

THE
SCHOOL
BEAUTIFUL.

1907

ISSUED BY C.P. CARY
STATE SUPERINTENDENT OF PUBLIC INSTRUCTION

BLANK ENGRAVING & PRINTING CO., MILWAUKEE.



HIGH SCHOOL BUILDING AND GROUNDS, LAKE MILLS, WIS.
O. M. Jones, Prin.

THE SCHOOL BEAUTIFUL



1907



BY
MAUD BARNETT
State Library Clerk



*That is the most beautiful which at the
right time is in the right place.—Millet*

ISSUED BY
C. P. CARY, State Superintendent

MADISON
Democrat Printing Co., State Printer
1907

JUN 8 1907 WJ.
SUB. FOR WJ. 8
copy
Ed
6/2:
A7
1907
2

INTRODUCTION.

This bulletin has been prepared and sent out for the purpose of calling the attention of teachers, school officers and the general public to the need of our schools in respect to decoration and sanitation. In a word, we believe the schools should be both beautiful and sanitary. At present it is little exaggeration to say they are neither. The walls of our average schoolrooms, particularly in the country, are dingy and bare. If not bare, then covered with chromos and other disfigurements named pictures. To find a schoolroom having properly painted woodwork, walls and ceiling, one must search far and wide among country and village schools, while in city schools, rooms that appeal to the artistic sense are far from common.

It is needless to say children delight in the beautiful; they are educated by the beautiful and appropriate. The sense of beauty develops under favorable conditions and affects for good the whole attitude toward life. The love of the beautiful is necessary to the complete man. If this fact had been duly appreciated at all times by school boards and the general public, doubtless long before this the average schoolroom and schoolgrounds would have been made attractive.

On the sanitary side it may be said that the preservation of the health of our school children is the preservation and utilization of one of the chief sources of wealth and happiness. He who can do a day's work in a day, and a year's work in a year, has a tremendous advantage over the man who is feeble, sickly, or otherwise incapacitated for strenuous labor. To shut up our children in dark, dingy, unventilated schoolhouses, in this day of knowledge and enlightenment, is little short of criminal. Shall we not have in this state, a revolution with respect to the appearance of schoolgrounds and school buildings both exterior and interior, but particularly the latter, and shall we not also revolutionize our schools with respect to heating, lighting and ventilating?

C. P. CARY,
State Superintendent.

Grateful acknowledgment

Of assistance in the preparation of this pamphlet is made to Mr. Alexander Mueller, Director Milwaukee Art Students' League, Milwaukee, Wis.; Mr. John Cotton Dana, Public Library, Newark, N. J.; Mr. C. J. Jorgenson, Milwaukee, Wis.; Prof. E. P. Sandsten, University of Wisconsin, Madison, Wis.; Prof. L. H. Clark, Normal School, River Falls, Wis.; Prof. I. N. Mitchell, Normal School, Milwaukee, Wis.; Prin. W. L. Smithyman, Milwaukee, Wis.; and Supt. Julia Rockafellow, Waukesha, Wis.

The design for the cover of this book was made by Miss L. Zimmerman, Milwaukee, Wis.

SCHOOLROOM DECORATION

THE SCHOOL BEAUTIFUL.

Any child has an inherent right to a clean, neat, airy and attractive room in which to spend his days at school. If the schoolroom is not hygienic, if it offers nothing of the beautiful, nothing in its interior arrangement and decoration of those influences which ennoble character and make for contentment, he will suffer physically and mentally and spiritually; he will not, when his school days are over, step out into the world with a well rounded education or an appreciation of what the life that is his may hold in store for him.

The first duty of the teacher who does not find a clean and attractive room ready for occupation, is to make that room as clean and attractive as is possible. At first blush, the task may seem beset with many difficulties. The glaring whitewashed walls, the bane of so many schools, the unscrubbed floor, the dingy paint, in truth the entire atmosphere of the room, speak of a public spirit lying dormant largely because of the demand for strictly utilitarian instruction. This must be met by arousing the ever present spirit which wishes the child to have the best the community can afford, and by directing to the bare and desolate schoolroom the human desire to adorn and beautify. What remains to be done thereafter will be mere detail of organization and direction.

How to go about this work, the teacher's own good judgment will best dictate. There are no two places just alike and no rules can be laid down for guidance. Tact and perseverance will accomplish much.

In an article written by E. C. Brooks for the September World's Work is given "the story of a little group of college students who formed an organization of thousands of women who have revolutