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THE PNEUMATIC.

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EDITED BY
F. G. CRAMER.

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THE PNEUMATIC.

VOL. X. JANUARY, 1899. No. 1.

THE ELECTRIC "MOTO-VEHICLE."*

BY C. E. WOODS.

FOLLOWING a very complete and interesting introduction, giving the defense for the name moto-vehicles and the various types of vehicles manufactured as well as the present status of the art abroad, the author makes the remarkable statement that twenty thousand carriage makers are required to-day to fill the market demand for vehicles in this country as required for road and street transportation. A little over thirty per cent of the total animal power used in this transportation is required in the cultivation of the soil, to obtain fuel for this power, and to transport such means of maintenance and stable refuse from point to point. This means, broadly speaking, that animal power has in itself but about seventy per cent efficiency in its application. Further, horse power cannot be worked at a greater average than about five hours or twenty miles per day, which as compared with mechanical applications of any form puts such power into a very low figure of utility. Under such conditions of operation, this power unit has a depreciation of not less than twenty per cent per annum and from large users of horses in express companies, large liveries, etc., the depreciation has been given as about thirty-three per cent—either of which figures is far in excess of any of our good mechanical or electrical propositions of the day.

These startling facts and figures bring us very close to an understanding of the possibilities in the moto-vehicle as an industrial feature, and we cannot under such circumstances deny the brilliant outlook it has for the future. The sanitary conditions attendant on its use, its lesser cost of maintenance, its greater mileage

*Abstract of a paper read before the Chicago Electrical Association, November 18, 1898.

capacity, its more rapid transit, its lesser space occupied in the stable and on the street, its freedom from expense when not in use, all put together, answer entirely the objections which at first appear as to its greater initial cost. The possibility this vehicle opens up for road and street improvement and the low cost of maintenance of same should be items of great interest to municipalities, counties and States. Streets will have a capacity for double the number of vehicles without any increased congestion, will be freed from the continual pecking of iron feet, which are the main causes of their rapid deterioration, and sewers will perform their functions without being continually clogged up with refuse matter.

But to come back from speculation to reality. The greater first cost of these vehicles is a necessity which is very readily understood, as the vehicle part itself for the first item, is necessarily more expensive for the reason that when it comes to carrying twice or three times the weight in the vehicle ordinarily carried to running it twice or three times as fast as the horse-drawn vehicle under exactly the same conditions of road and street, it means quite a different proposition in vehicle construction without reference to its electrical and mechanical features.

I remember in my first early experience the disappointments which arose in regard to weights, constructional features, controls, etc., and three years ago I thought it would never be possible to build a moto-vehicle with any mileage capacity at all at a less weight than 1,800 pounds or 2,000 pounds, yet to-day I have vehicles in operation which weigh 800 pounds, including everything, and have a mileage capacity of about twenty-eight miles on one charge of the batteries. My work has also developed the fact that as great a range in different vehicles can be obtained as regards size, usefulness, etc., as in any of the prior lines of vehicles, and I have found that for a diversity of design covering nearly thirty different styles of vehicles, the whole proposition is confined to what I call four different sizes of equipments: By this I mean four different sizes of motors, batteries and so forth which are as follows:

My lightest vehicle is equipped with a one 2½ h. p. motor, 36 batteries of sixteen ampere hour capacity for two hours which runs the vehicle at a speed of fourteen miles per hour, carrying two people. The weights in all the construction work of this vehicle have been reduced to a minimum, the total weight of the batteries being 440 pounds, about 360 pounds being in the motor and vehicle proper. To tabulate these different equipments will be the most concise way of putting them, and I will call my first equipment No. ½.

Passenger capacity, two; complete weight of vehicle, 800 pounds; weight of batteries, 440 pounds; average miles run on one battery charge, 20; speed, miles per hour, first, 3½, second, 7, and third, 14; number of motors used on vehicle, 1; horse power of same, 2½; number of battery cells, 36; amperes per hour for three hours, 12; time in hours required to charge batteries, 3.

No. 1 equipment, designed for a top carriage or a heavy buggy: Complete weight of vehicle, 1,150 pounds; weight of batteries, 600 pounds; average miles run on one charge, 25; speed, miles per hour, first, 3½, second, 7, third, 14; number of motors used on vehicle, 2; horse power of same, 3; number of battery cells, 40; amperes per hour for three hours, 18; time in hours required to charge batteries, 3.

No. 2 equipment, which is designed for four passengers in an open vehicle such as a trap or brake: Complete weight of vehicle, 1,800 pounds; weight of battery, 800 pounds; average miles run on one battery charge, 30; speed, miles per hour, first, 3½, second, 7, third, 14; number of motors used on vehicle, 2; horse power of same, 5; number of battery cells, 40; amperes per hour for three hours, 30; time in hours required to charge batteries, 3.

No. 3 equipment, which is designed for both commercial delivery wagons and for my heavy cabs, of which I have built a great number, and is also applied to heavy carriages with tops, has a passenger capacity for from four to eight people: Complete weight of vehicle, 2,400 pounds: weight of batteries, 1,000 pounds; average miles run on one battery charge, 25; speed, miles per hour, first, 3, second, 6, and third, 12; number of motors used on vehicle, 2; horse power of same, 6½; number of battery cells, 40; time in hours required to charge batteries, 3.

The original calculation for one of the large

cabs reads as follows: Maximum speed of vehicle, miles per hour, 12; total load to be carried, including four persons, 3,200 pounds; maximum horse power required in motors, 5½; average horse power required in motors, 4; voltage of motors, 72; volts lost in transmission in motor, 8; maximum voltage required, 80; number of cells required at two volts each, 40; maximum amperes required, 52; maximum amperes per motor, 26; average amperes per motor, 22; mileage capacity desired at maximum speed, 30; hours discharge required, 2½; ampere hour capacity required in battery, 2½ hours discharge, 110; greatest maximum effort required in motors for overcoming inertia and grade climbing, 9.

In accordance with these calculations from prior experience in smaller vehicles, I designed two motors of a nominal 3½ h. p. each, either one of which was capable of running the vehicle at a slight overload under normal conditions of level roadway. The test on the cabs showed on a macadam and asphalt road a very little difference, and called, at the speed of twelve miles per hour, for 42 amperes with a potential of 72 volts at the motor terminals, which amounts practically to 4 h. p. In overcoming inertia the amperes would rise with a slight drop of voltage to 65, gradually diminishing until an acceleration consumes a period of about one-half minute.

There has been a great deal of controversy concerning the excessive weight of moto-vehicles and also considerable controversy by some of our theorists about what is considered dead weight and pay weight, and I want to say here that this limitation has not in my experience as yet been reached. We are perforce obliged to have weight for traction purposes, and many tests made by me on slippery roads, bad places, etc., have proved that with power applied to but two driving wheels we could not reduce our weight more than about 15 per cent. to 18 per cent. of what I have already obtained, without being too light for good traction under all conditions of road.

I have also found a very wide difference in amount of power consumed in the use of rubber tires. I recently tried a new tire on the above named cab which consumed about 18 per cent. more power than the ones I am regularly using. I also, by very careful testi, have discovered that the hard rubber tire is far preferable to the pneumatic tire for use on the moto-vehicles—and this without any reference to its first cost, durability, or freedom from puncture. The facts of the case are that the pneumatic absorbs more energy by about twenty per cent. when inflated, and by a very considerable increase over this as it may become deflated to different points of pressure.

The point of control has been a matter of considerable discussion by both those directly and indirectly interested in the development of the moto-vehicle. I have tried series paralleling the fields and I have also used series paralleling the batteries, after which I have adopted exclusively the series paralleling of the batteries as my method of installation. The one thing to be observed is to have very large contacts and connections and to take the same pains in the distribution of the batteries when in parallel as one does in the distribution of current in the armature. In other words, a uniform resistance of the circuits of the different batteries will produce perfectly satisfactory results in their operation, which I do not find to be the case in series paralleling the fields. This latter can be done to such an extent that but a small rise of current would be made in overcoming inertia but the excessive amount of field winding will oversaturate the fields unless they are unnecessarily large, and tends to a very considerable loss of voltage in dead resistance; and, while we economize in current, we do not economize in energy, as in the case of series paralleling the batteries.

Three speeds I have found to be sufficient for all practical purposes, even on our congested streets, and now have my motors running in parallel entirely independent from one another in their propelling function. Fourteen miles per hour for the larger vehicles I have found to be about the practical limit, as the amount of momentum stored up in the given weights of the vehicles cannot be brought under control by brake application quick enough to be safe on our city streets at greater speeds. In other words, we cannot brake on the moto-vehicle any more than we can on the car, beyond the locking of the wheels. In the light road buggy which I have, I have geared it up to twenty miles an hour, and find that with 800 pounds I can handle it with a reasonable

degree of safety on boulevards and parks, but I do not recommend these speeds to go any higher as a general proposition; although as a racing proposition, I believe that the motor-vehicle will be brought down to 1½ minutes for a mile, or perhaps even less time.

The Gospel of Good Roads

STEEL TRACK ON COUNTRY ROADS.

When country roads will be void of ruts they will be improved highways. Ruts are caused by wagon wheels being drawn continuously over the same course on the road bed and gradually working deeper and deeper into the surface. Wide tires, would, of course, improve the surface of roads instead of cutting it up as narrow tires do. The use of wide tires is one way of keeping the roads free from ruts. The other way is to build steel tracks on the country roads. In advocating steel tracks, the Age of Steel says:

"The improvement of public highways has become a matter of national interest. It has assumed sufficient importance to command the attention of legislation, and to the assembling of public spirited citizens in conclave and convention. The need of improved road-beds is conceded, and everybody knows that present methods are faulty and inefficient. The old formula of an annual turnout of local citizens, with axe, spade, plow, and an elected supervisor, has seldom done more than grade some hills, fill up washouts with branches and dirt, dig up some obstructive stumps, and corduroy occasional patches of bog-land. It is, however, the old story of mending old clothes with new cloth, leaving the garment itself in perpetual need of the tailor. Every rainy season leaves its mudholes and quagmires, washouts and new bathing places for frogs, while broken wheels, overturned loads, broken harness and occasionally a lame horse, and a teamster covered with mud and profanity. As the average supervisor is not an engineer, or the man who plows corn and cuts hay a sapper and miner, it follows that, however they may irrigate their jeans with perspiration, and conscientiously fill up one hole by making another, the old conditions of mud and mistakes are hereditary and continuous.

It is true that many of our agricultural districts are fairly gridironed with railways, and the haulage of products over long distances by steam have to some extent counterbalanced, or made up, for the sins of road-menders and road makers. The contents of a corn-crib, and the grain that streams from the spout of a threshing machine, the apples that mellow in the summer sun, the butter that comes from the creamery, and the eggs found in the hay, find their way to consuming markets in enormous quantities along the Bessemer steel rail, but the labor of getting them there is another matter. It is said that all roads lead to Rome or London. This may be true, but the conditions of travel, while they do not change the fact, are, after all, of importance, both to bipeds and quadrupeds. In many of our agricultural districts, products of commercial value are detained and in many instances rendered worthless by the inability of the producers to haul them over hills of greasy clay, or through mud with no bottom. It is probable that this loss represents an enormous amount of money. The same cause operates in the checking of local trade. The local merchant spends his time over his stove or in rubbing his nose on a window pane. There is no tinkle of cash in his till, his hardware keeps on his shelf, his coal yard is a solitude, the lumber pile remains untouched, and the man who sells mittens or shoes, clothing and groceries, has to cultivate the virtue of Job, and pray for better roads or aerial navigation.

"These conditions are more general than is supposed, and their effect on business of all kinds in a direct and indirect way is harmful to say the least. In treating of the situation Mr. Martin Dodge, director of the office of road inquiry in the Agricultural Department, has some

strong things to say of the utility of steel track on public or country highways. As an authority in this matter his statement and opinion are of weight. In substance, he says, that previous to the experiments of which he has the supervision, steel tracks heretofore placed upon highways was done by private enterprise and so laid as only to be used by vehicles with flanged wheels. When the government took the matter in hand it was decided to experiment with vehicles without flanged wheels on a smooth track. A suitable space on the grounds of the Trans-Mississippi Exposition was secured for an experimental track.

"The details of construction and method are as follows: The road consists of two parallel lines of steel plates, eight inches wide, and at sufficient distance apart to receive the wheels of the vehicles at the standard gauge. These plates have a slightly projecting flange upward and on the inner edge so as to prevent the wheels without flanges, easily leaving the track At the same time the flanges being only one-half inch in height are not sufficient to prevent vehicles from leaving the track, if the driver so desires, or finds it necessary to do so in passing vehicles going in the opposite direction. The plates are not supported by cross ties or stringers, but are provided with flanges downward and upward at the same time. These are embedded in the concrete of the roadbed so as to form a substantial part of it, and the steel plates themselves are supported at every point by a sub-structure of cement.

"Haulage by horse or inanimate power on the same roadbed without undue hazard or inconvenience is one of the objects of government experiments. It is obvious that the horse is not to be displaced on the country road. He is here to stay where in a thousand and one forms of service he has no rival or competitor. It is, however, certain that the electric road has a suburban future, and as a subsidiary feeder to the steam railroad will be of increasing importance, but where its articulations are not practical or economical, the yoke of oxen and the span of horses will figure, as they always have done, as the farmer's friends. With better roads there will be less need of the "black snake," easier and less dilatory transport, less of mud, spavined horses and broken wheels, and a highway on which the wheels prosperity as well as the wagon will more freely roll onward."

PRACTICAL ROAD IMPROVEMENT.

A writer in the October number of Municipal Engineering takes a practical view of the good roads question that is likely to commend itself to all interested in securing some tangible results in the way of better roads. He thinks that a mistake is made by the friends of the good roads movement in trying to get parmanent good roads immediately. What he advises is that "better roads, not good roads, should be the war cry of the improved roads propaganda." The lack of progress that the good roads movement has made in most sections of the country is ascribed by him to the fact that the stone roads which are advocated by good roads leagues are beyond the means of the people who have to build roads. The money available in the average community does not suffice even for making a begining of scientific road building. Instead of employing the money now available to good advantage in building good dirt roads, it is practically wasted, as it always has been, and the agitation for good roads continues without undertaking to introduce a systematic plan for bettering the condition of the roads by the employment of better methods in the road building and repairing than is now done.

The improvement of the roads, without the increase of the outlay, is the proper plan to be pursued, according to the good roads writer in Municipal Engineering. The employment of high class road machinery is the sine qua non, in his opinion, and the different townships or districts must acquire such machinery before they can expect to accomplish better results in road building. But townships have as a rule no authority for acquiring expensive machinery, even if they desired to. State legislation to enable the people to help themselves is needed. The case is set forth as follows in Municipal Engineering: "In a large majority of the states there is no law under which any purchase can be made and paid for in installments running several years. Any attempt to stretch or strain the laws, even for so desirable a purpose, can and has been repeatedly upset by some single obstreperous and unconverted citizen.

What is needed is legislation of the local option order, whereby a majority of the taxpayers in any township or district could petition their road commissioner to purchase certain necessary machinery at a stated price, payable in a stipulated number of yearly installments, at the legal rate of interest, no payment exceeding one-half the yearly revenue of the township or district making the purchase. Under such a law the township with a $1,000 revenue could buy $1,000 worth of machinery on five years' time, payable in five annual installments of $200 each and interest. There would be no increase in the taxes and remaining $800 applied each year to operating the machinery would be productive of far greater results than the whole thousand dollars without the machinery. Or, a road district with an annual revenue of $100 could purchase $250 worth of machinery on five years' time and have the best roads its money could make instead of the poorest. By this method it would be impossible to saddle on the township or district any undesirable debt, as it requires action by a majority of the taxpayers. At the same time it enables a progressive and enlightened majority in any community to accomplish its purpose, which at present cannot be done."

The merit of this proposition is that it promises some immediate benefits in the way of better roads. High-class dirt roads can be made to replace the miserably made roads that are prevalent in so many districts, if some system is introduced whereby the proper machinery is provided for constructing the roads. In Wisconsin it would seem to be a far better course to pursue than any that has yet been suggested. State aid for road building cannot be secured, unless the constitution is amended, and this cannot be accomplished for several years, even if the legislature can be induced to submit a constitutional amendment on the subject. Those members of the legislature who are interested in having better roads, and we believe that they all must be, would do well to consider the advisability of providing such legislation as is suggested in the above quotation from Municipal Engineering.

«WIDE TIRES.»

The League of American Wheelmen has just issued a fourth number of its «Good Roads Library» in the form of a convenient little illustrated volume on the subject of «Wide Tires» comprising forty-three printed pages, setting forth the results of actual experiments conducted by the Agricultural Experiment Station of the University of Missouri. The useful object of this little book is to brush away all theoretical discussion, and show by the results of actual tests the influence which the width of the wheel tire has upon the draft of wagons used by farmers and merchants. The experiments recounted in the pages of «Wide Tires» were conducted on an elaborate scale, and were divided into four classes, viz: 1. Trials on macadam, gravel and dirt roads; 2. Trials on meadows and pastures; 3. Trials on stubble lands; 4. Trials on ploughed lands. The conclusions arrived at from these experiments are tersely stated in a well-arranged «Summary of Results,» in which the advantages of wide tires, under all ordinary conditions, are plainly stated. The main subject is introduced by a few pages setting forth a resume of the wide tire question, prepared by Isaac B. Potter, President of the L. A. W., and including a condensed statement of provisions of the Wide Tire Law now in force in several of our more important states. The pictures in this little book are of a practical and forcible sort and do much to enliven and illustrate the matter-of-fact statements contained in the text. Every student of the subject of good roads should have a copy.

A copy of «Wide Tires» may be had by any person who sends five cents (in postage or otherwise) to Secretary Abbot Bassett, 530 Atlantic Ave., Boston, Mass.; or by any member of the L. A. W., who will make request to Secretary Bassett, enclosing a two-cent stamp.

FARMERS AND WHEELMEN UNITED.

The Farmers' National Congress, which has just closed its annual session at Forth Worth, Texas, has passed resolutions strongly endorsing the system of state aid to road building, and commending the efforts of the League of American Wheelmen for its general introduction.

The passage of these resolutions marks a signal success for the Highway Improvement Committee of the L. A. W. It means that the farmers, who have so long looked with doubts

and misgivings upon the good roads work of the L. A. W., are beginning to understand that this work is in their own interest, and that, by working in harmony with the L. A. W., they can bring about the construction of durable highways without being obliged to bear all the expense, as they have so long supposed they would have to do. The Higbie-Armstrong Law, by which state aid has been introduced in New York, provides for a division of the cost of road construction between the state, the county and the local township. Many of the towns availing themselves of its advantages will secure an amount of money from outside sources equal to four or five times that which they raised themselves, most of those funds coming from the cities, where the tax levied to raise it is but a single cent per thousand dollars of assessed valuation.

Ever since the L. A. W. was organized in 1880, it has been working for better roads, but never have its efforts been endorsed or commended in terms by a farmers' organization The Farmers' National Congress consists of about 450 delegates, representing nearly every state. It is the strongest agricultural body in the United States, a thoroughly representative body of wide-awake, up-to-date, although conservative, farmers, and was declared by Wm. H. Hatch, for many years Chairman of the House Committee on agriculture, to have more influence with Congress than all other agricultural bodies combined. Its endorsement of state aid to roads and the L. A. W. work will have much weight with the legislatures, and with farmers generally. It marks the turning point in the good roads work of the L. A. W., and opens the way for united action between the members and the farmers of the United States. The book which the League is now circulating, entitled «Must the Farmer Pay for Good Roads?» and expounding the State Aid system, will do much to help on this work.

The passage of these resolutions by the Farmers National Congress is the result of the efforts of Mr. Otto Dorner, Chairman of the Highway Improvement Committee of the L. A. W. He has attended the sessions of the Congress for three successive years. In November, 1896, at Indianapolis, and again in September, 1897, at St. Paul, Mr. Dorner addressed Congress upon State Aid to Roads and the work of the L. A. W., and made many friends for the League. He attended the Congress at Fort Worth as the delegate from the L. A. W. His farmer friends, who were delegates from Wisconsin, selected him to represent that state on the Committee on Resolutions. This committee elected him as its secretary and passed the good roads resolutions he presented by a vote of 29 to 2. The resolutions in full are as follows:

Resolved, that the best interests of American agriculture demand the construction of first-class roads connecting farms with market towns;

That the cost of their construction is too considerable to be borne by farm property alone;

That, the entire population is interested in, and benefited, directly and indirectly, by good roads, all property ought to contribute to the cost of their construction, through the medium of a state tax;

That we endorse the system of state aid to roads, because it appears to solve the good roads problem in the farmer's interest; it largely decreases the cost of road construction to local committies, provides a means by which the large city taxpayers and corporations owning valuable franchises from the state are made to share in the expense, and properly leaves it optional with farming districts to avail themselves of its provisions or not, as they may choose;

That we believe the state aid system suitable to most states in the Union, and commend the efforts of the National Road Parliament, the League of American Wheelmen and the Government Office of Road Inquiry to make this system of road construction generally known and understood, and to bring about its general adoption.

An association for the improvement of roads and the construction of cycle paths has been formed in New Jersey.

The Hum of the Horseless

In general appearance the New York electric cabs are perhaps somewhat different from any vehicle heretofore constructed. The fore body is similar to an ordinary hansom-cab, but rearwardly projecting from this part of the vehicle is a box in which the batteries are housed. These batteries are composed of a multitude of lead plates carried in boxes and immersed in dilute acid. They are inserted or removed by taking of the rear end of this socalled battery-box. For obvious reasons the running is composed of four wheels instead of two, as in the ordinary cab, and their appearance, to say the least, is striking. Aside from the small diameter and extremely massive construction, they are fitted with immense pneumatic tires five inches in diameter made up of rubber stock from five-eighths to one inch thick. These tires are pumped to a pressure of about eighty pounds. Another radical departure from ordinary practice is embodied in the arrangement of the front wheels as drivers, the vehicle being steered by the rear wheels. Each cab is fitted with two two-horse-power electric motors, one of which is geared to each driving wheel. The motors are entirely encased, and are attached to the axle adjacent to the wheels. The steering gear is entirely different from that of a horse-drawn vehicle. Each steering wheel revolves on a short axle pivoted close to the hub on an axle tree, so that it turns on an independent pivot. The two short steering axles are, however, connected together by various rods, so that both wheels move together.—Harper's Weekly.

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A sound comparatively new in the streets, says the New York "Sun," is the hum of the electric carriage. The passing of one of these vehicles still attracts some attention, even on Broadway, but it is in the residence streets, where the noise of the traffic is less, that the sound of them is most striking. Take, for instance, a street that has been laid with asphalt pavement. There is no longer heard in this street the rumble or rattle of wheels over the paving stones. There is heard only the sound of the horses' hoofs, and that is a clumping, in regular time, that is, over the paving stones. There is heard now only the sound of the electric cab going through the block. No hoofs and no rattle of the wheels on the stones, but the curious machine-like hum of the vehicle as it moves, something intensely modern and up-to-date and characteristic of the moment.

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An electrical omnibus has lately been put in service experimentally in Berlin. It has accommodation for twenty-six passengers, measures 23 feet in length by 6½ feet in width, while its weight, including the battery, is 6.65 metrical tons. The battery, which consists of 120 cells, contained in twenty-four boxes, weighs about 1¾ tons, and is stated to have a capacity sufficient to run the vehicle a distance of 60 kilometers (37½ miles) at a speed ranging from 6 to 12 kilometers per hour. The motor is geared to the front axle of the omnibus.

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Mr. C. W. Fourdrinier, manager of the Boston branch of the Pope Mfg. Co., recently gave the motor carriage a rough-weather test. When the streets were covered with drifts of snow three and four feet high Mr. Fourdrinier was seen riding the vehicle, which appeared to run with ease while electric cars and the vehicles were stalled.

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An English journal advocates as a needed innovation the employment of automobile funeral cars, insisting that the display of black horses, plumes and other insignia of unreasonable mourning is but the survival of the antiquated and barbarous custom of slaying horses at the the grave of their owner.

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The French Automobile club has issued a map of France, showing all the electric stations where accumulators can be recharged.

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An international motor-car Congress will be held in Paris in 1900. It will be promoted by the Automobile Club de France.

Cycling Cogitation

OF COPY.

When Milwaukee determined to exhibit itself to the annual gathering of wheelmen at Indianapolis last year as a «bright spot» the delegation entrusted with the «job» consisted of a lawyer, a bicycle manufacturer, and two newspaper men. A queer mixture, no doubt. The lawyer talked League politics, the manufacturer talked trade and the two newspaper men lost only eight hours (actual sleeping time) of Indianapolis pleasure and hospitality. Nevertheless the «bright spot» was bright all the time, a condition caused by the polished manners of the lawyer. This mixed delegation set out from Milwaukee with the well defined purpose of creating an impression. They expected to make history, L. A. W. history, for the week, little dreaming that it was to be the beginning of a romance in which one of the delegates would play a prominent part and will soon be playing second fiddle.

It is hardly necessary to state that the delegate figuring in the romance is one of the newspaper men. I have never heard of a lawyer or bicycle manufacturer figuring in a romance. But newspaper men, oh, how often. Well this certain newspaper man has a liking to pretty girls. There is no better place in all this world to satisfy such a liking than Indianapolis. Only one was necessary for our Milwaukee boy. He is satisfied and, it is said, his postage account has been heavy and an extra force of clerks have been taken on by the postmasters of Milwaukee and Indianapolis. Cards will be out soon.

* *

The Wisconsin division of the L. A. W. is to be congratulated. Not because it is still in existence or because it can dispense with a treasurer, but simply because its chief consul henceforth will be Frank Van Valkenburgh. Those who know Mr. Van Valkenburgh know his abilities, and are therefore pleased with his appointment. Those who don't know him know about him and those who don't know about him can't know much about anything. Van is a wonderfully sensible man. His part in cycling is taken purely in a cycling spirit. There is still in his nature the spirit we all possessed when we were boys. We would rather chop two cords of wood for Johnnie Smith's mother than prepare enough to kindle the fire for our own mother. Most of us have lost that element in our nature. Van still retains it; that is, in a certain way. He is a busy man and we must not expect him to neglect his business for the Wisconsin division. But we may expect, and the chances are that our expectations will materialize, that he will put in more of his spare time to the interest of the division than any other man would dream of devoting to such a cause. Van does'nt like to see a thing go to the wall, so to speak. If the L. A. W. had never been organized he probably wouldn't give a snap about the Wisconsin division. But the L. A. W. has been organized and the Wisconsin division has every opportunity to go to the wall. And Van knows it. He is not going to try to move the wall further away from the Wisconsin division. He is going to try to move the division further away from the wall. It will be a task that will require "much brain, little muscle." Just the kind of task suited to Van. Let us, every member of the Wisconsin division, pitch in and help him.

* *

Bicycle racing talk, which always begins with a new year, is now on in full force. Club members and devotees of the sport in general are already guessing on the '99 champions although a very few known to whom the '98 championship honors belong. I am of the opinion that "Major" Taylor deserves the title, but there are thousands ready to dispute this claim. However doubtful the national championship may be, there is no doubt as to who is Wisconsin champion. It is hardly necessary to say his name is McDougall. Everybody knows it and what is pleasant to state is that everybody concedes it; that is, everybody who knows anything about the sport in Wisconsin. McDougall is only a "youngster," and if he improves with age only one or two years will elapse before he will be at the top of the ladder.

RECORDS MADE AND BROKEN IN 1898.

COMPETITION—STANDING START.

Half mile, made by Fred Sims, Washington, D. C., :56 3-5.

Twelve miles, made by Tom Linton, Willow Grove, Pa., 20:31 3-5.

Fifteen miles, made by Tom Linton, Willow Grove, Pa., 25:38 4-5.

Twenty miles, made by Tom Linton, Willow Grove, Pa., 34:02.

Twenty-five miles made by H. D. Elkes, Willow Grove, Pa., 42:42.

Thirty miles, made by H. D. Elkes, Willow Grove, Pa., 56:38.

AGAINST TIME—FLYING START, UNPACED.

Half mile, made by William Martin, Newby Oval, Indianapolis, Ind., :55 3-5.

Mile, made by W. W. Hamilton, Denver, Col., 1:55 4-5.

Two miles, made by A. B. Hughes, Denver, Col., 4:16.

Three miles, made by A. B. Hughes, Denver, Col., 6:32 4-5.

Four miles, made by A. B. Hughes, Denver, Col., 8:50.

Five miles, made by F. J. Titus, Willow Grove, Pa., 11:05 1-5.

Ten miles, made by F. J. Titus, Willow Grove, Pa., 23:09 2-5.

Fifteen miles, made by W. W. Hamilton, Denver, Col., 35:03.

Twenty miles, made by W. W. Hamilton, Denver, Col., 47:08 2-5.

Twenty-five miles, made by W. W. Hamilton, Denver, Col., 59.13 2-5.

AGAINST TIME—FLYING START, PACED.

Mile, made by Edouard Taylore, Willow Grove, Pa., 1:32 3-5.

Fifteen miles, made by Lucien Leona, Charles River Park, Mass., 29:24.

Twenty miles, made by Lucien Leona, Charles River Park, Mass., 39:18 4-5.

Twenty-five miles, made by Lucien Leona, Charles River Park, Mass., 49:08 2-5.

Thirty miles, made by H. D. Elkes, Willow Grove, Pa., 51:41 3-5.

TANDEM—FLYING START, PACED.

Mile, time, 1:42 2-5; two miles, 3:40 3-5; three miles, 5:31 1-5; four miles, 7:25 1-5; five miles, 9:25 2-5; six miles, 11:19; seven miles, 13:12 1-5; eight miles, 15:13 1-5; nine miles, 17-06 3-5; ten miles, 19:02 4-5, all made by J. B. Fowler and C. A. Church, Willow Grove, Pa.

TRIPLET—FLYING START, UNPACED.

Two miles, time, 4:17; three miles, 6:24; four miles, 8:29; five miles, 10:34; six miles, 12:42; seven miles, 14:48; eight miles, 16:58; nine miles, 16:01; ten miles, 21:07; twenty-five miles, 53:26; twenty-eight miles, 59:54, all made by Earl Kiser, C. W. Miller and Arthur Gardner, Bellair, Fla.

QUINTUPLET—STANDING START.

Three miles in 5:32 3-5, made by W. F. Sager, E. W. Swanbrough, H. Watts, F. B. Kent and E. von Steeg, Cambridge, Mass.

Hour record, flying start, paced—One hour, 34 miles and 1,220 yards, made by H. D. Elkes, Willow Grove, Pa., Aug. 6, 1898.

Hour record, flying start, unpaced—One hour, 25 miles and 600 yards, made by W. W. Hamilton, Denver Col., July 9, 1898; tandem, 26 miles and 1,292 yards, made by E. W. Swanbrough and W. F. Sager, Denver, Col.

Hour, triplet, flying start, unpaced—One hour, 28 miles and 75 yards, made by Karl Kiser, C. W. Miller and Arthur Gardiner, Bellair, Fla., March 16, 1898.

HANDICAP RECORDS.

Half mile, time, :56 3-5, made by W. Fred Sims, Washington, D. C., Aug., 3, 1898, handicapper, E. E. Simpson.

One mile, 2:00 1-5, made by W. Fred Sims, Washington, D. C., July 23, 1898, handicapper, E. E. Simpson.

Two miles, 4:09, made by E. C. Bald, Indianapolis, Ind., Aug. 11, 1898, handicappers, W. G. Hunter, C. L. McCarthy and Paul L. Aldrich.

Multicycle handicap record—Two miles, time, 3:25 2-5, made by W. E. Becker, A. C. Mertens, Nat Butler, William Martin, Newby Oval, Ind., Aug. 10, 1898, handicappers, C. L. McCarthy, Paul L. Aldrich and W. G. Hunter.

IN COMPETITION.

Quarter mile, 29 seconds, made by H. C. Gadke, Council Bluffs, Ia., July 30.

Third mile, 38 2-5 seconds, made by Major Taylor, New York, Aug. 27.

Half mile, 56 3-5 seconds, made by W. Fred Sims, Washington, D. C., Aug. 3.

Two-thirds mile, 1:09 4-5, made by Major Taylor, New York, Aug. 27.

Mile, 1:41 2-5, made by Major Taylor, New York, Aug. 27.

Two to ten miles, made by Tom Linton, New York, Sept. 5.

The fastest time of the year was made by Major Taylor in November, after he deserted the sanctioned tracks, his riding making the world's records, as follows: One-quarter mile, against time, paced, on Nov. 5, 1898, time, :22 2-5; one-third mile, Nov. 14, time 29 4-5; one-half mile, Nov. 12, time, :45 4-5 three-fourths mile, Nov. 16, time, 1:08 2-5; one

mile, Nov. 16, time, 1:31 4-5; two miles, Nov. 5, time, 3:13 3-5.

RECORDS BY AMATEURS.

Half mile, 1 minute, made by Edward Llewellyn Woodside Park, Pa., July 30, 1898; two-thirds mile, 1:21, made by E. L. Wilson, Washington, D. C., May 28, 1898; two miles, 3:53, made by C. J. Wagner, Newby Oval, Indianapolis, Ind., Aug. 12, 1898; three miles, 5:52, made by Harry A. Gibson, Newby Oval, Indianapolis, Ind., Aug. 12, 1898; four miles, 7:47, 1-5, made by C. J. Wagner, Newby Oval, Indianapolis, Ind., Aug. 12, 1898; five miles, 9:43 1-5, made by Harry A. Gibson, Newby Oval, Indianapolis, Ind., Aug. 12, 1898; half mile, flying start, unpaced, made by C. V. Dacey, Denver, Col., in 58 seconds.

Against time, flying start, paced,—Two miles, 3:42 4-5, made by E. L. Wilson, Washington, D. C. May 19, 1898.

Tandem, flying start, paced—one-fourth mile, time, :34 1-5, made by Earl Peabody-R. Llewellyn, Indianapolis, Ind., Aug. 12, 1898; one-half mile, time, :53 3-5, made by Ingraham brothers, Charles River Park, Aug. 31, 1898; one mile, time, 1:50, made by F. A. Joseph-F. G. Hood, Detroit, Mich., June 18 1898.

Triplet, flying start, unpaced—One-half mile, time, :50 1-5, made by J. R. O'Mara, George Walther, Charles R. Pease, Newby Oval, Indianapolis, Ind., July 4, 1898; one mile, time, 1:55, made by Nugent brothers and J. F. Flynn, Cambridge, Mass., May 26, 1898.

Handicap records—One-half mile, time, :60, made by Edward Llewellyn, Woodside park, Philadelphia, July 30, 1898; one-third mile, time, 41 4-5, made by F. L. Kramer, Tioga track, Philadelphia, Sept. 17, 1898; one mile, time, 2:08 4-5, made by F. L. Kramer, Manhattan Beach, Aug. 27, 1898; two miles, time, 4:17, made by F. L. Kramer, Newby Oval, Ind., Aug. 13, 1898.

Our Busy Cycledom

The wheel of fortune is full of punctures.

—

The bicycle tax in France amounted to $800,000 in 1898.

—

The gendarmes of France use bicycles when on a hunt for criminals.

—

A novice has a greater right to form opinions than he has to express them.

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In the island of Java girls over fifteen are not encouraged to ride bicycles.

—

Bourrillon, the French rider, won sixty-two of the sixty-three races in which he rode the past year.

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During one week in September bicycles to the value of $2,693 were shipped from New York to India.

The Baltimore Herald advises young men not to marry lazy girls unless they are in the tire-repair business.

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It is said that the «Uncles» of Paris have no fewer than 2,964 bicycles in their possession at the present time.

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Central Australian natives call the bicycle a «Piccaninny engine.» That's better than «bike» by a long way.

—

Eddie McDuffie's '99 model will have a 26 inch front wheel and a 30 inch rear wheel, which, he claims, makes a speedy bicycle.

—

A new clause has been added to the Austral Wheel Race entry blank. It compels the signer to declare that the machine he intends to ride possesses no mechanical advantage to accelerate speed, beyond what is commonly known and used.

Washington street, Boston, is the longest paved street in the world. After riding its entire length your cyclometer will register seventeen and one-half miles.

—

The cautious cyclist knows very well the importance of investigating any unusual clicking about his machine as he spins along the road, and his ear soon tells him whether the sound «times» with the revolutions of the crank or of the wheels, and helps him just where the loose screw may be found.

—

Says the L. A. W. Bulletin:

«Hats for women are now made entirely of paper. French tissue, Japanese tissue and silk paper are used, and come in all colors as well as flowered, crinkled and plain. They are said to be tough and durable and able to stand rain or sun.»

This is indeed, very startling news for wheelmen. What do they care?

—

The Denver Wheel Club Echo, edited by Burley B. Ayers, mentions F. P. Van Valkenburgh as a prominent L. A. W. vice presidential possibility. It says, «Frank P. Van Valkenburgh, the Milwaukee lawyer, is a great accomplisher of things and stands as the crackajack in this line in the west. A man of great eloquence, his oratory and executive ability have done much to spread the privileges of cyclists.»

—

Arthur Gardiner's thoughts were recently expressed in the following words:

"I know that league men in the East are making a great effort to have us return to the fold but I do not think there is a possible chance of our doing so. We would not return without full concessions, which, I believe, the league would not be willing to give us. I am opposed to returning to the league under any conditions. The league has almost killed racing and is not entitled to much consideration from us. If the men stand together now, there is no reason why racing should not again become popular throughout the country. If the theatrical or any other amusement business had been run the way the league ran racing it would not have lasted as long as racing has lasted. The stand taken by the men is what should have been done several years ago. The prospects for a successful season for the union men are brighter now than ever, and when our rules are made public I think all will concede that we know how to go at the matter to insure success."

—

The manufacturers and dealers of the English piano trade are complaining bitterly of the inroads made by the bicycle in their business. The money of the «middle class», who says the Chicago Record, were their best supporters, is now appropriated to the purchase of a new mount and advertisement columns show that that the piano is a drug in the market. The influence of the wheel has also extended to the orchestral societies and choral classes for which England is famous, while it is with difficulty that some of the large amateur choirs in London can be kept together. The same difficulty is being experienced in the large country towns in an even greater degree. The Englishman has always loved to live out of doors, and now that he can combine with the benefits of his religiously taking walking exercise the ability to cover long distances and much of the zest of horseback riding it is no wonder that the country lanes throughout the land are thronged with bicyclists. A music journal mentions as showing how cycling enters into the politics of music patrons that on the occasion of a recent national festival, in announcing a continuous round of music of many hours' duration, the manager advertised that special arrangements would be made in the basement of the hall for the accommodation of hundreds of bicycles.

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We are indebted to a veracious contemporary for the following interesting piece of news:

«A gun factory in Vienna, Austria, is said to have the distinction of making the costliest bicycle in the world. The owner of the «wheel» of fabulous value is a South African diamond who has agreed to pay $275,000 for the remarkable machine. The South African millionaire was so impressed with the beauty of the frame when it was on exhibition at the last Vienna

exposition that he bought it and ordered it set with precious stones. The bicycle is to be a present to his wife on her next birthday. It is a mass of jewels, chiefly diamonds.»

Presumably this wonderful bicycle is of the vintage of 1898. Will its fortunate possessor attempt to keep up with the styles in wheels and purchase $275,000 worth of bicycle at say $10,000 a pound at the beginning of the season of 1899 and each year thereafter? At any rate it may be some satisfaction to her to be the owner of what is doubtless the only real, simon-pure «diamond frame» wheel on earth. It might be of interest, also, to be informed whether the lady does her ridinb upon the public highway or only within the walls of a safety deposit vault. If the latter we commend her good judgment. A safety deposit vault would certainly an appropriate place to deposit a safety.

—

A correspondent, referring to the article on «Narrow Tread and Bow Legs» on page 194 of the November PNEUMATIC, disagrees with the conclusions reached. No bicycle has so narrow a tread as two and one-half inches, a tread under four and one half inches being rare, and one of not less than five inches being now usual.

Furthermore, he finds fault with the analogy between an equestrian saddle and a bicycle saddle. An equestrian saddle is necessarily of a different shape from a bicycle saddle, the latter being narrow where straddled. There is no tendency to slant the legs outward and consequently they do not have to be brought in at the lower end to a narrow tread, as alleged. The article in question was probably not written by a wheelman; at least there is nothing to indicate that he has more than the most superficial acquaintance with bicycling, and our correspondent thinks that he might well bear in mind the well known saying that «a little learning is a dangerous thing.»

While there are serious objections to an excessively narrow tread, they are mechanical, rather than physiological, and the present tendency is not to go to an extreme in the matter one way or the other.

The bicycle bow-leg will have to go to join the bicycle face, the bicycle arm, the bicycle nose, and other bicycle myths.

A peculiar bicycle law is in force at Prague, Bohemia. The person who proposes to buy and use a wheel must first make an application to the police board for a license. What the tax is we are not sure, but think it is about $2 a year. The police then notify the applicant to appear before the board's official doctor to be examined. If the medical man says it will be injurious for the applicant to ride a wheel he gets no license and no wheel; if the report is favorable the police notify the would-be cyclist to appear and prove by riding several laps on a track that he knows how to manage a wheel. If he falls or wobbles too much, or shows a disposition to be dangerous to the rest of humanity, he gets no license. If, however, he shows that he is sufficiently expert he is told that he may have a license provided he first goes to the board's official photographer and has his picture taken. When the picture is produced, it and a copy of the license are pasted in a little book which the cyclist must always carry when he is out riding. The license is numbered, and the number corresponds with that which must be displayed on the wheel. The portrait and license must be shown on demand to any policeman.

The indomitable perseverance of the Bohemian character is shown by the fact that many licenses are taken out and many wheels ridden by the residents of beautiful old Prague. It may be added in justification of the rigid police requirements that it needs skill to steer a wheel through some of the extremely narrow and crowded streets of the city.

—

An old country clergyman relates the following story:—

«I was walking round my garden one evening in the late autumn of last year thinking out my sermon for the following Sunday, when I was aroused by the sound of groans proceeding from the roadway.

«With terrible forebodings I opened the rectory gate and rushed out. Yes! There on the grass by the roadside lay a man and beside him a bicycle—terrible instrument of torture.

«In again I ran and brought a glass of water. The man had not stirred. I lifted his head upon my arm and dashed the cold water into his face. He shuddered and then sat suddenly bolt up-

right in a manner which was most surprising.

«‹Look here,› he said, glaring up at me, and mingling his remarks plentifully with oaths, ‹What's your little game? Can't a poor fellow take a comfortable nap without being interfered with by such as you and being nearly drowned with water, eh?›

«‹I beg your pardon,› I said, when I had got over my surprise. ‹I thought you had had a fall.›

‹You're a deal too officious,› went on the amiable cyclist. ‹And for two pins I'd give you a fall. Go and do the blooming good Samaritan to some one as needs it, and leave us poor harmless cyclists alone.›

«And with these words he settled himself once more comfortably in the long grass and prepared to continue his interrupted snooze.»

—

The Medical Press, commenting on the death of a young clergyman from lock-jaw following an abrasion of the skin caused by a bicycle accident, says that the most dangerous wounds to be infected with the tetanus bacilli are punctured ones, inasmuch as the micro-organisms belong to the anaerobic class which cannot flourish in the presence of oxygen. But any wound of the skin, superficial or otherwise, may become infected if care be not observed in thorough cleansing after its infliction. Hence cyclists should distinctly bear in mind that all wounds caused by falls from the machine cannot be regarded as safe from tetanus infection until, without any delay, they have been thoroughly washed and cleansed with some trustworthy antiseptic, a procedure with regard to which fortunately there is no difficulty. At the inquest on this case a verdict was returned to the effect that death was due to lock-jaw «but whether it was caused by the accident there was not sufficient evidence to show.» As a matter of fact, no reasonable doubt can exist as to the disease having been inoculated at the time of the accident. Tetanus almost invariably follows injuries involving contact with the soil, and the dust of main thoroughfares in the country is particularly active in this respect. The period of incubation is uncertain, but the text-books state definitely that traumatic tetanus seldom begins immediately after the injury has been received, days and even weeks intervening, with mild prodromata for a brief period preceding the graver phenomena. It is a matter of general knowledge that tetanus may be comparatively frequent in particular regions, while almost unknown in others, and its occurrence ought always to stimulate investigation into its causation.

—

The outlaw's press representative is at it again. He has interested the Associated Press insofar as to issue the following under date of December 25. "If Arthur Gardiner knows what he is talking about there is not the slightest possibility of the outlaw racing men returning to the fold of the L. A. W. The champion cyclist has returned from Wisconsin and was busy yesterday with affairs of the American Cyclists' Racing Association. During the day he received a letter from a New York cyclist to the effect that the L. A. W., through its eastern officials, is making strenuous efforts to reclaim the racing men.

«It was said that the overtures made included a guarantee that if the racing men would return the fines against them for competing in unsanctioned races would be withdrawn and they would be received with open arms. This concession, however, is not what the outlaws are looking for. Gardiner announced positively that the union would not consider any proposition unless it included a guarantee of adequate representation in the league and a voice in the control of racing.

«While the West seems to be in favor of this, it is not likly to be granted—at least such representation as the cyclists would demand. The officers of the union would also hold out for certain concessions for the men who own tracks and who pay the purses, and the league, it is said, would never consent to this. Instead of bothering themselves concerning league affairs the officers of the union have been busy prepairing for next season's racing. A complete set of rules has been drawn governing racing and is ready for the approval of the officers at the coming meeting in New York.

«These rules have been framed with great care and with a view to the experiences of the past. They are said to be liberal in the extreme, and the officials believe that they will result in successful racing for the union. At least there will be no more shutting out of men from purses because some one is holding a

"one-horse" meet at Podunk. All the points which in the league rules are thought to have worked harm to racing men have been avoided."

Wheeling, an English cycling paper, under date of December 21, 1898, says, "the membership of the League of American Wheelmen is now over 100,000." Wheeling is about one year behind or ahead of the times.

200 cycling policemen have organized a club at Vienna.

Taken From Contemporaries

THE ADMISSION OF PROFESSIONALS.

Cycling Gazette.

Those pure-minded persons who grow so righteously indignant when the question of admitting professionals to League membership is discussed, resemble in no small degree those Spanish statesmen with whom Mr. Day and his associates on the peace commission had to deal in Paris. The Spanish mind loves to weave hair-splitting arguments that ignore plain facts, and thus it would be easy for a Spanish lawyer to prove that Spain never has lost any of the colonial empire that she possessed a hundred years ago. His argument would be conclusive, but tangible facts and conditions would not bear out his fine words. At Paris, there were floods of beautiful arguments to show that the Cuban debt must go with Cuba just as the roof goes with a house.

When the matter of admitting professionals comes up at Providence in February, Spanish hair-splitting arguments will not be in it for a moment with the fine-grained objections that will be offered by the immaculately pure gentlemen of New York, who are amateurs only because they never have been declared professionals. New York's chief consul makes $1,000 a year out of cycling, and yet he claims to be the purest of pure amateurs. The New York secretary makes $2,500 a year out of cycling, and he, too, believes himself an amateur. President Potter's cycling salary this year was $3,500, and yet the Racing Board has not declared him a professional. There is something wrong somewhere. Let a boy in the country ride a quarter-mile race for a twenty-five cent purse and he is forthwith made a professional, and at the same time barred from League membership; but a man who is fortunate enough to belong to the League and influential enough to land himself into a paying berth can forever masquerade as an amateur and pour forth all sorts of maledictions against those riders who are honest enough to compete for cash prizes, and no one questions his honesty or his uprightness. It is a putrid condition of affairs.

It is a condition of affairs that reflects no credit upon the League of American Wheelmen. It is a condition of affairs that should be remedied. And if the League of American Wheelmen is not a monstrous fake organization, the working out of the remedial processes need not require more time than is necessary to the passage of a constitutional amendment admitting professionals to membership.

And there is no good reason why such an amendment should not be passed.

MAKING THE TURN.

The Wheel.

The frequent turning of corners soon accustoms a rider to make what is known in military parlance as a right or a left turn, but the neat execution of a right or left "about" turn is seldom seen. It is not an exaggeration to say that the majority of riders dismount if they want to turn round completely in the width of a narrow road, while another 20 per cent make a bungle of the attempt, and few perform the simple feat well. Riders are so accustomed to turn through only one right angle that they are apt to stop turning their wheels when only

half way around. This little point is the whole secret.

Keep the front wheel turned twice as long as you are accustomed to in turning a corner. Of course, it is necessary to reduce the pace, and the rider must notice the width of the road and turn with that degree of sharpness which will bring him at least half-way around by the time he is half-way across the road. He must remember to keep on turning and pushing on the pedals. Often the rider fails to turn because he has been devoting all his thought to steering the machine, and has forgotten to propel it. As a complete turn on an average road must begin at the side of the road, a certain degree of driving force is necessary to get the machine out of the gutter, and the cycle will not continue kindly in the same course unless it is driven uniformly.

PEDALS.

G. L. Hillier in New Zealand Cyclist.

Pedals—called in the earlier days of the history of the sport treadles, presumably because they were trodden upon—constitute an important part of the cycle, and they are, of course, of innumerable patterns, more or less practical. Without doubt, the most satisfactory form for all-round work is the "rat trap" pedal, so called from its resemblance, in its earlier stages, to the open jaws of the spring rat-trap, or gin, used in country districts. The saw-like row of teeth has, however, now disappeared from the edges of the pedals plates, and been replaced with few and relatively short teeth, which do not as easily injure the sole of the shoe as did the original pattern.

Rat-trap pedals afford a much better grip than rubber pedals, and they are by far less likely to slip when wet—a somewhat important consideration—so that it may unhesitatingly be asserted that this form of pedal is the expert's pedal.

A good deal of care should be exercised when using new shoes for the first time on rat-trap pedals, as a very great deal depends upon getting the holes made by the pedal teeth in the proper position. It is quite worth while under such conditions, to devote a short time to the satisfactory breaking in of the new shoes. The rider having mounted, the foot should be put in the proper position; it should in effect be placed at right angles to the pedal pin

If any deviation from this rule is permitted, it should be only to the extent of a fractional in-turning of the heel. Care should be taken that the ankle clears the crank boss, although nowadays the sharp square edges which, in the olden days so rapidly coerced the rider into a proper position by cutting his ankles, have been in the main done away with. The ankle may pass as near as may be to the crank boss, but should not actually touch it.

The best course to ensure a satisfactory grip is to wet the soles before mounting, and then, having got the foot exactly into its proper position, the rider may climb a fairly stiff hill, watching his foot carefully to see that its position does not alter, and the result will be that the holes for the pedal spikes will be made in the right place.

It, of course, occasionally happens that for one reason or another, considerable difficulty is found in getting the foot into its proper position. This occurs to a good many riders, especially to novices, and when once the holes have been made it is often difficult to remedy the error without the assistance of a small guide block attached to the shoe to fit behind the front plate of the pedal. It is important that this guide block, which simply consists of one thickness of sole leather, cut with a square edge, should fit properly against the inside of the front bar, and it may with advantage, when adopted so as to secure a correct position for the foot, be made also to fit, but not tightly against the central barrel of the pedal. With the most ordinary care in inserting this guide block, the holes which are not satisfactory may be avoided, and the correct action of the ankle will be encouraged.

Rubber pedals are, of course, preferred by a good number of people because they are not injurious to the shoe. The clever pedaller can use them with safety, but the novice is prone to slip his pedal when using them, and this tends to danger which is considerably amplified by the fact that the rider is a novice. In such cases I very strongly advocate the use of toe-clips, but they must be properly used.

Rubber pedals are essentially useful when

the cycle is adopted for the rider's vocation, as they do not call for any block or anything of the sort, and one's shoes are therefore comfortable to walk in. The best form of the rubber pedal has square rubbers moving on central pins, so that they adopt themselves to the curve and position of the foot. This minimises the chances of slipping. Of course, rubber pedals come out rather heavier than rat-traps, but they have their advantages; although I personally believe that the rat-trap pedal is by far the safer for all-round use, by both novice and expert. A vast number of ingenious modifications combine the advantages of both rubber and rat-trap pedals, and they have been put upon the market, and some of these contrivances may appeal to the rider who wants a change. A strong effort has been made in certain quarters to introduce what is called the American or Butterfly pedal, albeit, the general lines of the pedal in question were used in England a good many years ago upon the ordinary bicycle.

But as far as I can judge the plain, square-bodied rat-trap pedal, with a stout central barrel covering the pin, and two reasonably strong ends is more satisfactory, and affords a better hold for the foot than anything put upon the market of late.

The bearings of the pedal are (with few exceptions) exactly like those of the cone-adjusting hub. The adjusting cone and nut are, however, frequently covered by a belled dust-cap—an almost indispensable addition. This, of course, has to be removed before adjustment is possible.

In some machines a different way of locking the cone obtains; the end of the axle is hollowed out, and what remains is split open; over the split end screws the adjusting cone, and when it is in situ a tapered screw is screwed into the axle, and causes its split end to expand, thus gripping the cone in position. This method is less efficient than the ordinary one, especially in view of the great difficulty of using a screw-driver on so unstable an object as the end of a pedal.

Pedal bearings require frequent cleaning out with paraffin; but great care is required to keep it off the rubber, which it attacks. They require frequent oiling, and we need hardly say that efficient oil-holes are a sine qua non.

Pedals are often injured by falls, and if the axle be bent the pedal will not revolve. In such cases the pedal must be taken to pieces, and the machine ridden by pedalling upon the bare pin. It is very inadvisable for an amateur to try to straighten it.

RAILWAYS DEFEAT BICYCLISTS.

"A test case of great importance to English bicyclists which, curiously enough, was the first of its kind submitted for decision, was decided here to-day. The question was whether or not a bicycle was personal baggage and whether or not, accordingly, the railways were required by Act of Parliament to carry it without extra charge, the passenger being by law entitled to a certain weight of personal baggage free. The plaintiff sought to recover the sum charged by the company for the transportation of a bicycle, which it declared was extra baggage. The counsel for the plaintiff contended that the wheel was clearly personal, as it was something which the traveler carried for his own personal convenience and use. There was no distinction, it was argued, between a bicycle and a gun-case, a case of fishing tackle, an artist's easel or a pair of roller skates. The railway company argued that a bicycle was not an article which a person ordinarily took about with him. If a bicycle were to be regarded as personal baggage, it was urged, then a boat forty feet long would have to be so regarded and carried free. The court held that a bicycle was not personal or ordinary baggage, and that the railway company was entitled to make charge for its carriage."

The above report, published in the Chicago Record, in a cable message from its London correspondent, is erroneous in saying that "the case is the first of its kind submitted for decision." In the April, 1898, number of the Pneumatic we cited several cases in which the question had come up, and mentioned the fact that an English court had decided that a bicycle was not personal baggage.

Observations

BY LOUIS NAPOLEON.

If "acts speak louder than words," circumstances at least should point the way to action. In a local paper some time ago appeared the following:

"For the second time within a fortnight a fire engine has become stalled in the mud while on its way to a fire in the outskirts of the city. It is high time for a practical campaign in the interest of good roads."

Having somewhat of a knowledge of horses, in fact being "raised" on a farm, I have had ample opportunities while driving to gauge the general run of bicycle riders in respect to their knowing the rules of the road. In this matter the horsemen as a body show about as much regard for the rights of the road as the wheelman is lacking of this sense.

The influx of bicycle riders of recent years, so to speak devoid of that knowledge to handle the reins, has been the direct cause of many a mishap to the wheelman. For were he posted as to the ways and customs of the driver in guiding the horse and vehicle he could many times guard against possible mishaps, more difficult for the horseman to avoid, in giving up his right of the road and in other "tight pinches" which the cyclist, more than any other user of the roads, encounters.

Competitive racing by a cyclist against a horse was, I think, first introduced by that demon of a rider, Johnnie Johnson when he stirred up the cycling world by his phenomenal bursts of speed at Independence Iowa, in 1892. In '96 and '98 Walter C. Sanger followed in his footsteps and created considerable interest throughout the land by his winnings from the horse Albatross. Just a few weeks ago the familiar and good natured "Wallie" had an imitator in the east, one Soger, but the press dispatches announced his name as "W. S. Sanger" which called forth some comment. Of Sanger's home the Chicago News says: "Milwaukee's only claim to cycling fame is that she produced a Sanger." Which, I think, is not very complimentary to the cycling devotees of the Cream City.

The wheelmen throughout the land are lamenting the decadence of the cycling club. It is not necessary to repeat at length the one assertion that the wheeling interests have become too unwieldy, the devotees of the sport have so vastly increased in number that there is no more individuality about anybody, the supposition being that all ride the wheel and naturally it has become a common, every-day thing to do, whether it be for pleasure, recreation or business. Only the more important bicycle organizations are serving the order of things in providing more of a social feature of club life.

In comparing Paris with New York, Frank Tryon Charles, in the December number of "What to Eat," says this of the Empire city:

"Can be run over free of charge; in Paris, if run over, must pay a fine for being in the way.

"Can speak to a New York policeman without bowing; safer to bow in Paris.

"Can buy daily papers with the news of the day; in Paris newspapers bear to-morrow's date with yesterday's news."

The first is good in so far as the pedestrian would be fined if run into by a wheelman. The second quotation could hardly be carried out by the scorcher for he would strike his nose on the handle-bar. In the third instance I think Uncle Sam can justly claim to be in the van in the newspaper field for the European in trying to be ahead of the times is really a day later.

The wagon is as distructive to the general run of roads as the bicycle tends to their betterment. I have often witnessed it that drivers of vehicles, invariably, in seeking the best portion of the roadway, drive upon the patch created alongside by the constant travel by bicycles, thus ruining the smooth surface and even obstructing the passage of the wheelmen. It makes one rather shoot at times to see this done.

Legislation in the interest of cycle paths is a slow and exasperating process. In course of time, after exercising undue patience and a great deal of political wire-pulling, something may be arrived at and possibly a commencement made but there is never the vigor and manifest interest than if a private organization, qualified to undertake the construction of such work, had it in hand. "We want good roads" is the slogan, but the present generation wishes some enjoyment in having them, so will have to build cycle paths.

Helpful Hints

Rubber pedals are preferable for winter riding.

* *

Children under seven years of age should not be allowed to cycle.

* *

Do not ride before breakfast or at any other time with an empty stomach.

* *

It is not good policy to try to tow a lady up a hill that you can hardly climb.

* *

A teaspoonful of salt in the oil of a cycle lamp will brighten the flame considerably.

* *

Cork grips can be cleaned by rubbing them with a soft cloth soaked with turpentine.

* *

If you haven't a good place in which to store your wheel during the winter some repairman or dealer has.

* *

Do not take your bicycle apart just to put it together again. The unnecessary screwing of nuts often causes the thread to strip.

* *

In riding in hot summer days, protect the head well from the sun, and do not expose the back of the neck to any strong heat or cold draught.

* *

When it seems impossible to locate a small puncture try the following: place some finely powdered chalk in a piece of card and pass it slowly around the tire. The escaping air, in almost every instance, will blow the chalk.

* *

There is nothing of greater importance to the would-be racing man than a proper course of training. An exchange, giving some advice on training, says it is of importance that you should begin your training by having a few doses of some mild laxative. There are plenty on the market, but you must take care that you use only such as do not re-act and induce constipation when the immediate effect has passed away. The habitual use of purgatives, however, should not be indulged in, but the body should be kept in order by adjusting your diet. If, however, you should get a spill (and this is not unlikely), and get knocked about, a mild purgative will assist you toward a speedy recovery.

Assuming that your first race takes place in September, you should start training about July, so as to allow yourself plenty of time to get fit. You must have a gradual preparation if you wish to develop the full powers lying dormant within you. Of course, if you have not time for training, you must do the best you can under the circumstances. Do not be discouraged if you do not meet with success at your early attempts at racing. Keep trying again and again until you get the necessary experience, which will then clearly indicate to you whether you have the requisite speed power within you or not.

Several of our present leading racing men were rank failures when they first took to the track; but persistent training and experience has now helped them to gain the prizes which they coveted, but did not obtain, in their early days.

A racing man may show form when least expected. All racing men cannot expect to turn out champions, but there is no reason why they should not be good riders.

Let us suppose that a man is now endowed with the necessary physical powers to become a rider of the first class. Still he has a good chance of obtaining a fair share of the prizes, owing to the system of handicapping, which aims at making all men equal on the race-path by giving each rider a start according to his riding abilities.

The handicapper is the beginner's friend, and no matter how poor a rider may be, the handicapper, by giving him starts proportionate to his abilities, places all on an equal footing.

A beginner should be careful not to do too much work, but by a gradual process get his body into that condition which will be able to stand the strain put upon it by racing.

As the majority of racers are of short distance, it will be found quite sufficient if a rider each day does about three miles at a good steady gait finishing up with a sprint, which should be regulated according to the sprinting capabilities of the riders. Start at first with simply sprinting up the straight, and gradually open out until you can comfortably sprint half a lap at full speed. When you can do this, you can consider yourself as getting near that state which is called «fit» or «in form.»

In Lighter Vein

A MISTAKE.

Judge.

Scotty: "I see a humped-backed feller terday an' touched him on de hump fer luck." Micky: "Yer don't look exactly benefited." Scotty: "Naw. He turned round an' assassinated me all over de road He was nuttin' but a bicycle rider jest after completin' a century run."

GOING TOO FAR.

Cleveland Plain Dealer.

"Did you hear that they were going to tax punctures in bicycle tires?"

"That would be double taxation. Too many tacks in bicycle tires now."

THE WORST OF ALL.

Chicago News.

"That fellow is a regular Spaniard."

"Spaniard? He's worse than that. Why, he'd smash a bottle on a bicycle path."

A LINGUIST.

Detroit Free Press.

"Does your husband speak more than one language, Mrs. Parvenu?"

"O, yes, he talks war, horse, baseball and bicycle, one just as well as the other."

HIS MISTAKE.

New York Herald.

"Do you really think you love my daughter as a husband should?"

"Love her? Why, I would give up my bicycle for her."

(No cards.)

WOMAN'S WAY.

Tit-Bits.

A hirer-out of cycles tells a story of a lady who returned with the back tire of a cycle deflated and cut to pieces.

"You have punctured the tire and been riding about on it afterward until it is ruined," said he. "Why did you not bring it back here at once?"

She looked at him in great surprise and calmly answered, "My hour wasn't up."

HARD WORK.

Detroit Free Press.

"What's the matter, old man? You look hot and excited."

"Just been trying to dodge a cross-eyed girl on a bicycle."

AN EFFECTIVE METHOD.

New York Journal.

Micky: "I wish I could get over that nasty habit of always avoiding people."

Scotty: "Why don't you learn to ride a wheel?"

THOSE REPAIR SHOPS.

Cleveland Plain Dealer.

"Busted my new tire last night and took it to a repair shop."

"That's foolish."

"Why, what do you do?"

"Buy a new tire."

IT CERTAINLY DOES.

Tit-Bits.

He—But the worst of cycling is that it brings one in contact with all kinds of people.

She (thinking of her bruises)—It certainly does, especially the first week or so.

A FINANCIER.

Pittsburg Chronicle Telegraph.

"How did you get your overcoat away from your uncle?"

"Spouted my bicycle."

"Didn't you get your bicycle out of pawn in the spring by hocking your overcoat?"

"Certainly; it takes an astute financier to get the most out of his assets."

ITS LUCK.

New York World.

Miss Munnigirl: "Tell me, Count, hasn't the bicycle almost entirely superseded the horse in Paris?"

Count LeFrang: "For see riding, yaas; bote I haf not seen see bicycle mit vas good to eat."

BLISSFULLY UNCONSCIOUS.

Cleveland Plain Dealer.

"Tommy Tyre has been declaring for some time that he would just ride over the next fat man that got in his way. He did too."

"What was the result?"

"Tommy smashed his bicycle and broke his collar bone."

"And what happened to the man he ran against?"

"The man? Oh; he didn't know it."

THE NATURE OF THE COMPLAINT.

Puck.

"Sam's wife done made him gib up de wheel case he's got a bicycle heart."

"Fo' de Lawd's sake! How do it affek him?"

"It done make him git soft on bicycle gals what he met on de road."

UP TO DATE.

"What gear would you prefer?" asked the dealer in bicycles.

"What would you recommend?" said the customer.

"Well, for a tandem of this weight I should think a ninety-three would be about right."

"What's the matter with a '90?" inquired the customer, eying him suspiciously.

ONE THING NEEDFUL.

Mr. Wabash—"Do you belong to the 'Daughters of the Revolution', Miss Olive?"

Miss Olive (of St.Louis)—"Not yet; but pa's going to buy me a wheel next week."

HER DAMAGING RECORD.

She says she cannot sing or play,
She scoffs at art and poetry,
She only rides her wheel all day—
And I guess she's not the girl for me.

THEIR OBJECTION.

"Have you noticed that the German manufacturers of bicycles are trying to exclude American machines from their market?"

"Yes. They are afraid the air in the tires has injurious microbes in it."

AN EXPERT.

Life.

"Is Spinner an expert bicycle rider?"

"I should say so. He ran over four men last week, and the police didn't catch him once."

HORSE SENSE.

Indianapolis Journal.

"So you think it absolutely necessary to have bicycle shoes on when you ride your wheel, do you?" asked the Cheerful Idiot.

"Of course," said the youngest boarder.

"Then, would you wear horseshoes when you rode a horse?"

THE LAW OF GRAVITATION.

Chicago News.

"Newton discovered the law of gravitation by noticing an apple fall from a tree, didn't he?"

"Yes. If he hadn't been so previous somebody might have discovered it by seeing a beginner fall from his bicycle."

DEPTH YET TO BE REACHED.

Washington Star.

"You boast of your greater civilization!" exclaimed the Indian contemptuously.

"Haven't we a right to?"

"No, sir. The Indian has been dragged down by your influence, but he is still superior. He may drink intoxicating liquor. But he doesn't smash the bottles on the asphalt for bicycles to run over."

HE IS RIGHT.

New York Herald.

"You needn't jump out of the way," sarcastically remarked the monkey-backed youth. "You won't get run over. This is a safety."

"It isn't the machine I'm afraid of," replied Uncle Allen Sparks, thoroughly roused. "It's the darn fool that's riding it."

UNSTABLE.

Poindexter—"Handelbarr has changed his politics again."

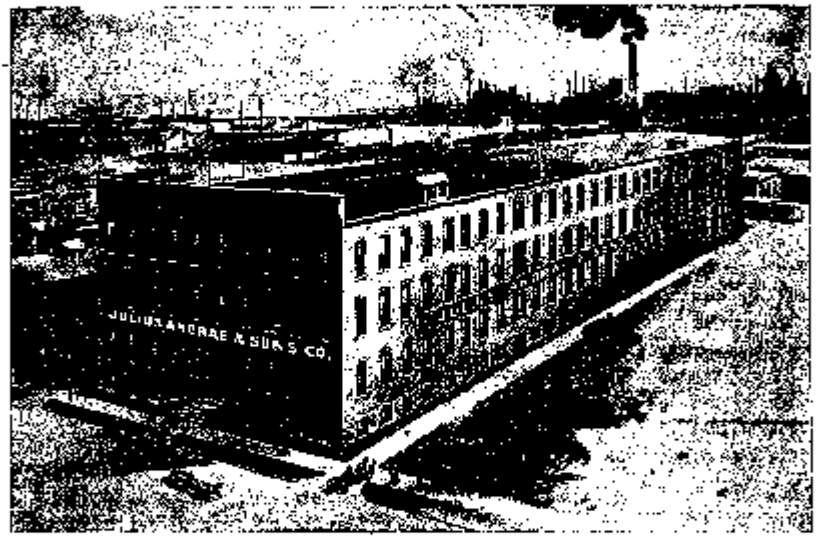
Tillinghast—"I'm not surprised at that. He changed his wheel not long ago."

With the Trade

THE NEW ANDRAE FACTORY.

The Andrae people are now the possessors of one of the finest bicycle factories in the world. It is located in the heart of the manufacturing district of Milwaukee and consequently has the advantages of excellent railroad facilities. The track of one of the main roads leading out of Milwaukee has been extended to the door of the shipping department. The factory is a three story and basement structure with a frontage of sixty feet on Madison Street and extending 150 feet between Clinton and Barclay Streets.

cheap, can we make cyclometers has been our policy, and that policy will not be changed while we remain in business. Our unlimited facilities and enormous production and sales, however, enable us to offer Veeder cyclometers to the public, at practically the same price asked for inferior instruments. We originated the small barrel-shaped cyclometer with a compound differential combination of gears and this revolutionized cyclometer making. Many have copied the outward appearance of our regular instrument, but an unprejudiced comparison of mechanisms will convince



THE NEW ANDRAE FACTORY.

This new factory with its model equippment gives the Andrae people an almost unlimited capacity. The building will be used exclusively for the manufacture of Andrae bicycles and perfect service and prompt shipments will be the company's watchword hereafter.

The Veeder Manufacturing Co., Hartford, Conn., has the following to say about cyclometer making: "Making cyclometers is a business with us, and not a side issue. We believe that we employ not only more machinery and special tools, but more expensive and accurate machinery and special tools than all other makers of cyclometers in the world combined. We know that our sales exceed by far those of all other makers combined. How good, and not how

any one of the justness of our claims to unquestioned superiority.

"The name Veeder is stamped on every cyclometer that we make."

The Sanger Handle-Bar and Plating Co., of Milwaukee, has received notice from the government patent office in Washington that on Dec. 21st their application for a patent on their adjustable handle-bar, was granted. All the claims have been allowed and the factory is now running with a double force both day and night. The Machinery throughout the factory is the most modern and almost all automatic, and commencing with the first of the year, their production will be 1,000 bars in every 24 hours.

A High Grade Manufacturer

who can't build the best bicycle he knows how to make, with best equipment, including G. & J. DETACHABLE TIRES, and sell it at $40, with a fair discount to his agent, either doesn't know how, hasn't studied or hasn't a large enough output.

Rambler

BICYCLES

at $40

couldn't be better at any price. WE HAVE STUDIED, know how, have a large output.

Ask for 1899 Catalogue.

Gormully & Jeffery Mfg. Co.

Chicago. Boston. Washington. New York. Brooklyn. Detroit.
Cincinnati. Buffalo. Cleveland. London.

Mr. J. Cordes, manager of the sales department of the Sanger Handle-Bar & Plating Co., has just returned from a trip through the east in the interest of the Sanger Bar. Mr. Cordes states that a favorable reception was given the Sanger Bar, "and," he says, "it certainly deserves it." So it does.

Distributing agencies for the Sanger Bar have been established for the eastern trade in New York city with Walter E. Lindsay and Co., 258 Broadway, and Case and Schmedeiker, 92 Wall St., who will handle all export trade as manufacturers agents.

Every cyclist ought to have a nipple grip. It is almost as great a necessity as a wrench. One of the handiest nipple grips is the Neversilp, made by the Buffalo Specialty Mfg. Co., Buffalo, N. Y.

If you want an interesting little publication every month send your name and address to the Joseph Dixon Crucible Co., Jersey City, N. J., for a copy of "Graphite."

The E. C. Stearns & Co., Syracuse, N. Y., is issuing the Annual Yellow Fellow Year Book. A copy will be sent free to any address upon request.

The 1899 Vim tires will be better than ever, say the Boston Woven Hose & Rubber Company, the makers. Vim tires always were good tires.

H. A. Middleton, formerly with L. C. Chase & Co., is now superintendent of the India Rubber Co's. factory at Akron, O.

"Salamander" is the name of a chain lubricant manufactured by E. G. Enger & Co., Toledo, Ohio.

Walter C. Sanger will be at the New York cycle show in the interest of the Sanger Bar.

Catarrh Cannot be Cured

with LOCAL APPLICATIONS as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces. Hall's Catarrh Cure is not a quack medicine. It was prescribed by one of the best physicians in this country for years, and is a regular prescription. It is composed of the best tonics known, combined with the best blood purifiers, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing Catarrh. Send for testimonials, free.

F. J. CHENEY & CO., Props., Toledo, O.

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Can Build Anywhere From One To One Thousand Bicycles For You

If Order Is Large Enough Will Build Bicycles To Your Own Specifications

Prices Will Be Right

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THE BREMER BICYCLE

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MASTER OF THE ART OF PUBLICITY.

No more attractive advertising was ever printed in any trade paper than is at the present moment being used for the purpose of exploiting the merits of the Claus Handle-bar. It is a thousand pities that other advertisers in the "Cycle Age" will not imitate so superior a form of work. In graphic character, in aptness of illustration, in artistic ensemble, in the joining of happy phraseology to equally happy drawings, in power to arrest attention, it is easily in the lead.—CYCLE AGE, December 8, 1898.

THE CRAMER WAY

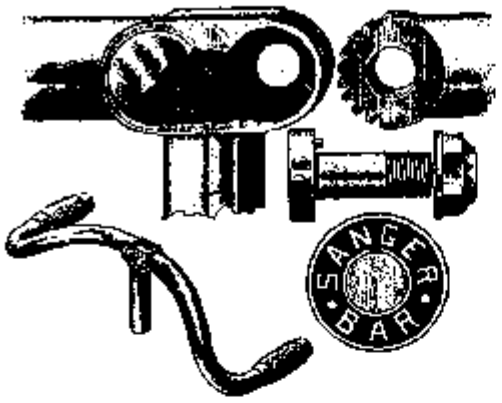
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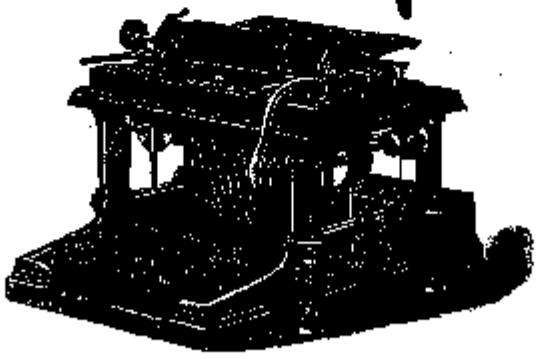
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Of printing
That we figure on.
But we never cry
Over spilled milk.
Unsuccessful estimates
Are the spilled milk
Of the printing business.
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Because
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Of work,
We carefully calculate
The cost
Of the stock
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Required
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Good all through.
After costs
Have been figured,
And we claim
To be able
To figure "close,"
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A fair profit.
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To the order
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Ranks with the Best in the State.

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Brown Deer Tavern

Louis Heuer, Proprietor.

Brown Deer P. O., Wis.



I have used Ripans Tabules with so much satisfaction that I can cheerfully recommend them. Have been troubled for about three years with what I called bilious attacks coming on regularly once a week. Was told by different physicians that it was caused by bad teeth, of which I had several. I had the teeth extracted, but the attacks continued. I had seen advertisements of Ripans Tabules in all the papers but had no faith in them, but about six weeks since a friend induced me to try them. Have taken but two of the small 5-cent boxes of the Tabules and have had no recurrence of the attacks. Have never given a testimonial for anything before, but the great amount of good which I believe has been done me by Ripans Tabules induces me to add mine to the many testimonials you doubtless have in your possession now. A. T. DEWITT.

I want to inform you, in words of highest praise, of the benefit I have derived from Ripans Tabules. I am a professional nurse and in this profession a clear head is always needed. Ripans Tabules does it. After one of my cases I found myself completely run down. Acting on the advice of Mr. Geo. Bower, Ph. G., 928 Newark Ave., Jersey City, I took Ripans Tabules with grand results.
Miss Bakaw WINDHAM.

Mother was troubled with heartburn and sleeplessness, caused by indigestion, for a good many years. One day she saw a testimonial in the paper indorsing Ripans Tabules. She determined to give them a trial, was greatly relieved by their use and now takes the Tabules regularly. She keeps a few cartons Ripans Tabules in the house and says she will not be without them. The heartburn and sleeplessness have disappeared with the indigestion which was formerly so great a burden for her. Our whole family take the Tabules regularly, especially after a hearty meal. My mother is fifty years of age and is enjoying the best of health and spirits; also eats hearty meals, an impossibility before she took Ripans Tabules. ANTON E. BLANKE.

I have been a great sufferer from constipation for over five years. Nothing gave me any relief. My feet and legs and abdomen were bloated so I could not wear shoes on my feet and only a loose dress. I saw Ripans Tabules advertised in our daily paper, bought some and took them as directed. Have taken them about three weeks and there is such a change! I am not constipated any more and I owe it all to Ripans Tabules. I am thirty-seven years old, have no occupation, only my household duties and nursing my sick husband. He has had the dropsy and I am trying Ripans Tabules for him. He feels some better but it will take some time, he has been sick so long. You may use my letter and name as you like.
Mrs. MARY GORMAN CLARKE.

I have been suffering from headaches ever since I was a little girl. I could never ride in a car or go into a crowded place without getting a headache and sick at my stomach. I heard about Ripans Tabules from an aunt of mine who was taking them for catarrh of the stomach. She had found such relief from their use she advised me to take them too, and I have been doing so since last October, and will say they have completely cured my headaches. I am twenty-nine years old. You are welcome to use this testimonial.
Mrs. J. BROOKMAN.

My seven-year-old boy suffered with pains in his head, constipation and complained of his stomach. He could not eat like children of his age do and what he did eat did not agree with him. He was thin and of a sallow color. Reading some of the testimonials in favor of Ripans Tabules, I tried them. Ripans Tabules not only relieved but actually cured my youngster, the headaches have disappeared, bowels are in good condition and he never complains of his stomach. He is now a red, chubby-faced boy. This wonderful change I attribute to Ripans Tabules. I am satisfied that they will benefit any one (from the cradle to old age) if taken according to directions. E. W. PAGE.

ONE GIVES RELIEF.

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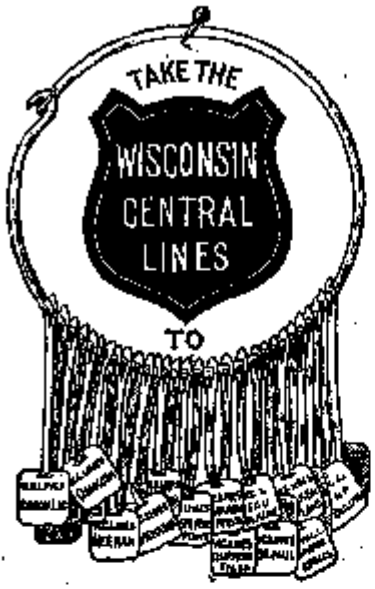


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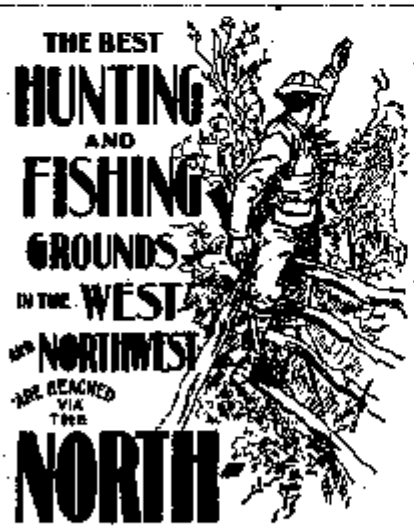
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VOL. X. FEBRUARY, 1899. NO. 2.

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THE PNEUMATIC.

VOL. X. FEBRUARY, 1899. No. 2.

TOLD TO THE BABY.

BY CLARENCE PATRICK M'DONALD.

MRS. MONTRESSOR was not averse to complying with the request of the weak, pleading voice coming from the bed at the end of the room. Indeed, it was with a happy acquiescence that she brought the baby and placed it beside the frail little occupant of the bed. She was only too grieved to think she could not do more to allay the apparent mental suffering of Miss Collins.

Miss Collins had only been sick a few days, but Mrs. Montressor knew, without the doctor's explanation, that the beautiful, golden-haired, black-eyed young woman would pass away very soon, now; knew that her lease of the life to which she clung with such determined obstinacy, was of short duration.

Mrs. Montressor smoothed out the pillows and braced the sufferer into a sitting posture. It was hard to see the poor little woman die without being able to render her some beneficial assistance.

The baby crowed and patted the sick woman on the hand; and then, seeming to see some new-found object of interest in the bright rays of sunlight which were sifted through the lace curtains at the window, crooned more joyously than ever, and tried to grasp the little rays as they shot across the alabaster whiteness of the spread. To her the wincing of the consumptive was a love-grimace destined to amuse her.

The woman coughed. It was the hollow cough of a woman who would never again wander through the woods, listening to the twittering of the birds—the cough which always predicts that death is hovering near ready to clasp its victim in its cold and uncertain embrace.

"Papa will never know what I've suffered

she nestled her little face upon the pillow beside the invalid's, and fell asleep.

Mrs. Montressor came in a few minutes later. She started when her eyes fell upon the bed. She bent down and sadly kissed the woman's cold lips, and then, taking the baby in her arms, silently left the room.

Outside the door she met the State's champion.

«Can I be of any assistance?» he inquired, noticing the peculiar expression on Mrs. Montressor's face.

She looked at him, her eyes filled with tears.

«No,» she said, «you can do nothing for her now. She does not even need my services any longer.»

WHAT THE MOTOR VEHICLE SHOULD BE.

The requirements of the moto vehicle are set forth in the report published by the Massachusetts Charitable Mechanics' Association of Boston relative to the recent contest between Moto carriages at Charles River Park. The requirements are set forth as follows:

In the case of carriages intended for road use, and not for racing, a speed greater than about fifteen miles per hour is not needed; for in the case of country roads, the conditions of the roads usually prevent a greater speed without injury to the vehicle and the rider; and in the case of city roads, faster riding would be against the law, on account of the danger to foot passengers. Great speed, therefore would be needed only by carriages intended for racing. Nevertheless, the ability to increase the power exerted at times very much above the normal is a great desideratum, for it may be necessary to climb steep hills, and to maintain upon them a reasonable speed, and one considerably greater than can be maintained by the average horse and carriage. Indeed, the motor carriages should always be able to go faster than the horse driven carriages; not only because they should expedite travel but also because they can be better guided.

Range of speed and good control are very important matters. These are especially important when one finds a portion of the road so clear of other travel as to render possible and desirable a high speed, and another part so crowded as to render it necessary to creep along at a very slow and very variable speed, which may even at times become a negative quantity.

In steam carriages it is easy to accomplish this result by throttling the steam more or less as may be needed. In the electric carriages the method of accomplishing this result is usually as follows: The carriages have usually three or four forward and two or three backward speeds produced by setting the controlling mechanism at certain definate positions; then when a speed is needed intermediate between any two of these, the result is obtained by setting the controlling mechanism in the position corresponding to one of them, and then, after moving with this speed a part of the distance, changing to the other. When we take note of the fact that it requires a little (though short) time to develop any one speed, it will be evident that this method gives the driver a very perfect control of his vehicle. Of course the brake may be used in both as an additional auxiliary when necessary. It should be added that those that cannot reverse are at some disadvantage when in a very great crowd of heavy and slow-going teams, or in a blockade; nevertheless in cases where they can turn in their own width this difficulty is less than where they cannot.

These remarks apply also to gasoline carriages, as they are usually built with ranges of speed that give them good control.

By this is meant that the carriage should be easily turned, quickly started and quickly stopped, and easily guided when the room is small; as in a crowd of vehicles or in a narrow street, also in cases where it is necessary to turn quickly, to turn in a small space, or to reverse or go ahead at any speed, these things can be

for him, baby,» she said, her sad, plaintiv voice momentarily holding the baby's attention. «It seems hard to know that I shall die without ever again being pressed to his breast, or feeling his warm lips touch mine.»

She stopped for a moment. The baby laughed and showed two little teeth.

«Perhaps, after all, I did wrong in going away as I did. Had I stayed here everything might now be so much happier, for I know that your father loved me then. It seems but yesterday when together we rode our wheels to the spot where I last saw him,» she went on introspectively, her eyes not on the baby, but looking through the open window and resting on an imaginary spot over the hills.

Suddenly the strains of Lewis's "Stag Party" Two Step reached her from the race track. It was the day on which the State championship races were to take place, and he was to participate. Her thoughts flew through the window and entered the race-track. In her mind's eye she saw the whole picture. She saw the smiling faces of the beautiful young women as they cheered and waved their dainty, perfumed handkerchiefs at their respective favorites; she saw him as he rode around the track, his eyes bright with the excitement of the sport; she saw the smoothly rolled track, and the thousands of spectators; she saw the wiry, muscular men against whom he was to compete. She heard the shrill, sharp cry of the candy-boy crying out his wares; she heard the vibrations of the music, as it rose and floated upon the afternoon breeze; and she heard the hum of myriad voices wafted gently to her through the open window.

The baby laughed and twined its little hands among the roses on a chair by the bed-side. To her the world held no other charms than those in the immediate foreground; to her the breaking heart of the woman was not crying out in anguish, but was singing a low, sweet, gentle lullaby.

The woman went on: «Perhaps, after all, I acted for the best. It all happened so suddenly, baby, I had no time for thought.

«It was an afternoon just like this one, dear. Mrs. Montressor had gone out, and I was left alone in the house. Your papa told me he would not be able to go out with me that afternoon—said he was compelled to go to Lincoln for a day or so.

«In those days I believed everything he said, I confided all to him. Indeed, I put him above reproach. I did not know him. I was ignorant of the fact that he loved your mother with the same affection he bestowed upon me.

«I took my wheel and rode over the hills. The afternoon was so pleasant that I did not notice the distance I had gone. Just as I turned a bend in the road, I came unexpectedly upon your father and the girl whom you now call mamma. They were reclining by the road-side, and her hand rested in his.

«I took in the situation at a glance. It startled me for the moment, but something seemed to impel me to ride right on and not notice them. I saw your papa raise his eyes and touch his cap. I grew dizzy. My wheel struck a stone in the road, and I was thrown violently upon the ground and knocked unconscious.»

The baby laughed joyously again, and clapped her little chubby hands. Loud shouts came from the race-track; and to her came his name shouted with almost frenzied energy. She knew what those continued acclamations meant; they proclaimed to the world that he was now the State champion.

«When I recovered, I was lying in this room,» the pale sufferer went on, speaking hardly above a whisper, «and a little while after that, I was handed a note. It was from your mamma.

«'We have always been such friends,' it read, 'that it seems hard for me to write these words; but I must hereafter treat you with the same disregard for injury and respect as you showed me this afternoon. Ere this reaches you, however, I will feel consolation in the thought that my engagement to him will fully compensate me and off-set the little slight you gave me this afternoon.'

«I grew well again, but the world no longer held any charm for me. I went abroad for a little over a year, and then returned to bid Mrs. Montressor good-bye forever. On my arrival home, however, I caught a severe cold and have lingered here ever since. But it seems—»

The little woman was seized again with another violent attack of coughing. Then she became very still. The baby wondered why she did not again talk to her, and waited patiently for a few moments. Then becoming sleepy,

readily done. All this is necessary in order that obstacles, whether at rest or in motion, may be easily and quickly avoided. It should be observed, however, that all the motor carriages exhibited are decidedly more manageable than a horse and carriage, besides occupying less room, and that the operator guiding the motor carriage knows just what it will do, with far greater certainty than the driver of a horse and carriage knows what his horse will do.

SIMPLICITY AND DURABILITY.

The special importance of simplicity is that the machinery may not easily be gotten out of order on account of a multiplicity of the parts, or from a need of too delicate adjustment, that the services of a skilled mechanic may not be needed to drive it, and that ordinary repairs may be made as easily as possible, and by the use of such tools only as can be easily carried on the vehicle.

In order to secure durability none of the parts should be so proportioned as to wear out quickly. But in order to be secure of the durability, it is necessary to observe the wear of the carriage during a long period of service, and while it would be easy to condemn features that evidently showed weakness by an inspection of the new carriage, it would need a long trial to pronounce positively that any carriage is very durable.

APPEARANCE AND DESIGN.

When motor carriages become common, there will be use for those which, though well adapted to their purpose, are not especially handsome. Thus it would not be suitable to have in a delivery wagon the richness and beauty desirable in a pleasure carriage; nevertheless, in all cases neatness and elegance of design are important.

COMFORT AND COST OF OPERATION.

The motor carriage should be fully as comfortable as those now in use, and not jar the rider excessively.

The cost of operation, in the case of all the carriages exhibited, so very small an item that it would hardly have any influence upon the user of a motor carriage in deciding which to puchase. It is not in any way to be compared to the cost of keeping a horse. The cost is, in practically all the cases, less than two cents per mile on ordinary roads.

CLIMBING OF GRADES.

The carriages should be able to overcome as steep, or even somewhat steeper hills than horses can climb, and to maintain a greater speed than a horse. A severe test of a motor carriage is to have it start from rest on a steep grade, in which case the capability of a motor to bear a very considerable excess of load temporarity is a great help.

DESCRIPTION OF DE DION VEHICLES.

The quadricycle is provided with two seats, the rear seat being a saddle occupied by the driver of the machine, and the forward one being a seat occupied by another rider. These machines have to be started by means of the pedals, which cease to act as soon as the motor begins to operate. The gasoline is contained in the bottom of the combined tank and carburetter; a current of air, whose quantity is regulated, is caused to flow over the surface of the gasoline, and thus becomes charged with gasoline vapor. The mixture of air and gasoline then passes through the mixing valve at the top of the tank, where it unites with a quantity of air sufficient to make the proper explosive mixture. From here it passes through a pipe into the cylinder, where it is exploded by an electric spark.

The engine is single acting, and the cylinder is provided, on the outside, with a series of projecting rings, the object of these being to present a large surface to the air for the purpose of cooling the cylinder, as this arrangement renders it unnecessary to carry cooling water. The engine is vertical, and the crank pin is set in two discs which perform, to some extent, the functions of a fly-wheel. The discs are enclosed in a flat cylindrical box made of aluminum. The lower part of this box contains oil, into which the crank pin dips at each revolution. This engine drives the rear axle by a train of gears, this axle being made in two parts connected by a differential train of spur gears, which allow the two rear wheels to turn at different rates of speed in going around curves.

The steering is done by means of the handle-

bar in the ordinary way. In the case of the quadricycle the forward axle is fixed relatively to the carriage, and the axle of the front wheel is mounted at the ends of the fixed axle by means of vertical pivots, and the steering gear is so designed as to cause the two front wheels to turn through different angles to the carriage when going around curves. Ball bearings are used throughout the running gear. The weight of the tricycle is said to be about 175 pounds, and that of the quadricycle about 275 pounds.

The charge of air and gas in the cylinder is exploded by an electric spark, which can be caused to occur at any portion of the stroke desired. Thus if a high speed is desired this spark would be made to occur near the beginning of the stroke, and if a slow speed is desired, near the end of the stroke. The batteries for the spark apparatus are contained in a metal box hung from the upper bar of the machine, an induction coil is hung on the rear axle, and to the valve-operating gear is attached a circuit-breaker of special design. By suitable adjusting the position of this circuit-breaker by means of a handle, the spark is caused to occur at any portion of the stroke desired. It will be evident, therefore, that any speed above a certain minimum, which they state to be about four miles per hour, can be obtained. For lower speeds, the machine has to be driven by the pedals, and, in starting, the pedals are used until the motor commences to work properly. The switch of the igniter is in the handle of one of the handlebars. In going in a crowded city street, if the speed required is too low for the motor to work, the pedals are used.

These machines, on account of their lightness, would naturally be preferred to the heavier carriages by any one who desired a substitute for the bicycle, rather than the comfort and roominess which can be obtained only with greater weight. They can, if anything gets out of order, be driven by means of the pedals.

The tricycle can be easily guided, having only one wheel in front; and also, on account of the small wheel base, it can be turned around in a very small space, and this partly offsets the disadvantage of not being able to reverse and back.

The machine is capable of a very considerable speed, and the whole idea is very ingenious and well calculated for use when a light and small vehicle is desired.

CHIEF CONSUL VAN VALKENBURGH'S ADDRESS.

It is customary for the Chief Consul to outline his policy for the coming year. The League is no exception to the rule that no organization is worthy of life that has nothing to live for. What is the reason for the existance of our association? When this question is answered I am sure it will not be difficult to outline the policy of the League.

Primarily, I hold, that the League of American Wheelmen exists for the purpose of promoting wheelmen's rights and securing to them suitable means for the unrestricted use of the bicycle along and over highways of the country, so long as they do not interfere with the rights of others. Ten years ago wheeling was a novelty, an innovation, a sport. It was entitled to no distinguishable rights. It existed merely by sufferance. There was little or no acknowledged law that defined our position and, from our standpoint, much of that which existed rather restricted and harassed our movements than recognized our rights. Union and combination became necessary for our existance. The L. A. W. became a power and our battles were victoriously fought. To-day we have recognized rights. The utilitarian instincts of the community, too, have been brought to respect the qualities of this means of locomotion, and wheelmen have ceased to be sportsmen. Cycles have become almost as indispensable to modern life as the telephone, type-writer and trolley-car But the declaration of independence that made

this recognition of the wheel an established fact, was written by those of us who, as pioneers, associated ourselves together in our fight for survival under the banner of the L. A. W.

This has been the history of the League. This much we have done that has resounded to the benefit of every wheel rider in the country. There is no man that rides to-day who does not owe a debt of gratitude to the League of American Wheelmen.

Thus, so far, the great work of the League has been, through united effort, to obtain legal recognition for wheelmen's rights. In a great measure these rights have been obtained. Yet, every once in a while, they are threatened, and unless vigilantly guarded will be curtailed or unnecessarily restricted by inconsiderate and hasty legislation. We have proof of this in our own city where ordinances are being prepared that will subject bicycles owned in the city to the payment of a license fee in addition to the present tax levied upon them. Matters of this nature require prompt and concerted action on the part of the wheelmen. But, as is usual in such cases, the brunt of the fight in opposing such ordinances will fall upon the League and its sister organization, the C. R. C. And this, too, when the benefits derived therefrom will be shared by all the wheelmen in the city.

By a bit of surreptitious legislation (Sec. 925-52, Sub. 66, R. S. Wis.) cities incorporating under the general charter may "regulate and license bicycles, and the use thereof upon the streets and public places, and provide for the use of bells and lights thereon." It is the duty of wheelmen to see that this section is amended in so far that the word "license" is striken out.

It may be deemed expedient to again seek the passage of a bicycle baggage bill. We are in much better shape to pass the bill, except financially, at this session of the legislature than we were two years ago, thanks to the irrefutable arguments provided wheelmen by our good friends the Wisconsin Central Railway Co., and I gladly take this opportunity to again thank that Company for the way in which they fulfilled their promises to the wheelmen.

The question of securing adequate protection for wheels from theft is also deserving of attention. It might be wise to have a statute enacted that will make the stealing of a bicycle at least as great a crime as the stealing of a horse. The penalty for stealing any old horse is from two to fifteen years imprisonment, while a man may steal a bicycle, hire a shrewd lawyer, prove its value to be less than twenty dollars, and get off with a light fine. And in this connection I wish to call the attention of members present to the desirability of some method being secured by which a man can insure his wheel. I am glad to say that there is a proposition on foot to establish a mutual benefit bicycle insurance company in our state, and that a bill has been drawn providing for such a corporation. I hope that this matter may be fully discussed before we adjourn.

I instance these cases of needed legislation and necessary League action to show that on the proposition of obtaining proper recognition of wheelmen's rights there is still work to be done and that new needs will be ever present demanding our attention.

The question of League control of racing and the admission of professionals to the League are to be fully discussed at the National Assembly at Providence next month. Personally I have been in favor of dropping racing, provided that a competent organization could be found that would take proper care of the sport. But at present no such body presents itself, willing to undertake the task, and I am of the opinion that for another year, at least, we must continue our control of bicycle racing.

I favor the admission of professionals provided restrictions are placed upon them rendering them ineligible for certain League offices such as membership on any racing board or committee. These are questions of domestic policy and as Wisconsin may be represented at Providence it will be well for us to have a full and free discussion of the subjects so that the sentiment of the division may be expressed in its vote at the assembly.

And now I come to brief discussion of a matter that is in my judgment of paramount importance to the welfare and existance of the League of American Wheelmen. As I view it, obtaining recognition for wheelmen of their legal rights is but a preliminary skirmish. The great battle of the League is still before it. We want good roads. We want them not alone as wheelmen, but also as citizens, and we want all good citizens of the State of Wisconsin and

of the United States, whether they ever saw a bicycle or not, to join with us in our efforts to secure them.

Singular as it may seem, good roads are the result of education rather than of experience. Centuries of experience have left the roads in worse condition than they found them. On the question of the wrong inflicted by bad roads and the methods to be used in riding them the bicycle rider is an authority. Much of his lesson has been learned from experience, I admit. But experience has only taught him that there is a wrong to be righted. The methods and means of righting it have been learned by him through the expenditure of much money and an exhaustive study of the subject. The immediate connection between his logical brain and the logical condition of the road has been established by his wheel. I presume that President Potter, or our energetic fellow member, the Chairman of the National Committee on Highways, Otto Dorner, might both have lived, ripened, gone to seed and been planted with an absolutely impenetrable ignorance on the subject of good roads had not fortune led them to straddle a bicycle. I will guarantee reformation in the manner of road building in any community where I can get fifty per cent of the intelligent farmers on to wheels. Nay, more, I will take fifty per cent of them, including the bicycle haters and best friends of bad roads, make them wheel for, say, twenty miles over the roads in their neighborhood and bring them back sad, sore and solemn, may be, but enthusiastic road reformers. Wheelmen are personally acquainted with the roads they ride over. They know each change of grade, and every change of surface. From a direct application of practical dynamics they can figure the loss of power attributable to bad roads and the result of their figuring is appalling. Fortunately many riders are men of energy, education and action, resenting their losses, not only from the standpoint of personal discomfort, but also from the standpoint of economics. Their advice, springing mayhap from selfish resources, is nevertheless worth millions of dollars to all citizens, even to those who do not come into direct contact with the roads. The ultimate saving in cost that could be brought about by a system of good roads is incalculable. These facts must be taught, this advice, this education, this classification of practical ideas and destruction of prejudice, must be carried on, at this stage, by an energetic and active association.

Providence sometimes makes use of strange instruments and it may be that the awkward, humpbacked, much reviled scorcher is but a precursor of a great economic change, and it may not be impossible that the League of American Wheelmen is destined to introduce into the American Republic reforms in the nature of practical road building that will revolutionize our present domestic economy.

This broader, more unselfish and yet singularly selfish plan of action seems to me to embody the "reason why" of the L. A. W. More substantial, more lasting, and universally beneficial, it is a labor worthy our united efforts, and should call to our ranks every thinking rider in the country.

MARRIAGE.

Marriage is lottery, so we say,
But we all want a hand when the drawing begins,
We each think the prizes are coming our way,
And most of us think that the other man wins.

Emma Playter Seabury.

The Hum of the Horseless

Electric motor cabmen of Paris must understand their profession thoroughly before they are allowed to ply the vehicles through the streets of the Gay City. The largest company operating electric carriages in Paris has secured a tract of land out in the country and would-be motormen are required to travel up and down this tract of land until they are proficient in the management of the electrical vehicles. The road at different places is constructed of different material, as asphalt, macadam, wood, and stone. Various obstructions are put in the way, such as baby carriages, pedestrians, bicycles, etc. These are made of thin boards and are painted to represent the various objects. They are held in place by a stay or prop, and the motorman is required to circulate around them until he becomes proficient in managing his vehicle. This is an excellent idea, and it is to be hoped the same thing will be in use here when the horseless vehicle comes into more general use. Notwithstanding the fact there are many electrical vehicles plying in the city of New York, there have been few if any accidents by them, which shows that our drivers are at least as careful as their French brethren. In the recent severe storm in New York electric carriages succeeded in getting along rapidly when the ordinary cab could only proceed at a snail's pace, which may be regarded as a genuine victory for the electric carriage.

—

Among the attractions to be given in connection with an exhibition arranged by the London Automobile Club will be time tests of motor vehicles on the track, motor cycle races, hill-climbing tests in the neighborhood of Richmond, competitions with a view to proving the efficiency of commercial delivery vans, lorries, omnibuses, and the like.

It is proposed to invite the recognized automobile clubs of the world to a congress during the show, and there will probably also be a grand parade of prize winners and an entertainment at the seat of a member of a club near London.

The club believes that motor cycle racing on the path is likely to become popular, and that in the matter of these races alone the show will prove advantageous to manufacturers. Pedaling in the motor cycle races will be allowed only over a certain distance necessary for the starting of the machine.

—

"The 20th Century Movement" is the title of a catalogue issued by the American Electric Vehicle Company, 1545 Michigan Avenue, Chicago, Ill. This company has made a special and careful study of the requirements of this class of vehicles. The storage battery which they use combines power, lightness and compactness, and one charging will run a vehicle thirty-five miles at a cost of one cent a mile. The batteries can be recharged in the carriage in about three hour's time. The vehicles are equipped with a recording wattmeter showing the amount of electricity used and indicating the capacity remaining. Single reduction motors are employed, and the braking is done by means of band brakes. The catalogue describes all of these parts in detail as well as the steering lever the reversing switch, lamps and various types of vehicles manufactured, a number of which are shown by means of handsome cuts. The catalogue, which is handsomely gotten up, will be sent to any one on application.

—

A new method of electrical propulsion for vehicles has been invented by F. W. Schneider, Triberg, Germany. In his improvement for the propulsion of vehicles by accumulators, a main battery when starting is put in circuit parallel with a small auxiliary battery, constructed for quick discharge, the purpose being to supply the additional current required at the start essentially from the auxiliary battery, thus avoiding a high rate of discharge from the main battery and thus increasing the efficiency of the battery. By this construction the inventor avoids the excessive discharge incidental to the use of the mixed system of accumulators.

—

The motor industry in France employs upwards of 200,000 people.

Observations

BY LOUIS NAPOLEON.

But for my riding slowly and with caution I would quite frequently have had severe accidents. Coming home one evening when it was quite dark and riding on my side of the street I just missed a collision with a boy who was on his left side, contrary to the rule of the road. Another instance occurred in this same block. I had mounted my bicycle on the right side of the street and in looking down at my feet to properly catch the toe clips did not detect the rider coming directly at me, who, of course, turned out to the right, crossing the street railway tracks to avoid the collision which would have resulted, and in passing remarked: «Can't you look out?» But as I was in the right it was his duty to turn out even if I had been looking ahead, and I therefore said: «Why don't you get on the right side.»

*

Although I call myself a wheelman since 1884 I can say that the year 1879 saw me mounted on a velocipede, with iron tires, wooden pedals, etc., about the height of myself at the time. I got «stuck» on the machine while attending a city school and my grandfather purchased it after a lot of persuasion. My parents resided in the country where I spent my Saturdays and Sundays. This contrivance, being a variation of the ordinary bicycle which became quite popular a little later, I had the folks to take along out to go through the preliminaries of the first lessons in mounting and riding. Ours was a house of large proportions standing on an eminence. At the rear of the house I commenced operations quite unassisted. I would take the machine, lean it up against the stone wall of the house, crawl up into the saddle, give myself a start and go down the incline until, losing control or balance, would «double up» somewhere. I never fully learned to ride it and after a while the machine was entirely forgotten. I lately made a search for that abandoned mount or parts thereof but could not find a trace of it much as I would have liked to have the old «bone-shaker» as a relic and a reminder of the good old days.

Through good and efficient services the present chairman of the Highway committee of the L. A. W., Mr. Otto Dorner, is considered an authority in road building by the League as well as the National Bureau of Road Inquiry at Washington. The past year he has attended numerous conventions of rural associations and has accomplished much for the cause. Although a member of the L. A. W. only since 1894 it again illustrates the fact what a little hustle and earnest endeavor will accomplish be it in any direction. Mr. Dorner is yet a young man, hovering about the quarter century mark, and one of whom we may hear more later on.

*

Going through my file of cycling papers I ran across an L. A. W. Bulletin of '94 with this paragraph in its columns: «Terry Andrae, formerly the champion rider of the state—that was in the days of the ordinary—will train for the track this season,» which recalled an incident to my mind which «Willian Twinkle» Erwin, now of France, penned two years before. It ran thus in part: «When Terry Andrae was at my turkey dinner on Thanksgiving Day some one put an egg in his pocket. He did not discover it until he was on his way to Milwaukee. He discovered it then even earlier than he would have done had not a big man come into the car and crowded Terry in his seat. The egg was of inferior quality. Terry would like to know who put the egg in his pocket. He does not wish to return the egg, for he is sure the owner does not care for it again; but if the gentleman who originally owned the piece of hen fruit, and who put it in Terry's pocket, will send in his address, Terry will try and get a day or two off soon and visit him.»

*

Bicycle journalism has been on the decline for the past three or four years. At that time every town of any little importance in the bicycling industry or sport had its cycling paper, or several of them if the field warranted it. The daily newspapers must be blamed for

the extermination of the majority of cycle journals, for in catering to the wants of their readers and keeping up with the rapid advance of the almost universal use of the wheel, the daily sheet serves up cycling news every day. So by the time the weekly bicycle journal came around its news was old and subscribers were certain to loose interest and fail to renew. The cycling papers of to-day could be summed up on short notice, for they are "few and far between." Most of them are trade papers; those published in the interest of the sport and wheelmen in general appear mainly in magazine form and they are limited. The bicycle paper and the cycling club can be compared as being on an equal basis for when the club flourished four and five years ago the paper was likewise in its prime.

*

Wisconsin's Chief Consul, Mr. Frank P. Van Valkenburgh, starts out very auspiciously for a successful and prosperous year in League work in the Badger state. Although making no promises, in his message read at the meeting of the Division Board of Officers, he outlines a policy which, with a good business administration and with the executive ability the C. C. is endowed with, should not fail to land this division in the place of importance which it commanded a year ago. The message appearing in another part of this issue dwells to some extent upon the enaction of laws favorable to wheelmen in the matter of the railroads carrying bicycles as baggage, for which cause the division valiantly fought two years ago but was defeated on the eve of victory by the lobbyists, and also to further a bill making the theft of a bicycle as great a crime as stealing a horse, and one to eliminate the word "license" from the statutes of the state, so that, in addition to the personal tax already levied, every little town cannot legally collect this additional for which at their wish they could place among its local ordinances at the present time. Mr. Van Valkenburgh favors bicycle insurance and says that a bill has already been drawn up for passage at the present legislative session. There have been several companies formed and doing business for the past six or eight years but their reliability has been questioned. He is also favorable to surrending the control of racing by the L. A. W. if a reliable and trustworthy organization can be found to uphold the sport. In winding up he makes a strong plea for the advancement of better roads and this should be the League's one and prime object.

*

This month marks the meeting of the National Assembly at Providence, R. I., at which many proposed amendments to the L. A. W's. laws will come up forconsideration. Their adoption or defeat will take quite a lot of deliberating. The question of relinquishing the control of racing will be thoroughly discussed but, though the majority of the delegates are in favor of assigning same to some other responsible body, such an organization to assume it has not presented itself.

*

In these columns I commented the subject of cycling journalism; its decline of recent years and stating the times when this class of journals flourished. *Printers Ink* in its issue of February 19—'96, in an article entitled "Some Notes on Trade Papers" by Julius Gordon covers the general field of such periodicals and "winds up" as follows.

"The bicycle papers, of which the "woods are full," have had a still more marvelous growth. *Bearings*, the *Wheel*, the *American Wheelman*, the *Referee* and others are simply crammed with advertisements which yield a large revenue. There is, however, a big difference in the two fields. The street railway papers have come to stay, and with ordinary care will retain if they do not increase the amount of business they now carry. Their advertisers are principally wealthy manufacturing concerns who are as good as wheat, the best kind of customers a paper can have. The future of the bicycle papers is not so certain. The bicycle itself has come to stay, but its production is being overdone. Hundreds of small concerns with limited capital and no experience are rushing into the business. They fill up the advertising pages of the wheeling papers at present, but what will the harvest be?"

DISSECTING THE L. A. W. DOLLAR.

BY F. P. VAN VALKENBURGH,

CHIEF CONSUL WISCONSIN DIVISION, L. A. W.

I have been asked many times in the past few weeks what good does it do to join the L. A. W. A popular misapprehension of the objects of the League and a failure to understand its workings prompts me to offer a little light on the subject.

In the first place let me state that the League of American Wheelmen is only incidentally a social organization. It is also only by force of circumstances connected with racing. It is essentially a league, a combination for mutual support, for promoting common interests, and furthering the common welfare. In my message, printed elsewhere in this edition, I have endeavored to point out some of the salient points in the history of the League, and to enlarge a little upon the objects of the organization. Here, then, I am anxious to say a little about the workings of the League, and to explain what is done with the money received from members.

In the first place, understand, not one cent of the money paid in by members goes to the racing end of the organization. This department, in the hands of a competent racing board, is self supporting. The money paid in for registration fees, for L. A. W. sanctions, in fines and penalties meets all the expenses of the racing board. The direct benefits of the League from racing are many, so many in fact, that the League has kept up its interest in racing from rather a selfish motive, believing that the advertisement given it from that source is one of its best recruiting cards.

Of the moneys paid in by members, twenty-five cents go to the L. A. W. Bulletin, an official organ, published weekly, and containing, besides official notices, lists of new members and the like, items of interest to all wheelmen and the humor and wisdom of a very bright man, one Sterling Elliott. The remaining part of the membership dues is divided between the national organization and the state division, while the dollar paid for entrance fee goes entirely to the state division.

The national treasurer disburses the funds of the central organization under the direction of the executive board, and this money is spent in printing vast amounts of matter used in recruiting new members, in the work for good roads, in national committee expenses attendant upon investigations of local questions, in the actual expenses of officers, and in paying one man, the Secretary of the national organization, a salary. This is the only salary paid by the national body.

Thousands of dollars are spent in the publication of pamphlets upon good road work. In the past year, under the active and energetic supervision of Mr. Otto Dorner, of Milwaukee, between four and five thousand dollars alone was spent in preparing, publishing, and getting into circulation a small book upon highway improvements, that gave a full history of the various movements in the past years towards the introduction of a system of good roads, and explaining at length that great innovation inaugurated in New Jersey under the name of State Aid.

A continual agitation of the question of Good Roads is thus being kept up. Four hundred thousand copies of Mr. Dorner's book have been sent out to the farmers of the country. This work would in itself have been impossible by reason of the expense in postage alone, had not Mr. Dorner's work so commended itself to the federal officials that they adopted it as a pamphlet published under the auspices of the National Good Roads Bureau, and sent it as an official publication through the mail. Thus the National Government has recognized the L. A. W. by a contribution that has already amounted to $4,000.00.

During the past year two pamphlets have been prepared by President Potter and circulated amongst thousands. One, in the interest of wheelmen alone, upon the proper methods for the construction of cycle paths, and the other, of more universal interest, concerning wide tires. These efforts to arouse the public to some adequate conception of the awful losses entailed by bad roads are to my mind, the great work of the L. A. W. All this work is of immediate interest to wheelmen. Good roads

means much to them. But much as it may mean to them it is little or nothing compared to what it means to the public at large.

Of the funds in the hands of the state divisions a large part goes to recruiting expenses, for it is only with a large membership that good can be accomplished; some to the necessary legal expenses incurred in protecting the wheelmen's rights in courts of law, some to expenses incurred in obtaining needed legislation, some in the matter of locating and erecting sign boards for the benefit of touring wheelmen, a large sum in keeping up a set of road maps and a tour book, some in the payment of the expenses of delegates to state board meetings and to national assemblies, some in the payment of rewards offered for the recovery of wheels stolen from members, and some to such incidental expenses as printing, postage and clerk hire.

The Wisconsin Division pays no salaries to officers.

Let us now look at what the individual member gets for his investment. In the first place, then, there is a standing reward of twenty-five dollars for the recovery of a wheel stolen from any member of the League. Secondly, a discount from the regular rates at hotels throughout the state, that can be taken advantage of by those touring. Thirdly, a special discount at League repair shops. Fourthly, a liberal discount on all magazines and books purchased through the accredited agents of the L. A. W. Fifthly, a bright weekly magazine, containing matters of interest and official news. Sixthly, a set of road maps of this state for fifty cents, one quarter the regular price, and a section map of your own section, free. Seventhly, free admission to all races held at the Annual State meet, and also an opportunity to have three days of good fun at the same. Eighthly, the co-operation of a set of bright brainy fellows in securing wheelmen's rights, and redressing their grievances. Ninthly, the right to consult in person or by letter the attorneys of the league, and receive their advice, and in most cases their assistance free on matters involving wheelmen's rights. Tenthly, the advice and assistance of local Consuls, particularly advantageous when touring through new parts of the state. Eleventhly, the privilege to organize local Consulates and to make the same social organizations, with a representative at the semi-annual meetings of the state body. And twelfthly, the honor of wearing any sized button one pleases with the L. A. W. emblem upon it, so as to mark oneself as a progressive, up-to-date wheelman.

Taken From Contemporaries

ITS DURABILITY

The Wheel.

A serious question in connection with the chainless bicycle has been as to the effect upon the running of the machine, in case the gears were thrown out of alignment. As a mechanical proposition, it is safe to say that any marked distortion of the frame would make the gears bind, and in consequence impossible to turn.

Is this likely? Actual practice says not. The inventor of the line-contact roller gear found, during the record-breaking at Philadelphia, that the gear on a machine upon which the half-mile record had just been reduced was an eighth of an inch out of mesh, and in tests it was found that an even greater disarrangement of the gear did not prevent the machine from being ridden with comfort. Bevel-geared machines have amply demonstrated their fitness for all-around use. They have been tested throughout the past season by hard and experienced road riders, and have been found not only practical, but eminently satisfactory. The most remarkable test of their wearing qualities has been the extraordinary number of "centuries" ridden upon one machine in 1898 by a trained athlete. This man rode the machine upwards of 30,000 miles, and none of the gears, or any part of the driving mechanism, was changed during his work. The machine was taken apart many times for careful examination, which, of course, necessitated readjusting and lubricating, this being done merely to avoid the possibility of an accident that would interfere with the effort.

The important point, however, in connection with this test lies in the fact that a number of accidents were met with, requiring several repairs to the frame,

the machine having had many falls and a number of collisions; and the excessive vibration and jars to which the machine was subjected seemed to bring about a fatigue of the metal, necessitating repairs. Yet, in spite of this fact, there was never the least binding of the gears, they running as smoothly at all times as when the ride was begun.

Naturally the rear quadrant, being so much more heavily braced, resists torsional stress to a greater extent than the lighter types of chain machines, and in addition, there is no question that the driving rod, transmitting the power from crank bracket to rear wheel, in itself acts as a brace; yet when the unusual conditions under which this machine was ridden, and the severe usage to which it was subjected, are considered, the fact that there never was sufficient variation in the alignment of the gears to cause them to run hard is in itself a most potent argument in favor of the chainless machine.

It is not intended here to praise the chainless machine at the expense of the chain-driven machine. On the other hand, the statements made in favor of the chainless are set down without quibble or apology. All other considerations aside, the important question concerning the new type of machine has been as to its durability. That question must now be regarded as answered.

AUTOMOBILES FOR FIFTH AVENUE.

Scientific American.

For many years the last relic in the way of stage lines in New York has been the Fifth Avenue line, but the service has not been very satisfactory to the public and the franchise has now been acquired by the Third Avenue Railway Company. This line will equipped in a short time with automobile carriages of some kind. If this is done, the line will be a valuable feeder to the various crosstown lines owned or leased by the Third Avenue Railway Company. The present service is slow and irregular, and for a long time the stage company has been examining various methods of traction. It is not probable that tracks can ever be laid in any part of Fifth Avenue, as public opinion as well as property holders are entirely opposed to it.

There is no objection, however, to the noiseless and cleanly omnibus or stage, which will leave the street in a good and sanitary condition. Of course, the Fifth Avenue line of stages must necessarily compete with the Madison and Fourth Avenue electric lines, and for a long distance it runs parallel with them; but while automobile vehicles cannot be operated as cheaply as the underground trolley, still the margin of difference is not so great as to prohibit their use, and as we have already stated, the line would be a valuable as a feeder to the various crosstown lines. There are many people who have used the stage line for years and who will probably continue to do so, and from a scenic point of view, nothing can be finer than a ride up Fifth Avenue in a modern omnibus. There is no crush of travel, as there is on many of the adjacent streets, so that the trip is more enjoyable, and the line will certainly come in for a considerable percentage of the short haul business, which pays very well, and it is admirably adapted for for this kind of transportation.

During the storm on November 26, the electric automobile vehicles behaved remarkably well. They ran throughout the entire night, and the last one only came in about six o'clock in the morning, when the snow must have been from eight to ten inches deep, and the carriages had no difficulty whatever in forcing their way through drifts which were much deeper than this. Horse cab companies turned over orders to the electric company rather than fill them themselves. Of course, the mileage per charge of battery was reduced. The motors and batteries acted admirably. One reason of their success was undoubtedly due to the large pneumatic tube tires, which are five inches in diameter and give a large and resilient bearing surface.

THE QUESTION OF BRAKES.

Cycle Trader.

Of the making of brakes there is no end, and, apparently, there is no end also to the opinion of makers as to the right direction in which to turn their brake-making propensities. We have brakes on the tyre, brakes on the rim, brakes on the hub, brakes worked by hand, by foot, air brakes, wire brakes, and even hydraulic brakes. A slight consideration of the conditions governing the braking of a cycle would show that, all things considered, the tyre is the point at which the brake ought to act. If the brake is applied to the hub the whole of the momentum of the machine is transmitted to it through the tyre, rim and spokes, necessitating the use of large gauge spokes, and giving the tyre a decided tendency to creep on the rim. With the brake applied on the rim, the spoke difficulty is, of course, done away with, but the tyre creeping still remains. The brake applied on the tyre would seem to be the most reasonable arrangement, but the tyre is then subjected to considerable wear on the tread, and, in the case of puncture, the brake becomes practically useless. So that it would appear that the rim brake has a certain amount of advantage over either of the two, and will, probably, be the one most generally adopted in the future.

The Gospel of Good Roads

VOTE FOR GOOD ROADS.

Complete returns to the Minnesota State election show that the state aid amendment to the constitution has been passed by the people by a vote of 70,043 to 38,017. The returns have only recently been completed, owing to the unsettled conditions of the northern and eastern portions of the state. This is the first time that a popular vote has ever been taken in any state upon the good roads question, and the result is a most emphatic endorsement of state aid as its solution. The Farmers' National Congress, which met at Fort Worth, Texas, early in December last, passed strong resolutions in favor of state aid, and commending the efforts of the League of American Wheelmen towards its introduction. The Minnesota vote is another notable endorsement of the work of this organization.

The constitutional amendment was introduced at the 1897 session of the Minnesota Legislature by Mr. A. R. Choate, of Minneapolis, as the representative of the L. A. W., and its passage by that body was the result of his persistent and diplomatic work in his behalf of the measure. This left it to be submitted to popular vote for its final passage. A strong educational campaign for good roads was carried on by the L. A. W. throughout Minnesota during the past summer and fall with the active assistance of the Bureau of Road Inquiry at Washington and the press of Minnesota. A large edition of pamphlets, explaining the state aid system of road building and its advantages to farmers, was distributed and numerous articles and editorials upon the subject appeared in the papers in various parts of the state. The resulting vote for the amendment is almost two to one in its favor.

The Minnesota Legislature will now take the necessary steps to put a system of state aid into operation, such as is now in force in New Jersey and in New York. Farmers, especially, will appreciate this, as it will enable them to obtain durable highways without being obliged to bear the entire expense, as they do at present. In New Jersey and New York, the cost of roads built by state aid is divided between the state, counties, and local tax-payers in the town. Many towns availing themselves of the New York law are securing funds for road building purposes from outside sources, equal to four or five times that which they raise themselves. Country tax-payers have learned that state aid to roads provides a means by which the large city tax-payers and corporations owning valuable franchises from the state are made to share in the expense, and that it remains optional with the farming districts to avail themselves of this assistance or not, as they may choose. This explains the popularity of state aid in Minnesota and the large vote in its favor.

SIDE PATHS.

At a meeting held in Rochester, N. Y., by representative wheelmen of Buffalo, Syracuse, Utica, Albany and several other cities a bill was framed bearing the title of "An act in relation to the use of bicycles on sidepaths, for licensing bicycles, for the appointment of sidepath commissioners and to provide for the construction, maintenance, regulation, preservation and shading of sidepaths."

The bill applies to all the counties of New York State except Monroe and Albany, which have laws of their own. It gives the power of appointment of sidepath commissioners to county judges, instead of to boards of supervisors, which were designated in the original draft of the measure, and provides that each commission shall consist of five members. The original draft made it optional with the wheelmen of the county to have a commission made of any number of commissioners from three to fifteen. Another change is that the annual sidepath fee to be collected from riders is fixed at 50 cents. The first proposition was to leave it to each county to fix it at from 25 cents to $1. The final sections of the bill as it now stands are practically new. They read as follows:

Section 6. No person shall drive, lead, stand or hitch any horse, cattle, sheep, swine or other animals upon any sidepath now constructed or hereafter to be constructed in this State.

Sec. 7. No person shall wilfully obstruct, injure or destroy any sidepath or any portion thereof now constructed or hereafter to be constructed in said State.

Sec. 8. No person shall ride any bicycle on any sidepath in said State at a greater speed than ten miles per hour. Bicycle riders traveling in opposite directions on said paths shall turn to the right in passing, and every bicycle rider overtaking another on said paths shall turn to the left in passing.

Sec. 9. The sidepaths heretofore constructed and hereafter to be constructed in said State are hereby placed under the control and direction of the boards of sidepath commissioners of the various counties in which they are located.

Sec. 10. Any board of sidepath commissioners, with the consent of the commissioner of highways, or other officer performing similar duties, having jurisdiction thereof, may remove limbs of trees overhanging any sidepath in the country wherein said board has jurisdiction, when in the judgment of said board the same

shall interfere with the free passage of bicycles along said path.

Sec. 11. Any person who rides a bicycle on any sidepath in this State in violation of any of the sections of this act, or does any of the acts by the provisions of this law forbidden, is guilty of a misdemeanor, and is punishable by imprisonment in any penitentiary or jail for a term not exceeding twenty-five days, or a fine of not less than five dollars or more than twenty-five dollars, or both such fine and imprisonment.

Sec. 12. Courts of special session having jurisdiction to try misdemeanors as provided by section fifty-six of the code of criminal procedure, shall have exclusive jurisdiction to try offenders in all cases occurring under this act, in the same manner as in other cases where they now have jurisdiction, and to render and enforce judgment to the extent herein provided, and said courts shall have jurisdiction of all said offences committed within the county where said courts are held, in the same manner as though the defendant had been taken before a magistrate of a town where the offence was committed.

Sec. 13. This act shall apply to all counties, except the counties of Monroe and Albany.

IN NEW JERSEY.

The department of Road Improvement of the state of New Jersey has made its annual report. Roads have been constructed under the system of state aid during the past five years in New Jersey and the results demonstrate the wisdom of an effective good roads policy. The state road commissioner comments on the appreciation of property that is situated in districts where stone roads have been built. He says that in suburban localities where there are the largest number of hard roads the largest number of home builders have established themselves and there is a noticeable increase in valuations, while in agricultural districts where stone roads exist farms are renting quickly and selling quickly, while those on the lines of the old dirt roads are fast going to decay. With stone roads, he finds that farmers are able to carry their own products to the cities and find direct customers, and, even better, they do not have to depend on the city customers entirely, but they can easily reach those who live in the towns, boroughs and villages, who, as a rule, were supplied from the city markets through the local stores, because farmers and growers preferred to ship by rail rather than waste time and horse flesh on mud roads. To show the stimulus that good roads have for farmers the commissioner quotes some figures concerning the amount of traffic over a certain road that constitutes an outlet for a large farming districts. Since the roads leading to it have been macadamized, it seems that from 1,600 to 1,700 teams pass over it, while the number during the days of mud roads was from 200 to 400.

The appropriation for good roads purposes in New Jersey is $100,000 a year. This is the amount of state aid, which is supposed to pay for about one-third of the cost of building roads. The road commissioner says that roads cost from 20 to 70 cents a square yard. It is noticeable that the good roads question is more prominent than ever this year, to judge by the attention given to it in the various gubernatorial messages. Nearly every message urges the legislature to which it is directed to provide some practical scheme of road improvement. It is one of the most necessary objects of legislation on account of the benefits conferred on a very large class of people, as the experience of New Jersey, Massachusetts and some other states proves.

Our Busy Cycledom

The days are growing longer.

Ceylon enjoys a universal lights law.

The Czar of Russia is an enthusiastic cyclist.

Arthur Zimmerman may return to cycle racing this year.

Zimmerman first rode as a professional at Florence, Italy.

The popularity of professional racing is rapidly declining in Paris.

The long crank is worrying England a little more just now than it worried us several years ago. Sprint a while, Johnnie Bull.

A man named Megson is said to be the coming Australian champion.

—

The annual meeting of the Century Road Club will be held in Chicago on February 26.

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Japan is really a progressive country. It uses bicycles in its postal and telegraph departments.

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Gear cases are not used extensively this season in England. The reason is, "just because it's American, see," as one Englishman said.

—

"Wheeling," published across the pond, says, "the winter game amongst cycling clubs in America is 'euchre'." Funny way of spelling poker, isn't it?

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The Rhode Island division has appropriated $250 with which to entertain the delegates to the L. A. W. National Assembly to be held in Providence this month.

—

"Plugger Bill" Martin is in South Africa where he is endeavoring to arrange for an unpaced match race between Van Heerden, the South African champion, and himself.

—

A new toe clip has been invented. The clip is hinged to the side of the pedal and has extensions on the front and rear which spring the clip into place when touched by the foot, the pedal always being balanced for use either side-up.

—

The figure fiend is at it again. He says there are 10,000,000 bicycles in use in all the world. He goes on to say that if these wheels were placed in one long procession with thirty passing in a minute, it would take nearly a year, day and night, in passing a given point. If we take it that every cyclist, on an average, has ridden 100 miles, no less a distance than 10,000,000,000 miles of ground have been traversed by 20,000,000 wheels. If the average weight of a machine is taken at 30 pounds, the 10,000,000 machines would weigh nearly 134,000 tons.

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Recent tests made by Prof. Carpenter, of Cornell, on the comparative value of large and small bicycle tires are said to have shown conclusively that, other things being equal, the larger the tire the easier runs the wheel. It is not a matter of friction by contact with the ground, for, that being of the rolling type, amounts to practically nothing, but it depends on the loss of power in compressing the tire. On a two-inch tire the rider of average weight causes very little compression of the tire tread. The tire has a great bearing surface. Take half an inch from the diameter of the tube, however, and as it rolls along a constant indentation and release result. Here the power is lost, and hence the conclusion. Prof. Carpenter says that a poor two-inch tire will run easier than the best one-and-a-half-inch tire that was ever made. A difference of over 15 per cent in the running qualities of a wheel is attributed to the kind of tire used. A single tube always proves faster than the double tube, but this may be due partly to the better material employed in making the former.

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A. G. Spalding is credited with the following opinions on the control of racing:

«During my connection with our racing team in the past I have not always agreed with the manner in which the L. A. W. has handled some things pertaining to the sport, especially the professional end of it, and I know it has been criticised more or less on account of its arbitrary methods. On the other hand, in order to control a sport with so many conflicting elements, especially the professional, it is absolutely necessary, in order to retain a firm grip upon the racing interest, that the parent organization which stands sponsor for it should be arbitrary and firm.

«The L. A. W. is a natural body to control racing, and in fact it is the only national body organized today that is competent to handle it. While in the past it may have made some mistakes in meeting out proper punishment, yet I am satisfied that the majority of people in this country who take an interest in cycle racing believe in the honesty of purpose that prompts the action of the officials of the L. A. W., and without such confidence of the public no sport, especially professional, can be successfully carried on very long. I think it might be possible to organize an association for the exclusive control of professional cycle racing, but to be successful it must be national in character and controlled by representative men in the leading cities of the country. Not only would it require representative men in whom the public has confidence, but it would also, probably, take considerable capital to properly carry it on. Until such a representative association is organized, I am strongly of the opinion that the L. A. W. is much better equipped to handle the racing of this country, both amateur and professional, than any other organization.

«While to some it may seem incongruous for an amateur organization like the L. A. W. to take under its direction and fostering care professional racing, yet in order to keep this sport clear from corruption

and misdirection, and as the tendency of all sport where great skill is required is toward professionalism, I think it would be a mistake for the L. A. W., a mistake for the racing interests, and a mistake for the racing men to give up its control of professional or amateur racing.

According to a French physician the hideous, humpbacked position of the "scorcher" is due to the fact that the lungs create the instinct to inflate themselves with the greatest possible ease, and in going at a rapid rate through the air a new relation is created to which the body has to adapt itself, and so far from being an objection, declares this physician, the hump, in obedience to this law, is really the only rational method of riding.

He quotes the well-known maxim that "A horse runs with legs and gallops with his lungs," and declares this is also quite true with regard to the cyclist, who finds in his increasing speed the greatest obstacle to his process of respiration, and in proportion as he goes faster so, in proportion, is his respiration more difficult.

The innate tendency of everyone is, of course, to breathe through the nostrils rather than the mouth when the body is in the ordinary upright position, but this can only be done when the current of air is not rushing along too rapidly. Evidence of this is to be seen whenever anyone is walking against a high wind, when he opens his mouth and unconsciously bends his head down, so that his head acts as a shield against the force of the current of air, and from these broken shafts the lungs fill themselves with comparatively little effort.

Exactly the same thing happens with regard to the cyclist, who creates for himself the same rapid draught as in a high wind. This increases the faster he goes, and in order to break up the current of air he lowers his head instinctively, until, as he approaches his maximum speed, he gets his nose almost parallel with the road he is travelling, and in this way he is able to breathe with the greatest ease.

The question of breathing is, indeed, the dominant one in cycling, as in most violent exercises, for the inexperienced rider who attempts to scorch is brought up sharp, not, as a rule, by the fatigue of his muscles, but because he gets winded. This frequently shows itself in the inevitable "stitch in the side," an invariable proof that the individual cannot get his second wind, and every rider knows the fate of a man in that position.

At first sight, it must be confessed, the military cyclist does not appear to be a very formidable foe, yet he is a great mainstay to the infantry which he supports, and to which he constitutes the advance guard. In the first place, he has two great characteristics in his favor, says a writer in the Windsor Magazine. He is very difficult to hit, owing to the remarkable celerity with which he moves, and the small target he offers to the opposite party. The only way to bring him to the ground is by seriously wounding him—in short, knocking him off his machine, for it is well-nigh impossible to incapacitate the cycle. When he is hotly pursued, nothing but an utter collapse of his steel steed will effectively stop him, for if his tyre becomes punctured, he can still ride along without much inconvenience upon the rims of the wheels, which, although it may be detrimental to the cycle, is of secondary importance in a matter of life and death.

Then, again, a body of cyclists may prove a great source of anxiety and trouble to cavalry, and harass them exceedingly, whether it be while advancing or retiring. Cavalry depend mostly for their success upon 'shock action'—that is, the tremendous force with which they hurl themselves into a body of infantry, and their vigorous usage of the sword. The result is that, unless the infantry are well supported, they are thrown into confusion and cut to pieces. But with a company of cyclists it is different. The cyclists have plenty of room in which to move, and if compelled by force of numbers to retire, after discharging a volley at the on-rushing cavalry, can in a moment mount their machines and race away. Presently they dismount, rest the machine against their side, disengage their rifles, take deliberate aim, fire a volley or two, mount again, and fly away. These tactics are repeated every few minutes, so that the cavalry are completely nonplussed, their numerical strength being at the same time reduced considerably by the intermittent and deadly rifle volleys. Nothing demoralises cavalry so much as to find that they cannot get to close quarters with their enemy.

Then there is another disadvantage under which they labor. Supposing they wish to dismount, in order to use their carbines. One man out of every four must hold the bridles of the horses of his comrades, so that their attacking force is thereby reduced by 25 per cent. Even when driven to bay, a posse of cyclists is by no means a despicable foe. In this eventuality they take up their position behind the grounded cycles, whence they can maintain a terrible rifle fire. One hundred cyclists in such a position could fire about 40,000 rounds, so that they could account for a fairly good number of their opponents before their ammunition was expended.

Cycling Cogitation

OF CODY.

SMALLEST TAX BILL.

A FIREMAN PAYS 5 CENTS ON A BICYCLE WORTH $2.

Chas. J. Dreifahl, the Nineteenth ward assessor, is a conscientious public official. Paul Malzahn of 2605 Walnut Street, a fireman employed at the house of truck company No. 7, is the smallest taxpayer in Milwaukee. His bill is 5 cents. The tax is on a bicycle, which the fireman swears to be worth only $2. As a rule assessors do not bother with small matters of this kind and are not looking for 5-cent taxes, because it costs the city about 15 cents to make the assessment, put it on the tax roll and collect it. The postage alone for sending out this tax bill is 2 cents. One of the funny parts of the proceeding is the fact that the fireman went to the length of making out a sworn statement that his wheel is not worth more than $2.

The above was clipped from a recent issue of the Milwaukee Evening Wisconsin. There is nothing exciting about it. I reprint it merely because it brings to mind an editorial published in the CYCLING REVIEW of June 1897 (now THE PNEUMATIC). The editorial commented on a paragraph published at the time in the Milwaukee Sentinel. The paragraph probably led weak minded people to believe that high grade wheels could be made at a less cost than $35.00 in 1897. The above mentioned $2.00 bicycle is one of the $35.00 bicycles the Sentinel referred to. I reproduce the CYCLING REVIEW editorial verbatim as evidence:

If the story which appeared in the Milwaukee Sentinel on June 6th be true, the fire laddies of Engine Co. No. 1 have finally discovered the secret of making *high grade* wheels at a cost less than $35.00. Here follows the wonderful tale:

There are several firemen at Engine Co. No. 1, on Broadway, who have wheels which they made themselves. The wheels are unusually large, having 28-inch frames. The firemen bought the material together during their spare time. The material, which is all of the highest grade, cost them $29.60 per wheel. The enameling cost them a few dollars more. In this manner the firemen secured high grade wheels at a cost less than $35.00. Three of these machines have already been built by the fire laddies and more will be constructed by them in the near future. They are building the wheels for their own use only.

The above leads us to believe that either the fireman or the bicycle editor of the Sentinel formerly held the position of bicycle salesman in a department store and was taught to ignore the words *high grade* to such an extent that the meaning of those words is lost to them entirely.

* *

Three moguls of the Wisconsin division L. A. W. were lined along a lunch counter the other day waiting to be served. Waiting in a lunch room isn't the most pleasant thing a man can do but they seemed happy. They were discussing the prospects of the state meet to be held at Janesville. One of the moguls said something that was apparently very interesting, for I noticed that the other two opened their mouths while listening. I don't want it to be understood that I considered the open position of their mouths a positive indication of interest in the conversation. They may have been preparing for the meal the cook was hashing up for them for all I know. Nevertheless I was convinced that an interesting topic was on tap and moving several seats nearer overheared something like the following.

«I tell you it will be a grand innovation» said Mogul No 1, «funny the managers of former meets never thought of it.»

Moguls Nos. 2 and 3 nodded in assent and said in the same breath, «You bet.»

«I understand the committee will consist of nearly 200 and I can see no cause, under the circumstances, why we should be compelled to stag it all the time, as was the case during previous meets,» said Mogul No. 1.

A broad smile brightened the features of Moguls 2 and 3 but quickly disappeared when Mogul No. 2 said, «But, if the committee consists of only 200 members what will our chances be. There certainly will be 200 visiting wheelmen there, not counting us.»

«I guess we wouldn't count anyhow, even were we the only three to attend the meet,» said Mogul No. 3.

Then with sad, melancholy-like faces the three moguls dropped the state meet topic and a meat of another kind was tackled.

This conversation would have been all Greek to me had I not previously been accosted by Dame Rumor with the announcement that the managers of the Janesville meet were planning for an entertainment or reception committee consisting of 200 of Janesville's fairest young ladies. Whether or not there is any thing back of this rumor I am not prepared to state. It certainly would be a state meet innovation and perhaps a good one, but, I do not wish to comment on anything before I know some facts concerning the topic.

Whatever I have said, heretofore, in behalf of Mr. F. P. Van Valkenburgh's enthusiasm in matters pertaining to the L. A. W., wheelmen's rights and good roads, is amply verified in his address and in an article from his pen appearing elsewhere in this number of THE PNEUMATIC. Any wheelman, I don't care how busy he may be, can afford to read every word of Mr. Van Valkenburgh's address and article on the L. A. W. and then spend a half day in figuring out in what way he can best help Van make of success of the movements he has taken upon himself to carry out.

* *

Some how or other I can't get over that romance of a young Milwaukee newspaper man and a pretty Indianapolis lassie. Perhaps it is so persistant in staying by me because I saw the events of the very first chapter, or, perhaps because I, myself, was the preface. Every convention, every gathering held in Indianapolis, whether of importance or not, reminds me of it. Not because I have the least possible chance of attending these conventions but because my young newspaper friend manages things so very cleverly that when his paper commissions a member of its staff to report these conventions he is usually the one to receive the assignment. I am probably over-stepping the limits of the friendship existing between the young newspaper man and myself in telling so much about affairs which concern only him and one other. The only apology I offer for so doing is a rumor to the effect that the wedding will take place in Milwaukee during the week of the national meet. Thus Milwaukee is assured the assistance of Indianapolis in its fight for the 1900 meet. And that ought to be worth the time it takes to tell it.

* *

In company with Mr. Oscar Morris, of the Milwaukee Sentinel, I was strolling down Grand Avenue the other day. We were discussing the prospects of the cycle trade for the coming season and therefore were pleased to meet Col. H. P. Andrae. Mr. Morris, of course, asked the Colonel the every-day question, «How's business?» and received, in very emphatic manner, the reply, «Dodging orders, my dear boy, dodging orders.» Then the Colonel continued to tell how bright was the outlook for the coming season and how orders were coming in like hot cakes. A visit to the Andrae factory several days later convinced me that what the colonel said was indeed a fact, and, if anything, underrated his company's bright prospects for 1899. It wasn't so much what the Colonel said as the manner in which he said it that caused Morris to remark later: «The Colonel has missed his calling. Although he is, I believe as successful a man as any one in the bicycle business, still, he has made a mistake in stiking to it. Why, my boy, do you know that if he had taken to selling some little article from a wagon on a street corner and travelled from city to city several years ago he would to-day be worth millions. He's the brightest man in the bicycle business and is building excellent goods but do you know that—Just then with a "so-long" my friend dashed over the curb toward a passing car and I was left alone to think about something else.

* *

With Mr. Van Valkenburgh at its helm the Wisconsin division, L. A. W. has every prospect of an economical administration before it. Lawyers, as a rule, believe in economy and Van is not an exception. For some time past the public has given its undivided attention to Van's oratorical abilities. Consequently people were interested only in such parts of Van's anatomy as were required in oratory: brains, lungs, nerves, etc. They didn't pay the least attention to his feet. But Van did. And if present indications are not misleading he will continue to do so for some time to come. The cause, well, Van blames it partly to the recent business meeting of the state division and partly to his ideas on economy. The meeting was to afford him for the first time the pleasure of appearing in the role of chairman of a state division meeting. Van, of course, has appeared before hundreds of gatherings in similar roles on previous occasions but some-how or other this convention had a peculiar effect on him. Probably he thought several delagates from Racine would be in attendance and therefore the members would be inclined to be critical. At any rate Van made up his mind to give his personal appearance the most complete attention. But at this stage of the game his ideas on economy came in contact with his plans. He wouldn't buy a wig, a new suit of clothing, a diamond stud, etc. No sir, he argued with himself, he must not think of such a thing. Just then a bright idea came to him, Why not sit, during the meeting, behind a large table and permit only his feet to prominent display? Had he not read in the morning's paper of a special bargain sale of $8.00 shoes for $1.00? A few minutes later Van, minus $1.00, passed proudly through the door of the shoe shop. He had made a bargain. He had saved the day for himself before the meeting and also $7.00. Like every tale this one has its moral. As is well known economy and style are not closely related. But Van's feet and shoes were, at certain points. The shoes were of ancient design, as pointed as some of Elliott's jokes, and it was on this point that Van's feet and his shoes would not agree. Everybody admired (verbally) the shoes during the day of the meeting. But that's a common failing we all possess. Now Van wishes some of us would pay the corn doctor's bills.

Wisconsin Division L. A. W.

The L. A. W. asks more of you than your dollar. It asks you to work for good roads.

* *

The next state meet will be held at Janesville, beautiful-Janesville-on-the-Rock-river.

* *

It is rumored that the Janesville state meet committee on entertainment will consist of several hundred young women.

* *

Wouldn't you pay a dollar to have the thief who stole your bicycle at work in Waupun for a year or two? It costs only a dollar a year to be a member of the L. A. W. and bicycle stealing is one of the things the Wisconsin division is trying to exterminate by sending the thieves to Waupun.

* *

Members of the L. A. W., when asked by a non-member what benefits are derived by becoming a member may tell him:

That there is a standing reward of twenty-five dollars for the recovery of a wheel stolen from any member of the League.

That a discount from the regular rates at hotels throughout the state, that can be taken advantage of by him when touring.

That he will receive a special discount at League repair shops.

That he can secure a liberal discount on any magazine or book.

That he will receive a bright weekly magazine, containing matters of interest and official news.

That he can purchase a $4 set of road maps for 50 cents.

That he will receive a section map of his own section free of charge.

That he will be admitted free to all the races held in connection with the annual state meet.

That he will have the privilege to consult in person or by letter the attorneys of the League, and their advice, and in most cases their assistance free on matters involving wheelmen's rights.

And that he takes upon himself the opportunity to help advance the greatest movement a civilized race undertake, the improvement of its highways.

Tell him that it is not his dollar the L. A. W. wants as much as his assistance.

* *

The present session of the state legislature will be asked to repeal the statute passed last summer giving the cities power to regulate and license bicycle riding, which not only imposes an extra burden on cyclists, but makes them liable to arrest and annoyance while touring.

* *

Your application for membership may be given to any member of the L. A. W., or send it direct to Sam. J. Ryan, Appleton, Wis., or Abbott Bassett, Boston, Mass.

Do not allow the wheel to drag when climbing a hill. Keep a steady pace.

* *

A small quantity of soapstone should be used on and around the patch when repairing punctures on tires.

* *

If you wish to become a good hill climber never jump off your bicycle as soon as you reach a hill. Many hills look very much steeper than they really are, and you can dismount later on if it is too much for you.

During the coming season, it is intended to sprinkle Michigan Avenue, one of the principal boulevards of Chicago, with oil instead of water. This, if one may judge from the result heretofore obtained by the experimental use of oil for sprinkling, particularly on railway roadbeds will be more thorough in its effects than the old way, as well as more permanent. Wether it will not prove highly injurious to bicycle tires, as seems likely, remains to be determined.

A Semi-monthly Latin journal, called *Vox Urbis*, is now being published in Rome. In a recent number there is an ode on the bicycle by Maurus Ricci, which is termed "birota velocissima," (the very swift "two-wheeler).

In Lighter Vein

BAD AS BOSTON.

Tit Bits.

The cyclist was a stranger in literary Fleet-st. That was evident from the cautious manner in which he picked his way through the half empty thoroughfare. It was evening. The penny-a-liner approached him.

"Sir," said he, "your beacon has ceased its functions."

"Sir!" gasped the cyclist.

"Your illuminator, I say, is shrouded in unmitigated oblivion."

"Really! but I don't quite—"

"The effulgence of your irradiator has evanesced."

"My dear fellow! I—"

"The transversal ether oscillations in your incandescer have been discontinued."

Just then an unsophisticated little paper boy shouted across the street:

"Hey, mister, your lamp's out!"

BICYCLE SIGNS.

Pearson's Weekly

"I distrust that man on sight," said Jones meaningly. Jones is one of the men who think they are born detectives. "Yes, sir; I wouldn't trust that man with a saucepan lid."

"H'm," said Robinson, who happened to know the man in question, and held a very different opinion. "And why not, may I ask?"

"In the first place, do you notice the stooping insinuating way in which he carries his shoulders?" That's craft."

"Oh!"

"In the second place, you observe that he clutches his fists as though he had a grip on something that nothing would persuade him to loosen. That's cupidity."

"Ah!"

"In the third place, do you see how furtively he glances from side to side? That's guilt."

There was a pause.

"I happen to know that man," said Robinson.

"And I am right?" demanded Jones triumphantly.

"No; you are wrong. He has just become proficient enough to go in the street with his bicycle. Nearly all bicycle riders have these signs."

"Ah!"

THE COW AND THE CYCLIST.

Cycle.

Oh, cow,
Oh, gentle cow!
I venture near thy grassy field
And gaze
At thee as thou dost eat
The grassy grass,
In peaceful peace,
Oh, graceful cow!
The farmer lad maligned thee
When he said
Thou wert a wild and quickly
Rattled beast;
That thou wouldst rave
And toss thy head and bellow at the sight of my
New crimson waist, and raise
Thy tail, and charge at me.
Oh, peaceful cow!
Thou didst not mind at all
My crimson waist—but, stay—
Methinks
Alas—oh, yes!—thou dost!
In fact, I do not like that wild,
That snorty snort!
And, see,
Thou comest on with vengeful mien
And swoopest down the sward!
I like thee not! Thy head is down!
Thy tail erect!
Thy eyes ablaze!
Methinks,
Ah, yes! methinks
That I had best
Ride quick, for, lo!
Oh, cow!
Oh, angered cow!
I find I did mistake,
I scorch me hence! Farewell!
Oh cow!
For now I see thou art,
A bull!
Oh mad male cow,
A bull!

A SURGEON.

Indian Cyclist.

Jones.—"The doctor advises me to take to cycling."
Brown.—"Well, are you going to?"
Jones.—"No. You know he's a surgeon."

With the Trade

A NEW METHOD OF MERCHANDISING.

Manufacturers, jobbers and retail dealers, all of whom have been sorely perplexed in determining upon a plan or policy of conducting their business on account of the new conditions of merchandising that have arisen in the past few years, will be interested in the new policy that A. G. Spalding & Bros., the well-known manufacturers of Base Ball, Athletic and Sporting goods, have decided to adopt in the distribution of their goods direct to the consumer through the medium of the retail dealer.

This firm boldly announce, that on and after January 1, 1899, they will not avail themselves of the jobbers' facilities in distributing their goods as they have been doing in the past, but will go direct to the retail dealer, and by doing away with the jobbers' or middlemen's profits, commissions of sales agents, etc., and all complications attending this mode of distribution, will be enabled to better maintain the quality of their goods and furnish the consumer and retail dealer at lower prices than it is possible to do under the old system.

It is the belief of the Spaldings that this plan will meet with the hearty co-operation and approval of the retail dealer, who, they claim, will be able to secure a reasonable and sure profit on this line of goods, to which he is justly entitled, as none of Spalding's Trade Marked Goods will be sold to any dealer that cuts the established retail price.

Knowing some of the obstacles that this move will undoubtedly encounter, a representative of the PNEUMATIC called on Mr. A. G. Spalding at his New York office and asked him:

"Why did your firm decide to adopt this new method, and how do you expect to carry it into successful effect.

Mr. Spalding answered: "I will answer the first part of your question by saying that we decided to adopt this policy because the present demoralized and changed condition in merchandising made it necessary in order to better satisfy the user, to maintain the quality of our goods and insure a fair profit to the retail dealer in handling them. Answering the 1st part of your question as to how, will say that the best way to do a thing is to do it, and we are simply going to do it. We do not anticipate the obstacles or difficulties your question would imply, for in our honest efforts and determination to maintain quality and established retail prices, we feel assured of the co-operation and support of the legitimate retail dealer, who has grown weary of the senseless 'price cutting' and the consequent demoralization that besets the retail trade on every side.

"The retail dealer is worn out and almost exhausted in paying rent, clerk hire and other necessary expenses in conducting his business and laying in a stock of standard, well-known goods that are in demand, only to find, as the selling season approaches, some big dry goods store in his neighborhood using the same goods as 'leaders' and advertising cut prices for the purpose of attracting trade on other goods more or less worthless, and thus forcing the legitimate dealer to meet those cut prices and close out his stock at cost, or less. Our new plan contemplates a close affiliation with the legitimate retail dealer, with whom we will divide profits, with the hope that by working together for the same end, a better condition of the Athletic and Sporting Goods trade will be brought about.

"To enable us to maintain retail prices and to ensure a fair profit to the retail dealer, it is necessary that we absolutely control the source from which dealers draw their supplies, and, consequently, we have been forced to discontinue supplying jobbers with our goods for jobbing purposes.

"Our new catalogues with reduced retail prices, and special trade discounts will be issued early in January and sent to all legitimate retail dealers asking for them, and in the meantime, we would ask the trade to withhold its approval or criticism of our new plan until our new catalogue with reduced prices appears and our samples can be examined."

DID YOU EVER CYCLE AFOOT?

Last summer those who visited England were startled by seeing everywhere men, women and children gliding along the pavements, or on the asphaltad boulevards, silently and swiftly. On investigation they found that such had on their feet a new form of skate, which made locomotion a luxury. This summer we are going to see the same thing in the United States. The Cycle Skate is such a delightful means of locomotion that it certainly has come to stay, being noiseless, smooth running and swift.

These Cycle Skates should not be confounded with the old roller skate, as they are as different as the old wooden "bone shaker" is from the modern bicycle, and the only wonder is that the great inventive genius of America did not long ago introduce them.

They are made with only two wheels to each skate one before the other, as in a bicycle. These wheels are small, about two inches in diameter, with rubber tires, and ball bearings. The feeling when first put on the feet is simply indescribable, the movement being so easy and smooth, together with the total absence of noise, that it makes one feel as near to flying as anything yet invented.

A High Grade Manufacturer

who can't build the best bicycle he knows how to make, with best equipment, including G. & J. DETACHABLE TIRES, and sell it at $40, with a fair discount to his agent, either doesn't know how, hasn't studied or hasn't a large enough output.

Rambler

BICYCLES

at $40

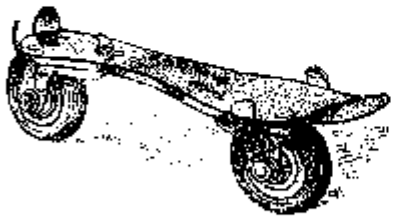
couldn't be better at any price. WE HAVE STUDIED, know how, have a large output.

Ask for 1899 Catalogue.

Gormully & Jeffery Mfg. Co.

Chicago. Boston. Washington. New York. Brooklyn. Detroit. Cincinnati. Buffalo. Cleveland. London.

The most perfect Cycle Skate is manufactured by the Buffalo Foot Cycle Co. Buffalo, N. Y. This firm has expended much money and time in experimenting with the skate, and the product they are now selling proves how well they have succeeded. The price is very reasonable, and we strongly advise our readers who are looking for a delightful novelty to write to the manufacturers for a pair.



We might add here that those who have written to us on the subject of the investment of their spare capital, and those who desired our advice with regard to starting in business, that the best opportunity we are cognizant of is the opening of Foot Cycle Academies, as it is a certainty that this is going to become as great, a rage as bicycling, or greater, and the money will be for those who get in on the ground floor. Such should write for further particulars to Mr. W. S. Cleveland, Mutal Life Bldg., Buffalo, N. Y.

The Olive Wheel Company, of Syracuse, N. Y., has just issued a catalogue of 1899 Olive bicycles. The catalogue has been carefully prepared and is very neat and tasty in appearance. It describes and illustrates the complete line of '99 Olives and also the distinctive features and equipment of the Olive. A copy to the catalogue will be sent free of charge to any one desiring same.

The retail business is opening up earlier and with more favorable indications this year than in 1898.

An English exchange advocates printing presses as a side line for bicycle agents.

The Columbia bicycle will be sold in Cuba by Thomas H. Harris & Co.

How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that can not be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O.

We the undersigned, have known F. J. Cheney for the last 15 years and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O.

WALDING KINNAN & MARVIN, Wholesale Druggists, Toledo, Ohio.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free.

Hall's Family Pills are the best.

If
You
Are
Not
Satisfied
That
The
Bremer
Bicycle
Is
The
Wheel
You
Want
At
The
Price
You
Want
To
Pay
Drop
Us
A
Line
And
We
Will
Call
On
You
With
Samples
Or
Send
You
Catalogue
And
Net
Prices.

BREMER CYCLE
MFG. CO.,

Clybourn and
West Water Sts.

MILWAUKEE,
WIS.

How Much is Health Worth to You?

Is it worth the time required to secure two subscribers to THE PNEUMATIC? If it is send us two subscribers and we will give you absolutely free of charge, a 136 page book on the

Healthful Use of the Wheel

Containing over 500 articles on Hygienic bicycling, written by twenty-five of the most prominent doctors and specialists . . . . . of the present day. . . . . .

A FEW OF THE ARTICLES:

Cycling and Mental Health—The How Often and How Much of Cycling—The Hygiene of Learning to Ride—Where to Learn to Ride—How to Mount the Wheel—Hygiene Caution for Women While Learning to Ride—Healthful Clothing for Lady Cyclists—The Avoidance of Exhaustion—Scientific Basis of Nutrition for Cyclists—Proper Height of Saddle and Handlebars—Hygienic Construction of the Saddle—The Avoiding of Accidents—Medical Hints for Emergencies—Things to be Provided for on a Long Ride—A Presentation of the Possible Dangers of Bicycling—Shall a Person who has Damaged Heart or Kidneys Ride the Wheel—The Bicycle and the Age, and Many Other Articles.

SEND US TWO YEARLY SUBSCRIBERS FOR THIS INSTRUCTIVE BOOK.

ADDRESS:

Subscription Department The Pneumatic,

MILWAUKEE, WIS.

Bicycle Advertising

It seems to me that a large number of bicycle manufacturers are spending too much money in advertising. I do not mean that the amount is too great, but that the results are too small. The advertising appropriation of some manufacturers is ten times larger than that of others. Still they do not spend half as much. They invest it. Those who spend too much are going about it in the wrong way. They are putting all of it in the trade papers. That's a mistake. The mistake comes in by putting ALL in the trade papers. If they receive their proper proportion they are one of the best paying mediums obtainable. What good would trade papers be to Scott's Emulsion or Uneeda Biscuits if these articles were advertised in them exclusively. The more you spend in trade papers the less it pays. That is if you must cut down your advertising elsewere. It seems to me that bicycle makers are trying the wrong end. It ought to be their object to create a demand among the public for their respective bicycles. The trade papers will never do this. They are only of use after this demand has been created. Then they cannot be dispensed with. But the demand can only be created by advertising in a paper that reaches the public, and therefore, the trade too.

ADVERTISING MANAGER
THE PNEUMATIC.

WISE WORDS IN INK MAKE MILLIONS THINK

THE WHEEL

(A TRADE PAPER PUBLISHED IN NEW YORK.)

IN ITS REPORT OF THE EXHIBITS AT THE CYCLE SHOW

says:

Claus bars are seen on many of the machines at the show. The success of this company has been due to the possession of a good thing, well pushed by up-to-date advertising. If more owners of good things would engage intelligent advertising men and let them do their work unhampered, as the Claus folks have done, there would be more successes.

WE ARE MODEST

BUT WE WANT YOU TO KNOW THAT WE ARE THE ADVERTISING MEN THE CLAUS CO. EMPLOYED.

F. G. CRAMER & CO.

ADVERTISERS

207 GRAND AVENUE, MILWAUKEE, WIS.

Printing Points

Published to Preserve the Art Preservative of Arts.

VOL. II. MILWAUKEE, FEBRUARY, 1899. No. 2

Did you
Ever hire
A seedy, ragged,
Untidy appearing
Man
To represent
You on
The road
With samples
Of your goods?
If you didn't
Do you
Think you would
If you
Could hire
Such a man
At a smaller
Salary than you
Would
Be compelled to
Pay for a neat,
Well appearing
Salesman?
Perhaps you
Don't give a rap
About the appearance
Of your salesmen
If
The seedy one
Sells as much
As the tidy one.
If—
There's the
Rub
If—
There's no
If
About the facts.
Clothes alone
Will not
Make a salesman.
But good clothes,
Other things
Being equal,
Will make
A better salesman.
This talk
Is not intended
For you
Unless
You consider
Your printed matter
Salesmen.
Is you consider
Your circulars,
Booklets,
Catalogues, etc.
Salesmen
See to it that
Their appearance
Is neat and attractive.
We supply
Attractive salesmen
In this line,
Not free of charge,
But at
A figure
About the same
Other printers ask
For the seedy kind.

THE PNEUMATIC PRESS

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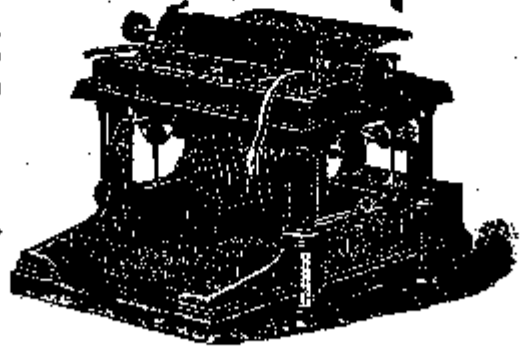
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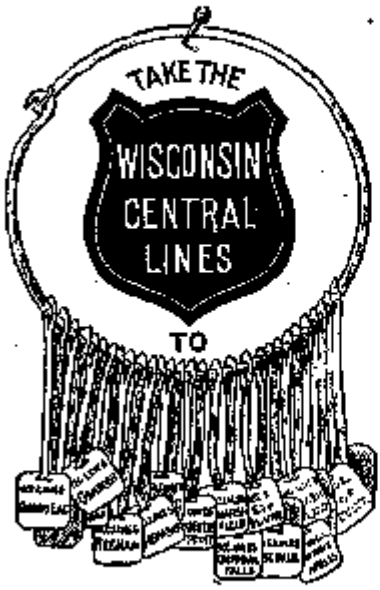
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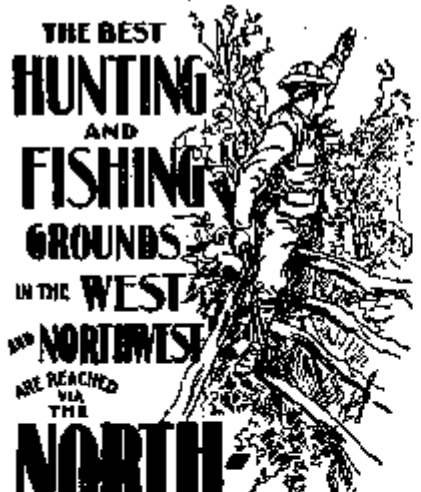
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THE PNEUMATIC.

VOL. X. MARCH, 1899. No. 3.

LOVE ON A CYCLE.

MUCH better learn in the road, miss. Some of the quiet roads about here is worth all the cycle tracks in the kingdom. Stands to reason you learn more confidence.»

«But—but wouldn't it be worse to fall off in a public road?» the young lady suggested timidly.

«You won't fall off,» said the proprietor, reassuringly. «My young man will see to that. He'll hold you on right enough.»

«Is the young man in now?» inquired Hetty.

She was an exceedingly pretty brunette of 19, with wavy dark hair and sunny blue eyes, a girl any young man might have been proud to hold on a bicycle. She had recently come up from the country with her mother, a doctor's widow, who had one daughter married and settled in London already, and who had taken a small house in a quiet street in that part of Hammersmith which now genteely styles itself "West Kensington."

Hetty's married sister, Mrs. Mornington-Willoughby, insisted that Hetty wanted "smartening and bringing up to date." To this end Hetty must at once learn to "bike," this being the year of the bicycle craze among smart and would-be smart Londoners.

No girl has a chance of marrying decently, opened Mrs. Mornington-Willoughby, unless she could golf and cycle. And as Hetty hadn't any money marriage was the only thing for her.

Mr. Mornington-Willoughby was a successful auctioneer. His wife spent his money and looked down upon the means by which it was made. Her aim was to be "smart" above all things, and she intended that her pretty sister, Hetty, "who really has no style, poor child, and is dreadfully provincial," should be an attraction at her "at homes" ("second Sundays 9 to 12, first Sundays 4 to 7") and should marry really well. To this end she decreed that Hetty should ride and choose a costume for her sister from a "smart" lady's tailor in which Hetty looked distractingly pretty.

«Only you really should powder to tone down those red cheeks,» said Mrs. Mornington-Willoughby, «and practice cycling somewhere in back streets, for your just the kind of girl to grow beet-root color over an exercise until you're used to it.»

Thus it came about that Hetty Sylvester stood in a bicycle shop bargaining with the proprietor for a course of lessons from one of his two "young men."

«The instructors are in the back of the shop there—at least one of them is,» said the proprietor, jerking his head in the direction of a long

vista of bicycles which led from the shop to a capacious shed at the other end. «He's a new hand I've had to take on lately through press of work, a crack rider and first-rate instructor, thoroughly reliable. Now, when will you have your first lesson? Will to-morrow morning at 10 suit you, or is that too early?»

«Oh, earlier, if possible,» returned Hetty. «There'll be less people to see me fall about.»

The proprietor laughed.

«Some other young ladies are of your way of thinking, for both my young men have engagements from 9 o'clock onward. How would a quarter to 10 suit you? A quarter to 10 in the Meredale road? I wouldn't have more than ten minutes or so the first time if I was you. Vaughan,» he called out down the shop, «a quarter to 10 in the Meredale road to-morrow morning; you'll have finished Mrs. Jenkins and be able to take this young lady, Miss Sylvester, won't you?»

«Yes, sir.»

The answer came from the depths of the shop, beyond the avenue of machines, where a group of three young men were standing beside a workman who was explaining something about a broken-down machine. One of the young men was broad-shouldered and well built and was dressed in a smart tweed cycling get-up; and even at this distance and by the bad light in the shed, it seemed to Hetty that he was remarkably good looking. She hoped not unnaturally, that this might prove to be Vaughan, the teacher. It was surely pleasanter to be held on to a machine by an eminently presentable young man, who looked at a distance in his cycling dress quite like a gentleman, than by some ugly, grimy 'Arry. Of course, such a trifle was really of no consequence; still, when, the next morning, Hetty arrived at the Meredale road she glanced with some interest up and down it in search of her instructor.

At first she could only see a stout lady in a shepherd's plaid costume wabbling along with difficulty on a bicycle, supported by a shallow-faced, weedy-looking youth in a shabby black coat and shocking boots. The youth and the lady went up and down the road, taking no notice of her, and Hetty, turning the corner of the road, beheld to her relief the handsome young man she had seen in the shop on the previous day coming briskly along by the pavement in charge of a lady's machine and evidently on the look-out for some one.

«Stop!» said Hetty; and the young man stopped, smiled and raised his hat.

His manner of doing so was so natural and so eminently gentlemanly that Hetty grew embarrassed and blushed.

«I beg your pardon,» she said, «but don't you come from Messrs. Tynn & Harris' bicycle shop?»

«I do,» said the young man.

«I think,» said Hetty, blushing again, for Messrs. Tynn & Harris' young man had laughing gray eyes under dark eyelashes and a trick of staring intently in the face of any one who was talking to him; «I think I am your appointment for a quarter to 10?»

«I am very glad to hear it,» said the young man.

«Glad?»

«Well, you see, miss,» he said, quickly, «it's a relief to teach any one young and slight, like you, after some of the weights I've had to pull round.»

«There's a very stout lady being taught in the Meredale road just around the corner, by a man in a black coat.»

«Ah, that's my mate, Bill,» observed the young man, as he lowered the seat of the bicycle. «Now, will you mount, miss?»

«Miss Sylvester,» said Hetty, correcting him.

He was so handsome and so eminently well-bred looking that it seemed a pity he should speak in rather a common style and allude to the youth in the bad boots as "my mate, Bill," and call his pupil "miss." His manner of teaching, too, was charming, and, although he occasionally dropped, or misplaced, rather, a large and necessary "h" as, for instance, when he alluded to the "'ouses at the head of the road," his voice was pleasant and mellow, with hardly a trace of a cockney inflection.

Hetty was timid at first, and clung to him as is the manner of all beginners. But he did not seem to mind. He was provided with a leather strap, which he fastened round her waist, as she had seen other instructors do, and he caught her most cleverly when she was about to tumble off.

«You must have had a great deal of practice,» said Hetty, «and I am immensely obliged to you. They told me at the shop you were a crack rider as well as instructor.»

«Very 'andsome of Mr. 'Arris,» murmured the young man.

Hetty felt sorry about his "h's." It was a pity, she thought, that they could not exchange instruction, and that in return for his gentle and kindly teaching of balance on a bicycle she could not initiate him in the mysteries of the eighth letter of the alphabet.

The "mate, Bill," came along during the progress of the lesson and stopped at the edge of the pavement to eye them curiously.

«Your friend looks annoyed,» said Hetty.

«He's so greedy, he wants all the custom,» her instructor explained.

Excusing himself, he joined the pallid young man in the bad boots on the pavement and interchanged some talk with him, after which the shabby young man smiled and walked away.

«I'm immensely obliged to you, Mr. Vaughan,» Hetty said at the end of about twenty minutes, «but I'm rather tired now. Shall I make an appointment for to-morrow with you or at the

shop.»

«Oh, with me, please.»

«Well, when are you disengaged?»

«I wonder,» said Mr. Vaughan, after consulting an extremely smart Russia leather pocket-book, «whether 9 o'clock to-morrow morning would be to early for you? Then we shall have the place to ourselves.»

«Nine will do beautifully. Good morning, Mr. Vaughan, and thank you.»

He raised his cap and she noticed how pretty his short, curly, fair hair looked in the spring sunshine. He was certainly a most good looking young man and there was, of course, no harm in his smiling at her when he said good-by, especially as he had such nice, white teeth. On her way home Hetty wondered whether Mr. Vaughan had a "young woman," and, if so, whether she was not very proud of him?

Calling on her sister that afternoon, she recounted to her her first experiences on the bicycle.

«And what sort of a man was your teacher?» asked Mrs. Mornington-Willoughby, a tall, slender woman, with elaborately waved hair, touched up with chestnut hair dye, a high-pitched voice and a manner suggestive at once of irresponsibility and artificialty and which contrasted ill with Hetty's frank simplicity.

«Oh, wonderfully good looking, and so nice!»

«Heavens, child! You're blushing! It's horribly bad form to blush when you talk about men of that class. You'll be blushing about your hairdresser next. Of course they choose good-looking men for that sort of thing—holding girls on bicycles and all that. Broken-down gentlemen they are sometimes, and awful scamps you may be sure.»

«But Mr. Vaughan isn't a broken down gentleman,» said Hetty hastily. «At least I mean, though he looks and behaves like a gentleman, he drops his h's.»

«Oh, lots of university men do that. We're not so particular about h's in town as the good people in the provinces. But I'm glad he's not a gentleman. Makes him safer. Why, there was an awful scandal last season at the Regency skating rink. They had two instructors there all the girls went mad about. Awfully good-looking, you know. The dress showed them off. The girls used to take them out to lunch and stand them all sorts of things.»

«Maud! How disgusting of them!»

«Don't look so shocked! It is so provincial to be easily shocked. At last Lady Betty Wardropers' guardians found she'd given one of these men a pair of diamond sleeve-links and was secretly corresponding with him. Of course there was an awful row.»

«Of course!» Hetty repeated. «But—but was she fond of him?»

«As is anybody bothered about that! She was packed off abroad and the young man got sent away. Oh, those handsome young men who go in for teaching girls riding or skating or cycling, make a very good thing of it.»

Hetty was silent. She could not bring herself to think the nice big gentle-mannered Mr. Vaughan "made a good thing" of the folly of well-educated girls, who ought to know better than to fall in love with him. Yet her manner on the following morning, when she met him at 9 o'clock in the deserted Meredale road, was marked by a slight touch of constraint, which, however, soon vanished under the pleasant courtesy of his greeting.

At the end of half an hour they seemed like old friends. Somehow, without exactly asking questions, Mr. Vaughan managed to learn all his pupil's circumstances and the leading facts of her hitherto tranquil existence in a quiet country town.

Hetty was an unselfish, sweet-natured girl and all that could be learned about her was to her credit. She had been an excellent daughter and had nursed her father devotedly through his long illness; she loved outdoor exercise, skating, riding, rowing and gardening; she was fond too, of dancing, but she had no taste for the round of trivial engagements with which her sister filled her time, nor had she the least desire to emulate that lady's "smartness."

«Is Mrs. Mornington-Willoughby your sister?» Mr. Vaughan had asked in evident surprise.

«Yes. Do you—have you ever heard of her?»

«My mate taught a friend of hers, I think,» the young man answered in rather a confused way.

Hetty was startled on looking back to recall the extreme friendliness with which she and Mr. Vaughan had parted and the length of that second lesson. She could not get the young man out of her head, and with a hot flush of shame she asked herself whether she was not "just as bad" as those girls at the skating rink of whom her sister had told her. None of the men she met at Mrs. Mornington-Willoughby's "at homes" were half so good-looking or charming in manner as Mr. Vaughan, even if they were more certain in their h's.

The girl began to feel troubled and distressed. She went to bed thinking about the bicycle teacher's grey eyes, and as a consequence she dreamed about them, and next day she flushed red as a rose when she met the young man as usual at 9 o'clock in the Meredale road.

This time it was her turn to learn about him. His mother was dead, Mr. Vaughan told her, and his father was "in business at Westminster," which Hetty took to mean a shop there. He himself was quite independent, 26, and on the lookout for a wife. «In my own station of life, of course,» he added.

«Yes, I hope you will find a very good one,» murmured Hetty.

«I suppose I oughtn't to look so high as a lady?» Mr. Vaughan suggested, insinuatingly,

as he held her hand in his while assisting her to alight.

«I really don't know why you shouldn't,» she answered simply. «You only want, if you will forgive me for saying so——»

«Pray, tell me!»

«Well, to be just a little more careful with your h's.»

«Thank you, immensely,» he said, gratefully. «Now, will you help me at that? You will want at least a dozen lessons more to teach you cycling. Will you look after my h's if I look after your balance?»

«Of course I will,» said Hetty, promptly.

But three pouring wet days put a stop to the cycling, and on the evening of the third even the constantly recurring thought of Mr. Vaughan was banished for the time from Hetty's mind by the event of her first dance in London. It was a subscription dance, and Hetty, in white tulle and lilies of the valley, looked lovely enough to almost satisfy her sister.

«No style,» that lady declared, «but very young and fresh and all that.»

The member for Kensington, Sir Henry Grahame, a wealthy baronet, was among those who sought an introduction to Mrs Mornington-Willoughby's pretty sister. He was a handsome, erect man of about 50, and he exclaimed gallantly that the belle of the room must not be wasted on "a fogy like himself" for a round dance, but that she must know his son.

«I am enormously proud of my boy Eric,» he told her, «and I must find him for you.»

Mentally he was wondering how such a sweet, well-bred girl came to be the sister of that handsome snob, Mrs. Mornington-Willoughby.

«Here is my boy,» Sir Henry exclaimed with fatherly pride, as a handsome, well-built young man, with laughing gray eyes and curly fair hair approached them, «Eric, I want to introduce you to Miss Sylvester.»

«Miss Sylvester and I are old friends, father. We have met—out cycling. May I have this waltz, Miss Sylvester, or are you engaged?»

«You have been making fun of me all the time,» whispered Hetty, with burning cheeks, as she laid her fingers on Vaughan's arm. «It was cruel of you.»

«On my honor I haven't. You met me in the bicycle shop, and next day, as I was on my way to my sister's house to give her a lesson on her new machine, you asked me if I came from Tynn & Harris' and I told you truthfully that I did. Then you told me that my name was Vaughan and that you had an appointment with me and I couldn't find it in my heart to contradict you.»

«And where was Mr. Vaughan all the time?»

«Mr. Vaughan was 'my mate, Bill.' He wanted to spoil the sport, so I squared him.» «You were laughing at me all the time,» faltered Hetty, «and I can never forgive you.»

«Not if I never drop another 'h'? Remember you encouraged me to believe I might some day marry a lady if I only took care of that.»

«It's extraordinary what luck some girls have,» Mrs. Mornington-Willoughby asserted, not without envy, a week later. «There's my little sister, fresh from the country and can't say boo to a goose, and she has managed to hook the son and heir of a rich baronet at her very first dance. The man had never seen her before and he proposed the same evening!»

But Mrs. Mornington-Willoughby was never let into the secret between Eric and Hetty, of love on a cycle!

TANDEM RIDING.

FROM "THE ART OF EASE IN CYCLING," BY G. LACY HILLIER.

In no form of riding does sound ankle work tell more than in tandem riding, and the difficulties which many couples on tandems experience, especially in hill climbing, are due in a very great degree to want of agreement in the ankle action. In short spins this fact may not become apparent, but in long rides it is sure to tell, and the fact that cyclists who habitually ride together do vastly better than scratch pairs is of course due to their having got acquainted to one another's style.

It very often happens that two notably good riders on singles fail altogether to ride as well as they or their friends expect when they use a tandem, whilst individually inferior riders ride considerably better together, the explanation being obvious. The two crack riders possess marked styles of their own and those styles do not agree, the technical expression being "they don't nick." The proper way to minimise the difficulty at first, and to bring the two styles into agreement, is for the riders to decide that one shall be the leader or captain, and that the other shall obey his instructions. The leader should, of course, steer and have control of the brake, and on him will fall at first the lion's share of the work. A clever pedaller, especially if he rides on the front saddle, can usually feel with his feet what the rear rider is doing, and will very soon discover what special trick or fault

of style his companion possesses; so far as my experience goes this cannot be quite so well done on a tandem steered from the rear saddle, though I am not quite clear why.

In the earlier spins, which should be taken on as level a road as possible, the leader should let the novice or beginner do as little hard work as possible. In many such cases the other rider is most anxious to do his "fair share of the work," and this desire, unless carefully checked, leads to trouble—in this way one rider puts in a lot of work, the other rider feeling the machine running very easily, has qualms of conscience as to whether he is doing his fair share—he begins to work harder with a similar result, and in a very short space of time both are going "all out" until exhaustion sets in. The crucial test of good tandem work is found in hill climbing—the tandem is considered to be a bad hill climber as compared with the single cycle—and there may be some drawback in the distance between the wheels, but I am inclined to put its bad name for hill work down to two conditions.

First, the want of agreement between the style of innumerable "scratch pairs," which disagreement tells most uphill; second, the high gearing used on many tandems on the road. Where two cyclists habitually ride together on a moderately geared tandem they will, in most cases, be found to have a special reputation as hill riders, which bears out my view of the matter. Tandem riding is certain to grow in popularity as time goes on, especially where ladies and gentlemen ride together, the steering and brake being in the hands of the male member of the mixed crew, the lady being thus relieved of all the troubles which they involve. The tandem is faster than the single on the level, and that means, of course, that the work is easier at moderate speeds, and it is certainly a more companionable mount, especially when there is much difference in the riding capacity of the two cyclists.

Many a fair cyclist, who for one reason or another is much slower than her husband, feels that she is something of a drag upon him when out for a ride and that he would really like to go two or three miles an hour faster. This often induces her to remain at home rather than go for a run with him, though possibly the spin would be not only enjoyable, but a real benefit to her health.

This course eventually causes the lady to give up cycling, to her own detriment. But if a tandem be added to the family stable of cycles, the conditions are entirely altered—the lady can do all the work required of her—as it very often happens that nervousness in steering and balancing has much to do with slow pace on the single, and, after a few rides together, the pair get accustomed to one another's style, and the result is entire comfort and satisfaction.

If the steersman of such a tandem will take the trouble to learn ankle action himself, and carefully instruct his partner in the art, the pair will be able to ride faster and further with ease and satisfaction to both.

THE HORSELESS CARRIAGE AND PUBLIC HEALTH.

One year ago a company put thirteen horseless electric cabs for hire on the streets of New York. To-day the same company operates one hundred cabs and they are so popular that they have to be taken from the public cab stands and kept in the cab house to fill telephone and messenger orders of regular customers. Three hundred cabs are needed to fill the demand, and it is doubtful if the demand would be supplied. In addition to the cabs there are at least thirty delivery wagons, pleasure vehicles, etc., in Manhattan proper. It is probable that many hundreds will be in use another year, but the number will be limited, as horseless carriages are complicated pieces of machinery and have to be built carefully, and the factories are now crowded to their utmost.

Commenting on this state of affairs, the Scientific American argues that the merit as regards convenience and economy of the new means of transportation is patent to all, but there is another point which should not be overlooked. In a few years, the horseless vehicle will change the aspect of many of our great cities, and the new industry, which has had such a struggle for existence, will, in time, transform our cities. In ten years New York has witnessed remarkable changes in transportation. It has seen the old horse cars discarded for the cable, and now the cable is to make room for the underground electric system. With even the partial exit of the horse will disappear to a great extent the dust and mud and noise and the cobblestone pavements, and it will benefit the public health to an almost incalculable degree. The first point to be considered is that of street paving. Each year miles and miles of asphalt have been laid in place of the wretched cobblestone and block pavements. Of course, there are certain conditions under which asphalt pavements are not available, as on streets where the trucking is the greatest, for the trucks, which are heavy in themselves, are loaded with tons of goods, and the metallic tires cut into the asphalt. The cost of keeping a pavement in repair under such conditions is something enormous. A good example of this may be seen on a block of Chambers Street, between Broadway and Centre Street, New York; the ruts in the asphalt pavement are very deep and repairs

are constantly being made. With the introduction of the horseless wagons and "auto-trucks," steel or iron tires will undoubtedly give way to heavy rubber cushion or possibly pneumatic tires, and at any rate, solid rubber tires would be used in order to obtain the necessary bite upon the pavement. No matter how heavy the traffic, asphalt pavements would then be available and afford the best possible street pavement for automobile vehicles of all kinds. Cobblestones and Belgian block pavement will be renewed as fast as they wear out with asphalt, and the result will be that in time cab riding will be a positive pleasure and a bicycle can go anywhere.

The noise and clatter which makes conversation almost impossible on many streets of New York at the present time will be done away with, for horseless vehicles of all kinds are always noiseless or nearly so. This question of noise has much to do with the general health of the community. Specialists have many times expressed an opinion that the nervous diseases which exist in the city are aggravated, if not caused, in many cases, by noises incident to a great city's traffic. The bells of the new vehicles will of course be somewhat annoying at first.

A point, most important of all, connected with the displacement of the horse is undoubtedly that of the cleanliness of our streets. When we stop to analyze the dust and mud, we find that two-thirds of all of the dirt which we find in the street is caused by the horses themselves, as the dust from other sources and the attrition of the pavement is slight. Therefore, if all of the horses could be done away with, two-thirds of the dirt would disappear in return. While this may virtually be regarded as impossible even a great many years hence, at the same time there is no question that the greater use of the horseless carriage, wagon, and truck will produce a marked effect upon our streets. The number in use is so comparatively small at present that it cannot be reckoned with. But by the time we have two thousand horseless vehicles in the streets, we will begin to see a marked difference. The most obvious and important part of the work of street cleaning in a great city like New York is the removing of accumulations from the surface of the streets. In the late Colonel Waring's book, entitled "Street Cleaning," we find that forty per cent of the entire disbursement of the department is for sweeping and sixty per cent of the laboring force is employed in this part of the work, which is now done by hand. Machine sweeping was formerly much used, specially by contractors, but the work done by it was unsatisfactory and the dust raised even after preliminary sprinkling was very great. It is now considered by sanitary experts that there is little, if any, economy of sweeping with machines, and in the summer of 1895 the use of it in what is now known as Manhattan and the Bronx Boroughs of the city of New York was abandoned.

At the present time there are 1,600 men engaged in sweeping the streets of New York. The wages of the men vary from $50 to $60 per month, depending on whether they have worked one, two, or three years for the Department. The average amount they receive is, consequently, $55 a month, or $660 per year; this multiplied by 1,600, gives us $1,056,000. This is the actual amount spent in sweeping alone, but in addition to this must be considered the cost of brooms and scrapers, and also carting and dumping. The 1,600 men collect 690 loads of sweepings per day, each load containing 1.5 cubic yards, so that each day 1,035 cubic yards of street sweepings are carted away to the dumps. In the New York Street Cleaning Department, 32 per cent of all the appropriation goes for carting and 25 per cent of the laboring force is employed upon the work of carting, from which it will be seen that the cost is very great. Of course, only a part of the expense of carting should be charged to removal of the street sweepings, for garbage, ashes, paper, and refuse must also be carted away; at the same time, the expense of moving 690 loads to the dumps and afterwards carrying the same on scows to sea and dumping amounts to a great deal. The average cost for disposing of the sweepings and refuse in 1896 was 17.9 cents per cubic yard from deck scows, and on the dumping scows the cost was slightly less. The capacity of a modern self-propelled automatic dumping boat like the Delehanty boat "Cinderella" is 500 cubic yards. With the advent of the horseless carriage a considerable portion of the sum spent in sweeping, carting, and dumping dust and mud from the streets would be saved. This is a general proposition, which at the present time cannot be reduced to figures, but it is very safe to say that several hundred thousand dollars per year will be saved on street sweeping if 50 per cent of our vehicles were actuated by motors.

The question of health must also be considered.

In summer, the dry dust rises in clouds and attacks the delicate membranes of the nasal passages and throat, producing irritation and coughing. Mud consists, of course, in sweepings which are made into a sirupy mass with the aid of water, and if the dry dust is bad, the mud is infinitely worse. When the streets are practically relieved from so-called "dust," it will be a boon to every housewife. Costly draperies and curtains are damaged each year by the dust from the street, and often windows are closed on this account when they should be opened to properly air and ventilate the house. With the advent of streets which are clean and which can be kept clean with a minimum of expense, it is probable it will tend to greater neatness on the part of the community at large, for it is a true fact that cleanliness breeds cleanliness.

The Gospel of Good Roads

GOOD ROADS AND STATE AID.*

It has been said that before we could thoroughly realize the difficulty of hauling on our common country roads, one of two things had to happen: either the horse must learn to talk; or else we must take his place on the wagon, and that the latter occurred when we learned to ride the bicycle. The League of American Wheelmen, with a membership which has grown beyond the hundred thousand mark, is generally acknowledged as the most potent factor in the promotion of good roads sentiment. Since 1892, the League has maintained the "Good Roads Magazine," which has been merged more recently into the "L. A. W. Bulletin and Good Roads," its weekly official organ. The L. A. W. sends its emissaries to good roads conventions and to the more important farmers' gatherings, and the highway laws of a number of states have been improved through its efforts. Its latest undertaking is the printing of a million illustrated good roads pamphlets, and their circulation, by mail, among farmers, whose addresses are being gathered by the thousands of L. A. W. officials. The first three hundred thousand of these pamphlets have already been printed and mailed.

The losses from bad roads in the United States are enormous. The U. S. Office of Road Inquiry explains that our average load of crops weighs practically a ton while in Europe it is upwards of four tons, and often six tons. John M. Stahl, editor of the Farmer's Call, estimates that the annual cost of wagon transportation of the country is $900,000,000, of which $500,000,000 might be saved. Gen. Roy Stone, Chief of the Road Inquiry Office, has verified this by careful computations, and reports that the total haulage on the public roads each year is 313,349,227 tons, costing $946,414,665.54, which constitutes over one-third of the total value of farm products. He states that nearly two-thirds of this cost is due to bad roads.

The average farmer resents any interference with his road building methods, which he considers peculiarly his own affair. No reform, therefore, can be forced upon him, and any successful plan of road improvement must leave it optional with him to avail himself of its provisions. The initiative must be left in his hands. The state aid system seems to have solved the problem to the farmers' satisfaction. This system has been adopted in several states, but is most successfully in operation in New Jersey, where it was introduced through the combined efforts of the League of American Wheelmen and the leaders among the farmers. This system divides the cost of road improvement between the state, the county, and the abutting property owners. Improvements are made only upon a petition from the latter. The feature of the state aid system which appeals most strongly to farmers is the fact that city tax-payers, large property holders and wealthy corporations are made to contribute to the cost of improved country roads, through the taxes and license fees now paid into the state treasury. The Farmers' National Congress, the most powerful agricultural body in the United States, passed resolutions last December strongly endorsing state aid as the solution of the good roads problem, and commending the efforts of the League of American Wheelmen to bring about its general introduction. The National Road Parliament, consisting almost entirely of farmers, passed similar resolutions at its last annual meeting.

*Abstract of an article by Otto Dorner in February Forum.

A. B. CHOATE ON STATE AID.

That A. B. Choate, of Minneapolis, is an authority on the question of good roads will be conceded after a perusal of the following which is part of a circular recently issued by him.

"Equality of taxation is a familiar principle, yet nothing could be more unequal than to tax farm property alone for the construction of roads which ultimately benefit the entire community. In the newer states the taxable property is more nearly equally divided between town and country, but in the older ones the preponderance is greatly in towns and cities, in New York the proportion being about six to one.

"The bearing which this fact has," says Mr. Choate, "upon the question of state aid for building country wagon roads is very apparent, for if the farmers are required to pay taxes on their proportionately very small amount of property to improve the long stretches of country roads while the city people pay only enough taxes of their great wealth to improve the roads within the city limits it will be necessary that the road taxes levied upon the farm property shall be much heavier in proportion to the value of that property than the road taxes upon city property, and the principle of equal taxation will be violated.

"The business men in the cities have learned that it is to their interest to have better country roads. The whole state is interested in the improvement of all the roads, and since the city people are insisting that they shall be improved it would be fair to levy a tax on city property as well as country property for the improvement of country roads. This is what is meant by state aid."

Mr. Choate then sums up the question in the

following brief yet masterly manner:

First.—All taxes should be equal.

Second.—Taxing farm property to improve all country roads and city property to improve city roads only results in unequal taxation.

Third.—City people desire to have country roads improved. Equal and just taxation requires that they contribute toward the expense.

Fourth.—State aid simply requires all benefited property owners to contribute to the expense of road improvements that benefit them.

Fifth.—State aid for road building is the same in principle as state aid for public schools.

Sixth.—State aid is not a new experiment in road building, but has proved successful in New Jersey, Massachusetts and elsewhere.

The above six points are clear, simple and convincing, and if the farmer is once convinced that he will only have to pay a minor proportion of the cost there will be little opposition in any of our legislatures to bills for the purpose of constructing good roads.

THE VALUE OF GOOD ROADS.

"That good roads have a money value to farmers will be granted by all; that the money value of improved highways is alone sufficient to justify the cost of their construction will be readily admitted by many farmers, questioned by others and denied by not a few." The foregoing statement appears in one of the circulars issued by the United States department of agriculture and was the subject for a paper read by Mr. Charles Corner before the agricultural congress recently held in Texas. Mr. Corner said in part:

That this must be true, both as to the first and second statements, is self evident; that they have a money value to the farmer is true for the following among other reasons:

The saving of time and teams between the farm and the market.

To permit the profitable cultivation of truck patches and the marketing of their produce in the odd times of farm leisure.

Reducing the wear and tear of wagons, teams and harness.

It will allow our farmers better opportunities to take advantage of the change in market values.

And last, but not least, it will increase the real estate value of his holding.

This is only the economical side of the question, but there are other advantages scarcely less important, social, educational and religious.

As to the social aspect of the case it is a common remark that boys are continually leaving the country and flocking to the towns because they find the country dull and uninteresting. No young person, whether boy or girl, wants to live where there is no recreation or relaxation from the daily round of toil other than the change of the seasons and the landscape. With good roads the country life would expand and attract youths from the city to the farm, to its healthier labors and more wholesome pleasures. Our social intercourse would become less angular in the gentle friction of a more intimate intercourse.

We have stumbled by force of circumstances upon a certain inverted order of progress so far as transportation is concerned. We are able to travel to the ends of the earth in conditions of luxury that the Cæsars might envy, while denying ourselves the privilege of visiting our neighbors in the same precinct if the rain has destroyed the usefulness of the road to their house. In our towns, and often in the country, too, we eat the fruit and vegetables of California, Colorado and the tropics, usually because the truck patches of our farmers are not in touch with the towns.

As to the educational side of the question, tidiness and thrift are virtues that are continually being preached by a good system of roads, and, in addition to this, in bad weather those of our children who live in the country can hardly get to school, and in this way the school term, already too short, is virtually lessened by the absence of good roads.

MARTIN DODGE AND STEEL ROADWAYS.

In a recent interview in a Washington paper Mr. Martin Dodge, director of the office of road inquiry in the agricultural department gave the following information concerning steel tracks on roadways: "All steel tracks heretofore placed upon the highways having been laid by private enterprise and so laid as only to be used by vehicles with flanged wheels, it remained for the government to make a demonstration as to the utility of the steel track so made and laid that vehicles without flanged wheels might have the great advantage of a smooth track, heretofore only enjoyed by the vehicles with flanged wheels. I was made director of the office of inquiry and immediately began operations to build a sample steel track wagon road for the purpose of making tests as to its cost, value and utility. For the department I secured a suitable space on the grounds of the Transmissisippi exposition at Omaha, where the results might be seen by the greatest number of people, and constructed such a road as I had recommended before, but which had never been fully tested.

"The road consists of two parallel lines of steel plates eight inches wide and at a sufficient distance apart to receive the wheels of the vehicles of the standard guage. These plates have a slightly projecting flange upward and on the inner edge so as to prevent the wheels of ordinary vehicles, which have no flanges, from easily leaving the track. At the same time the flanges, being only one- half inch in height, are not suffi-

cient to prevent the vehicles from leaving the track, whenever the driver so desires, for the purpose of passing other vehicles going in the opposite direction. These steel plates are not supported by wooden cross ties or longitudinal stringers of any kind, but are provided with flanges projecting downward and outward at the same time. These flanges are so imbedded in the concrete of the roadbed as to form a substantial part of it, and the steel plates themselves are supported at every point by a superstructure of cement or other imperishable material.

"The only cross ties used are not for support, but only to maintain the steel plates at a uniform distance from each other and also to prevent tilting and maintain the face of the plates in a horizontal position. The road, when properly finished, contains no perishable material, such as wooden cross ties and stringers, heretofore used and thought necessary for all steel track construction, but forms a smooth, firm and compact mass more hard and durable than a road can be made by any other known material. The weight is about 100 tons per mile of single track.

"The three great advantages of this new roadway are:

"First.—That it can be built without greater cost and probably with less cost in most places than any other hard and durable road.

"Second.—It will last many times as long as any other known material for road purposes and with much less repair.

"Third.— The power required to move a vehicle over the steel track road is only a small fraction of the power required to move the same vehicle over any other kind of road. This important fact can be taken advantage of either by increasing the load, which a given power would be able to move over a common road or by diminishing the power necessary to move a vehicle over the new road.

Mr. Dodge exhibited the following letter from Mr. F. Melber, who has been experimenting privately with the new roadway:

"My road has been in position for about a month, and among other interesting things I watched the temperature of the steel when exposed to the hot afternoon sun. Every steel worker knows that steel bars lying in the yard of a bridge works, for instance, will get so warm in a few minutes that the men cannot hold them in their hands. I find that my steel stringers remain cooler than adjacent broken stone. This, I think, is as well a remarkable as an important fact, and it goes to show that there takes place an interchange of the temperature between the inner substances and the steel, and that in this class of steel highways we do not need to provide for expansion.

"Altogether I find the steel road to verify all I have said about it, even as to cost, and with regard to traction advantages, I am now able to give figures. I have made 20 trials, using a guaged spring balance and find that the average force needed to pull an iron wagon weighing 1,550 pounds, with a 16 foot wagon bed, is 2.5 pounds, which, reduced to a load of 2,000 pounds, means a traction force of 3.23 pounds per ton. In page 18 in your pamphlet on tests in Atlanta you arrive at an average tractive force of 41 pounds for good macadam, and you place the traction for hard earth roads with morin at from 75 to 102 pounds, in the mean, say, 88 pounds. My tests, therefore, demonstrate that the steel roads need for traction, one-twelfth the power as compared with macadam and one-twenty-seventh the power as compared with earth roads."

The Murray (Tenn.) Times sums up the situation in this wise: "On our gravel roads two mules haul two hogsheads of tobacco; on the mud roads four mules can scarcely drag enough to fill Uncle Josh Sledd's pipe three times a day." It then gives a number of very sound reasons why good roads are paying investment to farmers, among which are the following: "A good road economizes time and force in transportion between the farms and the market reduces wear on horses, harness and vehicles; increases the value of real estate contiguous to the roads; brings prices for farm products because they can be marketed at less expense; rural homes are sought after along good roads; wagon highways are the greatest arteries of commerce; civilization is judged by the condition of the roads; no tax is as great on the taxpayer as bad roads; a bad road is a heavy tax on those who use it, and the worse the road, the heavier the tax; bad roads cause a decay of agriculture; they impose the greatest of all burdens on the farmer; the roads cause people to gather in the cities; bad roads wear out the horses very rapidly, thus detracting very largely from the profits of the farm."

In his message to the state legislature Governor Smith, of Vermont, laid considerable stress on the cost of hauling farm produce. He prepared statistics showing the cost of transportation of the products of Vermont from various towns which lie away from the line of the railroads to the railroads. "The rates by railroad," said the governor, "will never in my judgment be higher, so that whatever can be saved by improved roads out of the cost of teaming these products ought to go into the pocket of the producer of the hay or the butter or the lumber or granite or whatever is teamed. The standard authorities give the saving in cost of teaming over good roads as compared with ordinary dirt roads to be from 50 to 75 per cent, so that there is $1.25 to $3 for every ton of freight teamed to go into the pocket of the producer in Vermont if only good roads are made where bad ones now exist."

Bicycle Law.

These pages are open for questions pertaining to cycling in its legal aspects. Any legal questions concerning wheelmen's rights and liabilities will be answered. Questions must be relevant, brief and to the point.

SOMETHING ABOUT LIENS.

When a rider takes his wheel to the repair shop after a surgical operation has become necessary by reason of a fracture, he enters into a contractual relation with the repair man, whereby he becomes liable to him for the reasonable value of the services performed. If he pays the repairman's bill upon the completion of the work, there is an end to the transaction. If, however, he does not, the repairman has a right, which he may or may not exercise, to retain the machine in his possession as security. This right is known in law as a mechanic's or artificer's lien. We shall point out briefly some of the general principles of law that apply to, and a knowledge of which is likely to be of service in, transactions between bicyclists and bicycle repairmen in this connection, without referring to any decided cases, but if any of our readers desire more specific information concerning any point mentioned, it will be our pleasure to throw further light upon the problems suggested in future issues.

We have intimated that the repairman may keep possession of the machine as security, if his bill is unpaid. This, however, must be taken as a mere general statement, and is subject to certain well-defined rules. A repairman may enter into an agreement to do whatever work is required of him for a specified price. If this sum, whatever it may be, is tendered him, he has no right to retain the wheel for a single moment, and its possession may be recovered, if necessary, by appropriate legal proceedings. If there is an agreement between the repairman and his customer that accounts shall be settled at stated intervals,—for instance, monthly or quarterly,—no right of possession can properly be claimed by him, at least until the account is due.

Another case where there can be no lien on the bicycle is where there is a definite promise to deliver the same either at a certain time or generally upon the completion of the work. By making an unconditional promise of this character, the repairer has waived or relinquished his right, and can only take such action for the value of his services as he might in the case of any other debt due him.

There may perhaps be a dispute between the owner and the repairman as to the amount due, where there has been no previous agreement. In such case, the lien will be for the reasonable value of the services rendered, and no more. The rider may in such case tender the reasonable value, if he can prove that it is reasonable, and recover possession, but if he fails to prove that the sum tendered is not at least equal to a reasonable remuneration, he will be defeated.

If the machine has been re-delivered, after the completion of the repairs, the lien is gone, even though the repair bill remains unpaid, and this is true notwithstanding the fact that the bicycle has again been brought in for further repairs.

A machine cannot be held by one under a claim of lien on account of any other indebtedness which may be due, for goods which may have been sold, for example. There may also be a lien for storage, and in certain cases there may be a right to retain it for the unpaid purchase price, but the right to the so-called artificer's lien is the one which bicycle dealers and repairers will most frequently have occasion to assert.

It must be remembered that the liens we have mentioned confer only a right of possession, and do not authorize a sale for the purpose of satisfying the debt. Of course, if the owner of the bicycle is sued for the amount due, and a judgment rendered against him, the wheel may be levied on and sold in the same manner as any other property of the debtor.

If your wheel is stolen, and the thief takes it to a repair shop, you can claim it without paying the repairer, since the thief cannot thus create a lien as against the true owner. The innocence and good faith of the repairer are not material.

What we have stated is not, in its entirety, of universal application, and we must not be understood as advising any reader to act upon it without investigation as to how far the laws of his state modify the general doctrine, but as to the application of the law in particular cases we invite inquiries.

The other day two wheelmen on a country road in California, who were traveling at a high rate of speed in opposite directions in the dark, collided with the result that one of them was almost instantly killed, and the other severely cut and otherwise injured. This strongly emphasizes what we have heretofore said in this department as to the wisdom of carrying lighted lamps, even in the absence of any requirement of law.

The Hum of the Horseless

PROBLEMS OF THE AUTOMOBILE.

In a recent issue of the Electrical Engineer, there was an editorial discussion of the question, who shall build the automobiles, when it was pointed out that in all probability the work would fall largely into the hands of the present bicycle manufacturers and electrical inventors, who have devoted their attention to this class of work; not including those who have evolved types of steam, oil, compressed air, gas and other carriages for heavy traction and for country traffic. A large problem was thus indicated for solution, but it is by no means the last or the only one that is raised by the new developments in the substitution of mechanicals for animal power in the propulsion of vehicles.

Although many classes of carriages have been tried, especially in France, the fact so long insisted upon in these columns has already been demonstrated, namely, that electricity is by long odds the preferable power within cities for this new work. But there is doubt in many quarters as to how the contingences that arise shall be dealt with; how the market shall be supplied, and how the carriages when sold shall be maintained. It is not until one goes closely and deeply into the various conditions, that the elements of uncertainty and perplexity are fully revealed.

First of all we may say that we do not believe that any great number of carriages will be rented. It will be the natural and obvious policy of the builders to sell as many vehicles of all types as they can and to bring out a new style with improvements each season. Otherwise the capital investment would be enormous and the vehicles would not receive the care they need; so that an extraordinary rate of depreciation might be expected. There will doubtless be electric liveries to take care of casual business, but we cannot help thinking, for many reasons, that more private people than ever, in moderate circumstances, will be able to own carriages for themselves, even if they "board" them in large central repositories. Hitherto many wealthy families in New York, for example, have had stables in the rear of their mansions or in streets rendered thereby well-nigh useless for any other purpose. But with the horses eliminated, it is simply a question of storing the carriage and charging the batteries, leaving the coachman available in many capacities as a spare servant about the house. It strikes us that the costly old private rear stables and the old streets of stables will now disappear. They have had their day and will cease to be. Many of the electric carriages will be "up kept" by central charging stations and called by telephone whenever needed by the owner. One well-known New York millionaire says he will no longer bring his horses from Newport for the winter, and he has authorized the building of three special private carriages, which will be handled for him entirely, as to cars and maintenance, by a central company. Our impression is that he is going to save money by the change.

On the other hand, there are plenty of private houses and apartment houses in large cities, and there will be more, whose occupants will own electric carriages, either outright or by clubbing together. In these houses, current is already available. Why should not the carriage be kept right on the premises, just as the bicycle is now? In a great many New York houses the front basement room is often very poorly utilized. The family may breakfast in it, or it may serve as a billiard room, or it may be a lounging place for the domestics. Nothing would be easier in the world than to take eight or ten feet square of that room and run the private carriage in there, ready for instant use. For hundreds of doctors, this would at once solve a difficult problem, and we believe there are scores and scores of fairly well-to-do families that would welcome the chance to "set up a carriage" at the cost of sacrificing part of the semi-useless basement. For large apartment houses, this innovation would be even easier, and it is not unlikely that just as recent houses have announced good storage for tenants' wheels, those built in the near future will advertise that they have abundant and special accommodation for automobiles. Such apartments will be the choice.

THE MILDE ELECTRIC VOITURETTE.

One of the interesting electrical novelties in automobiles recently shown at Paris is the Milde "voiturette." The batteries and motor are mounted on a separate truck or platform on the forepart of the tricycle, surrounding the front wheel and suspended from the encircling frame or shafts attached to the body. The batteries are 15 Fulmen accumulators, type B, in three groups, each cell with 5 plates, of 85 ampere-hours' capacity, and delivering current at 25 volts to a series would motor taking from 500 to 600 watts. The armature is geared to the central wheel and at 2,000 revolutions per minute gives a normal speed of 15 kilometres an hour. Steering is effected by means of the handle bars, supported by four posts, which turn the whole front truck bodily within the shafts, with the aid of the guide wheels bearing on the platform that carries the mechanism, etc. The controller is placed under the seat and

is operated by the handle at the right side of the carriage. It throws the batteries into various groupings and cuts in and out resistance from the field of the motor, so as to obtain different speeds and outputs. There is one pedal just within the dashboard to cut down the current quickly for slackening speed and another which actuates a mechanical hand-brake on the rear axle.

The voiturette can, it is stated, make a trip of 60 to 70 kilometres (35 to 45 miles) without recharging. Its total weight with two passengers is 440 kilogrammes (950 pounds), of which 140 kg. is for the fares. The load of 26.4 ton-kilometres is carried at an output of 127 watt hours per ton-kilometre, and at a cost of 3 francs per day, including recharge. The price is 3,000 francs, or $600, which puts it well within the reach of a great many people of but moderate income needing vehicles for business or pleasure travel. One criticism on the rig that might be offered is that the mechanism and batteries should be better housed for the weather. The designer of the carriage is M. Greffe.

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FROM PARIS.

A cable dispatch from Paris says Automobilism receives new impulse by the inauguration of the Automobile Club de France, in its new quarters in the Place de la Concorde. Another journal devoted to this sport, called "L'Avenir de l'Automobilism," has made its first appearance. Electric cabs ought to have been ready for hire in the streets of Paris, as they were promised by the Compagnie Generale for January 15, but a little delay has been caused by the difficulty of obtaining accumulators from England within the specified time. These new cabs are furnished with sufficient motive power to carry them sixty kilometers. It is expected that one hundred vehicles will be in use by the end of the month. Meantime the company has utilized some vacant land at Aubervilliers as a sort of training school for the future automen, or whatever the drivers of electric cabs will be called. A track has been made, about seven hundred yards in length, on which they have been learning to manage their machine for some time. All sorts of artificial difficulties have been arranged, and obstacles have been placed at awkward parts of the track, which goes up hill and down dale in a most bewildering way.

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THE FIRST HORSELESS.

It is said that the mechanician Vaucanson invented a horseless carriage some one hundred and fifty years ago. In a document which has recently been discovered it is recorded that the mechanician was honored, in 1740, by a visit from Louis XV. for the purpose of inspecting the carriage which ran without the aid of a horse or other visible means of propulsion. Two persons in the vehicle made the round of the court-yard to the satisfaction of his majesty and suit, but, though a promise was secured of royal patronage, the Academy of Sciences declared that such a conveyance could not be tolerated in the streets, so the scheme had to be abandoned. The motor power was supplied by a huge clockspring, so that only a short journey was possible, but the gear seems to closely resemble that of the horseless carriages of to-day.

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The principle on which the horseless vehicle is built is being so expanded as to include the heaviest sort of drays, and the hour is not so far distant when no horse will be in sight below Central Park in New York city.

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All hail to the automobile, and may some gifted genius soon arrive who will whip it into shape and make it presentable, says the Scientific American. All things are possible, even a good-looking horseless carriage.

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A Chicago electric vehicle company has closed a contract to supply pleasure vehicles for several Bombay princesses. The order aggregated $26,000, and the vehicles will be shipped during the early summer.

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According to press reports all horse trucks and wagons are to be banished from the streets of Stuttgard, Germany, after a certain period of time.

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The horse has had his day, but he will be a relic of the past if the advancement of horseless vehicles continues at the present rate.

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A street sweeping motor vehicle is in course of construction to be used on the streets of Paris.

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Two Spanish towns, Vittoria and Bilbao, are said to be connected by motor-car service.

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A road race of 108 miles for automobiles is soon to be held in Verona, Italy.

Observations

BY LOUIS NAPOLEON.

It is not in my nature to laud anyone throughout the length and breadth of the land unless there is a good reason so to do. I have in mind, one Martin C. Rotier, a friend and co-worker of mine, who just recently retired as chief-consul of the Wisconsin Division L. A. W. with the good will of his associates and crowned with six years of unbroken service in the interest of league work. Mr. Rotier first came to be known as a wheelman in 1887, upon the organizing of the pioneer wheeling club of the state. In 1891 he became secretary-treasurer of that body, its presiding officer then being A. Cressy Morrison who subsequently became chief consul with Martin Rotier as an able lieutenant in the secretary-treasurership. His untiring devotion to the duties this office imposes was the means to bring the Wisconsin Division from a mediocre position to a place well up to the top in national League matters. He has sacrificed many a valuable hour for the cause and is to-day as much in evidence as any one connected with the organization although not holding office in the Division. His advice in state L. A. W. affairs is often sought, being thoroughly familiar with all questions at issue. Mr. Rotier is responsible for the production of Wisconsin's accurate road map the compiling of which occasioned a great deal of trouble and time, but is a thing executed in such fine detail that it stands way above the ones produced by other divisions. He was the one mainly responsible for the stubborn contest fought in the state Legislature two years ago, for the passage of the law compelling railways to carry bicycles as baggage.

Having been in close touch with him throughout the fight I know that he spent a lot of time, covering a period of about a year, previous to the consideration of the bill; but to my knowledge he has never been as much as thanked by the Division Board of Officers.

♦

Uncle Sam's office force in the postal service of Chicago was recently wrought up to a great state of excitement. Their executive head desired all employees without exception to wear uniforms while on duty the same as the carriers. The men expressed themselves forcibly against that idea and with the favorable voice of the press succeeded in downing the postmaster. The Chicago Record editorily remarked: "It is not likely that Postmaster Gordon will find any uniform better adapted for summer wear than the usual bicycle coat, knickerbockers and stockings."

♦

A report from Wisconsin's capital, where the Legislature is at present in session, announces as follows:

"A bicycle bill, which will undoubtedly stir up the wheelmen of the state was introduced in the assembly by Mr. Guth and was referred to the Committee on Roads and Bridges. The bill takes bicycles, unicycles, tricycles and tandems out of the class of vehicles, and by so doing cuts off their right of way on the road."

There will clearly be a big fight on before final consideration of the bill and it deserves a decided defeat. I would heartily favor its passage; thus taking bicycles out of the class of vehicles and securing free carriage of same on railways, providing, of course, the construction of cycle paths had progressed so far as to give the bicyclists their own wheelway. To pass a state law for building them would be in line with the times.

♦

A local paper editorially quotes:

"Accident insurance companies report that the horse is three times as dangerous as the bicycle. It might be added that it is safer to keep away from both, but safety is not the strongest ambition a man has."

There is one strong point against the pedestrian anti-wheeler element who persist in calling down bicyclers for their recklessness and do not take into consideration their own transgressions. A wheelman must have the eyes of a hawk, always on the alert, to guard against mishaps or collisions with these erratic foot passengers.

The L. A. W. consulate in Cleveland is taking a hand in municipal politics. For the coming season the consulate is pledging the support of wheelmen to candidates for city offices to those who will in turn pledge themselves to carry out certain measures. A number of questions which are put to every candidate from Mayor down read as follows:

1. Will you support the work for the passage of an ordinance regulating street sprinkling to such an extent as to leave a dry strip three feet wide next to the curb on each side of the street, and the regulation of the amount of water used so as to prevent flooding?

2. Will you support and vote for an ordinance to require all vehicles, as well as bicycles, to carry lights after dark?

3. Will you support and vote for an ordinance providing that all vehicles and bicycles keep to the right of the street?

4. Will you use your influence to have all ordinances regulating the speed limit of bicycles, street cars and other vehicles enforced?

A bill has been introduced into the Minnesota legislature compelling railroads to carry bicycles as baggage.

Our Busy Cycledom

Denver wants the 1900 National Meet.

Thirty inch wheel models have taken France by storm.

There are 35,000 cyclists and sixty cycling clubs in Munich.

The pneumatic tire is celebrating its tenth anniversary this year.

Tom Linton will race in Germany during the greater part of 1899.

According to a German paper there are 3,120,000 cyclists in Germany.

Major Taylor says he is perfectly satisfied with white pacemakers.

The racing men of Paris have begun training for the coming season.

"Something About Liens" in our Bicycle Law department will interest you.

The Minnesota state legislature has passed a bill for the protection of cycle paths.

Buenos Ayres is in a flourishing condition. 10,000 cyclists support three cycling papers.

The natives of India ride bicycles equipped with rat-trap pedals, which, it is said, they push with bare feet.

During the year of 1898 the membership of the German Cyclists' Union was increased from 35,909 to 42,713.

It is likely that Earl Peabody will bring suit against Chairman Mott if not reinstated in the amateur ranks.

A cycle track on one of the upper floors is part of the plans for the new Great Central hotel soon to be constructed in London.

England's two representative cycling organizations, the National Cyclists' Union and the Cyclists' Touring club, will celebrate their "Majority" this year.

While trying to ride from Madrid to Slater, Iowa, on February 7th, Charles Craig was frozen to death. He was making a short cut across a field to save distance and evidently fell from his wheel to the ground.

Those German newspapers "made in Germany" have always looked into the mirror for items. The latest is a prophesy, that man kind will henceforth be divided into three classes, cyclists, cyclophobes, and cycle thieves.

A somewhat amusing and interesting fad is taking hold of women who cycle. It is a cycle album in which the owner will jot down her experiences of rides, and send it to her friends to do likewise. Some even add dainty sketches and others poems to theirs.

The cyclists of Berne adopt the customary Swiss cape for winter riding. It is made in dark blue or black frieze, with a peaked hood which can be drawn over the head. The appearance is distinctly picturesque, though, perhaps, somewhat suggestive of a witch on a broomstick. (The proof-reader thinks "frieze" an appropriate material for a winter costume whether it's spelled that way or not.)

The city council of Philadelphia has passed a bill declaring the throwing of glass on public highways to be a nuisance and providing a $10 fine for every offence. Milwaukee has a similar law, though few people, even among the police, are aware of its existence.

In handing down a decision the Tribunal of Dijon, France, expressed the following opinion: "Whereas a bicycle in its functions resembles a vehicle, and yet in its action with one wheel behind the other it resembles a horse, it is difficult to tell where the machine ends and the horse begins."

The State of Connecticut is determined to down the cycle thief. The present legislature has a bill before it providing that no dealer shall destroy the number on or repaint a bicycle, or in any way try to destroy its identity, within thirty days after receiving it. The penalty is $50 or six months.

If the jurisdiction of the L. A. W. extended into India we would suggest that danger signs be erected in the Botanic Gardens of Calcutta. A gentleman while riding in those gardens recently, lost control of his machine and ran into a deep tank. The rider was rescued after a little difficulty, but the bicycle has not yet been found.

A bill introduced by Senator Goodrich, of Connecticut, stipulates that all dealers in second-hand wheels must be licensed and must keep complete records of all wheels received and sold, with the names, addresses and descriptions of everybody involved. The bill also provides a fine for any person destroying a name-plate or number on a wheel.

An Englishman has designed a neat folding mud guard for bicycles, a wire yoke being hinged to the frame to swing parallel with the forks when not in use, with a roller at the outer end of the yoke to carry a flat fabric, which rolls up against the fork. A brace is placed at the center of the guard to curve it so that it will follow the shape of the wheel

The latest fad among women is the fashion of having dress guards to match one's costume. The lace guard, consisting of cords passed in and out the holes, is undoubtedly more satisfactory than the netted ones. Macrame cord is excellent for the purpose. Surprising as it may seem, about twelve yards of cord are necessary to lace the guard on each side, making twenty-four yards in all.

—

"Bicycling Notes for Tourists Abroad" is the title of a booklet devoted to what its title denotes. It is published by F. O. Houghton & Co., European and Foreign Steamship Agents, Boston, Mass. While the booklet was prepared for the special benefit of tourists cycling abroad it is so full of valuable information that every cyclist ought to secure a copy.

—

The bicycle is no longer so keen a competitor of the street car as it formerly was. Two years ago a number of observations were made in the city of Harrisburg, Pa., with a view of showing the number of persons riding wheels and the number riding in the cars. It was found that during two days of October 67.7 per cent were bicyclists and 32.3 per cent were car passengers. This year the number counted at the same spot in the same length of time included 59 per cent on wheels and 40.07 per cent in cars.

—

Tod Sloan, the American jockey, who turned the heads of all Britain, by his wonderful performances on the turf partially attributes his mode of riding to the attitude adopted by racing cyclists. "There is always some wind resistance, and must be," says Tod. "That is an elementary question of physics. I will give an illustration of the wind pressure in the case of a bicycle rider. If two men were matched whose pace was equal, the man in an upright position would not have the slightest chance against the man who leaned forward on his machine."

—

A Londoner has invented a bicycle support which provides improved means whereby a bicycle, when traveling very slowly or when stopped, may be maintained in an upright position. The support consists of a bracket having a vertical member fitted to slide up and down and to turn upon a spring surrounded tubular pillar which projects down from the crank-hanger of the machine. The frame has horizontal arms provided with rollers adapted to rest on the ground in order to afford the lateral support required. By pulling upon a cord, a lever will be caused to bring the arms and rollers to operative position.

—

An amusing account of how a Chinaman trains for bicycle racing is going the rounds. The training is divided into three periods, each consisting of 100 days, so that it is almost a year before the athlete becomes "fit." The first period must begin at the time of the new moon. The subject has to arise at 4 a. m., walk out into the open air, draw seven deep inspirations and afterward undergo a gentle massage. During the second period the treatment becomes more severe; wooden planks are substituted for the human hand in the massage. What takes the place of the wooden plank in the third period is not stated; possibly millstones might then prove efficacious.

Joseph C. Conn, of Ilion, N. Y., has invented a bicycle chain-cleaner. The chain-cleaner mechanism comprises a base surmounted by an adjustable standard carrying brushes upon which standard a wheel is mounted. A well in the lower part of the device is adapted to contain a cleaning material, such as gasoline. The chain, after having been removed from the wheel, has its ends united and is then hung upon the wheel, with one side between the brushes. The wheel is then turned, and the chain passed through the brushes and the gasoline. After having been thoroughly cleaned, the gasoline-well is removed, and an oil-well substituted. The chain is then again passed through the well and thus thoroughly lubricated.

—

The following is not a character sketch of the Prince of Wales. It is merely a little liner going the rounds of the English press. One day last year, the liner states, a cyclist punctured near Sandringham, and, as usual, found he had no repairing outfit with him. An elderly gentleman, cycling too, came up, and on finding what was the matter, placed his tool-bag at the disposal of the injured one, and watched the operation of repairing with interest, remarking that he might have to do it himself some day. The tire being right again, the younger man expressed his thanks and a wish to meet his friend if ever he should happen to be in town. The other replied that he was occasionally, and would be sure to call, then, with a quiet smile, handed his own card in return, bearing the simple inscription "The Prince of Wales."

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What the ordinary cyclist does not know about law, bicycle law at that, if published in book form would make a fine sized library. Cyclists, as a class, are law-abiding citizens, simply because they are mostly bright, respectable people, and not because they know the law. To learn by experience would perhaps mean thirty, sixty or ninety days, saying nothing about a retainer. To ask an attorney would mean receiving legal advice and, incidentally, a bill. If you are a subscriber to the Pneumatic you are in a position to obtain any legal advice on matters pertaining to cycling you may desire. The Pneumatic pays the freight. Your 50 cents a year (or 25 cents as per special offer at the present time) entitles you to ask any legal questions you want to ask and to receive reliable answers. Send your questions to "Bicycle Law Department," The Pneumatic.

—

That John Chinaman is a heathen, or scorcher (it's the same thing) is proven by the manner in which he is making himself obnoxious as a cyclist in Shanghai. He evidently fancies himself a trick rider, and is anxious to show off his dexterity regardless of the safety of the general public. An aggrieved resident wrote to one of the Shanghai papers regretting that such things should be. He complains that young native scorchers ride at a reckless pace through the crowded streets, with arms folded across the chest. He remarked one who was not only riding "hands off," but had actually taken off the handle bar of his machine and was holding it over his head! If a man chooses to make a goose of himself in this manner and runs into a brick wall he has only himself to blame; but in this particular case the young celestial did worse—he lost control of his machine and ran into a lady who was riding on the opposite side of the street, knocked her off and smashed her machine.

For the use and behoof of the bicycle girl come Napoleon blue cloth dresses, martial in cut and decorations, says Ellen Osborne in the Chicago Record. Gold braid, gold buttons and epaulets, military belt, red silk facings, soldier cap, etc., will make a smart appearance on the highways.

Divided and circular skirts continue last season's battle. The length of the skirt has increased, apparently. A novelty offered is a waterproof ribbon for trimming dresses and insuring a hat against an unexpected downpour.

A serviceable dress is of dark blue cloth with one of the new short coats cut off exactly at the waist line. This closes in front with a fly finish so high that a necktie just peeps out at the top; the sleeves are severe and a notched collar folds away from the throat. This garment is lined with a checked blue and white silk like that of which the silk blouse worn with it is made.

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The steamship Miowera which arrived at Vancouver, B. C., on February 24, brought with it the story of a remarkable bicycle race in Sydney, which was won by a dead man. It occurred at a big electric light carnival. In a one-mile race there were fifty entries, some of the fastest men in Australia taking part in it. While 10,000 people watched this particular race, which was for a magnificent cup, young James Somerville passed over the tape, a winner and a dead man. At the start he quickly forged ahead, closely followed by another crack rider named Percy Cliff. They left forty-eight riders away in the rear and shot around the track almost wheel to wheel. When within twenty-five yards of the tape Somerville, who still led by half a wheel was seen to release his hold on the handle bars. His pedals whirled round, however, and he pluckily held his position. Five yards from the tape Cliff put on a tremendous spurt and struck Somerville's hind wheel, shooting the machine with its then almost inanimate burden, like a rocket over the tape. The crowd yelled wildly, but silence ensued when Somerville, after crossing the tape, plunged headforemost from the machine on the hard track.

When picked up he was dead. Physicians who examined his body said he must have had an attack of heart failure on the last lap.

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"Exercise," said a physician the other day to the editor of a contemporary, "is the corner stone of health. It differs essentially from work, in which the fundamental idea is that of labor. On the contrary, the idea of exercise is based upon activities undertaken for the benefit of the body or mind, some form of exertion intended to promote health or furnish amusement. Work is essentially toil, even though it be congenial. Exercise, on the other hand, is purely recreation. If exercise be taken only from a sense of duty, it loses the distinguishing feature of exercise and becomes work. A course of exercise, say cycling, should be carried on by easy stages. Exercise is a tonic and therefore benefit is not to be derived from a single dose. If active exercise is necessary as a hygienic measure, what form is best? You cannot persuade your patients to run, it is so undignified; or to saw wood, it is too laborious. But if you can persuade them to ride a wheel you have cured them, if it is exercise they need." The wheel was then discussed from the therapeutic point of view in this way: "Active exercise may be divided into three classes, those requiring strength, speed and stamina, and they all increase in common the circulation of the blood. Exercises requiring the exertion of strength are more fatiguing than those of speed. Cycling can be adapted the requirements of the enfeebled invalid."

—

A very important victory for cyclists was scored recently when the courts decided that the bicycle must be recognized as an approved method of transportation in cities and that municipalities must provide roads upon which wheelmen can travel in safty.

This decision grew out of an appeal in an action for damages against the city of New York which was begun by a wheelman who had been injured in an accident caused by a defective pavement.

The city admitted that there had been a hole about two feet square and five inches deep in the pavement, but it contended that the street was in fit condition for ordinary vehicles such as trucks and carriages and that the plaintiff rode through it at his own risk.

Moreover, it was argued that the city could not keep the streets safe at all points for bicyclists, and any person using a bicycle on them must use a higher degree of care than a driver, and especially at night.

On the other hand the plea was made that as the city made better streets according to the demands of civilization it also assumed greater responsibilities, and that as the asphalt pavements had been laid largely for the accommodation of bicyclists the city was responsible for injuries to bicyclists more than for those to drivers of ordinary vehicles. The plaintiff contended that the roadways should be kept in a condition that would insure the safety of wheelmen, just as sidewalks are kept in repair for pedestrians.

The lower court dismissed the case, but upon appeal this decision was reversed and a new trial was ordered.

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In commenting upon native women in Santiago de Cuba, Mr. Rutherford writes to the Chicago Record as follows: "An American girl is the most interesting of all sights to them. They watch her in silent amazement from the time she appears in view until she has turned the corner. They seem to think the American woman the most wonderful of all earthly objects. The Santiago ladies, no matter how hot the day, always dress in black when they appear on the Plaza de Armas at 'la tarde' for the usual evening's promenade. The other evening an American girl was there in a blood-red costume, made of some kind of thin, flowing gauze material. She promenaded with young United States officers and the rising of the sun at midnight would not have attracted more attention. But the thing which threw the whole city into a commotion was the appearance of a young American girl on the plaza riding a wheel and wearing a white costume with a short skirt. Such a thing as a girl's riding a wheel was never before dreamed of in Santiago. This fair American cyclist was doubtless out for the purpose of having a little fun and she succeeded in astounding the natives with an event they would think about for a lifetime under usual conditions.

"No less amazed was Santiago society when a Chicago lady appeared at a fashionable reception in full evening dress. It was a square-neck decollete gown. Santiago woman had seen such things in pictures, but they did not believe the illustrations true to life until the Chicago belle stood before them as a living exemplar."

In Lighter Vein

I visited at Cupid's house,
And in the darkish hall
I fell across a baby cab
Which stood against the wall.
To the attic then I rambled,
With mingled fear and doubt,
And there were two old bicycles,
Which brought the match about.

In cities where speed is regulated by the police a scorching day is often a fine day.

Do cyclists have a poor opinion of everyone they run down?

Said the brake, "I shall have to put a stop to this."

Does she deserve to be loved who tells her mother that she is too weak to run a sewing machine a half hour and then mounts her wheel and rides a half century?

Truth tells a story of a man out West who traded his wife off for a horse. Mrs. Mickle was deeply interested and raising her eyes from the paper said to Mr. Mickle: "You wouldn't trade me for a horse, would you, darling?" "Of course not," Mr. M. replied, "but I'd hate to have anyone tempt me with a bicycle."

The colors of the Beginners' Bicycle Club are usually black and blue.

She did not dismount and therefore angered the policeman stationed under the sign which read: "Dismount here."

"Can't you see that sign? Can't you read?" were the authoritive questions of the officer.

"Yes, I can read; but I can't get off," answered the fair one.

Mr. Gardiner was telling Mr. Wheeler how many thousand miles his cyclometer registered for the season and when he was all through Mr. Wheeler asked in an absent-minded manner, "Was the cyclometer attached to your bicycle or lawn mower?"

"I am glad to see you are not ashamed to clean and care for your own lamp," remarked the stern father to the obedient daughter, who was having her first experience trying to cleanse a smoky cycle lamp. "No," she sighed, "the work just soots me."

Micky—"Do you meet many people while wheeling."
Scotty—"Oh, yes, I run across a friend occasionally."

Micky—"I've been reading a history of ancient times and think it was terrible to break wretches on the wheel, as they did."

Scotty—"That's nothing, you ought to see one of those six-day bicycle races."

The most patient man in the world has been discovered. He is the man who inflated his tires with a hand pump one morning without swearing that he would throw the thing away and kick his wheel to pieces rather than ever try to do it again.

The Portland Observer tells of a cycle enthusiast of that village who was asked by a caller if the lady next door had any children, and replied, "Yes she has two boys one a '95 and the other a '97 model.

According to the Detroit Journal the fervid lover exclaimed: "Red rose, with thy lips compared look meek! Thine eyes are as the soft, deep skies of Italy! Thy tresses would shame a Helen's locks!"

The maiden sat cold and unresponsive.

"Thy bicycle is the best ever!" protested the youth and thereupon a crimson flood suffused her glorious countenance.

"Men are such infernal liars!" she shyly faltered, thus confessing that her heart was touched at last."

Mrs. Micky: "I have read the words 'infernal machine' in papers quite frequently of late. Can you tell me what they represent?"

Mr. Micky: "I'm not quite certain, but when I'm on the lawn I think it is a lawn mower, when I'm in the house I think it is a piano, and when on the street, I am certain it is the bicycle."

Just about Christmas time Mr. and Mrs. Westendiatte found it necessary to do a great deal of spelling when they conversed regarding shopping tours in the presence of their son; in whose mind they wished to preserve the Santa Claus tradition.

One night Mr. Westendiatte had come in laden with bundles, and when he had been relieved of them, and was seated at the dinner table, the conversation began in the usual way, for little Willie was present.

"Did you get the s-k-a-t-e-s and the d-r-u-m that h-e has b-e-e-n asking for?" asked Mrs. W., as she began serving the vegetables.

"Yes, and there was a s-l-e-d-g-e for one and six, and I took it," answered Mr. W., smiling at his young son and heir.

"You didn't forget the t-i-n s-o-l-d-i-e-r-s and the t-r-u-m-p-e-t, I hope," said his wife, "and the w-i-g and the Santa Claus costume?"

"No. Got 'em all," answered Mr. Westendiatte.

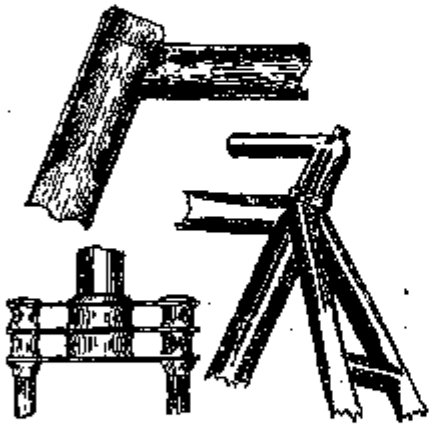
"I'll bet you forgot the b-y-c-i-c-l-e, now, didn't you? she asked, anxiously.

"That ain't right!" broke in little Willie. "It's b-i-c-y-c-l-e. ain't it, pa?"

With the Trade

SIXTEEN OUNCES OF QUALITY

For every pound of price is what the Olive Wheel Company, Syracuse, N. Y., claims for its Olive bicycles. These wheels certainly are fine wheels and contain several distinctive features, of which the front fork is one. The meritorious features of this part are not only in design and finish, but construction as well. The post, which is the main stay, wherein lies the strength, is the company's own special design, the same being one solid piece to a taper. The heavier gauge is so assembled to the crown plates by pressure and brazed in such a manner that there is almost an impossibility of breakage. The triple crown consists of three distinctive plates made from cold rolled steel, high carbon stock, made especially for this purpose. The top cap is highly nickeled and polished and attached thereon is a special design of rubber coasting device, a preventive of the feet slipping as well as a protection to the nickel finish of that part of the bicycle.



THE THREE OLIVE FEATURES.

The seat post cluster which the Olive people have adopted for 1899, is one of their own special designs so constructed as to add rigidity to the frame, not a clumsy affair. Its construction consists of a one piece connection, "V" shaped, hollow milled, so as to attach the upper rear forks, making a flush and neat connection. This is one of the vital points of the frame, there being as much strain at this point as there is at the crank hanger, not purely a compressional, but a twisting strain as well, which has been overcome by this device. The construction is such as to harmonize with all other connections of this chain, which is so much admired by the riding public.

The graceful lines are not more clearly shown than in a front view of the Olive. One cannot help but notice the narrowness of tread of the crank hanger, which is 4¾ inches. By giving this narrow tread a chain line of 1½ inches is secured, which in the past has been one of the problems a manufacturer had to contend with, and which heretofore has been unable to obtain. It adds to the speed and easy running qualities and rigidity of the wheel. This will be appreciated by old riders.

"IMPERIALISM."

The growth of "imperialism" has been steadily advancing for many years, if one may term riders of Imperial bicycles, the go-lightly kind, Imperialists. Imperial wheels have made new friends every year, always keeping the old ones. The advance sheet for 1899 just issued by the manufacturers, Ames & Frost Company, Chicago, Ill., give the specifications of five models, each built in several lights of frame. The



IMPERIAL FOR MEN.



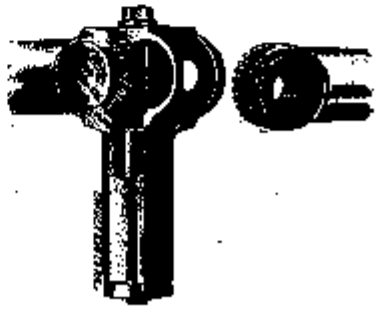
IMPERIAL FOR WOMEN.

prices for men's models will be $55, $50 and $35; for the ladies' models, $50 and $35. Cyclists should write for a copy of the Imperial catalogue, which will soon be issued, before deciding on their 1899 mount.

THE SANGER EXPANDER.

Says Joe Cordes, the ever aggressive, hustling salesmanager of the Sanger Handle Bar Co.: "The question is frequently asked of us, 'but can you fit Sanger Bars with expanders?'

"Sure—here's the way it's done:—



THE SANGER EXPANDER.

"We simply groove through the ratchet (which operates the two halves in unison) a channel through

THE CRAMER WAY

WINS



From the Milwaukee Journal, Feb. 18, 1899.

PRIZE AWARDED IN ADVERTISING COMPETITION.

The committee selected to compare the competitive advertisements in yesterday's Journal has awarded the prize of a half page advertisement in the Journal to Harpke & Maier. The following is the report of the committee:

The committee has considered carefully all the advertisements in the Journal of February 17, and, of those in the competiton, prefer that of Harpke & Maier, as being the most concise, well-worded and attractive.

C. E. M'LENEGAN, *Principal West Side High School.*
S. A. HOOPER, *Principal South Side High School.*
ALBERT E. KAGEL, *Principal Public School.*

WON THE PRIZE.

F. G. Cramer, the adwriter, wrote the advertisement for Harpke & Maier, which won the prize in yesterday's contest for the best written and displayed advertisement to appear in the Journal.

—*From the Milwaukee Journal Feb.* 18, '99.

Our business is advertising. If we couldn't write better ads than a clothier, barber or bicycle manufacturer we would be ashamed of ourselves.

Address

F. G. Cramer & Co., Advertisers, 207 Grand Ave., Milwaukee.

which the expansion bolt passes freely. This leaves about one-eighth inch of the teeth on each side and is amply sufficient to allow of the co-operation of the two sides or halves of the Sanger Bar. The ratchet teeth simply cause the two halves of the Sanger Bar to rise or sink in unison and play no part in the clamping which is done by the meshing of the teeth of the corrugations drawn up by the bolts and nuts. The 'Sanger' is an adjustable bar, not reversible like all clamping bars turning on a horizontal plane. Nor does it ever require turning around in the stem to change from a low position to high or vice versa. The Sanger Bar once set in the head of a bicycle, there is never an occasion to release handle bar clamp or expansion-bolt fastening it. It's there for good, but the position can be altered at will, and the wrist position is always correct, from way up to way down, a range of 16 inches, and both sides always true."

ENTIRELY NEW AND NOVEL.

The makers of the Fredrick adjustable handle bars claim to have "something entirely new and novel." The Fredrick bar is certainly new but in place of novel we would use the word useful. Although a newcomer it will not be long in receiving a warm grasp from many a cyclist. It is a very pretty bar and the adjusting device, a tapered conical ratchet play, is very simple.

The adjustments obtained through this device are so numerous that any shape can be formed, from the highest upright to the lowest ram's horn drop. The



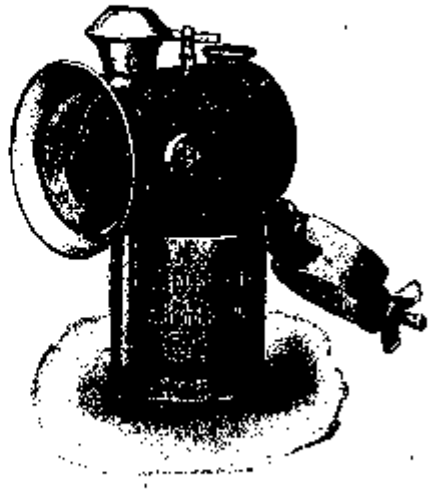
THE FREDRICK BAR.

material used is the finest that can be made, the knuckles being of the highest grade drop forgings and the tubing in handles the best cold drawn seamless. The stems are drop forged, being part of the head, which, while more expensive than tubing, makes it impossible for same to break. The adjustment is very simple and strong and it is impossible to get out of gear or work loose. Changes are made instantaneously and grips always have the correct tilt. All joints are flush, and the strongest that can be manufactured.

The use of internal expanders having become general, an expander which is invisible, and entirely different from that in any other bar is used when ordered. These bars are made by the Fredrick Manufacturing Co., 220 Broadway, New York.

TWO GOOD THINGS.

The "Solitaire" is the name of one of the smallest but a very prominent member of the family of bicycle lamps. The "Webb" is the name of a simple—perfectly simple adjustable handle bar. These two accessories are manufactured by the Sandford and Pollow Co., located at 285 Lake Street, Chicago, Ill. The Solitaire



THE SOLITAIRE LAMP.

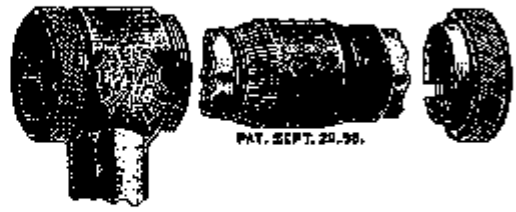
lamp burns dry gas, stands but four and one-half inches high and weighs only eight ounces. The side lights are red and green jewels, three quarters of an inch in diameter and it has two inch convex polished



THE WEBB BAR.

lens. The lamp is beautifully finished and its general appearance is very neat.

The Webb bar is simply perfect. It is made in two styles, regular and ram's horn at various widths. The



THE WEBB ADJUSTMENT.

double grip adjustment, which can be operated with the rider's thumb and finger, absolutely prevents the loosening of the bar. One of the strong mechanical features is the fact no brazing is used and the bar is made cold.

THE BUNDY LAMP.

In a little booklet issued by the Frank E. Bundy Lamp Co., many well founded claims are made for the Bundy Lamp. This ideal gas lamp is easily charged,

Printing Points

Published to Preserve the Art Preservative of Arts.

VOL. III. MILWAUKEE, MARCH, 1890. No. 3

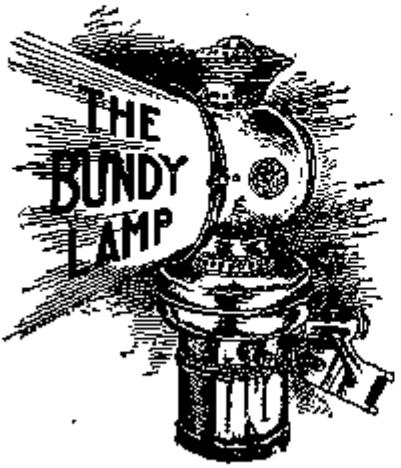
Did you
Ever hire
A seedy, ragged,
Untidy appearing
Man
To represent
You on
The road
With samples
Of your goods?
If you didn't
Do you
Think you would
If you
Could hire
Such a man
At a smaller
Salary than you
Would
Be compelled to
Pay for a neat,
Well appearing
Salesman?
Perhaps you
Don't give a rap
About the appearance
Of your salesmen
If
The seedy one
Sells as much
As the tidy one.
If—
There's the
Rub
If—
There's no
If
About the facts.
Clothes alone
Will not
Make a salesman.
But good clothes,
Other things
Being equal,
Will make
A better salesman.
This talk
Is not intended
For you
Unless
You consider
Your printed matter
Salesmen.
Is you consider
Your circulars,
Booklets,
Catalogues, etc.
Salesmen
See to it that
Their appearance
Is neat and attractive.
We supply
Attractive salesmen
In this line,
Not free of charge,
But at
A figure
About the same
Other printers ask
For the seedy kind.

THE PNEUMATIC PRESS

Printers to Business Men,

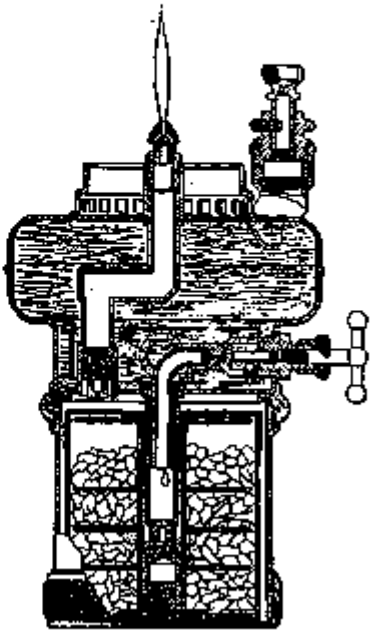
207 GRAND AVENUE, Milwaukee.
Fifth Floor—Next to Elevator.

The carbid charges, called carblots, are hermetically sealed, and the operator has but to break the soft lead seal, and place it in the carbid chamber over the water column. The water chamber is filled with water through an opening large enough to admit the water



THE BUNDY LAMP.

with no trouble. The gas is generated by turning a needle pointed valve, allowing water to pass through the water regulator direct to the water column. It then passes to the carblot and the moisture is gathered by the carbid and gas generated. It is impossi-



THE BUNDY GENERATOR.

ble to jar the Bundy light out, and when the lamp top

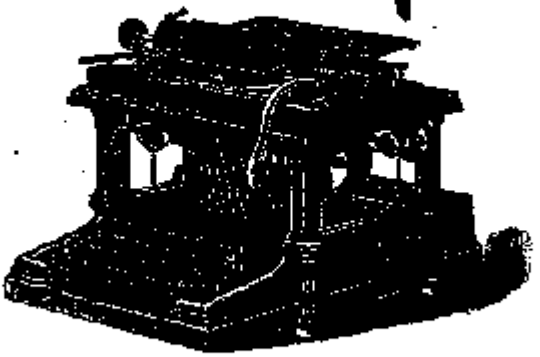
...The New Rem-Sho Typewriter...

Interchangeable.

Long Carriage.



A Typewriter in which Simplicity, Durability and Beauty of Design has been Combined.



Supplies for all Machines.

Typewriters for Rent.

Some of the Strong Features of the Rem-Sho.

- Ball Bearing Basket Shift.
- Perfect Paper Feed.
- Instantaneous Adjustable Escapement.
- Rigid Roller Bearing Carriage.
- Handy Center Pointer.
- Powerful Manifolding Properties.
- Clear Stencil Cutting Power.
- Universal Keyboard.
- Writes Beyond Margin.

Milwaukee Office

371 Broadway, New Ins. Bldg.

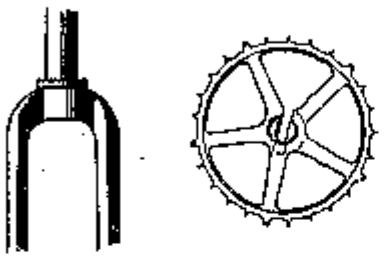
'Phone, Main 342.

Catalogue on application.

is on, no wind can extinguish it. Cyclists interested in the better grades of bicycle lamps should send for a copy of the Bundy booklet. Address Frank E. Bundy Lamp Co., Elmira, New York.

'99 "LIBERTY" CHANGES.

A point overlooked by manufacturers up to this time is the fact that the two positions, scorcher and upright attitude actually require two different lengths of top tube, or distance between handle-bars and seat post and the mere shifting of the saddle backward or forward on seat post will not give the same position or power over the crank hanger so long as the out-



LIBERTY FORK CROWN AND SPROCKET.

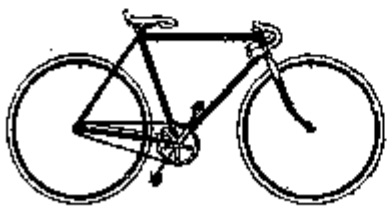
line of frame remains the same. The forward position with drop bars needs a top rail at least two inches longer than does the upright position with upcurve bars if each rider is to obtain the desired results, viz., power with the least expenditure of energy. In furnishing frames of two lengths of top rail, 20½ inches and 23½ inches, with lines of main frame to corre-



LIBERTY, MODEL 61.

spond, the Liberty Cycle Co. overcomes a difficulty which has bothered, in the past, both the veteran wheelman and the novice.

In addition to the well known "Liberty" square fork crown, they introduce an arched design, with the nickel finish carried down some 3 inches, reinforced, retaining all the advantages of strength and in every



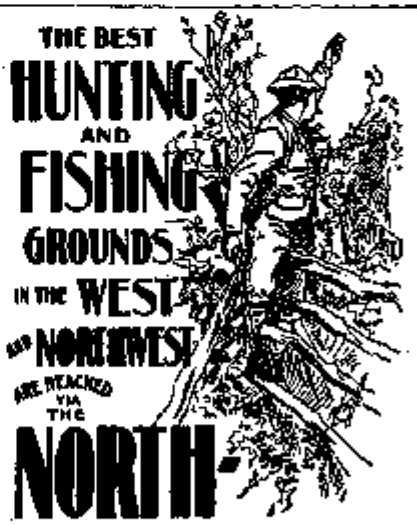
LIBERTY, MODEL 64.

respect the equal of the square crown.

The upper rear forks on flush joint machines, bring-



City Ticket Office,
100 WISCONSIN STREET,
MILWAUKEE.



For Illustrated Pamphlets and full information apply to your nearest Ticket Agent or address W. B. KNISKERN, Gen'l Pass'r and Ticket Agent

CHICAGO & NORTH-WESTERN R'Y,
CHICAGO, ILL.

How Much is Health Worth to You?

is it worth the time required to secure two subscribers to THE PNEUMATIC? If it is send us two subscribers and we will give you absolutely free of charge, a 136 page book on the

Healthful Use of the Wheel

Containing over 500 articles on Hygienic bicycling, written by twenty-five of the most prominent doctors and specialists . . . . . of the present day. . . . . .

A FEW OF THE ARTICLES:

Cycling and Mental Health—The How Often and How Much of Cycling—The Hygiene of Learning to Ride—Where to Learn to Ride—How to Mount the Wheel—Hygiene Caution for Women While Learning to Ride—Healthful Clothing for Lady Cyclists—The Avoidance of Exhaustion—Scientific Basis of Nutrition for Cyclists—Proper Height of Saddle and Handlebars—Hygienic Construction of the Saddle—The Avoiding of Accidents—Medical Hints for Emergencies—Things to be Provided for on a Long Ride—A Presentation of the Possible Dangers of Bicycling—Shall a Person who has Damaged Heart or Kidneys Ride the Wheel—The Bicycle and the Age, and Many Other Articles.

SEND US TWO YEARLY SUBSCRIPTIONS FOR A COPY OF THIS INSTRUCTIVE BOOK.

ADDRESS:

Subscription Department The Pneumatic,

MILWAUKEE, WIS.

ing the top ones closer together, with brace curved instead of straight, imparts a neat finish to this part of machine.

The Liberty people claim that internal expanders are not reliable, from the fact that the pressure of the



LIBERTY, MODEL 73.

expander outward has a tendency to strain and weaken the tubing at a point where it is unprotected. On the other hand compressing the tube has the opposite effect, as is well known. Moreover, their pinch bind although small is visible at all times, safe and cannot get out of order.

The Liberty Patent Frictionless Sprocket is a dis-



LIBERTY, MODEL 75.

tinctive Liberty feature. 5 teeth (in 35 teeth) do the work. The rest are there, but simply serve as guides and cleaners. At any one time three teeth only engage and necessarily friction is reduced in proportion. The company have much faith in their sprocket. This is what they say: "As a hill climber it has no equal. With this device the weakest rider can raise his gear



LIBERTY, MODEL 77.

ten points and do better work with less fatigue than he could accomplish under the old style sprocket and lower gear. Under any and all conditions it is the easiest running wheel on earth." Take the matter of chain wear in connection with their front sprocket, as the same link does not engage at each revolution of the chain the friction and wear is reduced at least four-fifths and necessarily the life of the chain prolonged.

HAS STOOD THE TEST OF TIME.

One concern that, despite the fierceness of competition, has pursued the even tenor of its way and enjoyed a steady and marked increase of business is the Bunker Saddle Co. of Chicago. Their Rubberneck saddles with their simple and ingenious and pat-



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Supplies DETAILED, SPECIFIC INFORMATION concerning the TRADE CONDITIONS of the WORLD'S MARKETS.

It tells WHERE THE MARKETS ARE and by whom supplied.

Who the RESPONSIBLE BUYERS ARE, and HOW TO REACH THEM.

It can ascertain FOR YOU the particular REQUIREMENTS of any or all markets in THE LINE OF GOODS YOU MAKE.

It has inaugurated a most valuable method of REGISTERING AMERICAN MANUFACTURERS in Foreign Countries by means of

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Placed in the CHAMBERS OF COMMERCE in FORTY-FIVE of the PRINCIPAL COMMERCIAL CENTERS OF THE WORLD.

This is a movement in the Interest of American Commerce with which YOU SHOULD BE IDENTIFIED.

Write for particulars to

The Philadelphia Commercial Museum,

233 South Fourth Street, Philadelphia, Pa.

ented rubber cushion is one of the few of the very many cushioned saddles that have survived the test of time—a fact which conveys its own moral.



RUBBER-NECK RACER.

The Rubber-neck has been kept abreast of the times and the line is now complete and attractive, including all styles of saddles, from that designed for the racing man to that intended for the juvenile rider and at a range of prices that will interest any dealer, maker or rider. The racing saddle, shown by the illustration, typifies the Bunker line.

COLUMBIA CATALOGUE READY.

The Pope Manufacturing Co., Hartford Conn., has just issued its twenty-second annual greeting in the form of a catalogue illustrating and describing Columbia, Hartford and Vedette bicycles. It is no more necessary to comment on the catalogue than on the bicycles it describes. Suffice to say that it is one of the catalogues every rider or prospective rider ought to possess.

FEATHERSTONES.

The 1899 catalogue of Featherstone bicycles is out. It illustrates and describes six models, four men's, two ladies,' also two juvenile bicycles. The prices are $50, $40, $30 and $25 for the regular models and $20 for the juveniles. A. Featherstone & Company, the manufacturers of Featherstone bicycles, announce in their catalogue a change of policy in distributing their goods. Instead of selling their product to the jobber, who in turn sells it to the retailer, the company will sell direct to the retail trade. This policy, it is stated, is best for the rider, the retail trade and the manufacturer. The bicycles, which are this year known as Featherstones, were formerly known as the Road King, Road

"New Zealand Cyclist"

THE CYCLING AUTHORITY OF NEW ZEALAND.

PUBLISHED BY THE

LYTTELTON TIMES COMPANY,

Christchurch, New Zealand.

WHEELMEN'S RESORTS.

Hotel Daub

Ranks with the Best in the State.

Beisley's Waukegan Special Brew Ale on Draught.

Henry Daub, Proprietor.

First and Main Sts., - Watertown, Wis.

George Hammer's

"PIONEERS" HEADQUARTERS,

Silver Springs P. O., Wis.

Silver Springs Home,

John Kleist, Proprietor.

Silver Springs P. O., Wis.

Brown Deer Tavern

Louis Heuer, Proprietor.

Brown Deer P. O., Wis.



Queen, Duke, Duchess. The catalogue describes in detail the various parts which, as a total make the Featherstone models excellent mounts, and every rider who is interested in 1899 models should write for a copy. It will be sent free of charge to any address by A. Featherstone & Co., Chicago, Ill.

POPE LINE IN MILWAUKEE.

The Pope Mfg. Co., of Hartford, Conn., has completed arrangements with the Phillip Gross Hardware Co., of Milwaukee, for the selling of their line of bicycles, including Columbia, Hartfords and Vedettes in

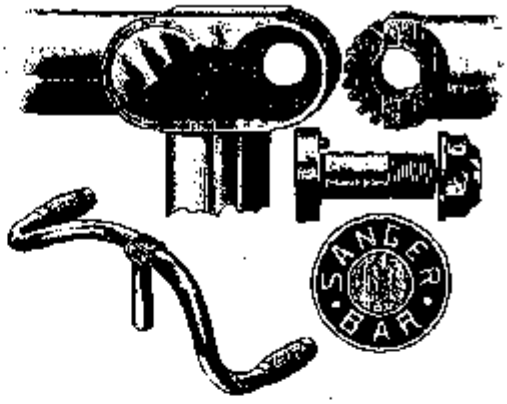


IRA D. LUNDY.

Milwaukee County. Besides Pope's wheels, the big Milwaukee concern will sell Northern, Famous and Crawford bicycles. The bicycle department will be in charge of Ira D. Lundy, formerly with the Cream City Cycle Co.

THE CARE OF THE CHAINLESS.

Through long experience, riders of bicycles have come to know intimately the various parts of the chain driven bicycle, which may possibly require attention at different times or through different causes. The bevel gear form of chainless bicycles is so radically different in its driving mechanism from the chain driven machine, that neither the riding public nor the average repairer is sufficiently familiar with its elements to enable him to understandingly make the different adjustments which may be required, without explicit directions. On this point Stearns riders need not worry. The makers of the famous "Yellow Fellow" have prepared of booklet on the care of their chainless bicycles. A copy of the booklet will be sent to any rider upon request. Address the E. C. Stearns Co., Syracuse, N. Y.



Give

each of one hundred men his choice of either a "Sanger" Handle Bar or any other, and ninety-nine will select the "Sanger" every time. Because

1st. It's the most practical.
2nd. It's the best mechanically.
3rd. It's the most finely finished.
And; besides it is not at all costly.

Never have to cock your eye to get both halves straight. THEY MOVE TOGETHER. Our expander is right. It don't have to be improved.

Sanger Handle Bar and Plating Co.

Milwaukee, Wis.

Think It Over

When a manufacturer gets down to figuring out the results of advertising in trade papers he invariably comes to the conclusion that trade papers don't pay. He is right. He will, of course, receive an inquiry now and then for a catalogue or something else that he is giving away but when he compares the actual amount of orders received through trade paper advertising with what it costs to get those orders you may expect to see him draw a long face. Trade papers have only two points in their favor. They introduce the manufacturer to possible purchasers and tell the latter what he sells and where to find him. But most manufacturers employ high-salaried salesmen to do the same thing and at the same time these salesmen are selling goods. Trade paper advertising would be all right if it didn't cost so much. Perhaps it might be cheaper to create a demand for your wheels by advertising in a medium that goes to the consumer. When the consumer knows what make of wheel he wants he will find a dealer anxious to sell him. When a dealer has an opportunity to sell your bicycle he will come to you whether he reads your $10, $20 or $40 ad every week in the the trade papers or not. Think it over.

ADVERTISING MANAGER

THE PNEUMATIC.

THE MORSE ROLLER JOINT CHAIN.

Anything that will improve the running qualities of a bicycle ought to interest every cyclist. That is one of the reasons why wheelmen should study the mechanical features of the Morse Roller Joint Chain. The advantage of this chain, as put forward by the makers, consists first in the form of the joint. The rivet is composed of two parts, one of which rocks or rolls on the other thus doing away with friction. Mechanical tests have conclusively proven this chain to possess an efficiency of over 99½ per cent, as the parts have no sliding motion over each other.

The spaces which are found between the pins of the joint also allow whatever dirt may creep into the chain joint a place without giving it a chance to grind out the joint as is usually the case in the ordinary form of pin joint. Secondly, the makers claim that the rollers reduce the friction between chain and sprockets to a minimum as they turn as the chain feeds off and on the sprocket wheels. The other features of the Morse Chain are: its noiseless action even when run in mud, water or dust; its self cleaning property, as the action of the pins rocking back and forth tend to work out the dirt which may enter the joint.

The catalogue issued by the company gives a very complete description of the chain and will be sent on request to any address. It is a catalogue worth having; as is also the Morse Chain worth riding. Address the Morse Chain Company, Trumansburg, New York.

THE FIRST BICYCLE IN THE KLONDIKE.

A copy of the "Klondike Nugget," published in Dawson, N. W. T., reached E. C. Stearns & Company, Syracuse, N. Y., in which appears an article headed "Dawson's Bicycle" reading as follows:

"To Miss Lotta Burns of Seattle belongs the honor of bringing into the Yukon country the first ladies' bicycle. She arrived at the Sovereign and exhibited her wheel at various points along the river. Her description of the reception given the bicycle by the Indians in the lower country is quite amusing and we expect the manufacturers may at some future time, for advertising purposes, issue a pamphlet filled with illustrations of the memorable trip of the Stearn's ladies' wheel from 'Frisco to Dawson. The wheel was purchased from Miss Pringle, who won it in one of the Examiner's contests, and to say it is the observed of all observers when on parade but mildly expresses the attention paid to the first bicycle in Dawson."

LIGHTEN THY DARKNESS

And illuminate the way to success by using the Schumacher "Acetylite" lamps, is the advice of the Schumacher Acetylite Lamp Co., 84 La Salle St., Chicago, Ill. This company has given special attention to the simplifying of the use and control of acetylene gas, resulting in the production of a cartridge which possesses, it is said, the combined merit of being not only simple but absolutely safe. The retail price of the Schumacher "Acetylite" lamp is $3.50. These lamps can be purchased from any up-to-date bicycle dealer.

P. & F. CATALOGUE.

We are in receipt of a neat little catalogue issued by the P. & F. Manufacturing Co., Reading, Pa., con-

50 Visiting Cards for 25 Cents

WE will send you prepaid 50 visiting cards with your name, and address if desired, printed in copper plate script type, for 25 cents in stamps. Considering the quality of the cards and printing this offer cannot be duplicated in your vicinity.

The Pneumatic Press

Milwaukee Wis.

taining descriptions and illustrations of the company's well known saddles, tool bags, pedals and pumps. Every wheelman who is particular about the equipment of his machine should write for a copy of this catalogue. It will convince you that P. & F. goods are made for particular wheelmen.

ANDRAE '99 SUNDRY CATALOGUE.

During the past few years, the Julius Andrae & Sons Co., Milwaukee, Wis., has been doing an extensive business in a jobbing bicycle sundries. The Company issues a complete sundry catalogue each year. The 1899 catalogue has just been completed and will be mailed to any agent desiring a copy.

$100 Reward, $100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

Address, F. J. CHENEY & CO, Toledo, O.
Sold by Druggists, 75c.
Hall's Family Pills are the best.

TUBESING BROS.,

Manufacturers of

Medals and Monograms. Fine Jewelry.

313 Third St., - Milwaukee, Wis.

WANTED a hustler in every town to earn a high grade $50 bicycle during spare moments. Others have earned one in less than a month. Address Dept. B. The Pneumatic for proposition.

50 YEARS' EXPERIENCE

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TRADE MARKS
DESIGNS
COPYRIGHTS &c.

Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable. Communications strictly confidential. Handbook on Patents sent free. Oldest agency for securing patents.

Patents taken through Munn & Co. receive special notice, without charge, in the

Scientific American.

A handsomely illustrated weekly. Largest circulation of any scientific journal. Terms, $3 a year; four months, $1. Sold by all newsdealers.

MUNN & Co. 361 Broadway, **New York**
Branch Office, 625 F St., Washington, D. C.

ONE-HALF CENT A WEEK

If you find a subscription blank in this copy of THE PNEUMATIC you are not a regular subscriber. The regular subscription price is 50 cents a year, but to interest you we have reduced the price one-half and if you fill out the enclosed blank and send it to us before May 1, we will send you THE PNEUMATIC regularly for one year. 12 two cent stamps and 1 one cent stamp is a small expense. May we not have your subscription?

THE PNEUMATIC,

MILWAUKEE, WIS.

I have used Ripans Tabules with so much satisfaction that I can cheerfully recommend them. Have been troubled for about three years with what I called bilious attacks coming on regularly once a week. Was told by different physicians that it was caused by bad teeth, of which I had several. I had the teeth extracted, but the attacks continued. I had seen advertisements of Ripans Tabules in all the papers but had no faith in them, but about six weeks since a friend induced me to try them. Have taken but two of the small 6-cent boxes of the Tabules and have had no recurrence of the attacks. Have never given a testimonial for anything before, but the great amount of good which I believe has been done me by Ripans Tabules induced me to add mine to the many testimonials you doubtless have in your possession now. A. T. DeWitt.

I want to inform you, in words of highest praise, of the benefit I have derived from Ripans Tabules. I am a professional nurse and in this profession a clear head is always needed. Ripans Tabules does it. After one of my cases I found myself completely run down. Acting on the advice of Mr Geo. Bower, Ph. G., 585 Newark Ave., Jersey City, I took Ripans Tabules with grand results.
Miss Bertha Wiseman.

Mother was troubled with heartburn and sleeplessness, caused by indigestion, for a good many years. One day she saw a testimonial in the paper endorsing Ripans Tabules. She determined to give them a trial, was greatly relieved by their use and now takes the Tabules regularly. She keeps a few cartons Ripans Tabules in the house and says she will not be without them. The headaches and sleeplessness have disappeared with the indigestion which was formerly so great a burden for her. Our whole family take the Tabules regularly, especially after a hearty meal. My mother is fifty years of age and is enjoying the best of health and spirits; also eats hearty meals, an impossibility before she took Ripans Tabules. Anton H. Bjerken.

I have been a great sufferer from constipation for over five years. Nothing gave me any relief. My feet and legs and abdomen were bloated so I could not wear shoes on my feet and only a loose dress. I saw Ripans Tabules advertised in our daily paper, bought some and took them as directed. Have taken them about three weeks and there is such a change I am not constipated any more and I owe it all to Ripans Tabules. I am thirty-seven years old, have no occupation, only my household duties and nursing my sick husband. He has had the dropsy and I am trying Ripans Tabules for him. He feels some better but it will take some time, he has been sick so long. You may use my letter and name as you like.
Mrs. Mary Gordan Oliphe.

I have been suffering from headaches ever since I was a little girl. I could never ride in a car or go into a crowded place without getting a headache and sick at my stomach. I heard about Ripans Tabules from an aunt of mine who was taking them for catarrh of the stomach. She had found such relief from their use she advised me to take them too, and I have been doing so since last October, and will say they have completely cured my headaches. I am twenty-nine years old. You are welcome to use this testimonial.
Mrs. J. Brockerman.

My seven-year-old boy suffered with pains in his head, constipation and complaint of his stomach. He could not eat like children of his age do and what he did eat did not agree with him. He was thin and of a sallow color. Reading some of the testimonials in favor of Ripans Tabules, I tried them. Ripans Tabules not only relieved but actually cured my youngster, the headaches have disappeared, bowels are in good condition and he never complains of his stomach. He is now a red, chubby-faced boy. This wonderful change I attribute to Ripans Tabules. I am satisfied that they will benefit any one from the cradle to old age if taken according to direction.
E. W. Finch.

ONE GIVES RELIEF.

R·I·P·A·N·S

The modern standard Family Medicine: Cures the common every-day ill of humanity.

TRADE RIPANS TABULES MARK

A new style packet containing TEN RIPANS TABULES packed in a paper carton (without glass) is now for sale at some drug stores FOR FIVE CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (12 tabules) can be had by mail by sending forty-eight cents to the RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York—or a single carton (TEN TABULES) will be sent for five cents. RIPANS TABULES may also be had of some grocers, general storekeepers, news agents and at some liquor stores and barber shops. They banish pain, induce sleep and prolong life. One gives relief.



RAMBLER BICYCLES

1899 PRICE

$40

SOME people imagine RAMBLERS are high-priced wheels, just because they "**used to sell**" for $150!

That is a mistake.

1899 **Rambler** BICYCLES "20 year old favorites"

are the leading wheels of to-day, as they have been for many years, and are the very best RAMBLERS ever built, at any price!

The 1899 Price is $40

because 20 years' experience has taught the RAMBLER builders how to build **better** bicycles for **less money.** The rider gets the benefit.

Call and see Ramblers. Ask for catalogue.

AGENCIES EVERYWHERE.

Gormully & Jeffery Mfg. Co.

Chicago. Boston. Washington. New York. Brooklyn. Detroit. Cincinnati. Buffalo. Cleveland. London.

VOL. X. APRIL, 1899. NO. 4.

The Pneumatic

A BICYCLE MAGAZINE

THE

ONLY MAGAZINE

PUBLISHED FOR THE BICYCLE RIDER

50 Cents A YEAR.

5 Cents A COPY.

PUBLISHED MONTHLY AT
207 GRAND AVENUE, MILWAUKEE, WIS.

THE PNEUMATIC.

ESTABLISHED 1891.

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EDITED BY
F. G. CRAMER.

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WM. A. KRASSELT, Business Manager.
LOUIS PIERRON, Circulator.

The Pneumatic,
207 Grand Ave., Milwaukee, Wis.

THE PNEUMATIC.

VOL. X. APRIL, 1899. No. 4.

Between Life and Death.

BY OSCAR H. MORRIS.

MY money was gone. What had I to live for. Why not end my life now and rid myself of the horrible suspense?

To think of having lost my money in various manners nearly drove me mad and it was impossible for me to stand it any longer.

Destitution, that horrible disease staring me in the face, left me nothing to live for.

It was about eighteen years ago. I was riding down the avenues with no thought except that of ending my life, with only one friend and companion, a dear one, to cherish. That friend and companion, if it might be called one, was my bicycle. Well, on this eventful ride, I resolved to separate myself from life. How was I to accomplish this act? In what manner? I remembered the Bay, and, with the above intention, rode to it. It was the Bay of Caluma des Fessa. Do you know it? Were you ever there? The bay, the large, still, black bay. Many times before have I ridden to this vast body of water, a pleasant trip, but this one, this trip, shall I ever forget it? I did not ride to it with the same intention I had on my previous trips, I did not ride with the same strength and vigor, I did not have the same feeling as on other rides. The truth was, I rode, and rode, not knowing where for the present time. I could not collect my thoughts, I had none.

I reached the Bay Caluma des Fessa, placed my wheel against a large tree and sat upon a rock, put my elbows on my knees and my face I buried in my hands. Every few minutes I would gaze at the black water lying before me. I could hear its music, which I had often heard before, but which I now distinguished to be different from what it formerly was. I thought of the papers that would come out in the morning, headed "A BIG SENSATION," with full account of a probable murder or suicide. My plans were completed, everything was in readiness, and there was no reason whatever why I should not commit the deed I arranged for at once.

I hesitated, but not through fear, as I was not afraid to die. Life was sweet a few weeks ago, and what I now desired I would have dreaded at that time. My situation at that moment brought back pleasant and unpleasant recollections of the past into prominence. I hardly believe that anything occurred during my life that did not come into my string of thoughts. I had been wealthy, yes, very wealthy; where did it all go? I lost it on the Row, where many a man and woman lost honor, respect and

money; where homes were broken almost daily, where gay women gathered to win or lose, and where everyone without will-power lost all in his possession.

Among the thoughts entering my brain during this time was one. Shall I take off my clothing? It was a queer thought, but nevertheless it came into my mind, and had some effect on the fatal leap. I did not know whether to take them off or not. It seemed that the feeling with wet clothes on me was disagreeable. I then realized what I was thinking about. The foolish thought and impression made me laugh aloud. It was not the musical mirthful laugh that is generally rendered, but a coarse one without mirth or feeling. I looked at my clothes and shoes and then laughed again, aloud.

From a post to my right the laugh was echoed. It was also of a mirthless but feminine character. Was someone mocking my misery? Peering through the gloom I could distinguish a tall form standing motionless a few feet away, with one hand on a bicycle. I could not study the figure, and made no attempt to advance toward it. Presently I heard the rustle of garments and a noise which seemed to come from the chain of my evening visitor. Right near she came until I could be positive that the mocker was a woman with tawny hair that shone in the darkness, and satin garments that glistened when the bay threw its reflected sparkle towards us. She stepped so close to me that her breath came hot in my face, and her eyes glittered as she looked up to mine. I compared myself with a statue and glared back at her with what might be called a whispered curse.

«So you would do it too!» she said in a hissing whisper. «You would sleep in the black waters of the bay, but you are afraid to commit the act.»

I made no reply and the woman laughed again.

«Come,» she said, gripping my arm with a vise-like clutch. «I will help you. Be brave with me. We will do it together.»

She dropped her bicycle near to where mine was lying and dragged me towards the bay, and I jerked myself loose with a curse.

«Who are you?» I asked. «What are you doing here, you fiend?»

I might have screamed the words, and she alone would have heard them, but the situation was too intense. I spoke in a husky whisper and leaned forward with burning eyes, and a desire to throttle my companion. She made no motion but in a moment laughed again.

«Who am I?» said she, repeating my question. «What does that matter? If I told you truly, you would not know then, and the real name was lost years ago. What do I here? Ask yourself the same question. You curse me, but we have an equal right to die, have we not?»

I moved further back into the shadow.

«There is an old saying that misery loves company,» said the woman. «But the adage fails here. You wish to be in misery alone.»

Then she came close to me, and this time I did not move away, but looked down at her wonderingly.

«Come,» she said softly, «in a moment it is all over. I will give you courage.» She grasped me by the hand and her fingers were icy cold. My hands and temples were burning, and as in a dream I drew her toward me and smoothed back her hair from her forehead. Her face was cold, and then I felt of my own brow. Again the woman laughed.

«You are feverish and I am cold,» she said. «But I have had the fever, and it is determination that makes my blood now run sluggish. What do you die for—love?»

Of a sudden a great desire to unburden my sorrows on this woman came over me; but I fought with my inclination, and only answered softly: «No.»

There was a moment's silence and the woman asked:

«What then?»

«I am penniless—the red, the black, the green cloth table,» I jerked out in a somewhat fierce whisper.

Her eyes suddenly gleamed, she come toward me, nestled close to me and tightened her grip on my arm. Her eyes then looked into mine, and she said:

«Penniless? And jewels in your scarf and rings on your hand? You surely die for some other reason.»

«A few hundred francs will not restore to me the position I once held in the world,» I said. «I am poor and it is for that, that I die!»

The woman slipped a sparkling bracelet from her wrist, and handed it to me.

«This is all I have, but it is valuable,» she said. «Take it and live.»

'Twas I who laughed this time. I gently placed my arm about her waist, and took one step forward.

«Come,» said I. «We will do it together. I have lost thousands, and cannot live on such a meager store. I have spent as much as these will bring in a single night—when I lived.»

I startled myself when I uttered the last words, for I had spoken as one already dead. The woman held back.

«It was a moment ago that you were impatient—now you hesitate,» I whispered softly, bending over so my lips touched the tawny mass of hair, that shone with a luster in the gloom. «Do not be afraid. For what do you die—love?»

Her hand tightened on mine, and her breath came faster, as she said, so softly that I could hardly catch the word, «perhaps.» Then she continued in a stronger voice: «You are a coward! You have all that life can offer, save one thing—money. And you are not willing to work for that, but would rather end your life.

What can you know of real sorrow—of blasted hopes, of a wronged and ruined life and a broken heart? I have naught to live for—you everything. You are in despair through one calamity—I from a succession of griefs, each of which is greater than any which have marked your life. You are a coward!»

I answered nothing, and her words but added weight of despair that burdened my soul. I realized that what she said was probably true, but I could not, would not live.

Presently she broke away from me and stepped off several paces. Then with a voice which startled me by its loudness she asked sharply and hurriedly:

«You are not lying when you say you die because you are poor? Would you live if your fortune were restored? Would you wish to die if you were again rich?»

She was excited by a new idea. It was infectious, and not knowing what her thoughts were I answered huskily:

«No. If I were rich I would not want to die. I cannot stand being poor.»

She stepped quickly over to me and placed her hands on my shoulders. «I may save you!» she said, her voice low and trembling with excitement. «Give me your jewels and come with me!»

«You cannot save me!» I exclaimed in bewilderment. «My jewels are worth but little. You are mad! Come—the bay waits, and our sorrows but grow stronger.»

Again I placed my arm about her to lead her to the brink of the bay. She stopped me with a whisper.

«I offer to try and save you,» she said. «I may not succeed, and if we meet with failure we can come back to the Bay together. What are a couple of hours? I am willing to live two hours more of sole misery to try and save you. Will you not take the chance?»

I was confused by her manner and remained silent. She reached out her hand and commanded:

«Give me the pins and rings.» I complied with the command and then she said: «Now come with me!»

«But where to?» I asked in wonderment, as she started to leave the bank of the bay.

We mounted our wheels and rode slowly away from the shadows of the dark waters.

«They say,» she said, «that the right hand of a suicide brings luck in games of chance. Perhaps the right hand of one who is soon to take her own life may also bring luck. We will go to Beaudeau's.»

I heard of that place. Who in M—— did not? A gambling place where fortunes were won and lost in a single night by the richest in the city, where they stood the insult of the losers and flaunted their professions before the winners. Such was the place.



«YOU ARE A COWARD!» * * *

«I know the place,» I told the woman; «but I have never been there.»

«You prefer gambling, but not on the wheel,» said my companion. «Well, gambling, either way, if you like it, is a royal sport. The place I mean is not far from here; let us go. We shall sell the jewels and the wheels for what the keeper will give us. Then we shall play, play my way and you shall have a chance for life.»

The possibility, rare as it was, of redeeming my fortune, excited me. I will not say that a great hope was born within me, for despair had taken too firm a hold upon my mind, to be banished by such a wild chance as was offered; but I was excited.

We again mounted our wheels. We needed them. They would bring us to destruction or elevation more quickly. We started off. The excitement in my brain caused me to pedal faster.

«Wait,» she said. «I will not ride further until you have made me a promise.»

«A promise at such a time?» I asked. «'Tis easily made—but perhaps it will be harder kept. A man tottering on the verge of eternity can fulfill but a few vows and keep not many promises. If it is a promise that can be kept, I will promise.»

«It is easily kept,» said the woman, riding towards me. «We are going to take a rare chance, but we may win. If you win you will live. 'Tis for that lack of money that you die, and if the wheel rolls us wealth, life and happiness will be yours. But it is not for poverty that I would die. Promise me that if our venture brings you luck, you will not hinder me in my plans. I will ride or walk back to the bay, as the case may be, and you will go on to the lights and life of the city.»

I was silent, for that promise I was asked to make was a strange one. I nearly fell from my wheel and for a full minute I was almost dazed. I rode motionless and speechless by her side. Then I said: «If we win wealth, part will be yours and then we both will live.»

The woman shook her head, and her fierce eyes, the only feature that I could discern in the darkness, again sought mine.

«Wealth cannot restore my happiness,» she said. «If I wished wealth it were easily got. But money cannot bring back honor or a broken life. We may both die—but should you win back life you must not interfere with me. Do you promise?»

I did not hesitate in answering this time. «It is folly to think that we will win,» I said. «We will seek the waters of the bay together; but should the rare chance come to pass, I promise that I will not interfere with your plans. Come, let us go to Beaudeau's. Perhaps the wheel will be kind and roll us life.»

«It has rolled many others death,» said the woman. «We may win its good graces.»

We began to ride a little faster and, after passing the toll-gate, to the glare of the city lights on the lake shore. She looked down at me and laughed gently.

«A strange pair met,» she said. «And each would study the other's features. In truth you are a handsome man—far too good looking to die.»

«You are hardly fair,» said I, for she had covered her face and head with a filmy veil, and only the fire from her eyes shone out from the meshes.

«At Beaudeau's we will know each other better.»

We then began to ride through the city streets at quite a rapid gait and soon after we reached the place which would determine life or death. At the entrance I shouldered my companion's wheel and carried it to the second floor of the building, went down again and brought mine upstairs. We left them in the hallway and entered. The click of the chips, the ring of the coin and the whirr of the roulette ball made strange music for my ears, but I heeded little. We sat on the sofa and I gazed down at her veiled face, I felt that the unknown woman exerted a strange influence over me and I was oddly thrilled by the weariness of her presence. Timidly, I said:

«You are my benefactor, perhaps my savior. Am I never to know your features?»

«This is a strange place for a savior to come to aid, and it will be a stranger game the savior will soon play,» said the woman. And then she drew aside her veil. «My face is not unknown here, though a few years ago I would have thought it far more likely to see the inside of a convent cell than the gilt and tinsel of a gambling hall. Men have said that I am beautiful. Do you not think so?» The question was frankly asked. Our souls were too stirred with deeper emotions and stronger, sterner passions to be influenced by vanity. I gazed long and rapturously at the perfect dazzling beauty of the woman and for the time forget my sorrow. I bashfully touched the mass of tawny hair that shone like an aureole above her features, and said softly:

«You are very, very beautiful—too beautiful to think of death!»

«You are not original,» she said. «I said nearly that of you. But come, we will learn your fate. It is not well to prolong suspense. Let us see what B——will give us for the jewels.»

«Only the jewels?» I asked. «Why not the wheels also. They are almost new and of the latest patterns, and perhaps we will be able to realize something from them. If fate is with us they will do us no good, and if we win we can purchase others.» The woman sought out a bald and weazen-featured man and bargained with him, while I stood by. He glanced keenly at the rings and pins and then picked up the bracelet from her open palm. Then he went to the hall and looked at the two bicycles. I thought a moment and said:

«You must not sell that bracelet. We are to gamble for my life and must only use my property to play the game with. The bracelet is yours.»

«Do you think that I will need it after to-day? The bracelet has brought me naught but sorrow. It must be sold with the bicycles.» I did not argue further, but stepped back to allow her the opportunity to complete the bargain. Presently I saw G—— count out several bank notes into her hand, and the woman come over to me.

«He has not a fourth of the value of the jewels and the bicycles,» she said. «It matters lit-

tle. If luck be with us, we will win with a small amount as well as with a greater. We must play the game with three hundred francs.»

She passed rapidly by several tables, and led me to one surrounded by a throng of people interested in the playing of two men, one of whom was excited and flushed with enormous winnings, and the other of whom sat with a set, stern face, the changing light in his eyes seeming but the reflected despair which was eating at my own heartstrings.

«They are royal gamesters, and they wager heavy,» said my companion. «Do you know the game?»

«No,» said I, feeling a sort of faint and far-away interest in the proceedings before me.

«There are many ways to wager,» said the woman. «By some you can double your wager if you win, some triple and some obtain thirty-five times the amount of your bet. 'Tis the latter way we must play—a desperate game—but we have a desperate issue at stake. I will place the money on a number, and one whirl of the wheel will give you life or death. What will the number be?»

«You are young,» said I, looking down into the fair face, marred by the fire of despair in her eyes.

«I am twenty,» said the woman. «Shall we play that number?» I nodded assent. She forced her way through the throng by the table, and I followed her.

«I will make one wager,» said she quietly to the attendant at the wheel. «Three hundred francs on twenty,» and she placed the bank-notes on the number painted on the table. It was not a large wager, but an unusual one made against such odds. The crowd looked curiously at her, and the gambler who had been winning gave a short, nervous laugh. The attendant nodded stoically and spun the wheel and ball.

I heaved a sigh of relief as the whirr of the ball sounded in my ears. I knew I would lose and I felt that the agony was over. It seemed an age that the ball rolled about in the bowl before it dropped, and in the actually brief period I pictured our ride or walk back to the bay and our plunge together into the dark waters of the bay. And somehow it seemed not altogether unpleasant to die with the tawny haired woman in my arms.

There was a snap and click of the wheel and the ball dropped into a pocket. I did not dare look at the machine, and fastened my eyes on the woman's face instead. A quickly drawn breath from her and a low exclamation of wonder from the surrounding throng made me look back at the gambling table.

«Twenty wins,» came the sharp voice of the croupier and I felt the woman clutch me by the hand. The man with the pallor of despair on his face has lost again, and he cursed the woman.

«Over ten thousand francs,» said my companion, in a low voice. 'Twill start you on your way to life again. Is it enough?»

Of a sudden the fever of the game was on me. I grabbed the woman fiercely by the arm and said excitedly, but so low that no one else could hear:

«'Tis a paltry sum! I will not have it! Play it again!»

«Then you will not live for ten thousand francs?» said my companion softly.

«Play!» was all I said in a husky undertone.

«I will play ten thousand francs for a repeat on twenty,» announced the woman in a clear voice.

The hand of the croupier was stopped upon the wheel. Noisy exclamations came from the crowd, and the woman and myself were the center of a wondering gaze.

«'Tis above the limit!» cried the croupier. «One thousand francs upon a number, or fifteen thousand francs upon a color! You may wager on a color the sum, if too large for a number bet!»

The woman laughed mockingly. «It is a long time since B—— was frightened by a bet,» said she. «It's a good story for this city to hear. I will wager as I say, or not at all!»

Back in the crowd about the table a calm voice said:

«It is a mad chance. Let her play, the stakes.»

It was B—— who spoke. The croupier bowed assent and again the wheel was spun. The woman came close to me and I put my arm about her. The hum of the wheel sounded like a mighty waterfall in my ears, and a mist excluded from my sight the crowd, the croupier, the table and all save the great golden mass of hair that rested near my shoulder.

There came again the snap and click which told that the ball had found its home, and then suddenly the woman buried her face against my coat. She had not dared to watch the wheel.

Things grew suddenly clear, and I leapt forward to learn my fate. The croupier announced slowly, incredible as such a thing could be:

«The number repeats—twenty wins again!»

The crowd about the table were thrown into a turmoil of excitement. The woman gave a short gasp when the result was announced, and looked up at me in a half frightened manner. Then she turned hurriedly to the croupier.

«I will play no more!» she exclaimed. The clear voice of B——, back in the crowd, said calmly:

«If the lady will step in the rear apartment with me, I will give her her winnings in check. The amount is very large, and would be inconvenient to carry away in any other form, even if we had such an amount of money in the bank.»

With a slight pressure of the hand my com-

panion left me, and I pushed my way through the crowd to a secluded corner where I dropped upon a divan with a sigh. My mind was wonderfully clear. I knew that, through the agencies of an unknown woman, in a remarkable manner, my fortune was restored, and I was able to take my accustomed place in the world again. I knew that I had won back life over the whirring, whirling wheel, but this thought gave me no joy or pleasure, and not one ounce of the weight of misery which bore on my soul has been lifted off. My old grief was gone, I knew that, but a new one took hold of me. I knew what that was and quickly decided upon it. Just then a soft hand was laid on my shoulder, and the woman sat down on the divan beside me. Her face was pale and she trembled, as did her voice when she spoke.

«You asked for my name, when we stood near the bay,» she said falteringly. «It is on this paper which gives you nearly a half a million francs. I have endorsed it, and you will not wish to die now. Sometimes—perhaps, you will think of me—in the days to come, when you are rich and happy.»

I took the paper but did not glance at it. Instead I gazed into her eyes which were lighted now with a strange, new sadness. Presently she continued:

«You made a promise to me, near the bay, and that promise must be kept. The time has come for parting. You will go out into the life and happiness of the world, and I will go—well—back to the banks of the bay.»

She rose sadly and raised her veil which she threw about her head. I rose, too, and grasped her proffered hand.

«I did not promise all that you say,» said I, slowly. «But what I did promise, I will adhere to. Do you wish to go back to the bay?»

«Yes,» said she, looking frightened and suspicious at my manner. «You must not interfere with me.»

«That is what I promised,» I said, «and with your future plans I will in no way interfere—but I will return to the bay with you.»

She looked steadily at me for half a minute, and then said, «As you will.» We then made arrangements to have our friends—my friend—my companion—my bicycle and hers also returned to us. They would be at the foot of the stairs when we got there. Down the carpeted steps we walked. We mounted our bicycles, those silent steeds which in part assisted me in getting rich. We went to a side street, and encountered no one as the night was pitch dark. In due time we arrived at the bay. She dismounted and nearly pulled me off the wheel. Then she shuddered and did not seem to be in such a great hurry. We looked on the black waters.

«It was here that we first met,» said I. «It was a strange meeting and seems months ago, does it not?» She did not answer and I continued:

«It was only a few hours ago—but much has happened in that time. Yes, to me much has happened, but nothing to you, has there?»

«Then,» said I, «you may not wish to die.» She turned fiercely upon me and in a passionate whisper said:

«Yes, more now than ever. You are rich and can go back to your friends, and find favor and be respected and happy. If I went back, it would be to the old life that I hate! I cannot and will not live!»

She started away but I caught her by the arm.

«Then you are determined to seek rest in the waters of the bay?» I asked.

«Yes,» she hissed, struggling to free herself, «and you have promised not to hinder me.»

«I will not,» said I, steadily. «We will take the leap together.»

She looked at me and her eyes blazed from behind her veil.

«You mock me,» she said in a passionate whisper. «You are rich and have no cause to die.»

I drew her close to me and bent over her until my lips touched the silken film that covered her features.

«I have cause,» I said passionately. «A few hours ago I would have died because I was poor—now I would die for love! I adore you! Without you life would not be worth living, and with you life and poverty would be paradise! Do not die, my queen! Come back to a new life, to a new happiness—live for me!»

She struggled weakly to release herself, but I would not let her.

«You do not know what you ask,» she said, hoarsely. «You know not who I am.»

«I care not,» said I. «Do you not love me?»

«I would be shame your life.»

«Do you not love me?»

«Your friends would sneer you and cast slurs upon you.»

«Do you not love me?»

«I am a woman of the city and not worthy of you?»

«Do you not love me?»

She was silent for a moment and then the answer came in a sobbing whisper, «God knows I love you!»

Snatching the veil from her face, I drew her closer to me and covered with kisses the cheeks all wet with tears. Then with my arm about her waist, I turned my back upon the dark waters of the bay.

«We will leave this spot,» said I softly, bending over my love and leading her away from the mad chant of the waters. «We will go back to the life of the great city and you will help me to be a man.»

«And you will help me be a woman.»

It was in the first gray light of the morning we mounted our bicycles and left the Bay Coluna das Pessa.

Cyclists Who Make Wheeling Unpopular.

THERE is in the world a certain proportion of individuals who are, apparently, born haters of cyclists. With these strange beings, we have nothing to do. But it may be worth while to notice how cyclists, in some cases, make their own enemies.

The Hub divides such an inquiry into two heads. First, "Cyclists disliked by the public;" and secondly, "Cyclists whom cyclists detest."

In the first category the crowd of sinners is the more numerous. "The lady who wobbles against traffic" is here in the very front row. In the days of the old high bicycle, a rider was sometimes months ere he ventured to ride on the main roads. Nowadays, as soon as a rider can balance, as likely as not, he or she plunges daily in amongst the cabs, carriages, 'buses and trams, whose drivers are kept in a state of nervous excitement, unless the nervous cyclist can be given a wide berth. Of the dangers of this sort of riding, everyone appears to be well aware except the cyclist who runs the risk. Ladies are by far and away the worst offenders in this respect, and they make enemies for the sport every time they cause the hard worked 'bus driver to rein up his horses, and with aching legs to jam on his brake.

The cyclist who rides fast and near to the kerb, also, does much harm. He overtakes pedestrians at a swoop, and often hears a startled "Oh!" as he speeds onwards. If it is absolutely necessary that he should tear along, he should turn more into the center of the road on overtaking anyone; and if, as many do, he objects to ringing his bell, a whistle or a cough will warn the person on the path of his approach, and save many a jump of the heart.

Despite the attractions of cycling, walking is still a popular form of exercise. Many men—and women, too—there are who delight in nothing more than a steady tramp along the lanes. Are you aware how these people hate cyclists? Why is it? Principally, because such sturdy pedestrians love to walk in the road. Maybe, he is whistling as he tramps along, when suddenly, whirr! whish! two or three cyclists go by, having drawn near without a sound. The pedestrian starts, stops, crouches as if about to receive a blow. The danger is past. The walker breathes again, and with his first breath he hurls—well, not benedictions, after the departed wheelmen. "Saturdays and Sundays, now, it is simply impossible to go out for a country walk," said one such individual indignantly to the writer.

Drivers of smart traps and affluent individuals able to indulge in horse-riding do not all love the wheelman. Their chief cause of complaint is against the riders who, coming up from behind, skim close to the horse, and go almost under his nose in a dive for the kerb again. No cyclist would think of cutting so close across a fellow-wheelman whom he had overtaken, and those who do it to drivers and horsemen only help to augment the "Drat those cyclists" brigade.

Although not so bad as when wheelman rode more in clubs, and less by twos and threes, there is another evil that can be referred to. When a number of healthy, active young fellows get together, we know they don't sit still and talk in whispers. At times they are positively lively. It is when they become rowdy and noisy that the harm is done. The sight of seven or eight wheelmen walking arm in arm down the main street in some quiet country town, shouting the latest selections from the Halls, is not one calculated to inspire respect for the cycle and its votaries. The man who, after tea, sits with his feet sticking out of the inn-window, is another foe of his fellow-wheelmen. "Larks"—so called—of all sorts, also are out of place at the cycling inn. The writer well remembers to have had his attention called by the landlady of a well-known inn, to the state of a room in which a party of "cycling gents" had had their midday meal. Impaled on a hat-peg were three-quarters of a loaf of bread, and on each of the other pegs hung a pewter pot. On the table an apple-pie, from which the fruit had been scooped, had been filled up with beer and water. The table-cloth had been well peppered all over, and in a big pot in front of the window, containing a geranium, were stuck two rows of knives and forks. Later in the day, an unfortunate guest discovered that salt had been liberally mixed with the pounded sugar. Let us hope, however, that there are but few riders who would consider such unwarranted goings-on funny!

Many more specimens could be given of the riders who make the sport unpopular with the public; but it is, perhaps, time to turn to the cyclists who are in the black books of their fellow-riders. To the real hard rider no being can be more objectionable than the persistent "hanger on." He goes out on the prowl to find someone to "give him a lead." That long suffering individual discovered, the nuisance "gets on" his back wheel, and keeps glued there. If he would take his turn at cutting out the work he would often be a welcome companion. But no; not he! If you slow down he does ditto, and simply potters till another rider overhauls you, and he then swings out and on to him in turn. Smart tandem pairs are, in particular, the victims of the "hanger on." So often, indeed, had a certain two brothers been annoyed by the impertinent conduct of unknown cyclists whom they met that at length the rear rider ventured to remonstrate with one such individual. "Shall hang on if I like," was the retort; "it don't hurt you."

"Perhaps it doesn't," said the tandemist; "but it isn't fair. You take a turn, and then we'll say nothing." "That be blowed!" said the rider of the single, politely; "I'll hang on if I like, and you can't stop me!" An attempt to run the man off his feet failing, the rear tandemist hit upon a plan. Next night the tandem was out on the old familiar road, and down swooped the same individual and a friend. They ranged themselves in nice position behind the tandem, when the man on the back seat turned. "Going to hang on again?" "Rather!" replied the pair. The tandemist put his hand in his pocket. "If you are not off before we get to the next telegraph pole," said he, "down goes this handful of tacks." Immediately, fearful of punctures, the hangers on sat up. Tandem riders should note the recipe. But don't leave the tacks on the roadway.

A potent terror of the road is supplied by the little hands of "park bikists" who meander along, wheeling to this side and that, just as fancy takes them, and with an air of supreme indifference as to everything and everybody else but themselves. When a rider approaches from the front they begin to near each other and open out again in most erratic fashion, till, aided by Providence, the coming rider makes a dive through at one of their spread-out moments, and so gets by in safety. The only way to cure these people of such dangerous habits would appear to be to shout "Keep to the right!" four or five times in their ear, emphasizing each word with a tap on the head with a coal hammer. If the rider approaches such a party from behind, the sound of his bell produces either no effect at all, or else, at once each man or woman grips the handles tightly, the group divides, and whilst half draws slowly to the left, the remaining moiety edges steadily for the right-hand gutter. A lady rider who is a positive danger to herself and all others is she who, without a sign of warning, suddenly dismounts or turns around in the road. Not long since a rider, coming at a good pace down a hill, saw, as he started up the slight rise that comes after it, a lady pedaling calmly along. Just as he approached her, he gave a little ting on his bell by way of warning. Almost immediately, that woman, finding the little hill a trifle trying, hopped off her cycle, and to the left. Happily the rider managed to swerve out a bit; but his elbow caught the foolish one full in the back and sent her and her cycle sprawling.

As we have said, these are illustrations of but a few of the methods by which cyclists of to-day assist to sustain the—happily fast disappearing—unpopularity of the wheel, or else render themselves obnoxious to others rationally enjoying a grand pastime.

If you, reader, fair or otherwise, are in any way inclined to these or other faults when awheel, try and avoid such, to the advantage of all of us, and of the sport generally.

How To True A Wheel.

WHILE we advise cyclists to take their bicycles to a reliable repairman when the wheels are out of true, there are many who will try to do the work themselves. For the benefit of these we offer the following suggestions which, if carefully followed will lessen the work of what usually proves an enormous job:

Having the wheel sideways towards you, and holding one of the top spokes on the side of the wheel next to you with a pair of pliers to prevent it twisting, a turn of the nipple from right to left will tighten the spoke and draw the rim over towards you. Turning the nipple the reverse way will have an opposite effect on the rim, and loosen the spoke. Having placed the bicycle in such a position that the wheels will turn freely, proceed as follows: Take hold of the front fork or rear stays, as the case may be, with the fingers close to the rim you wish to true up, and hold the thumb (or a piece of chalk) stationary, in such a position that the edge of the rim will touch it in places when the wheel is revolved. Revolve the wheel slowly and notice where the rim touches the chalk, then tighten the spokes on the opposite side of that place, if they are slack. Should they be tight (which is rarely the case), loosen those on the side where the chalk mark is. A quarter or half a turn of the nipples is generally sufficient. Now revolve the wheel slowly and repeat the above operation at every "high" place in the rim—i. e., every place that touches the chalk. Of course, should the rim touch all the way around except in one place, you will tighten the spokes on the side next to you at the place where it does not touch. In tightening or loosening spokes, hold them with a pair of pliers close to the nipple, and turn the nipple with a nipple wrench placed firmly upon it.

Having trimmed the rim so far, i. e., made it so that the edge keeps in contact with the chalk when the wheel is revolving a full revolution, the next operation is to get the rim concentric. To do this, see that the frame is firm and steady, sight some object on the opposite side of the rim a little distance away from it, and in a line

with the inside of the rim and your eye, and revolve the wheel slowly; at the places where the rim looks to be nearest the hub, loosen the spokes on both sides equally, and where the rim is farthest away from the hub, tighten the spokes on both sides equally. Repeat the operation until the rim is a circle with the hub in the centre.

The rim is then true; but it is most important that it should be central with the hub sideways.

If it is not, the bicycle will not steer properly. To find out if the rim is central, thread a piece of strong cotton thread over the tire between the spokes and as close to the barrel of the hub as possible without touching either spokes or hub (when the thread is tight) to a point on the rim nearly diametrically opposite the place whence you started; take the cotton over the tire and thread between the spokes on the opposite side back to the starting point; then tie the two ends of the thread together over the tire; place a pair of trouser guards, or pieces of metal bent to a similar shape, over the tires, so that the ends press the cotton close to the edge of the rim at the sides.

See that the thread touches neither the hub nor any of the spokes and with a pair of dividers measure the distance from the cotton to the flange of the hub on one side; with the dividers set to this distance, measure the opposite side; if both measurements are the same, then the wheel is true. If one measures less than the other, loosen all the spokes equally on the side that measures less, and then tighten all the spokes equally on the side that measures more. An eighth or quarter of a turn is usually sufficient, unless the rim is very badly out. A very slight adjustment of the nipple makes a surprising difference to the rim in this last operation. In turning the nipples be careful to do so equally—i. e., if you loosen the first one one-eighth of a turn, loosen all the others on that side one-eighth of a turn, and then tighten all those on the opposite side the same amount. It is best to start at the valve, and you then know where to stop.

What Good Roads Mean.

BY OTTO DORNER.

SURELY, if there is anyone to be benefited by the improvement of our country roads, it is the farmer. The trouble with those who are objecting to road improvement is often that they are too short sighted to see their own advantage. They forget that every trip to town with a load of crops means an expenditure of time and effort, wear and tear on wagons and harness, all of which means dollars and cents to them in an indirect way.

Good roads not only mean larger loads, they mean faster trips. They mean that where it required four horses to draw a given load while the road was poor, only two horses are necessary after it is properly improved; that the wagon and the buggy will last twice as long, because of less hard usage on gravel hills and stony roads. They mean that the distance to the next house is decreased by half, because it only takes half as long as before to reach it with the buggy. They mean that the farmer can see his neighbors oftener, and come into closer touch with the world, doing much towards its higher civilization. They mean that his children can get to school easier, and will have to miss school less often on account of muddy roads. They mean that a shower of rain will not keep the farmers home on election day, when it is their duty to go to the polls and vote. They mean that it will become possible to deliver mail throughout the country districts, instead of requiring people in the country to go to the town and get it. They mean greater conveniences of many kinds, and the many benefits which necessarily follow better means of communication with the world in general.

It is a pleasure to see that the friends of the Good Roads movement are multiplying every year; that the farmers' institutes are taking up the matter of good roads; that the agricultural societies are discussing means of improving country roads; that the successful and progressive farmers are taking up the agitation for better highways and convincing their neighbors upon the subject; that road machinery is being purchased in larger quantities each year; that the number of town meetings which vote to retain the old system of "working out" the road taxes is growing smaller continually, and that the old plow and shovel method of road building is rapidly being crowded back into the pages of history. The farmers of this country are realizing that better roads mean everything to them, and it is safe to say that we are upon the verge of a general effort to place the roads of the United States upon a proper footing. The matter of roads is one in which we are far behind, however great our progress in other directions may have been, and it is a source of wonder to every European who visits the United States, that we have been content to leave our roads in such wretched shape.

The Hum of the Horseless

Coming of the Automobile.

According to the Chicago Record the project of establishing a line of automobile conveyances to run in place of the carettes is another of the interesting indications that the day of self-propelling vehicles is rapidly approaching. The automobile has been found practicable abroad, and in Pavis it has become immensely popular. There is no apparent reason why it should not be adopted and put into general use here.

Aside from its convenience, the great advantage to be expected from the automobile is that it promises to play an important part in contributing to the cleanliness and attractiveness of cities. Most of the dirt that disfigures a city's streets is brought in on the hoofs of horses. The automobile as it is now made is very nearly noiseless and its tires roll over the pavement without sound. The iron-shod horse can never be driven on either asphalt or granite blocks without a clatter. The automobile carriage contains within the area bounded by its four wheels both the load and the motive power propelling the load. The horse takes up fully half the space which a wagon or carriage occupies to-day in the crowded processions of traffic. The automobile, in its perfected form, will be trustworthy and secure. The horse is apt to frighten, shy and run away, leaving havoc in its path. The automobile needs no harness, no food, no regular visits to the blacksmith's and no veterinary surgeon. Whatever money its owner has to lavish upon it he can devote to improving the beauty of its structure and design.

In short, for the city and excepting upon those thoroughfares which may be especially set aside for the use of people who like to drive horses as a relaxation, the advantages of the automobile are manifold. The benefit which is of the most practical importance is the improvement in the city's streets which must follow its introduction.

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A recent experience in New York which has suggested an improvement in motor vehicles whereby they can be made immediately serviceable to doctors in emergency cases is described as follows:

A woman had received a complicated fracture of her arm, too complex for the physician to accurately locate. He then decided to make use of a Roentgen ray apparatus for this purpose, but found the patient too weak to be removed. He obtained the apparatus, but, having no source of electricity convenient to operate it, he called an electric cab by telephone. The current from the battery in the cab was conducted to the apparatus by special wires which successfully operated it and enabled the physician by the usual observations to locate the fracture in the arm and set the latter quickly.

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Anyone interested in Motor Vehicles should write the Duryea Manufacturing Company, Peoria, Illinois, for copies of their booklets, entitled, "Motor Vehicle Pointers" and "Motor Traps."

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Pneumatic tires for automobiles are selling in France at 15 each or $60 a set.

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The membership of the Automobile Club de France exceeds 1600.

New Inventions.

Morgan H. Vanervera, of Little Falls, N. Y., has invented an adjustable handle bar. The stem of the handle bar at its upper portion is slotted at opposite sides. In the upper portion of the stem a horizontal part is mounted to turn, which is provided with an annular series of ratchet teeth aligned with the slots in opposite sides of the stem. Pawls are pivoted in the stem opposite each other and in a position to engage the teeth of the horizontal portion. The shanks of the pawls being raised, the handle bar can be adjusted to the desired position, even when the bicycle is going at full speed.

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Emil H. Haupt, of New York, has invented a tire armor. The steel armor extends across the tread and at the sides of the tire, and is formed with opposing ends. Clamps are adopted to support the end portions of the armor. A spring tension device connected with the clamps serves to draw the ends of the armor toward each other and to provide a means whereby the armor will yield lengthwise to such an extent as not to interfere in any appreciable degree with the elasticity of the tire.

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A water cycle provided with a number of floats upon which the frame of the machine is carried has been invented by John J. McClemont, of Union Hudson County, New York.

The cycle is driven by means of a pedal crank mechanism which actuates propellers through the medium of bevel gears and connecting rods. The device is guided by means of a hand operated steering wheel connected by chains and sprockets with the front float.

The Wheelwoman

EDITED BY ACORN.

The condition of most road surfaces at the present time of the year is such that a really pleasurably cycle ride is an impossibility. Town riding is quite practicable but the few ladies who venture out now, complain that the enjoyment found in the ride is not sufficient to compensate the amount of care which must be expended upon the wheel after returning from a spin.

But ere many weeks have passed, the enthusiast of the cycle will again be speeding forth through towns and villages in search of fresh tracts and new pastures.

The remarkable developement of cycling as an exercise for ladies has given a marked impetus to the ladies tailoring trade, for, while a few years ago any home-made suit was considered good enough for wheeling, ladies have now formed styles and fashions which are not only adaptable to this exercise, but are also smart and becoming.



The battle between the rationals and skirts has been fought, and the general result, it must be acknowledged, has been in favor of the latter. For although the rational style has many features to commend it there are only a few intrepid ladies who adopt it here and they must be prepared to face many incomplimentary remarks.

In the accompanying sketch I have shown one of the more fancy styles of cycling dress, in which marked contrast and fancy ornamentation finds full scope. The jacket is the Eton or Zouave type, coming just down to the waist, and finishing with points back and front. The lapels are the dress coat order, and finished with silk. Braided ornaments are placed up the fore parts and on the skirts and as a rule these would also be placed on the back of the jacket as well as on the sleeves.

The blouse of fancy silk has a decidedly brightening effect on the appearance of the wearer.

The skirt, as all cycling skirts should be, is kept to the short side, and the circumference not too extensive, the average width for these skirts being about two and a half yards.

If you are about to have a new costume made, it will be well to insist upon having the cloth well shrunk before it is made up, otherwise the best coat and skirt will prove most disappointing after being caught out in a shower.

Women athletes seldom give public exhibitions of their skill—due, perhaps, to their excessive modesty—and their running, jumping and gymnastic records are usually kept secret by their physical instructors. Women who want to be beautiful and healthy, no longer have to recourse to drugs and lotions. They know that cycling and clubs, dumb-bells, swings and similar medicines for the muscles kept in store by the physical culture teacher, will help out nature's short-comings more than all the doctors and beauty of profession.

Among the elderly American wheelwomen is a lady of eighty-four who learned to ride so that she might cycle to church since the distance was rather far for her to walk. Probably the oldest living bicyclist in the world is a lady of Essex County, England, aged ninety-three, who is an adept rider and whose sprightliness is astonishing.

It has been said that in London women are blamed for the proposed increase in the premiums on cyclists' insurance policies, because they are more reckless than male riders, dodging round corners and across slipery pavements, under the noses of horses, in an alarming manner.

A dress guard material which commends itself as likely to exhibit good wearing qualities, and one which will be less liable to become shabby in a short time than the so-called silk guard now used, is a cord specially manufactured and rendered water proof, so that it will be impervious to wet, which works such havoc with the ordinary cord. The color of this water proof cord is tan, and therefore is also in its favor.

The Gospel of Good Roads

State Aid in New Jersey.

Inasmuch as the state of New Jersey is ahead of other states in the good roads movement the fifth annual report of Hon. Henry I. Budd, state road commissioner, contains opinions and facts of great importance. The New Jersey law requires the state to pay one-third of the cost of all improved roads that are constructed on the approval of the commissioner. The county pays the other two-thirds. When two-thirds of the property owners along any highway petition to have it improved, and agree to pay one-tenth of the cost, the improvement will be made, provided the state appropriation for the purpose is sufficient to meet all such demands. In this case all property owners adjoining the highway are assessed one-tenth the cost, and this is a lien against their property the same as an ordinary tax.

In six years under this law, 325 miles of improved roads have been made, at an expense to the state of $565,000. Last year about eighty-five miles were improved by state aid.

Experience in the work is teaching important lessons in road construction, enabling the people to get more for their money. Formerly the largest part of the expense was in making the foundations. It has been learned that the earth properly drained is as good a foundation as can be made. There are soils that require a stone road to be eight inches deep, some six inches and some but four inches, and so construction varies. Where the lesser depth is required stone roads are but little more costly than gravel roads, when the latter has to be carted a long distance. In order to preserve a proper surface after the first two or three inches become worn, it is necessary to recoat it. All the foundation that is required, therefore, is enough to sustain these two or three inches.

In maintaining the surface to prevent wearing and "raveling," it has heretofore been the custom on some of the stone roads to keep sprinkling carts in operation constantly in a dry time. It has been discovered that an application of coarse sand or fine gravel and loam to the surface will maintain its integrity. This material forms a soft cushion for the horses' feet and keeps the wheels from direct contact with the surface. It also prevents the fine powder that binds the stones from blowing away, and holds the moisture so necessary to the binding quality of the stone dust. This surface coating need be only one-half to one inch deep. By this means, utilizing the materials that lie along or near the road bed, the road may be preserved from excessive wear at small expense. As to the width of roadbed, Mr. Budd says: "Although the first cost of a road is practically in direct proportion to its width, the cost of maintenance and repairs is governed largely by the amount of traffic. If the traffic is at all severe, it will be cheaper to maintain a moderately wide road than a narrow one, on which, being confined to one track, the traffic will wear more severely than if spread over a wider surface. On many of the roads of this state where the traffic is moving mainly in one direction at a time, a macadamized or graveled width of eight feet would be amply sufficient. On roads of more importance, where it is necessary to provide for the frequent passing of vehicles, a stoned width of sixteen feet is necessary. It is probable, however, that a minimum width of ten or twelve feet would be better than eight feet, as the traffic would not be so closely confined to one track and the edges of the roadbed would be less likely to be pushed out. Drivers should be better informed as to the importance of not constantly following one line in using a road; and should be instructed to drive over all parts to prevent the formation of ruts, which are great destroyers of roads.

"We have settled upon the widths of ten, twelve and fourteen feet as ample for the traffic in the country, and sixteen feet in the towns, as the limit for state aid. Then, if the municipalities through which they pass, or the citizens thereof, decide the whole street shall be covered, they improve the remainder at their own expense."

The price of New Jersey stone roads varies from three to five thousand dollars per mile. A gravel road thirty-four miles long costs one thousand four hundred dollars per mile. In wet places where telford is necessary the cost reaches seventy-three cents a square yard. In the lower part of the state the cost ranges from fifty to sixty cents, and in the northern part where rock is obtained along the line of road and the bed need be only from four to six inches, the cost is from twenty to forty-five cents a square yard.

The plan of Commissioner Budd is to secure the construction in the first place of continuous lines from important centers, instead of detached sections. Whenever in any county numerous petitions are filed with him, he has the power to say which shall be first built. In most instances he utilizes his discretion to build those lines that are a continuation of those already made.

In Old Virginia.

The Southern Planter, published in Richmond, Virginia, is one of the best edited and most influential agricultural papers read by farmers, and incidentally by those who love to read the cream of class publications. It is proud of the state in which it is published, proud of the people of that state, but thoroughly disgusted

with and ashamed of the highways of that haughty southern state. In its February issue under the caption, "The Roads of Virginia," appears the following:

"Were it not that, from long familiarity with the views of Virginians towards the question of providing good roads for the State, we are so fully conscious of the absolute impossibility of inducing the people, both of the country and cities, to make a new start in the method of providing the means for building and repairing the so-called roads of the State, we should deem this a most opportune time to write fully on the question and reiterate some of the views we have so often given expression to in these columns. Day by day we have farmers calling on us complaining that the roads in the country are practically impassable for anything but a saddle horse, and that it is impossible to haul produce to the market. Letters to the same effect reach us by every mail. The remedy for this is simple, but will never be applied in this State until the citizens, both of town and country, realize that good roads are absolutely essential to the prosperity of a country, and are more than worth what it will cost to make them. Being as great an essential to the prosperity of the cities as to the prosperity of the counties, it is unjust to impose the cost of providing them upon the counties alone. The initial cost of building the roads should be a common charge on the property of both cities and counties, and should be provided by issuing bonds having the guarantee of the State, or, better still, of the Nation, but chargeable in certain defined proportions upon the cities and counties. Money raised in this way would be raised at the lowest cost, and hence the burden would be lightened for all, and would probably not amount to more than is now annually wasted in so-called road working, which more properly should be described as road destroying. Good roads once made would cost little for maintenance for many years, and this cost should, for main roads, be also apportioned on the cities and counties in certain defined proportions. Until these principles are admitted as sound, we see no prospect of having good roads in this state."

The Cost of Bad Roads.

According to Gen. Roy Stone there are 1,500,000 miles of road in the United States, over which 500,000,000 tons of freight are hauled every year. Putting the average haul at eight miles—though this is probably an over-estimate—he figures the cost of carting at $2 a ton, or $1,000,000,000 the year.

With uniformly good roads the cost of moving this freight would be only $400,000,000, saving $600,000,000 to the public annually. This is equivalent to the yearly interest on $20,000,000,000 of 3 per cent government bonds.

One-half of this almost inconceivably large sum would rebuild almost every mile of road in the United States at an average cost of, say, $6,166 per mile, and the other half would furnish a yearly income of $200 per mile for their repair and maintenance.

At present the people spend the vast sum of $20,000,000 each year in repairing their worthless roads. This sum would build 4,000 miles of thoroughly good macadam road, sufficiently wide for rural use. Experiments made in the Missouri Agricultural Experiment Station show that in nearly all road conditions broad tired wagons pull easier than those with narrow tires. On macadam roads a load of 2,518 pounds can be hauled on broad tires with the same draft as a load of 2,000 pounds on narrow ones. On gravel road, except when wet and sloppy on top, the draft of the broad tired wagon is much less than that of the narrow tired wagon; a load of 2,482 pounds can be hauled on broad tires with the draft required for 2,000 pounds on narrow tires.

The trials on dirt roads give varying results. When it is hard, dry and free from dust, 2,530 pounds can be hauled on broad tires with the draft required for 2,000 pounds on narrow tires. When the surface is covered with two or three inches of dry, loose dust, the results are unfavorable to the broad tire.

In general, the better the road the greater the advantage of the broad tire. On turf it is much easier of draft.

The Bad Roads of Ontario.

The province of Ontario is progressing slowly with the movement for better roads. According to the report of the road inspector of the province the roads are little better than the trails of a century ago. His report, summarized, is as follows:

"A century ago the roads of Ontario, such as existed, and they were very few, were mere trails. To-day, notwithstanding the amount of money and labor placed on them, the majority are little better than trails. This criticism may seem overdrawn to those who drive over some of the best gravel roads during the summer season, but if the journey had to be made in the fall or spring, the rainy seasons, its fairness would become more apparent.

"From the middle of October to the end of December, and from the 1st of March to the middle of May, a period of five months, by far the greatest part of the mileage of the province is mud, ruts and pitch holes. This may vary somewhat at the more northerly and southerly parts of the province, but it is the general rule of the average year. Of this period of five months there are at least two months of the year when the roads are practically impassable for loads. From the middle of November until the middle of December, and from the middle of March until the middle of April, the agricultural trade of

the country is practically cut off. For the remaining three months of the five the roads are barely passable."

Where Roads Should Be Built.

The tax we have to pay because the original cattle tracks and paths led abruptly up and down over the hills seems to be as immovable as the hills themselves which cause it. Immense sums would be eventually saved if many hill roads were relocated. In learning how to improve our highways and to construct new ones, it is well to learn where lines should run, in order to insure economy in grades and reduce the tax on time, strength, wear and tear and maintenance caused by hills.

Writing on this subject in the Portland Industrial Journal, Mr. S. D. Gray tells of roads over hills which "must not be gone around because our fathers traveled them and we may as well be footsore as they." He cites a case "in which both town and county commissioners refused to act. This road was two miles in length, with eight rugged hills, four of them unsafe to ride up or down. All these hills could have been avoided and a level road made for less than $1,000 that would pay for itself in ten years. The old hills still remain. What we need is an understanding not how to build our roads, but to say where our roads can and should be built."

Oil For Good Roads.

Crude oil for killing the dust on country roads has been experimented with by a Maj. Meigs. It came about in this manner: The Major had noted the change that had taken place in a bad bit of road near a town in Pennsylvania, where an old oil pipe had been leaking for some time. This pipe was near a place in the road that was invariable impassable during the season of spring and fall rains. The ground became so saturated by the oil that the mud rapidly dried up, and the surface of the earth became hard and remained so. A tank containing some 130 barrels was used for tests, which were made on a notoriously bad stretch of road. The results have proved that it is easy to keep the worst road in condition by treating it with oil, which prevents the earth from becoming wet by forming a waterproof crust. It is estimated that a barrel of crude oil will suffice for a strip of road 100 feet long by twelve feet wide. The cost of the oil at the wells is about 90 cents a barrel, so that this form of road mending is about the cheapest known.

The Care of Streets.

The asphalt streets in German cities are given greater care than the streets of most American cities receive. The consul as Breslau gives, with a good deal of detail, the work in that city, which may be summarized as follows: One man with an iron barrow, a shovel, a broom and a rubber scraper has charge of four blocks. During the day he is constantly going over his beat, taking up litter and keeping the street thoroughly clean. Each morning he sprinkles the pavement with very fine, sharp sand to prevent slipping, and if the day is rainy this is repeated several times. Once a week the street is thoroughly washed by sprinkling carts, then brushed with rubber brush sweepers, which carry the filth into the gutters, from which it is removed in carts. In the spring and autumn, during the period of wet weather, the streets are washed several times each week, which is for the purpose of removing the slime which the asphalt seems to leave, to keep the pavement from being slippery and to preserve and harden the asphalt. The men in charge of the streets are paid 5 cents an hour and the ordinary street hands receive 4 cents an hour.

One Word of Three Letters.

A corn belt veteran writes:

"Very few persons realize the vast importance to western farmers of good roads, or the vast amount expended each year upon our roads to produce such meager results. A road over which a man can drive in a light buggy at a speed of twelve miles per hour, or over which heavy loads may be drawn any day in the year, would indeed be a convenience and source of profit. This can be done on most roads about six or seven months of the year. What is the matter with the other five or six months can best be described by one word of three letters —mud. The continual grading of dirt into the center of the road each summer, only to be washed back again into the gutters in wet times, as it is done in many counties, seems a useless waste of money. If one mile of road in such localities were properly covered with broken stone or gravel, where available, it would be like a little leaven placed in a measure of flour. It leaveneth the whole lump."

Wide Tires in Pennsylvania.

By a recent act of Assembly the farmers of Pennsylvania are entitled to a rebate on their road tax if they use only draft wagons with tires not less than four inches wide to haul loads of not less than 2,000 pounds. The rebate for each year is one-fourth of the assessed highway tax. The purpose of the act is to induce those who haul heavy loads to use broad-tired wagon-wheels, so that the roads may not be so badly cut up as by the narrow tires. To be entitled to the rebate it is necessary to have no narrow tire on any wagon used for hauling over 2,000 pounds.

Racing and Racers

Racing Board Getting to Work.

When the racing board of the League of American Wheelmen was completed the chairman, Fred Gerlach, immediately called a meeting in New York City for the purpose of conferring with his colleagues. The meeting was held in the Astor House and a policy for the coming racing season was outlined. From every section of the country came expressions of satisfaction with the manner in which the L. A. W. has controlled and fostered the sport and placed it upon such a high plane, and these expressions also contained the statement that the Board will have co-operation from the authors. The promoters and racing men understand that the League has controlled and fostered the sport for almost twenty years for their protection, and the fact that the sport is now considered at the head of all athletics shows how successful the League has been.

The tracks which have been suspended by the League for not paying salaries due racing men have all complied with the requirement of the racing board that these amounts be paid, and all have been re-instated to the sanction privilege. This action has caused the racing men to understand that the League insures them protection in every case, and the track owners who have been under suspension understand by it that the League will also protect them in cases where racing men do not keep their contracts or comply with the rules. At the meeting it was found that there are over nineteen hundred bicycle tracks in the United States, and of these all will hold meeting under League sanction except possibly three, which are designing to conduct races under the auspices of men who have been suspended by the League for actions detrimental to the interests of racing men and the public which patronizes the sport. As heretofore, the public will be insured that meets held under L. A. W. sanction will be honestly conducted to the last detail, and racing men will know that their interests, as well as those of the track owners, will be protected. The latter especially understand that they must have the co-operation of an established and honored organization to protect their valuable property interests, while not laboring under any hardship whatever.

The board is now working on the National Circuit, which will have dates in every large city in the country, and the best of the racing men will follow it. The world's championships at Montreal and the national championships at Boston will be part of the circuit, and other cities which will have dates are New York, Buffalo, Springfield, Bridgeport, Hartford, Syracuse, Cleveland, Indianapolis, Chicago, Peoria, Louisville, Baltimore and St. Louis. It is probable that the circuit may also embrace Denver, Pueblo and Omaha, as those cities have applied for dates. Jacksonville, Fla., has requested the board to start the circuit in that city, and other southern cities will also make a similar request. State circuits will be conducted by the L. A. W. in New York, New England, Pennsylvania, Ohio, Indiana, Wisconsin and Illinois, making a very busy season for the riders and a strong showing of the ability of the L. A. W. to keep the sport, not only constantly before the public, put in such a way that the patrons will be confident that the sport is not in the hands of professional showmen with selfish interests exclusively.

The registration of riders in the League of American Wheelmen will commence May 1. After that date all riders will have to be regularly registered with the Racing Board. The Racing Board is now taking action on the suggestion that riders in novice races only will not be required to register, and their action will in all probability be favorable to the suggestion. Amateurs who are members of the L. A. W. will have to pay but fifty cents. Others can join the organization at the time of registering, and will be entitled to all the other privileges of a member, including road books, etc., in divisions which issue them, and nearly all of them do.

Some cycle racing authorities suspect that the reason such men as Eddie Bald and Owen Kimble do not return to the L. A. W. is that they are afraid to meet Major Taylor, who gave them such a hard rub last season.

There were 621 professionals registered by the L. A. W. last year. Of these 56 are the outlaws, and the other 565 are still loyal to the League.

Bourillon, the champion of France, attributes his victories to the fact that he confines his endeavors entirely to short races.

Helpful Hints

Any rider sending in an acceptable hint will receive THE PNEUMATIC for one year.

Keep your eyes open and your mouth shut while riding.

* *

The most comfortable position is the correct position, always.

* *

The best oil is none to good for use in the bearings of a bicycle.

* *

A cheap bicycle without a name is not worth as much as you pay for it.

* *

Unless competing in a race ten miles an hour should be your maximum speed. Eight miles is plenty fast enough at any time.

* *

When a rider is fatigued he should not attempt to climb hills. A short walk is refreshing, while exertion is dangerous.

* *

Do not pass a vehicle on the wrong side. The driver may suddenly turn to his own side, and then a collision is likely to happen.

* *

A duster very slightly moistened with kerosene will do more to make and keep the enamel of a machine bright than half an hour's polishing.

* *

A chain should never be hung up to dry after it has been cleaned with oil. The better plan is to coil it on a plate and let it drain that way.

* *

All wheelmen, as wheelmen, are equal. Always bear in mind that you have as much, but not more, right to the road as the other fellow.

* *

The farmer who cycles has a barometer all his own. He watches the wool on the backs of sheep. If it increases in curliness a spell of fine dry weather is indicated.

* *

A good rub-down and a change of clothing are two essentials when the ride is over. Nothing is more injurious to health than to stay in clothes that have been saturated with perspiration.

* *

Wheelmen who are continually losing their trouser-guards will find that a hook and eye, sewed on the trousers where the guard is usually fastened, is a very simple and effective tightener.

It is suggested that men cyclers who are also smokers should always carry their tobacco in a rubber pouch. The advantages of following this suggestion will become apparent when a patch is necessary in case of a puncture.

* *

To let your bicycle have its own way descending unknown hills is sheer recklessness and gross foolishness. You do not know what obstacle may be at the bottom until you strike it, and then—you may not know what it was until you regain consciousness.

* *

Simple as it may seem, back-pedaling is an art. While there are no certain rules which, if followed, will make one an adept at it, there are very few who understand it without practice. It is well to know how to back-pedal without jerking the machine out of true.

* *

Lamps cause a great deal of trouble when in a dirty condition. A little attention before and after each ride is all that is necessary to keep your lamp clean. Always wipe all the oil from about the lamp, keep the reflectors and lens clean and trim the wick before using the lamp.

* *

Cyclists who ride in winter are often troubled by the freezing of the water in the reservoirs of acetylene lamps. This can be avoided by not filling the reservoir until it is absolutely necessary to light up. Do not permit the light to go out at any time as the heat produced by chemical action in the carbide and burning gas is sufficient to prevent freezing of the water when the lamp is in use.

* *

Dwellers in a damp climate are liable to suffer from rheumatism and many and diverse are the suggestions for alleviating the pains thereof. Some recommend whiskey as the antidote, while others swear by celery. No less a person than Princess Christian declares that she has found cycling to be most efficacious as a cure for this painful complaint. A royal testimony such as this should do something to increase, if that be possible, the popularity of the already popular pastime.

* *

There is probably nothing that the cyclist abhors more than the sight of a hill. The ordinary hill is pleasing to climb when the rider goes about it in the proper manner. If the rider jumps to his work on a long hill, using great force for a time, he tires himself and does not get as good results as when, catching the pedal at the top of the stroke and using proper ankle motion, he follows it almost through the complete revolution. By consistently observing the practice of this method he uses not only the power of the thigh muscles, but the calf muscles as well

Talks on Touring

BY THE TOURIST.

Any information pertaining to touring, such as distances of trips, condition of roads, etc., will be given in this department on request. Communications should be addressed to "Tourist," The Pneumatic. Readers submitting acceptable descriptions of tours, articles on touring, etc., will receive the Pneumatic free for one year.

Several Valuable Hints.

Mr. G. Lacy Hillier, an authority on cycling, says that the rider who tours for the first time is prone to make certain mistakes, unless he takes the good advice of somebody with more experience than himself; mistakes that greatly detract from the pleasures of touring, and are apt to render what should be an enjoyment rather a toil. The first of these lies in the taking of a greater amount of luggage than is indispensable. Nothing more than a change of woolen underclothing is necessary, even say a woolen vest and a pair of stockings. Anything further that may be required can be easily sent on ahead to the destined stopping place, and cheaply enough, moreover; but, as a matter of fact, nothing more is called for, if one has no appointments at one's destination. The dry woolen things can be adopted at the journey's end, and the discarded articles prepared to be worn again on the succeeding day. Too much weight on the machine makes riding too much like hard work, and one does not tour to labor. A parcel, again, offers more or less resistance to the wind, according to its size, and its dimensions should, therefore, obviously be limited as far as possible.

Another error to be avoided is that of endeavoring to cover too great a distance in a specified time. There are two ways of arranging a tour. One lies in mapping the whole of the ground out beforehand, determining at what spot to stay each evening, and where to proceed to each day. When this is done, hotels can be advised; the course to be covered can be arranged to include places of beauty and interest, and if the error referred to is not perpetrated, and care is taken not to do too much in the way of riding, the result is sure to be satisfactory. The other method is for the rider to simply cycle wherever the whim may lead him, stop when he is tired at the nearest convenient hotel, make no plans, have no trouble, and probably fail to see anything worth seeing. The one is the sensible method, and the other—shall we say Bohemian?—and, as experience has shown to be the case, the former is to be recommended. An excellent plan is that of contriving that the tour shall be a circular one, so that the cyclist may spend several days awheel, pass through sufficiently pleasant scenes, and return to his starting-point without having traced his way over old ground, and without it being necessary to resort anywhere to the railway to get back when his holiday's end arrives.

Needless to say, touring should be done on a suitable machine, generally a strong full roadster, not too heavy, but fitted with all accessories to meet any eventualities. A moderate gear should be used, and some discretion in actual riding needs to be exercised, as the rider who, feeling unduly exuberant in the morning, scorches accordingly, is apt to find himself regretting the action in the afternoon, when the sun is probably strong, and he feels himself quite the reverse. It is also wise to abstain from unduly encouraging the thirst that is inevitable with many riders in hot weather, but which it only needs an effort of will to conquer.

An International Touring Association.

Last year, at Luxembourg, there was formed an organization known as the International League of Touring Associations. The delegates present represented all of the great cycling associations in Europe, among them being the Cyclists' Touring Club of England, and the Touring Club de France, and others of the strongest cycling bodies of the old world. The object of the new organization is the fostering and encouragement of international touring, and to that end it is the purpose to make all benefits of each of the associations reciprocal with all the others. The next meeting will be held in London this summer, and the League of American Wheelmen has been invited to become a member and so name a delegate. So important is this association considered by the L. A. W. that the executive committee has authorized President Keenan to take the necessary steps to become a member, and he will attend the meeting in person.

The final organization will be made at this meeting, and when it is concluded it will so operate that a member of the L. A. W., who is touring in any of the countries of Europe, will be entitled to all the advantages of a resident member. This will include hotel discounts, information from all local officers and properly outlined tours. As thousands of wheelmen annually visit Europe from this country, the benefits to be derived from such an alliance will easily be seen. The Cyclists' Touring Club is one of the strongest cycling organizations in the world, in fact, next in importance to the L. A. W., and the arrangements for the coming meeting have been left with its executive officers. They are particularly anxious to have the L. A. W. become a member, as the friendliest feelings already exist between the two organizations, and our own organization has not been slow in seeing the benefits that will accrue to its members under the arrangement as outlined.

#

Touring Tips.

Never start on a trip with a new saddle.

#

Do not forget your pump, wrench and repair outfit.

#

Wheelmen who desire to continue the use of their last year's mounts will find it advantage to obtain a new set of tires. After a wheel has been ridden several thousand miles, and has, perhaps, been subjected to long-continued and excessive artificial heat during the winter, or possibly to the cold atmosphere of a garret, much of the life and elasticity of the rubber and fabric are gone. This may not be noticeable until after the change is made, when the rider will perhaps wonder how he possibly managed to ride so "dead" a set of tires without becoming aware of their lack of resiliency. It pays, if you can afford it, to try the experiment suggested.

League of American Wheelmen

For Any Information Address ARTHUR BASSETT, Boston, Mass.

Membership April 20th, 1899.

1.	Pennsylvania	15598
2.	New York	15256
3.	Massachusetts	10755
4.	New Jersey	4247
5.	Ohio	2303
6.	Indiana	2023
7.	Illinois	1944
8.	Michigan	1705
9.	Rhode Island	1443
10.	Connecticut	1372
11.	Wisconsin	1241
12.	Maryland	1128
13.	New Hampshire	680
14.	Kentucky	625
15.	Missouri	559
16.	District of Columbia	486
17.	Iowa	470
18.	Maine	462
19.	Colorado	334
20.	Minnesota	322
21.	Southern California	314
22.	Delaware	224
23.	Virginia	170
24.	Vermont	121
25.	Georgia	100
26.	West Virginia	95
27.	Florida	58
28.	Montana	53

L. A. W. Securing Legislation.

The various divisions of the League of American Wheelmen are hard at work in securing the passage of bills in the State legislatures which will give the wheelmen some of the advantages and privileges they wish to enjoy. Principal among these bills are those which are designed to have the roadways of the country placed in proper condition for the traffic which goes over them. They are doing this, not only in their own interests, but in that of the farmers as well, and the latter class is co-operating with the wheelmen in every instance. Among the States which have bills for highway improvement on their calendars are New York, Connecticut, Rhode Island, Pennsylvania, Maryland, Georgia, Missouri, Illinois, Iowa, Michigan, Minnesota, Wisconsin, Nebraska and Colorado, and in every case the League of American Wheelmen is using its influence to have these bills passed.

In several other States there are bills requiring railroads to carry bicycles as baggage, and in the past the L. A. W. has secured the passage of similar bills in fourteen States, so that at present there is a line of States stretching from the Atlantic to the Pacific which require the railroads to carry bicycles as they would a trunk or other articles of baggage. In some States there are bills providing for the building of cycle paths and all of the States have local measures. The amount of work being accomplished by the L. A. W. for wheelmen is not generally known, but it is of great importance and goes steadily forward.

L. A. W. Business Methods.

The new executive committee of the League of American Wheelmen has prepared a policy for this year which will include the most energetic pushing of all the objects of the organization. The improvement of highways, touring, favorable legislation, transportation of bicycles on railroads, social meetings and racing, will all be given every attention, not only by the executive committee, but by the committees having the several branches of the organization in charge. To make this work most effective the executives have decided upon placing every department upon a thoroughly business-like basis. To this end the finances will be directly in charge of the executives and every committee will be required to make a report of its doings at the end of each month.

In this way the higher officials will be thoroughly informed of what is being done in every department, can aid immediately any one of them desiring assistance, and can cut out all members who are not doing their duty. To do this has required an almost entire change in the methods of the organization, but now that it is accomplished, there will be no waste of energy in any of the departments, and members of the organization will secure the benefits without any deterioration.

A Good Bill.

Owing to the efforts of the members of the Minnesota Division the following bill passed the state legislature March 9:

"Section 1. Any person who wilfully injures, obstructs or destroys, or drives any cattle, sheep, horse, swine or animals, team or vehicle, except a bicycle, or wilfully allows his cattle, sheep, horse, swine or animal to be led or driven upon or to stray along, a bicycle path constructed exclusively for the use of bicyclists, except for the purpose of crossing such paths at street intersections, and at private driveways leading from the street to adjoining premises, and for the purpose of crossing such paths to and from the street and adjoining premises where necessary, shall be guilty of a misdemeanor and on conviction thereof be fined not less than five (5) dollars nor more than fifty (50) dollars or by imprisonment for not more than thirty (30) days or both.

"Section 2. Whoever wilfully shall throw, drop or place, or shall cause or procure to be thrown, dropped or placed in or upon any cycle path, public avenue, street, sidewalk, alley, road, highway, bridge, parkway or place, any glass, tack, nail, piece or pieces of barbed wire or other metal, brier, thorn, or other substance which might injure or puncture any tire used on a bicycle, or which might wound, disable or injure any person using a bicycle, in this state, shall be guilty of a misdemeanor and on conviction thereof be fined not less than ten (10) nor more than fifty (50) dollars or by imprisonment for not more than sixty (60) days or both.

Our Busy Cycledom

Cycling on ice is one of the favorite pastimes of the subjects of the Czar.

—

A German doctor is responsible for the statement that cycling is a sure cure for diabetes.

—

"A medical student wishes to exchange a well preserved skeleton for a bicycle" is the gruesome wording of an offer appearing in a country paper in England.

—

Several physicians have recommended cycling as a cure for stammering. And to make dumb people speak we recommend a puncture ten miles from anywhere without any possible means of repair.

—

Vol. 1, No. 1 of THE OBSERVER has made its appearance. With Phil. A. Roth as its editor, Louis Pierron as the observer and Emil Koehn as special contributor, it overflows with interesting chats, among which vignettes awheel predominate. Taken in its class THE OBSERVER is a small clear havana while its contemporaries, if really there are any, are crude stogies.

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It is said that there hangs in the window of a Chicago fashionable tailoring house what the men will have to wear next summer if they ride bicycles and wish to be in style. A St. Louis man has set the pace and predicts an early and enthusiastic season in the bicycle world. Suiting the action to his belief, while in the city last week he ordered the suit, which hangs in the tailor's window before being sent to its owner and is wondered at by crowds. The suit is a gaudy affair and resembles a crazy-patch quilt. It is made of scraps of cloth of various designs carefully sewed together. The scraps are in all shapes, running from an inch to six inches and are highly colored, while the sleeves of the coat are made of one kind of cloth. The buttons in front are huge steel plates, with a bicycle engraved on them. There are two lower pockets, with covers and buttons to secure them.

—

The bicycle race is not always to the swift. There is as much skill required in riding slowly as in going at a breakneck pace. For that reason the tortoise race has been invented to add a freakish interest to wheeling competitions.

A trick that is an elementary one in fancy riding is to twist the front wheel and then sit upright in the saddle while the bicycle is stationary. Were this to be allowed in a tortoise race there would be no end to it, for all the competitors would sit like statues waiting for some one to make a move. It is a rule of the "race," therefore, that the wheel must be actually moving all the time, as slowly as the rider can propel it without falling off, but at no time must there be a dead stop. When the wheel cannot be seen to move the rider is disqualified.

The excitement of a rapid race is exceeded by that of this tortoise contest. Where the competitors are evenly matched the struggle to balance the wheel while scarcely any perceptible movement is made and the momentary expectation of a collapse keep the spectators in a state of quivering interest that provides a new sensation in bicycle competition.

—

In order to facilitate the recognition of claims of members of the Century Road Club the country has been divided into districts as follows:

"District No. 1—All that section lying east of a line following the eastern edges of Ohio, Kentucky, Tennessee and Georgia. District No. 2—All that section lying west of the line mentioned and east of a line following the western edge of North and South Dakota, the southern edge of South Dakota and the western edge of Iowa, Missouri, Arkansas and Louisiana. District No. 3—All that section lying west of the last mentioned line. The state centurions in the states within each district as specified shall send all claims for bars for centuries ridden which have had their approval to the member of the road records committee residing within the district which includes their state. All centurions of foreign countries or divisions shall send all applications for bars for centuries ridden which have had their approval to the chairman of the committee direct. The members of the committee in their respective districts shall pass upon all applications for and issue all orders for bars upon the official jeweler. The committee as a whole shall pass upon all protests against or objections to the granting of century bars."

—

The great increase in the number of bicyclists all over the United States makes riding at night without lights on bicycles, whether in cities, small towns, or country roads, a positive menace to the limbs and lives of men, women and children pedestrians, and to drivers, and to the bicyclists themselves.

The laws compelling the carrying of lamps in the countries of Europe are national in character and apply to hamlet and country roads as well as to the large towns, but in the United States it is a matter of local option and all communities having a proper pride and care for the welfare of their inhabitants should enact ordinances requiring the use of lamps.

No doubt it would be better to have such ordinances apply to vehicles of all kinds, yet differences between carriages or wagons and bicycles must be admitted—in the one case, one has the sound of horses' hoofs, the noise made by the vehicle and the fact that it looms up large in the darkness, giving warning of nearness; whereas, the bicycle has been properly called the "silent steed," it approaches quickly, noiselessly, and, being small, is practically invisible at night unless carrying a lighted lamp.

While cyclists have sometimes objected to the passing of ordinances compelling them to carry lighted lamps at night, yet it is a fact that after such ordinances become a law, and the riders experience the great advantages accruing and the largly increased safety, they would not be willing to do without either the law or the lamp.

Law or no law, bicyclists having a proper regard for their own safety and that of others will never be on a dark road without a light. It gives a warning of approach as nothing else can, and a broad, well-reflected light enables the rider to avoid all obstacles and bad places in the road.

With the Trade

The Crescent Catalogue.

The Crescent catalogue, like the bicycle it describes, is "sky high." In preparing the catalogue the Crescent people were not at all selfish. They did not confine its space to a description of their product, but added some very useful information which every wheelman ought to possess. As a bicycle catalogue it is complete. The illustrations are perfect and the text instructive. No one interested in bicycles ought to fail to write for a copy. The following is a reprint of several articles appearing in the catalogue.

RULES OF THE ROAD.

To ride a bicycle well means, in addition to ability to manage the wheel, a knowledge of both written and unwritten laws of the road and a respect for the rights of others using the public highways. A city street crowded with vehicles and pedestrians, or a narrow country road full of trouble to the beginner, becomes very clear to the rider who observes the following three fundamental rules:

1. Always keep to the *right* of the center of the road.

2. Always pass to the *right* of a vehicle, rider or pedestrian approaching you.

3. Always pass to the *left* of a vehicle, rider or pedestrian going in the same direction as yourself.

In addition to the above fundamental laws of the highway, the following suggestions may be of service: Pass behind a pedestrian crossing the street. Two or more riders in company should all follow the same rule in passing either vehicles, other riders or pedestrians. Do not "scorch" on crowded streets. Always have your wheel under full control at road intersections. Keep a good lookout ahead and watch all crossings carefully.

CARE OF THE WHEEL.

It would be impossible, in this limited space, to give an extended description of how to take care of your wheel. We trust the following suggestions will be of benefit to Crescent riders. Remember, a bicycle is an exceedingly fine piece of workmanship. You will probably weigh five or six times as much as your wheel does; hence, handle it accordingly.

Always keep your bicycle well cleaned. A well groomed horse moves freer than one neglected—the same with a bicycle.

Be sure to have the bearings always properly adjusted, as a perfectly adjusted bearing is necessary to secure easy running. It would be better that the bearings be adjusted a little loosely rather than too tight. If they are a little loose the wheel will run freely, but if they are too tight, either the cones or bushings will soon be worn or broken.

See that your chain is adjusted just right. Better have it a little slack than too tight. Keep your chain in perfect running order; take it off occasionally and wash out all the dirt and grit with kerosene oil. After the latter has fully evaporated, place the chain in a bath of heavy lubricating oil and let it remain there over night. Before putting it on the wheel, rub off as much of the oil as possible, for the oil is needed in the bearings only, not on the surface. Before using the wheel, spin the rear wheel around for a few moments, so that the oil will only remain in the bearings of the chain; then wipe the chain dry and afterward put on a thorough coating of graphite. This will give you a very smooth running chain; the oil lubricates the bearings, and the graphite makes the chain run smooth and easy over the sprockets.

The Crescent Bevel Gear Chainless Bicycle requires practically no special care, as the mechanism is thoroughly protected from the dust and weather, and when this mechanism is once thoroughly adjusted it will remain so for a long time, requiring no attention, but running easier and easier the more it is used. The bevel gears are thoroughly lubricated when the wheel is assembled, but it is very easy to add additional lubricant, if desired, at any time.

Always see that both front and rear wheels stand true in the frame. If wheels need truing, have it done by an experienced person.

Be sure that your handle bar and saddle post are clamped perfectly rigid in the frame. A loose handle bar has caused many a bad accident.

Keep your tires well inflated, for you do not get the full advantage of a pneumatic tire until you compress the air; then you get "life." With the tire blown up moderately hard, you will ride further with less fatigue than you would with a soft tire; the former bounds over the road, the latter drags. The rear tire should be blown up a little harder than the front one, as it carries the heavier portion of the load.

Be sure that every nut is set up tight; make it a rule to examine every nut before each ride. It takes but a moment, and may save an accident.

Nickel plating will rust if permitted to remain damp, therefore each nickeled part should be cleaned and dried after a ride in the rain or over muddy roads. A good rule would be to have a bottle of kerosene near where you keep your wheel, so that if you have not time to clean the wheel when you return, if it is wet, saturate a cloth and cover all the nickeled parts with kerosene, which will keep them from rusting until you have time to clean them thoroughly.

Most saddles as they are made to-day are comfortable, but you must find out the position at which they will be comfortable to you; hence, by a little experiment of tilting them up or down, back or forward, or raising or lowering, you will find that your saddle is probably right.

When starting on a ride see that the necessary tools, pump and repair kit are in the tool bag.

Oil will destroy the life of rubber. Do not let any come in contact with your tires.

Keep your bicycle in a dry place.

The time that you devote to the above suggestions will give you the satisfaction at least, of knowing that your bicycle is right.

HOW TO FIGURE GEARS.

To ascertain the gear of a chain-driven bicycle, multiply the diameter of the rear wheel by the number of the teeth on the front sprocket, and divide the product by the number of teeth on the rear sprocket.

To ascertain the gear of a wheel driven by bevel gearing, divide the number of teeth on the driving gear on the crank axle by the number of teeth on the gear on forward end of the gear shaft. Multiply the quotient thus obtained by the number of teeth on the gear at the rear end of the gear shaft, and divide the product by the number of teeth on the gear on the rear hub. Multiply the result by the diameter of the rear wheel.

A copy of the Crescent catalogue will be sent to any address by the Western Wheel Works, Chicago, Ill.

A New Bicycle Bell.

The illustrations herewith submitted show a new bicycle bell, patent for which has just been granted Frank Mossberg and C. A. Brink, and assigned to the Frank Mossberg Co. of Providence, R. I. Its construction is novel in many respects.

By reference to figure 1 it will be seen that this bell is placed directly in front of the post, thus giving a neat symmetrical appearance. At the right of the cut will be seen a small shaft extending radially from

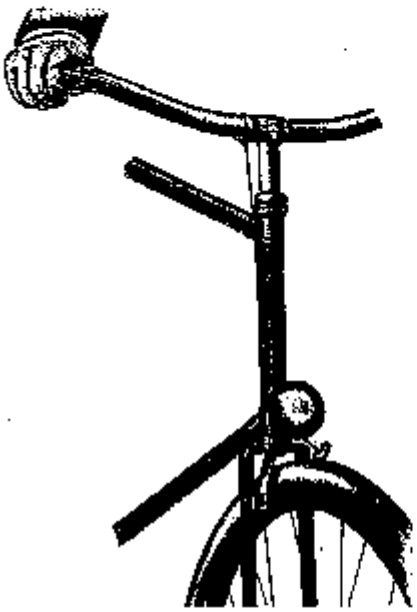


FIGURE 1.

the bell, having a small wheel at its outer end. When the bell is at rest this wheel stands about ⅛ of an inch away from the rubber tire of the bicycle wheel and by pulling the hand lever shown at the left of the handle bar the bell, together with its shaft and wheel, is caused to swing downward until it is brought in contact with the rubber tire when it will revolve with same and thus cause the bell to ring.

Figure 2 shows the No. 1 bell which consists of two gongs of different pitch which when actuated by the

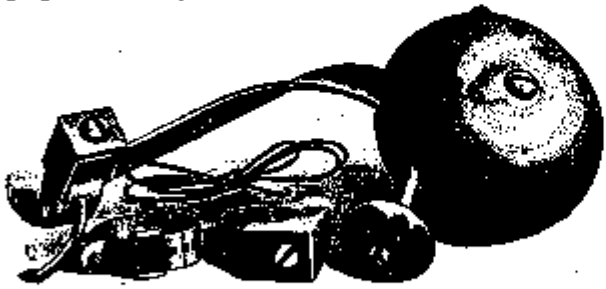


FIGURE 2.

striking mechanism will give out a musical tone which is very loud and clear. Thus this bell is known in the trade as a "Chime Bell."

The interior or striking mechanism is more clearly shown in Figure 3. In this cut one of the gongs is removed. It consists mainly of a practically radially mounted cam shaft with a friction wheel shown at the left of the cut, which when forced to revolve will actuate the strikers. The strikers consist simply of two metal rods or hammers which are mounted in a plate



FIGURE 3.

to move freely, and, when carried up to strike the gong by the action of the cam shaft, the same return to their normal position through the combined action of gravity and rebound. Thus it will be seen that the power required to operate the bell need only be sufficient to overcome the weight of the strikers plus the friction of the cam shaft on the bearings. It will also be readily seen that the mechanism as here described will not easily wear out.

In case the bell cannot be attached to the front

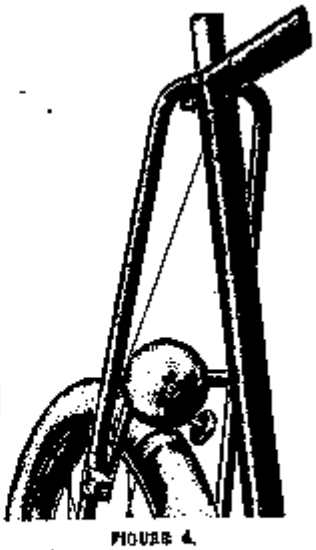


FIGURE 4.

fork of a wheel on account of the brakes used on some wheels, it can be attached to the rear fork with equal satisfaction, as shown in Figure 4.

The company favored us with a sample of the "Chime Bell", and we took occasion to give it a trial which verified all of the foregoing claims. The bell retails for

75 cents and the single gong bells made by the same company retails for 50 cents. If your local dealer does not sell the Mossberg Bell write to the company for a copy of their booklet.

Market for Bicycles in the Orient.

Rounsevelle Wildman, the Consul General at Hongkong, has just sent an interesting report to Washington concerning the bicycles in the Eastern countries. In the first place, comments the Buffalo Express, there is no attention paid to name and reputation of the various wheels, but all fall under the generic title of "bicycle." Nor is there any regard for style—a wheel of 1898, for instance, being just as well received as one of 1899. This, Mr. Wildman points out, offers an excellent opportunity for American manufacturers to work off old stock, providing, of course, the machines are well built. Each bicycle should have a brake, lamp and bell, as the available roads of Hongkong and other cities where bicycles are used are constantly filled with rickshaws, and as darkness comes almost without warning. A wheel should not cost more than $20 wholesale in America, which, with freight charges, say, from New York to Hongkong of $3.50, would allow a good profit. At present there is no large agency in Hongkong, but various stores carry bicycles for the accommodation of customers. About two-thirds of the machines now used in Hongkong are of American make and were bought in San Francisco. Bicycle dealers are warned against indiscriminate selling to unknown persons on credit, as there are no collection agencies in Hongkong. Since Manila has fallen into the hands of Americans, the demand for bicycles by inhabitants of that city has greatly increased.

The Snow repair stand is one of the several good things every cyclist ought to possess. It is a stand in which you can place a bicycle and turn it to any position desired. The wheel, having been firmly fastened in the holder by means of rubber covered grips, is raised to any desired joint by the mere act of lifting it, and retained there by the pawl, which engages the notches of the ratchet. The return or lowering motion is accomplished by pressing a foot lever attached the base, which releases the pawl. The wheel may also be swung around to any convenient angle, thus bringing all its parts successively before the operator. The stand, with shelf, is sold at $5.00. For further information address the Snow Wire Works, Rochester, N. Y.

The Barnes, Phoenix and Viking bicycles are represented in Milwaukee by D. W. Howie, with salesrooms at 154 Second street. Mr. Howie has made bicycles the subject of his study during past years and it was on his knowledge of what constitutes a good bicycle that he selected his line for the season. And he ought to know. Mr. Howie has a full line of models on the floor and invites riders and prospective riders to visit his store and inspect them. He doesn't urge anyone to buy. He says that isn't necessary.

The National India Rubber Co. is puzzling several thousand people just now with the Kangaroo Bicycle Tire Puzzle. We have given it up, but, perhaps, we are not so good at solving puzzles as some of our readers and we suggest that you write the company for one. Address the National India Rubber Co., 244 Monroe St., Chicago.

There is much to interest the dealer in the sundry catalogue of Hibbard, Spencer, Bartlett & Co., Chicago. A copy will be sent free upon request. The company issues a bicycle catalogue also.

Manufacturers are instructing agents to talk high grade believing that the cheaper grade of bicycles will sell themselves.

The Stover Bicycle Mfg. Co., Freeport, Ill., is a newcomer in the motor manufacturing field.

The German cycle market is overstocked to the extent of 175,000 bicycles.

Observations.

BY LOUIS NAPOLEON.

The late spring has prevented many of the ante-winter riders from bringing out their bicycles. But the season will come on with a rush and the bicycle repairman will be swamped with work, as last fall's dilapidated wheel is removed from its abiding place in the garret, basement or possibly the barn, and forthwith brought to the "doctor" to be toned up.

*

"The man who is prepared to ride a '99 wheel this year can be picked out already in a crowd by a certain haughty and supercilious manner."

This editorial quotation was clipped from the Chicago Record. It seems the writer of it did not note any further distinctive mark of character about these individuals; whether they were prospective riders of a low or high grade of machine.

*

I overheard two comely matrons in their gossip, in a grocery store, the other day. One of these objected to her "hubby's" practice of taking a spin in the early dawn of day. The following is the sense they expressed themselves in and by these words:

"I hate to have John take long rides on his bicycle before sunrise."

"Do you think they are injurious?"

"Of course; I always have to get up and get breakfast for him before he goes."

*

In the Milwaukee Sentinel of March 29 appears an illustrated article from the pen of Otto Dorner, the apostle of good roads, which thoroughly goes through every detail necessary for the construction of macadam highways and streets. It is very exhaustive and points out the numerous weak spots the road overseers or builders are "soft" on.

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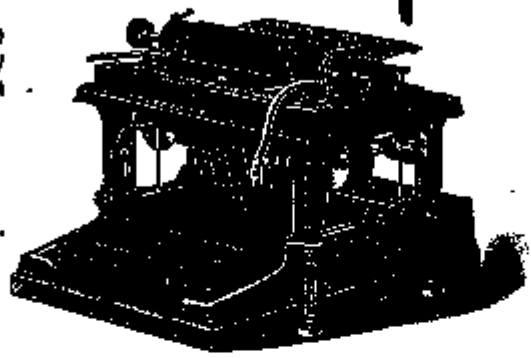
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I have used Ripans Tabules with so much satisfaction that I can cheerfully recommend them. Have been troubled for about three years with what I called bilious attacks coming on regularly once a week. Was told by different physicians that it was caused by bad teeth, of which I had several. I had the roots extracted, but the attacks continued. I had seen advertisements of Ripans Tabules in all the papers but had no faith in them, but about six weeks since a friend induced me to try them. Have taken but two of the small 5-cent boxes of the Tabules and have had no recurrence of the attacks. I have never given a testimonial for anything before, but the great amount of good which I believe has been done me by Ripans Tabules induced me to add mine to the many testimonials you doubtless have in your possession now. A. T. DEWITT.

I want to inform you, in words of highest praise, of the benefit I have derived from Ripans Tabules. I am a professional nurse and in this profession a clear head is always needed. Ripans Tabules does it. After one of my cases I found myself completely run down. Acting on the advice of Mr. Geo. Bower, Ph. G., 898 Newark Ave., Jersey City, I took Ripans Tabules with grand results.
Miss BERTHA WISEMAN.

Mother was troubled with heartburn and sleeplessness, caused by indigestion, for a good many years. One day she saw a testimonial in the paper indorsing Ripans Tabules. She determined to give them a trial, was greatly relieved by their use and now takes the Tabules regularly. She keeps a few cartons Ripans Tabules in the house and says she will not be without them. The heartburn and sleeplessness have disappeared with the indigestion which was formerly so great a burden for her. Our whole family take the Tabules regularly, especially after a hearty meal. My mother is fifty years of age and is enjoying the best of health and spirits; also eats hearty meals, an impossibility before she took Ripans Tabules. ANTON H. BLAUKER.

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I have been a great sufferer from constipation for over five years. Nausea gave me any relief. My feet and legs and abdomen were bloated so I could not wear shoes on my feet and only a loose dress. I saw Ripans Tabules advertised in our daily paper, bought some and took them as directed. Have taken them about three weeks and there is such a change I am not constipated any more and I owe it all to Ripans Tabules. I am thirty-seven years old, have no occupation, only my household duties and nursing my sick husband. He has had the dropsy and I am trying Ripans Tabules for him. He feels some better but it will take some time, he has been sick so long. You may use my letter and name as you like.
Mrs. MARY GORMAN CLARKE.

I have been suffering from headaches ever since I was a little girl. I could never ride in a car or go into a crowded place without getting a headache and sick at my stomach. I heard about Ripans Tabules from an aunt of mine who was taking them for catarrh of the stomach. She had found such relief from their use she advised me to take them too, and I have been doing so since last October, and will say they have completely cured my headaches. I am twenty-nine years old. You are welcome to use this testimonial.
Mrs. J. BROCKMYER.

My seven-year-old boy suffered with pains in his head, constipation and complained of his stomach. He could not eat like children of his age do and what he did eat did not agree with him. He was thin and of a sallow color. Reading some of the testimonials in favor of Ripans Tabules, I tried them. Ripans Tabules not only relieved but actually cured my youngster, the headaches have disappeared, bowels are in good condition and he never complains of his stomach. He is now a red, chubby-cheek boy. This wonderful change I attribute to Ripans Tabules. I am satisfied that they will benefit any one (from the cradle to old age) if taken according to directions.
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A new style packet containing TEN RIPANS TABULES packed in a paper carton (without glass) is now for sale at seven drug stores—FOR FIVE CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (60 tabules) can be had by mail by sending forty-eight cents to the RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York—or a single carton (TEN TABULES) will be sent for five cents. RIPANS TABULES may also be had of some grocers, general storekeepers, news agents and at some liquor stores and barber shops. They banish pain, induce sleep and prolong life. One gives relief.

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THE CYCLING AUTHORITY OF NEW ZEALAND.

PUBLISHED BY THE

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Christchurch, New Zealand.

DO you send out salesmen and let them talk to possible customers in rag time, or do you instruct them to talk in the most convincing business-like, result-producing manner?

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The following appeared in the April 6 issue of "The Wheel," a trade paper published in New York, and speaks for itself:

Andrae Facts by an Expert.

"Every man to his trade" is a truism lived up to by the Julius Andrae & Sons Co., of Milwaukee. Terry Andrae, mechanical expert, supervises the construction of Andrae bicycles. Henry Andrae, man of commerce, manages the selling of them. Cramer, advertising expert, gives them publicity. Cramer got up the '99 catalogue, and did it well. He tried to make it as interesting as a letter from an old friend. He tried to inject the moisture of sympathy and modest enthusiasm into a discussion of wheels, cogs, chains and other dry mechanical facts. And he did it. The Andrae story is worth the while of any dealer to read, and the Andrae catalogue on the dealer's counter will catch trade. This line of wheels and the good people who make them have stood the test of years.

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VOL. X. JUNE, 1899. NO. 5.

THE Pneumatic

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THE PNEUMATIC.

ESTABLISHED 1891.

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F. G. CRAMER.

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The Pneumatic,
207 Grand Ave., Milwaukee, Wis.

THE PNEUMATIC.

VOL. X. JUNE, 1899. NO. 5.

Love on a Tandem.

BY LOUISE HOUSTON.

Dramatis Personæ.

MISS RUTH HUSEN, a pretty vivacious girl who was spending the summer at the Lakeside Hotel.

MR. GEORGE SAMPSON, a bashful young man who was devoted to Miss Husen. Out of her sight he was miserable; and under her sharp blue eyes he suffered agonies. He gave her the impression as though he had some message of the deepest import constantly on his mind, but when he walked with her on Sunday afternoon, or rowed on the lake, or danced the two-step, he had nothing to say for himself. He knew if he did not look into her eyes he could make his tongue do his bidding. A happy thought came to him; he ordered a tandem.

SCENE: A woodland road. Mr. Sampson and Miss Husen riding tandem.

TIME: Six o'clock of a September afternoon.

MISS HUSEN.—(referring to the wheel) «It is a perfect beauty, Mr. Sampson. Have you named her yet? A good name has come to me.»

MR. SAMPSON.—«And to me too—perfect! How many syllables has yours?»

MISS H.—«One.»

MR. S.—(breathlessly) «So has mine! Now let's count three and say the name.»

Simultaneously they both said, «One, two, three—Ruth!»

Then they laughed in an excited way that the passers-by must have thought rather amazing even for two young persons out for a ride.

MR. S.—(impressively) «It's the most wonderful thing I ever heard. Don't you feel positively creepy?»

MISS H.—«I should say I did! Little cold chills are running all over me.» (slowly) «But—I—I said mine in fun because I thought you would say the same.»

MR. S.—«Why, I never heard anything so strange. How nice it is that we can think and feel together in this way!»

He felt himself blushing, as he wondered if that persistent and dominant thought about her, which had been so often in his mind of late, could have been perceived by this wonderful young woman.

MISS H.—(not heeding) «Is not the scenery beautiful, Mr. Sampson?»

MR. S.—(slightly embarrassed) «I can read minds sometimes, with people who are very sympathetic to me. I imagine it would be rather dangerous for you to do any very private

thinking in my presence. I fancy I have read some of your thoughts lately, without your suspecting it.»

Miss H.—«Really? This frightens me. You are not serious?»

Mr. S.—(seriously) «I was joking, of course. But, Miss Husen, there is something about you that I can read.»

Miss H.—«That I am a silly girl?»

Mr. S.—«No—no—Guess again.»

Miss H.—«I can't guess secrets. Won't you tell me?»

Mr. S.—«Yes; there is nobody else like you!»

Miss H.—«Ah! How unkind! Am I a monster?»

Mr. S.—(calmly) «You are an angel.»

Miss H.—(shrugging her shoulders and showing a faint tinge of pink in her ears) «I would much rather be a woman, for the present. But I see your meaning; it is a polite way of saying that I am of no particular use in this world.»

Mr. S.—(promptly) «It's nothing of the sort. You do a great work in making people happy, why what would we men do without you? You see, my dear Miss Husen, you in particular ought to marry; but—you ought to marry only one man.»

Miss H.—«Oh, Mr. Sampson, believe that I have no notion of marrying more than one.»

Mr. S.—Great heavens! no! What I mean is that you in particular ought to marry one man in particular.»

Miss H.—(joyously) «Oh, that's what I've been thinking; but I thought maybe you would not approve of——»

Mr. S.—(interupting eagerly) «Not approve? Well, I guess so—if only we are thinking of the same man!»

Miss H.—(soliloquizing) «How easily I could help him out, but he would never forgive me—never!»

Mr. S.—«Eh? Miss Husen.»

Miss H.—«That depends. You found me this afternoon, talking to Mr. Watson——»

Mr. S.—(furiously) "That pig-headed man! I have always had a particular grudge against him.»

Miss H.—(sweetly) «So have I.»

Mr. S.—«I knew you didn't like him, I read that in your face long ago. I fancied that it was possible that you might—care a little for me, eh?» (and he let his hand touch her shoulder ever so lightly.)

Miss H.—«Oh, Mr. Sampson!»

Mr. S.—«Yes—Miss Husen—Ruth, I have loved you for a long time. Answer me, sweet.»

Miss H.—«Really, I don't know what to say.»

Mr. S.—«Say yes.»

Miss H.—«But I can't say «yes» without considering the matter.»

Mr. S.—«You can.»

Miss H.—«Well, I won't say «no».»

Mr. S.—«Tell me, dearest, at once.»

Miss H.—«Don't be unreasonable.»

Mr. S.—«Well, do you hate me?»

Miss. H—«No, I don't hate you.»

Mr. S.—(joyfully)—«Then you like me?»

Miss H.—«Perhaps I do like you.»

Mr. S.—«Very much?» No answer.

Mr. S.—«Be brave dearest, and tell me.»

Miss H.—«Bend down your head to me—I—I will whisper it in your ear.»

Mr. Sampson inclined his ear readily, and she whispered something into it. There was a flush on his cheeks and a light in her eyes. She was happy, for she loved him. Yet she was vaguely conscious that something was lacking. Before she could decide what might be wanting to make her engagement complete, bang—crash! They were deposited unceremoniously by the roadside.

He caught her up in his arms and kissed her soundly. «I am glad you are not hurt,» he remarked as he let her go, not now afraid to look into her eyes.

«Oh, George,» she exclaimed, but she was no longer conscious of any lacking element in the engagement.

Two From Puck.

THE WEAKER VESSEL.

BY TOM P. MORGAN.

"I'm feelin' pretty bad over an affair that happened out at my place yesterday," said Farmer Honk, dropping into the office of the Ruralville Bazoo.

"Nothing serious, we hope, Mr. Honk?" returned the editor, genially. "Take a chair!"

"Pretty blamed serious, thank ye!" replied the honest agriculturalist, wagging his head and accepting the proffered chair; "I guess you remember hearin' about that old bull of mine?"

"The one that broke up the Sabbath School picnic last summer and tossed Miss Oldgal, one of the teachers, up in a tree?"

"Same old rascal! Pretty smart bull, too, even if he was so mean. While the lady you speak of might not have been quite as young as she had once been, she was fully as modest. The bull done the job with the deftness of long practice, as they say in stories, an' hung her in an unpicturesque attitude on a limb quite a good ways up in the air, an' there she hung, swingin' an' swayin' in the balmy breeze, as it were, an' hollerin' like forty for assistance. An' yet she wouldn't let any of us men folks come within gun shot of her to help her down, but jest hung there screechin' till we went an' hired poor Amos

Pettingill, who is stone blind, to go an' feel his way along to her rescue with a ladder, while the rest of us stood off almost out of shoutin' distance an' directed him to the tree by hollerin' 'Right!' or 'Left!' accordin' to whether he was goin' wrong or not—suthin' like the merry game of 'Hot-an'-cold' that you've seen the children play. Eh-vah! Kinder funny about womenfolks, ain't it?"

"So it would seem," agreed the editor.

"Uh-huh! But that wasn't what I started to tell you. Along about the middle of the afternoon, yesterday, a young lady, rigged up in a pair of bloomers so red-checkered that you could mighty near hear 'em comin' before she hove in sight, whirled up on her bicycle to the pasture gate, near which I happened to be putterin' around at work, an' asked if she couldn't take a short cut through the field, for some reason or other, I forget what; or mebby for no reason at all—women are as often that way as any other, you know."

"We have noticed that fact," answered the scribe; "we have been married twice, ourself."

"Yew! Wal, whatever the young lady's reason was for wantin' to go through the pasture, she wanted to go mighty bad. I told her that she was welcome, an' all that, but it wasn't safe, for them red—er-er—garments of her'n would set the old bull—I called him 'the gentleman cow,' from motives of delicacy—wild, as sure as fate. But she persisted, an' looked like she was goin' to cry; an' so,' as I'd rather risk the bull's action than face her tears, I gave in an' opened the gate, tellin' her to pump the machine across the pasture like all gee whiz was after her. Wal, it wasn't long till the bull caught sight of her, jest as I know he would, an'—"

"Great Scott! And he attacked her?"

"Naw! He uttered a beller of horror, whirled an' tore in the opposite direction like a tornado, busted through the fence that runs along the top of the ledge, plunged headlong over an' broke every bone in his body on the rocks below. He was a brave bull, an' all that, but there was a limit to his nerve. Nice day, ain't it?"

IN AFTER YEARS.

BY ROY L. MCCARDELL.

The Bright Days of boyhood over, Sanford and Merton took up the cares and responsibilities of manhood. Mr. Barlow, their tutor, had often remarked the dissimilarity of temperament in them as lads. The boy is father to the man; and, as they older grew, these traits deepened with the stability of purpose that came with added years.

Sanford was an optimist. For him the world was bright with promise and big with opportunities. He saw mankind actuated with good motives in every instance. "Art and science stimulate tolerance and progress," he often said; the world grows better as it grows older."

Not so with Merton; he was a pessimist of the deepest dye, and his first action upon reaching manhood was to become allied with a Reform club. He never voted a straight ticket under any circumstances.

"It is easier to tear down than to build up." he said. "The world grows worse and wickeder; we are a race of degenerates."

And with totally different views as to life, these young men went several ways in the world. But years afterward they met.

Sanford was still the same. Disappointments had not discouraged him, life had not been all he had hoped for; but he did not repine and was as hopeful as in the days of his young manhood. Merton, too, was unchanged. He had looked for evil purpose in the motives of men and had generally found it.

They exchanged confidences.

"I have been very lucky," said Sanford; "on every side of me, during the late hard times, I saw business firms of long standing fail and go under. But I breasted it out. Given a year or two of good times and I shall be out of debt. And it look like good times!" Merton frowned. "The prospect is gloomy," he said; "the country is going to the dogs. I am only worth a pitiful ten millions to-day. But had I any sort of luck I would be as rich as the richest."

"I had a good idea," said Sanford. "I took the bicycle craze at its height; I saw that the wheel was designed to become popular but that the price stood in the way of persons of moderate means. So I resolved to place them within the reach of all. And I began in business, listing my wheels, of course at a hundred dollars, but selling them, according to the means of the purchaser, at from twenty-five to fifty dollars. Everywhere I was hailed as a benefactor, and had prices not taken the late tumble in high grade wheels I should have come out 'way ahead. As it is, I have the satisfaction of knowing that I helped to bring the price of all makes within the reach of all. But for three years, I was the only manufacturer of cheap wheels in this country. But, tell me," here he returned to Merton, "in what line of trade did you amass your enormous wealth?"

Merton puffed gloomily upon his cigar. "In the bicycle business," he answered shortly.

"Indeed!" said Sanford, eagerly. "What wheel did you make?"

Merton flicked the ash from the end of his cigar. "None," he said sullenly; "I opened a repair shop while your wheels had the run of the market."

Then they adjoined for a high ball, and Sanford took his with sugar in it.

Brakes---Their Use And Non-Use.

CYCLING says the importance of this subject is demonstrated by the number of serious and fatal accidents which have occured during the present season, and while it is not our intention or desire to lay down any law upon the subject, a few words from both points of view may be helpful to those who are halting between two opinions. Some people—they may be cyclists, but probably they are not—contend that it is a matter for legislation, but this is not our opinion. A cyclist should be as free to choose a brakeless cycle as an equestrian is to choose a spirited horse. There are many people who may safely do either; but whoever makes such a choice should remember that he is responsible, not only for his own safety alone, but in a measure for the safety of all whom he may meet in his travels. A man may take his life in his own hands, but he has no right to do the same with other people's lives. There is much to be said for the use of a brake, but, at the same time, the arguments against its non-use are not so sound as they may at first sight appear to be. The primary use of a brake is to increase the rider's safety, it will never insure it. Only a few weeks ago a cyclist was descending a steep gradient leading to the center of the town when his brake, which he was in the habit of using, failed him, and a serious fall resulted, disabling him for some weeks. Those who put their trust in brakes should see that they are sufficiently strong to stand any gradient upon which it may be intended to use them, that all adjustments and fittings are securely fixed, and, for the sake of the tire, if a band or a rim brake is not used, that no dried mud or stones are allowed to collect upon the plunger. Speaking generally, there are no parts of the machine which receive less attention than the brake fittings, and yet, when one is used, there is no part deserving more care. If this care is bestowed, a brake will be useful in helping the rider out of many a tight place, both in hill and traffic riding, but it should only be used as an aid to, never as a substitute for, back-pedalling. Many people, however, prefer to ride with no brake at all, and when the unreliability of many brakes upon steep hills is considered, the practice is not so foolish as it would at first seem. Only an adept to back-pedalling, however, should adopt the course. Many riders of brakeless machines say that they would not care to ride any hill with a brake upon which they could not control their machine by back-pedalling and there is much to be said for the argument. The hill mentioned above is one well-known to the writer and often ridden by him without a brake in safety; and yet another person, trusting to a brake, came to grief upon the same hill. Upon the other hand, a very welcome rest may often be gained upon a long descent by using the brake to assist in controlling the machine. Again, riders without a brake need not be so helpless as many people seem to think. It is some years since the trick of braking the front wheel with the foot, either behind the front forks, or, if a mudguard is used, in front of the forks, was described in these papers, and, at the end of last year, a hint was given how to increase one's back-pedalling power by steering with one hand, and pulling upwards from the back of the saddle with the other, both most useful and easily accomplished feats. The former served the writer in good stead one day soon after he learnt the dodge, when, in descending a long and rather steep hill, which he could see from the top was quite clear, he had allowed his machine to get beyond back-pedalling control, just as a number of cows suddenly emerged from a farmyard, and quickly covered the road, monopolising as only cows (and sheep) can. Leaving the right pedal as the left was coming up from the bottom centre, he quickly plugged the front fork with his right toe, and brought the machine sufficiently under control to steer between the cows, bringing away as evidence of the squeeze a tuft of hair on each knuckle. More could not have been done with a brake. To sum up, the brake should be discarded only by those who are accomplished back-pedallers and able to supplement their powers in this direction by the dodges above-mentioned. One other rule should be remembered, viz., ride over the tops of unknown and long and steep hills slowly. The machine by this means will be more easily controlled.

A rider of strong nerve, combining experience, care and skill, is as safe without as with a brake. Reckless speed is the cause of more accidents than the absence of a brake, and in many of these cases, the position of a brake would not have prevented the accident. To those, however, who are not gifted with and prepared to use, the above-mentioned qualities, a brake is indispensable.

A Sure Cure.

This world is full of trouble, dear,
And I can guess what's yours;
You've struck a tack—
Your tire is slack,
Now wind's the thing that cures.

The Fate Wheel.

It was certainly an unfortunate moment for John Castle to choose to put his fate to the touch, for Kate Manners was in the mood to turn on her dearest friend, and the sight of John Castle of all persons was calculated to loosen her tongue considerably.

Leila Castle and Kate Manners were students at the Datchley Art school, Leila living at home with her family in Kelton road, while Kate lived in rooms alone. It had been pleasant for Kate as she grew to know Leila better to enliven her days by accepting the hospitality which the Castle family offered. They were kind to the lonely little student, and she was grateful.

But latterly Kate had noticed a withdrawal of the hospitality. Mr. and Mrs. Castle bowed chillily when they met her, Leila became too busy to talk, and John, Leila's brother, seemed the only one who remained cordial. His cordiality, indeed, Kate was forced to admit, had decidedly increased, and she found it by no means unpleasant, though she fretted and wondered over the others.

Then came the afternoon when Leila dropped in to tea, and while pretending to wax confidential, had lashed Kate's pride and temper.

The subject of Leila's confidence had been John's matrimonial hopes and plans, or rather the hopes and plans of the Castle family with regard to John.

From hopes and plans Leila had then drifted on to a description, more realistic than polite, of the style of girl who often sought to marry John, but who would never be welcomed, nor indeed tolerated by her parents or herself, from which point she slipped on to hints of the actual girl they all hoped and felt sure John would soon present to them as his future wife. Then she took her departure.

Kate clinched her hands as she sat thinking over the ugly word picture that Leila had drawn of herself as the artful wordly entangler of John's affections. She could be scornful as well as they. She—but a knock at the door interrupted her angry musings.

"Dr. Castle to see you, miss," said the maid, and there stood John himself.

He did not beat about the bush. He had come to ask Kate to be his wife, and he went straight to the point. He took the chair nearest to her, and he leaned forward and told his tale with his love shining in his eye. But he was not prepared for the wrath and misery in the face which she turned on him when he paused.

"Do you think I would marry a man whose people would not tolerate me?" she asked in passionate scorn.

John started in amazement. Then the recollection of some home speeches to which he had listened lately sent the blood to his face.

"Don't talk in that way, Kate, my darling," he pleaded. "Nothing matters if you love me."

"Love you!" she cried. "I think I hate everybody in the world—you and them and myself."

"What do you mean?" he burst out. "What have they—what have I done?"

"Tell me!" she turned on him furiously. "Would your father and mother and sister welcome me as your wife?"

John hesitated. He was naturally truthful.

"You know they would not," she continued. "You know would detest me and do all in their power to prevent such a marriage, and do you think I would fling myself at them as you ask?"

"But Kate, dear Kate, it is madness"—

"Go away," she commanded. "I will not have your hand. I am going to cry, but I am not going to yield, and I tell you to go."

John had not been in the room half an hour, and he wanted to stay longer, but having issued her commands, Kate gave him no option. She went quickly into the inner room and locked the door.

So John was forced to go, but the love and rage in his heart were fierce.

How Kate spent the hours which followed most women know without being told; how John spent them most men can guess, but in the morning one idea, at any rate, inspired them both, though their motives appear to have been wide apart for they both wheeled out their bicycles and mounted them.

Then the divergence of their motives was apparent. Kate, starting off impulsively down the stretch of the road in which she lodged, longing only to get away from everybody, realized suddenly that the figure in the distance which had just turned the corner was the figure of John Castle and without hesitation she wheeled about and sped the other way.

That John was coming to see her she felt sure, but she devoutly hoped that he had not caught sight of her.

The roads were slushy, but the air was still, and the wild strength she brought to bear upon her pedals sent her flying over the ground. She realized, however, that the roads were no worse and the air was equally favorable to John if he chose to follow and her anxiety became intense.

As she turned into the busier roads she was forced to slacken pace, and the hindrance set her fuming. She saw bicycles coming toward her and through the clatter of carts and feet, she seemed to hear the "swish" of others following her, but she dared not turn her head to see if the one she dreaded was among them.

After a while, however, she felt the clatter of traffic behind her, and the relief of the quiet was very great. In time, though, she grew accustomed to it, and as she sped on her ears or her imagination became conscious of the "swish" of a bicycle still following.

The pace at which she was going began to distress her. Her muscles seemed to be contracting, her breath came painfully. She remembered that after the level stretch came a sharp downward slope, and after that a hill, up which it would be impossible for her to ride. She was growing desperate. She dared not face John, for she could not rely upon her strength. She was angry, mortified, resentful, but she loved John Castle, and therein lay her vulnerability.

The "swish" behind her sounded nearer. She could not stop. In the hurry of her thoughts she determined to keep up the race to the last possible moment. There was little hope now of escape, but it was the only course—and anything might happen.

Then the slope began. It was steep and rugged. The road, too, narrowed gradually, and the slush was deeper. Kate seemed literally to fly over the ground, for she gave no thought to her brake. The cyclist behind seemed to be using the same method. He was close upon her now, coming swiftly as an eagle.

As they neared the bottom Kate became aware that a big black object was looming down the opposite hill, but she did not heed it. "Anything may happen," was the only thought she was conscious of as she swerved close to the hedge to allow the big thing to pass. Next moment there was a slip, a crash behind her, a shout and a groan. She lost her nerve and swerved over into the hedge—and the race was over!

The shock half stunned her for some seconds. Then she scrambled up and looked back. A wagoner was kneeling beside a man, who was lying very still—the man was John Castle.

John Castle lay motionless at the bottom of the wagon on that slow journey back, and Kate held his hand in an agony of love and fear and remorse, not daring to cry out, yet finding it almost unbearable to keep silence.

Her heart was soft and humble enough when she reached the home and saw the mother's misery, and she told her tale as gently as she could. Only when she turned to Leila did her bitterness rise again.

"Last night your brother asked me to be his wife," she said. "That," pointing to his still body, "is the result of my refusal. If you wish to learn the result of my acceptance, you must come and ask me for it."

And Leila did.

Acceptances of love are not in the recognized list of cures and antidotes, but one acted most successfully in the case of John Castle—so successfully, indeed, that once or twice Kate was tempted to think his concussion a fraud. However, if it were so, the end seemed now to justify the means.—Lloyd's Magazine.

The Best and Cheapest Method to Improve Country Roads.

BY STANLEY D. TALLMANN.

Prior to the eighteenth century, the only methods of travel were by the roads (overland) and by water. One will notice in ancient and medieval times that all the important cities of the world were situated on the sea-coast, consequently placed there by their accessibility for commercial intercourse. Soon afterwards, when nations became quarrelsome and had conflicts with one another, they took the shortest and safest ways to transport their troops, and oftentimes it was most convenient to go overland. Then came the period of military road building. Caesar often speaks, in his Commentaries on the Gallic War, of the conditions of the military roads. In modern times the commercial centers began to be connected with railroads. The same principal of road building is employed in railroad building as in country road building.

Mud is the greatest national enemy this country has to contend with. The alleged wrongs inflicted upon the Cubans by the Spaniards are nothing to the wants and distress occasioned by mud. Mud can imprison and enslave thousands of people. I know certain seasons of the year where families have been bound and shackled by the mud, been prevented from the enjoyments and privileges of free transit, and utterly isolated from their neighbors. When we see what a great enemy mud is, the first thing to take into consideration in road building is some plan to avoid mud and build roads that will be free from mud.

In road building the chief effort should be toward securing the best of drainage, as water and dirt are bound to make mud. A dry road is usually a good road, or will become a good road in time by constant usage. The exception which proves the rule is the sandy road. A sandy road is a dry road but not often a good road. A sandy road can be made a good road by putting down large flat pieces of limestone, say about four inches in thickness, and whatever size they can be obtained, and proceeding as I will hereafter mention in other road building. In order to secure good drainage, the road should be rounded up or "crowned" as we call it. This strains the

water to the side gutters. In speaking of the gutters I will shortly speak of how much importance it is to have the gutters empty themselves into culverts and from one place into another.

We often notice our road commissioners as they attempt to improve a muddy and poorly drained road, put a few loads of gravel in the travel track or crown. This, after a few heavy loads have passed over it, has two deep ruts, which hold the water and prevent it from running into the gutters. As teams pass over the gravel with muddy wheels, the gravel sticks to the mud on the wheels, and is carried off and deposited along the road. These two deep ruts hold the water until it percolates down into the soil foundation, softening the clay or dirt and mixing with it, until before very long the road is as bad as before.

I believe, to assist the drainage, the road should be first crowned and then about four to six inches of crushed stone, depending upon the amount of travel, put on, gradually decreasing a little in thickness as it approaches the gutters, then a heavy steam-roller passed over it two or three times to set it, upon this about three or four inches of finer crushed stone should be placed and a steam-roller passed over it again. A great deal of care should be taken not to have the road flat on top. This hard stone dressing forms almost a water-proof covering that will last for years if properly taken care of each spring by putting on some fine crushed stone.

The great lack in the present system of road building is the caring for them after completed. Repairs should be made as soon as the slightest signs of wear appears, otherwise the defect grows with increasing rapidity and what at first could have been entirely removed in a few minutes' work results in expensive and permanent damage. This covering will let the water drain freely to the gutters and leave a comparatively dry road in a few minutes after a heavy rain. This is very important in another way, as it keeps the ground underneath the road free from saturation, and thereby makes a strong foundation. It is the natural earth underneath the covering that must bear the weight of the road. It really sustains in addition the weight of stone, etc., as well.

If this natural soil, or foundation of the road, is permitted to become saturated with water, either by water percolating down into it from the surface, or from water rising into it from below, it has no strength to resist the wheels which at once sink into it and ruts are formed. But if this soil foundation is kept dry, or nearly so, it is strong and will support any load likely to pass over it. If the water is shed from the road to the gutters and there remains, the water works its way into the earth at the foundation of the road and causes the injury above spoken of.

Speaking of the great importance of keeping a road in repair, let a wagon track scarcely perceptible at first, after a shower stand full of water and soften the road at that spot, another wagon passing along later, sinks further into the softened track, here is a deeper hole to hold water, soon it becomes a rut, then the rut develops into a pitch hole. The soil underneath is brought up and mixed with surface covering, the surface covering is broken down and forced into the soil.

Here, then, is a bad road and apermanent weakness, the result of a neglect to repair the road at the proper time, and a neglect to keep the drainage of the road in perfect condition at all times.

Building Macadam Roads.

BY OTTO DORNER.

THE ever increasing demand for better highways has led to numerous attempts, which are being made all over the country, to build what are supposed to be "macadam roads." They are mentioned in the country budgets as well as in resolutions for the improvement of city streets, and the indulgent taxpayer, when his eye falls on the high-sounding name, takes satisfaction in the idea that he is now to have highways of the most modern type. But, alas, the attempts to build stone roads are rarely successful, for, while much excellent material is often employed, the methods adopted are generally deplorable. In too many cases the men having the work in charge are content to simply deposit the stone upon the highway, frequently throwing it right into a muddy spot, and doing nothing further after the material has been put in place and spread. In many of the towns and cities where a road roller can be afforded, the officials undertake to finish their work by placing a layer of dirt or gravel on top of the stone, and then running the roller back and forth over the surface until it seems to be hardened.

All these attempts at building macadam roads are failures, when regarded from the standpoint of intelligent and scientific road construction. To build a macadam road, the material should be

put down in layers, and each layer separately rolled and compacted. To begin with, the subsoil, which is to serve as a foundation for the stone, must be properly crowned, sloping down from the middle to each side of the road, and then it must be rolled until it is absolutely hard. A soft earth bottom cannot support a stone roadway intended for ordinary heavy travel. Where a road is built upon low ground, it should be drained. Water finding its way beneath a macadam road, unless quickly removed by drainage, will soon ruin it. The stones used in each layer should be of uniform size, as nearly as practicable. Unless the stone to be used has been properly broken, the road can hardly be a success. No



Stone on a macadam road as it appears when spread ready for rolling.

stone larger than 2½ inches should be used. If the bed of stone, when compacted, is to be more than 4 inches thick, it should be put down in two layers, the material for the upper layer to be smaller than that used below, say not larger than 1½ inches. Broken stone may readily be assorted by a rotary screen furnished with the stone crusher.

A common mistake is to spread gravel or dirt over a layer of stone before it is rolled, in the belief that it will help to compact it. The stone alone should be rolled. Under the pressure of a suitable roller, of sufficient weight, the angular pieces of stone will readily shift about until they are firmly wedged in place, while the round par-



Stone on a macadam road when partially rolled, showing how the roller packs it.

ticles of gravel, or the smaller pieces, loose, soft dirt or sand, when mixed with these angular pieces, will prevent their being thus crowded together and compacted. A layer of very small stone, or screening, or fine gravel, may be used in a separate layer on the surface after the rolling of the layers beneath is entirely completed. This will also fill a few remaining crevices at the top. The surface of the finished road should then again be rolled to make it thoroughly hard and smooth, so that the rain and surface water will readily run off to the sides. If this water should penetrate into the road, it is liable to soften the foundations. Water is the greatest enemy of good roads.



Stone on a macadam road, firmly wedged and packed together. Small stones, gravel, dirt or sand if mixed with the stone or spread on the surface before rolling, prevents its being thoroughly wedged and packed.

The above explanations are the result of a careful study of the instructions issued by the state highway commissions of Massachusetts, California, New Jersey and Connecticut, and indicate the principles followed in those states in the construction of roads by state aid. The same principles are set forth in treatises upon macadam roads as built in Pennsylvania, Alabama, New York, North Carolina and Ontario, and they constitute the fundamental rules laid



A good foundation is necessary for a good macadam road. Both the foundation and the finished macadam roadway be "crowned," or made higher in the middle than at the sides.

down by experienced road engineers all over the world.

A macadam road, when once it is properly constructed, needs but little repairing, and lasts for generations, as has been indisputably and repeatedly proven in England and on the European continent. A stone road, poorly built for want of successful rolling, even with excellent material, can be but a poor highway at best. Many so-called macadam roads, recently built by inex-



The mistake is often made of depositing macadam stone on an old road, without first preparing a suitable foundation. This picture shows how the dirt or mud prevents the stone from becoming properly packed. The almost certain result is that the stone will continue to sink as the result of travel, while the mud oozes out at the top, leaving the road nearly as bad as before.

perienced men, or without the proper use of road rollers, are continually going to pieces by the wearing of ruts and the subsequent combined action of water and travel. A heavily loaded wagon, with its entire weight resting upon four narrow tired wheels, exerts a tremendous pressure upon a small space, far greater than that exerted by the broad surface of the road roller. Every wagon wheel has a great tendency to displace the particles of road material, by crowd-

ing them both downward and sideward. Hence the necessity of exercising the greatest pains and the utmost care in thoroughly packing, rolling and hardening any macadam road.

The building of macadam roads offers opportunities for manifold mistakes and for an enormous waste of public funds. If ever it be true that what is worth doing is worth doing well, it is emphatically true in the building of stone roads. If a macadam road cannot be built right from the start, it had better not be built at all, to prevent a needless waste of money. Every good macadam road testifies to the value of durable highways, while every stone road improperly built throws a shadow of doubt upon the movement for better roads.

Cycling Dress For 1899.

SPRING has arrived at just that stage where the bicycle rider makes his appearance. The macadamized boulevards have not been put in their summer condition and the venturesome mortals who are brave enough to get out their wheels and ride down to business are easily detected by the little sprays of mud which run up their backs, for all the world like little squirrel tails. The wheels themselves are minus that shiny, new look which denotes the well-groomed bicycle in the summer time and the entire cycling world has that torn-up appearance which is commonly supposed to go with the spring house-cleaning.

Your local wheelman does not pay much attention to his dress or his wheel at this time of the year, for he knows that it would be useless, but just the same he is using his eyes to their best advantage and the various haberdashers' shops are thronged with riders who are looking for the latest in cycling attire.

They are not the only ones out on the streets however, for the golfer is there also. There seems to be a sort of affinity between the two sports and the clothes which interest one are carefully studied by the other. For several years the two costumes have been almost identical, but this year the two sports seem to have come to a fork in the road where their paths diverge and henceforth each class will have a distinctive style.

It will not be the wheelman to change, for he is very well satisfied with his garb, but the man who gets his fun out of pounding a little gutta-percha ball with long sticks with odd-sounding names, has made up his mind to switch styles and the result will be almost a new dress for the golf enthusiast.

The bicycle rider will stick to his swell-cut knickerbockers, the only change being that they will be cut a trifle different. Instead of wide, baggy trousers, ending up with golf bands at the knees, the swell tailor will make them on a sort of taper, like riding breeches, and instead of the golf bands will substitute the old-fashioned buckle. This has been found to give better satisfaction than the other style, for with the buckle there is no binding at the knee and the tailor can turn out a better looking garment.

But the golf band will not be discarded entirely, for there are those who will stick to this style. There will be modifications of the old style, however, and in place of a band some six inches in length and made of stiff cloth, there will be small bands just long enough for two buttons. Then there will be bands made of the same cloth as the rest of the trousers, being simply a continuation of the leg, with buttons to fasten with.

Checks will continue to be popular for the nether garment, although some of the ultra-swell will stick out for trousers of the same material and color as the coat. This combination makes a jaunty suit and one that will suit the most quiet taste.

In the matter of caps there will be some change. There have been changes in head gear every spring for the last five or six years and now the haberdasher seems to have struck the right thing at last. Formerly it was the proper caper to wear a small cap, just large enough to stick on two or three hairs on the crown of the head. Then the Stanley cap had a run and now the cap fashioned after the golfing style finds favor in the eyes of the wheelmen. Not the huge headgear flopping down over the ears, but a neat-appearing cap, with a reasonable sized peak and generally made of the same material as the trousers. One of the latest conceits in this line has been adopted from the golfing world and is a silk cap made of fancy colored Scotch plaid and so light and airy that one has to feel twice before he is sure that he has any cap on at all. Of course, a new thing costs money and as much as $2 can be invested in such a cap.

Negligee shirts will be far more popular than the sweater. This latter garment will be used more for long country runs and in cold weather than for boulevard riding. For early spring wear the plaited front shirt will have the call, the bosom being stiff enough to keep out the chilly spring breezes. As warm weather approaches these plaited fronts will be discarded and in their places will come the regular negligee. With these shirts will go collars and cuffs of

the same color as the body of the shirt. There is something new in the way of collars, a neat turn-down with rounded edges. These collars will be most comfortable as well as adding to one's appearance. The cuffs will be attached or detached according to the will of the purchaser.

For ties those who desire to cut a swell will use English twilled silk string or washable ties of Madras or Oxford.

There will be a variety of styles in coats, with no marked preference. The box coat will continue in favor and in most cases will be blue to accompany the check trousers. Vests will not be worn except for early spring or late fall riding, when the weather is so chilly as to demand the extra garment.

Among the cycling clubs there is not so much talk of club uniforms as in the past and the chances are that this summer there will be few clubs to adopt such a costome, leaving the matter of dress to the discretion of the members. Club uniforms were all right in the early days of the sport, but at the present time the club member does not like to wear such distinctive clothing.

Another reason for the falling off in demand for uniforms is the fact that if a club does have a neat uniform it is not long before every Tom, Dick and Harry in town has one like it, so that the purpose for which it was adopted is lost sight of. In the eastern cities, however, the uniform continues in popularity.

Getting down to the question of proper dress for golfers it will be found that a most radical departure in style has been made this year. Knickerbockers have been given the go-by and discarded by many as not being as suitable for the sport as the new dress adopted. In place of the short trousers there will be long ones, which is said to be most suitable, because the golfer is with the ladies so much and there is no reason why the long trousers should not be worn. With the long trousers to be worn by the gentleman golfer will go a tight-fitting jersey jacket, with silk sleeves, in red, green or a combination of the two colors. The silk sleeves are for the purpose of allowing more freedom to the arms. When a coat is worn it is generally of the same color as the trousers. White flannel will be in demand. With the flannel suit will go the white flannel cap. The new gold golf cap of fancy colored silks will also be worn.

As outlined by a haberdasher the woman who finds so much enjoyment in golf will wear the tight-fitting jersey jacket, with silk sleeves, a white pique skirt and a jaunty little white cap of the same material.

Cupid's Miss.

DAVID MUNROE CORY.

My Lady and Dan Cupid
  Went cycling in the Park.
The wild winds played at hide-and-seek
  Amid her tresses dark;
And kissed the blushing roses
  Upon her soft, warm cheek.
Dan Cupid murmured to himself,
  "No fairer game I seek!"

He raised his bow, the maiden mlessed,
  But punctured deep her tire.
"The cycle maid is arrow proof!"
  He cried, with rising ire.
"I'll seek a maid who's just as fair,
  And one whom Love can find."
And saying this, the fickle boy
  My Lady left behind.

The Hum of the Horseless

French Regulations.

Every type of vehicle employed in France must offer complete conditions of security as to mechanism, steering gear and brakes. The construction of the carriages must be approved by the Service des Mines. This certificate must be obtained for each type of machine. The builder is then at liberty to manufacture an unlimited number of vehicles. Each vehicle must bear the maker's name, the type of machine and the number of vehicle in that type, as well as the name and address of the owner.

No one may drive the automobile who is not the holder of a certificate of capacity, delivered by the prefect of the department in which he resides and granted with the consent of the Service des Mines. The driver of an automobile must always have the regulator of the speed well in hand. In case of narrow or crowded thoroughfares the speed must be reduced to a walking pace, and in no case must it exceed 18½ miles in the open country or 12½ miles an hour upon passing houses. Racing is allowed, provided authorization is obtained from the prefect and the mayors are warned. In racing, a speed of thirty kilometers, or 18½ miles, an hour may be exceeded in the open country, but in passing houses the maximum of twenty kilometers (12½ miles) must not be exceeded. The approach of the automobile must be signaled by means of a trumpet. Each automobile must be provided with two lamps, one white and the other green.

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Electric Cabs in Paris.

Popularity has already been achieved by the electric cabs, which began to ply for hire in Paris at the beginning of last week. The trouble is there are not yet enough to go around. A dozen came out from the Compagnie des Petites Voitures depot on Easter Sunday, and the number has steadily increased every day. The company has a hundred available, which will be on trial for a whole month. They are all moved by electricity. The type at present is the so-called landaulet, carrying four passengers. The fares are very moderate, only a trifle above the regular thirty cents per journey. All this made the cabs instantly popular.



IN THE HORSELESS AGE.

Priscilla Angelina Murphy: I'm goin' tar shake yer right here, Billy Hicks, 'cause yer ain't up-to-date enough fer me Yer Dauntin rad wuz all right, but it ain't in it wid Favre's automobile. Dat is over between us.—LIFE.

The Wheelwoman.

EDITED BY ACORN.

The bright red coats and waist coats of the golfers have caught the eye of the woman cyclist, and this season is to be rampant with gay costumes. The military hat, too, somewhat modified in form, has also been seized upon by her, and nothing will be as popular this year. The opportunity it affords for brilliant color is great. Plaids as bright as the Chinese flag, in every conceivable color and pattern, are wound about the broad brimmed hats, with a feather jauntily stuck on one side. Another taking feature is that these hats shade the face so well.

The aim of the well-dressed cyclist should be to appear as fresh and neat at the close of a long ride as she did when starting out.

It frequently happens that cyclists go out for a day's tour with the intention of taking dinner at a hotel. A difficulty then arises as to how the ladies may provide a suitable change in their costumes, without very much inconvenience.

An English exchange tells of how one thoughtful girl worked wonders in that line and yet seemed to carry nothing extra with her. Her wheeling costume was one of gray cloth rather the color of dust, with a short coat buttoning up to the neck and finished with a white starched collar and tie.

Before appearing for lunch she removed the latter, and by turning the coat fronts well back, revealed a soft, folded front of pretty silk tucked into a silver belt, and finished at the throat by a bit of dainty old lace. Her friends were delighted with the charming effect produced by this simple change.

The other day I saw a pretty new cycling costume of indigo blue cloth. The elegant spencer was finished in front with a second edge of blue and white spotted silk, of which the revers were also made, as well as the collar and pockets. The chemisette was made of white pleated batiste, with a cravat of red satin. The half length skirt was divided at the back and the edges were machine-sewed. With this suit was worn a sailor hat with folds of the spotted silk wound about the crown and white dog-skin gloves.

Do not ride without having loops of elastic attached to the skirt to slip around your ankles. Even if it is not windy when you start out, it may be blowing a gale when you return, so changeable is the weather here.

Have you ever used oil-cloth for facing the buttons of your cycling skirt? I have, and found it very satisfactory. It does not stretch out of shape, stands out well, and prevents the skirt from creeping upward when riding. I took strips about seven inches wide, shaped them like the skirt and used them as an interlining between the dress goods and the lining. The bottom of the skirt was then finished with rows of stitching about an inch apart and going up as high as the oil-cloth.

Cyclists must not make the mistake of discarding their woolen underclothing even during the hottest weather, for they will not take cold nearly so easily with woolen material next to the skin as they would with cotton or linen. And besides, one can get a light weight woolen garment which will not be much warmer, apparently, than a cotton one. Stockings should invariably be made of wool, or else sore feet will certainly result.

When wheeling, the feet are so much in evidence that the ladies show a marked inclination to sacrifice comfort to appearance by wearing shoes that are obviously too dressy for the purpose. Wheeling shoes ought to have low heels, broad tips, rather heavy soles, and the upper parts should be cut as low as possible in order to allow full freedom for the ankle action.

No matter how warm and thirsty a cyclist may be after a ride, she ought to refrain from drinking ice-cold liquids until she has allowed herself to cool off gradually in a draughtless room. A cup of hot tea or coffee is much better than lemonade or aerated drinks. If she values her complexion (and what woman does not!) she should also avoid sudden changes of temperature, particularly from heat to cold, since the pores, opened by the heat, are suddenly contracted, and the circulation receives a shock which invariably proves injurious to the complexion.

Recently, a cyclist had a very unhappy experience, in the neighborhood of Newark. While riding down a steep hill she lost her pedals, and was whirled with tremendous speed towards a small cottage which stood at the foot of the hill, facing the road. The occupants of the cottage, an old woman and her daughter, having seen the lady from their window, hastily opened the door to obtain a better view, when in dashed the cyclist. In doing so, she unceremoniously knocked down both women, and after overturning and smashing numerous articles of furniture and crockery, the hapless rider and her unruly steed collapsed amid the ruin they had wrought.

After returning from a hot, dusty ride take a quick sponge bath with water in which a handful of salt has been dissolved and this with a good rub down with the bath towel will do one an immense amount of good. This treatment is to be followed by a complete change of underwear, when you will feel equal to going for another jaunt on your wheel.

(Continued on Page 149.)

The Gospel of Good Roads

Col. J. B. Killebrew, of Tennessee, figures out that if the general government would appropriate every year an amount equal to that now expended for pensions, say $150,000,000, for the building and improvement of the roads of the country it would give, in round numbers, $2 per capita for the entire population of the U. S. A county covering, say, 500 square miles, with a population of 25,000 would receive annually for the building of roads, $50,000. This continued for ten years would grade, macadamize and gravel every road in an average county of this area.

If the plan to put convicts at improving the highway is feasible it should be carried out. It will not in any way interfere with the laboring man who so often protests against the employment of felons at work which deprives him of an opportunity to make a living. The open air, outdoor life and wholesome labor would result in making better men of criminals while the prison walls affect the average nature in the opposite way. It will improve morals and roads at the same time, thus coming nearer to the idea of a civilized nation.

The movement for good roads is, like many other things in this world, obstinately opposed by the very ones to whom its accomplishment as a fact would do the most good, says the Baltimore American. In a genuine reform, such as this, the crusade is long and arduous and disheartening to any but the most determined advocates. The wheelmen have done good missionary work, but apparently they have not convinced the rural mind that the advantages they are contending for would be general and far reaching.

The following poem is all the more significant because it was clipped from The Farm Journal, an agricultural paper read by upwards of 880,000 farmers every month:

"You need a short vacation," said the doctor,
"And a rest,
With not a bit of toil in any mode."
Said the farmer with a wink,
"Then I'd better go, I think,
And be working out my taxes on the road."

The fact that bad roads cost this country $800,000,000 annually has caused the Atlanta Journal to remark: "The gospel of good roads should be preached by every newspaper in the state. Georgia cannot afford to lag in this movement. Other southern states are going forward, and their progress toward good roads is bringing them into public notice among those in other sections who contemplate moving to the south."

The funny man on the staff of the Chicago Tribune asked Uncle Hiram how deep he expected the mud to be on the roads around the farm.

"You've heard that the ground's froze about four feet deep, ain't you?" asked Uncle Hiram.

"Yes," answered the funny man.

"Well," said Uncle, "that's how deep the mud's goin' to be this time."

Mark Twain tells a story of a minister who once drove over a road that was so bad that he (the minister) remarked that if he ever went to the bottomless pit (he did not use these words but a shorter one) he hoped he would not go over that road, because he would be downright glad to get into the bottomless pit to escape the torture of the road.

A gravel mixture containing ten parts of pebbles ranging from an eighth of an inch to an inch in diameter, six parts of sand and four parts of clay is said to be an excellent material for surfacing roads. Experiments have shown that this combination as a whole will neither "run" nor crumble under the wheel of a wagon.

A puncture is a very rare thing in Germany, especially while riding on asphalt pavements. This is due to the fact that the householders have to sweep the pavement to the middle of the street, regularly every morning before 6 o'clock, the litter being taken away by the city teams.

Bicycle paths are to be constructed through the streets of Vienna. Ground has been conceded for the purpose of building a new street on condition that a strip be prepared for the use of bicyclists.

Kansas City is taking good care of its boulevards. Delivery wagons may only enter a boulevard at the street nearest their objective point, and must leave it at the next street.

In Kansas City wagons drawn by one horse are required to be equipped with three inch tires and those drawn by two horses with four inch tires.

Haag and Scheveningen, two cities in Holland, are to be connected by an ideal road which will have a carriage way, a track for cyclists and a footpath.

Strange as it may seem, no two causes are closer allied than those of the farmer and cyclist.

. . . THE . . .

League of American Wheelmen

For Any Information Address ARTHUR BASSETT, Boston, Mass.

Membership June 1st, 1899.

1.	Pennsylvania	14422
2.	New York	13381
3.	Massachusetts	10271
4.	New Jersey	3692
5.	Ohio	3358
6.	Indiana	1864
7.	Illinois	1750
8.	Michigan	1677
9.	Rhode Island	1479
10.	Connecticut	1348
11.	Maryland	1152
12.	Wisconsin	908
13.	New Hampshire	564
14.	Kentucky	624
15.	Missouri	564
16.	District of Columbia	486
17.	Iowa	470
18.	Maine	449
19.	Colorado	334
20.	Southern California	314
21.	Minnesota	287
22.	Delaware	180
23.	Virginia	170
24.	Vermont	127
25.	South Carolina	104
26.	West Virginia	96
27.	Georgia	87
28.	Florida	58
29.	Montana	53
30.	North Carolina	21

Railroad Rates to L. A. W. Meet.

The Transportation Committee of the League of American Wheelmen makes the following announcement:

Railroad rates for the L. A. W. National Meet at Boston, August 14-19, are as follows: One limited fare by route traveled, going and returning the same way from points outside a radius of 200 miles from Boston, short line mileage, tickets limited to continuous passage in both directions, to be sold and good going through New England from August 13-17, inclusive; returning August 14-20, inclusive.

Round trip tickets from points more than 200 miles from Boston may be deposited with Boston city ticket agent of the initial line (first returning coupon) on or before August 19, on payment of a fee of fifty cents, and such tickets will be extended for a continuous return passage, to arrive at destination not later than August 31.

For continuous passage, round trip tickets by variable routes (going by one route and returning by a different route) from points more than 200 miles from Boston, two-thirds of the one-way fare by route traveled in each direction, i. e., one fare and one-third for round trip.

From points 200 miles or less from Boston, convention rates good going August 13-19, inclusive, and good returning August 14-20, inclusive. One wheel to be carried free to Boston at owner's risk on any of the preceding forms of tickets.

This arrangement gives the meet at Boston advantages, so far as transportation is concerned, which have never been granted to the L. A. W. for previous National Meets. The extension of the limit for the return portion of the tickets to August 31 allows not only an opportunity for League members to enjoy the Meet, but also ample time to visit the seashore and mountain resorts of New England after the Meet is closed.

Renewals in L. A. W.

Every membership in the League of American Wheelmen, except the "Old Guard," expires exactly one year from the date the application was received. The veteran memberships expire uniformly on April 1. For the last several years the greatest recruiting in the League has been in the spring and summer, so that now is the time that these memberships expire in large numbers. But each member is allowed sixty days in which to renew his membership, and the past history of the organization shows that from 75 to 90 per cent take advantage of this, but do not renew immediately upon the expiration.

Secretary Bassett drops their names from the rolls, however, and in sending out his weekly reports, announces that so many memberships have expired. When they are renewed he adds them to the totals for the week, and in this way the membership is computed. It is good book-keeping, but some of the enemies of the League would have the public think the organization had lost all the members who did not renew immediately, instead of taking the sixty days.

The League officials do not expect to have the membership rolls to show an increase until the 1st of June at least, on account of these lapses of membership, but from that time on it has been found that the memberships are again taken up in almost as large numbers as when going out. These added to the new applications will make a very satisfactory showing.

The national meets of the L. A. W. have been held since 1880 in the following cities:

1880—New York.	1890—Niagara Falls.
1881—Boston.	1891—Detroit.
1882—Chicago.	1892—Washington.
1883—New York.	1893—Chicago.
1884—Washington.	1894—Denver.
1885—Buffalo.	1895—Asbury Park.
1886—Boston.	1896—Louisville.
1887—St. Louis.	1897—Philadelphia.
1888—Baltimore.	1898—Indianapolis.
1889—Hagerstown, Md.	1899—Boston.

Talks on Touring

BY THE TOURIST.

Any information pertaining to touring, such as distances of trips, condition of roads, etc., will be given in this department on request. Communications should be addressed to "Tourist," The Pneumatic. Readers submitting acceptable descriptions of tours, articles on touring, etc., will receive the Pneumatic free for one year.

Touring Routes For Wheelmen.

The large number of wheelmen now in this country has caused the development of a pastime which is steadily growing with each year, and which would not be possible with any other means of locomotion than by the bicycle, i. e., touring. There are thousands of wheelmen who every year spend a portion of their time, at least, in making tours from one city to another or between different sections of the country. Many of these wheelmen are at a loss to know what routes they should take when on these trips, and heretofore the only means they had of ascertaining was by the consultation of road books, which were not always convenient, or by appealing to the cycling editor of the nearest large paper.

Every newspaper reader knows of the routes which these editors have supplied to wheelmen, for they are published for the benefit of all. But even the cycling editors have only limited means of securing the desired information in reply to requests, and they can give only an incomplete return. The League of American Wheelmen has appreciated the necessity of having a central office for the providing of these routes and to that end has organized its touring bureau, with headquarters in Boston.

It is the intention to have every possible tour systematically arranged and kept on file for the use of members only, and they will be provided promptly upon application, the only charge being a two-cent stamp for the reply. This bureau, under the direction of Paul L. Aldrich, chairman of the Touring Committee, is compiling the routes in New England, New York, Pennsylvania and on the Atlantic seaboard. Others embrace tours between Boston and New York to Chicago and San Francisco. When these are completed the other sections of the country will be taken up in order, and eventually, the entire country will be covered. When this is done it will be possible for a League member to get any route, of whatever length, by return mail.

That the bureau is appreciated is shown by the hundreds of requests for routes which it has received in the last six weeks.

‡

Information for Tourists.

A distinct departure and one which will be appreciated by members of the League of American Wheelmen, in the conduct of its work for wheelmen, is the organization of the recently appointed Touring Committee. The headquarters of the committee are located in the national offices in Boston, with Paul L. Aldrich in charge. The work of this committee will be on a scale that will be of the greatest value to the League and its members. Every possible tour in the country will be systematically arranged and kept on file so that any member desiring to make a tour from any given point to any other will be given complete information regarding the roads to travel, the hotels at which to stop, the addresses of the local consuls on the way, the time of arrival and departure of trains, or boats, if part of the tour includes these means of conveyance, and in fact all information that will be necessary for the trip.

This department of the League will be at the disposal of members of the organization only, but it will be of incalculable value to them and will be one of the strongest inducements the L. A. W. holds out to wheelmen to become members of it. The committee is now energetically at work compiling this information and will have it in such a condition by the opening of the riding season as to be at the disposal of those who desire to use it. This department, in conjunction with the International League of Touring Associations, will give the L. A. W. complete control of all advantages in touring, whether in this country or abroad, and will make an L. A. W. membership ticket very valuable.

‡

Several thousand members of the League of American Wheelmen will probably make the trip to the National Meet, at Boston, in August, on their wheels. Many of these will come from New England and other Eastern States, but quite a number are expected from the far West. The Touring Department of the League is busily engaged in outlining tours to the meet, that members can easily secure them when the proper time comes. The committee for this meet are already at work and a most elaborate programme is being outlined. Among the attractions will be a military carnival, an all night smoker, excursions and tours to the places of historic interest in the vicinity of Boston. The Race Committee is planing one of the strongest cards that has ever been offered at the meet, and some novelties in cycle racing are promised.

‡

Otto C. Mayer, who has been appointed L. A. W. representative at Vienna by President Keenan, writes that wheelmen touring in Europe should make it a point to visit the Austrian capital. "There is no city in Europe," he says, "that is more interesting to wheelmen than Vienna. The whole city is like a garden, and there are miles and miles of the finest roads." Mr. Mayer is preparing for the L. A. W. Touring Bureau all information concerning Austria that may be of interest to L. A. W. tourists. President Keenan expects to have, within a short time, representatives of the League in all the European Capitals, within the territory covered by the international touring agreement.

‡

When the touring department of the L. A. W. compiles all the information regarding tours throughout the country it will have exact information regarding all roads. This will be used by the other departments of the League as a basis for agitation for good roads wherever the information shows they are needed. This will give the League something more definite than it has had in the work for good roads.

Helpful Hints

Any reader sending in an acceptable hint will receive THE PNEUMATIC free for one year.

A wet sponge passed slowly over a punctured tire will usually locate the trouble.

* *

A valve that refuses to come off will be made less determined by heat from a hot iron or alcohol lamp.

* *

If the crank hanger is out of line or the the rear wheel out of true the chain will be prevented from slipping down on the sprocket teeth and will not run smoothly.

* *

When it is desirable to take off a tight crank without the assistance of the repairman, it will be found that a piece of ⅜-inch brass rod with a slight groove in one end and a large-faced hammer are valuable assistants. Place the brass rod on the crank near the crank-shaft and hit it two or three sharp blows. The crank will generally start, and will not be bruised by the brass.

* *

A Bicycle Luncheon.

[Very appetizing after a ten-mile spin.]

Clam broth.
Egg timbales.
Cold roast beef, with jelly.
Minced chicken sandwiches.
Cheese. Cakes. Macaroons. Fruit.

* *

The following recipe is suggested for the preparation of a chain lubricant:

Render out beef tallow enough to make about two-thirds of a pint; while boiling hot add two and a half ounces of dry graphite and stir in well. Clean the chain thoroughly with gasoline and while the mixture is still hot, drop in the chain, let stand a minute, take out and wipe perfectly clean. Use a little dry graphite on the chain and you will find it will run very smoothly.

* *

To repair a burst or cut outer casing open it up on the under side, and if burst or blistered, separate the cloth and rubber around the hole, and place about three thicknesses of rubber tissue between the canvas and rubber; then heat a smooth-faced flat-iron just hot enough for ironing clothes and press it on the canvas for a few seconds until the tissue adheres firmly. Let it set for half an hour. If the casing is simply cut, a good plan is to place a piece of tissue and then some canvas over the cut and press with a hot iron.

The effects produced by the drinking of water vary with the manner in which it is drunk. If, for instance, a pint of cold water be swallowed as a large draught, or if it be taken in two portions with a short interval between, certain definite effects follow—effects which differ from those which would have resulted from the same quantity taken by sipping. Sipping is a powerful stimulant to the circulation—a thing which ordinary drinking is not. During the act of sipping the action of the nerve which slows the beats of the heart is abolished, and as a consequence that organ contracts much more rapidly, the pulse beats more quickly, and the circulation in various parts of the body is increased. In addition to this we also find that the pressure under which the bile is secreted is raised by the sipping of fluid.

* *

Cyclists who are nervous about punctures should not waste their energy dodging every little bed of stones on the road. As a matter of fact, it is much better for the tires to take a moderate patch of stones straight and crash quickly through it, letting the thick tread of the cover take the brunt of the damage than to wriggle about in a belt of flints, dodging from one to another, and bringing the comparatively thin sides of the tire in contact with sharp edges. Of course, it is best to avoid a bed of stones, when it can be done completely, by a circuit; but in crossing a scattered belt, "straight and quick" should be the idea. Actual puncture need not be feared from the stones commonly met with on our roads—it is almost always thorns, pins, nails, fragments of glass, etc., that cause puncture—but stones that undoubtedly chip and wear the tires seriously, are very frequently encountered.

* *

Too much attention cannot be given a chain. In the first place it must neither be too tight nor too loose. A tight chain makes the work of driving very hard. The links of the chain grind upon the cogs of the chain wheel and the dirt adds to the already excessive tightness, and great force will be required, as well as frequent renewals of the rapidly worn-out chain. The chain should not be so tight that there is not a little play in it, and a fairly correct adjustment may be obtained by fixing it so that there is less than an inch to-and-fro movement possible of the pedal. Two causes contribute to the mistake of having a chain to tight. One is a fear that it will rattle against the frame and the cure of it by undue tightening of the chain is a remedy far worse that the disease. A rattling chain is an abomination, but to tighten it by straining it tight is a grievous mistake, punishing yourself by the extra demand on your muscular powers.

Observations.

BY LOUIS NAPOLEON.

A press notice recently said:

"The Michigan Supreme Court, in a decision rendered April 19, held that the state laws do not require townships, cities and villages to keep highways in safe condition for bicycle riding, the duties of the municipality ceasing with maintenance of safe roads for other classes of vehicles."

This is clearly discrimination against the bicycle and calls for special legislation to provide cycle paths. This can be done; but when? The need of a uniform law throughout Uncle Sam's domain is evident.

*

A London (Eng.) writer, Horace Townsend, recently sent the following communication to this country, a eulogy of the wheel:

"A. J. Balfour's declaration, in his speech before the National Cyclists' Union, of which he is president, that 'there has been no more civilizing invention within the memory of the present generation than that of the bicycle,' is received with approbation on all sides. The majority of the papers have devoted leading articles to the subject, pointing out the revolution effected among the poorer classes of society by the bicycle and the part it plays in ministering to the health, recreation and health of the multitude."

*

Did you ever take note of the fact that when you ride whit an upturned handle bar you are less likely to go at too great a speed? Such is the fact which I have ascertained in a number of instances outside of my own experiences. An adjustable bar is the proper thing, for when competing in races your bar will certainly have some drop in it, else a lot of your power is lost. To ride with a turned-down bar lends the impetus to go faster and therefore it is wise, when riding for pleasure, to reverse the bar. I make a distinction by using two handle bars; one for speeding, the other for every-day riding, and find it a very good practice. The tendency to go fast lies mainly in the position you assume on your mount and the natural freedom of motion on the bicycle is induced by the adjustable bar.

*

In his daily letter to the Chicago Record, William E. Curtis writes:

"The ladies of Kansas wear sunbonnets and calico dresses when they go out on their wheels. They look comical in that sort of a costume, but it is the most appropriate and comfortable that could be devised for this kind of a country. There is a bicycle in nearly every farmhouse, and the women use them more than the men. When they want to do a little shopping in town or go to the post office or attend a meeting of the sewing circle, it is no longer necessary to take a team out of the field. The feminine portion of the population of Kansas has thus been emancipated from the shackles of farm life. Except for a few weeks in the spring, when the frost is coming out of the ground, the roads are tolerable, and even when the mud is deepest a Kansas girl can go to town and back before her father can get half way there with a team and wagon. The calico costume and the sunbonnet obviate the only other great difficulty, which is dust."

*

One of the important incidents chronicled in the Chicago Record of May 10 was the announcement that fashionable tailors for women had graciously decided to let their patrons wear a skirt provided with a detachable flounce so arranged that it could be divorced from the rest of the costume in a few minutes.

The purpose of this device is to enable a woman to shorten her dress to suit her convenience. An ordinary walking skirt can be quickly abbreviated to a length suitable for golf or bicycling at a moment's notice.

The importance of this invention does not lie solely in enabling woman to suit her costume to the conditions of the hour. It may accustom her to dispensing with the flounce on very muddy and very dusty days, until she will insist on wearing only short skirts in dirty weather.

*

In one of its electrical reviews the Chicago Record recently said:

"One of the most annoying experiences which can fall to the lot of the bicyclist who is bitten with the 'century' mania is what is now called 'bicycle paralysis.' A numbness is felt in certain fingers, which may last not only while on the wheel, but for twenty-four hours, and sometimes longer, after the ride is over.

In some cases this numbness extends throughout the whole hand, and the rider simply has to stop. The cause of the trouble is the excessive vibration of the handle bars. A good remedy is skilled massage, but the quickest and most thorough cure is attained by the use of electricity. Either the ordinary induction coil or the static machine will serve the purpose. The electric current gives to every atom in the affected hand a gentle and continuous vibration, which soon restores its normal conditions."

THE WHEELWOMAN.

(Continued from Page 144.)

The chief characteristics of cycling garments should be comfort and neatness. One should always wear woolen clothing next to the skin. The corsets should be short and fairly loose. The shoes, made of soft, pliable leather to give a free ankle movement, should have low heels, broad tips and firm soles. The skirt should be plain and short, and made of some light material, such as a serge. Elastics should be sewn inside, through which the foot is passed. The skirt should be worn over bloomers made of satin or brilliantine.

Do not wear full sleeves, for they resist the wind and when blown about look inelegant.

As to gloves, in warm weather they should always be ventilated by having perforations in the palms to allow the moisture to escape, those of doe skin being preferable.

Our Busy Cycledom

B. L. McKenzie, of Chump, Tenn., desires to exchange a '97 Cleveland bicycle for a young Jersey Cow. We noticed the ad. in the Farm and Home. [Query by the proof-reader]: was the town in which Mr. McKenzie resides named in his honor?

—

A German paper contains the following advertisement: "Owing to the death of my wife, a seat on my tandem is vacant. Candidates for the seat may send in their names to Scorcher, in care of this paper."

—

"I have obtained a copy of the February 24 issue of The Irish Times, of Dublin," writes a correspondent, "and note this adlet:

"'Wanted, Strong Bicycle, in good condition, SOLID TIRES, G, 527, this office.'

"How's that for up-to-dateness?" asks our correspondent and then he says, "Imagine an American advertising for solid tires."

—

The following advertisement appeared in the classified columns of a late issue of the Melbourne Telegraph: "If this should meet the eye of the gentleman that took my 'Imperial Rover' Bike out of Christ Church Grass enclosure yesterday, at 1:30, by mistake, of course, I just want to caution him in riding it. It is getting pretty old, and I have ridden over 20,000 miles on it, and it might break any day. The 8½ inch cranks want using with special care in going round a corner, for there is only about an inch clearance with the front wheel. I hope he will be careful. It would be such a dreadful pity if he broke his neck.

"If the gentleman will call and see me any day, I will explain many points about the machine which he ought to know.—Arthur Smyth, Daily Telegraph Office."

—

The inherent Yankee trait of asking needless questions to verify facts which are perfectly evident brings to the mind of a writer in the Chicago News an occasion when this practice would have been responsible for bloodshed but for the physical incapacity of the victim.

Two Wisconsin boys—back in the '80s, when the old cast iron ordinaries were in use—started for a country spin over Wisconsin's beautiful hills from Racine to Lake Geneva in the early summer. At this season of the year it is customary for the farmers to repair the roads with loose rocks and gravel and therein lies the tale.

The youthful pair had been spinning along for miles without mishap and were now ascending a gentle rise. Without careful scouting they started down the decline, and, when it was too late, discovered that it was quite steep and covered with loose stones and gravel. They were in for it and their only hope lay in successfully eluding the bowlders.

With nerve and muscle braced they shot along, gaining momentum with every yard. Half way down the wheel of one struck a stone. Up came the little wheel and the rider sped along for twenty feet balanced on the drive wheel. Another stone. A crash and under the slowly floating cloud of dust the victim lay bruised and inextricably entangled in the spokes of the machine.

At this moment the voice of a farmer who had stood leaning over the gate leisurely surveying the scene broke the silence in an uninterested drawl: "Did yer hurt oberself, bub?"

—

The Hospital is responsible for the following, on which comment is unnecessary:

The growing use of the bicycle and its frequent prescriptions as a means to health, suggests (says the "Hospital") as a possibility, which, in fact, is already not far from its accomplishment, the evolution of a new kind of medical specialist, the consulting cyclist, who will devote himself to giving medical and practical advice as to all that concerns the use of the machine; whether to ride or not; what sort of a machine to ride; at what pace to ride; how the saddle is to be adjusted; where the handles are to be set; how the machine should be geared, etc.; all being things which differ for each individual. For in truth, the fitting of the machine to the individual is a matter of no small nicety, and is one in regard to which the advice of a medical man knowing in such matters is of considerable importance. Many a doctor recommends the use of a cycle who is himself no cyclist, just as he may recommend hydropathic treatment, although he may know but little about the various combinations of bath treatment which will be found of greatest use at the particular spa resorted to. In stating the broad fact that cycling will do good he is acting within the range of his own knowledge and experience, but when he is asked about speed and gears and length of runs, unless he is a cyclist as well as a medical man, he is apt to find himself at sea, and so is tempted either to deal with these matters "on general principles," or to refer his patient to the dealer. But surely the decision as to all the details of bicycling, especially when bicycling is undertaken for health purposes, is a medical affair, and is also one which may very properly be made a specialty.

—

Very few Americans have forgotten the famous Trocha de Mariel which caused the Cubans so much trouble. It was a strongly fortified line extending from the Gulf of Mexico to the Caribbean Sea, and designed to close in the insurgents in the most western extremity of Cuba. No description of this great rampart is required here. Suffice it to say that it was some 20 English miles long, and built along a very good road. The chief aim of the general in command was to be able to concentrate a certain number of troops at any given point and at the shortest notice. For this purpose it was requisite to put all parts of the Trocha in rapid communication with each other. It

was in this connection that the bicycle came into play and gave excellent results. A small body of trained cyclists under the command of a captain—almost the only really trained band of men Spain had at the time—was sent from the Peninsula. They were striped blue and white uniforms, gaiters, large wide-brimmed hats, and their weapons consisted of sword bayonets. Day and night, in all weathers, and during the considerable time that the Trocha was held, these men performed their duties in a manner that elicited unstinted praise from all beholders and received the warmest recognition of the general in command. Spanish officers opine that the Trocha fully answered the purpose for which it was constructed and exercised an important part in the conduct of the war. That a very large share of this result is due to the use of bicycles admits of no reasonable doubt in the minds of competent critics. Horses might have been employed instead, but they would have been dearer, more troublesome, and not anything like so expeditious and so noiseless. Only certain kinds of horses can live in Cuba at all, and if used in warlike operations they do not long remain serviceable, as has been amply proved. Then the peculiar kind of forage they require in such a climate and the alarming frequency with which they must be shod in a country where horseshoes cost about a dollar and twenty-five cents a pair, are two points worth serious consideration.

Why You Should Join The L. A. W.

BY F. P. VAN VALKENBURGH.

A GREAT many people regard the L. A. W. as an investment from which they must get immediate pecuniary returns. In order to attract a large membership, this method of paying back the dollar has received much attention and there are many that have joined because of the fact that opportunities were offered to get back as much as, if not more than, was put in. For instance, a man joins, pays his two dollars, subscribes for Harpers' Monthly Magazine and gets a $4.00 publication for $3.00, by making use of the L. A. W. rates. If, in addition he takes the Century—another $4.00 magazine that he can get for $3.50 he makes 50 cents more—and for the remaining fifty cents he gets the Bulletin, his hotel discounts, his touring maps and the like. The second year he invests a dollar and makes fifty per cent on it by subscribing to the two magazines—with everything else thrown in. If he attends the state meet, he gets his admission to the races and to all the entertainments free. Now he has made his dollar in cash and has all the benefits of the association.

This is one kind of member. Now there is another kind of member and one that means more to the organization and to the riding public. This is the member that joins on account of the work done by the L. A. W. He joins because he appreciates the fact that the work done by the League for good roads means more to him than can be measured by ten times what his membership costs him. Of course, it does not come to him as cash in hard, but it does come to him in the comfort of riding.

If the Guth Bill had been passed by the last legislature there would not be a wheelman that rides outside of a city or incorporated village, that would not gladly give five times what it would cost him to join the League to have that law off from the statute books. Yet, had it not been for the L. A. W. and its work at Madison, that bill would have become a law, and today wheelmen would have no right upon the country highways.

If the League had not secured the passage of a law prohibiting the licensing of bicycles, provisions for the payment of licenses would have been in effect in many cities. Say that the number of wheelmen affected by such laws would have been 10,000, and the average license had been 62½ cents, that would have meant $6,250 dollars out of the pockets of wheelmen. Does that seem like a big sum? If a license law had been passed in Milwaukee alone, as was proposed, at $1.00 per wheel, Milwaukee wheelmen would have paid over $30,000 for that tax in addition to the thousands of dollars they now pay on bicycles taxed as personal property.

Of course, the benefits stand good for all wheelmen—and they get them whether they join the League or not. But to some people this fact does not deter them from becoming members.

They know that the League officers in their state work for no salary, that they give their time and attention to the work because they believe in it, and they appreciate that it costs money to do what they are doing. Good members pay in their dollar fully knowing that they are contributing to a good cause. Can't you get others to join in the same way?

Racing, Racers and Records

New Cycle Racing Rules.

The new racing rules of the League of American Wheelmen have just been issued, and show some important changes from those of last year. The Racing Board has been engaged in the task of remodeling the rules for the past two months, and the changes made will be approved by those who make a study of the sport.

The first change made in the rules is the insertion of the following paragraph: "The L. A. W. acts as a governing body, establishes rules for the conduct and government of track races, exercises its powers to prevent fraud or imposition upon the public and to enforce the mutual obligations of promoters and racing men."

The next change is in the paragraph concerning entries, and gives the handicapper the right to throw out entries in which the best two performances of the rider in handicap events are not given. In settling the valuation of prizes, the retail value of the goods in the city or town in which the race is contested will govern the settlement, according to the new rule. Another change is in the rule regarding the suspension of men who do not ride at meets at which they have entered, the change being that the rider "may" be suspended instead of "shall."

In the rule regarding official referees, an official referee is required only at open meets. Also an official referee may demand railroad fare and hotel expenses. Meet promoters will have to forward handicapper's fees with the entries.

That objectionable scheme for deciding the professional championship by the points system has been changed. It has been deemed unfair to give sixty points for championships at the national meet, and hereafter all of the championships will not count more than ten points for the winner.

Division championships will be open only to members of the L. A. W. and do not have to be promoted by a League club as in the past. In case of failure to appoint or elect a Division Racing Board by a Division the National Racing Board may appoint a board to act in lieu thereof, with power to perform the duties of a Division Board.

Important changes are made in the registration clause, and the new rules provide for payment as follows: Professionals, $2 per annum; amateurs, members of L. A. W., 50 cents; nonmembers, $1.50; novices, nothing; riders between the ages of 16 and 18, 50 cents.

One of the rules has heretofore provided that no one shall be allowed in a final because of a foul or an accident in a trial heat. The new rule gives the referee power to allow the man fouled to take the place of the man committing the foul in the final heat.

The Chicago Times-Herald relates an incident in which Laura Millard, a diamond studded watch, a bicycle, an exciting chase and an anxious stage director were the combination that nearly caused trouble on the stage of the Studebaker one morning last week. Miss Millard arrived from New York a short time ago, to open her Chicago season in "The Gypsy Baron" as prima donna of the Castle Square Opera Company. She has been in Chicago before, is an enthusiastic bicyclist and knows all of the boulevard paths. Shortly after breakfast she left the Auditorium for a spin to Jackson Park, and incidentally among the cool morning breezes commit her lines in the new opera to be put on the following night. Pinned to her shirt waist was a handsome diamond studded watch, prized as a memento of her Tivoli engagements in San Francisco, where it had been presented to her by admiring music lovers of that city in the days when she was sharing honors with Alice Nielsen.

A rehearsal for principals and chorus had been called on the stage at 10 o'clock sharp. Henry W. Savage, owner of the company, had arrived in the city the night before and was anxious to see and hear a rehearsal. General Director Stewart was on hand, Musical Director Robinson and Manager Clarke were there. All was ready, but Miss Millard didn't show up. Impatiently everyone waited for the prima donna —no prima donna, no rehearsal. Just as the rehearsal was to be called off the stage doorkeeper yelled, "Here she is," and up the stage alley, astride her wheel, with flushed face and out of breath, came the belated singer. She related an experience that demonstrated the nerve of some women and her ability as a cyclist.

She had figured on taking her spin so that she would arrive at the theater just in time for rehearsal. On her way north—at Thirty-ninth street—her watch fell from the pendant and rolled into the gutter. A young rider going in the opposite direction saw the watch, jumped from his bicycle, picked up the valuable timepiece and was evidently tempted by its dazzling beauty, for, instead of handing it to Miss Millard, he remounted his wheel and started South at a rapid speed. The prima donna lost no breath in outcries, but started in pursuit. It was a race from Thirty-fifth street to Fifty-first, with Miss Millard always within half a block and closing in as they neared the park.

As the boy approached Fifty-first street he saw a park policeman in the distance, and, fearing capture and arrest, he threw the timepiece into the grass bordering the sidewalk. Miss Millard was satisfied at even this good fortune; but with the thought of the company waiting for her at the theater, she saw no alternative but to let the boy go and return to the theater. Under some circumstances a principal would be heavily fined for delaying a rehearsal, but Miss Millard's pluck and story excused her.

With the Trade

A Model Handle Bar Factory.

Sanger handle bars are made in a factory devoted to the manufacture of handle bars and nothing else. As will be seen by the accompaning illustrations, the factory is equipped in a model manner.

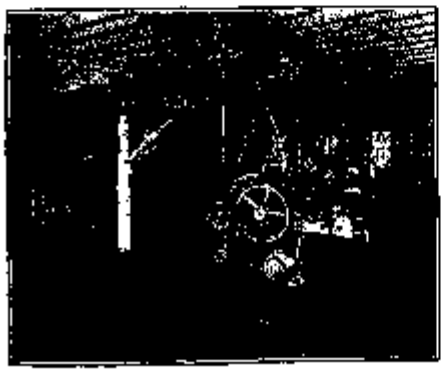
Six Prentiss self-feed automatic stop drill presses perform part of the various machining operations on the forging (lugs), except the corrugating and ratchet cutting. These drill presses are fitted with specially made ball-bearing double swivel jigs, repeating opera-



6 Prentiss Drill Presses.

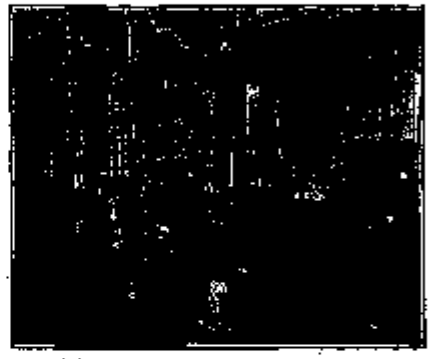
tions, following each other constantly, the operator feeding one side of the double jig while the other is in automatic operation, thus utilizing every minute of the time of both operator and machine.

The second view shows a row of two milling machines and four automatic screw machines. In the foreground a Kempsmith milling machine that cuts the groove into the forged lugs to admit of the passage



Row of Milling and Automatic Screw Machines.

of the expander bolt, and 10 groove-cutting tools milling lugs at each operation. Alongside stands another miller, that performs the ratchet-cutting operation, which gives the Sanger bar its distinctive feature of "co-operating sides" moving, for adjustment, in unison. This machine turns out ten lugs, per operation of ratchet cutting, and is fitted with a jig that is the pride of the tool department. The operating features



Tool Room.

of this jig are too complicated for detail here. Four of the latest automatic screw machines, in this row, are used for the various operations on the stems and heads, and special tools and jigs do their respective work automatically with accuracy and speed. The millers here shown are Kempsmith machines and the automatic screw machines Warner & Swasey.

To the left, another Kempsmith milling machine

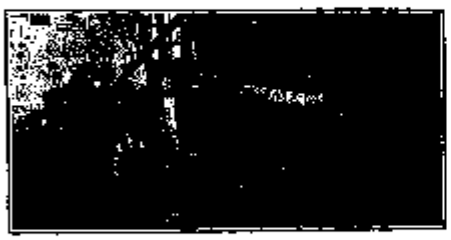


Miller, Handle Bar Press and Band Saw.

(used for the Sanger bar stem head), turns out twenty stem heads at each operation, assisted by the use of

another most ingenious jig, a product of the tool department.

Alongside this miller stands the Rudolphi & Krummel broaching machine for cleaning the inner surface of the stem heads in one operation, and in the background the handle-bar bending press, manufactured by the same firm, forms and bends one thousand handle-



Engine Room and Dynamos.

bars daily. The hand saw to the right is used for the slotting of the stem ends for the tapered internal expander, for dividing the bent bars into halves and various other work. Back of this stands the double-wheel face grinder (Diamond Machine Co.), which smooths both sides of the stem head at once.

The designing and devising of all the special ma-



Drop Hammer for Corrugations.

chinery, tools, jigs, etc., is in charge of C. A. Peters, who has long been known as an expert mechanic, toolmaker and inventor of numerous practical devices. The cut shows drills, lathes, planer, grinders and universal miller. All special tools and jigs are designed and produced here; among them are some representing an investment of over four hundred dollars in labor. Each and all such special tools and jigs are in duplicate and held in reserve, to avoid delay in case an accident renders one useless.



Polishing Room.

Twenty polishers are at work constantly on Sanger bars exclusively, formerly the largest job nickel-plating establishment in Wisconsin. The department's whole force is engaged on Sanger bar work exclusively and is kept busy from 10 to 15 hours daily.

Cycle Paths.

Under the "side path" law recently enacted in New York, several counties have already named their Commissioners. In the central parts of the State the greatest interest is manifested in the construction of these paths and the Commissioners are to care for their maintenance. There is one peculiar feature of this law, and that is, that while the League of American Wheelmen will continue its agitation for good roads in that State, it cannot be said to be selfish as it can immediately reply that it can have side-paths for cyclists' exclusive use at any time, but that they want entire good roads in the interest of the whole community.

The Maryland and District of Columbia Divisions of the League of American Wheelmen are working in conjunction for the building of a cycle path between Baltimore and Washington. This will be one of the longest cycle paths in the country when completed and will be used by thousands of wheelmen.

Catarrh Cannot be Cured

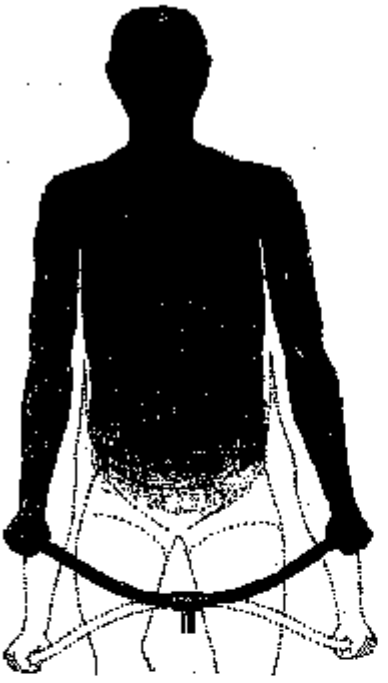
with LOCAL APPLICATIONS as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces. Hall's Catarrh Cure is not a quack medicine. It was prescribed by one of the best physicians in this country for years, and is a regular prescription. It is composed of the best tonics known, combined with the best blood purifiers, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing Catarrh. Send for testimonials, free.

F. J. CHENEY & CO., Props., Toledo, O.

Sold by Druggists, price 75c.

Hall's Family Pills are the best.

If You Ask A Doctor He Will Tell You



An X-Ray photograph of a rider using a Claus Bar shows the chest in the proper, healthy, breathing position.



An X-Ray photograph of a rider using a bar not adjustable on the Claus principle shows the chest in a contracted, unhygienic position.

that many cases of consumption and other diseases of the lungs are caused by not filling all the air chambers of the lungs with fresh air when breathing.

He may not tell you with the same simply words, but his words will have the same meaning.

It is impossible to fill all the air chambers when the chest is contracted—the doctor will tell you so.

When people ride a bicycle for exercise—for health—they expect health to come from the pure air cycling brings.

But what's the use of pure air when it doesn't get into the lungs? How much good does a liniment do if you don't apply it?

Any adjustable bar that does not work on the Claus principal contracts the chest—keeps fresh air out of the lungs—causes lung trouble.

THE CLAUS BAR

retains its width—the proper chest expansion—at all of its twenty adjustments.

It enables the rider to throw out his chest—breath deep—to fill the lungs with healthy, life-giving atmosphere.

It is the only adjustable bar that can be adjusted without a wrench, and while you ride. All its parts interlock—they cannot wriggle or work loose.

It is the only bar that is guaranteed forever. It will never cause you any trouble and if it does it will never cause you any expense. We will stand that.

If you cannot buy a Claus in your town send us $2.50 and we will send you one direct—and return your money if not satisfied. Write for our monthly paper—it's free.

THE CLAUS HANDLE BAR MFG. CO.,

MILWAUKEE, WIS., U. S. A.

See that a Claus Bar is on the wheel you buy—the dealer will give it to you if you insist upon getting it.

50 Visiting Cards for 25 Cents

WE will send you prepaid 50 visiting cards with your name, and address if desired, printed in copper plate script type, for 25 cents in stamps. Considering the quality of the cards and printing this offer cannot be duplicated in your vicinity.

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$75.00
"ORIENT" CHAINLESS.

$65.00
"ORIENT" 1:30 RACER.

$50.00
"ORIENT" LIGHT ROADSTER.

Pierron Cycle Co.,

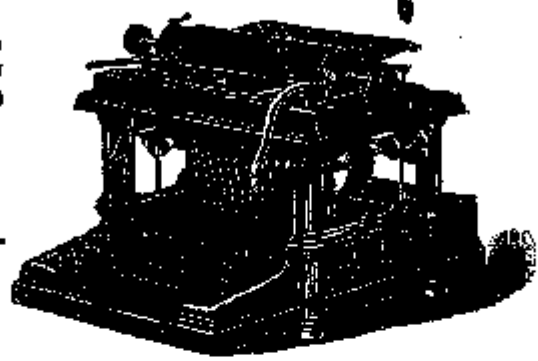
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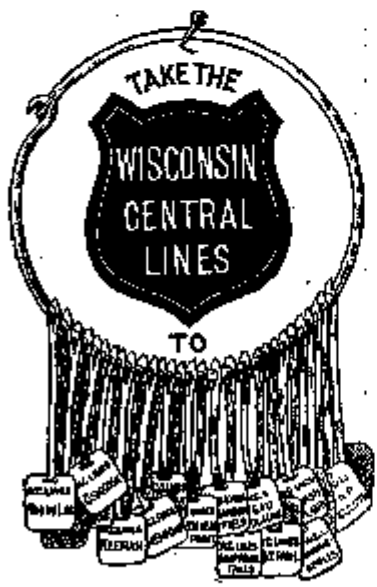
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THE CYCLING AUTHORITY OF NEW ZEALAND.

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I have used Ripans Tabules with so much satisfaction that I can cheerfully recommend them. Have been troubled for about three years with what I called bilious attacks coming on regularly once a week. Was told by different physicians that it was caused by bad teeth, of which I had several. I had the teeth extracted, but the attacks continued. I had seen advertisements of Ripans Tabules in all the papers but had no faith in them, but about six weeks since a friend induced me to try them. Have taken but two of the small 5-cent boxes of the Tabules and have had no recurrence of the attacks. Have never given a testimonial for anything before, but the great amount of good which I believe has been done me by Ripans Tabules induces me to add mine to the many testimonials you doubtless have in your possession now.

A. T. DEWITT.

I want to inform you, in words of highest praise, of the benefit I have derived from Ripans Tabules. I am a professional nurse and in this profession a clear head is always needed. Ripans Tabules does it. After one of my cases I found myself completely run down. Acting on the advice of Mr. Geo. Bowne, Ph. G., 605 Newark Ave., Jersey City, I took Ripans Tabules with grand results.

MISS BESSIE WHEDAN.

Mother was troubled with heartburn and sleeplessness, caused by indigestion, for a good many years. One day she saw a testimonial in the paper indorsing Ripans Tabules. She determined to give them a trial, was greatly relieved by their use and now takes the Tabules regularly. She keeps a few cartons Ripans Tabules in the house and says she will not be without them. The heartburn and sleeplessness have disappeared with the indigestion which was formerly so great a burden for her. Our whole family take the Tabules regularly, especially after a hearty meal. My mother is fifty years of age and is enjoying the best of health and spirits; also eats hearty meals, an impossibility before she took Ripans Tabules.

ARTHUR H. BLANKEN.

ONE GIVES RELIEF.

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The modern standard Family Medicine: Cures the common every-day ill of humanity.

TRADE RIPANS TABULES MARK

I have been a great sufferer from constipation for over five years. Nothing gave me any relief. My feet and legs and abdomen were bloated so I could not wear shoes on my feet and only a loose dress. I saw Ripans Tabules advertised in our daily paper, bought some and took them as directed. Have taken them about three weeks and there is such a change! I am not constipated any more and I owe it all to Ripans Tabules. I am thirty-seven years old, have no occupation, only my household duties and nursing my sick husband. He has had the dropsy and I am trying Ripans Tabules for him. He feels some better but it will take some time, he has been sick so long. You may use my letter and name as you like.

MRS. MARY GOSSAM CLARKE.

I have been suffering from headaches ever since I was a little girl. I could never ride in a car or go into a crowded place without getting a headache and sick at my stomach. I heard about Ripans Tabules from an aunt of mine who was taking them for catarrh of the stomach. She had found such relief from their use she advised me to take them too, and I have been doing so since last October, and will say they have completely cured my headaches. I am twenty-nine years old. You are welcome to use this testimonial.

MRS. J. BROCKMAN.

My seven-year-old boy suffered with pains in his head, constipation and complained of his stomach. He could not eat like children of his age do and what he did eat did not agree with him. He was thin and of a sallow color. Reading some of the testimonials in favor of Ripans Tabules, I tried them. Ripans Tabules not only relieved but actually cured my youngster, the headaches have disappeared, bowels are in good condition and he never complains of his stomach. He is now a red, chubby-faced boy. This wonderful change I attribute to Ripans Tabules. I am satisfied that they will benefit any one (from the cradle to old age) if taken according to directions.

H. W. PRICE.

A new style packet containing THE RIPANS TABULES packed in a paper carton (without glass) is now for sale at some drug stores—price SIX CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (60 tabules) can be had by mail by sending forty-eight cents to the RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York—or a single carton (FIVE TABULES) will be sent for five cents. RIPANS TABULES may also be had of some grocers, general storekeepers, news agents and at some liquor stores and barber shops. They banish pain, induce sleep and prolong life. One gives relief.

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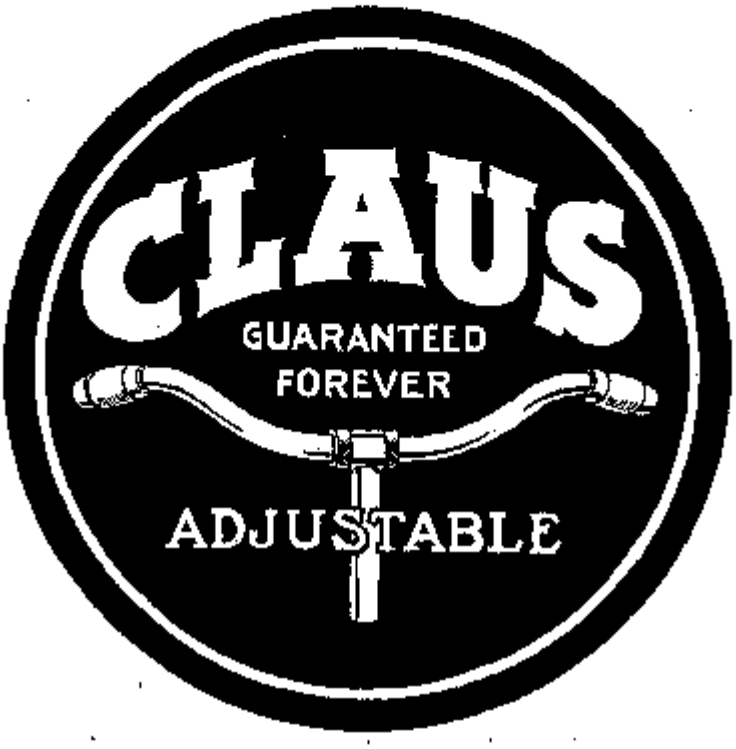
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THE PNEUMATIC.

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Married First and Engaged Afterward.

BY CHARLOTTE WHITCOMB.

"THEN according to the laws of the State of Wisconsin I pronounce you man and wife."

The words were no sooner uttered by the young attorney to the dusty couple standing before him in bicycle suits than the door of the office was thrown open and amidst peals of laughter and cries of "We've caught you! We've caught you!" a bevy of young people, all in wheeling costumes, burst into the room.

Here they were received with counter-exclamations of "But we've won the bet! We've won it fairly!" and Miss Garrison who had acted the part of bride fluttered a marriage certificate in the faces of the new-comers in proof of the assertion.

"You've done it, by George! Where could we have missed you! Did you separate?"

"No, indeed!" answered the young lady who had acted as bridesmaid, "We four jogged along comfortably together and Oh, hasn't it been a bit of fun!"

"Capital joke," said the best man, "and we've proved that running away and getting married is just no trick at all."

"You must have had your man waiting to go through the ceremony, Farrell?" said one of the new-comers.

"Oh, yes," said the groom, introducing the lawyer, who had just re-entered the office, "Mr. Cottrell, an old friend whom I remembered to be practicing law here. Tom, old fellow, you went through your part like one to the manner born."

"You're entitled to a fee, Mr. Cottrell, and, for our sakes, I hope you'll make it of a size he'll remember," said a laughing girl.

Roger Farrel, gaily handed the lawyer a gold piece which the latter with a bow and a smile presented to Miss Garrison, saying:

"If Mrs. Farrell will do me so much honor I shall be made happy by her acceptance of this as a wedding present from her husband's college chum and friend."

Miss Garrison demurely accepted the gift though with slightly heightened color and the merry party passed from the office, except Roger

Farrell, who had noticed Miss Garrison's momentary embarrassment. He said:

«Confound it, Cottrell, you put too serious a face on a mere joke!»

«Joke, Roger! What do you mean, man? You telegraphed me to be ready to perform a marriage ceremony for a runaway couple and I——well, I've performed it as I have performed the same ceremony for a score of other runaway couples from the Twin Cities.»

Roger Farrell turned pale and sank into the nearest seat.

«Great Heavens! Cottrell, you don't mean you're legally qualified——»

«Certainly. I'm a Justice of the Peace, but what's the matter, Roger?»

Roger groaned. «It was all a joke—done on a wager. It was like this. A party of young ladies and their chaperones and friends from the Twin Cities have been stopping at a lakeside resort not a hundred miles from here and someone said the most closely guarded girl could elude the vigilance of her set and get over here and be married, if she were in earnest, even though her intentions were known. Miss Garrison was induced to try it in company with myself, as groom, and two friends of hers as attendants. I telegraphed you, yes, but how could I know you were a qualified official? Say you're not serious, Cottrell! Say so!»

The young man's excitement and distress were so unfeigned they extended to Cottrell, who rose and paced the floor.

«But it's the truth, old man! I wish I could say otherwise if the thing is not to your liking.»

«Oh my God! To my liking! That's just it. Miss Garrison is the most beautiful woman in the world and the last one I would trifle with, and just think where this places her. Why, she is going to marry old Poindexter. I suppose the engagement may be already announced. Can't we ignore it and let it all go as a joke? Isn't there any way out of it?»

«Roger, it calls for a divorce, or a legal separation, easily and quietly obtained, but necessary to the legality of a future marriage on the part of either of you.»

The two men discussed the unfortunate episode until train time, when the lawyer accompanied Roger Farrell to the station, where the party were ready for the return trip.

It was the opening of Florence Garrison's second season in society. She had been, since her debut, an unrivalled belle because of her beauty, her intelligence and her general lovableness, until her cousin and chaperone had said it was no triumph to marry off such a girl; it was much more of a triumph to keep her unmarried until the right man, the one eligible *parti*, came along. Mrs. Poindexter, "the invincible," as the young men called her, was now congratulating herself that Miss Garrison was not only not engaged but still quite fancy free. For her brother, a man old enough to be Miss Garrison's father, had become a widower and the two were planning a marriage which should secure to the Poindexter contingent Miss Garrison's very considerable possessions.

Florence was a girl of spirit and independence, but had from the first felt that she was hardly a match for Mrs. Poindexter. Some way, she could not tell how, no sooner did she express a preference for any young man, or any one of her admirers show particular interest in her, than circumstances seemed to keep them apart.

Since Mr. Poindexter's arrival he was always at her side. He was her escort here, there and everywhere, as far as such things could be arranged by a chaperone, and the escapade of the pretended runaway party to the border town of Wisconsin was heartily enjoyed by Miss Garrison because she had been free from Mrs. Poindexter's espionage and the odious attentions of the brother also for almost an entire day.

She was only a girl, barely twenty, and though the escapade was shocking from Mrs. Poindexter's point of view, Florence could not help a feeling of elation that she had taken part in it. As she thought of her elderly admirer, Roger Farrell by comparison became very attractive. She had always admired and liked him and wondered why his attentions had ceased with the previous season. She recalled the incidents of the day—his lover-like attentions playfully given and apparently only to carry out the farce they were acting, but she thought with a glow at her heart, how she had called him "Sir Roger," and the look he had given her as he called her "My Lady Florence."

As she saw him swinging along to the train her heart beat a little faster in spite of herself and she felt glad she was alone in her seat.

Roger, as he sank down by the lovely girl's

side thought with envy of Poindexter but determined to tell Miss Garrison the whole truth and let her decide what was to be done. He began:

«What do you suppose Mrs. Poindexter will think of our little affair of to-day?»

«Oh, she will be properly shocked, of course.»

«And Mr. Poindextor, will he forgive me?»

«Really, Mr. Farrell, I do not see how it concerns Mr. Poindexter in the least but I wish he might know of it and be so shocked he would turn his attentions elsewhere.»

«Why, Miss Garrison, are you really in earnest? We have all been expecting, I may say of myself, dreading the announcement of your engagement to him. Mrs. Poindexter has certainly led me, for one, to expect it.»

«I do not doubt it. I have felt half persecuted by him but I hate him! I do! I hate him!»

Roger Farrell glanced at the flushed face beside him with added interest and thought of another little verb, one which if she might be induced to speak it as earnestly to a man as she had just spoken its opposite of a man the object of her regard should be in the seventh heaven of delight.

«But I do not quite understand,» he said. «Surely you are your own mistress and may select another chaperone and rid yourself of such annoyance.»

«Mr. Farrell, I have known you, in a way, a good while and I think I may speak quite frankly. Mrs. Poindexter is my only woman relative. A rupture between us would oblige me to make a home for myself and there might be publicity which I must avoid if I can, but this bringing Mr. Poindexter into my life I cannot and will not endure. I am told she is coupling my name with his and preparing everything so that only open rebellion will free me of him and what, Roger—what can I do?»

The upraised, tear-filled eyes, the white hand on his sleeve were too much for Roger. The two young people were quite alone, the other members of their party being in forward seats.

He bent his handsome head until his face was dangerously near that of his beatiful seat-mate.

«Florence, what would you say if you knew that Poindexter can never trouble you again without answering to me? That the ceremony you went through with me to-day was no sham but a reality, that we are married? Do not shrink, dearest. Everything shall be as before if you so desire, but you are legally mine, that is, Florence, mine to protect. I must tell you that I love you. I believe I have always loved you.»

Pressing her soft hand to his lips he continued: «I have said you are mine to protect, won't you be mine to love? All the laws in Christendom cannot make you so without your own dear consent. Won't you give it, Sweetheart?»

Florence's answer must have been satisfactory to her lover, because there followed a long, silent moment when if there had been any one to look they would have seen something that appeared like utter self-surrender on her part. Later when traces of emotion had disappeared Farrell accompanied Miss Garrison to the group of their intimates, and, radiant with happiness, introduced her as his betrothed.

Although they acknowledged they were legally "man and wife," a church ceremonial was arranged, with the attendant runaways as maids and groomsmen, for Florence laughingly said she could never feel properly wedded unless she had been to church; so in due time the wedding came off, Mr. Poindexter giving the bride away in his best style and Mr. Cottrell being best man, and so well did the runaway party keep their secret that, excepting themselves, Cottrell and the Poindexters, no one knew that Roger Farrell and Florence Garrison had been once before married and engaged afterward.

A Race For A Wife.*

BY WALT ALWYN.

THE poor dear girl was bewildered. She had been favored with the attentions of two aspiring young men for some considerable time, and she was uncertain which one she had the larger portion of affection for.

Her rough and ready father was consulted.

"Two of 'em," he said, as he scratched his head thoughtfully.

"Yes, pa."

"They—they both want you, then?"

The girl hesitated, and then nodded.

"We used to fight for little things like that—when I was a lad," he said

She shook her head very decisively.

"Don't you want one more'n another?" he asked bluntly.

The girl blushed and said she did'nt know.

"Let 'em decide between 'emselves," he suggested.

The girl decided to do as suggested, and "let 'em"—if they would.

A day or two later she was chatting to Charlie Brown when Harry Lane came up and interrupted them.

As Charlie left her he pressed her hand fervently and whispered, "When will you give me—an answer?" She paused a moment.

"Saturday," she replied softly, "after the race."

"After the race," he repeated; "and if I win—will you——"

She nodded.

"A cycle race," he said to himself, gloomily, "with the dearest girl in the world—as a prize."

It would be advisable to mention that the race referred to was one of the principal events of this small town.

Charlie and Harry, the rival aspirants for the young lady's hand, were each considered tip-top riders.

They were both entered for the race; and, as luck would have it, the chances of each were voted fairly equal.

This would have made the race much more exciting, had the general public known the details of the matter. As it was, it simply made the three certain individuals directly concerned all the more anxious as to the result.

When Harry Lane bade her "Good afternoon," he hinted at the suspense that she was keeping him in, and begged for a definite answer.

He received a similar reply to Charlie's—"Saturday—after the race."

"Then—that decides it?" he said firmly.

"Ye-es."

"I'll claim you—on Saturday night," he added confidently.

The next day Charlie and Harry met.

Charlie grasped Harry's hand nervously as they were about to part.

"We shall meet again—on Saturday," he said, gloomily.

"Yes; both on 'scratch,'" said Harry.

"I—I'm afraid I can't congratulate you—if you win!"

"And I don't think I can conscientiously—wish you success, Charlie."

"I'm afraid not. The prize is to great," and Charlie sighed.

"If I win——" began Harry.

"Oh, don't say——" interrupted Charlie, as if the very thought was too much for him.

"There's a prize for the second?" said Harry, with a curious look at his companion.

"I'd just as soon be last—as second!" said Charlie sadly.

"Charlie," said Harry, "we'll shake hands on it—and wait——"

"Till Saturday," concluded Charlie.

They shook hands and parted.

Saturday came, as it has the habit of doing every week; but in anticipation of this particular one, three certain persons spent a very miserable and anxious Friday night.

The "Annual Sports" were causing much excitement for miles around, and chances were freely discussed as to the likely winner of the "Championship Vase."

Fully an hour before the time for commencement the Athletic Ground was crowded with eager spectators.

Every place seemed occupied and crowds were standing by the gate.

Presently a young fellow well muffled up

*Bicycling News.

emerged from the pavilion, and accosted the first country-looking fellow he saw.

They went behind the pavilion together.

"Do you want to pocket half a sovereign, my man?" queried the muffled up young man.

The other said he didn't mind if he did.

"It's on the quiet, mind," said the young man.

The other party nodded knowingly.

The young man glanced nervously around and finally muttered something to the other.

"You see," he explained, "this fellow wants a starter. He wants his machine holding for him till it's time to start, and there's half a sov——"

"For holdin' the machine?" interrupted the other.

"Yes," said the young man, with a curious look in his eyes, "if you hold it—as I wish. Now, just before the start"—and the young man whispered very confidentially—"you might—er—just let this thing"—showing some sharp-pointed object—"accidentally puncture his tire so that he won't have—er—too much wind——"

The other winked as if he understood, and held out his hand.

The young man slipped the promised coin into the outstretched palm.

"See?" he said. There's another for you—if I win!"

He led the way to the pavilion and the other fellow followed.

They went straight in the direction of Charlie Brown.

Charlie was just commencing to strip for the race.

"I—I haven't got a starter," he said, to the young man approaching; "mine hasn't turned up."

"Oh, I heard you hadn't got one," said the other young fellow. "I've managed to get one for you though, old chap"—and he introduced the stranger.

"Awfully good of you, Harry," said Charlie, thankfully. "Thanks so much."

Harry only smiled a self-satisfied smile.

"Well," he soliloquised, "it can't be helped. I don't like to resort to—to this, but—I must win! He's the only chap I fear, and I couldn't let him win! No!" he muttered, "he shan't!"

Harry proceeded to attire himself in his racing costume, and the two rivals entered the path together.

The applause was loud and long, but the pair heeded it not. They had only one thought—and one hope.

They each glanced nervously around for the sight of a pretty girl's face, but Dora was not to be seen amongst the spectators.

She "couldn't bear the strain," she said, but promised to come in after this particular race—and hear the result.

Harry and Charlie took up their respective positions on "scratch," the signal went—and off they started.

Nothing sensational occurred in the first lap; and Harry glanced anxiously aside towards Charlie, who was pedalling steadily as if nothing had happened

The race continued and the excitement increased; for at the beginning of the last lap the two were clear away from the other competitors.

Charlie was working the machine as he had never done before, and Harry grew anxious as he guessed that his ruse had been unsuccessful.

Still he rode on bravely.

Charlie gained the lead for a moment.

Harry caught him up, but Charlie led again and appeared to be gaining splendidly.

Within fifty yards of the finish Charlie seemed a certain winner; but Harry was pedalling in terrible earnest, and, with one superhuman effort, his machine dashed to the side of Charlie's and they both finished together—a dead heat!

The excitement seemed to be at the very highest point, and the two successful riders tumbled into the dressing tent, and leaned back on their respective chairs thoroughly exhausted.

They stared at each other pathetically, and each smiled a sickly smile.

In the meantime the minor races were continuing, and it was agreed to decide the previous "dead heat" at the conclusion of the sports.

Harry came out of the tent after a short rest.

Charlie's starter—especially engaged for the business by Harry—was lolling lazily against the rails.

Harry approached him.

"Fool!" he muttered savagely.

"I—I hadn't time, sir," apologised Harry's employés.

"I nearly lost the race," muttered Harry, fiercely. "You—you——"

"I'll work it all right, next time," added the

man confidently.

"Look sharp and get hold of his bike," advised the young man. "You know the rest!"—and Harry returned to the tent.

Finally, the time for the race to be definitely settled was nigh.

Harry and Charlie came out of the tent together again, and met with a warmer reception than ever.

There was a bit of preliminary waiting, but in the excitement and eager anticipation of the forth-coming event, an accidental (?) puncture to Charlie's bicycle tire was somehow unnoticed.

The two riders eventually mounted.

Harry glanced hastily at Charlie's starter and the latter nodded suggestively.

The pistol sounded and the two finalists commenced steadily.

They ran fairly level for a considerable time, but Charlie appeared to be wasting more energy than was necessary, considering the medium pace at which he was travelling.

Harry gained on him easily, but Charlie was struggling with all his strength to keep up a decent pace.

Suddenly he made a vigorous attempt and seemed to literally push the machine along, but Harry still retained the lead without any apparent exertion on his part.

Charlie's face was positively crimson with his continued efforts, as he put all the force of his limbs into play and pedalled frantically.

Then there was a crash! Charlie fell headlong over his machine, and it dropped heavily upon him.

He didn't rise and Harry continued—and won!

A crowd quickly collected around the unfortunate Charlie and he was carried to the tent. It was afterwards ascertained that he had fractured a bone or so.

As he lay in the tent Harry sat beside him.

"You—you won, old chap," said Charlie, as he held out his hand to Harry.

The winner hung down his head and grasped the proffered hand nervously.

A minute or two later, Harry was called from the tent to officially receive the coveted "Championship Vase."

Several speeches were made, and Harry was congratulated on all sides.

Presently there was a bit of a disturbance at the entrance to the tent.

"Charlie!" exclaimed a girl's voice.

Charlie reared himself up to the best of his ability.

"Dora!" he said.

There was a silence of a moment or two, broken only by the silent mutterings of a couple of persons.

Several things were whispered, which, of course, couldn't possibly be of any interest to anyone else.

The crowd returned to the tent, with Harry—the Village Champion—in their midst.

He saw Dora, and held up the Vase proudly, for her benefit.

"Dora," he said, happily, "this decides it."

"Ye-es," she repeated, quietly; "this—decides it."

Harry was perfectly happy; for not only had he won the village prize, but he was congratulating himself on the fact that he had won *the* prize! What more could he want to make him a happy man?

He called to see Dora at her house that evening; but her father informed him that the girl was out.

Whether this offended him, or otherwise, we can only guess;—but he hasn't called since.

When Charlie was better again Dora introduced him to her father.

"He was her choice,'" she said.

Charlie stared curiously at Dora's father, while the latter curiously scanned Charlie's figure.

"We—we've met before, I think," he said, somewhat bewildered.

"Have you—really?" asked Dora, with a pleasant smile.

"Yes," said the father, as he scratched his head, "I punctured his tire!"

Coasting.

BY CHARLES SLOAN REID.

IT'S down the hill, around the bend,
Across the little bridge,
Then far along the avenue
That drops adown the ridge;
Thro' the scented evening twilight,
In balmy summer weather,
'Tis sweet, so sweet, to coast along,
We two, on wheels together.

She's just the rarest little elf
That ever heart desired,
And rides with such becoming grace
Her wheel, pneumatic-tired;
And every eve in summer time,
Just when the sunlight's dying,
Away we go, with feet at rest,
Adown the hills aflying.

The pink glow in her cheek defies
The blushes of the rose,
And, save me and the breeze, no one
Her lips' rare sweetness knows;
For every time we reach the brook,
The woodland spirits miss her,
For in my arms she's hidden quite,
While lovingly I kiss her.

Some day we'll ride a tandem sure,
On which we two are one,
To coast along the path of life
With but one track to run;
Then all the year will be one joy
Of summer's balmy weather,
When e'er we two have joined our hands
To coast life's track together.

It's down the hill, around the bend,
Across the little bridge,
Then far along the avenue
That drops adown the ridge;
Thro' the scented evening twilight,
In balmy summer weather,
'Tis sweet, so sweet, to coast along,
We two, on wheels together.

The Time Limit.

G. LACY HILLIER, an authority on bicycle racing in England, is opposed to the present method of placing time limits on races. Let us consider, he writes, the position of the amateur entering for a scratch race. He is a man who races for his own amusement. He is not engaged or employed to race, indeed, he pays his entry fee to race, demonstrating clearly that he is not a renumerated performer. If he be a genuine amateur, the prize is of no moment to him. Dozens of racing men have never looked at the prizes unless they won them. Our rider is there to beat the other men, to compete with other amateurs, as I have said before, for his own amusement.

To beat his opponents he must use his head. Were he one hundred yards faster in the mile, he could not run away from them unpaced. To be behind them, to watch them, to come with a rattle at the proper moment, and make a dash for the tape, is his programme.

The sages without experience solemnly argue that "it couldn't hurt a man to ride a mile in two minutes thirty seconds," and abuse him because he takes five minutes or six minutes. Therein they demonstrate their utter ignorance of the ABC of cycle racing. It is not a question of pace, but position, and, what is more, since the earliest days of waiting on the path, it has always been a question of position and nothing else, and there is not a limit mark novice, having ridden in half a dozen races who does not know the fact. Any one of the men in a slow heat in a championship would gladly do two minutes thirty seconds or faster, if only some method could be found to guarantee that A, B, and C, should be in front of him when the bell rang. As no such method exists, he waits, as also do A, B and C.

The question of position is the crux of the matter, position whence to watch opponents, take shelter and pacing, and jump at the right moment for the tape.

Since waiting appeared on the racing path, numbers of persons, nearly all non-practical, have suggested a time limit, as likely to remedy the waiting difficulty, and they would possibly have been right had pace been involved, but pace is not the question, and, as the time limit is supported by a penalty, disqualification, that is to say, deprivation of a chance of winning the prize, it is clear that in a certain event, the amateur will have to decide whether he will seek the honor of beating his opponents, or jeopardise his chance of doing so to make sure of the prize. There is but one course open to the bona fide amateur. I say that the amateur will be upon the horns of a dilemma in a certain event. That event is, of course, the fixing of anything but an absolutely wide time limit. Up to now, the limits have been quite safe, the mile limit being ten seconds more than the limit per mile in five miles. But one amateur has been disqualified, and he was a University man, who rode to win, and of course ignored the time limit. The fact that this old woman's remedy was even considered by the N. C. U. shows how greatly that body has fallen out of touch with active racing. That a remedy which does not deal with the real cause of waiting should have been adopted by any body with practical racing men on it is amazing, and it is very fortunate for the Union that the active officials should have been careful to render it innocuous.

There is, of course, a way of dealing with waiting, though I should oppose tooth and nail its application to amateur championships, which should not be made the subject of experiments in cycle racing. My scheme would be useful in ordinary race meeting programmes, and would enable the events to be kept up to time, and, moreover, it would prove a very legitimate inducement to make the men ride faster.

Obviously, from what I have said above, we must seek a remedy by means of the competition for position, and as obviously the men, at any rate on moderately sized tracks, begin to look for position at the bell, I propose to place it in the power of the judge to ring the bell for last lap whenever he chooses, should the first or any subsequent quarter mile be covered in slower time than a fixed standard.

We will suppose that the heats of a mile scratch race are being run off. Before they came on an accident caused delay, and the programme is behind time. Now, if a fit of waiting supervenes and the N. C. U. time limit rule is in force, with a stiff limit, heat after heat

must be declared void, several good men are disqualified, more time lost and the final spoilt as a race. If my scheme is adopted, a standard of, say, 38 seconds is fixed for the first quarter, and, say, 1 minute 14 seconds for the half. If the track be three and a half laps to the mile so much the better. As the men complete the first quarter, the time-keeper says "46!" The judge, seeing that it is a wait, rings the bell for last lap as the men pass the tape.

The judge may, if he sees fit, let the race be ridden out, or he may ring the bell at the next lap. The effect, as soon as the men understood it, would be this: Every time they came up to the judge they would be seeking position; that would mean an acceleration of the pace. If the programme was behind time, the heats could be hurried up, and yet the men would be asked to do nothing which clashed with the principles of amateurism. The plan would work best on small tracks. On large ones half-lap finishes might do. The judge's handling of the bell should be concealed by a screen, unless the bell was a large electric one worked by a button.

In addition to the advantages set forth above, my plan possesses one more, which puts it well in front of the National Cyclists' Union's time limit, if that is ever worked on an "interesting to the public" basis, and the mile limit fixed at 2 minutes 15 seconds or 2 minutes 30 seconds. In that case many heats would be declared void, and many cracks would be hanging over the fence when the final was run. My plan provides a finish and a man qualified for the final out of every heat.

In conclusion, I desire to say once again that what I object to in the National Cyclists' Union time limit is that it seeks to force an amateur to do an unamateur-like thing. Good amateurs by the score have waited to win. Good amateurs, against their better judgement, have gone all the way like "honest, straightforward sportsmen" to quote the faddists, and been whacked for their pains, whilst one of the most artistic pieces of roping I ever saw was done by an artist who ran himself out and rolled on to the grass to suit his "gaffer's" book. He'd have been lauded to the skies as an "honest sportsman" by some of the people who don't understand cycle racing, but only rule it.

I hope that better times are coming for amateur cycle racing, and that the rules, such as may be left, will be uniformly enforced. The first necessity for the revival is some practical legislation by practical racing men, and the earliest sign of the dawn of sense will be the elimination of that fine old crusted bogey, beloved of the theorists and faddists, the time limit, so judiciously handled by the National Cyclists' Union officials in 1898.

She Has A Wheel Now.

THE lieutenant always had offered objections to his wife learning to ride a wheel, says the Detroit Free Press. When she first suggested that she would like a bike, he pooh-poohed the idea and told her he really had no respect for a woman who glides all over town astride a bicycle.

"But Mrs. Green has one," offered the lieutenant's wife.

"I don't care if she has," was his tart rejoinder. "I don't think any more of her for it."

And Mrs. Lieutenant only sighed.

Day before yesterday Mr. Lieutenant remarked to his wife that business of importance called him out of town for two days.

He didn't observe the look of keen delight that flashed over the countenance of Mrs. Lieutenant at that instant.

He went away.

Mrs. Lieutenant's time had come.

That very evening she blew up the tires of Mr. Lieutenant's old wheel and trundled it out into the yard. She leaned it against the fence and darted across to Mrs. Green's.

Mrs. Green was only too glad to give her dear friend and neighbor a lesson in the gentle art of propelling a bike, and forthwith donned her wheeling costume.

The two women adjourned to the street at the rear of Mr. Lieutenant's house, and Mrs.

Green held the machine when Mrs. Lieutenant clambered abroad.

Her skirts proved an awful nuisance. They would persist in getting tangled with the chain and at last both women gave up in dispair.

As they parted, Mrs. Lieutenant was struck by a beautiful thought.

"I have it," she exclaimed, "these skirts won't bother me to-morrow night."

"What are you going to do?" asked Mrs. Green, with wonder.

"You'll see," was the reply.

And the next evening Mrs. Green did see. She held her sides with laughter when she did, too!

It was 8:30 and quite dark. Mrs. Green and Mrs. Lieutenant were away up the street with the old diamond frame of the lieutenant. Mrs. Lieutenant was making rapid progress.

Back on the porch of her house, Gracie, her 7-year-old daughter, sat sobbing as though her heart were broken.

Of course it had to happen that Mr. Lieutenant should show up at that juncture.

Gayly swinging his satchel he approached his home. He found it all dark and his little girl in tears on the porch.

"Why, Gracie, Gracie," he cried, "what is the matter, child? Tell me, tell me."

The little one looked up and said with a great deal of choking: "I ain't got no mamma any more, no mamma any more; I'se got two papas now."

Mr. Lieutenant felt himself growing pale and sick with a deadly nausea. He rushed into the house and called: "Alice! Alice!" The walls echoed the cry; that was all.

He questioned the child further, but all she said was: "I've got two papas now."

The horrible thought of elopement and the subsequent scandal flashed through the mind of Mr. Lieutenant and he regretted deeply every cross word he had ever spoken to her whom he loved so dearly.

"See, see," cried the child just then; "there is my other papa now."

Mr. Lieutenant clenched his fists; there was murder in his eye. He looked down to the corner where the electric bulb flickered and glowed. There beneath that white light he saw—

Mrs. Lieutenant in his second best suit astride his old diamond frame wheel with Mrs. Green clutching the saddle from behind.

Cycling And Health.

BY A CYCLING DOCTOR.*

ONE of the most frequent questions I have put to me in my capacity as a cyclist and a medical man is: "I have such-and-such symptoms; ought I to ride a cycle?" Now the uninitiated might quite naturally think that questions such as these would not be difficult to answer by anyone who not only has had some experience of cycling, but also has some knowledge of the human frame and its powers. And easy it would be were the interrogated to understand precisely what to "ride a cycle" involves. If the doctor could only feel sure that to answer: "Yes, you may cycle, but I must prescribe in what doses," would be a guarantee that his directions would be carefully adhered to, he might give an affirmative reply in almost every case in which the query was put. But, unfortunately, that is far from being the case, for many persons who have been told that they may ride in moderation, ride to excess, and the result often is that it proves their undoing.

In these days of hurry-scurry, rapid living and high tension, with nervous diseases and dyspepsia constantly on the increase, it is very necessary that everyone should take exercise of some sort. The world has now become rather dainty as to its amusements, boredom is a commoner affection of the mind than it formerly was, and the form of exercise we who cater for the health of the community supply must now

*New Zealand Cyclist.

be a little "spiced" if possible. So it is not quite good enough, for most end-of-the-century folk, to suggest homely, ordinary, common-place walking as a healthful exercise for certain types of individuals. Something a little bit more exciting is needed, and even asked for, and if we cannot suggest it we shall not get folk to take the exercise which is so very necessary for the preservation of robust health and cheerful spirits.

Here cycling comes in handy; not necessarily the cycling of the tourist, the racer, or even of the very moderate twenty-miles-a-day man, but just cycling, no matter how little of it. And it is impossible to give an individual whose capabilities one does not know a hard and fast rule as to the exact distance he should ride and how long he should take over doing it. But I find the following method a very excellent one to suggest when called upon to advise the physically weak, the aged, the very young, or the man or woman who has never gone in for active exercise: "Take a bicycle on to a lawn, or other smooth grassy surface, and without the assistance of anyone"—I don't mean that advice should not be given, but that there should be no holding the novice on the cycle—"take the machine about for half an hour to an hour. Just wheel it at first if you are slow to learn, and you will at any rate gain some experience as to the innate 'cussedness' of a bicycle's ways, learn something of the theory of steering and balancing, and, best of all, will have taken exercise which is interesting." And it is because cycling is interesting that it is of such great value to the weakly one of previously sedentary habits. He probably is bored by walking, hence we substitute another, and even better form of exercise which does not bore him. But, of course, wheeling a cycle round a lawn is not the end of his little experiment in exercise. Very soon the novice—unless he be very young—will apply himself to learning to mount, and will very soon accomplish the feat, and then the rest will be plain sailing, for it is well known that the learner who can mount unassisted has not very many minutes before him until he rides by himself.

Thus we have our imaginary patient able to ride a little. We know he is quite unfit for long journeys and rapid travelling, but for all that we are not going to take away from him that which by this time has probably become a very enjoyable hobby. Except in the case of the young novice, who must be advised and controlled by his experienced elders, it is usually quite safe for the doctor to tell the patient that now he can manage a bicycle there is no reason why he should not ride, but not necessarily as others do. The advantages of systematic, quietly enjoyed, gentle exercise must be pointed out to him, together with the risks of over-exertion—even of slight over-exertion—and then, if he be sensible, he may almost be left to his own feelings to decide as to the biggest of the homœopathic doses of cycling he may take.

I might almost say that there is practically no disease from which a man or a woman can suffer which absolutely prohibits him or her from every form of cycling, and which yet allows them to have the wish to indulge in wheeling. But it must be clearly understood that often—very often—the amount of riding which can be indulged in is very, very small. Yet even to be permitted to ride two miles a day at a six-miles-an-hour pace will often cheer one who has been a cyclist, or has just become one, when he is suddenly informed by his doctor that he is suffering from an ailment of the existence of which he had no previous knowledge.

Law of the Road as Applied to Bicycles.

BY J. G. CALHOUN,

MEMBER OF THE HARTFORD COUNTY BAR.

COURTS of last resort have, with almost entire unanimity, decided the bicycle to be a *vehicle*. This result was not reached without many contests in which the principal contentions urged by opposing parties were, first, that the machine was a nuisance, and second, that its rider was but a pedestrian.

As a vehicle the bicycle is brought at once within the mass of common law principles and established rights that go far to clear up any lingering doubt as to the status of the wheelman, so that it can be said, in brief, that the law of the bicycle is mainly an application of old and settled principals to new conditions, and riders of the wheel have the same privileges and are under the same burdens as drivers of all other vehicles.

It is a common error to designate these burdens and privileges as belonging to the vehicles themselves, so that even in reported cases we frequently read of "the rights of bicycles," "the rights of loaded teams," etc., when a moment's consideration proves that the bicycle, carriage or wagon has no "rights" but that they belong exclusively to the person using the same; and while the common speech can be followed for convenient discussion of the law of the road, the fact is not to be an instant forgotten that it is the individual who has the rights, and vehicles are but inanimate and circumstantial.

ORDINARY PRUDENCE AND CARE DEMANDED.

The foundation principle that is the guidance of those who use a highway is, that each person within its limits is expected to use ordinary prudence and care, and has the right to expect that others will use a like caution. What this ordinary prudence and care is can only be determined by the facts of each case as they may be proven, and if one person by omitting this care be injured in his person or property he is without legal remedy, and if he injure the other, he will be liable to her in damages. As the right to use the highway is personal it follows that no one class has rights superior to other classes. Persons driving horses do not thereby acquire additional privileges, nor are those who adopt improved methods of locomotion debarred from doing so if those improvements are not subversive of the rights of other members of the public. If one in making use of his own means of locomotion be injured by the act or omission of another, the question is not one of superior privilege, but whether under all the circumstances, there is a negligence imputable to some one. So it is not the duty of a party lawfully traveling upon a public highway upon a bicycle, when he sees a horse and carriage approaching, to stop and inquire whether the horse is likely to be frightened nor to anticipate that such horse will be frightened.

RIGHT OF WAY.

The caution and effort exacted from each person, depends, in a great measure, on his environment, and hence we say that loaded teams have the right of way at all times. That is, it is unreasonable to require a person driving a heavy and unwieldy load to go as far out of the traveled path as one who is controlling a light buggy or bicycle. Nor is any so-called law of the road inflexible in its application. All give way under the circumstances for which the law is charitable, and if the meeting of two persons upon the road is sudden and unexpected to both, the element of surprise may excuse an unfortunate movement if it appear to be dictated by impulses of prudence.

PASSING WHEN MEETING.

Next to the rule requiring care and expecting it in others is the broad and necessary regulation that parties meeting shall turn to the right to pass. This is statute law in most of the states of the United States and is observed in all whether founded on special enactments or not. It is a rule that most demands recognition and obedience from all, and it is the rule most frequently applied. More highway collisions occur from disregarding it than from any other reason. The person found on the wrong side of the road in a highway accident has a greater burden of proving that he is in the exercise of ordinary care and diligence than he

who is on the right side, and one who is traveling on the right hand side of the path has the right to expect that a person coming towards him will, even at the last moment, turn in accordance with this rule, in order to avoid a collision. Nevertheless, one who is thus traveling may not wantonly and wilfully persist in clinging to the right side when it is evident that evil must result. But a person who voluntarily puts himself on the prohibited side of the way, and is unable to surrender to such as he may meet the portion of the way to which they are entitled, probably cannot furnish a legal excuse if injury results to one who is in no way at fault. The wrong consists in placing himself where he cannot recover, and where the other party also has the right to go. Where parties meet on the sudden and an injury results, the one on the wrong side should be held answerable unless it clearly appears that the party on the proper side had ample means and opportunity to prevent it. The obligation to keep to the right is limited to those persons who are visible or expected, and consequently, the rule does not apply where there are no others of whom the traveler has notice, nor to pedestrians who attempt to cross.

RIGHTS OF WAY IN CROSSING.

In crossing from the right to the left hand side in order to turn up to a house or store, one who is traveling properly on that side has the right of way over the person crossing, and it becomes the duty of the latter to make his intrusion upon such side in a manner that will not needlessly obstruct or endanger others. He is not responsible for an unusual and the highest degree of care to avoid a collision, but if damage result from an attempt to force a passage in front of persons on that side, the intruder will be liable unless he exercises reasonable and ordinary care with reference to such teams as he may encounter.

PASSING WHEN OVERTAKING.

In overtaking and passing vehicles going in the same direction there is no well settled rule in the United States. So far as custom has established any regulation on the subject, it is that the traveler who attempts to pass one going in the same direction as himself should turn to the left. The foremost person, should, on request, yield sufficient room on one side or the other for passing in safety, but the hindermost has no right to force a passage, and if in attempting to pass he negligently collides with the carriage of the other he is liable in damages to a party who is using due care. In a recent case in Michigan it is held that where one upon a bicycle comes up behind another who is unconscious of his approach, and is walking where he has a right to walk, and gives no warning, and strikes him with his wheel, these circumstances, unexplained, tend to show negligence.

PASSING AT ROAD INTERSECTIONS.

Upon occasions where vehicles meet at the intersections of roads crossing each other the English rule is that the driver coming transverse shall bear to the left so as to pass behind the other carriage. The same rule is occasionally met with here in the right of way usually afforded those traveling on the superior thoroughfare. The difficulty with such situations is to determine which is the main, and which the cross highway, and it is rare that the courts exact more of those confronted with such situations than the exercise of reasonable and ordinary caution on the part of each. Before attempting to cross any heavily traveled street, it is doubtless the duty of the driver to observe whether he can do so without interfering with persons who are in the proper exercise of their right of passing through the street.

SPEED REGULATIONS.

One who uses the public highways is usually under certain restrictions as to speed that are determined by state laws and municipal ordinances. Whether riding upon the highway at an immoderate speed is an act of negligence aside from the statutory provisions is a question upon which authorities are not agreed. A New York decision holds that it is not negligence *per se* to drive a team at a "lively trot" in the streets of a city, and an Indiana court refused to hold that a speed of fifteen miles an hour on the part of a wheelman was actionable negligence; though it seems that in Pennsylvania and in certain other states such a rate of speed is unlawful. To drive a vehicle through a crowded or populous street in such a manner, or at such a rate, as to endanger the safety of the inhabitants, is an indictable offence at common law and amounts to a breach of the peace. Driving at

an excessive rate of speed is undoubtedly an element in determining negligence, and it is a well settled principle that a person who is engaged in an illegal and prohibited course of conduct is liable for all the consequences of his acts. Added to the element of speed is the question of the control which the rider may have over his machine and the opportunity which his course or posture may give him of observing the situation of other travelers of the same highway. To avoid liability for damages from a collision it is essential that the wheelman should show that he was exercising the same care that a reasonable and prudent man would use under like circumstances.

RIGHTS OF FOOT PASSENGERS.

Highways are neither exclusively nor primarily for the use of vehicles. Foot passengers have their definite rights therein and both those on foot and those in vehicles are required to use that degree of care and prudence towards each other which the circumstances of the case demand. The law is especially considerate towards those who desire to cross a street or highway on foot, and requires a greater degree of care on the part of persons who are in charge of vehicles to see that collisions do not occur, for, when they do, the result is usually most serious to the foot passenger. Neither the young nor the infirm are restricted in passing and repassing upon the streets and roads more than the adult and able-bodied. This right of the foot passenger, however, does not exempt him from due care on his own part. So far as the pedestrian is concerned, the rule that carriages are to keep to the right does not apply. It has been held, too, that the mere fact that one is not looking when he attempts to cross the street is not conclusive evidence of want of care, though a blind and headstrong attempt to cross, irrespective of any vehicle that might be approaching, would not be considered at the exercise of reasonable caution.

STREET RAILWAY TRACKS.

Numerous cases have been decided in courts of last resort as to the rights of vehicles upon and concerning the tracks of street railways. It is certain that all other vehicles have a right to cross, and even ride upon, such tracks as fully and freely as if they were a portion of the highway, though not to the obstruction of the traffic of the street railway company. All other vehicles are bound to take notice of the approach of cars and of their size and usual attachments, and it is contributory negligence for a wheelman to ride between the tracks without taking precautions against the approach of cars from the rear. So when a wheelman attempts to cross a street car track in front of an approaching car when the latter is so near as to render a collision unavoidable, he has no basis for recovery for consequential injuries.

VEHICLES STANDING BY THE WAYSIDE.

It is undoubtedly the right of persons to stop by the wayside and to leave bicycles or carriages by the highway for temporary purposes. When so left it is the duty of other drivers to take notice of their position and to refrain from running over or against them, and the person so negligently injuring the wheel of another will be liable for the damage so caused. This right must however, be subordinate to the necessary use of the highway for public travel and there are doubtless many instances in which the narrowness of the way or the press of a crowded street would cast the burden of proving ordinary care on the person leaving his wheel at the mercy of heavy traffic. The rule is less strict with the bicycle than with a horse and wagon, for the former is not only smaller in bulk but cannot take fright and collide with others.

FOOTPATHS AND SIDEWALKS.

The riding of bicycles upon paths and sidewalks is, in the main, a subject of special legislation in different localities which are in part permissive or entirely prohibitive. But upon the principles of common law the decisions have generally denied the right of wheelmen to use any portion of the highway that is usually reserved for pedestrians. The argument is that the bicycle rider cannot claim the privileges both of the users of vehicles and of pedestrians. One who walks in the highway where vehicles are not intended to intrude has a right to expect that he will not be interfered with by bicycles, and in case of injuries resulting from collisions between pedestrians and wheelmen upon sidewalks the want of ordinary care has usually been placed upon the rider of the wheel. Certainly, more caution should be exacted from him when riding upon a sidewalk, than when using that portion of the road usually devoted to vehicles.

The Gospel of Good Roads

Street Cleaning by Direct Labor.

The Review of Reviews, commenting on clean streets, gives New York and Toronto credit for being the two cleanest cities on the continent to-day. Both cities are cleaned by direct labor. New York not only employs and thus directs all its street cleaning and garbage dispatch forces, but it has an organized department, with an adequate and properly adjusted equipment of horses, carts, brooms, stables and stations, and it pays its men $2 a day and upward for eight hours' work. To be sure, it has had a Col. Waring, but had Col. Waring been a contractor or a contractor's superintendent the metropolis would not have been the clean city it is to-day. It is to the method of direct labor, under model conditions of employment, that this first worthy result of the kind in a large American city has been achieved.

Toronto, the other of these two exemplary cities, has gone even further than New York in eliminating the contractor. In this enterprising Canadian town, with its 190,000 people, Street Commissioner Jones has during the last seven years entirely revolutionized the care of the streets of the city. He has not only organized the execution of this work under a distinct department, but out of the margin thus saved from the annual appropriations for caring for the streets he has actually built and equipped a modest but complete set of workshops, where the entire construction and repairwork of the department is executed. Not only are the sprinklers, rotary sweepers, automatic landing carts and snow scrapers each after a special pattern devised by the commissioner or under his direction, built in these shops, but even the harness is made, the horses are shod there, and it is the truthful boast of the commissioner that every article of manufacture used by the department is produced from the raw material in these shops. It is exceedingly refreshing to find there inventive genius constantly brought to bear to produce appliances, not for sale in the general market, and hence of that crude adjustment which can be used anywhere, but appliances precisely adapted to the particular needs of Toronto, with its own climate, soil, street mileage and pavements. By maintaining thus its own shops and construction staff, as other large business enterprises do, the street cleaning department has produced an equipment such that the commissioner, in some kinds of work, claims now to be accomplishing with four teams and four men, what formerly required nine teams and seventeen men. A considerable element of this saving of labor has been due to the automatic loading machines, invented in these shops, which elevate the winnows of litter directly from the street into a dump cart as rapidly as horses can walk.

Convict Labor and Good Roads.

Convict labor and good roads are a combination which, just at this time, is all-important to the Kentucky Division of the League of American Wheelmen. Since the days of Boone the State has been mired up all winter and under several inches of dust all summer; or, has been in the same condition as nearly any other State in the Union.

To remedy this condition is what causes the Kentuckians to think of the before-mentioned combination. The State can ill-afford to go to the expense of building a system of good roads, and in looking for an alternative measure the division has hit upon the convicts as the proper class to help them out.

The officers of the Division have been in communication with prominent men throughout the country, particularly those interested in the good roads movement, and in this way have received an unexpected encouragement. It seems to be the consensus of opinion that the use of convicts is the only way in which the roads of the country can be speedily and economically placed in proper condition for traffic at all seasons of the year. In urging the use of the class some of the advocates show that in such use they would not be coming in contact with any class of free labor, as the improvement of the public roads in the United States has progressed so little that there is no such thing as a road building trade. And again, it is pointed out that good roads are for the entire people, and the convicts, being supported by the people, should be made to build and repair them.

The Division will use the matter it is collecting as the basis for a bill to be presented in the next Legislature.

Santiago will have better roads soon. General Wood has authorized the construction of a military road around the city. The road, which will be seven miles long, will connect the wharves, military barracks and hospitals. Another good road will be constructed straight through the city from the wharves to the main fort back of the town.

Our Busy Cycledom

The authorities of Pittsburgh are considering the necessity for a general lamp ordinance for all vehicles on account of the increasing number of motor vehicles.

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The Periodical Department of the League of American Wheelmen is one of the most patronized departments of the organization. In this branch of the League a member can secure an appreciable discount on any of the current publications, and the saving in many instances will offset the cost of membership. The list of periodicals which give these discounts to League members only includes many of the European magazines.

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There is a false impression to the effect that the League of American Wheelmen uses a portion of its funds to support the Racing Department, and that the amount so represented takes so much from the other departments. The Racing Department, on the contrary, is self-supporting, and has always been. If the League should not have the Racing Department the other branches would not receive an additional dollar because of its absence. The Racing Board derives its revenue from sanctions and registrations, and the national treasury never appropriates a cent for its maintenance.

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The Pennsylvania Legislature, which adjourned recently, passed the Marshall side-path bill, and Governor Stone affixed his signature thereon, making it a law. Wheelmen all over the State are highly pleased with the passage of the measure, and already a number of counties have petitioned their courts for the appointment of side-path commissioners. Dauphin was the first county to apply, although Center had the petition prepared in anticipation of the bill becoming a law. There was much disappointment over the defeat of the "compromise" road bill, which was lost, in the general confusion attending the closing day of the Legislature, by a vote of 78 to 71. The disappointment was, however, somewhat lessened by the passage of the side-path bill and a resolution by both Houses recommending the appointment of a good roads commission of seven members, one of which is to represent the Pennsylvania Division of the League of American Wheelmen.

An International exhibition of motor carriages open to all exhibitors will be held at Berlin September 3 to 28, 1899. The exhibits will be placed in six classes, including motor carriages for passengers, motor carriages for freight, motor cycles and trailers, motors and accumulators for motor carriages, and parts and wheels for motor carriages. The exposition will be held in a covered building known as the Exerciser-Haus. It will be open daily from 9 A. M. to 6 P. M. and, it is possible, also in the evening. A series of tests, races, etc., are also in contemplation. The exhibition space will be rented, and not more than two examples of the same class will be permitted to each exhibitor. Intending exhibitors must signify their intention of exhibiting either by letter or telegram before the 15th of April. The committee has power to accept or reject any article offered. Photographs must also be provided showing the carriages or other articles. There are other rules governing the show. Neither prizes nor medals will be given. The advantage to exhibitors will be confined to the results of a competitive test, which will be made with great care.

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At a meeting of the National Transportation Committee of the L. A. W., held in Philadelphia, Chairman Henry C. Nickerson announced that contrary to all rumors the '99 L. A. W. meet in Boston next August is to be a big success. This he gave out as a result of the meeting of all the cycling officials of Boston, at which the affair was placed in the hands of the Massachusetts Division. Sterling Elliott, Abbot Bassett, H. C. Nickerson and A. Wolfson compose the new committee in charge.

Before the meeting adjourned Mr. Nickerson stated that over $7,000 had been contributed toward the general fund. This statement assures the success of the '99 meet.

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The list of events and prizes for the L. A. W. National Circuit, which opens at Indianapolis this week, shows the usual amount of prizes, both amateur and professional, in each of the cities having sanctions. With several of thousands of dollars in sight as prizes during the next 60 days the professional riders who have been loyal to the L. A. W. have no regrets. There will be quite a difference between these riders and nearly all of the "outlaw" professionals, who have not seen the first glimpse of a prize since the season opened.

Observations.

BY LOUIS NAPOLEON.

Anent the Chicago road race on Decoration Day a paper stated editorily in part:

"Both the racers and other riders of the wheel will note, also, that the race demonstrated very conclusively that interest in wheeling is not yet waning. Wheeling and wheelmen's races have been with us long enough now to have lost their novelty. Interest in the sport is no longer sustained by curiosity. Yet the crowds which awaited the riders along the route and at the finish yesterday indicated very plainly the extent of the public's interest in bicycling. While more than 200 ambitious riders are willing to bespatter themselves with mud in an earnest effort to ride rapidly over rough country roads, and thousands of others are eager to seek a chance to cheer them at the goal, there seems to be little prospect of a decay in bicycling as a sport."

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Theodore Stanton in the Chicago Record says:

"Americans who propose bicycling in France this summer should be informed concerning the new fiscal arrangements. Two or three years ago a 10 franc tax was put on bicycles, but so many owners of machines avoided declaring them at the tax collector's that the government lost heavily. In the effort to force these delinquents to pay their tax it was decided to require the owner of every bicycle to attach conspicuously to his wheel a metal label with "1899" stamped upon it. So now any wheelman is liable to have his machine taken from him until he pays a fine, if he is discovered in public without his label. Every foreign cyclist in France must be provided with a special "permis de circulation," drawn up on stamped paper and furnished to foreigners at the different French custom houses. It is good for three months from date. At the end of that time foreigners will be treated like residents and required to pay their tax and procure the label."

*

There is many a rider of the "butterfly" order, who, as soon as the hot summer days come on, forsakes his wheel the same as he does when the chill blasts of winter frighten him into sending his machine into retirement for six months. There could be no greater mistake. Bicycle riding is not a violent exercise, unless the rider makes it so. It is easier, cooler, and in every way more comfortable to ride a quarter of a mile, or ten miles awheel, than it is to walk the same distance and the journey can be covered in a fraction of the time. If you are afraid of the hot weather use your wheel judiciously, but do not abandon it. A sponge bath with a little sea salt in it, morning and evening, will do wonders to keep you cool and comfortable during the day.

*

It is a great pity that some cyclists who are gifted with more pluck than wisdom have not a far-seeing friend at hand to warn them of the dangers of overstraining. The men who thus run the risk of an early grave are those who invariably make hard work of cycling. They never know what it is to have an easy time on a bicycle. Year in, year out, their one absorbing thought is speed, and their one idea is to train, train, train, so that they may be able to hold their own with men far their superiors in muscular and organic strength. Cycling is one of the finest aids to health when pursued to that end, but, on the other hand, it is a rock on which many a weakling has wrecked his constitution. We are not seeking to pose as an admonitor of the usual alarmist order; we simply speak as we find; and we could name, within our own little sphere of observation, young fellows who will one day regret that they ever crossed a wheel. They are wearing themselves away—absolutely reducing themselves to peregrinating shadows. They are always in the saddle, and are always riding hard; and to one who, like ourselves, is accustomed to reckon up a man's internal condition as a horse-dealer would the points of a horse, it is easy to see that it cannot last long. The collapse will come, and it will be a case of "touch and go"—perhaps "go," and cycling will be condemned by their circle of friends as a dangerous sport. To the man with perfect physique, who trains carefully and allows himself plenty of rest, racing is a safe diversion, but in cases similar to those we have quoted, hard and continuous riding, even with systematic training, cannot be too strongly condemned, and one's health is more precious than all the long-distance medals in the world.

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League of American Wheelmen

For Any Information Address ARTHUR BASSETT, Boston, Mass.

Membership July 7th, 1899.

1.	Pennsylvania	14024
2.	New York	12587
3.	Massachusetts	10251
4.	New Jersey	3509
5.	Ohio	2478
6.	Michigan	1816
7.	Indiana	1760
8.	Illinois	1555
9.	Rhode Island	1498
10.	Connecticut	1384
11.	Maryland	1129
12.	Wisconsin	935
13.	Kentucky	594
14.	New Hampshire	576
15.	Missouri	536
16.	District of Columbia	436
17.	Iowa	476
18.	Maine	462
19.	Southern California	355
20.	Minnesota	312
21.	Colorado	301
22.	Delaware	180
23.	Virginia	170
24.	Vermont	129
25.	West Virginia	87
26.	Georgia	87
27.	South Carolina	77
28.	Florida	58
29.	Montana	58
30.	Washington	58
31.	North Carolina	21

The Rights and Privileges Committee of the L. A. W. has been more than usually busy this spring preparing side-path bills and in giving legal advice to the divisions.

The L. A. W. consulate at Des Moines, Iowa, has recently shown the efficiency of this form of the League organization by securing city appropriations of $40,000 for the reconstruction of highways leading out of the city.

The Maryland division of the L. A. W. is working hard to secure the building of the cycle path between Washington and Baltimore. When finished this path will pass through some of the most beautiful scenery in the East, and many historic spots will be on the route.

The Ohio Division of the L. A. W. will issue a new road-book within a short time. The officials of the division say that it will be the finest ever issued in this country or abroad. Every member of the division will be furnished with a copy free of charge.

The claim that the "outlaws" have a meet scheduled for Philadelphia is denied by the L. A. W. racing officials. Members of a certain club there tried to get the club to promote an "outlaw" meet, but were met with refusal. The individuals then attempted to run a meet themselves, but found they could not get a track unless they conducted their races under L. A. W. sanction.

The Florida Division, L. A. W., has been added to the list of the divisions which have succeeded in having "side-path" laws passed through the Legislature. There was not a dissenting vote and the Governor has signed the bill. These paths are very popular in Florida, many being already in use, and more are now being built under the new law. Chief Consul Bahl, of the division, is preparing for the L. A. W. Assembly which meets in Jacksonville in February.

The L. A. W. has succeeded in having passed in Pittsburg an ordinance requiring all vehicles to carry lighted lamps at night. There is no discrimination, as there should not be, between bicycles and carriages or other forms of vehicles, but all come under the same regulations. The ordinance also carries provisions for rules of the road and is, altogether, a very fair piece of legislation, being designed to obliterate any discrimination against wheelmen.

Secretary Bassett, of the L. A. W., received 1,206 renewals of membership last week. This gives a total of over 17,000 renewals since April 1. This large number shows the fact that many thousands who are dropped from the rolls immediately upon the expiration of their memberships renew at a later time, within the period allowed. This is the season when the largest number of memberships expire, but the figures given above show that a great majority of them have only temporarily lost their membership.

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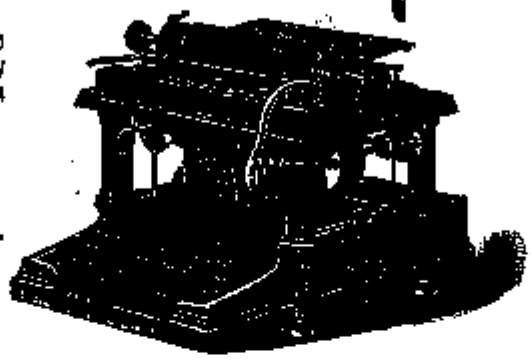
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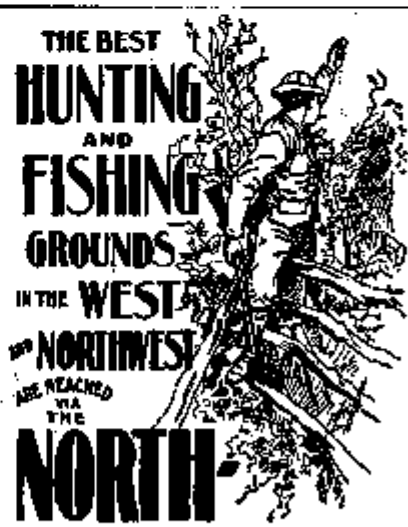
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I have used Ripans Tabules with so much satisfaction that I can cheerfully recommend them. Have been troubled for about three years with what I called bilious attacks coming on regularly once a week. Was told by different physicians that it was caused by bad teeth, of which I had several. I had the teeth extracted, but the attacks continued. I had seen advertisements of Ripans Tabules in all the papers but had no faith in them, but about six weeks since a friend induced me to try them. Have taken but two of the small 5-cent boxes of the Tabules and have had no recurrence of the attacks. Have never given a testimonial for anything before, but the great amount of good which I believe has been done me by Ripans Tabules induces me to add mine to the many testimonials you doubtless have in your possession now. A. T. DEWITT.

I want to inform you, in words of highest praise, of the benefit I have derived from Ripans Tabules. I am a professional nurse and in this profession a clear head is always needed. Ripans Tabules does it. After one of my cases I found myself completely run down. Acting on the advice of Mr. Geo. Bower, Ph. G., 568 Newark Ave., Jersey City, I took Ripans Tabules with grand results.
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MRS. MARY GORMAN GLASER.

I have been suffering from headaches ever since I was a little girl. I could never ride in a car or go into a crowded place without getting a headache and sick at my stomach. I heard about Ripans Tabules from an aunt of mine who was taking them for catarrh of the stomach. She had found such relief from their use should-ered me to take them too, and I have been doing so since last October, and will say they have completely cured my headaches. I am twenty-nine years old. You are welcome to use this testimonial.
MRS. J. BROCKETTA.

My seven-year-old boy suffered with pains in his head, constipation and complained of his stomach. He could not eat like children of his age do and what he did eat did not agree with him. He was thin and of a sallow color. Reading some of the testimonials in favor of Ripans Tabules, I tried them. Ripans Tabules not only relieved but actually cured my youngster, the headaches have disappeared, bowels are in good condition and he never complains of his stomach. He is now a red, chubby-faced boy. The wonderful change I attribute to Ripans Tabules. I am satisfied that they will benefit any one (from the cradle to old age) if taken according to directions. E. W. PRICE.

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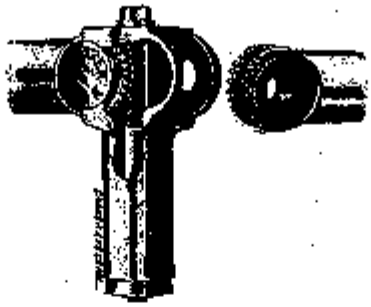
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VOL. X. AUGUST, 1899. NO. 7.

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THE PNEUMATIC.

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The Pneumatic,

207 Grand Ave., Milwaukee, Wis.

THE PNEUMATIC.

VOL. X. AUGUST, 1899. No. 7.

A Happy Accident.

BY ARTHUR CHAMBERLAIN.

IT was growing late in the afternoon as Mr. Richard Thorp pedalled his wheel up the hills and coasted down into the hollows of a New England country road. A five year's sojourn in the level West had quickened for him the charm of his birthplace; he had hailed with delight her rivers of sparkling water and the rough, granite out-crop that broke through the fields of green and gold. The swamp-pink was already intensifying the deep verdure of the meadow grass, while from one and another pine-clad hill top flashed the far-off mysterious arch of the sea.

As Mr. Thorp exulted in these things, a sudden jolt, a rapid forward flight through the air and a myriad of elusive sparks dancing before his eyes convinced him that he had met with an accident. Picking himself up, he saw in the dim light of a foliage-shaded hollow a medium sized log, and on its hither side was his bicycle, with its front fork snapped in twain. A good deal shaken by his header, he made terms with his misfortune by sitting down upon the disastrous log and examining, ruefully enough, his broken machine. It was past all amateur mending; he might count himself fortunate if he could drag it over the road until he came to some friendly farm-house. The chill of approaching evening was sharp in the hollow, and he sat comfortlessly upon the log, waiting for his shakiness and dizziness to wear away.

After a few moments he raised his head to listen. Was it merely this wretched humming in his ears, or did he really hear the sound of approaching wheels? He arose and faced about, swaying a little despite his best efforts to stand firmly. The indistinct outline of a team came out from the gloom and a woman's voice hailed him in the gathering dusk.

«Will you please stand aside, sir? The road is narrow. Oh, dear, it's a drunken man!»—as Mr. Thorp staggered in his attempt to get out of the way. Then, catching sight of the log and the bicycle:—«Why, no; the man's hurt. Whoa, Billy! What can I do for you, sir? Why, Dick—Mr. Thorp—*this is* an unexpected rencontre!»

«Is it peace or war this time, Miss Otis?»

«Entire neutrality, if you please. Consider

me as a member of the hospital staff, bound to succor both friend and foe. Well, your wheel is a smash! No, let it alone; I can manage it.» She lifted the fragments into the light wagon and shoved the log out of the way. «Now, if you're not too dizzy, you'd better get up on the seat. It's no use taking you to the station; the last train's gone until morning; you must come to the White farm-house with me—charming place; I've been there for several summers; always meant to buy it when there was a chance, now some wretch of a man has outbidden me—through his agents, I don't know the wretch's name and I don't care to—and I'm left out! It's a good thing for the Whites, though—you know the proverb about an ill wind.»

She spoke breathlessly, as if she preferred to talk rather than to listen. The cool air, laden with the scent of the fields, charmed away her companion's headache and he was content to be quiet, looking less at the darkening landscape than at the face of the speaker.

«Here we are!» she said at length, with an air of evident relief.

They turned off from the road as she spoke, and the outline of a farm-house became dimly visible, framed in the spreading foliage of elms and beeches, with a vine clambering along its front while a line of sheds trailed off at one side.

Mr. Thorp gallantly assisted at the unharnessing, and once fairly untrammelled, Billy betook himself to the watering-trough, the slow clump, clump of his feet alone breaking the wide silence. The two young people entered the house together.

It has been stated that pie is losing its prestige as an article of New England diet. Perish the thought! There was pie for supper that night in the White homestead, and golden-brown doughnuts; with small, flat fish caught in the neighboring river and delicately browned in lard of home manufacture; dark, delicious berries arose, island-like, from lakes of unimpeachable cream—and prudence no less than inclination prompted Mr. Thorp to take a stroll afield after doing the meal full justice. Clearly a guest must not be permitted to wander abroad unaccompanied, and as Mrs. White professed herself «All tuckered out, stepping 'round,» and Mr. White was «Tired enough to sleep without rocking,» the duty of hospitable oversight fell upon Miss Otis.

Rambling out from the shadow of the overhanging trees they stood in the full moonlight. From the great, five barred gate that opened into the pasture they looked across a large field of grass, dry and yellow from the longish drought and swaying in ripples of pale gold. Beyond it rose a dark line of trees, while from scattered farmhouses points of isolated radiance twinkled on the distant hillside.

«It's good to see pine trees and hills again, after years on those flat, woodless prairies,» remarked Mr. Thorp, with a wave of his hand towards the open prospect.

«Oh, yes; it's charming, charming!» assented the young lady, half absently. «I wish I knew,» she went on with sudden petulance, «who the wretch is that is exiling me from all this loviness.»

«I thought you were profoundly indifferent to that odious personage. You said——»

«At your old tricks, I see, Mr. Thorp. How you pick one up! I don't care for the creature's name; I'm simply curious to know why he pitched upon this particular spot for his schemes. Real estate, most likely;—intends to cut up the farm into houselots, pay the railroad to run a branch through the property; then he'll put up some gingerbread buildings and a library, maybe; call the place 'Meadowrest' or 'Pasturecroft' or something as sweetly seductive,—oh, dear, how frightfully raw it will all be!»

«Capital, Miss Otis! You have an eye for business, I see. But I agree with you that it's a pity. Out West, where I've been digging for some years—actually as well as figuratively, you know—I've longed for such a place as this to settle down in; country life and civilization together—the West is so abominably lonesome.»

«Even when one is occupied? Surely, a man should be too resourceful for anything of that sort.»

«Recollection is vivid in spite of occupation, Miss Otis.»

There was a pause, broken at length by the young lady:

«Perhaps we'd better go in, Mr. Thorp; it's getting rather cold, don't you think so?»

«What you two been buzzing about by the gate over there?» demanded Mr. White, with good natured familiarity, from his post of vantage by the woodshed.

«Mr. Thorp's been telling me how much he enjoys New England scenery after his Western exile,» replied Miss Otis, brushing by Mr. White into the "fore room" and seating herself at the old-fashioned piano. Mrs. White had retired long ago.

Feeling that he had touched a discordant strain, Mr. Thorp was more than willing to listen in silence to music that promised to renew the harmony. The ancient piano gave evidence of careful use; it was in good tune and there was a pleasant, singing quality to its light tinkle. Sitting there in the moonlight duskiness, he found himself growing strangely reminiscent. The era of tops and marbles, of furtive fishing excursions and surreptitious swims; the first dawning sense of the attractions of sundry Sadies, Lucys, Katies and Lizzies—all this came clamoring for remembrance. How long it had been since he lost all track of those early loves! What was that girl singing?

«Wave, willows, murmur waters, golden
sunbeams smile;
Earthly music cannot waken——»

Oh, confound it! That spill of his must have rattled his nerves; what business had he to grow choky? He pulled himself together as the music ceased.

«Those old tunes are very sweet, Miss Otis; but may we not have something more modern by way of contrast?»

«Certainly, if you prefer it, Mr. Thorp. Here is one.» Her voice rang out, soft and clear:

«Oh! the clang of the wooden shoon,
Oh! the dance and the merry tune——»

That she should sing that song! That she should dare to sing it! Had it not haunted him when his back was breaking at the irrigating ditch, or when he was rounding up the cattle among a squad of shouting cowboys, or—worst of all—when he sat alone in his shanty while the snow swirled outside; grimly speculating on the chances of his chum's getting safely back from the "store" some ten miles away. Well, she should not outface him——

«I have not heard that song since our—disagreement, Miss Otis,» he said calmly enough, as the strain lost itself in silence.

«No?» she answered. «No, I suppose not. It's rather a touching one, I think—it gets on one's nerves. Perhaps it was the reaction that made us so—peppery.»

«Peppery! Well, yes; *I* was. Ice itself couldn't have been cooler than your manner.»

«You think if I'd lost my temper——»

«As I did——»

«We might have parted as good friends?»

«We might——No!» he exclaimed, defiantly. «I will not go into that matter again. Haven't I threshed that chaff sufficiently in five years' time? Let it go! Let it go!»

She rose from the piano and turned towards the moonlit window.

«Ah, if it *would* go!» It was the lowest of murmurs, the echo of a whisper; but Dick Thorp heard it.

«Ah!» he cried sharply. «Don't do that—don't play with me! It isn't worth while—I'm off to-morrow morning.»

«I never played with you,» she answered. «I am not playing—now.»

He came over to her and laid a hand gently on her shoulder. «Alice!»

She looked up at him with tearful eyes. «Dick!»

«What a precious pair of idiots we have been!»

Some ten minutes later, two figures might have been seen slipping out of the old farmhouse.

«Come, dear,» said Dick, «let us take one more look at the place before we think of it in the hands of its new owner.»

«As if I cared at all for that wretch—now!»

«Oh, but you must care a great deal about him—at least, I hope so!»

«Why, Dick, what *do* you mean?»

«I hope so,» replied her lover fervently, «because, darling, *I* am that wretch.»

Lamp Logic.

ACCORDING to the Bicycling World many wheelmen have become so accustomed to completely neglecting their bicycles that they are apt to adopt the same policy where their lamps are concerned. They seem to labor under the impression that, given a lamp, the only other thing necessary is a match; at the most, a little oil—if the lamp is of that persuation—is all that could possible be asked for by the most exacting lamp. Such a thing as seeing that the lamp is in perfect order rarely enters their heads. That the wick should be trimmed and the lamp itself kept perfectly clean and unclogged, is farthest from their thoughts.

Such riders are the ones who have trouble. The complaints one hears of lamps can, in nine cases out of ten, be traced to them. Many of them look upon the carrying of lamps as a nuisance, and as a consequence are in constant trouble. They ignore—or, perhaps, are unaware of—the fact that carriage lamps or house lamps require attention and get it as a matter of course. No one would think of neglecting them, yet there is just as much reason for doing so as there is in the case of bicycle lamps.

Oil lamps are long-suffering, and will give better service at the hands of careless users than the acetylene gas type. As a set-off to the marked superiority of the latter in many respects, there is the absolute necessity of handling them with some intelligence. The same methods that, applied to oil lamps, give fair results will render the acetylene lamp practically useless. This is a fact that should be faced at the beginning, and which salesmen should strive to impress upon their customers. It is the penalty which the latter pay for the envied light.

Nearly all of the various acetylene lamps now on the market are the result of long experimenting, and while several of them are perhaps as perfect and as practical as it is possible to make them, yet the manufacturers themselves do not claim that it is only necessary to fill the chamber with carbide and turn on the water to keep the lamp in condition and make it give at all times the beautiful white light for which the acetylene lamp is noted. Those riders who have discovered the secret of maintaining a perfect light will admit that it requires considerably more care and attention than the old oil lamp, yet they feel that the absence of grease and ill-smelling smoke, in addition to the wonderful light, more than repays them for their trouble.

In the first place, the acetylene lamp requires frequent and persistent cleaning in all its parts. The gas, in generating and in burning, forms a coating which stops up the gas channels and lava tips, and, incidentally, it might be mentioned that this coating varies according to the purity of the calcium carbide; hence it behooves a rider to purchase only the carbide which is prepared by reputable makers for use in cycle lamps.

In several varieties the gas channels are protected against impurites by the use of cotton or felt, but at best they require cleaning, and care should be taken to keep the lava tips clear of soot by the frequant use of a fine wire, or, in the absence of this, the tip can be removed and blown through. The water flow also requires attention.

Frequently there is a sediment in the water which obstructs the flow and the water channel requires cleaning and adjusting; the latter can be accomplished in nearly all modern lamps and the rider should ask for and thoroughly understand instruction on this point before purchasing.

In some forms of lamps blotting paper or fine cloth is used to assist in spreading the water, throughout the carbide, and this should be changed when it appears to obstruct the percolation of the water. Where the water feeds directly into the carbide the end of the water channel should not be permitted to become coated with deteriorated carbide. The case of the carbide chamber should always be screwed up tight or there is danger of combustion at this point. In case the rubber band in the base becomes worn, a new one should be inserted. Those who have had long experience with these lamps say the carbide should be replenished every time the lamp is used to secure the best results.

The acetylene lamp has been on the market only about two years and is, therefore, comparatively speaking, still in the experimental stage, with the usual amount of room for improvements. But it is a success for all that, and the

dealer who discourages its sale is as blind to his own interests as the dealer who a few years ago undertook to block the progress of the pneumatic tire.

It is true that there are a number of cheap acetylene lamps on the market which lack the principles of success and have been built only to sell, but the sale of the entire type should not be discouraged for the faults of the few.

The First Safety.

P. L. RENOUF, an Englishman, was recently engaged to write a chapter on ancient bicycles and in the course of his writings he told much of the early history of the trade. He contended that J. K. Starley, who has always been credited with bringing out the first safety bicycle, was several years late. He said that the first chain-driven, rear-driving safety was invented by Henry John Lawson early in 1880. It was called the bicyclette and was conspicuous by its large front wheel, which necessitated a secondary hinge, or swivel, bearing the handle-bar and connected to the front forks by bridle rods. The steering showed a decided forward pitch or rake. This device of Lawson's, Mr. Renouf contended, was several years before the times and his wheel was not well received.

PATENT GRANTED THOMAS HUMBER.

Patent 6767 was granted April 24, 1884 to Thomas Humber, who turned out a wheel with many of the features which are incorporated in the latter-day cycle. He had a tubular rear or main frame forming an irregular pentagon, a seat lug forming the junction of the upper rail with the pair of stays leading to the rear axle, socket steering and adjustability of both handle bar and saddle. The steering lines were similar to the old Star, brought out in this country eight or nine years ago.

These two inventions, Renouf claims, antedate anything brought out by Starley. He also makes some claims for the women's safety brought out by Lawson in 1884. American makers, however, do not agree with him at this point. The claim is that this was the first woman's wheel. This may be true in some respects, but not in others.

Bert Owens, of Washington, D. C., U. S. A., is said to have the honor of bringing out the wheel for women. His invention is a drop frame bicycle, which is admitted to be the first of its kind ever made. There was no top bar on his machine, two straight tubes running to the head from the crank bracket as in the present day. Lawson's device looked something like it, but Owens' patents give him the honor, it is said.

Renouf's statements aroused the friends of Starley and for some time ink was thrown around in a most promiscuous manner. Renouf says that Starley did not bring out his wheel until the fall of 1885.

In winding up his story the English engineer points out the salient details of the present bicycle in the order in which they were placed on the market, together with the name of the first public user. Of these Renouf says:

HISTORICAL DETAILS OF THE STEED.

1. The pentagonal frame, introduced first by T. Humber, 1884.

2. The socket steering; Humber and Crowden, 1884.

3. Tubular chain or compression stays; Humber, 1884.

4. Ball steering in some form; Trigwell and Renouf.

5. Ball socket; Morris and Wilson; and, if I mistake not, Singer & Co.

6. The one diagonal tube leading upward from the bracket and tying the frame; Morris & Wilson.

7. The clamping seat-pillar lug and handle bar clip; C. Crowden.

8. The barrel bracket and cup-adjusted axle-bearing; Humber.

9. The seat pillar lug as a joint for top rail, back or seat stays and diagonal tie; Humber

10. The straight diagonal tie from seat pillar to crank bracket, with elongated wheel base; Messrs. Ellis & Co.

11. The pentagonal frame straightened out to

a long wheel base; as far as I know, P. L. Renouf and the Humber company.

12. The detachable chain wheel, mounted on a "claw" or disk crank; P. L. Renouf and Ellis & Co.

13. The present shape of handle grip. I really believe that Mr. J. K. Starley, though, of course, that same grip, placed parallel with the machine, had been in use on single and on ordinary bicycles.

14. Size of wheels twenty-eight inch back and thirty inch front; I believe the Premier company; or twenty-eight in both, back and front, the Referee and the Raliegh companies.

Awheel in Italy.

THERE could be no more striking contrast than when, after having pushed up from a bleak Alpine valley to the top of one of the high passes, a cyclist coasts swiftly down among the vineyards and mulberries and cornfields of Italy, says the Queen. For this reason, ride into the country, if you can, from Switzerland or the Tyrol, and begin your journey with the tour around the Italian lakes. Either the Simplon, the San Bernardino or the St. Gotthard is a beautiful approach to Maggoire; by the San Bernardino and the St. Gotthard the descent may also be made to Lugano; the Splugen, the Maloja and the Stelvio all lead to Como; while over the Brenne, one of the favorite passes in old days, is the route for Garda.

In the course of the tour round the lakes you are continually crossing the frontier and riding from Italy into Switzerland and back again. You must therefore be prepared to satisfy the demands of both the Swiss and Italian custom houses. But it is the simpler now, since this year, the same special ticket, with your photograph attached, and filled up with a description of your bicycle, to be obtained from the Cyclists' Touring Club, admits you free in both countries. The membership ticket of the Touring Club de France also gives you the right of free entry, no matter at what point you may travel into Italy. If you do not belong to one of the touring clubs you will have to deposit duty on entering the country and go through the nuisance of reclaiming it on leaving. The Italian officials, if you arrive on your wheel and can show your ticket, are always considerate and make the formalities as easy as possible.

Some of the best Italian Highways are in the north, in the lake region, and of all the lakes Como is the finest from the cycling point of view. The road, most excellent in places, if only passable in others, keeps almost always close to the shore and runs all round it, though there are two short stretches on the western bank, from Aagegue to Tremezzo and again from Menaggio to Dongo, so bad as to be hardly worth riding over.

On the eastern, or less popular side—popular, that is, with the tourist—from Colico, at the head of the lake, to Varenna, there are about eighteen kilometers of as good going as you could get anywhere, even in France, except at the end of the summer after a long drought, when the surface is apt to be loose; while the entire distance from Colico to Lecco, forty kilometers, the road is so marvelously engineered, you are astonished that its fame should be still almost wholly local. It goes tunneling through the rocks if by so doing it can avoid an unnecessary climb and certainly it is no less a triumph of engineering skill than the Axenstrasse, though not half, not quarter as well known.

There is not much riding about Lugano; you find but fragments of road here and there on the banks; and it is only on the western shores of Maggiore, from Arona to Locarno, about eighty-one kilometers, that there is a continuous highway. But there are charming little runs, mostly level, through pretty green valleys connecting all these lakes. From Arona or Gravellona you can cycle over to the little Lago d'Orta; from Menaggio to Porlezza, at the head of Lake Lugano, it is very easy going; and from Laveno, on the eastern side of Maggoire, there is another, and extremely pretty, but rather hilly, ride to Varese and its lake; and on to

the town of Como, where, unless you mean to extend your journey much further south, you may make a complete circular tour by wheeling the forty-four kilometers to Milan, setting out across the plain of Lombardy for Verona and starting homeward by Garda and over the Brenner pass. There is nothing lovelier in Italy than this ride.

The regulation sights—that is, outside of Milan and Verona—are few, an occasional church, an occasional picture, that is all; but the lakes, with their succession of gardens and terraces, of villas and little arcaded towns and old castles, are a never-ending sight. For a scorcher a day would be more than enough to spare to each lake, but the cyclist who rides for pleasure will think a fortnight all too short for the tour.

Or, if you are in no special hurry, from Milan you can strike southward by Piacenda, Parma, Modena, Bologna, over the Apennines, by Pistoia, to Florence, about 350 kilometers, an enchanting ride—beautiful scenery, wonderful old towns, and everywhere the vineyards and olives, the cypresses and stone pines of the south. And from Florence by way of Siena, Montepulciano, Cortona, Perugia, Assisi, Spoleto, there is another tour, no less enchanting, to be made to Rome.

There is a shorter route, from Florence, by Arezzo, to Perugia, and then through the same towns to Rome, 352 kilometers, but the longer is the more delightful. The names of the towns alone are sufficient to explain that this route leads through one of the most interesting parts of the country, historically and artistically, architecturally and archaeologically, as well as one of the most beautiful and picturesque. And the roads are among the best in Italy, not as you approach Rome, however.

In the Campagna, where often you see bits of the old Roman paving, for you are here on the Flaminian Way, they deteriorate. South of Rome again there is more of this paving and the high roads are often unridable. You can sometimes find ridable by-roads and you can manage, of course, to cycle down to Naples and on to the extreme south, if you want; but there is a good deal of hard work about it and your chief compensation must be the thought that you are off the main travelled roads in a country that none but the enterprising cyclist and the native ever see.

Naturally, I can give but the barest outline of the journey through central Italy. It admits of many variations, of many lesser tours and excursions; for instance, from Florence to Pisa and Lucca in the west, to Arezzo and Urbino in the east. It is inexhaustible, and there is not a town, hardly a village, that has not, in its architecture or in its galleries, something beautiful or strange or curious to detain you. And always, between the towns and villages, are the same olive gardens and cypress avenues and vineyards and hills crowned by monastery or church, and almost always the same clear skies and brilliant sunshine.

A more comprehensive and, in some ways, more picturesque tour could be made by riding into the country from Marseilles, along the Riviera, following the Cornice road to Genoa, and by less famous roads, wheeling as far down as possible on the western coast and returning up the eastern. There are sections of this route where you would be obliged to make rather wide detours inland, if you keep to rideable highways. Thus, on the western side, after Spezia and Leghorn and San Vincenzo, you would leave the coast for Grosseto, returning to it again at Civitavecchia and leaving it there again for Rome, and, indeed, between Rome and Naples you would see less of the Mediterranean than you could wish.

From here southward, it is doubtful if you could get anything in the shape of a good coast road, and the crossing the country to the other coast is so complicated that, unless you want to play the explorer for the cyclists who come after, you had better ride from Naples by Pompeii and Salerno, so as not to miss these two places of interest, by an extremely roundabout route to Ortona, from which town, all the way to Ravenna, passing Ancona and Rimini, the borders the Adriatic. From Ravenna, Venice is not so far off, and from Venice, if you have any time left over you can cross the Brenner on the route homeward.

Most of these routes and distances you can obtain from the C. T. C. foreign road book and with this and the road books published by the Italian club and for sale at the C. T. C. offices you can easily map out your journey and calculate the length of time it will take. The maps of the Italian club are most practical and useful.

Italy is unquestionably hot in July and August. Even in the north, around the Italian lakes, it is warm work riding these two months, and you will quickly learn that the natives themselves rarely appear on their cycles, except in the early morning and late afternoon. The spring is better; only, in May and until the very end of June, there is too much snow on the high Alpine passes to cross them with any comfort, so that you would miss that first beautiful descent into Italy. The autumn, almost up to Christmas, is capital riding weather, though after the summer drought the roads are often loose and dusty, and in October the roadmenders begin to get to work.

ABOUT THE EXPENSE.

If you avoid tourist hotels and fashionable resorts you may live as cheaply as in France or Germany. In Rome, or Florence, or any one of the large cities, you can pay just as much or as little as you choose and it is funny about the lakes, for example, to discover how, once you get away from places like Cadenabbia and Bellaggio or Lugano or Baveno and Pallanza, the tourist's headquarters, your expenses are reduced to quite one-fifth of what you have been spending. It is always well to make your bargain with the landlord as soon as you go into an Italian hotel. It is a bother to those who are not used to bargaining, but it is the Italian's way of doing business and his amusement, too, and you must conform to it, unless you belong to the Cyclists' Touring Club, which has made a tariff arrangement with many hotels, chiefly those appointed by the Italian club. A list of hotels, with the tariff, when it has been accepted, for each, is published in the C. T. C. Foreign Handbook. Consult this, shun fashionable haunts, and you cannot complain of the expense.

A knowledge of Italian will be both an aid and a pleasure and a little will go a long way, for the natives are always ready to understand you, if they possibly can manage it. In the out-of-the-way villages the foreign cyclist may still be mobbed. Why, I do not know, for you see plenty of cycles on the roads and in the towns, but the people are so charming in everything they do that you will not mind it much. In a word, to sum up, nowhere can you find combined such beautiful country, such picturesque towns and villages, such interesting galleries, such (on the whole) good roads, such charming people, such blue skies and brilliant sunshine as in Italy.

The Effects of Cycling upon Future Generations.

BY A CYCLING DOCTOR.

WHEN an appreciably large proportion of the inhabitants of a nation, and a still greater proportion of its female sex, makes a very radical change in its habits—in its mode of life—within the short space of some three years, it goes without saying that generations yet unborn will feel the effects of this change, be the influence for good or ill. Once before in these pages has it been remarked that a species of physical Magna Charta was granted to womankind when it became, not only permissible, but fashionable, for girls and woman to become cyclists.

To a lesser extent the craze has influenced men as well as the opposite sex; for, even in those cases in which the devotees of the pastime of the age were previously engaged in some form or another of athletics, the particular mode has, in many cases, been altered through the popularity of the bicycle—horsemen have become wheelmen, the football and cricket fields have been abandoned for the road or track, and the newer sport has such advantages on its side—can so easily engross more attention, and take up more time on account of its convenience and its complete lack of dependence upon the co-operation of other fellow-sportsmen—that the effect of cycling on future generations is sure to be influenced by the present physical improvement of the men as well as of the women of the land.

In the opinion of some of the enemies of cy

cling, the next generation — the sons and daughters of to-day's cyclists—will be a degenerate lot, with stooping shoulders, weak knees, and a hereditary predisposition to anxiety of expression and starting of eyes, and with a general tendency to the early developement of obscure nervous lesions. Thus, our enemies at least acknowledge the far-reaching effects of cycling on the physical developments of our descendants. We, however, who are cyclists, and especially those of us who are medical men and cyclists too, take a more optimistic view of the future of our race as the outcome of wheeling. One medical man, who has written frequently upon cycling in its relation to health, has, for some years back, been noticing when possible, the relative height, developement and general energy and staying power of his young girl patients and their mothers. He states that he has found that even since "the sex" has been accorded the minor physical enfranchisement of lawn tennis, gymnastics, swimming, or, perhaps, sometimes cricket, there has been a marked improvement in the physique of the daughters who have had such athletic advantages over the mothers who, in their day (this refers chiefly to the middle classes) took little exercise more vigorous than a game of croquet, gentle carriage exercise or a "genteel" walk. The daughters are more robust, more erect, have more grace of carriage, and—this should appeal to all fair readers—are of a more handsome type than their mothers, taken as a whole.

But if this change for the better is to be noticed in those who have only had the limited health-giving advantages conferred by the sports mentioned above, which are nearly all bound to be fitful—that is, they can only be enjoyed on certain occasions, under certain restricted conditions, and during particular times of the year—what will be the state of things amongst the grand-children of the present hardy race of cyclists of both sexes?

Some such results as these are expected to follow. The constant enjoyment of exercise in the open air, and the possible exposure to various types of weather, will increase lung capacity and diminish susceptibility to disease, especially to "colds." The actual exercise itself will strengthen the muscles and digestion, improve the strength and vitality, and thus assist the growing and strengthening capacity of the body. And as the natural result of constant open-air exercise is to lessen the time spent indoors, often in over-heated and vitiated atmospheres, as well as diminishing the number of hours spent in sedentary pursuits, it is probable that there will be a corresponding diminution in cases of anæmia; chest diseases, "nerves" and hysteria. Life will almost certainly be prolonged, and, what is better still, it will become more enjoyable; for ill-health and active outdoor exercise are barely compatible.

But these effects are already beginning to be seen in both sexes, but especially in the case of girls and women, for whom the change has, of course, been more radical. What of the more distant future—say a hundred years hence? Fortunately, the prophet who usually foretells the events of a century in advance has no chance of suffering the mortification of being compelled to eat his words, so I may say with confidence that, if cycling has "come to stay," and if the sport be judiciously enjoyed and not abused, there will be a vast improvement in the human race a century hence, on its cycling account alone. Our grand-daughters and even great great grand-daughters, will especially benefit; but even in fifty years it is considered that the race will show marked signs of physical and mental advance. Our girls of that day will be capable of much greater endurance under physical exertion, and of greater resistance to the inroads of disease, and especially infectious diseases.

The style of dress will probable be greatly modified in style and weight, and hence there will be less susceptibility to changes of temperature and weather, for the race will be more "hardened."

Cycling, with its calls upon one's self-reliance, stamina, nerve and pluck, will certainly lessen the number of "delicate," nervous and helpless females; and the fascination of the wheel will allure many daughters of the leisured class from over much novel reading, moping, introspection and sentimentality—thus the race promises to be more healthy minded. In short, the introduction—first of the safety bicycle and then of the pneumatic tire—seems to give promise of successive generations of healthy, hearty and handsome girls and boys, who will have a particularly good chance of prolonged, vigorous and enjoyable lives.

The Question of Gear.

BY F. T. BIDLAKE.

THE giving of advice on the question of gear is one of the most difficult tasks for anyone attempting to cover all cases, as so much depends not only on the strength and skill of the rider, but the pace at which he desires to go, the length of his journey, the character of the country through which he travels, and whether he is a fair weather butterfly or an all-round-the-year mud-plugger. It is obvious that one gear cannot be best under all varieties of these conditions, and the consequence is that advice is necessarily generalized.

As a result of that generalization, my urgent advice is for the average man on average roads under normal circumstances to use a 68-inch gear, and inasmuch as the average woman is less muscularly powerful, and at the same time usually more agile than the average man, I would urge no higher gear than 58 for her use, and with these two recommendations, I assume that the riders are of average height and use cranks of 6¾ inches in length.

A very short, or a very tall rider, who would be suited either by a 6 or a 6½ inch crank instead of 6¾, might conveniently lower or raise the gear in proportion, as the case may be.

I know that there are critics who vote this gear absurdedly low, and talk glibly of their 80 or 90 gears, but for the overwhelming majority of riders such an enormous gear is absolutely wrong.

The only excuse for a very high gear is that it must be used for a long sustained high speed effort on the track. If I were advising a man as to the gear necessary for ten miles behind quadruplets on a cement path at record speed, I should certainly not talk about the sixties, or even seventies or eighties, but high up near the hundred.

The high gear fashion is a craze that will pass. A high gear seems comfortable, stately, graceful, when you start for a ride and are full of energy, the road is level, or the wind fair, and if your journey be very short, or a park ride, you may like the slow foot action, and by never riding till you are tired you will escape the inconvenience of the high gear.

A low gear postpones the tiring point. On the high gear you may concentrate your efforts into a burst, as do sprinters, or only take very little untiring rides, as do the showy folk; but on a low gear you will go a long way and not feel tired at the end.

Of course, with any gear fatigue must set in sooner or later. With the no gear at all of sitting in a chair you ultimately become tired, and as a general rule the higher the gear (above the mean) the sooner will fatigue come. I grant it is grand while it lasts, but it is exhausting for ordinary mortals.

The fatigue due to riding a low gear passes off immediately on resting, but when you are done up on a high gear you seem to want a fresh pair of legs.

On a high gear a tired rider seems helpless and the work enormous, on a low gear he can "cut and come again," and always find a little left.

But, people object, as you seem to get so much more power out of a high gear. This is a fallacy; you have to put so much more power into it every stroke.

It might be argued that in the long run it comes to the same thing with you, make a few powerful strokes per mile or a lot of gentler ones, but it is in that difference that the whole secret lies.

The gear is only a means of using your power, it gives you nothing, and if you prefer hard work slowly done to light work speedily executed, you are a high gear man. Most people are not.

Heavily built men with large limbs and huge muscles can ride high gears. They have strength rather than agility, and can do the heavy dumbbell work of a high gear rather than the speedier revolving of lighter loads.

A low gear is better adapted for starting a machine and for back-pedaling at moderate speeds.

In the limit, if pedaling is excessively fast, it is of course harder to keep one's pedals on a low than on a high gear, but this limit does not come at ordinary speeds, and for speeds above twenty miles an hour such as may be reached down hill by the average man, he will usually

have his feet on the rests.

Uphill, at a given speed, the low gear has an advantage, in fact on a 63 gear a man can get up a hill so steep that he could not push the pedals round upon it if he were on an 88 or 96.

At the same time, if a hill can be rushed, and is not too steep, a high-gear man will be faster than a low, inasmuch as there is not enough time per stroke for the low gear man to get his work done.

Hot Time in the Old Homestead.

(The Wheel.)

Oh, there's sulphur in the kitchen
And there's brimstone in the hall,
While oaths, loud an portentious,
Ricochet from every wall;
The women walk on tiptoe,
Lest they feel effects of ire,
For father is attempting
To repair a punctured tire.

There are sprockets on the doorknob,
And the saddle's on a nail;
The rims are on the gas jet
And ball bearings fall like hail;
There is gore upon the carpet,
Caused by blistering spokes of wire,
As father is attempting
To repair a punctured tire!

Oh, the baby's gone to gasping,
And each breath seems like its last,
For it's swallowed half the stickum
And its insides are glued fast;
Little Johnny's lost the rubber
In his wish to help the sire
In his wild, misspent endeavor
To repair a punctured tire!

Oh, the gasolene for cleaning
Has exploded like a flash,
And the tub for tracing bubbles
Has tipped over with a splash;
Hush! 'Tis finished! Now he's pumping!
"Failed to stick!"—and through the mire
To the puncture man goes father
With his still deflated tire.

The Hum of the Horseless

Selecting a Name.

The Electrical Review believing that vehicles propelled by electricity lack a designating name to distinguish them from other vehicles recently undertook to supply this deficiency by instituting a prize competition among its readers for the best designation of "the electrically propelled, self-contained vehicle for roads and streets." About 400 names were received in competition and were submitted to a committee of well-known electrical experts for consideration. The word electromobile was awarded the first prize. This is a singularly euphonious term and has two great merits, that it is easy to pronounce and can be easily shortened into "electro" or "mobile." It certainly seems to be by far the best of the numerous words suggested in competition, among which are the following:

Accelawatt,	Autovolt,
Equine-nit,	Elecar,
Sacrotom,	Pacolet,
Automo,	Franklin,
Aut,	Automoto
Faraday,	Chevaless,
Autopropelentric,	Moby,
Electragon,	Piantemobile,
Trolly-Ho,	Electrola,
Moto,	Autihorse,
Locomobile,	Voltcar,
Telecar,	Quatrecycle,
Electropel,	Odomotor,
Autogo,	Autema,

It cannot be said that any of these are as appropriate as electromobile yet it is possible that a better word will be coined when the public becomes closer acquainted with such vehicles.

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Although most people think the automobile is an up-to-date product of this decade one was really in use in the streets of New York a half-century ago. It was invented by Robert Dudgeon, who built the "steam road wagon," as it was called, to carry him to and from business and to convey his family to church. It was a noisy apparatus and consumed two bushels of coal and nearly a hogshead of water on each trip. Mr. Dudgeon rode in it for ten years, when the city authorities forbade his further use of it. The machine still reposes in the inventor's Long Island home. A similar automobile, built by Mr. Dudgeon, was exhibited at the Crystal Palace, London.

The postal authorities of Buffalo, N. Y. are experimenting with an automobile wagon for the collection of mails. The first test showed that the mail from forty boxes, covering a territory of six miles in length, was collected in less than half the time necessary to cover the same route with a horse and wagon. If the experiment proves satisfactory it is possible that a number of automobiles will be placed in regular commission.

—

Central Park is now the only park in New York city closed to the automobile. It is expected, however, that it will be in line with the other parks soon, now that the president of the commission has signified his willingness to ride through the park in an automobile to determine whether or not the vehicle would scare the horses.

—

The new electric sweeping machines which will be used in Paris this fall can be run back and forth over a street to sprinkle it and the return and sweep the dirt in piles. The dirt is then taken up by electrically-driven carts and carried away.

—

At a town meeting on July 30, the fathers of Bar Harbor adopted a series of drastic bylaws virtually prohibiting the use of automobiles in the town. It is to be regretted that a town should fight that which has never done any damage.

—

Thomas A. Edison is deeply interested in the automobile and will shortly produce a vehicle of his own invention, which, it is said, will be more simple and lower priced than any of the vehicles on the market at the present time.

—

There are no restrictions on the use of automobiles in either London or Paris and the vehicles circulate everywhere in these two cities.

—

An electric vehicle built in France recently made a trip of eighty-five miles in seven and a quarter hours, without recharging the battery.

—

An automobile fete will be held at Pau, France, next February.

The Gospel of Good Roads

What Poor Roads Cost Our Farmers.

If ever there were two classes of people that had a good cause in common they are the bicyclists and the farmers, argues the Scientific American. The question on which their interests agree is that of the need of good roads, for while a hard, smooth surface is an absolute necessity to the wheelman, it is of even more vital importance to the farmer, seeing that the condition of the roads makes a serious difference one way or another in his yearly profits. As the result of an inquiry made in 1895 by the United States Department of Agriculture, replies were received from over 1,200 counties giving the cost of hauling crops in various parts of the United States. The average load hauled was found to be 2,002 pounds; the average haul, 12 1-10 miles; the average cost of hauling a ton of crops to market was $3.02; while the average cost of hauling a ton for a distance of one mile was 25 cents.

In order to compare the roads of the United States with those of Europe the bureau through its consuls made careful inquiry on the subject of cost of hauling in England, France, Germany, Belgium, Italy and Switzerland. The average cost of hauling one ton one mile was found to be in England 10 cents, in France 10 cents, in Germany 8½ cents, in Belgium, 9½ cents, in Italy 7½ cents, and in Switzerland from 6 to 8 cents, the average of all these European states being 8 6-10 cents per ton per mile. More than one cause may enter into this determination of cost, but that the great cost in America is due to our poorly made dirt roads is proved by the fact that while over the superb roads of Europe a farmer will haul three or four tons at a load, our farmers are able to haul only a ton or less than a ton over the "plow and scraper" ridge of soil which even at this late day is dignified by the name of road in many parts of the country.

The Evolution of the Highway.

The steel-shod roads established in some parts of the country recall the iron highways in Pennsylvania of 60 odd years ago, which are within the memory of many living man. These were state railways, says Farm and Home, used by steam trains and by private parties who cared to put on their little cars for hauling merchandise. Fancy a train of cars held up to allow a driver ahead to stop and water his horses! There was so much delay and profanity on account of the failure of horses and locomotives to get along amicably together, that the state commissioners finally ordered the locomotives off the road the entire afternoon. Looking forward as well as backward, we can set these tiny beginnings beside the modern reality and wonder what transformation another 60 years will work upon our highways. Cycle paths across the continent, perhaps, which will enable a man and his wife to pedal from Chicago to San Francisco on a pleasure trip, and perfect roadways over which horses and electric vehicles will haul marvelous loads.

Good Roads Movement an Old One.

The good roads movement in this country is not of recent origin, as many who are following and agitating it may think. In the earlier part of the century an agitation for good roads was kept up for nearly fifty years, and had among its leaders such men as Henry Clay and John Calhoun. This movement resulted in the government taking a sufficient interest in it to provide for a national turnpike through the leading eastern cities to those in the west. About the time the movement was well under way, the railroads, as a means of transportation, became so prominent as to cause the road work to stop.

Railroad building has practically reached its limit in this country now, though there will be extensions of the system gradually, but the good roads movement which they stopped in the earlier days is now receiving fresh impetus from the lessons that good steel highways have taught the people, and because of the necessity of good highways as feeders to the immense railroad systems of the country.

Instead of having one kind of good road to the detriment of the other, it is very probable that the work of the League of American Wheelmen, in conjunction with the Farmers' National Congress and other agricultural organizations, will result in the work of road building being taken up where it was left off some years ago and completed as the necessities of the country demand. To do this will require millions of dollars and much patient effort, but the good roads agitators are confident they can convince the legislators and the people that improved highways are an economic necessity.

The American automobile is already achieved. According to the St. Paul Pioneer Press its next need is a well-articulated system of roads to run on, along which the inns and repair shops will spring up in immediate response, as they have done already in answer to the more modest needs of the American bicycler.

Helpful Hints

Any reader sending in an acceptable hint will receive THE PNEUMATIC free for one year.

A tallow candle makes a good chain lubricant.

* *

It is not good policy to ride "hands off" in crowded thoroughfares.

* *

Use none but the best lubricating oil for the bearings. A few drops every hundred miles are sufficient.

* *

Cyclists using acetylene lamps may be interested to learn that an ounce of carbide gives about an hour's light.

* *

Do not pass a vehicle on the wrong side unless it is absolutely necessary and then do it with the greatest caution.

* *

Do not lounge about in perspiration wet clothing after a ride. Keep moving until you can make a change to dry clothing.

* *

Paraffin if mixed with a little nitro-benzol and poured over carbide is recommended by a French scientist as a means of preventing odors. The mixture is said to be of no detriment to the carbide.

* *

The proper way to pedal is to lift the heels just before the crank passes the dead center on the downward stroke. The higher the heel is lifted the greater power will the rider be able to exert on the pedals. Similarly, it should be dropped just before the rising pedal passes the dead center.

* *

To ride with one's mouth open is not only excessively ugly and foolish looking, but it adds greatly to the fatigue. Breathing through the nose entirely should be cultivated, and the lips should always be closed unless when speaking. The uncomfortable thirst, of which so many novices complain, is largely due to their habit of breathing through the mouth, and will be found to diminish when the proper method of taking breath is learned.

How many cyclists examine their wheel carefully before every run? How many accidents are recorded against neglecting to do so? To the first question the answer is few; to the second, many. It requires only a few minutes to test the parts most likely to go amiss by carefully following this programme:

(1) Feel back and front tire, gripping rim with the fingers, and pressing both thumbs on the tread. The front tire should yield to the pressure rather easily; the back ought to be but barely compressible; though, of course, the rider must suit his own natual requirements.

(2) Shake the front wheel in the forks, and see that there is no appreciable side play; see that the wheel revolves freely, and that the weight of the valve is sufficient to cause oscillation; see that the axle nuts are fairly held on the axle, using a wrench if the machine has been out of your own hands.

(3) Inspect the driving wheel similarly, and note also if it is evenly between the forks.

(4) Move the crank to and fro to detect looseness in the chain. There should be a play of less than half an inch, measured at the crank end.

(5) Pull the crank sideways to note any looseness in the bracket bearings, and test the pedals similarly.

(6) Glance at the saddle-post bolt; also see that the saddle is at its proper tilt.

(7) Feel the contents in the tool bag.

(8) Lift the machine by the handles, and lower to the ground again to observe if there is any looseness in the head. See that the bolt of the head adjustment is not loose, and finally press the brake firmly on the tire, and note if it goes on all right.

(9) Look that none of the lubricating holes are open; and examine the chain to see that it is not muddy or rusty. Now and then glance at the bolt and nut which secures the chain. Make sure that they do not rub against anything in their circulation.

Grandfather Kruger is a stern old man. His town Johannesburg imposes a yearly tax of $2.50 on all bicycles, and a fine of $25 for riding on the wrong side of the street, or for lack of license, bell and lamp.

Don't neglect to have a good look over your machine the night before a century run. Oil it, and lubricate the chain with a piece of soap if you have nothing else.

Talks on Touring

BY THE TOURIST.

Any information pertaining to touring, such as distances of trips, condition of roads, etc., will be given in this department on request. Communications should be addressed to "Tourist," The Pneumatic. Readers submitting acceptable descriptions of tours, articles on touring, etc., will receive the Pneumatic free for one year.

All the details for the tours to be made after the National Meet of the L. A. W. at Boston, this month, have been completed and details can be secured by addressing the Touring Department, No. 630 Atlantic Avenue, Boston, enclosing stamp for reply. These tours will be through the White Mountains and the Berkshires and along the North shore. They will be in charge of the National Touring Department of the League and have been arranged so that they may be enjoyed at a nominal expense.

#

The recent visit of President Keenan, of the League of American Wheelmen, to Europe has had results which will be the beginning of a new era in cycling touring abroad. The position gained for the League in this feature of the pastime is one of which every international tourist will be almost compelled to take advantage so alluring are some of the privileges which now come from L. A. W. membership.

The most important accomplishment of the president was the completion of an alliance with the International Tourist Association, an organization composed of the cycling associations of all the leading countries of Europe. Under the agreements in this organization the benefits and privileges are reciprocal and many of its advantages can be gained by an American Tourist in no other way than by membership in the L. A. W. These are to be obtained through the services and assistance of thousands of officers of the various allied organizations who are situated in all parts of the Continent. Official representatives of the L. A. W. have also been appointed in all the large cycling centres of Europe. In addition to this the alliance will result in a very considerable momentary saving, as L. A. W. members will derive all the benefits of discounts allowed allied members.

Cycle Paths.

Novelty Bicycle Ride.

The lot of wheelmen in the mountainous region about Los Angeles and Pasadena in southern California is not specially happy because bicycle paths are unknown and out of town the country is in such state that bicycling has its pains as well as its pleasures. However, there is in preparation a road for wheelmen which will be like nothing else in the world, according to the Scientific American.

An elevated cycle path nine miles long is to be built between Los Angeles and Pasadena. Three railroads and an electric line now connect the two cities, but other means of travel were not provided for. At least 30,000 wheelmen in Los Angeles county alone made it necessary that there should be some place for them to ride.

The path is to be supported by pillars of varying heights to make up for the inequalities of the grade. The floor is of board and is ten feet wide, with a four-foot lattice work fence on each side to prevent wheelmen from running off. Electric lights will be provided and midway a resting place and casino will be built. The toll for the privilege of riding will be slight and annual passes will be issued with each share of stock. Cyclists will have beautiful scenery to look upon as they take the pleasant ride.

Arrangements have been made with the customs authorities whereby bicycles to be used in the championships at the Montreal meet will be admitted into Canada free of duty. For this purpose the Transportation Department of the Canadian Wheelmen's Association has provided certificates, the presentation of which will frank the machine through. The certificates can be obtained from the L. A. W. Racing Board.

—

Bicycles will be carried as baggage hereafter by the Great Northern Railroad in the state of Washington. The company will check them in the same way as ordinary baggage, except that no more than one bicycle will be carried on one ticket. They will be taken on the weight basis, with excess charges the same as other accompaniments.

—

In giving advice to our country cousin the Farm Journal says: "If you ride a wheel avoid the monkey-on-a-stick style. It is not only ungraceful, but unhealthy and idiotic to ape professional racers."

—

Teddy Hale started on July 31 at London to ride a century a day for one year, Sundays excepted.

—

"Polkuporain" is the word adopted by Finlanders to designate a bicycle.

Our Busy Cycledom

First Tricycles In New York.

On the 25th day of June it was eighteen years since Police Justice Murray committed Wright, Foster and Walker, three citizens of steady habits and good repute, into the hands of the keeper of the New York city prison, with the solemn mandate that he should them "safely keep for the space of five days," for having committed the unlawful act of riding tricycles in Central Park, says Collier's Weekly. The L. A. W. had just rounded the first year of its history. The bicycles of that day were of the old high-wheeled sort, having solid tires and stubborn saddles, and weighing anywhere from fifty to seventy-five pounds stripped; tricycles were even more clumsy and cumbersome, and it was gravely discussed by many of our best newspapers whether any of these pedomotive contrivances should be seriously tolerated. In the Central Park case, Wright and his companions sued out on a writ of habeas corpus, and carried their argument into the Supreme court. Able counsel were retained and the contention assumed wide proportions. Petitions, statements, letters, affidavits and orders found place in the record and finally a referee was appointed to take testimony, which he proceeded to do to the extent of 823 pages.

To look back at the conditions of 1881 is to realize with greater force the strides which cycling has made in the intervening years. I sometimes think it is well for the sport that the wheelmen of the early '80s were young and brave, stout-hearted and strong-willed, and possessed of that versatile disposition which led them to defy the unjust statutes of the state with as much confidence and considerably better results than when they wrestled with the more inevitable laws of gravity and equilibrium. They sometimes progressed so rapidly to please thoughtful people, but thought mostly of other things, but their trend was well directed and the results have been mainly good. The wheel has found its dignified and permanent status; it has taken to itself a thousand improvements; and these have made it useful and practical to most people and delightful to everybody. But, more than all, it has become an assertive factor in the settlement of many public questions. The wheel has found a place upon the public roads and the public highways have been found to be unfit for its use.

—

Only those who live in the same flat with people who are in the habit of leaving their bicycles in the lower hall-ways where everyone who passes bunts his shins against the pedals will fully appreciate the folding bicycle recently invented.

The man who invented the baby carriage which could be flattened out and placed under the bed, or stood against the wall behind the sofa, worked a great benefaction. It was the best thing since the jointed fishing rod. Then a man invented a piano which could be readily taken apart and carried up the narrow staircase of a lodging house and then set up on a little room instead of being swung into an outside window, as a safe is generally put into an office building. But there are more bicycles than there are either baby carriages or pianos, so that the inventor of the folding bicycle is entitled to the greatest credit.

The folding bicycle is pivoted in the center and by pressing the two spring bolts (thus releasing the locks) the front part of the machine can be swung around against the rear, thereby making it only half the original size, and very convenient for carrying in or out of the house, up or down stairs, along narrow passages, etc., leaving one hand free to open and close gates and doors. It can be taken on and off cars and boats; it can also be taken in elevators, or carried up or down any stairway, however winding. It locks automatically when thrown into position, while it is claimed to be quite as strong as the ordinary machine.

For military purposes the folder can be packed with everything that is carried by a soldier mounted on horseback; while it can be hung on the shoulder and allow the soldier the free use of his hands. Perhaps the chief advantage of the machine, however, lies in the fact that for railway travelling it has no superior, as it can be placed underneath the seat in a railway carriage.

—

A cycle track at Sydney, Australia, is being lighted by means of inverted arc lights. Fifty-five arc lights and seventy incandescents are placed around the track at intervals of thirty-five feet, the lamps being inverted with the reflectors immediately over the arc. There are absolutely no shadows cast, and leading cyclists are of the opinion that it is safer to ride at night under this light than by daylight.

—

The Blank Bay district in Boston is patrolled by policemen on bicycles. They wear citizens' clothes and would be considered by theives to be ordinary wheelmen.

Racing, Racers and Records

Why Zimmy Came Home.

Early in '93, it will be remembered, says a writer in an English journal, that Zimmermann fell in the 25 miles championship of Ireland, and, besides being shaken, lost a few teeth. With his head in a sling, a few days later he visited Herne Hill to watch the "boys" train. Among the "boys" was W. C. Sanger, who had come over from America for the purpose of meeting Zimmerman, and also to win the one mile N. C. U. championship. They were not the best of friends, but Sanger could not help remarking, "Sorry to hear of your accident!" and Zimmermann replied, "I guess I'll soon be fixed up again!" The latter rider told Glynn, of the Palmer Tire Co., that the N. C. U. would grant him a permit, conditionally that he did not ride a Raleigh, and that he had cabled over for a Columbia and would accept the N. C. U. terms and compete in the mile championship. Whilst they were talking, Culver, the trainer of Sanger, called out quite loudly, "Ride twice round, then come to the top of the banking, and go all out for the quarter." At this Glynn pricked his ears, and wondered that Sanger should run a trial with his rival looking on. He pulled his stop watch out and noticed Zimmerman do likewise. Both snapped Sanger as he shot down the banking. Turning round, Glynn asked excitedly: "What time have you got?" for he made Sanger beat the world's quarter record by over a second; but Zimmerman's only reply was: "I guess I'll not be dictated to by any English Union!" In other words, he did not relish the speed at which Sanger had flown around the track. He left for America, and, as the world knows, Sanger won the championship.

By the Light of the Moon.

The phenominal time in which Hurst won the Paris-Bordeaux race has caused the victor to make the following statement regarding the pace:

"I was going at a pretty good rate behind Girardot; close behind me came Charron's motor, with Fischer behind. Charron carries a powerful acetylene lamp, which bathed me with its rays. I enjoyed it at first. Soon, however, I began to feel a sensation of slackness creeping over me. So I called to Girardot: 'Faster, please.' We increased our speed from 45 kilometers to 50. But as we increased our speed Charron and Fischer did the same. 'Faster still—Charron is on us!' Then what I expected occured; the light grew feebler; my courage returned, and I called out 'Quicker still; we are leaving them.' And it seemed that Fischer was also putting on the pace, for I saw the white light playing on the back of the motor. I grew nervous to exasperation; I yelled out wildly: 'For Heaven's sake, faster!' This time, Pognon, who had the seat next to Girardot, leant back and called out: 'What's the matter? We are going 50.' 'Charron's on me,' I replied. 'What's that? We've left Charron and Fischer far behind.' 'No, I can see the light on the back of the car—look for yourself.' I believe Pognon thought I was going crazy; but he looked, saw the pannel white with light and burst out laughing. 'But that's only the light of the moon!' Then I understood—and that's how I was enabled to get my lead!"

Cycling is becoming every day more prominent in fiction. It crops out in all sorts of places, which only goes to prove how thoroughly it is establishing itself in the daily life of the people. In Miss Ethel F. Heddle's novel, "The Pride of the Family," the hero is a young man who has amassed wealth in the cycle trade, and buys a Fifeshire estate from the impoverished but proud owners. In another work of fiction, Mr. N. W. Williams's "The Green Field," the heroine, a strong-minded young person, rides a bicycle without a brake and comes to grief in consequence. Then comes the future husband to render assistance.

The fire laddies of Paris are now mounted on an electric cart. It is a handsome vehicle, with a seat in front for several firemen, and a horizontal steering wheel. Back of this is a "dos-a-dos" arrangement which will permit of seating several firemen. Between these seats is a box for hose. The batteries are carried underneath, and scaling ladders are carried at the side.

It is expected that the old clumsy street cleaning machines now used in Paris will be displaced by electric automobiles. The new machines have the motor in front, while underneath and behind is a tank for water. The sprinkling device and the sweepers, which can be raised out of contact with the pavement when desired, are in the rear.

The bicycle is ridden by more than 200 members of Parliament.

. . . THE . . .

League of American Wheelmen

For Any Information Address ABBOT BASSETT, Boston, Mass.

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7.	Indiana	1474
8.	Rhode Island	1449
9.	Illinois	1421
10.	Connecticut	1342
11.	Maryland	1046
12.	Wisconsin	880
13.	New Hampshire	565
14.	Missouri	536
15.	Kentucky	535
16.	Maine	499
17.	Iowa	423
18.	Colorado	394
19.	Southern California	360
20.	Minnesota	339
21.	District of Columbia	322
22.	Delaware	180
23.	Kansas	170
24.	Virginia	143
25.	Vermont	122
26.	Georgia	85
27.	West Virginia	84
28.	South Carolina	77
29.	Florida	58
30.	Montana	53
31.	Washington	53
32.	North Carolina	21
33.	Alabama	21

Few unattached wheelmen realize what the League of American Wheelmen has accomplished, unselfishly, for the good of all cyclists since its organization twenty years ago. Some of the most important are the right to use the common roads (which at first was not conceded,) railroads are required to carry bicycles as baggage, wheels are given all the privileges of other vehicles, cycle paths are being built in numerous parts of the country, and cyclists are not subject to a special tax. These are some of the things of National importance. In addition the State divisions are constantly working for special legislation affecting their respective States. All these and much more are done for wheelmen in general, and there should be more support given the organization, that the work may be carried on and extended. Besides the things enumerated as accomplished, the League has special privileges and accommodations for members only, and that can be secured in no other way than through membership. Every wheelman in the country should be a member of the League.

Wheelmen do not fully comprehend that all of the privileges they enjoy have been secured through the League of American Wheelmen and that in addition it is through this organization that they have secured the rights on streets, roads, railroads and elsewhere to which they are entitled. This has been done with the support of a membership limited in numbers when compared to the multitude of wheelmen there are in this country. If the L. A. W. membership were only doubled much more could be secured, and even then there would not be anything near the number of members there should be. If wheelmen generally would support the national organization which is doing so much for them by becoming members, at the cost of a dollar a year, there is no limit as to what might be accomplished in their interests as a class.

A. B. Choate, of Minneapolis, who was successful in securing the opinion regarding cycle paths which has been so valuable to wheelmen, has been appointed a member of the L. A. W. Rights and Privileges Committee to fill the vacancy recently created in the committee by the resignation of F. P. Van Valkenburgh of Milwaukee.

A bicycle insurance company, incorporated under a special enactment of the Wisconsin Legislature, has been formed and will do a general business of insuring bicycles against theft. In recognition of the value of having support from the L. A. W. the company offers a discount of fifty per cent to League members.

The Rhode Island division of the L. A. W. has been incorporated. The officers are the same as before the change in form of organization.

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I want to inform you, in words of highest praise, of the benefit I have derived from Ripans Tabules. I am a professional nurse and in this profession a clear head is always needed. Ripans Tabules does it. After one of my cases I found myself completely run down. Acting on the advice of Mr. Geo. Bowser, Ph. G., 533 Newark Ave., Jersey City, I took Ripans Tabules with grand results.
Miss BESSIE WISEMAN.

Mother was troubled with heartburn and sleeplessness, caused by indigestion, for a good many years. One day she saw a testimonial in the paper indorsing Ripans Tabules. She determined to give them a trial, was greatly relieved by their use and now takes the Tabules regularly. She keeps a few cartons Ripans Tabules in the house and says she will not be without them. The heartburn and sleeplessness have disappeared with the indigestion which was formerly so great a burden for her. Our whole family take the Tabules regularly, especially after a hearty meal. My mother is fifty years of age and is enjoying the best of health and spirits; also eats hearty meals, an impossibility before she took Ripans Tabules. ANTON H. BLANKEN.

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I have been a great sufferer from constipation for over five years. Nothing gave me any relief. My feet and legs and abdomen were bloated so I could not wear shoes on my feet and only a loose dress. I saw Ripans Tabules advertised in our daily paper, bought some and took them as directed. Have taken them about three weeks and there is such a change! I am not constipated any more and I owe it all to Ripans Tabules. I am thirty-seven years old, have no occupation, only my household duties and nursing my sick husband. He has had the dropsy and I am trying Ripans Tabules for him. He feels some better but it will take some time, he has been sick so long. You may use my letter and name as you like.
Mrs. MARY GONSALVES CLARKE.

I have been suffering from headaches ever since I was a little girl. I could never ride in a car or go into a crowded place without getting a headache and sick at my stomach. I heard about Ripans Tabules from an aunt of mine who was taking them for catarrh of the stomach. She had found such relief from their use she advised me to take them too, and I have been doing so since last October, and will say they have completely cured my headaches. I am twenty-nine years old. You are welcome to use this testimonial.
Mrs. J. BANCROFT.

My seven-year-old boy suffered with pains in his head, constipation and complained of his stomach. He could not eat like children of his age do and what he did eat did not agree with him. He was thin and of a sallow color. Reading some of the testimonials in favor of Ripans Tabules, I tried them. Ripans Tabules not only relieved but actually cured my youngster. His headaches have disappeared, bowels are in good condition and he never complains of his stomach. He is now a red, chubby-faced boy. This wonderful change I ascribe to Ripans Tabules. I am satisfied that they will benefit any one (from the cradle to old age) if taken according to directions.
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The Pneumatic,

207 Grand Ave., Milwaukee, Wis.

THE PNEUMATIC.

VOL. X. SEPTEMBER, 1899. No. 3.

My Early Morning Spin.

BY WALLACE DUNBAR VINCENT.

«HENRY SMITHERS, you're not going to bed at eight o'clock, are you?» asked my wife in amazement.

«That's exactly what I am going to do,» I replied, «and I'll tell you why. I'm going to get up at five o'clock, and take a spin before breakfast.»

«What for, I'd like to know? You're usually so sleepy at half-past seven that it takes all my strength and patience to get you up.»

«Well, I came home in the car with Peterson, to-night, and he says he gets up at five every morning, jumps into his bicycle togs, grabs a mouthful to eat, and by five-twenty he's spinning down the road. He says it's the only time to wheel and get the best results. The air is like champagne, so he says, and the birds sing, and—er—well, it's just fine, and he feels braced up all day, you know. So I'm going to try it.»

My wife glanced at me with a withering expression.

«A lot you care about the air and birds,» she said. «I never knew you to be poetical before. You've got some object back of all this, and I want to know what it is!»

«My dear!» I exclaimed, reproachfully. «Haven't I been your husband years enough for you to know that everything I do is really for your sake? By giving up a certain amount of rest in the morning I believe I can fit myself for better work during the day. The more money I make in the city, the more comforts you can have. So there you are.»

«Is Mr. Peterson going to-morrow morning?» she asked.

«Oh, yes. They go every pleasant morning.»

«*They!*» exclaimed my wife. «You don't mean to tell me that that fat Mrs. Peterson goes too?»

«No, indeed,» said I, «of course not. Who said anything about *Mrs.* Peterson, I'd like to know?»

«You said «they,» didn't you?»

«Well, if I did, I meant to say «he,» of course. How women will quibble over a little slip of the tongue!»

My wife's eyes began to glitter for some reason.

«Henry Smithers, look here!» she commanded. «Tell me the truth!»

«Lucy, I always do!» I affirmed.

«Is that Peterson man going alone?»

«No, my dear, he isn't.»

«I thought as much! Now tell me who is going with him!»

«I am.»

«Possibly you think that remark funny. Now, see here Henry, is that putty-faced cousin from the city, who wears that shameful costume, going?»

«Lucy,» said I regretfully, as the tears almost came to my eyes, «if you only knew how your absurd jealousy cuts me to the heart, you would never speak so again! Many a man has been driven to——»

«Is that creature going?» interrupted my wife, in an awful tone.

«I—I really don't know,» I replied solemnly. «I never should have remembered it, if you hadn't asked me, but it seems now as though Peterson did say that his cousin does go occasionally.»

My wife immediately swept out of the room, and I went on preparing for bed. When she returned, I was both surprised and overjoyed to see a smile upon her face.

«You old goose,» she said playfully, «did you suppose that I was jealous? I only wanted to see if you would try to keep anything back from me, that was all.»

«No indeed,» I returned, «I was only trying to keep up the joke.»

So everything was lovely again, and I set the alarm clock and got into bed. I laid out my bicycle suit on a chair, for I didn't want to disturb Lucy at that time of day; and I went to sleep with happy visions of my coming spin. Immediately, so it seemed to me, I was riding my wheel. But instead of flying along the smooth country roads, I was bumping over the cobbles in a city street. Behind me came a trolley car, which seemed to have no need of tracks, and pursued me relentlessly whatever way I turned. In despair and misery I did my best to out-scorch the electric monster; but the clanging sounded just as near. I was on the verge of madness, when something made me open my eyes, and there was that old clock ringing away with all its might. I got out of bed as quickly as I could, and stopped the thing. I did not dare to strike a light for fear of waking Lucy, who seemed to be sleeping soundly. After scraping myself painfully against a corner of the bedstead, I succeeded in locating the chair upon which I had carefully laid my golf suit.

«I'll slip into all but my shoes,» I said to myself, «and put those on down stairs, so as not to wake Lucy.»

I was in a good deal of a hurry to get dressed, not only so as to meet Peterson, but because I was shivering from the cold. Lucy has decided ideas about ventilation, as well as about most things, and the window is open in our bedroom regardless of the weather. I progressed rapidly until I came to my trousers, then there was a hitch. Somehow, I couldn't seem to get into them. The legs seemed to be about half the proper width, and I couldn't get my foot through to save my life. It seems impossible now, but I really believe that I fooled with that garment, and shivered, for ten minutes. Then I found that I had been trying to adorn my lower members with my jacket.

Thoroughly disgusted with my stupidity, I grabbed my things and crept out the room and down to the kitchen. I lighted a lamp and was dressed in two minutes. Now for what Peterson called «a bite.» He said he generally cooked some cereal, such as oatmeal. I didn't find any oatmeal in the pantry, but there was a whole package of hominy. I put about half of it into a sauce-pan, with a little water, and set it on the range, just as Peterson told me to do. Then I discovered that the fire was out.

«Wonder what the mischief Peterson does in a case like this!» I muttered. «Ah, there's the oil stove—just the thing!»

Filled with hope, I tried to light the thing, but in vain. Then I remembered that it hadn't been used for a long while, and probably needed filling. It did. When I got through with it, it *didn't*; for the reservoir of the stove overflowed before I knew it, and the oil ran all over everything in the vicinity. I lighted the wick, and put on the sauce-pan. Then I looked at my watch. It was ten minutes of six!

«By George!» I exclaimed, «where has the time gone? I'll never be able to catch up with them—I mean him—now!»

I stood for a moment, undecided whether to

creep back to bed or not. The thought of bed never seemed more alluring, but supposing I should happen to wake Lucy, and have to acknowledge defeat! Never! «Come what may,» I said to myself, «I'll have a spin, even if I'm late for the 8:39.»

While the hominy was cooking, I thought I might as well oil up my machine, and save a little time. I took the lamp out into the hall, and set it on the floor. The sight of my wheel revived all my former desires. In fancy I could feel the bracing air and hear the birds, and all that sort of thing. Peterson had said that the air smelt just like colonge, down by the grove. —or something to that effect. Just then my visions were rudely dispelled by an odor which made me fear the house was on fire. I dropped my oiler, ran into the kitchen, and found that the hominy had boiled over to such an extent that it had put out the fire. From the sauce-pan arose a thick, black smoke, which was rapidly filling the room from floor to ceiling. Coughing and sneezing I made my way to the windows, and opened them all, back and front. Then I took the sauce-pan, with the cremated remains of my breakfast, and threw it into the ash barrel. I decided, to ride that morning without «a bite.»

Mad and cold, for the frosty air came in a good deal faster than the smoke went out, I determined to mount my wheel without further delay, and not to look at my watch until I was miles away from home.

«Come on, old fellow,» said I, as cheerfully as I could, considering that my teeth were chattering, «and bear me along through the champagne air!»

But my steed appeared to be balky. Instead of rolling along the hall in its accustomed way, it dragged, as though opposed to early morning spins. I got the lamp again, for the hall wasn't very light even now, and my heart sank—my tire was flat! I had ridden an entire season without a puncture, but now, at the crucial moment the tire was flat. But stay! Perhaps it wasn't a case of puncture after all; maybe the valve-nipple had worked loose. I got down on my hands and knees, and found that the nipple was missing!

What I said in an undertone as I crept around that hall, need not be recorded. Suffice it to say that I found a number of pins, tacks and bits of broken glass, but no valve-nipple.

As I went softly up stairs, the clock struck seven. If Lucy were still asleep, I would get into bed and pretend not to have heard the alarm at five. But fate was against me again. Lucy was dressing.

«Well, my early bird,» she exclaimed, «have you had a good ride?»

I assumed what I intended to be an expression of health and happiness. Just how it looked, I have often wondered.

«I should say so!» I returned. «Peterson and I went as far as Poole's Corners. I tell you; Lucy, I've never before known how beneficial and enjoyable wheeling can be!»

«Do you think you'll feel better for it all day?» asked my wife, kindly.

«Lucy,» said I, earnestly, «I believe the effects of this trip won't wear off for a week!»

What looked like an exultant glitter came into Lucy's eyes, but of course I must have been mistaken.

One day last week, while looking for something in Lucy's work basket, what should I come across but that missing valve-nipple!

"Alfred the Great."

BY H. HOWELL MEIKSELL.

"ELSIE," said my sister nervously, "I believe I've got a puncture!"

I looked at her apprehensively. "Never!" I cried, slowing down as she did, and jumping off my machine.

We examined the back wheel of her bicycle and found her surmise correct, then turned and looked at one another in dismay. We were four miles from home on a dull February afternoon. It was half-past three, and mother had forbidden us to ride after four.

I stood and considered a minute, then said: "There is no help for it. I must ride on to Baybridge and get this mended for you. You cannot possibly ride it as it is."

"Oh, Elsie! And leave me alone here!" As she spoke, Cissie gave a terrified glance at the high walls of a large asylum, which extended on our left for nearly a mile.

"What else can we do, Cissie?" I asked. "You aren't able to ride one bicycle and lead another, as I am, and it would be madness for us to walk two miles at this time of day, when I could go alone so much more quickly."

"But I couldn't——she began again.

"I know what you can do," I interrupted, "The lodge gates of the asylum are only a hundred yards off. We will ask the lodge-keeper to let you stay there."

"Very well," said she, and in a few minutes I left her snugly seated by a cosy kitchen fire.

I had a fairly steep hill to start with, and walked the two bicycles up it; then a sharp run down, which I coasted, clutching Cissie's bicycle firmly with my left hand; then a gradual upward incline where the asylum wall ended, and I entered a pretty piece of woodland.

On a summer's day, the next half mile would have been delightfully cool and green; but just now it seemed very dreary as I stood at the top of the last hill, pausing to take breath. Ah, me! That pause was my doom.

Before I could mount again, a rustle in the bushes made me turn my head, and I saw stepping towards me a short, slight man in a long cloak and deer stalker. There was only one thing peculiar about him—and that was that his hair reached almost to his shoulders. He came up to me, took off the deer-stalker, and made a sweeping bow. As he did so, I saw that his hair was parted straight down the middle of his head, which made me mentally liken him to a Biblical picture.

"Why so distraught, fair damozel?" he asked politely.

"I am not distraught," I answered, with a sinking heart; for I was afraid he was a lunatic, and wondered if he had any right outside the walls alone.

"Methinks your looks belie your words," he said.

Methought probably they did; but I was not going to confess it.

"Know ye, fair lady, to whom ye speak?"

I said "No," in a quaking voice.

"Alfred, yclept the Great by a loving people."

It was a lunatic. I was in for it now! What on earth should I do? Should I make a rush for it or should I humor him? A glimpse of something bright shining over the edge of his pocket made me decide on the latter course.

I made him a sweeping curtesey. "Sire," I said, "you do me great honor."

"I do, I do!" he nodded, "for I am in very truth the re-incarnation of Alfred; but none," he added sadly, "believe that I am. Yet 'tis but little that I ask for—first, that I may once rule over my little kingdom of Wessex; second, that I may be acknowledged and receive homage as the founder of University College, Oxford; and third, that I may have a royalty on all clocks that are made, seeing that I was their inventor."

I almost felt sorry for him. His voice was so sad a cadence, his beautiful brown eyes were so full of pathos.

He continued: "When I oke would assert my claims, they reviled me and drove me from my kingdom. Then they placed me within you dungeon walls; but to-day I bestole me from it, and hied me hither."

"Sire," I said, "I am sorry for you, and I wish that I could help you. But I must hurry to my sister, who is waiting for me."

He seemed lost for a moment, then said:—

"Methinks Alfred would not appear unseemly on bicycle."

"A charger would be more appropriate," I ventured to suggest.

"True, O maid!" he replied; "but I have not

the charger."

This was so obvious that I had nothing to say. He went on: "Indeed, I would as lief ride a bicycle. It will carry me quickly; but, alas! I have never ridden a low one such as this before. Ladye, thou shalt have a great honor. Thou shalt teach me—Alfred—how to ride this little bicycle."

I was again about to raise an objection, when my fear became a certainty. The shining object was whipped out of his pocket, and I beheld in terror a very modern revolver pointed at me.

"Trifle not with my kingly commands," he said sternly. "And you will not do my bidding, a bullet whizzes through your brain."

I shuddered, but kept my nerve as well as I could. I placed Cissie's bicycle against a tree, and prepared to show him how to mount, and assisted him to ride up and down a few times.

Though a small man, and I a fairly tall woman, I soon found that his weight tired me excessively, and I begged for a moment's respite. The same instant I saw his gaze fixed along the road which I had so lately traversed, and he said slowly:—

"What means this cavalcade I espy on the crest of yonder hill? 'Tis the churls who seek to imprison me again; but I, who am a king, will not that they take me. Rather would I strike this heart to the death." He thumped his chest as he spoke. It might have been mine, my breath came so thick and fast.

"They are drawing nigh!" he cried, as the little party of men, who probably did not see us among the trees, began descending the further hill.

"Nay, but I must not die! I lief would live to reign over my realm. Hi! maiden," he cried, turning to me, "I would don thy kirtle!"

"Sir!" I exclaimed.

"Off with it! Give it into my hands, that I may disguise myself."

The revolver was pointing at me. I unfastened my waist belt, and my skirt slid down to my feet, leaving me in blue serge knickerbockers. "In sooth!" he cried, "and now thou lookest like her that is dubbed the 'new woman.'" As he spoke he put on the skirt, and motioned to me to fasten it, which I did with great difficulty, his waist being a good many inches larger than mine.

He then flung his Inverness cape behind a bush, and, pointing to Cissie's mackintosh, which was strapped to her handle-bar, asked "What garment is that?"

"A cape," I answered.

"Give it to me!" he commanded.

I unfastened it with trembling fingers, and he threw it round his shoulders.

"Now fasten up my hair," he said, "in the same quaint fashion as your own." And, in spite of my terror, I almost laughed as I twisted up his scanty locks and fastened them with some of my own hairpins. He then put on my hat, and I donned his deer-stalker. By this time, we heard the tramp of the keepers drawing near us, though they had not yet appeared over the top of the hill.

"Mind," he whispered fiercely, "if you betray me you are lost; for I have here a trusty friend which will avenge me!" And, as he spoke, he tapped the revolver. "Let but a word pass your lips, telling that *I* am the king, and I will kill you as you stand!"

As he finished speaking, he turned and knelt down, pretending that he was examining the punctured wheel. The next moment the keepers had reached us.

"Anybody pass you here, miss?" asked one.

He addressed me respectfully, in spite of my garb—the consciousness of which was making me blush hotly.

"No," I said, "we have seen no one."

"Thank you, miss," he replied. "We are looking for one of our people"—jerking his thumb in the direction of the asylum—"one of our most dangerous ones, who has escaped. "I hope you won't meet him." And with these comforting words he and his companions walked on. I nearly screamed out to them as they passed on down the road, but the muzzle of the revolver was just visible, pointing at me from under Cissie's cape, and I dared not. When at last the men had disappeared round a distant corner, my companion stood up.

"In sooth, that was bravely done, fair maid!" he said, "I will remember thee when I am at last acknowledged as king." He put the revolver in his pocket. "Now show me some more of this riding, for I fain will be going."

"But my skirt and hat!" I murmured faintly.

"Methinks they answer my purpose well. Nay, nay! I shall keep them."

So once more I had to hold the machine while he rode up and down. After nearly half an hour he got the balance perfectly, and prepared to ride off.

"Farewell, sweet ladye!" "Prithe remember the hunted king whom you have helped, and be of good cheer that he will remember thee when his time of prosperity comes." So saying, he clumsily mounted my bicycle and rode off.

For a few minutes after he had gone I leant against a tree, and had to use all my strength of mind to keep myself from fainting; but the terrible sensation soon passed off. Then, with an effort, I mounted Cissie's machine and rode back to the lodge, where she was wondering at my delay.

I could hardly speak; so the good lodge-keeper gave me a stiff dose of brandy and water, and when the dazed feeling had passed off a little, my story was soon told. The kind doctors of the asylum, after hearing what I had to say, sent us home in one of their carriages to our poor frightened mother.

"Alfred the Great" was captured two days later at St. Albans—or Verulah, as he probably would have called it—and my bicycle was returned to me undamaged.

And the revolver was not loaded after all.

A Man of the World.*

BICYCLES, Pooh! Also bah! To say nothing of bosh!

I am a practical, matter of fact man of the world, and you may take it from me that I know a thing or two. Moreover, I never could stand foolishness or fancies.

Now, young George Chilvers was just the reverse. He was bicycle mad to start with, and his head was crammed full of nonsensical ideas for impossible inventions. Gears, chains, hubs, handles, all were, in his estimation capable of vast improvement, and he, George Chilvers, was the man appointed by Providence to effect the same. Absurd on the face of it, of course! I am not much of a mechanic, but I ride a bit, and I naturally know pretty well what's what. Show me something with money in it, and I'm your man; but George's inventions were like himself, ridiculous. Personally, I was very far from disliking the lad, but his actions made me angry, and that's the only word for it.

His father had given him a good, sound commercial education, and I have heard his employer, a very respectable merchant, by the way—say that, when George liked he could do book-keeping, or conduct the ordinary correspondence of the house if necessary, as well as the most experienced clerk on their staff.

Had he chosen to stick to it, there is little doubt that he might soon have worked his way up to a very responsible position in the business. But what does he do? Throws up his excellent situation at a moments notice, and goes into the world to sink or swim, live or die, for and by his great inventions.

Having effected this superfine piece of folly, he came gaily round to my office in the city—I may add at a most inconvenient time—full of his great plans for the future, to inform me of what he had done. As I have intimated, I took great interest in the boy, but that was no reason why he should come and occupy my valuable time just when I was most busy. I told him plainly what I thought of his conduct, and he went away in a temper.

For some time after that I often used to wonder where George was, and what he was doing, but I heard nothing, till one day, quite by accident, I came across a letter from him, which had somehow remained hidden among some other papers on my table for several weeks. That idiotic office boy is always doing something wrong. I shall have to give him notice. In this letter, dated from Nottingham, George informed me that he had just completed the drawings and a model of some new fantastic nonsense in the bicycle line. I forget exactly what it was—a new driving gear, I believe—but I knew at a glance it was utterly useless. He went on to ask for an introduction

*Cycling.

to a friend of mine, who is general manager of a large bicycle factory in the Midlands.

I gave him what he asked; but, as I am a largish shareholder in the Salash Cycle Company, I wrote a private letter to my friend Basher, the general manager, warning him that George's inventions were to be received with the utmost caution. I was naturally anxious that the company should not involve itself in outlandish "cranks" when we were earning a good dividend on the ordinary, sound commercial lines. Still I was glad to be able to give George the lift.

Well, what with business, and one thing and another, I thought no more of George for a bit. Basher wrote to say that my young inventive friend had called on him, and left the drawings for several new designs in component parts, and that when he had time he would look at them; though he was afraid that I was right in what I said, and that the ideas would be of no practical use. Sensible fellow, Basher.

Nearly a year passed, during which time I was very much taken up with the "slump" in South African mines, in which I was a "bear" and the "boom" in cycles, in which I was a "bull." I was passing along the street about mid-day, when someone touched me on the shoulder, and, calling me by name, offered his hand.

"Upon my word," I said, "you have the advantage——"

He laughed, a queer hollow laugh, with a sound like an echo in it.

"Not know George Chilvers!"

Of course I recognized him at once. I am one of those men who never forget a face.

"George," I said, "I am glad to see you. But what have you been doing with yourself? You are tall, aren't you? And, by Jove, you look awfully thin!"

"I have been in hospital a bit," he replied unconcernedly. "Lying in bed makes one grow, they say, and I am sure they cut enough of me away to account for a considerable difference in weight. I came out yesterday. I was on my way to see you."

"And I am on my way to lunch. You had better come along and have yours at the same time."

At my suggestion, I saw his right hand edge toward his pocket. I thought the movement looked instinctive, and drew my own conclusions. Moreover, I would much rather have a chat with anyone over a chop than be bothered to talk about unprofessional subjects at the office. So I said:

"But I insist. I have not seen you for weeks."

"It is over a year," he corrected. I hate these scientific people. They are always so exact.

"Well, over a year then, if you like. Anyhow, you are coming to lunch with me."

"I'll come," he said, and then, as though it was an after-thought, he added "Thanks." He did not seem quite as grateful as he might have. Still, as long as I could do the boy a kindness, I did not mind that.

After lunch he said, "I'm hard up."

"That's a nuisance! Have a cigar?"

"No, thanks, the facts are these. I came to town to see a man on business some time ago. To do that I was compelled to use up pretty well all my spare capital. I had managed to put by a little when I was in that beastly office. The business did not come off as I had expected, and then, before I knew where I was, this confounded illness bowled me over. I had to go to the hospital, and that meant more expense. Finally, here I am."

"Hard luck!" I said. "But I wish you would smoke."

"It was a bit rough, but not so bad as it might have been. While I was in the hospital I worked out quite the best thing I have done yet. I showed the rough drawing to one of the surgeons—a fellow who knows something about these things—and he said there must be a fortune in it. All I want now is to get back to the Midlands, where I shall have a chance of showing my idea to the right sort of people."

"Yes?"

"Well, I want you to help me." Then he blurted out, as though the words hurt him:

"Lend me ten pounds—not for long. I am sure to come right over this job. I wouldn't ask if I could help it. I want the money badly.

I shook my head slowly. I don't believe in encouraging this sort of thing. "I've no money to lend, George," I said. "But if a couple of quid would be any help—as a present, I mean——"

"No thanks. No thanks. I am sorry to have bothered you—I—I'm sorry——"

In another moment he was gone. Silly fel-

low. Of course I would have lent him the money directly—at least I suppose so. However, all's well that ends well, and I had to hurry back to business. George had, I found, kept me more than a quarter of an hour over my proper time. I have a great objection to that.

Then I saw George no more until—well, I'll tell you.

I live down at Sevenoaks, and, as I have said before, I cycle a bit when I have time. One Saturday afternoon I felt inclined for a really long ride. I suppose I must have got the cycling fever like one of those fellows who break records and that sort of thing on the Portsmouth Road. So I determined to ride right over to Westerham nearly ten miles by my cyclometer—and back. I had heard it was a pretty little place, and had only seen it from the rail, and I wanted, too, to have a look at the famous dangerous hill there. So I started off, and, if you will believe what I say, I arrived there scarcely a bit tired. I am pretty wiry, you see.

Ah! There's one thing I forgot. Just before I started for my ride I received a letter from Basher, and strangely enough it concerned young George. Basher said:

"Dear Betts,—Can you give us any idea of the whereabouts of your inventive young friend? I forget his name, and he has disappeared from here.

"I came across one of his designs the other day, and, as there seemed to be something in them, I showed them to Pendriff, our works manager. He says the last one is really very good indeed, though of course it requires working out, and he wants your friend to join our drawing staff so that he may have a chance of developing his ideas under proper supervision. To tell the truth, we are anxious that Rumblers should not get hold of these notions. If we can keep them to ourselves we shall be able to make the Rumbler people sit up at the shows.

"So, if you can put us on the right track we shall be much obliged.

"Yours very truly,

"Benjamin Basher."

I said at once to my wife that I always felt certain that George had got the right stuff in him. I put the letter in my pocket, and went for my ride to Westerham, as I have said.

After tea I walked over to see the famous hill. My word, it is steep! I walked about half way up, and sat down on a bank to watch the passers by, all of whom were wheeling their machines.

No, not quite all, for when I had been sitting there about half an hour I heard shouting up the hill, and fellows saying, "Stop! Stop! You've got no brake! It's dangerous!"

Then in a moment, as it seemed, some one came whizzing past me like a shot from a gun. He wore no hat, and his unkempt hair was blown straight out behind him. His face was quite pale, and that showed off his bright, dark eyes. It seems incredible, but he actually had both feet tucked over his handle bars, and I can assure you he was travelling like an express train. As he shot past he looked at me. I knew him—George Chilvers!

"George!"

He answered something which sounded like, "Done for! Going home!" I suppose his brain was turned with fright, and that he did not know what he said.

In another moment he was near the corner, the very steepest part of the hill. His machine ran straight at the hedge on the left side, gave a huge bound, and disappeared clean through. There was a crashing of branches, and a thud, and—that was all.

The bank is ever so steep—fifty feet or more. He had fallen sheer down to the bottom and broken his neck.

Upon my word I was quite cut up about it. It did seem such a pity that, just as he had a chance of doing fairly well he should meet with this—this—accident.

Cycling Cogitation

OF CODY.

NORTH MILWAUKEE is a pretty little village situated between and around the large A. D. Meiselbach bicycle plants. It has several pretty dwellings and a general store, an electric lighting system and a goodly number of high minded citizens. The few things it lacks are good streets. Those that have been made are not even bad streets; they are not streets at all. A short time ago when street indignation was at fever pitch the local L. A. W. Consul requested Chief Consul Van Valkenburgh and Otto Dorner to appear before an assemblage of North Milwaukee citizens and tell them how to build streets. The meeting was to be held at night and it was over a dusty road that the two good road apostles pedalled. They reached North Milwaukee and after shaking themselves to loose some of the dust gathered in the creases of their clothing they assisted the local consul in securing an audience. About fifty citizens were corralled into the hall to listen to good road speeches. The meeting commenced. It lasted three hours. Not a citizen left the hall until the speakers were almost back to Milwaukee again. Every one was spell bound. The falling of a pin would have sounded like an explosion. It was the unanimous verdict of those in attendance that they enjoyed the speeches better than a circus. And there was cause for such enjoyment. Instead of talking good roads Van told funny stories.

* * *

OTTO DORNER was also scheduled to speak. Dorner was a new man to the natives of North Milwaukee while Van was well known having talked politics in the village on several previous occasions. Before the meeting was called to order the chairman asked Mr. Dorner to tell him something about himself so that he could introduce him (Mr. Dorner) to the audience. Now Mr. Dorner is a very modest man. Ninety-nine men out of every 100 who would accomplish what Mr. Dorner has accomplished for good roads would have heads swelled beyond recognition. A small army of kissing bugs could not swell Mr. Dorner's head. He really blushed when asked for inside information. He said he didn't know what to say but offered the chairman a sheet of press clippings concerning himself and his work. He told the chairman to read one of the clippings and it would give him a cue on which to base the introduction. The chairman overlooked or forgot Mr. Dorner's instructions. At any rate he did not post himself on Mr. Dorner's sheet of clippings but waited until it was the apostle's turn to speak. Then drawing the clippings from his pocket the chairman said, "We will now have the pleasure of listening to a gentleman who has made good roads a study for years. He has given me this sheet to show you what the newspapers say about him." Then after reading a number of his press clippings concluded, "I have the pleasure of introducing Mr. Otto Dorner." Poor Dorner. He was awfully embarrassed.

* * *

WHEN Chief Consul Van Valkenburgh's little band of boomers arrived at Montreal *en route* to Boston someone suggested that a drive about the surrounding country would be interesting. Forthwith a number of carriages and coachmen, or "carters" as they are styled in Montreal, were hired to "cart" the boys over the Queen's highways. The sun was hot and as its rays were persistent in forcing their way through the thin straw hats worn by the Milwaukee crowd, the sign, "Tea House" on a road side inn was welcomed with shouts as loud as the parched throats of the tourists could ejaculate. In a quiet and cool apartment of the Tea House each of the party claimed it his privilege to pay for the tea and other beverages with which the various thirsts were being quenched. In the meantime (about an hour) the poor "carters" with parched throats were patiently waiting for one of the party to include them in a treat but no one but the thrifty waiter gave the carters a thought.

After several cups of tea had been consumed, Terry Andras, who, by the way, was the life and soul of the Milwaukee party, claimed the

privilege of buying the next round of drinks and it occured to the waiter that Terry was just the kind of a fellow who would not object to including the "carters." After the orders of all those present had been taken, the waiter asked Terry "if he wanted the 'carters' in it." "The what?" asked Terry in surprise. "The 'carters'" answered the waiter. "I should say not," said Terry sarcastically, "I want my tea plain." But the thirsty "carters" were included in the treat and Terry is still under the impression that he was overcharged.

Cost of Roads.

BY OTTO DORNER.

WITH all the advance of thought in the direction of better highways, there are still many who believe that their cost must necessarily fall upon the agriculturist. Just as the farmer was the pioneer settler in most of the States, so he has been the pioneer road builder. At his town meetings he had determined where new roads should be laid out, which of them should be "worked" and improved, and how much of a tax should be expended on each improvement. As it was left to him to plan this important work, so its expense has rested almost entirely upon his shoulders. Now, that the cry for macadamized highways is to be heard in the city and country alike, farmers believe, as a rule, that they are to be called upon to build them.

This is wrong. Farmers have enough in the way of taxes to pay, without undertaking the building of elaborate gravel and stone roads. It is unfair that such a burden should be added to their already heavy load. Whatever may be undertaken in the way of constructing permanent highways, should be done at the expense of those who are to reap its benefits. True it is that the savings in the cost of hauling crops would be considerable, and that this saving would result almost entirely to the farmer. But that is no reason for asking him to pay the cost of building such roads. He is not the only one to use them. They serve to bring city people and city products into the country, as much as they serve to bring country people and country products into the city. The merchant who has business with the farmer is as much benefited through a good road to travel over, as is the farmer who comes to town on business of any kind. Neither is the use of roads limited to those living in the vicinity, and travelers from a distance share the benefits resulting from their improvement. It would be the height of injustice, therefore, to ask the farmer alone to stand the cost of good roads.

The proper division of the cost of good roads has been accomplished through State aid. This is the system by which the stone roads of New Jersey have been built. The farmers in that State are so enthusiastically favorable to the extention of the state aid system, that it deserves to be described. In the first place, under the working of the State aid system, no improvement is undertaken except upon the petition of those residing upon the road to be improved. When such a petition has been duly signed, it is presented to the county board, who proceed to have the necessary drawings and specifications made. These are then presented to the State highway commissioner for approval. Upon their return by the State commissioner to the county officers, they proceed to advertise for proposals to build the road. When the contracts are let, a copy of each contract must be filed with the State commissioner, who thereupon appoints a supervisor of construction, upon the recommendation of the property holders who have petitioned for the improvement. The supervisor must give his whole time to the work, and see that the conditions of the specifications and contract are carried out.

Under this State aid system, the cost of improvements is divided between the State, the county and the adjoining property, the State paying one-third, the owners of the property adjoining the improvement paying one-tenth,

and the county paying the remainder

This system of building improved roads is highly popular, because no work is undertaken except upon the petition of those to be benefited. At the same time the cost of the improvement is not required to be born by the farmers, and those of them whose land borders upon the road where the work is done are required to pay only a small share of its cost. The rest of the expense is shared by city and country property holders, because county taxes are assessed in the cities as well as in the country, and because State taxes are shared by everyone in the State, according to the amount of property he owns, including the wealthy manufacturers, railway and insurance companies. As most of the wealth of the State is to be found in the cities, the New Jersey system successfully brings about the construction of improved gravel or stone roads without laying their entire cost upon the farmers, and without requiring them to contribute more than an equitable share of expense according to the wealth of each individual taxpayer. The State aid system successfully answers the objection still made by many; that we cannot have good roads without overloading the farmer with taxes of which he is already paying more than his share.

The Auto-carriage is the Thing.

THE auto-carriage is the thing. I'm tired of the horse!
He's got a lot of shaky ways I never could endorse.
The tricks he's played on me and mine through many a sorry year
Were such that I can part with him and never shed a tear.

The power-driven vehicle won't "shy" and spill the load,
Because a gentle zephyr stirs some paper in the road;
It will not turn a somersault, nor kick the cart in two,
Because it sees a parasol of red, or white, or blue.

A clothes-line full of flapping sheets may do its level best,
It can't induce a motor-car to strew things galley-west;
We shall not have to urge it up to box and cab and car,
The way we've had to urge the horse, to smell out what they are

And now we'll go out riding with our lady-loves, and know
One hand's enough to guide the cab wherever we would go;
And in some happy moment when the world seems wrapped in May,
The motor-car won't take a fit and try to run away.

And when we wish to go to ride we shall not have to chase
The motor, as we do the horse, an hour around the place,
To get a harness on it. No, the newer way is best,
For now we touch a button and the auto does the rest.

Helpful Hints

Any reader sending in an acceptable hint will receive THE PNEUMATIC free for one year.

Don'ts for Aspiring Century Riders.

Don't fail to take the advice given here, and you will go through.

Don't read this before you start if you think you know all about century riding. You can digest it afterward on your way home in the train, when only half over the course.

Don't neglect to have a good look over your machine the night before. Oil it, and lubricate the chain with a piece of soap if you have nothing else.

Don't think you will be able to go through with a worn out tire and a bad valve. It is a puncture-giving road.

Don't forget to go to bed early the night before the century run. You will ride with comfort the next day.

Don't start without a proper repair outfit. You are riding against time. A repair-box may make all the difference between being left and getting through.

Don't ride a high gear. You may have to battle against wind to say nothing of the hills *en route*.

Don't neglect to include in your kit a pocketful of raisins. They will be useful to stave off thirst.

Don't wear too heavy clothes. You will not get cold, as you will be travelling all the time.

Don't forget an oil-can, and a small amount of chain lubricant for use at the half way distance. It will make your machine run easy when you are tired.

Don't set your handle bars low down. On a long journey low handles tire the arms and back.

Don't start with a slack chain, as you will need to ride down several hills. A loose chain is apt to jump the cogs. Result: a spill, and out of the hunt.

Don't try to show off during the run, or practice any monkey tricks. Your companions will know your abilities before the 100 miles are negotiated.

Don't lay awake all night for fear you won't be up in time. Get someone to call you. You will be fresh then.

Don't omit to partake of breakfast before starting. Two beaten-up eggs will be found A-1.

Don't scorch to the meeting place. Leave plenty of time to arrive there early. You will want all your strength.

Don't be selfish on the ride. Give a share of the good road to your companions, and they will reciprocate.

Don't try to be always in front. Two minutes behind will keep you free of the dust, besides you can save yourself by being able to pick your road.

Don't drink at every public house. Carry as little freight as possible. The bicycle is not a 400-gallon tank.

Don't disobey the marshalls. You help yourself by helping them. There may also be a chance of your being disqualified.

Don't stand round the refreshment bars when you have had what you want. Remember the other fellow is waiting.

Don't imagine that because you are a century rider you own every hostlery *en route*. Behave decently.

Don't ride up-hill when you feel your front wheel stick. Get off and walk. You can make up the lost ground on the level road.

Don't overlook the item of having plenty to eat *en route*. A well-fed man or woman has more endurance than a hungry one. This is absolutely necessary.

Don't stand about in draughts when at the stopping places, as your muscles will get cold and stiff.

Don't, if you are not a strong rider, walk about too much at the stopping places. You my feel fresh for fifty miles, and dead when the last twenty come along.

Don't disregard the request of a friend for the loan of your pump, etc.; it may be your turn next.

Don't ride on the lee side if it is a cross wind. You get all the dust there, and the little advantage gained is not compensated for.

Don't smoke while riding in the bunch. Your smoke and the ashes from your pipe are liable to annoy the other fellow behind you.

Don't, if you are a lady, expect every man to be your slave. Remember the majority of the wheelmen are having a bad time themselves. Show self-reliance.

Don't come away without enough money in your pockets to defray expenses, provide a night's lodging or railway fare. Accidents happen to the best regulated machine.

Don't get too far behind during the last five miles.

Don't borrow a generous wheelman's kit and forget to give it back, as he may want it himself later on, besides it has a dishonest appearance whatever way you look at it.

Don't give advice or interfere with another rider's machine if you have not some mechanical knowledge. He will blame you if things go wrong afterwards.

The Gospel of Good Roads

Who Shall Pay for Good Roads?

"The great reason why we have so few good roads in the United States is that we have left it to the farmers alone to build them. This is wrong. It is absolutely impossible for the farmers alone to provide a system of good roads. The cost is altogether too great, and unless substantial help is furnished them, upon some reasonable basis, progress in road building will continue to be slow and unsatisfactory," says Otto Dorner, Chairman of the L. A. W. Highway Improvement Committee.

"The help which the farmers require in building roads should come from the cities. The cities are the great centers of wealth; they are the great markets in which business is done—the great distributing points for manufactures and for agricultural products. Agricultural America has built them up and maintains them. The union between the cities and farming districts is close, upon a hundred different channels of trade. Each depends upon the other. What is more proper than that the city should unite with the country in constructing and maintaining suitable and efficient means of communication and transportation?

"There need be no doubt that the taxpayers of most American cities are willing and ready to contribute to the cost of building country roads. Their necessity is as thoroughly realized in the cities as it is by the farmers who become stalled on a muddy road with a load of grain hauled half way to market. City people know the country better than they have ever known it before, and their business relations with the country people are growing more and more intimate. They are quick to see the convenience and saving which would result from the construction of good roads and know that they themselves would be, in a large measure, the gainers.

"But how can a tax be levied upon city property for expenditure in country districts for road building purposes? A city tax is out of the question, as much so as it would be to levi a town tax upon farm property for building sewers in a distant city. True, a county tax might be levied, a large share of which would be paid by the cities situated in the county, and which might be used for the building of roads in any locality within the county. But this is not sufficient, especially in the case of large cities like Chicago, New York, Cincinnati, St. Louis, Minneapolis and Baltimore. Their interests extend far beyond the counties in which they are situated; indeed, the cities themselves constitute the greater part, or nearly all, of the taxpaying property included in these counties. They may properly contribute to the cost of building roads in all the territory from which they draw their trade.

"The best method yet devised for levying taxes upon city property for the purpose of building country roads is by the medium of a State tax. This is levied upon city and country alike, upon all classes of people, so that every locality, every taxpayer, contributes proportionately, according to the amount of property owned, the wealthy property-owners contributing the largest amounts.

"Massachusetts, New Jersey, New York and Connecticut are probably the States which have made the greatest progress in country-road building. They have all levied State highway taxes, and have built roads by a system of State aid. While the rate of taxation has been low, the amount collected has been considerable. In New York $50,000 were collected by a State tax of one one-tenth cents upon every thousand dollars assessed valuation, and four-fifths of the whole amount was collected in the cities, where most of the property of the State is situated.

"The State aid system does not interfere in any way with present methods of road building, but simply provides a means by which an enterprising country community, desiring to possess first-class highways, may obtain financial assistance for the purpose from the cities. The State does not pay for building such roads, but simply contributes to their expense, just as it contributes to the cost of maintaining public schools, which are conducted by the local school officials, but which, to receive such State assistance, must be up to a certain standard."

Broad Street, Philadelphia, is the longest asphalted street in the world. It is the only street which is of even width for eleven miles, and this width is the greatest ever attained by any street for a course of eleven miles. It extends from League Island to the county line and does not vary an inch, except where the great city building causes the street to turn around it. Seven miles of the street are asphalted, the remainder is a roadbed of fine macadam.

Automobile express wagons will soon be given a trial in New York by the United States Express Company.

Our Busy Cycledom

Bicycles Abroad.

One comes across bicycles in the oddest corners. Take Persia, the alleged land of gazelle-eyed damsels and limpid streams, and rose bowers. There, around the city of Teheran, may be seen Englishmen and English girls having a jaunt, just as you might see them on the Portsmouth road. When the bicycle was first introduced into Persia, the late Shah, Nasr-i-Din, while out riding one day, met a traveler on a bicycle. He was immensely amused and insisted on having a race. Then he borrowed the bicycle, and had it taken to the palace. He insisted that his ministers of state should ride. It was more than the head of a grand vizier was worth, so the poor ministers jumped on and fell off, and tried again, and came croppers, and altogether were obliged to supply his majesty with half an hour's excellent amusement. The Persian dearly loves this sort of uncomfortable practical joke.

Says a writer: "I had an experience myself at Ispahan, in central Persia, with the Zil-i-Sultan, brother of the present shah. I was spending an afternoon at the palace, and the prince, whose inclinations are chiefly military, asked me a lot of questions about the usefulness of bicycles in warfare. Unfortunately, my knowledge of warfare was a minimum quantity, and I could not speak generalities. In the grounds of the palace I rode up and down, just to give his highness an idea of how easy bicycling was. Then he asked me to ride down a particular path as fast as I could. I didn't see the gleam in his eye as I set off. I was going at a tolerable swift speed, when, to my horror, I spied a well-like drop in front of me. I was off in a trice, and just saved both neck and bicycle from simultaneous breakage. Turning round, I saw the prince bent double crimson-faced and nearly apoplexy from laughter. I do really believe he would have enjoyed a smash-up. Since then I have sometimes thought that, if only I had broken my skull, he might have decorated me with the Order of the Lion and the Sun.

"Burma is a country you conceive to be chiefly made up of thick jungle and pagodas. Yet there is plenty of cycling in the land of the Lord White Elephant. There is a good little club at Rangoon, and it has runs round the lakes and occasionally up to Pegu, some sixty miles away. I'll always remember my surprise when I reached Mandalay after a sloppy journey along the jungle paths. I was a little eager to see this famous city. Suddenly the rough road changed to a good level macadam; there were cabs rattling to the station, and there was a pretty-cheeked English girl, in bloused and straw hat, on her bicycle. It seemed so strange to find a girl cycling away in that corner of the world! And yet there are many English cyclists in Mandalay

—

Cycling in Madagascar.

M. Lubiez, writing in Le Velo from Antananarivo gives some interesting details of the progress of the sport in Madagascar. The cycle is slowly making headway, but has not yet dethroned the filanzane, the chair carried by four bearers, on which short journeys are made "without pleasure and without comfort." The Europeans, almost without exception, are devotees of the wheel, but the process of reforming the habits of the people of a conquered country is necessarily a very slow one. The Madagasy are active and agile, but lack staying power. To take a run round a track is a mad joy to them; but a run into the country is beyond their power and the native members of the Sport Club who do start for a run with their European clubmen usually only ride a short distance, and then wait and rejoin the others on their return journey. In order to give an impulse to sport in the island the Sport Club, at a meeting held in the French Club, under the chairmanship of Lieut. Col. Gerard, decided to construct a track at a cost of 24,000 frs. The club in undertaking this work appeals for donations from 116 members and from other well-wishers. The governor has made a grant of 8,000 frs. and has expressed himself in hearty sympathy with the objects of the club. At the Easter races, which were held on the old ground, he gave a bicycle for the seven kilometre race. The motor car has not yet made its appearance, though Gen. Galliéni obtained two motor-tricycles from France in 1893. He soon made himself familiar with the mechanism, and electrified the natives by a turn or two which he took on the old ground. But, alas, he one day set out for a run along the road. He had hardly gone a hundred metres when the machine struck work and absolutely refused to budge. The machines were taken back to the stable, where for the last six months they have slept the sleep of the just. No one in the island could repair them, and the expense of sending them to Europe was too great.

—

Dixie Hines, once well known as a writer of cycling affairs, is now selling insurance at Savanah, Ga.

Racing, Racers and Records

Preparing for the Track.

According to an amateur champion, the question of correct position on a bicycle can only be determined by the rider after constant practice. The position which will suits one man will not be advantageous to another. Some men lean over very much, consequently have their handles very low, and others prefer to ride more upright. Then again, one rider will ride with the beak of his saddle five or six inches or even more behind the center of the crank axle, another will have the beak vertically in line with the center of the axle. As a rule, the higher the gear, the more forward is the position adopted. Herein let individual taste, after a trial, prevail, as also the position of the handles and ajustment of the saddle. It is very wise to get an attitude of comfort on the bicycle, one in which you feel that you have a perfect command over your mount. The higher the gear the longer you will be able to sprint in the run home. Zimmerman, when at his best, always rode with a low gear. For handicap work, 84in. to 90in., for cement paths, 76in. to 80in., for cinder paths, 80 in. will be found about the average gear for the majority of riders, combined with a 6½in. crank. These gears are not for paced work, but simply for handicap riding, where the rider has, particularly if he is a novice, to cut out his own pace.

Riders' shoes are most important. If you get them to fit you fairly tight, and ride in them in practice without socks, you will find that they will stretch. Then put socks on, and you will have shoes which are exceedingly comfortable. If you do not take this precaution, in nine cases out of ten you will find the shoes are too large for you after they have been used for some time.

Don't ride with the soles too thin; if you do, the pedal spikes are apt to press against the foot and cause great discomfort.

In regard to tires, after you have made your selection as to make, the size is an important item. The smoother the track the smaller the tire required. For allaround work, 1¼ inch tires will be found most suitable. A light man can ride a smaller tire perhaps with advantage; but, as the rims of racing tires are as a rule the same weight, a few extra ounces in rubber, which gives increase air space and a greater absorbtion of vibration, it is unwise to use tires of the smallest type.

You will perhaps have difficulty in determining the most advantageous seat on your bicycle. You can only do this by careful study and adjustment of seat and handle-bars. Get the position that suits you best when you are riding at top handicap speed. For this season a few half-mile bursts and careful observation should put you on the right track. There are some riders who cannot adopt the excessive crouching attitude. There is no doubt windage—a great decreaser of speed is avoided thereby; but many men find their breathing powers cramped by such a position. A happy medium is perhaps the sensible view to take. It is more graceful in appearance, gives you a better opportunity of making observations as to the riding of your opponents, and enables you to clearly see where you are going. When you have determined upon your position, take the measurements and put them in your pocket-book.

In choosing your bicycle be sure the frame is rigid, particularly in the bottom stays. If, when you put pressure on, your chain stays give, the power is not conveyed direct to the driving, but goes to twist your chain wheels and bearings out of true. The bottom stays then should be as rigid as the proverbial rock.

What should be made light are the wheels. These you have to pull round by sheer force, and the lighter you can get these, consistent with safety, the better and speedier must the bicycle be.

***

The Connecticut division of the L. A. W., together with other interested organizations, is working on a plan which provides for a magnificent highway which will run the entire length of the State from east to west. The cost will be several millions, but the farmers and wheelmen of the State feel certain they can convince the coming legislature that this will be an economical expenditure. The principal that *good* roads pay for themselves within a reasonable time and enhance the property values in their vicinity is being strongly urged, and while the undertaking is a tremendous one there is little doubt it will be almost entirely successful if the wheelmen of Connecticut rally to the support of the division. By immediately increasing the membership in the State the division can go before the Legislature with a very strong backing of interested citizens. A movement somewhat similar, was started last year by Mr. H. L. Marshall of C. R. C., and although the outcome is nothing tangible as yet, he has by no means given up hopes of bringing it to a successful issue some day.

. . . THE . . .

League of American Wheelmen

For Any Information Address Abbot Bassett, Boston, Mass.

Membership Sept. 15th, 1899.

1.	Pennsylvania	12139
2.	New York	11149
3.	Massachusetts	10262
4.	New Jersey	3122
5.	Ohio	2434
6.	Michigan	1696
7.	Indiana	1474
8.	Rhode Island	1493
9.	Illinois	1421
10.	Connecticut	1258
11.	Maryland	1046
12.	Wisconsin	870
13.	New Hampshire	577
14.	Missouri	536
15.	Kentucky	478
16.	Maine	439
17.	Iowa	423
18.	Colorado	394
19.	Southern California	360
20.	Minnesota	339
21.	District of Columbia	322
22.	Delaware	180
23.	Kansas	170
24.	Virginia	142
25.	Vermont	122
26.	Georgia	85
27.	West Virginia	84
28.	South Carolina	77
29.	Florida	67
30.	Tennessee	67
31.	Montana	53
32.	Washington	53
33.	North Carolina	21
34.	Alabama	21

Next year being presidential election year the League of American Wheelmen intends pushing various bills in the legislatures in the interests of wheelmen and thereby make the legislators of different parties place themselves on record as for or against wheelmen just previous to the great political struggle. These bills will include laws intended to improve the highways, force railroads to carry bicycles as baggage in such States as are not already compelled to do so, requiring uniform ordinances in each State and many other items of importance to the cycling fraternity. As it is customary to have a hard fight before the League can secure the passage of bills, it is the intention of the State and National officers of the organization to be unusually energetic during the season when politicians generally are more liable to grant concessions than at any other time. It is expected that this campaign for cycling legislation will be carried as high as Congress, as there are many ways in which that body can assist the wheelmen. The L. A. W. is now preparing in its various departments the outline of this campaign, and when the details are thoroughly and systematically arranged and all the various officers instructed, the work will be put under way. In the meantime, all wheelmen can assist in this work by joining the organization.

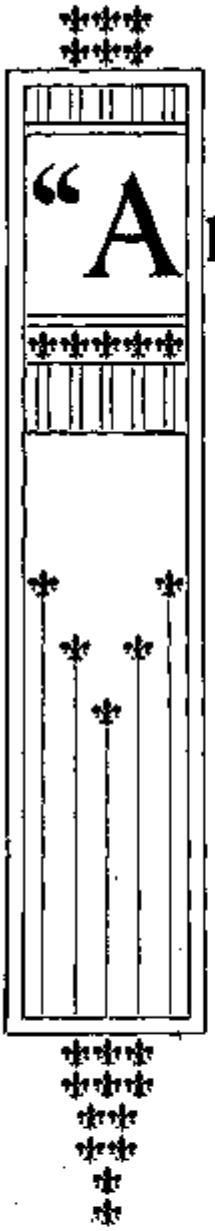
Among the innovations of the L. A. W. National Meet at Boston was a meeting of the local consuls from all parts of the country. These consuls are the local officials of the League who are so vital a part of the system of the League in distributing and furnishing information regarding the organization and for the benefit of members touring. While the state and national officials hold an annual meeting, this is the first time the local representatives have met and it is likely the plan will be adopted for the future National Meets. At the meeting the various plans used in recruiting new members, in furnishing information to tourists and in securing the passage of local laws to benefit wheelmen were fully discussed, and in each consul giving his individual experience the others present learned many new ideas in the work which they are doing so unselfishly for the L. A. W.

The Duke of Ratibor has been elected president of Germany's first automobile club just organized.

$100 Reward, $100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

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THE constructive features of the "Orient" are the machine's great talking points.

The Waltham Mfg. Co. has attained the summit of bicycle architecture. In their '99 catalogue they state briefly and truly as follows:

"Among bicycles the 'Orient' has become synonymous with 'Perfection.' It has always been our aim to make our product the very highest grade. Mechanical ingenuity, skill and intelligence, combined with the very best material, have made the 'Orient' a peer among wheels, and it is our constant endeavor to keep it in the position it now occupies: the very front rank of bicycles."

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$65.00
"ORIENT" 1:30 RACER.

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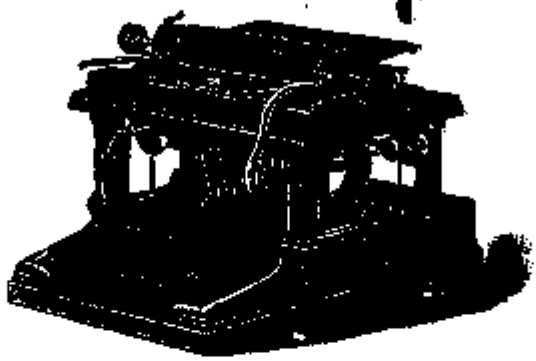
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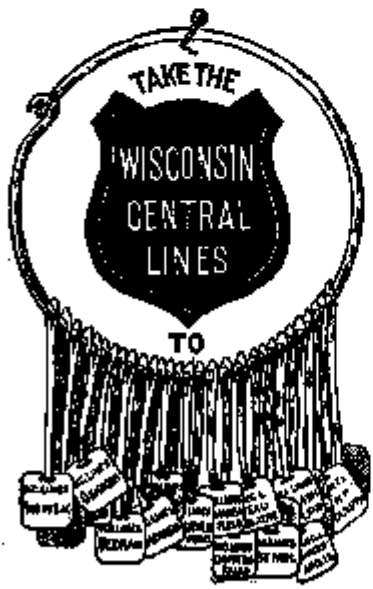
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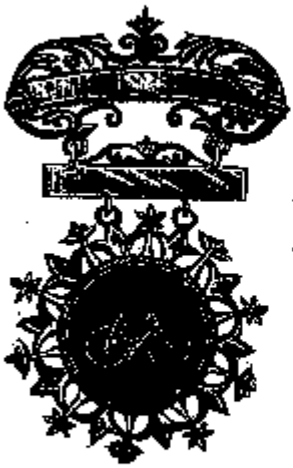
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I have used Ripans Tabules with so much satisfaction that I can cheerfully recommend them. Have been troubled for about three years with what I called bilious attacks coming on regularly once a week. Was told by different physicians that it was caused by bad teeth, of which I had several. I had the teeth extracted, but the attacks continued. I had seen advertisements of Ripans Tabules in all the papers but had no faith in them, but about six weeks since a friend induced me to try them. Have taken but two of the small 6-cent boxes of the Tabules and have had no recurrence of the attacks. Have never given a testimonial for anything before, but the great amount of good which I believe has been done me by Ripans Tabules induced me to add mine to the many testimonials you doubtless have in your possession now.

A. T. DeWitt.

I want to inform you, in words of highest praise, of the benefit I have derived from Ripans Tabules. I am a professional nurse and in this profession a clear head is always needed. Ripans Tabules does it. After one of my cases I found myself completely run down. Acting on the advice of Mr. Geo. Bower, Ph. G., 881 Newark Ave., Jersey City, I took Ripans Tabules with grand results.

Miss Bessie Whitely.

Mother was troubled with heartburn and sleeplessness, caused by indigestion, for a good many years. One day she saw a testimonial in the paper indorsing Ripans Tabules. She determined to give them a trial, was greatly relieved by their use and now takes the Tabules regularly. She keeps a few cartons Ripans Tabules in the house and says she will not be without them. The heartburn and sleeplessness have disappeared with the indigestion which was formerly so great a burden for her. Our whole family take the Tabules regularly, especially after a hearty meal. My mother is fifty years of age and is enjoying the best of health and spirits; also eats hearty meals, an impossibility before she took Ripans Tabules.

Arthur H. Blauvelt.

I have been a great sufferer from constipation for over five years. Nothing gave me any relief. My feet and legs and abdomen were bloated so I could not wear shoes on my feet and only a loose dress. I saw Ripans Tabules advertised in our daily paper, bought some and took them as directed. Have taken them about three weeks and think is much as changed. I am not constipated any more and I owe it all to Ripans Tabules. I am thirty-seven years old, have no occupation, only my household duties and nursing my sick husband. He has had the dropsy and I am trying Ripans Tabules for him. He feels some better but it will take some time, he has been sick so long. You may use my letter and name as you like.

Mrs. Mary Gordian Clarke.

I have been suffering from headache ever since I was a little girl. I could never ride in a car or go into a crowded place without getting a headache and feeling sick at my stomach. I tried about Ripans Tabules from an aunt of mine who was taking them for catarrh of the stomach. She had found such relief from their use she advised me to take them too, and I have been doing so since last October, and will say they have completely cured my headaches. I am twenty-nine years old. You are welcome to use this testimonial.

Mrs. J. Brookmyer.

My seven-year-old boy suffered with pains in his head, constipation and complained of his stomach. He could not eat like children of his age do and what he did eat did not agree with him. He was thin and of a sallow color. Reading some of the testimonials in favor of Ripans Tabules, I tried them. Ripans Tabules not only relieved but potently cured my youngster, the headaches have disappeared, bowels are in good condition and he never complains of his stomach. He is now a real, chubby-faced boy. This wonderful change I attribute to Ripans Tabules. I am satisfied that they will benefit any one (from the cradle to old age) if taken according to directions.

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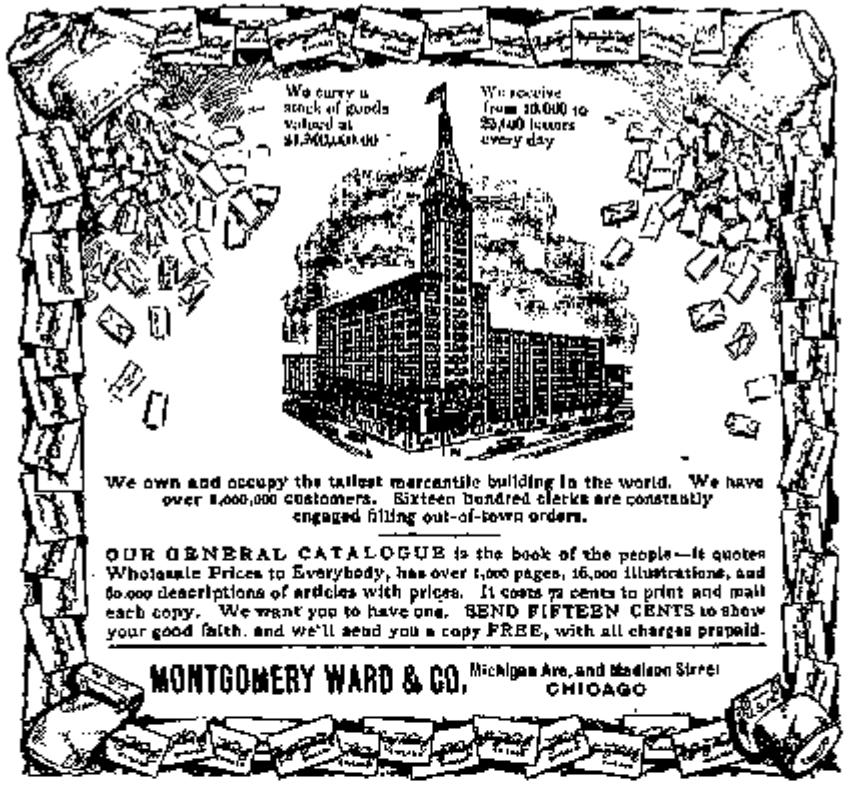
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VOL. X. OCTOBER, 1899. NO. 9.

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THE PNEUMATIC.

ESTABLISHED 1891.

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THE PNEUMATIC.

VOL. X. OCTOBER, 1899. No. 9.

Why?

BY DAVE CORY.

I WISH they would invent a tie—
The kind of tie I mean,
That would not round her collar twist
And neath her ear be seen.

I wish a shirt waist could be found—
The kind of shirt I mean,
That would not bunch up from her skirt
And leave a space between.

And then I wish they'd make a skirt
For "bikers" fat and lean,
That would not like a curtain rise
And show a ballet queen.

I wish—but never mind the wish—
If all these shocks we needs must feel,
Why don't it ever happen that
You see a *pretty* girl awheel?

Our Ancient Warrier.*

I THOUGHT he was disreputable, and rather objected to his company, but the others did not agree with me; and as there were two for, and one against, Mr. Thomas Bloggs (as he called himself) was permitted to continue his ride in our noble, if somewhat meagre, army of tourists.

Easter had set in unusually bright and fine, and quick to take advantage of it, Murdoch, Raffles and myself, old chums and ardent cyclists, had hastily planned out and easy circular tour to pleasantly, if not profitably, employ the time.

It was a very hastily planned affair. About nine o'clock on Thursday evening Murdoch and Raffles turned up at my place on their machines, each with a macintosh and a small parcel that might have contained a pair of swimming breeches by neat and close packing, on their handlebars.

"Come for a tour, old man?" queried Murdoch, when I opened the door to them.

"Tour?" said I. "When—how—where?"

"Now—bikes—anywhere," replied Murdoch laconically. "Don't make a fuss about it. Raffles and I are going for a bit of a trip just to get a taste of the joys to come and you might as well join us."

"Right it is," said I. "When do you start?"

"In five minutes," quoth Murdoch.

"Get your dunnage together—mac., toothbrush, nightshirt and matches. We'll see to your bike."

I did! In less than five minutes I had shed the garb of my civilized work-a-day state and was speeding round the house, looking for shoes and cap. Toothbrush and matches went into one pocket, night shirt into another, pipe and pouch into another. Then, with a last, hasty look round to see that nothing had been forgotten, I went out to the bicycle shed and found my mount pumped up and ready, with light a-burning and everything in compact order. Another five minutes, and we were out on the Woodford Road, making a bee line for Waltham with the intention of sleeping in Hertford that night or perishing in the attempt. And that's what I call expedition!

It was simply a lovely morning when we left the sleepy old town of Hertford. Hertfordshire is a charming county altogether, and the parts around Welwyn, Wheathampstead and on toward Luton are particularly pleasing, especially in the springtime.

Not a soul was about seemingly, though it was past nine; the birds sang in hedges and tree tops, sleepy cows nodded familiarly to us across wide, smiling pastures, and occasionally a frisky colt threw its heels into the air in sheer joy of existence, and raced us for the mere fun of the thing as long as our road ran in touch with its meadow. It was a positive treat to be alive under such conditions; and after the long dreary months of winter, in which most of our cycling had been rather in the nature of a duty than a pleasure, it filled us with that serene sense of satisfaction that would almost incline you to think kindly of your mother-in-law, and to be gentle with the man who by dint of superiority in the matter of dancing had captured the fickle affections of your last season's companion on the tandem—the girl with the yellow hair and forget-me-not blue eyes.

We had no map with us, and, as a matter of course, we had considerable difficulty in finding our way through the bewildering choice of roads that were presented to us as we got further and further into the country. It was Raffles fault. I wanted to buy one of those cheap and handy guides in Hertford, but he pooh-poohed the idea. He said there were finger posts, and if there weren't we could always ask our way. In this last he was wrong. There never was anyone to ask, not when they were required. When we didn't feel any special anxiety about our direction, countrymen and country maidens appeared from all points of the compass and jammed themselves into the narrowest of lanes, and got in our way and irritated us; but as sure as ever we came to a fork, not a soul could we glimpse. It's the natural cussedness of the way things are arranged on this lopsided contrary old planet of ours!

With regard to the finger-posts Raffles was near the truth. The were certainly finger-posts by the dozen, and doubtless to those who knew the country they were exceedingly useful, besides giving a finished look to the circular hil-

*Cycling.

locks on which they stood. But the fault we had to find with them was that they were too brief. We wanted to go to Luton, say. We knew that much; and we would suddenly come upon a finger post set at a corner where three roads met, after we had ridden a couple of miles haunted by an uneasy feeling that we were not going there, but resolved in the absence of anything better to be done to keep straight on and trust that we were.

Then Raffles would spot the finger post.

"Here's a post," he would sing out. "Now we shall know where we are." And we would all dismount and gather round that ornamental woodwork. One hand would say "To Mudley," another "To Snatcham," and the other, pointing down the road by which we had come, "To Welwyn." They always told us clearly and concisely where we had come from—I will say that for them. But we didn't want to know where we had come from; what we were chiefly interested in was where we were going to and the way to get there, and that they never told us.

"Where's Snatcham?" Murdoch would ask plaintively.

"Hanged if I know. Let's ride along to it and ask," I would suggest.

This would strike them as being rather silly and in slightly bad taste.

"Anyway, where's Mudley?" Raffles would grumble, getting irritated and going up and shaking the post as if he thought it probably knew more than it chose to tell, and might, perhaps, be induced to disclose something further if only the right measures were taken to make it.

"I know," I put in maliciously. I couldn't help it—the temptation was too great.

"Where?" they both queried with hope and expectation once more illuminating their expressive physogs.

"On the map at Hertford that we shouldn't require," said I with a chuckle.

They upset me into a bed of nettles between them, and I am not sure that I didn't deserve it.

It was while we were halting between the rival attractions of Mudley and Snatcham that our "Ancient Warrier" (so christened by Raffles and to be hereinafter known, as the lawyers say in their beastly long-winded fashion, as the "A. W.") came down the road mounted on a crock, and trolling gaily a stave about loving the merry spring time. He was anything between forty and sixty-five, I judged, and was the best preserved specimen of the "shabby genteel" in cycledom that I have ever encountered. His knickers were of a loud pattern check, and looked as if he had made them himself by shearing off the legs of the trousers of his spring suit of the last season but one; his coat was a frock one in the last stage of seediness. His get-up was completed by a brown billycock, a dirty clay and a pair of stockings that might have been borrowed from his wife or his married daughter, so evidently feminine were they. He had other things as well, including a pair of spring side boots with the elastics in a bad state of preservation; but these were the things that most struck the eye and arrested the attention of the casual observer.

He was a genial old chap, too—light-hearted as a child and with nothing haughty or reserved about him. He froze on to us straight off, and ten minutes after Murdoch had stopped him for directions as to our route we knew all his private history, his name and calling, his adventures and misadventures, his childhood and youth, his destination, his experience of the cycle and the price he paid for his machine and the way he made his knickers. At least, we imagined we knew all these things. We were young and confiding and if a plain tale was told us in a plain, straightforward way, and if we hadn't the remotest interest in it one way or the other, we did at least do the teller the justice of accepting it as gospel. And in this, perhaps, we were wrong.

The A. W. was, like ourselves, on the road for the holidays. He had a pension from the army where he had served twenty-five years through every battle we could think of, except Hastings and one or two others, perhaps. I asked him if he had served under the late Julius Cæsar. He didn't seem to know much about Cæsar, and I was going to improve the shining hour when Murdoch hit me in the ribs and suggested that I was playing it rather low down on the old chap and had better keep my funniosities for paid engagements.

As I have said, I rather objected to the company of the A. W. He seemed altogether too chummy and confiding considering his age and experience, and the symptoms suggested to my cautious mind humbug, and possibly not inno-

cent humbug at that. My chums didn't agree with me and the upshot was that we were four instead of three, until—but of that more anon.

The addition to our party was certainly good company. He could talk and sing and smoke, and did all three incessantly, using his own songs, which were of a jovial, if somewhat free, not to say low class; drawing from his own experiences to keep the conversation pot a-boiling and smoking our tobacco, levying on our pouches in rotation, so that none of us needed to feel jealous or slighted in any way.

One thing he had a thorough knowledge of, and which served us in good stead, was the road.

"You follow me, my boys, and I'll put you right," he had said when we first set out in his company; and he did, to such purpose that we had nothing to do save pedal and smoke and listen to his conversation and applaud his songs, until we came into Dunstable. Here we proposed drawing up and seeing what could be done for us in the way of chops and cheese. To this plan the A. W. gave his heartiest support, and, knowing of a "first-class, quiet little place" in the town, where "a drop of something good" could be likewise purchased, we allowed him to take the lead and conduct the party as he had been conducting from the time he joined us.

In fact, once or twice it struck me that we were playing second fiddles to a rather irritating extent. Once, Murdoch, who is a thirsty soul, fancied a drink and proposed it.

"Drink not you. Save it up for your dinner, my boy," said the A. W. cheerily. "It's a bad thing to drink on the road. I remember when we were in Egypt, etc., etc.," and off he started on one of his long-winded yarns, and Murdoch, giving a wistful look at the inviting sign-board of a cheery looking wayside inn, had perforce to pedal on. And then Raffles, whose morbid tastes run in the direction of all churches, with worm eaten pews and undecipherable brass tablets in them, espied in the near distance between Wheathampstead and Luton, just such a mouldy old edifice as he had been yearning to encounter, and wanted to stop and examine it.

"Nothing there, my boy, nothing there," said the hearty old fraud. "Wait till we get further along the road, then I'll show you something that will make your mouth water. When I was down in Sussex, etc., etc.," and Raffles, protesting, had to keep up out of common politeness, and by the time the reminiscences came to an end the church was miles behind us; and the best of it was the story wasn't about churches at all, but about a man he knew who had gone to the market just to see what was going on. He was leaning over the rails of a pen containing a couple of pigs, smoking—the man was smoking, not the pigs—when a farmer came up to him.

"Fine pigs, they be," said he.

"Yes," said the friend of the A. W. "Not bad animals as pigs go nowadays."

"What might you be wanting for them?" asked the farmer.

"Oh, I shouldn't refuse a ten-pound note if it was offered to me," said the other, who was a bit of a wag in a direction that one might call shady.

Well, not to hang the yarn out unduly, the farmer offered half that sum, and the other took it and left the farmer and the owner of the pigs, whoever he might be, to settle the matter between them.

However, to return to our adventure, it seemed silly and ungracious to object to the man for taking trouble on our own account, and I held my peace and followed the others round to the "first-class quiet little place" known to the A.W. If it wasn't exactly first-class according to our ideas, it was clean and comfortable, and our companion had in no way belied his capacity for supplying variety and quantity in the matter of foodstuff and drinkables.

We had a prodigious quantity of chops and potatoes and bottled beer, with cheese and celery and apple tart over all, and our united efforts served to about put us level, jointly, with the quantity consumed by the A. W. And, as for the drink—we simply were not in the running. I began to hope it was a contract affair, long before the end was in sight. Bankruptcy for the landlord or ourselves lurked in the near future, and, as a matter of expediency, I preferred that it should be the landlord. It is not that I am at all selfish, but I like to get something for my money, and it is, after all, a dismal thing to get broken over feeding someone else's appetite.

As a matter of fact, it wasn't a contract affair; but the bill was not very alarming. Seven and elevenpence it came to, to be precise, and

just when we were thinking of settling it, the A. W. had an inspiration.

It was that we should go odd man out for paymaster during the association. By that way, he said, we should avoid confusion, and we could have a settling up at parting. He offered to take the job in hand himself if we preferred it; but of course we couldn't allow that, and we tossed for it. Raffles won it — Raffles always is lucky at these things — but he didn't seem particularly elated.

"How are you fixed, my boy?" asked the A.W. kindly, producing a handful of change and picking amongst it. "Will you have a quid on account?"

Raffles protested that he had got enough and to spare to go on with, but the A. W. insisted on his taking the sovereign, as he was a stranger. Raffles immediately proceeded to carry out the duties of his new appointment, and then we got our mounts, and, with pipes on, leisurely proceeded through the ancient town of Dunstable, and out on to the Holyhead Road.

Heavy work did not seem to appeal to either of us after that dinner, and, what with mounting frequent gate-posts, and reclining on many alluring grassy banks to yarn and smoke, and idle the sunny hours away, we were not far on the other side of Dunstable when our attention was drawn to the fact that time was fleeting quite out of proportion to the distance we had covered. It was Murdoch who had noticed this, and energetically protested against the unusually dilatory nature of our tour.

"I say, you chaps," he exclaimed, as he counted the strokes that fell from the belfry of a neighboring church, "there goes five and we have done less than forty miles. If our object was merely to lounge, we could have done it cheaper and more easily at home. For my part, I came out to ride and I propose to go on."

We agreed, and, shaking out our pipes, we mounted, and drove at a good swinging pace over the most perfect imaginable of roads, and we dallied not until the ancient and honorable city of Towcester came into sight. It was a lovely scamper—twenty-five miles of it, and even Murdoch was satisfied when we drew up at the Talbot, and declined any more saddle until our systems were fortified for it by tea and trimmings.

I must do the A. W. justice to acknowledge that whatsoever there might be against his personal character, his character as a cyclist was absolutely unimpeachable. There was certainly a want of grace and style about his riding, a sort of get-the-old-jigger-along-somehow, that fastidious persons might have resented; but the cheerful light-heartedness with which he covered those twenty-five miles and the pace he contrived to get out of that old crock he had under him earned our respectful admiration.

"Ah!" he ejaculated, with a sigh of blissful enjoyment, as he mopped his brow with a straw colored bit of rag that had once been a handkerchief, "that's what I call riding. We'll have another after tea."

We did, too! Over the last tea cake and the final washings of the pot, we held a consultation. We were rather in favor of going on to Coventry until the A. W. negatived the proposition. The loveliest scenery, the best roads and the most comfortable of stopping places, according to our mentor, were to be found by branching off towards Northampton. However, Northampton or the North Pole, it was all one to us, and, as neither of us seemed disposed to assert himself, the Northampton proposition went by default and we went by bicycle.

The road certainly was all and a little more than the A. W. had claimed for it. We took it leisurely, and, for my part, I have never enjoyed a ride more.

A young moon was flooding the country-side with a soft, yellow light long before we got into Northampton, and the finer poetical feelings which I kept about me for use on just such occasions as these—finding them rather in the way for the plain, everyday affairs of work-a-day life—rose and ramped for a hearing.

Northampton, after the peaceful serenity of the open country roads, struck us as being noisy and not over-attractive, and we declined to stay in it. Later we regretted that we had been so nice in our requirements, but just then we individually and collectively had rural aspirations that made the very idea of big towns and busy throngs abhorrent.

The A. W., to whom we appealed, suggested that we should make our way towards Wellingborough, and be guided in the choice of a stopping place by the progress of time and our bodily needs.

We obtained a refresher at an hotel by the country ground and started to polish off the remaining mileage that lay between us and beddy-bye, as Raffles playfully put it. It wanted a considerable amount of polishing off, too. A certain sameness began to creep into the scenery. One clump of trees looked so much like another clump; the resemblance between the fields and waste places became more and more striking; and each hill down became shorter than its predecessor, while, on the contrary, the hills that went in the other direction became longer and longer as we proceeded, and there was but little joy in us by the time we reached Wellingborough. Once or twice we tried to get in along the road as a likely looking place cropped up; but accommodation in Northamptonshire seemed woefully unobtainable just then. Some couldn't have us and others wouldn't and the upshot of it all was that we were dog-tired and hungry and dirty in the extreme when we did manage to find a roost.

There was no picking and choosing about our quarters, I can tell you. The very first hotel we struck when we entered the town we halted at, and we refused to budge one yard further even at the solicitation of the A. W., who, of course, knew of something so much better. Fortunately, it turned out to be comfortable and accomodating, and with a big joint of cold beef, flanked with pickles and cheese, and foaming tankards before us, we brightened up again, and took a renewed interest in life.

Owing to the holiday rush, the hotel was fairly full when we arrived, and the best they could do for us in the way of sleeping accommodation was a pair of double-bedded rooms. However, we couldn't afford to be particular, and Murdoch and Raffles shared one between them, while the A. W. and myself toddled fraternally off to the other.

The A. W. put out the gas and that was the last that I, or indeed any of us, saw of him. I slept heavily, without a break, and only the most infernal racket at the door woke me in the morning to the astounding knowledge that it was just on ten.

"Say, you chaps; are you going to hang it out all day there?" piped Murdoch's dulcet voice through the keyhole.

I sat up and looked about me. The other bed was vacant, I noticed; but, just then discovering that the door wasn't locked, Murdoch blundered in.

"Hello, Bob," he queried, "the A. W. gone for a constitutional?"

"I expect so," I answered. "You woke me up or I should have dozed the day away completely, I believe."

I tumbled out of bed and proceeding to hunt for my wardrobe, and, not being able to discover it, I got flurried and began to shy the things about.

"What's up?" asked Murdoch.

"Can't find my togs," I grumbled. "I put them down by the bed. Where in thunder can the silly things have gone to?"

We hunted high and low, singly and together. We turned out the cupboards and looked up the chimney; but not a vestige of clothing could we come across. Then I looked at Murdoch and Murdoch at me.

"Queer," he muttered. "Sure you haven't been sleep-walking and gone out and pawned them, or—what's this?"

He was fumbling with a rummy looking contrivance that had hung unnoticed till then on the rail of the other bed. He held it out as he spoke, and I knew it at once. So did Murdoch. It was the homely contrived garment that had graced the nether limbs of the A. W.

"Why, the silly cuckoo has gone off in your togs, old man," said my chum, dropping the seedy rag, and collapsing in silly mirth on the bed. "How funny."

"Blest if I can see where the fun comes in," I retorted. "Besides, how could he make such a mistake as that?"

"Well, what else has he got on then?" demanded Murdoch indignantly. "I suppose he is wearing something."

The argument was not to be refuted. I had to accept it; but I did it with a bad grace, and privately I made up my mind to tell the A. W. exactly what I thought of him as soon as the chance presented itself.

"This comes of picking up objects along the road," I growled. "Old soldier! A jolly old soldier, I reckon. One of the prison brigade, most likely. Chuck us the rags. I must wear something, I suppose."

Even then, strange to say, the full extent of the disaster didn't occur to us. In fact, Murdoch regarded it as a first class joke, and he

went down to bring up Raffles to share it with him.

Every single item of my property was missing, from the shoes on my feet to the hat that had been my constant companion on many a jaunt, and, as I donned first one and then another article of the A. W.'s discarded attire, I bubbled over with rath and disgust unspeakable.

When we got downstairs, nothing could we learn of the A. W., and the others began to get thoughtful in between their fits of unseemly mirth at my ridiculous appearance. You see, at the worst, it seemed to them that the A. W. had only "done Bobby for his breeches," as Raffles classically put it. Alack-a-day, woe was us! I myself didn't see any consolation in that "only." I wanted my breeches, and I emphatically didn't want those of the A. W. But my companions were thoughtless and inclined to be selfish, as young men are to apt to be when the woes of another are in consideration.

My turn came to chuckle after we had had breakfast, and in the interval of waiting for the A. W. had gone round to the stables, to see how it was with the machines. My machine was all right and so was Raffles's. Murdoch's had undergone a similar metamorphosis to that which had overtaken my clothing. It had become a crock, the crock, in fact, which the A. W. had ridden so nobly and so well the day before in our company. Then Raffles and I had a little joke which tickled our risible faculties to an immoderate extent, but, do what we could, we couldn't get Murdoch to see any point of humor in it. On the contrary he was quite nasty over it, calling us "a pack of confounded fools," and assuring us that we had made our final tour in his company.

We were sorry for Murdoch, of course, but I couldn't help thinking that the lesson was a deserved one when I remembered the strange want of sympathy over my troubles, and I hoped he would profit by it.

Raffles thought he was going to be the only one of us who came out of that association clear—for, of course, we no longer had delusions about the return of the wanderer. It was a clear case of "do," robbery and fraud, under peculiarly heartless circumstances. Raffles kept to this view until he tried to settle the bill—for four, if you please—with the pound deposited by the A. W. as "security."

The hotel clerk assured him without any reservation or attempt to soften the blow, that the sovereign was a "snide" one, and then Raffles began to perceive the hollowness of all earthly things, and to join Murdoch in mumblings of policemen and assizes, and other weird matters that belong to the law and to those who exchange crocks for bicycles and pass off counterfeit coin on unsuspecting and open-hearted, confiding cyclists.

Thus ended our tour in one big comprehensive calamity. Murdoch wouldn't take the road on a crock, and I couldn't as a scarecrow, and, after lingering for awhile, without hope or expectation, but as a matter of bare duty, in the company of certain members of the police force, we finished the run in a few hours in railway trains.

We have toured frequent and far, together and separately, since then; but we are very, very shy now of making casual additions to our original party, and we look with suspicion and resentment on all elderly cyclists who display conflicting appearances, and seem more than usually genial and open. They might be all right, we admit, but they might once have belonged to the army, and one A. W. is just one too many for such as we.

Our Busy Cycledom

The C. N. Casper Company of Milwaukee, Wis., have issued a new map of the State of Wisconsin, and will send of copy free of charge to any of our readers desiring same.

—

Said the Boston Globe after the National meet: "The departing wheelmen descend from beans to beer. Boston in 1899, Milwaukee in 1900." Wonder if the average wheelmen will think it a matter of descending or ascending?

—

During the progress of the big good roads convention recently held in Milwaukee and attended by representative farmers from every part of Wisconsin a prominent farmer-senator noticed Chief Consul Van Valkenburgh in the front row. Advancing toward the remarkable "silver-tongued orator," the senator from the country said quite severely, "See here, you bicycle fiend, what are you doing amongst us farmers?" "Bicycle fiends, eh?" answered Van, sneezing between every syllable, "I want you to understand that I'm a full fledged farmer, at least I've had the hay-fever for more than two weeks." And then Van went into another indefinite fit of sneezing.

—

Keep the Mouth Closed.

A not inconsiderable proportion of people are victims of a degree of nasal obstruction sufficient to render it necessary to use the mouth more or less for breathing purposes. In an even larger proportion the obstruction allows of sufficient air being inhaled during comparative repose, but muscular exertion or emotion obliges them to supplement nasal respiration by opening the mouth. If one takes the trouble to look at the cyclists who pass, from this point of view, some surprise will be caused by the very small number among them who can ride from seven to ten miles an hour without breathing through the mouth, says the Medical Press. This relative obstruction is a serious thing, because it deprives the cyclist of a safeguard just when circumstances render the safeguard more than ever desirable. Whether in the crowded thoroughfares of large towns or in the wind-whipped roads and lanes of the country, dust is always present, usually in very uncomfortable quantities. It "blisters" the eyes, irritates the delicate mucous membrane of the nose, and, if inhaled as the results of breathing through the mouth, a tangible quantity must inevitably find its way into the bronchi, and even into the finer ramifications of the pulmonary air passages. The inability to carry on respiration through the nose should be regarded as a positive disqualification for cycle-riding, for there can be no doubt of the injurious results of inhaling the dirty and often microbe-laden dust which the cyclist has to meet, unless, indeed, mouth-breathers would consent to wear respirators.

—

Laws of the Road.

Every member of the community has the right to travel upon the street or highway at all times, either on foot or by such means of conveyance as he may have or see fit to employ.

A bicycle is held by the common law decisions of England and America to be a carriage, and the rider of it, as the driver of a carriage, entitled to all the rights and privileges that belong to the drivers of other vehicles which travel the public highway.

Whenever any persons travelling with any carriage shall meet on any public highway, the persons so meeting shall seasonably turn their carriages to the right of the center of the road, so as to permit such carriages to pass without interference or interruption.

The Supreme Court has decided that the words "center of the road," refer not to the smooth or most traveled part of the road, but to the center of the worked part, although the whole of the smooth or most traveled highway be upon one side of that center.

In is no excuse (in case of failure to observe this statute) that the road on his side was rough and rutty, but smooth on the other, and that it was more difficult for him than for the other party to turn out.

A traveler on the public highway is not bound to give way for another traveling in the same direction who desires to go by him, if there is room on either hand for the other to pass without any way being given. He is bound to yield way for one behind him to pass, when it is practicable, and when he is requested to do so, and when by keeping his place he will prevent one desiring to go faster from going by.

He is not bound, therefore, to look back or listen for the coming of another, so as to make clear the way for him.

Talks on Touring

BY THE TOURIST.

Any information pertaining to touring, such as distances of trips, condition of roads, etc., will be given in this department on request. Communications should be addressed to "Tourist," The Pneumatic. Readers submitting acceptable descriptions of tours, articles on touring, etc., will receive the Pneumatic free for one year.

Ideal Cycle Touring.

Though the League of American Wheelmen has done everything that has been done to secure for wheelmen the many privileges they now enjoy it has not, until this year, assumed a particularly active interest in inter-city, inter-state or international touring.

Realizing the importance of this department of the organization President Keenan has devoted a large amount of his time this year in making plans and executing them for the ultimate perfection of a touring system which would be alike practicable and attractive. With this end in view he first organized the Touring Department upon a practical basis. Under his directions the Touring Committee has been compiling for several months the best routes between the leading cities of the country and these have been so arranged that portions or all of them are available for members of the organization. The work has been somewhat impeded because of the number of applications for routes while they were yet incomplete, but during the winter months, when there will be little such interruption, it will be carried on, until the coming spring will see the League well equipped in this particular.

To make it fully effective President Keenan made a trip to Europe and while there took part in the organization of the International Touring Association and succeeded in making the L. A. W. a part of it, as well as concluding an alliance with the Cyclists' Touring Club of England, the strongest European cycling organization, whereby the two organizations will have reciprocal advantages.

But what had already been accomplished and what will be completed during the next few months the League will be in a position to offer its members advantages in touring, either domestic or foreign, that a year ago would have been impossible of accomplishment. And it is confidently expected that the activity in this department, as well as those in charge of good roads legislation and other features of L. A. W. work, will result in an appreciation by wheelmen of the values of the organization and consequently an increased membership.

#

Under the agreement between the League of American Wheelmen and the Cyclists' Touring Club, of England, which has been the cause of so much satisfaction among wheelmen, members of the L. A. W. who make tours of Europe will be furnished with membership cards in the C. T. C., and this will enable them to secure all the privileges of a resident C. T. C. member. Among the advantages that will be derived from this arrangement will be the use of C. T. C. road books which cover the greater portion of Europe and the text of which is printed in English, the only set of cyclists' road books published in Europe that are so written.

Hygienic Saddles.

The fact that so many new bicycle saddles are being designed is in itself an indication that the ordinary suspension saddle, although it possesses many excellent qualities, and was a great improvement upon the devices that preceded it, is not altogether satisfactory, and leaves something to be desired. Its chief defects are the hard and unyielding character of the leather, and its tendency, when pinched in in front to obtain a narrow peak, to throw up a central ridge, which is a highly objectionable feature. The athletic rider who adopts a forward inclination of the body, which causes a great proportion of his weight to be borne continuously by the pedals and handles, makes light of these objections, and for the same reason he is indifferent to springs, which he regards as inimical to speed and more or less unnecessary; but the ordinary road rider and tourist carry the greater part of their weight on the saddle, and they are, therefore, far more susceptible to anything that produces discomfort. Sufferers from the effect of perineal pressure are to be found in this class, and a central channel or depression is a very good feature in a bicycle saddle, as where the tendency exists, this useful provision guards against a recurrence of the evil, or prevents the development of a complaint that is sometimes attended with serious consequences. What is wanted is something between the saddles which, although of good shape and design, are as hard as a board, and those which are made so soft and yielding as to develop qualities equally objectionable, though of a different character. It is a course between these two extremes that is most likely to lead to good results in the construction of bicycle saddles. At the same time it is necessary to remember that the requirements of riders differ considerably, and that the saddle that will suit one will not suit another, owing to the variations in weight, size, build and the position adopted in riding.

The Hum of the Horseless

Naming the Horseless Carriage.

Although the horseless carriage is rapidly making its way into popular favor and promises to come into universal use, the English-speaking world has yet to find a suitable and convenient name for it. The French have settled the question for themselves with the word "automobile," which in English is cumbersome and awkward, although now commonly used. "Electromobile" as the designation of those carriages which are propelled by electricity is worse. "Autocar" is barbarous, and "motorcycle," is better than "automobile," is quite as clumsy.

It will be worth the while of philologists to watch the way in which the needed word is found and put into use. The word "bicycle" is not nearly so clumsy as are the proposed terms for the horseless carriage, but, while it is commonly used, it has given way largely to "wheel," or even "bike." All bicycle riders commonly speak of their favorite diversion as "wheeling." Some such short and convenient term is going to be needed in the case of the horseless carriage. Of the various names now suggested "motor carriage" or "motor car" seems for a number of reasons the best word at hand. It is not to unwieldy, it correctly defines the thing described, and certainly the word "motor" could be made to take on this specific meaning, seeing that the more common word "wheel" has been used successfully to designate a bicycle.

The problem, of course, will work itself out in accordance with usage, but if any philologists have apt suggestions to make as to the best word to use they should offer them at once. Before many months have elapsed the question will have settled itself.

Future of the Automobile.

The writer of a letter to a Chicago paper very correctly points out that the automobile is a less objectionable conveyance in the parks than the vehicle drawn by horses. The city of the future is to be a city of horseless carriages. Within a very few years, presumably, the automobile will be cheaper in price, and thus within the range of persons who cannot afford a horse and carriage.

The tendency of the south park board's ruling against automobiles, therefore, is to keep from the park driveways that form of conveyance which is destined, in the struggle for the survival of the fittest, to show itself best adapted to the needs of a progressive city.

An invitation was extended to Prince Lobenguela, of Matabeleland, recently to ride in a horseless carriage. When he first saw the vehicle he termed it a "devil machine" and inquired after the horses. It required considerable persuasion to induce him to mount but after once started he enjoyed the ride immensely.

In a 226 mile race between two automobiles and the Paris-St. Malo express the former covered the distance in seven hours and thirty-five minutes while the express required seven hours and forty-eight minutes. Although the time is very fast for an automobile it is very slow for an express.

The coming of the automobile reduces the work of human societies as cruelty to horses will almost cease. Drivers will no longer use whips and any "cruelty" to automobiles will result in nothing more than repair bills.

A dispatch from London says:

"Dr. Lehwess, of the Automobile Club, proposes to undertake in the early part of next year a journey from Pekin to London, about 8,000 miles, on a motor driven vehicle.

"Dr. Lehwess said in an interview: 'My car, which is being specially constructed for extraordinarily severe work, will burn ordinary petroleum, and I have a specially designed burner for the ignition.

"'The most difficult part of my journey, will, I fancy, be the stretch of some five hundred miles between Pekin and Khiacta, which is on the Russo-Chinese frontier, but for this I am prepared and carry a kind of anchor or grapnel with a length of wire rope, which can be attached to the motor, and used for hauling the car over otherwise impassable pieces of road or out of deep ruts or holes. As for fuel and water, the car has a carrying capacity for supplies to last us from three to four hundred miles, and there will be no difficulty in renewing our supply. From Khiacta I shall follow as much as possible the line of the new Trans-Siberian railway. Afterward, I shall cross the Ural mountains into Europe, and go by way of St. Petersburgh, Riga and Konigsberg to Berlin, and thence through southern Germany to Paris, whence I shall return to London by way of Calais and Dover. I estimate the whole trip to occupy about three months.'"

. . . THE . . .

League of American Wheelmen

For Any Information Address Albert Bassett, Boston, Mass.

Membership Oct. 20th, 1899.

1.	Pennsylvania	11972
2.	New York	10941
3.	Massachusetts	10197
4.	New Jersey	8046
5.	Ohio	2463
6.	Michigan	1659
7.	Rhode Island	1436
8.	Connecticut	1342
9.	Illinois	1221
10.	Maryland	902
11.	Wisconsin	887
12.	New Hampshire	588
13.	Indiana	549
14.	Kentucky	468
15.	Maine	467
16.	Iowa	409
17.	Missouri	396
18.	Colorado	268
19.	Southern California	267
20.	Minnesota	252
21.	District of Columbia	226
22.	Kansas	151
23	Virginia	137
24.	Nebraska	135
25.	Delaware	133
26.	Vermont	111
27.	West Virginia	82
28.	Georgia	74
29.	North California	73
30.	Texas	72
31.	Florida	67
32.	South Carolina	58
33.	Tennessee	57
34.	Washington	55
35.	Oregon	55
36.	Montana	46
37.	Foreign	43
38.	Canada	39
39.	Arkansas	26
40.	Alabama	20
41.	North Carolina	18
42.	Utah	17
43.	Mississippi	14
44.	South Dakota	14
45.	North Dakota	13
46.	Louisiana	12
47.	Idaho	7
48.	Arizona	4
49.	Wyoming	4
50.	Indian Territory	3
51.	Oklahoma	2
52.	Alaska	2

The Work of the L. A. W.

"How many wheelmen stop to think of the debt of gratitude they owe the League of American Wheelmen for what it has accomplished in their behalf, and how much more could be done if they would give it their support?" This is the question of an official of the organization who has been identified with it for several years and who is competent to speak of its merits. Continuing, he says:

"I see them riding by me in droves and always wonder how many of them are L. A. W. members, or who have even given a thought to the fact that they owe all the rights, privileges and accomodations they enjoy to the League, though they may not be nor never have been members. I know the League has been the object of many attacks, and these have been more or less injurious, but, generally speaking, they arise from the unthinking or those who have allowed themselves to be chagrined in losing preferment in the organization. These classes and their attacks are of but little harm, but the ignorance of the great mass of riders upon what the League is doing and proposes doing is a matter of great importance. It is time they were educated upon the subject and this education cannot come too soon.

"It is estimated that there are 3,000,000 wheelmen in the United States to-day. Of this number perhaps not more than five per cent have been identified with the League at one time or another. Yet it is this small percentage which has secured for themselves and all other wheelmen the rights to all public highways, the legal status of the bicycle as a vehicle, the various laws compelling railroads to carry bicycles as baggage, many municipal ordinances favorable to wheelmen, and many other things of a legal nature which have given wheelmen security and accomodation. It has kept up, after being the pioneer movers, an unceasing agitation for good roads, streets and cycle paths, and the direct result of this movement has been the appropriation by state, county and municipal authorities of millions of dollars for highway improvement. Besides these accomplishments the various

state divisions are constantly working for their constituents in matter which may be termed as being of purely local interest. In all of these things the average wheelmen shares and yet he does not and never did contribute the moral support of his membership or the financial support derived from his small membership dues which are only one dollar a year.

"But even for that dollar the member derives direct benefits which the selfish non-member cannot secure, for nearly all the divisions supply their members with state road-books, showing maps of roads and paths, their topography, condition, etc., besides placing at the disposal of members a system of official hotels, repair shops and local consuls. The national department furnishes a monthly magazine, a periodical department in which nearly any magazine or other literary periodical may be subscribed for at a discount, and there is always at the disposal of members the national touring department which furnishes routes for tourists.

"These are only a few of the things the League is doing for wheelmen, just as they occur to me, but they are enough, I think, to warrant the statement that the L. A. W. is entitled to the support and membership of every man or woman that rides a bicycle. But to give you a more definite idea of just how efficacious League work has been I will cite one accomplishment—the passage of the baggage bill in New York—and its effects. The railroads in that state estimate that this law is the cause of an annual loss to them of $300,000; or, in other words, the wheelmen of the State save that sum every year because the League compelled its passage. At that time the New York division had 20,000 members, which means that that number of men passed a law which saves to the entire wheeling population of the State a sum (to be credited to their work) of $15 every year for each and every member. This brings us to the question of 'what could be accomplished if the League had five times its present membership?'

"That is a query which can be left only to the imagination, but I think I will not be disputed in saying the results would be simply stupendous. It is upon these things the average wheelman does not reflect. He probably has heard them time and again, in one form or another, but he does not realize that the statements are intended for his own personal edification. He perhaps thinks it is something in which he is vaguely interested, but he does not stop to think that it is the influence of his and thousands of other memberships that will give the moral influence necessary to secure the rights, privileges and accommodations he wishes to enjoy, nor does he reflect that securing these things for him costs a large amount of money and his dollar a year is needed just as that of the members now giving it. And if he is of a selfish nature and wants a direct return from his dollar the League gives it to him with exaggerated interest.

"Let wheelmen think over these points and if there is any department in the League they do not like they need not patronize it. There are departments which appeal to every wheelman and they should cheerfully support the organization which has done and is doing so much for them."

The state divisions of the L. A. W. will be on the lookout this fall for political candidates who in the past have opposed bills framed in the interest of wheelmen. Many of the achievements of the League have been in the legislatures, and the organization purposes making it warm for those who have opposed its measures. Consistently, it will aid those who have been its friends in the past, and who have assisted in passing laws in the interest of wheelmen, or who have aided in defeating others inimical to them.

A New Jersey official of the L. A. W. suggests that the form of the organization be so changed that the unit of government will be in local consulate. He proposes that delegates from the consulates shall form the State organization and from the latter the national officials shall be selected—much upon the same principal as many fraternal organizations.

The National Assembly of the League of American Wheelmen, which was conditionally awarded to Jacksonville, Florida, may be held in Detroit. The Michigan city was one of the original aspirants for the honor, and may yet succeed in getting the assembly, which will be held next February.

The secretary of the L. A. W. is receiving many renewals of memberships from members who have been away on their summer vacations. This is indicated by the number of "second notice" cards returned that have largely increased in number since the first of the present month.

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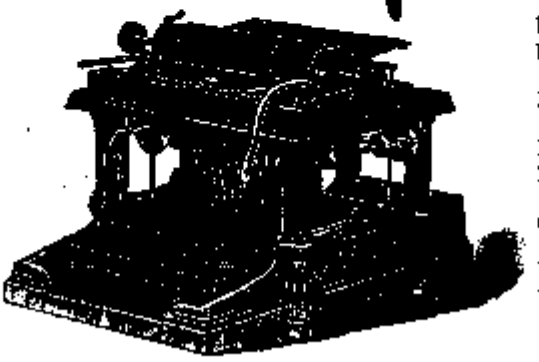
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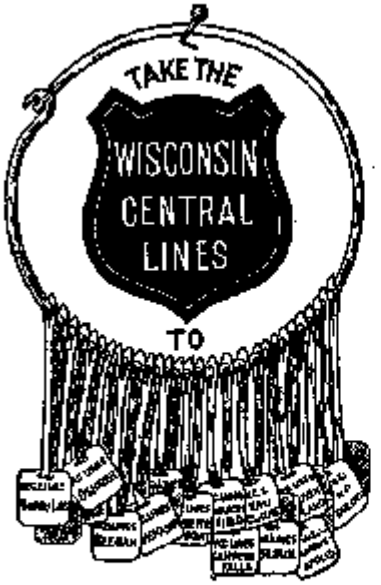
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I have used Ripans Tabules with so much satisfaction that I can cheerfully recommend them. Have been troubled for about seven years with what I called bilious attacks coming on regularly once a week. Was told by different physicians that it was caused by bad teeth, of which I had several. I had the teeth extracted, but the attacks continued. I took quite an advertisement of Ripans Tabules in all the papers but had no faith in them, but about six weeks since a friend induced me to try them. Have taken but two of the small 5-cent boxes of the Tabules and have had no recurrence of the attacks. Have never given a testimonial for anything before, but the great amount of good which I believe has been done me by Ripans Tabules induces me to add mine to the many testimonials you doubtless have in your possession now.
A. T. DeWITT.

I want to inform you, in words of highest praise, of the benefit I have derived from Ripans Tabules. I am a professional nurse and in this profession a clear head is always needed. Ripans Tabules does it. After one of my cases I found myself completely run down. Acting on the advice of Mr. Geo. Bower, Ph. G., 69 Newark Ave., Jersey City, I took Ripans Tabules with grand results.
Miss Beatty Wishart.

Mother was troubled with heartburn and sleeplessness, caused by indigestion, for a good many years. One day she saw a testimonial in the paper inserting Ripans Tabules. She determined to give them a trial, was greatly relieved by their use and now takes the Tabules regularly. She keeps a few cartons Ripans Tabules in the house and says she will not be without them. The heartburn and sleeplessness have disappeared with the indigestion which was formerly so great a burden for her. Our whole family take the Tabules regularly, especially after a hearty meal. My mother is fifty years of age and is enjoying the best of health and spirits; also eats hearty meals, an impossibility before she took Ripans Tabules.
ANTON H. BLADEK.

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Mrs. MARY GORMAN CLARKE.

I have been suffering from headaches ever since I was a little girl. I could never ride in a car or go into a crowded place without getting a headache and sick at my stomach. I heard about Ripans Tabules from an aunt of mine who was taking them for catarrh of the stomach. She had found much relief from their use and advised me to take them too, and I have been doing so since last October, and will say they have completely cured my headaches. I am twenty-nine years old. You are welcome to use this testimonial.
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THE PNEUMATIC.

VOL. X. NOVEMBER, 1899. No. 10.

The Boy and the Bicycle.*

BY GEORGE ARBUTHNOT.

EVERYONE called him a boy, though he was five-and-twenty. It was partly, perhaps, because he had not tendency to any masculine vices. He could never learn to swear or smoke, and to drink even moderately was a carefully cultivated accomplishment practiced at college as a difficult social virtue. He lived with his mother and sister and liked it; yet he was as hard as nails, and as full of life as a kitten or a young puppy. He had the temper of a fiend when aroused, which a physiognomist might have gathered from his curious, liquid, three-cornered eyes. Lithe and light, a brilliant cricketer, an excellent shot, with a keen sense of the humorous, he was bound to be popular wherever he went.

The boy caracoled about the road on his bicycle one early autumn day, now spinning along in the dead leaves by the foot-way, now coasting on absolutely level ground, where no other mortal could have made the wheels run but by application of the pedals, dashing on for twenty yards, and turning with a whirr, to circle round his sister as she worked steadily forward.

«Butterfly!» she remarked with some contempt. «Dick and Mervin will be frightened out of their wits if you behave like that when they are with us.»

Rose Hewly was sedate, and some phlegmatic, the very antithesis of the brother whom she adored.

«Dick really a good sort?» he demanded, making his machine stand still suddenly in the roadway. «You always speak as if he were a killjoy of sorts, an old sober sides. Don't marry a man of that ilk, Ro; two of you together would relapse into a state of profound boredom. You ought to have a fellow like me, who would——»

«Great Scott, Maurice!» ejaculated Rose, startled for once out of her usual equanimity, «there's the train. They'll be in the station long before we can get there, and they'll think there is no one there to meet them.»

The smoke of the engine indeed appeared, a soft, whispy cloud, as the train emerged from a cutting far in the valley below. Like a flash

*Cycling West.

the boy shot past her, and swung in an instant to a narrowing speck on the long, straight road—"scorching" was his soul's delight.

* * *

«You must be a changeling; it's quite impossible you and your sister should be so near of kin.»

A party of four on bicycles were running in even couples along a country road. Rose Hewly was ahead with her fiance, Dick Redwood, and Maurice followed with Mervin, Dick's sister. She, a little, bright-eyed shrimp with a dash of piquancy, had completely captivated the boy. He had, heretofore, with the easy philosophy of a wholesome mind, adhered to the doctrine that any average man and average woman would be happy together if once the knot were irrevocably tied, and had lightly rejected the doctrine of fate and affinity as morbid rot. Yet in the last three weeks, during which he had necessarily seen a great deal of Mervin, his ideas had changed.

«Hang it all! I dare say I could get on with a lot of girls, but I want her!» he had muttered pathetically to himself as he had wandered restlessly about in the evening, alone in his den, while the lovers said a long good-night in the drawing-room, for his mother and Mervin had retired. «She makes it all fun, but she treats me with the utmost contempt; if I went about in tail-coats and played the well-informed young man, she'd love me and look reverently at me, as she did at that boiled potato sort of an artist who's so fond of coming here without being asked.»

The Redwoods' visit was nearly at an end; they were to leave the next day, and the boy's heart bubbled and throbbed within him as he rode beside Mervin in the crisp air. He longed to tell her that he cared for her, but he could not. On the contrary, his efforts at gravity only provoked her uncontrollable laughter, and at last he gave them up and played the monkey tricks he loved the whole way to the village of Bareham, where they were to have tea. And at tea Rose and Dick were so gloomy and woebegone at the prospect of separation on the morrow, and were in such a peculiarly idiotic state—the state where a furtive but ill-concealed pressure of hands under the table is brazened out by a defiant stare, and varied by that disgracefully unabashed process which is commemorated in a song called, "Drink to Me Only with Thine Eyes," that there was nothing for a fellow with any self-respect to do but to "keep up his end," and this Maurice proceeded to do, with his usual vivacity, until even his sister was reduced to extremities of weak laughter, and Dick abandoned the furtive squeeze.

«Are you unhappy or depressed?» Mervin demanded as they started homewards. «I can't imagine that you know what it is to feel.»

This was awful, and all because a fellow had done his best to throw himself into a very obvious breach; yet, at all events, it gave him an opening, and there were six or seven miles lying in front of them during which he could plead his cause, for Mervin could not by any possibility escape his society. Not a generous thought, but the boy was desperate; however, he opened the matter in the worst possible way for his own interest, for he blurted out his hopes defiantly all in one breath:

«Feel? Of course I do. You ought to know that! By Jove, when I think I shan't see you again after tomorrow, I feel. You don't believe that, I suppose?»

She broke into a merry laugh. «Don't Maurice,» (she, like everyone else, had instantly adopted his Christian name) «it's too ridiculous! I suppose you want to make fun of me now.»

He pedaled along with his hands in his pockets at a terrific pace until he was almost on the top of those other two; then, when he was close to them, he saw through the gathering dusk that they were going along hand in hand, and he wheeled as if he had been shot, and, turning again, ran into line with Mervin.

«Well?» he said.

«Well, what, you ridiculous boy?»

He groaned.

«What's the matter now?»

«Will no one ever treat me as anything but a kid?» he said. «Mervin, I care for you; I do honestly. I feel as blue as—as a blue-bottle without you; but you only laugh at me. You won't take me seriously.»

She spoke more gently. «My dear Maurice, I like you very much, but—I don't want to hurt you. I don't believe you can think seriously about anything. I believe you believe what you say at this moment, and perhaps you will miss me for a day or two; that's natural. You would miss any companion you had seen so much of

as you have of me during the last few weeks.»

«You don't think I can care deeply?»

«Don't be so hurt. Yes, that's true. How can I think so? I don't believe you can even understand what it means to care, as, for instance, those two before us care; you can only make fun of them.»

«People have different ways of caring; I really couldn't picture myself spooning in public.»

«Well, the spooning is not necessary; but you are too volatile. I don't think you would ever care enough for any one to make a sustained effort for them.»

«Oh, I'm selfish, that's right enough; why didn't you say that at first? But, after all, there are few selfish men who have wives, you know.»

He said it with such grave sincerity that a smile twinkled in her eyes.

«I have a fiend of a temper, too,» he said. «I don't suppose I should be a bit of a model husband; but one doesn't come along to tell a girl one loves her with a character certificate in one's hand.»

She grew annoyed. «You are not the sort of man I could respect,» she said. «It isn't the temper—I could stand that; it's the general irresponsibility and frivolity. I couldn't rely on you in an emergency.»

«I'm getting it hot now,» he thought; and he waited patiently for more but nothing came.

«You do care for me a little, though?» he urged, after a short pause.

«I've told you I like you,» she said hastily, «as a companion you amuse me very much.»

He winced, but said aloud, airily: «Well, it's something not to be classed with bores, isn't it?»

He little knew how near he had been to winning his heart's desire. She had sternly demanded of the future what she could expect from it if she had such a boy for a husband—selfish, pleasure loving, unequal to discipline, without endurance? Why, it would be misery. So she had fought against her feelings. Yet, if he had pleaded tenderly, had done his utmost to convince her that this was no mere passing fancy on his part, she could not have resisted; instead of that he had replied with an easy jest, and her heart hardened, so that she rode home obdurately through the darkness.

* * *

Rose dying? When? How? Why?

It was the awful suddenness of it that drove in the blow with smashing force. It was about three weeks since the Redwoods had left Alton, and Maurice himself had been away for the last week, and had returned home late one night, having ridden back on his beloved bicycle to be greeted with this appalling calamity.

Directly after Mervin had gone he had been oppressed with a wild restlessness that made him more unstable than ever; he was utterly miserable, yet his spirits had apparently abated no whit, and even his sister had failed to notice that there was anything wrong with him. He had gone to work and bicycled and over-tired himself in the weary effort to obtain mental relief from over exhaustion, yet, all the same, he had played his usual antics and made no confidant. He could not tell his feelings to any one. He had tried, for he was really fond of his sister, and had every reason to count on her sympathy; but he was incapable of clothing his feelings in words, for, as with many outwardly shallow men, his reserve was, in reality, impenetrable. At last, however, his mother had commented on the long, blue-black lines beneath his eyes, and set it down to too much cycling. She suggested he should leave home for a week; he went, but only on condition that the bicycle went also.

As he entered the house on his return his first warning of his sister's illness was through one of the servants, and then he saw his mother and the nurse. It was a case of blood-poisoning, and the girl had only been taken ill about 5 o'clock that evening, five hours before. She lay in a comatose state, and the restoratives had no effect; the doctor had almost given her up.

Maurice stole into the room, creeping behind the screen, and he started when he saw the dead-green whiteness of the face he knew so well; she rolled her head from side to side with closed eyes, and muttered incessantly; he bent nearer and found that all her muttering was one word in endless repetition, «Dick, Dick,» and again «Dick.»

«Have you telegraphed for Dick?» Maurice asked anxiously.

«How could we?» asked poor Mrs. Hewly. «It is only since 8 o'clock we thought her in any danger, and besides, how could he come?»

She broke down utterly and hurried away.

Maurice interviewed the doctor and briefly demanded: «If her lover were to come would there be any hope of his rousing her?»

«There is a slender chance in that direction. In these cases to get the patient to make a fight for life is everything, and often an unexpected presence of the sort you suggest works wonders.» With racing step, yes quite as a cat, Maurice reached the den, and dashed over the pages of the railroad guide A—B—C—D—L—M—Ma—Me—here it was—Merton, train from Alton the last just gone; train from Merton to Alton 3:30, an express that got to Alton at 5 a. m., stopped to put passengers down if required. Distance from Alton to Merton sixty miles. Present time, 10:30, and if Dick were to catch that express he must leave his own house not later than 3 a. m.

Maurice scribbled on a sheet of paper, «Have gone to fetch Redwood on the bicycle,» and gave it to a servant, telling her to hand it to the doctor, and in an instant he was in an outhouse lighting the lamp on his machine. He had had nothing to eat for many hours, and was worn and not well, but he forgot all that in the excitement of the moment.

«Poor little fellow,» as his hands trembled with excitement. «You've had a good run today, already. Never mind, it's for her life, her life. Come on,» and shutting the door behind him, he was on with a flying leap, without touching the pedals, after the manner of a trick cyclist.

He knew the road—that is to say he had ridden over it in daylight once, and it was a tolerably strait main road for most of the way. Tonight it should have been moonlight, but the clouds were heavy and only a faint glimmer showed the long, white road stretching away before him. Maurice had felt worn and overdone when he had arrived home an hour before, but cycling was a second nature to him, and he hardly felt the pedals as he flew along. The night wind braced him as the good miles unrolled themselves beneath his flying steed. He had had a dim idea that the wind had been rising in fitful guests earlier in the evening, but it seemed to have dropped again, for all was still enough now. That was well; the task he had set himself to do would need all his strength; against a wind it would have been impossible. It was better that it was nighttime for he would meet fewer people, and would not be seen searching and be run in by a police; little would they have cared for his explanation that it was for a sister's life.

For the first five miles the way seemed easy enough, a long, sinuous, undulating road with gradual ascents and descents. The machine was highly geared, and the hills would have been hard to a less experienced rider; but long habit had accustomed Maurice to the work so that the upward slopes did not trouble him greatly and as for the downward ones he put his feet up and coasted. There were no very stiff hills either way as yet. The trees, dim, gloomy shapes, shot past him, looming large with extraordinary rapidity as he drew near, and vanishing behind.

At the end of a lane were upright posts through which he would have to push the machine and he lost some time in slacking speed before he need under the impression that he was almost upon them, there was also a bridge to be negotiated, and over this he passed, then he stooped down and noted the cyclometer for the first time. By the way he had come the whole distance would be about fifty-eight miles, and of this he had accomplished thirty.

He glanced at his watch—twenty minutes to one. He was on the right side, but the worst half of the road was to come. He recollected a long hill, very steep, which it would task him to ride at all. By way of a momentary rest, he wheeled his bicycle up a steep little pitch that lay before him and remounted at the top. Absolute darkness surrounded him until he rejoined the main road he was not quite certain of the way.

Cautiously passing down one narrow lane after another, he groped along until he turned sharply out on to the great broad highway once more. By the turn he lost the help of the wind, which now came across at an angle, retarding rather than helping him forward. It fell at intervals, and then he sprinted forward before another gust came; but the intervals were longer and longer apart, so that the gusts merged at length into one steady continuous push, the push of a giant hand in a velvet glove.

For the first time in his life he swore with a feeling of relief; he cursed the wind aloud with deadly emphasis, and the wind chuckled softly

in the dead leaves by the wayside.

The speed carried him partly up the great hill which he had been dreading, and which lay just beyond the village. Then he collapsed; his strength utterly left him and he seemed to have no life in his lower limbs. A tremendous crash brought him to himself, and he bounded off instinctively, pulling up within ten yards of a huge bough of an elm tree which lay in splinters over the road. If he had gone headlong into that he would have been a mangled heap.

With some difficulty he lifted the bicycle over, for the projecting branches got in the way, and he was afraid of spiking the tires. A long strip of level ground and then there was a steep hill downwards, marked, as he knew, with a caution board at the top, "Dangerous to Cyclists." The hill curved and turned, grew steeper and steeper, and ended in a narrow stone bridge with walls on either side. But he could not afford to pedal—he must coast, even if it meant death, he had lost too many minutes by inevitable delays; to regain them by spurts was his only chance, or he might as well give up and acknowledge all his agony and sweat to be in vain. Up went his feet and down he shot; he must chance that bridge. In the turn of the hill the wind caught him at the back with almost superhuman malice and, just when he did not need it, and drove him forward at terrific speed.

The force of gravity would have sent him on with dangerous force, but gravity and wind together shot him onwards as if he had flown out of a catapult. He had no brake, he had never used one, and he would have hardly dared to do so now in any case, for the friction would have been too great. Down he rushed, cleaving the air with such an impetus that the force of the wind behind was cancelled and seemed nothing. Every faculty was on the alert, every nerve strung to its highest pitch; the reaction after torpor had come and he was almost supernaturally alive.

For the first time in his life he knew what it was to feel really horribly afraid; choking agony was in his heart, he would have screamed had he been able to do so. He experienced the physical pain of terror in a way a man seldom experiences it; he was absolutely helpless, an atom hurled to destruction. Already he felt the grinding smash of his head against those stone walls at the foot of the hill; he could not escape it except by a miracle.

He tried to regain self-control, to realize it would all be over in a second; but the creeping horror of the contact entered into his very bones, and on, on he flew. He set his teeth. Would the hill never end? Was he never to be put out of his agony? He could not call it suspense, for the certainty of that stone wall was at the end.

The machine began to slacken slightly; his tension relaxed a little. What was stopping it? He might, after all, have some power over it. Then all at once he began to recover and realized that the bridge was far behind; he had shot over it without even knowing he had done so. The wind was still driving him on; if it held for a couple of miles more he would be in Merton, and after that, one mile, and he would be at the house.

He could not have seen his watch even if he had had it out. He must trust to chance. He might arrive to find that he had missed his aim by a hair's breadth; the last precious moments of hope might slip by while he vainly tried to arouse the house, or, worse, he might see the hands of the clock pointing to the hour at which the train started, so that Redwood could not possibly catch it. As these and similar thoughts occupied him, he sped on, and the level seemed a downward slope, because of the wind behind; the miles ran by beneath his wheels and the houses of the town were on either side of him before he had expected to see them. Another mile and he was fumbling at the garden gate, for the house was on the outskirts of the town, and boasted a garden. There was a banging and a ringing loud enough to wake the dead. It was Redwood himself who flung up a window to ascertain the cause of the din.

"For God's sake let me in!"

Maurice's voice gave him a second's preparation for disaster. He dashed downstairs and unbolted the door, while Mervin, in her dressing gown, peeped tremblingly over into the hall.

Maurice stumbled in, and, snatching the candle from Redwood's hand, held it to the grandfather's clock. The hands stood at seven minutes after 3. He fell down in a heap on a chair; and in broken, disjointed sentences gave his explanation; but, halting as they were, they were quite sufficient, for Redwood's instinct leaped

at the facts. He was into his clothes and down again while Maurice gasped to him to take his machine and ride on to the station. Then Mervin ran down and stood in deepest pity before the draggled, worn object in the hall, for the boy lay as if he had been dead, with ghastly face, and torn, mud bespattered clothes.

* * *

«Oh, hang the weary thing! I've been riding for two months without resting; mayn't I get off now or have I to be a man bicycle forever.»

Maurice spoke in his usual tone, though rather weakly, as he opened his eyes some two days later and gazed straight up into Mervin's face.

«You may get off now,» she answered, humoring him; «though I don't quite believe you, seeing that you have been in bed two whole days under my own care.

He closed his eyes again in complete satisfaction; but scraps of thought pierced themselves together in his brain, and suddenly he sat up.

«Rose?» he asked.

She made him lie down again. «She is getting well; nearly out of danger, thanks to you.»

«He got there in time?»

«Yes; and the sight of him aroused her as nothing else could have done to fight for her life.»

«But how absurd for me to be in bed. There is nothing in the world the matter with me.»

«I hope not now, but if you had heard all the queer things you've said in the last two days, I think you'd realize that there was a trifle the matter with you.»

He smiled. «Was my language enough to lift the roof off?»

«Pretty strong; but they say that's always the way in delirium even with the best men.»

«Am I a man, Mervin? I thought I was a boy when I went to sleep.»

«You are a man,» she said, with infinite tenderness; «a man of energy and resource; but do you know, Maurice—I think—I'm not quite sure—but I believe, after all, I like the boy best—for everyday wear, at all events.»

A Song of the Cycle.

BY LOUISA HUMPHRYS.

THE bike, the bike is a sentient thing
That thrills to the thought with a vibrant spring:
With the road ahead, and the road behind,
And the balmy lift of the backward wind.
Blest is the man who rides that steed:
Tireless, keen for the riders need.

Soul and frame is the man who rides,
Just the same is the steed he strides;
Vital soul, a body of steel,
Spirit and frame is the whirling wheel.
Quick, the man with exultant glow,
Quick, responsive the tubes below.

Lo, a steep where the shadows fall
Rise up like a dim, cool wall.
Bend to the doing of all you can do,
And the bike does half, for the bike knows too.
And the upward glide that surmounts the hill
Is a marvel of muscle, and steel, and will.

Downward now, and there's naught to do,
And the bike does all, for the bike knows too;
Sit quiescent in strong delight
Of the force that whirls to the end of sight
Out to the end where the clouds are curled
Out and over the edge of the world.—Ex.

How It is Done in England.

THE following, selected from an English paper, describes the manner in which bicycles are stolen in England.

"Yes, indeed, the bicycle thief has had a very busy season, and despite the publicity that has been given to many of his most simple modes of robbery and the open-eyedness of the country police, a great number of cyclists are bewailing the loss of their machines," said an important official at Scotland Yard, during a recent conversation with the writer.

You see that no sooner has one little dodge become known than the cycle thieves come out with something entirely new; they demonstrate an inventive capacity that is something extraordinary in some instances. Cases are reported from all over the country of robberies of bicycles by a woman, and all these cases are so remarkably similar, that there can be very little doubt that one woman is responsible for the lot.

If this is really so she has indeed been successful, and has carried off over forty cycles of different kinds during the last ten weeks.

Her plan is to dress up in a quiet bloomer costume and frequent roads where cyclists abound—and there are not many good country roads to which the description is not applicable. In the dusk of the evening time she settles herself under a hedge, and pretends to be greatly distressed at being unable to repair a puncture of her tire—especially distressed when a solitary cyclist is coming down the road.

The sight of a distressed female is generally too much for the sentimental cyclist who promptly offers to mend the puncture for her. He sets about doing so, and while he is thus engaged and the light is waning, she springs on his machine and romps away, leaving him to gaze after her in solid, stupid silence, for of course she is a crack rider, and he cannot possibly follow her on the punctured one she has left him, which is probably worth 15s or 20s, while his may be worth as many pounds.

One of the gangs of bicycle thieves has cleared off an enormous number of machines during the last four or five months by the following plan:—They frequent the roads favored by certain cycling clubs, wearing suits as much like those of the club's members as possible, and while unlucky wheelmen are regaling themselves, with soda and milk, perhaps, at some quiet wayside inn, these fellows make selection of the machines, and quietly and calmly ride away.

You might wonder that such a simple plan could possibly succeed, but it has been extraordinarily successful, and the fact is probably owing to the simplicity of the plan. Cycles, two, three, or even four at a time, have been stolen by the gang who work this dodge; and stolen from the front of inns while the owners of the machines have been watching the whole thing from the bar parlor window.

But the thing has become so well known to cyclists now that the thieves have had to take extra precaution. They now carry with them good steel chains and spring padlocks. With these they chain up any machines over and above what they can take away with them. Hence, if they arouse any suspicion on riding off, they get a good start, for even the filing of the chain will allow them a few minutes to get along the road, and files are not always ready. If a cyclist sees them chaining up his machine he could scarcely entertain any suspicions of them. He would, of course, tell them they were making a mistake, whereat they would laughingly apologize and chain up some other, and when the time came, fly off on the machine they originally only intended to "hamstrang," I might say. In those circumstances, the cyclist would probably regret he had spoken.

Robberies of this character are generally made in the evening, when it is dusk, and cyclists are not quite so wide awake as on their outward journey. In more than one case four thieves have gone up to an inn where a dozen cycles have been standing; they have chained up four of the less valuable wheels, and ridden away with the other eight.

Yes, of course, you wonder that they are not detected when they attempt to dispose of the machines. But there is really nothing strange in that. A cycle can be altered so much in a couple of days that its owner would never know it. I am firmly convinced in my own mind that one of the most successful gangs of these thieves runs a second-hand cycle business for the express purpose of disposing of the machines they steal; and I have no doubt that many a cyclist

has seen in shop windows or in possession of friends cycles that were their own personal property until the cycle-fiend dropped down upon them.

A rather different kind of dodge has been worked of late by a man who is patient and enterprising. His plan is to damage a cycle he may find outside an inn in such a way as to necessitate its being taken to the nearest cycle repairer. This is very easily done, indeed, and while the owner of the damaged wheel is waiting at the inn while his machine is put right, the thief calls at the cycle shop, asks for his friend's wheel, pays the small cost of damage and rides away.

I have very strong reason to suspect that one of these cycle repairing men was in very close touch with this man. In any case, I know the thief got over thirty machines from that man's shop by this dodge, and the number would hardly have been so big if the shopman had had the interests of his customers at heart. However, the workshop is closed now, and the man gone, so the police have little chance of substantiating my theory by charging the wheelmender.

I hardly know what to advise cyclists to do to avoid losing their machines; but it is foolish, extremely foolish, to leave a cycle unguarded outside a wayside inn. Beware of interested strangers, also of ladies who have punctured their tires while riding alone in quiet lanes. Beware, too, of the man who stops and informs you that something is wrong with your machine,-for ten chances to one when you alight he snatches your cycle and bids you a hasty "Good evening."

Cycling for Feeble Folk.

BY AN INVALID.

"You must not walk a yard if you can help it, but you may ride your bicycle in moderation, and the exercise will do you all the good in the world." These were the words of my doctor—of course, himself a cyclist—when he visited me as I was recovering from an attack of chronic gout, which had left me terribly shaky on my legs. He went on to explain that any weight on the joints of ankle and foot was almost sure to bring back the inflammation, and dearly bought experience taught me that what he said was true; but I should not have dared to suggest a bicycle run quite so soon. I had always put that off till I could just walk a little. However, thus encouraged, I had the seat pillar of my machine dropped till it was possible to sit in the saddle with one foot flat on the ground and the other just touching, the saddle itself being moved very far back, so as to get a full leg reach. Then I crawled but very gingerly, and carefully seated myself, with the left foot quite on the ground, and gently placed the right on the pedal and started off on the lawn in front of my house. A run—or rather a creep—of two miles by the cyclometer gave me a pleasant feeling of having exercised my limbs, and, dismounting as slowly and smoothly as possible, I returned to my couch, and rested till bed-time.

Next morning, feeling better, and equal, if need be, to walking a hundred yards or so, I ventured on the road—an extra good one—and got two miles from home and back, walking up two short rises where the work of pedalling would in my then state have been to hard. In three or four days I could again mount a rather high safety, and within a week was riding quite comfortably twelve or fourteen miles a day, though still too shaky on my legs to go more than a few hundred yards on foot.

This little personal experience is given in the hope that it may encourage other old and more or less heavy men, who are to weak on their legs to take sufficient walking exercise, to use the bicycle whenever they are just able to move their knees up and down.

Of course, they must do the learning, if they are not already cyclists, when they are in better form, and, equally, of course, they must be content to ride quite two inches lower than is

usual with people of their hight, with the saddle put far back to get the proper reach. This will not matter for slow work, on the level or gentle slopes, with a low gear. I use 65 inch, but even lower would be better. If the horizontal bar of the seat pillar is too short, it is easy and not costly to get one with a longer arm. The great thing to avoid is any hopping or pushing off from the ground—that is ruination to tender joints. The start must be made by the gentle pressure of one foot on the raised pedal, while sitting with the weight on the saddle, the other foot being flat on the ground just to steady the machine till it moves. The handles should be high and the ground nearly level.

As far as I have seen there are three types of bicycle suited to such feeble folk—a low front-driver, a "cob," that is, a man's safety with a very low crank center, and a strong, low-built lady's machine. Personally, the first type commends itself to me, as on it one can more comfortably sit very far back without risk of being too much over the rear wheel, but I have used with satisfaction all the three. It is comparatively easy, even with very shaky feet and ankles, to mount a lady's machine, lady fashion, even if the crank axle be fairly high, but there is risk of a jar when it comes to getting off, unless one foot, at least can be put flat on the ground without leaving the saddle or greatly sloping the bicycle.

For men who are able to ride with a low frame there is not much difficulty about getting a suitable mount, either diamond shaped or open fronted, but nearly all the higher frames that I have seen also have a higher crank axle; and even where this is not the case, there are few, if any, that have the distance between the rear hub and the crank axle lengthened in proportion to the height of the seat pillar. Now a tall man, sitting low for his stature, must put his saddle a long way back to secure the needful leg reach, and if the distance from rear hub to crank axle is short, he sits too much on the rear wheel.

Perhaps, now that the demand for stock patterns is not so great, more of our makers will try the experiment of building long, low machines, for riders who are long and heavy, without being either young or strong.

I have myself for the last twenty—I may almost say thirty—years, gained so much pleasure and profit from cycling, both when in the pride of power, and when dragged down by infirmities, that I should be truly thankful if any words of mine can be helpful to others whose days of activity are nearly over.

To many the tricycle might seem the natural to suggest as the old man's mount, but although I used it much in middle life, I now find that except on very good roads, the work is hard.

Of course, this is addressed entirely to those who are either getting old, or from other causes have lost the spring of their limbs. Let the young and active keep to high-built machines as long as they can, but when these are no longer easy to mount, don't let us of the older race give up altogether. There are many pleasant rides before us.

Mud Tactics.

MUD-PLUGGING is so obviously the betemoir of every cyclist young and old, that to speak of any possible virtues it may contain sounds paradoxical, and risk heresy. Nevertheless, after some quiet reflection on the matter, I have come to the conclusion, and so, I think, will you, that the periodical appearance of the mud monarch is, to some extent, a blessing in disguise, says a writer in Cycling.

In the first place, the experience of riding over a greasy, irresponsible surface, with the inevitable concomitants of slippery wheels and uneasy seat, imparts with direct force, to trio and ex-trio alike, the supreme value of careful ankle action.

Where admonitions are thrown away, and words fail to impress, experience quietly steps in to enforce obedience to rules, and the consequences are usually unpleasant. Nothing brings on disaster so quickly when riding through mud as careless plunging on the pedals. Be the steering ever so careful, the absence of the essential ankle work will inevitably induce deflection, and deflection of that jerky, ominous kind

which is almost certain to effect a union between the rider and the roadway.

Fortunately, most cyclists soon develop an instinctive knowledge of this principle, and almost unconsciously they exercise those powers which a little mud-riding experience subtilely imparts. It is for them to recognize and develop what experience has shown them to be one of the most clever acquisitions of a good cyclist, and that is clever ankle work.

Cyclists who are not accustomed to mud riding, and who have only a nodding (or shall I say subsiding?) acquaintance with its salutary effects, generally have very lax notions on the subject of steering. Advise, admonish, exhort, implore the tyro to keep his handle bars steady, and he will probably remain unimpressed, or, possessing his own ideas, regard you as a sufferer from a mild form of lunacy.

Beginners, and sometimes experienced riders, are sad victims in this respect, and suffer from an egregious self-confidence in their powers. At times the disease is positively alarming, as witness the fearsome gyrations of your jaunty cyclist when he feels himself in form, and an audience is about. Prescription: A few doses of judicious mud riding, carefully administered at frequent intervals. Three or four are generally enough, and the results are invariably satisfactory.

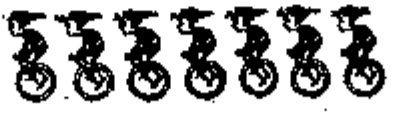
Mud riding again, trains the eye, and steadies the nerves. One sees the danger and is prepared for it, and a mud surface possesses that insidious danger which treacherously attacks your center of gravity at the most unexpected moments.

A rider who is long accustomed to smooth, sympathetic surfaces is a perfect baby on a patch of grease, and steals along in deadly uncertainty till he reaches the haven of dry road again. A practiced mud rider, on the other hand, is at home on every surface, and he is at all times a cool and self-reliant cyclist.

You will think that, as I have refrained so far from referring to the unsightly effects of mud riding on a machine, to say nothing of the rider, that this at least is a drawback which no amount of argument can dissipate. However, I think I can discern a saving grace even here. Where an unconscionable amount of summer dust and travel stains failed to induce cyclists to give their machines that attention for which they cried bitterly, I have known winter mud to succeed.

The average wheelman, throughout the best part of the year, is content to leave his machine severely alone, except, perhaps, when the bearings creak too thirstily to be ignored. The winter mud, however, changes the order of things. A regular cleaning becomes the rule, instead of the exception; the chain is taken off and bathed, and put on again with a new lease of life; the bearings are attended to, and the requirements of the various parts satisfied before they become painfully obtrusive.

All of which, I think, would tend to show that the mud monarch is not such a despotic tyrant after all.



The Hum of the Horseless

Comparison of Expenditures.

An English journal sums up the question of horse cost versus motor vehicle cost as follows, the money being figured in our coin.

I live five miles from a town, in a village of three hundred and fifty people. The only public means of communication with the world is by carrier's cart at the rate of five miles in two and a half hours. The district is hilly, roads flint, steam rolled; good except in prolonged dry weather. I average thirty-five miles per week, taking the year around.

I gave $115 for my horse, and $135 for a four-wheeled dogcart, taking four people and luggage. So that the horse figures out thus:

Interest on $250 at 4½ per cent.	$ 11.25
License for four-wheel	5.25
Keep of horse at $2.50 per week	130.00
Shoeing	12.50
Total	$159.00

Now for the motor. Less than a week ago a Leeds firm advertised a 5-horse power dog cart at $850. This I would take, since it would convey the same load as my present carriage. Annual expenses would figure out thus:

Interest on $850 at 4½ per cent.	$38.25
Tax	21.00
Petrol at $.75 for thirty-five miles; lubrication, $.25	52.00
Total	$111.25
Saving on motor	$47.75

I have not allowed for the fact that I should be away probably five weeks in the year, during which the horse must eat, but the car costs nothing.

As to the cost of tires, if we insist on rubber for a motor car should we not also do the same for the horse drawn carriage? Rubber is not an absolute necessity. Even if it be, "Ideal" tires cost $50 on a new four-wheel, and can be renewed for about $30, I am told, and would for my work last eighteen months at least.

So much for theory. Now, practically, horses have cost me for the past two years as follows: I bought a cob for $60; harness, $15; two-wheel trap, $50. After six weeks he fell going down hill, and cut his knees badly, and much damaged the trap. He was in stable seven weeks during which time I paid a neighbor's coachman $5 for doctoring him. The repairs to the trap cost $22.50. Hire of another horse during the seven weeks, $15. We went on for thirteen months without accident. Then he strained his shoulder and went lame, and I sold him for $25 and bought my present turnout. The actual expenses for two years of horse driving therefore come to something of this sort:

Original purchase	$125.00
Doctoring horse	5.00
Repairs to trap	22.50
Hire for seven weeks	15.00
Purchase of present turnout	250.00
Cost of keeping two years	260.00
Cost of shoeing two years	25.00
License two years	10.50
Total	$713.00
Deduct for sale of first horse	25.00
Total	$688.00

I am not exceptionally unfortunate, for one friend has had to shoot a horse worth $800 in consequence of a fall, and has a second in hospital now for the same cause. Both these occured since January. Another friend gave a long price for a horse, and in a week he fell and has been unusable since, about seven or eight weeks. I think I may therefore set the horse accidents against the possible repairs to car, and still have a balance in favor of the motor.

I do not enter into cost of man, as I must have one for garden, etc. In the case of motor, being a fair amateur mechanic and lathe man, I could do my own driving and ordinary repairs.

Again, my usual load is self, and and parcels. A quadricycle at $500 would do this, and cost less than one cent per mile. If I could afford the initial expense I would have one to-morrow.

—

The Requirements of an Automobile.

An automobile for the public must possess a neat, trim appearance. It must be practically noiseless—neither to offend the ears of the user nor to cause uneasiness on the part of the beast it is to supplant. Its motive power should be such that neither clouds of steam nor disagreeable gases would accompany it. It should be provided with a signal appliance to indicate

its approach, and at night a light to show its position. The motive power should be such as to require little attention while in operation, easily controlled and cheaply obtained. The automobile should be easily and positively guided, equipped with a brake independent of its motive power, should be capable of being operated forward or backward. The carriage seat must be so mounted that its occupant will be as comfortable as in an ordinary carriage. It should have a frame and wheels so constructed as to bear with a good surplus strength its motive machinery and load. It should be able to start itself with ease, and be as light in weight as safety will permit.

The Automobile on Water.

The next step toward the perfection of the automobile conveyance is the horseless carriage on water which can be conveyed with equal ease as on land.

In this newest of inventions the driver uses the same propelling power for both land and water. The only change is a switch of the motive power from the wheels which drove the conveyance forward on land to the propeller which sends it forward on water. There are two long and hollow cylinders placed parallel to each other which give the buoyant properties to the floating vehicle.

The driver sits in the front of the cylindrical float, on the the same seat that was his perch while driving a roadway. When he has made these preparations, the pilot fastens the new needless wheels on the deck by means of suitable clutches, and throws the machinery out of gear with the wheels of the carriage.

The starting and stopping is the same as the land automobile except that the machinery moves a propeller instead of four wheels. The change for land to water or vice versa takes a few minutes longer than this explanation.

The inventor is Arthur Leslie, a prominent New York newspaper man.

Beware of Ointments for Catarrh that contain Mercury,

as mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surfaces. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is ten fold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O., contains no mercury and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Halls Catarrh cure be sure you get the genuine. It is taken internally, and made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free.

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L. A. W. NOTES.

Increase in Membership.

The increase in the membership of the L. A. W. for the last few weeks was very great. This is particularly gratifying to the officers of the organization, for at this time of the year the membership is usually at a decrease.

This increase in membership will help the good cause in many of its efforts because it is in this time of the year that the legislatures are attacked in the interest of wheelmen.

Every member should help making the League stronger—not only for the League's good, but for his own good.

The Kentucky courts, for the first time, have rendered a decision which leaves no doubt of the status of the bicycle and rider in that State. Though nearly every other State has long since acknowledged that a bicycle entitled to all reasonable privileges of the streets, this is the first instance in which the Kentucky courts have had to render a decision in the matter. The Kentucky Division of the L. A. W. is gratified in this decision, inasmuch as it gives it a legal basis in all of its legal projects.

Among the economical advantages of good roads, as claimed by the League of American Wheelmen, are: save time and teams between the farm and market; permit the profitable cultivation of truck patches and the marketing of their produce in the old times of farm leisure; reduce the wear and tear of wagons, teams and harness; allow farmers better opportunities for taking advantage of the changes in market values; increase the real estate value of all surrounding property.

The Ohio Division of the L. A. W. is at work on a new road book, which will be in keeping with similar books issued by other divisions. It will be finished early next year, when it will be distributed to L. A. W. members.

One of the results of the National Meet of the L. A. W. at Boston, where visiting wheelmen complained of the flooding of the streets by the sprinklers has been an abeyance of the nuisance. A dry strip will be left hereafter.

Several divisions of the L. A. W. will so change their constitutions that when there is only one candidate for any office the Secretary-Treasurer will cast the ballot, thus avoiding the intricacies of a mail vote.

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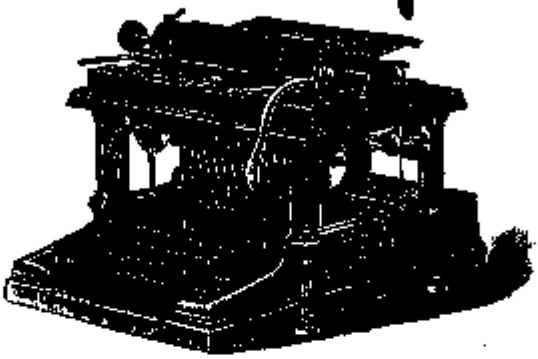
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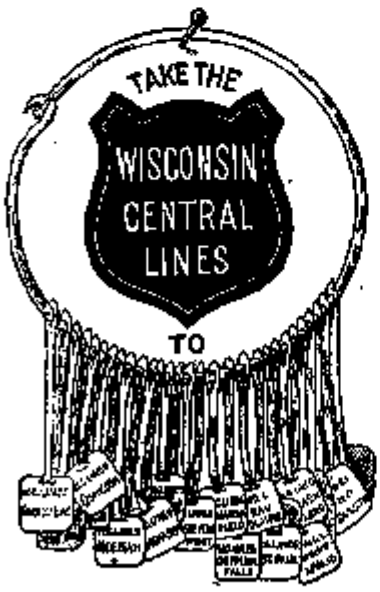
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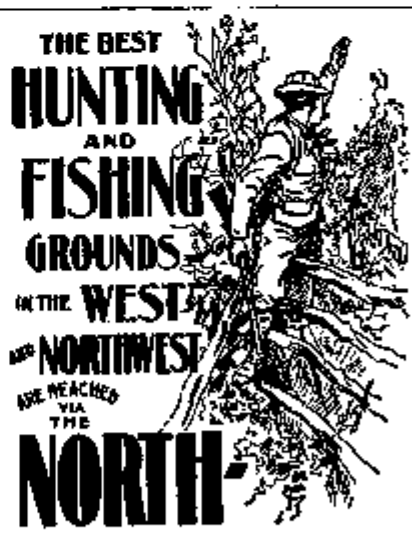
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I want to inform you, in words of highest praise, of the benefit I have derived from Ripans Tabules. I am a professional nurse and in this profession a clear head is always needed. Ripans Tabules does it. After one of my cases I found myself completely run down. Acting on the advice of Mr. Geo. Bower, Ph. G., 888 Newark Ave., Jersey City, I took Ripans Tabules with grand results.
Miss Bessie Wiedman.

Mother was troubled with heartburn and sleeplessness, caused by indigestion, for a good many years. One day she saw a testimonial in the paper indorsing Ripans Tabules. She determined to give them a trial, was greatly relieved by their use and now takes the Tabules regularly. She keeps a few cartons Ripans Tabules in the house and says she will not be without them. The heartburn and sleeplessness have disappeared with the indigestion which was formerly so great a burden for her. Our whole family take the Tabules regularly, especially after a hearty meal. My mother is fifty years of age and is enjoying the best of health and spirits; also eats hearty meals, an impossibility before she took Ripans Tabules. ANTON H. BEAGREN.

I have been a great sufferer from constipation for over 5 years. Nothing gave me any relief. My feet and legs and abdomen were bloated so I could not wear shoes on my feet and only a loose dress. I saw Ripans Tabules advertised in one daily paper, bought some and took them as directed. Have taken them about three weeks and there is such a change! I am not constipated any more and I owe it all to Ripans Tabules. I am thirty-seven years old, have no occupation, only my household duties and nursing my sick husband. He has had the dropsy and I am trying Ripans Tabules for him. He feels some better but it will take some time, he has been sick so long. You may use my letter and name as you like.
MRS. MARY GORMAN CLARKE.

I have been suffering from headaches ever since I was a little girl. I could never ride in a car or go into a crowded place without getting a headache and sickening my stomach. I heard about Ripans Tabules from an agent of mine who was telling them for catarrh of the stomach. She had found such relief from their use she advised me to take them too, and I have been doing so since last October, and will say they have completely cured my headaches. I am twenty-nine years old. You are welcome to use this testimonial.
Mrs. J. BROOKMYER.

My seven-year-old boy suffered with pains in his head, constipation and complained of his stomach. He could not eat like children of his age do and what he did eat did not agree with him. He was thin and of a sallow color. Reading some of the testimonials in favor of Ripans Tabules, I tried them. Ripans Tabules not only relieved but actually cured my youngster, the headaches have disappeared, bowels are in good condition and he never complains of his stomach. He is now a red, chubby-faced boy. This wonderful change is attributable to Ripans Tabules. I am satisfied that they will benefit any one (from the cradle to old age) if taken according to directions.
H. W. PAGE.

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VOL. X. DECEMBER, 1899. NO. 11.

THE Pneumatic

A BICYCLE MAGAZINE

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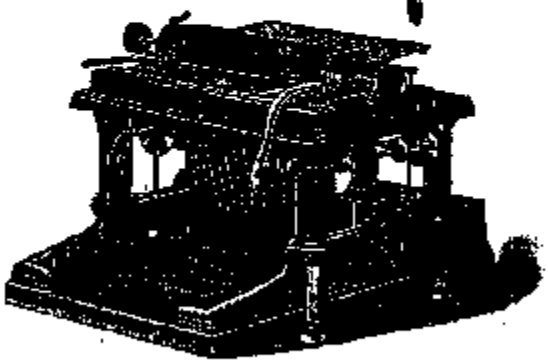
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THE PNEUMATIC.

VOL. X. DECEMBER, 1899. No. 11.

"Harriet's Heartsease."*

BY ANNIE PENNEY.

"PHYLLIS, start the fire earlier to-night than usual; I want you to have a good supper, for the minister will be here, and I know he'll be hungry after his long, cold ride."

The speaker was a woman about seventy years of age, with white hair, and a sweet, pale face that impressed everyone with the fact that she had known what it was to suffer and endure; but instead of growing morbid and cynical, she had accepted it as the will of divine Providence, had become quite reconciled, and, like Dorcas of old, gave to the widows and orphans and spoke words of comfort and consolation to the sorrowing and wayward.

She, with her grand-daughter, Harriet Sharp, a young girl of seventeen, lived in a large, old fashioned mansion on an elevation overlooking the Ashley River. The house had evidently been built for comfort, with its wide halls, large rooms and plazzas on every side. The inmates had been noted for their warm hospitality; it had been the scene of many a pleasant party, and was always crowded to its utmost capacity during the summer holidays. One by one the girls and boys had gone to make homes for themselves, and now grandmother and Harriet occupied the quiet old house.

The "circuit rider" and some of the neighboring boys and girls composed the usual visitors. The old lady always threw wide her doors to the ministers, who were usually young, unmarried men, and needed her kind attention and motherly care. The Methodist Conference had met a few weeks previous, and when the appointments were read it was learned that John Twiggs had been assigned as minister in charge.

After some inquiry Mr. Twiggs found that, there being no parsonage, he would be compelled to board; of course Mrs. Steven was the proper place for an inexperienced itinerant just entering upon a field of labor.

John Twiggs spent a few days with his married sister who lived about twenty miles distant, and then said "good-bye" to start on a long year's work among strangers. It was with some regret that he took leave of his home people, but there was no time to lose. After a tiresome ride alone through the country, he reached his destination in time to make due preparation.

"Dick, yonder is de new preacher. Be quick and go long and take his hoss. You are de slowes' nigger ever lived. If you ever saw a snail, you met 'im, 'cause you certainly never passed 'im." Dick did not hear this last remark of Aunt Phyllis, as he was hurrying towards the gate, where the minister had reined up his horse and was alighting. He let the boy take charge of his horse and buggy, and walked up the long, sandy walk, bordered with box wood—with an inner bordering of violets and late chrysanthemums. He was met at the door by Mrs. Steven, who had put on a clean, white ruffled cap and black silk apron, and with her calm, serene face presented a worthy model for any artist.

"This is Mr. Twiggs, our new minister, I suppose."

"Yes, ma'am," he replied, feeling rather lone

*Woman's Work.

some and homesick.

«I am very glad to see you. Walk up to your room; you will find it ready for you.»

Mr. Twiggs found his room comfortable and cozy, furnished with everything to make him feel at home. He scarcely had time to make preparations before the supper bell rang, and it was not an unwelcome sound to the half famished traveler. When he came down he found Mrs. Stevens and Harriet awaiting him, and the table was set with a delicious supper.

«This is my grand-daughter, Harriet Sharp, Mr. Twiggs.»

The minister, not a little abashed, shook hands with Harriet, took his seat, and they bowed their heads while he invoked God's blessing on the meal.

Harriet was a slender girl, with auburn hair, large, brown eyes, fair complexion, and rosy cheeks. To-night she felt so shy and confused that she hardly raised her eyes from her plate.

The minister asked a few questions about the different churches, their distance apart, and other matters of minor importance. Mrs. Stevens answered him as cheerfully as possible, knowing that the prospect was not flattering.

After finishing supper, the minister excused himself by pleading fatigue, and retired for the night.

Aunt Phyllis came in for the dishes, and took occasion to criticise the "new parson."

«That is the shamest looking man I ever seed. Why law, honey, that boy doesn't look old enough to leave his ma yet, much less to come here and preach to these wicked folks. I show is sorry for him.»

«Yes, Phyllis, he is quite youthful and has many lessons to learn yet, but we must do all we can to hold up his hands. A minister's life is always hard, and especially so to one just starting out.»

«He has a good face, and frank, honest eyes. I don't think he'll stay here longer than a year, because the Bishop will want him for a larger circuit or a station.»

This last was said by Harriet, who had, in spite of her timidity, cast several glances at him during the meal.

After sleeping soundly on one of Mrs. Steven's soft feather beds, the minister arose much refreshed, and ready to deliver his first sermon to a congregation of eager listeners, for who is not anxious to hear the first sermon of the "new" minister, and to see what kind of looking man is to be their pastor during the year!

Breakfast was eaten somewhat hurriedly, and then Mrs. Stevens hastened to get her bonnet and shawl, and Harriet put on her pretty new hat and cloak. It would soon be time for service, and Mr. Twiggs was to ride in the carriage, as his horse was very lame after the long drive of the day before.

When they reached the church they found it crowded. The minister walked down the isle into the pulpit, and after giving out his hymns and announcing his text, began his sermon. It was eloquent and impressive, so much so that Seymore did not go to sleep, and Mrs. Alexandria said to Mrs. Broadwell that the Bishop had favored them this year. The young girls exchanged significant smiles and bows, and each that as an act of kindness, he should be invited to dine at their homes.

* * *

«Miss Harriet, what portion of scripture do you like best?»

«Well, the New Testament, I suppose. I don't understand any of it as I should. Grandmother reads the Bible and seems to get so much comfort, but such is not my case. I read it as my duty, but I do not apply myself to it as I should.»

«Don't you know those precious promises were intended for you as well as for your grandmother?»

«That may be true, but you know there are a great many things intended for our welfare of which we do not take advantage.»

«Suppose you begin and read it differently from what you have heretofore done. Let us read it together, and maybe we can help each other. We will have regular hours, and will study the passages that confuse us. We will also look up what the different writers have to say of them, and in this way we will acquire the knowledge we have been seeking.»

«I heartily endorse every word you have said, and will be glad to study with you. I am quite sure you will teach me a great many things I am anxious to know.»

«I am glad you have agreed. When shall we begin?»

«To-morrow, from five to six in the afternoon.»

«All right, I'll be ready.»

The above conversation took place one Sunday afternoon, on the vine-covered piazza of the Steven's homestead. Harriet and the minister had become very firm friends. They roamed the woods in search of yellow jessamine and woodbine, and had gone on fishing excursions to the nearest streams. She had also accompanied him to visit the different members of his congregation, and on errands of mercy to the sick and suffering.

He admired Harriet for her beautiful face, her sweet disposition and high intellectual attainments; she was a good conversationalist and was well read on all current topics. Mr. Twiggs had often thought what a jewel she would be for some man, and what a model minister's wife she would make. He had asked himself the question a hundred times: «Do I love her?» To which his heart always answered: «No, it is admiration.» It is so hard to draw the line between love and admiration; we imagine we love when we merely admire.

But Harriet loved with all the fervor of youth. She watched eagerly every word and look, and had hoped some day that he would tell her of his love. When Conference again convened and the Bishop read out that John Twiggs was assigned to a larger circuit in Upper Carolina, it seemed as though her heart would break, and when the hour for parting came it was for both a very sad occasion. The minister had come to regard Mrs. Steven as his counsellor in all things, and she had been his helper in various times of need.

He and Harriet had enjoyed many long, pleasant conversations together, but a Methodist minister has no permanent resting place; so he resigned to his fate, bade them adieu, and started for his new work.

Poor Harriet! The roses faded from her cheeks, and her lively conversation was a thing of the past. Phyllis said: «That child is not herself; she shorely is sick.»

Mrs. Steven urged her to visit, and asked the young people to come, thinking she was lonesome and needed companions.

What a mistake our friends sometimes make when they try to draw us out to join the gay throng thinking to dispel our grief, while to leave us alone would be the greatest sympathy they could show.

PART II.

«ARE you going to the party to-night.» «Yes indeed. I would not miss it for anything. It is so seldom we get to go out in the evening, and that visitor is to be there, too. You know I'll go.»

«So will I. They say he is very good looking, with plenty of money. We must look our best. It might mean our good fortune.»

«Well, I'll see you there. Good-bye till then.»

«Good-bye.»

Fannie Phillips had stopped for a moment to see Sarah Jones, and to ask if she was going to an evening party that was to be given at the Gamewell's in honor of Charles Henderson, who had been invited to spend the Christmas holidays at their home.

He was a handsome young merchant of Charleston, was prospering in business, and "would be a good match for any girl." Consequently they all put on their prettiest evening dresses, and prepared to charm him.

Harriet's escort thought she looked very charming, in her pink albatross trimmed with lace and ribbon, all of which set off her thoughtful face to a decided advantage. Mr. Henderson was all they had expected. He was tall, with large, blue eyes, brown hair, face smooth shaven, and possessing enough dignity and wit to be agreeable.

«Come, Mr. Henderson, I want you to meet my friend. Harriet and myself are like Jonathan and David.»

So saying, Phoebe Gamewell led the way to where Harriet was sitting, and introduced him.

He and Harriet found many pleasant subjects to discuss; he was sorry when the hour of leaving arrived, and asked permission to visit at her home. Charles Henderson saw a great deal of Harriet, as the families were intimate friends, and when the time came for him to return home he asked if she would favor him with a correspondence. After that, many evenings Harriet sat on the front steps watching for Dick to bring the mail. Mrs. Steven noticed that she always looked "more like herself" after reading those letters.

* * *

«Dick, move 'round lively and get me some good wood. I have got to bake weddin' cake now.»

«Weddin' cake! Who's gwine ter marry?

You, Aunt Phyllis? You look like you in er notion of settin' out ag'in, hoppin' 'round so spry.»

«It's Miss Harriet, and that young man from the city. Go 'long; none er your sass.»

It was to be a quiet marriage, only the nearest relatives and friends being invited. They had decided on the twenty-third of October as their wedding day. It seemed that all nature rejoiced with them, as the sun never shone brighter, nor the golden sod and chrysanthemums looked lovelier. The bride wore a becoming dress of blue cloth, and looked very queenly as she stood in the old parlor to take the marriage vows.

They left at once for their home in the city.

When the carriage drove up to the door Dick and Aunt Phyllis were there to say good-bye.

Mrs. Steven declared that she had grown several years older, but she knew it was selfish to want Harriet all to herself.

When Harriet turned to take a last lingering look at the home of her childhood she could say with the poet:

"A feeling of sadness comes o'er me,"

but when Charlie took her hand in his, and told her from henceforth his every effort would be to make her happy, and that he hoped she would never regret the day she had given her life to his keeping, Harriet felt that she had at last found her heartsease.

A Query and an Answer.

My little sister Bernice
  One day, while busy at play,
Turned to me and questioned
  "Say Maudie, what's Christmas Day?"

"Has no one told you?" I answered,
  And looked surprised and wild.
"Has no one ever told you
  Of the Bethlehem Child?"

The darling then dropped her dolly,
  And she promised to be quite still,
While I told her the sacred story
  Of the star o'er the eastern hill.

Of the lonely, homeless shepherds,
  Who wandered thro' the night,
Following the star that pointed them,
  Thru' the moon's mellow light.

To the place in the lonely manger,
  Where the little Christ child was born;
Of the "Peace on Earth" shout by angels,
  With their garlands to deck fair morn.

Where He grew to manhood,
  Healed the maimed and blind, helped the poor,
Raised the dead to living:
  The while begging bread at each door.

I told of the sad crucifixion,
  I ended my story this way,
"My dear little sister, remember
  That Christmas is Christ's birthday."

—*Alfaratha Mae Hunt.*

The Bicycle

NEWS AND SUGGESTIONS FOR THE CYCLIST.

A Cheap Bicycle—and a Dear One.*

So much has been written in the daily Press on the cheap bicycle that it is not surprising that many people have been tempted to believe that the possession of a five-pound note should command the best bicycle ever built. As regularly as these assertions have appeared, they have been answered with figures and denials in the cycling Press. But it is hard to convince an over credulous public—when the pocket is in question. The very people who argue that they cannot see their money's worth in the bicycle of to-day, are the people who know least about how a bicycle is constructed, or what it is built of. Steel is steel, and rubber is rubber, to their mind; there is no such thing as quality.

They are able to appreciate the difference between a thoroughbred and a cab-hack. They can see the beautiful proportions and the spirit of the thoroughbred—the difference between the qualities in the one and the broken-kneed, short-winded, slow-going old cab hack are apparent; but they will not admit that there can be any difference between a sixteen guinea bicycle, with the five, ten or twenty years' reputation of a big firm behind it, and a six-guinea thrown-together medley of a crock, knocked down to the highest bidder at a local auction. It never occurs to them that there must be a difference in the quality of the material; in the quality of the workmanship; in the quality of the finish. One of the best arguments in favor of the bicycle built by a firm who have spent years in the study of the art of bicycle construction; who have devoted two or three months previous to the opening of each season to satisfy themselves that their productions for the coming year comply with the advancement in the mechanics of the bicycle, is that the would-be cyclist, who has purchased a cheap bicycle, in an auction room, gets rid of it as soon as he is able, and goes for the machine with a reputation to it.

Why, the idea that a good machine should be bought at half its usual price is unaccountable. Dozens of people have bought machines in auction rooms who would consider it an insult to suggest that they should buy any articles of clothing or a piece of furniture from the same source.

We are not, of course, ignorant of the fact, that, now and again, well-made machines find their way into the auction rooms, owing to temporary difficulties of the makers, or the demise of some concern, but they are very few compared to the hundreds made especially for the purpose. We do not say that there is any responsibility with the maker or the auctioneer; the people who buy have every opportunity of inspecting a machine before they bid for it, and they must take all risk and liability. Besides, many of the machines are got up so attractively that it is not surprising that an unpracticed judgment is readily deceived.

A coat of enamel covers a multitude of sins. You can't see underneath and detect the badly brazed joint, which, sooner or later, is bound to go, and perhaps result in the luckless rider adding his name to the long list of hospital patients. It does seem ridiculous that cyclists will run the risk of breaking their necks for the sake of two or three pounds with perfect equanimity, while they would hesitate to ride on a rickety 'bus.

It is not our desire to decry the cheap machine, as the daily press would have us believe, on purpose to bolster up the trade for the over-capitalized cycle companies.

The cheap machines we refer to are not built by the big cycle companies. The big cycle companies have learned from experience that the best bicycle is the cheapest in the end; they have in their employ mechanics who have the knowledge and experience and ability to guide them in their ideas of what is right and how to get it. They are men who would scorn to as-

*Bicycling News.

sociate themselves with some of the rubbish put on the market. It is not our intention to point out in this article the difference between the badly built machine and a rightly constructed one. We have been tackled on this question times out of number while on a railway journey, when, we suppose, our antagonist considered he would have the advantage of close quarters and the support of his fellow passengers. Everyone, cyclist or anti-cyclist, believes he has more knowledge of what a cycle can be built for than the manufacturer who has spent years in trying to produce the parts cheaper and retain the quality. We have been so much heckled on this subject that we decided some few weeks back to make a point of storing up any facts which we could use as arguments against all onslaughts. We recollect being attacked by a commercial traveler (we forget what line he was in but believe it was bricks) a short while ago, and naturally he was much interested in selling prices, competition, etc. And from bricks we drifted to houses, and from houses to clay, and from clay to broad beans, and from broad beans to something else, and from something else to—well, to cheap bicycles. We suppose this latter divergence was quite a natural transition.

Now, this traveler couldn't see "where the cost of the wheels came in—he had been told that the price of the wheels was half the cost of the bicycle." When we told him that though the wheels cost a good deal, especially the tires (which, however, were fortunately protected by patents, and naturally the rider of the bicycle got such wonderful benefits from cycling since the advent of the PNEUMATIC tire that he would certainly not wish to grudge the return to the inventors for the application of their brains,) they nothing nearly accounted for half the cost of the machine.

Then he referred to the frame, and asserted he couldn't see the value in the frame; "it was only tube, and surely that was cheap enough." We let him go along for some time, drawing upon his imagination for futher support of his quixotic notions of what a bicycle should be built for; then we took him in hand, and referred to the number of ball races, cups, cones, lugs, lubricators, nuts, bolts, cotters and screws, and tried to give him some idea of the hundredths of operations on these parts; how some of them could be made cheaper, but had been tried and found wanting; how easy it was to cut the tubes off to empirical lengths and ram them into the lugs; how simple to hold the skeleton frame over a fire while it was being brazed, without much regard as to whether the brass got into the joints or not; how little care need be taken in fitting the various parts together; how it is possible to buy a bit of scrap stuff here, and another bit there, and throw it together and make a bicycle; how, when this is done, it is possible to coat it with enamel to conceal the defects; and finally, how cheap it can be sold. Then we detailed how the mechanics and draughtsmen in big firms scheme and design and experiment to obtain perfect results; jigs are built for correctly constructing the frame and getting the right angles, and determining that it will track properly.

We expended all our practical knowledge upon this gentlemen, without trespassing upon trade secrets, and when he got out at the railway station, and we were settling down in the corner of the carriage, and beginning to think we had won over the individual at any rate, he returned to the carriage and said "he thought the managing directors had most of the profits out of the bicycles, and he shouldn't start cycling until they got cheaper." We are still in doubt whether he meant he was going to wait until the bicycles or the managing directors became cheaper; but so much for the incredulity of bicycle fanciers.

This set us thinking, and we took care to hunt up results of bicycles bought at auctions. We found more results in the repair shops than anywhere else. Scarcely a repair shop did we visit but we found some cheap bicycle with the wheels buckled, or the frame bent, or the forks broken or the tubing gaping away from the lugs, showing where the art of brazing had failed. Our experiences in this direction have led us to pen this article. Some of our inquiries have placed information in our hands to write a whole book-ful.

In one instance we saw a machine with the stays bent, the bottom bracket out of line, and the ball head, with the front wheel, lying in another part of the shop. The repairer informed us the owner had been lying in bed five weeks as a result of the machine literally dropping in two. On inspection we found that the brass had never run at all, and there was just a slight

resemblance round the tube, and the two tubes had been merely held into the lugs by the enamel!

The machine had been ridden about 300 miles before it gave out. Had the owner known that at every revolution of the pedals his life was in jeopardy we wonder whether he would have gone to an auction room for a bicycle and paid £6 10s for it. Had he saved this money, and added to it all that he has had to spend in doctor's bills, he could have bought three of the best machines money can buy!

We found in another agent's shop a lady's machine which had also been bought at an auction, and which the owner had left for the agent to try and sell. But the agent did not dare to sell it. This was bought for between £8 and £9, and in three months it cost £3 for repairs. The handlebar stem was packed round with brown paper, to make it fit the steering tube.

The chain broke, which caused a spill; a few days afterward a pedal came out going down hill; the tire flew off the rim and got so badly damaged between the stays that a new one was necessary; then the husband got furious, and took his wife to the agents and bought one of the very best Coventry-made machines, and planked down £20 for it.

This sounds like fiction, but it is a positive fact.

The instances where crank axles had broken, cones split, cups cracked, and fork crowns fractured, were too numerous to detail; suffice it to say that when the owners of these crocks come to reckon up the cost of repairs and the price they paid for the bicycle in the auction room at the end of twelve months, and then find that they can get scarcely anything for it because it has no transfer on, we think some of them begin to realize that in bicycles, the same as other productions, if you restrict the buying price you curtail the quality.

Few people realize the extent to which building-up machines by unscrupulous little men, working in garrets, is carried on; where good mechanics in large factories are paid 8d or 9d an hour, boys are got for the garrets, or men whose abilities won't secure them a job elsewhere are paid so much per pair for building, so much per pair for wheels, and all against time; the more they get through the more they earn; what care they whether the machine is built right, so long as it looks like a machine? Their work has not got to be minutely inspected by a viewer, and the only thing that influences the boss is the number of machines he can get out in a week.

We have just one thought more to add, and we leave it in the shape of a question, which no doubt some of the intending cyclists will be able to solve before deciding whether to buy a machine from an auction room.

Are you certain that the machine which is being held up for the highest bidder is one built by a good firm, which, wherever it goes, carries their reputation with it; or, if not, are you willing to risk your life on a machine which may at any moment land you into a serious accident?



Adjusted Incorrectly.

In a recent conversation with a bicycle manager we learned that the reason why so many society cyclists, or cyclists of the upper work ride so badly, is that they are taught by incompetent and ignorant people. "You would be astonished," said the manager, "to know that in some of the bicycle shops (I do not refer to cycle shops, but to those stores and such like places where bicycles are a side line) there are engaged men who have no more idea of how a bicycle should be ridden than the man in the moon.

"They dole out a lot of clap-trap non-sense which the unfortunate novice swallows as being gospel, with the consequence that we find the aristocratic rider with his saddle ever so much too low and his handlebars ever so much too high. When told of this, his answer invariably is—"Oh, the salesman at So and So's store told me that this was the correct position, and surely he ought to know."

One of the most astonishing things regarding the influx of outside merchants into to the cycle trade is that they steadily refuse to engage competent men to give instruction to purchasers of their bicycles. They prefer the smart, frock-coated, curly mustached, dandy shop-walker or salesman, who has no more knowledge of the bicycle in his head than has the principal.

These men are engaged for but a few dollars a week, whereas the cycle mechanic or expert cyclist would not fill such a position under a

much more increased rate of pay. The stores and outside merchants who have rushed into the cycle trade, are responsible for the wretched riding exhibited by those who pose as being leaders of society and fashion.

In another way they have done incalculable harm to the trade, for as soon as the novelty has worn off these people find cycling so uncomfortable, and in some cases so miserable, that they drop their wheeling in disdain. All those who ride a bicycle know that cycling is only made comfortable and enjoyable by having the machine properly adjusted and fitted to the rider's height and reach.

With a properly adjusted bicycle, cycling is indeed a pleasure, but with bad saddles, either too low or too high, with handlebars out of proper reach, or with pedals, cranks and saddle out of all relation to each other, nothing is more miserable than the riding of a bicycle.

Perhaps, too, finally considering the matter, much of the medical condemnation given to bicycle riding arises from doctor's observations regarding the wrong adjustment of saddle and handlebar.

⚜

A Wedding On Wheels.

The possibilities of the cycle from the matrimonial point of view have been demonstrated by a wedding couple near Vienna. The bride is a well-known cyclist, and the bridegroom, who is a repairer of cycles, the bride's page, and about two hundred guests, rode to church on bicycles. The gentlemen wore dark blue clothes, and white caps; the bride a cream skirt, black silk stockings, and buckled shoes, a white blouse with orange blossoms fastened in her white leather belt and in her white cap. The bridal bouquet was attached to the cycle. The bridesmaids wore white, and the bridegroom white flannels. Every wheel in the procession was decorated with leaves and flowers. After church the party took a long spin out to a country hotel, where the wedding breakfast was held.

⚜

A Tax On Bicycles.

An ordinance may be passed by the city council of Minneapolis compelling bicycle riders to pay a tax of 50c or $1.00 per year on each wheel, and the money so taken in will be used for the construction and improvement of cycle paths. The Minneapolis Cycle Path Association was organized two years ago and had to rely on private subscriptions, which were secured through the sale of cycle path tags. This method of raising entailed considerable work.

In accordance with the ordinance, each wheelman must have a tag on his wheel or be subjected to a heavy fine.

The framer of the ordinance is the most prominent wheelman in the city, and other wheelmen who are acquainted with the proposed ordinance have expressed themselves as in sympathy with its features.

⚜

The National Department Strengthened.

The move made by the L. A. W. in giving more attention to the organization and conduct of its national department was a step in the right direction.

Heretofore, the national department has acted merely as auxiliaries to the state divisions but this year they have had their work extended and thereby strengthened the national organization making it a national standard.

All the departments have been systemized upon a basis never before attempted and each has been in constant co-operation with the executive committee. Besides the departments upheld heretofore, two new ones have been created—press and touring department. The touring department has entailed a vast amount of labor and the entire winter will be occupied with preparing the best routes in the country, so the opening season will see it in readiness for the members.

How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that can not be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O.

We the undersigned, have known F. J. Cheney for the last 15 years and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O.

WALDING KINNAN & MARVIN, Wholesale Druggists, Toledo, Ohio.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free.

Hall's Family Pills are the best.

THE HUM OF THE HORSELESS | IN THE LINE OF PROGRESS

An Autogo.

It was an automobile,
Began to balk and rant,
And when 'twas told to move on, said,
"I auto, but I shan't!"

—*Harper's Bazaar.*

What Automobile Owners Think.

MR. BENJAMIN of Syracuse, N. Y., one of the most enthusiastic automobilists says:— "I believe they will become popular all over the country, although the present types are faulty, but I am of the opinion that there will have to be two types of carriages to satisfy the demand, one for city use and one for country trips."

Mr. Trebert of the same city believes that steam is the best motive power for a horseless carriage and owns a Stanley wagon. He says:— "The engine will run almost without noise and there is no apparent steam only when the day is cold or damp, and then only a small spray is visible." Further he concluded: "The greatest advantage is in the fact that the speed can be regulated anywhere from one mile to forty miles an hour, while, with gasolene motor only certain speeds can be used under all conditions."

T. D. Wilkie, also from Syracuse, believes that the automobile will be the great carriage of the well-to-do class. His experience has shown him that the machines are by no means perfect yet, but he thinks they will be soon. His carriage is propelled by a gasolene engine, the speed being regulated by gearing, and not belts.

Number of Automobiles in Use.

IT would appear from data now in our possession, states the Electrical World and Engineer, that in Europe there are now well over 7,000 owners of automobiles. Many of these own more than one vehicle, so that perhaps the number of vehicles could be put at 10,000. Of the 7,000, no fewer than 5,600 are in France. The general idea has been that in France the interest was centered in Paris, but this is erroneous, there being of the 5,600 no fewer than 4,541 scattered through all the departments. In France, moreover, there are 612 manufacturers of automobiles, not including makers of detail parts, 998 of them, 1,095 repair shops, 3,239 stores for oil, gas, etc., and 265 electric charging plants and "posts." For the remainder of Europe the figures are far from complete, but it would appear that there are 288 owners of automobiles in Germany, 90 in Austro-Hungary, 90 in Belgium, 44 in Spain, 804 in Great Britain, 111 in Italy, 68 in Holland, 114 in Switzerland, and 35 in Russia, Denmark, Portugal, etc.

No such figures as these are obtainable for the United States, and if we put the number of automobiles in this country at 500 it will probably be an exaggeration. The number of makers actually at work or organizing is somewhere around 100. Fortunately for our credit as an inventive and enterprising nation, there is every promise of a great outburst of activity, and, as we noted not long ago, one concern has laid out plans and contracts for some 4,000 electric vehicles to be built and delivered as quickly as facilities will allow. Other concerns, electric, oil, etc., are now about ready to build each from three to five vehicles a day, so that even within a single year this country may overhaul Europe. Many of our automobiles are going abroad, but several are being brought here, and without doubt the rapid advance of the art will depend in no small measure upon this international exchange of inventions, methods, devices and improvements.

Weight and Cost of Electric Vehicles.

THE storage battery, in most electric vehicles, represents very close by one half the weight of the vehicle. Investigation will develop that the estimate is as close as one hundred and fifty pounds for the average weight of a man, or one thousand pounds for the weight of a horse, and a little thought will show that this consideration is very pertinent. It resolves itself into this. For every pound of equipment installed on the electric vehicle a pound of storage battery must be added to carry it around. Therefore, especially do automobiles need light motors, controllers, bodies and trappings. Every saving and likewise every extravagance is twofold.

A reason for the cost of the automobile motors and designs is that they are new, and new things are expensive. No one has heretofore attacked the problem of building a small light motor of large output. Weight has not been a consideration, and now that

engineering talent has been concentrated on the production of light motors, they will be found expensive until the field widens and the competition becomes keen. The commercial fact is true of all automobile work. The present day is analogous to that of the $150 bicycle. Ten years hence we will be getting better machines for less money. Automobiles now cost almost $1.00 per pound. A first class locomotive can now be bought for ten cents a pound and will pull more, travel faster and last longer.

France's Motor Race.

THE great motor race, or rather series of races, organized by the well-known French political daily paper, "Le Matin," was open to all sorts and conditions of horseless vehicles, divided into three classes: (1) Cars, (2) cycles, (3) light cars or voiturettes, all of which attracted a big entry, including the best French motorists.

The race received the original name of "Course du Tour de France," or "A Race Around France," because of the itinerary, which all but encircled the country, the total distance amounting to 1347 miles from Paris (start) back to Paris (finish.)

It must be understood that the race was not a continuous one, the course being divided into a number of sections so that no night riding took place. The times of each competitor for the different days were to be added, so as to give the placings at the end of the race.

Altogether, the event lasted over nine days—from July 16 to July 24 inclusive. On the first day the course was from Paris to Nancy, that is eastwards; on the second, the route went to the south from Nancy to Aixles-Bains, where a general rest took place on the third day. The fourth day saw the competitors ride from Aix-les-Bains to Vichy, and the fifth from Vichy to Perigueux, right across Central France. The road from Perigueux, to Nantes (that is up north again) was negotiated on the sixth day, while a welcome and desirable rest for all was taken at Nantes on the seventh day, the two final stages being; On the eighth day Nantes Cabourg, right up in Normandy, and on the ninth Cabourg-Paris, which brought the chauffers again back to the starting point from the opposite side.

The fact must not be forgotten that all the vehicles which started were "stamped" in such a manner as to prevent any of them being changed on the way, the idea of the race being to get a fair test over a long distance of the different types of cars and cycles.

Magnificent weather favored the start, which took place on Sunday, July 16, at 8 a. m.

In all, forty-nine vehicles started, among which were twenty motor cars, the steerers of which included such men as Charron, De Kyoff, Chasseloup-Laubat, Jenatzy, Giraud, Girardot, that is to say, the best chauffers in France. Of course, this class (motor-car) was the one which attracted the greatest attention.

To cut a long story short, the race was nothing but a "duel" between Charron and De Knyff, who kept wrestling the lead from each other until the last day but one, when something went wrong with Charron's car, and he had to give up. This left De Knyff with a long lead, and he had no difficulty in keeping it to the end, reaching the finish of the last stage in good style. A fact that will give an idea of the phenomenal speed attained by these cars is that De Knyff covered the distance from Cabourg to Paris (123 miles of rather hilly roads) in 3hr. 14min., which gives an average speed of over 37 miles per hour.

De Knyff's total time was 44hr. 44min., for the different stages of the race, amounting in all to 1347 miles. In this class, Girardat was second, and Chasseloup-Laubat third, less than two hours behind the winner.

The motor cycle class saw Teste a winner, in the remarkably good time of 50hr. 58min., while Tart a very close second. The voiturette contest was won by Gabriel in 66hr. 39min., not bad at all for a light 2½-horse power vehicle.

Rene de Knyff, who won the motor-car contest, is one of the best known chauffers in France and has been first in many big events. It was he who with his car paced the champion cyclist Huret to victory in the recent Bordeaux to Paris race.

His vehicle had very few (and these were all unimportant) mishaps throughout the long journey. It was a Panhard car with a 16 horse power motor of the Daimler type, while Teste's mount was a De Dion and Bouton tricycle with a 2½ horse power, and Gabriel's a Decanville voiturette. A tremendous crowd enthusiastically received the men as they finished.

Automobiletaxameterdroschken.

AUTOMOBILISM is making its way with rapid strides in Berlin. In a few days time the first public conveyance in the shape of motor vehicle "droschkes" will make their appearance in the streets. These will be provided with the taxameters for calculating the fares.

Some other name will, however, have to be found for them, "Automobiletaxameterdroschken," as they are at present termed, is too dreadful a word for ordinary everyday use.—*New York Herald.*

South American Mail Wagons.

THE latest invention of progressing South Americans is the mail motor vehicle. In most cases innovations of this kind are adopted difficulty and

slowly both by the government and participating companies but its post appearance is gladly welcomed.

The government of Ceylon has ordered a number of hydro-carbon motor wagons, to be built according to the Daimler system, in order that the mail bags and mail packages may be moved with greater dispatch from the various post-offices to the main post-office and from there to the railroad station.

The new mail vehicle will have to traverse a distance amounting to 32 kilometers, according to the information from the Patent and Technical Bureau, of Richard Ludara, in Gorlitz, Germany.

The Automobile in Hawaii.

AN organization was formed in Honolulu, with $2,000,000 capital, to introduce electric vehicles in the Hawaiian capital. This company, The Automobile Company of Hawaii, will install a charging plant, to cost upward of $100,000 which will be capable of supplying one hundred carriages. Thirty electric vehicles have already been purchased.

Automobiles at $500.

THE International Automobile Company, which has been recently incorporated in West Virginia with a capital stock of $500,000, intends to make automobiles for $500.

The promoter of the company, H. A. La Pangh, states that after a thorough investigation of the various systems and styles of the motor power used the most economical is gasolene which they have concluded to use.

What Shall we Call It?

THE names suggested for the automobile are so numerous that a conclusion seems impossible. One suggests "lomo" for the abbreviation of the automobile. Another proposes to call an explosive engine car a "plo" an electric battery vehicle a "bat," and a steam driven carriage a "ho" the latter term reminding us of a breakfast food.

New Motor Carriage Invented.

THE Simon Brothers of Webster City, Ia., have invented a new motor carriage, and a stock company with a capital stock of $150,000 has been organized to establish a factory.

They Make Motor Tires.

THE makers of the Bailey bicycle tires report that they are making motor vehicle tires on the same principle as their bicycle tires.

The test given these motor tires has resulted most gratifying, and the firm believes that the claims for the bicycle tires that have been so well sustained should hold good for the motor tires.

The Various Lessnesses.

AND now a motor vehicle factory concern wants to locate in Marseilles, Ill. Pretty soon you may expect to read something like the following, says the Daily Register: About 10 o'clock this morning a horseless milk wagon loaded with cowless milk collided with a brainless rider on a chainless wheel. The luckless wheelman was badly injured and, being homeless, he was taken to the home for the friendless.

Horses at an Auction Sale.

THE advancement of the motor vehicle was shown at a recent horse sale in which fifteen horses, formerly the property of the Holbrooks' Worcestershire Sauce Company, were offered at auction, owing to the fact that the company has decided to substitute horseless vehicles.

THE incorporation of the Massachusetts Auto-Truck Company will soon take place. A plant will be erected at Worcester, Mass.

BOTH gasolene and steam vehicles are being manufactured by Jacob Rich & Sons, of Philadelphia.

Bike is King.

MOUNTED on a steel steed,
Like a knight of long ago,
On country roads I speed,
Spinning swiftly "Tally ho!"

Swiftly like an eagle soaring,
Morning air is cool,
O'er the bridge, the waters roaring,
Who disputes my rule?

Pity these benighted scoffers,
Who the kingly sport forgo,
Pity then the swimmers, golfers,
Who know not the "Tally ho!"

—*Robert J. Shores.*

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I have used Ripans Tabules with so much satisfaction that I can cheerfully recommend them. Have been troubled for about three years with what I called bilious attacks coming on regularly once a week. Was told by different physicians that it was caused by bad teeth, of which I had several. I had the teeth extracted, but the attacks continued. I had seen advertisements of Ripans Tabules in all the papers but had no faith in them, but about six weeks since a friend induced me to try them. Have taken but two of the small 6-cent boxes of the Tabules and have had no recurrence of the attacks. Have never given a testimonial for anything before, but the great amount of good which I believe has been done me by Ripans Tabules induces me to add mine to the many testimonials you doubtless have in your possession now. A. T. DeWerd.

I want to inform you, in words of highest praise, of the benefit I have derived from Ripans Tabules. I am a professional nurse and in this profession a clear head is always needed. Ripans Tabules does it. After one of my cases I found myself completely run down. Acting on the advice of Mr. Geo. Bower, Ph. G., 532 Newark Ave., Jersey City, I took Ripans Tabules with grand results.
Miss Sarah Wyckman.

Mother was troubled with heartburn and sleeplessness, caused by indigestion, for a good many years. One day she saw a testimonial in the paper indorsing Ripans Tabules. She determined to give them a trial, was greatly relieved by their use and now takes the Tabules regularly. She keeps a few cartons Ripans Tabules in the house and says she will not be without them. The heartburn and sleeplessness have disappeared with the indigestion which was formerly so great a burden for her. Our whole family take the Tabules regularly, especially after a hearty meal. My mother is fifty years of age and is enjoying the best of health and spirits; also eats hearty meals, an impossibility before she took Ripans Tabules. Arthur H. Blanchi.

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I have been a great sufferer from constipation for over five years. Nothing gave me any relief. My feet and legs and abdomen were bloated so I could not wear shoes on my feet and only a loose dress. I saw Ripans Tabules advertised in our daily paper, bought some and took them as directed. Have taken them about three weeks and there is such a change! I am not constipated any more and I owe it all to Ripans Tabules. I am thirty-seven years old, have no occupation, only my household duties and nursing my sick husband. He has had the dropsy and I am trying Ripans Tabules for him. He feels some better but it will take some time, he has been sick so long. You may use my letter and name as you like.
Mrs. Mary Gorman Oakes.

I have been suffering from headaches ever since I was a little girl. I could never ride in a car or go into a crowded place without getting a headache and sick at my stomach. I heard about Ripans Tabules from an aunt of mine who was taking them for catarrh of the stomach. She had found such relief from their use she advised me to take them too, and I have been doing so since last October, and will say they have completely cured my headaches. I am twenty-nine years old. You are welcome to use this testimonial.
Mrs. J. Brockbrank.

My seven-year-old boy suffered with pains in his head, constipation and complained of his stomach. He could not eat like children of his age do and what he did eat did not agree with him. He was thin and of a sallow color. Reading some of the testimonials in favor of Ripans Tabules, I tried them. Ripans Tabules not only relieved but actually cured my youngster, the headaches have disappeared, bowels are in good condition and he never complains of his stomach. He is now a red, chubby-faced boy. This wonderful change I attribute to Ripans Tabules. I am satisfied that they will benefit any one (from the cradle to old age) if taken according to directions.
E. W. Price.

A new style package containing TEN RIPANS TABULES packed in a paper carton (without glass) is now for sale at some drug stores—FOR FIFTY CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (120 tabules) can be had by mail by sending forty-eight cents to the RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York—at a single carton (TEN TABULES) will be sent for five cents. RIPANS TABULES may also be had of some grocers, general storekeepers, news agents and at some liquor stores and barber shops. They banish pain, induce sleep and prolong life. One gives relief.

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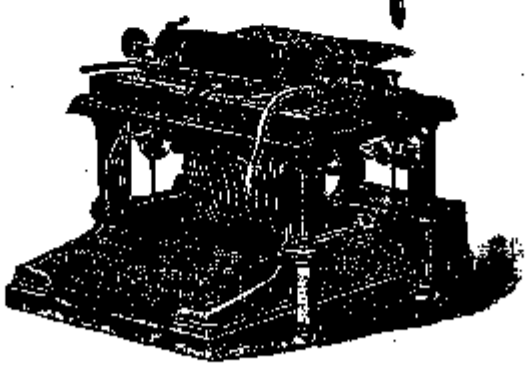
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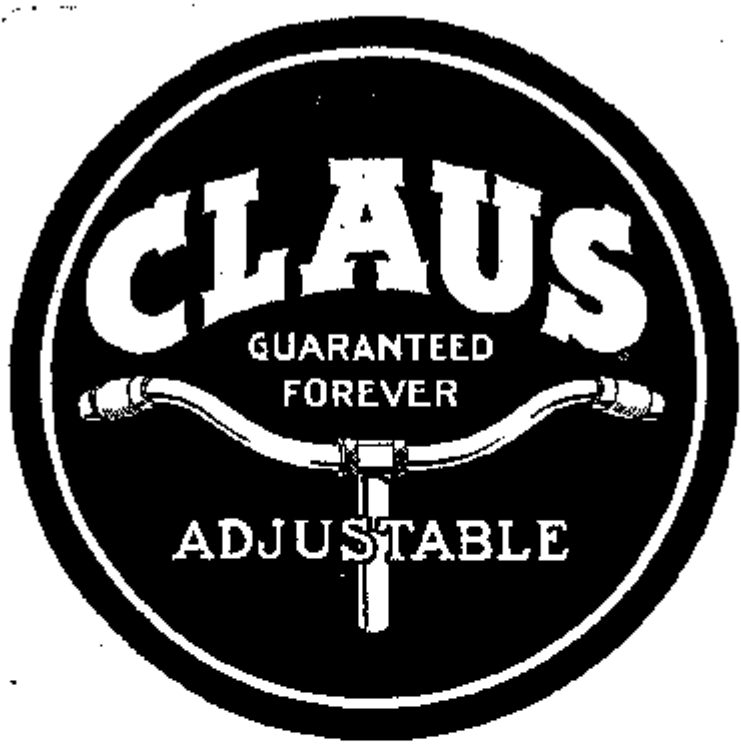
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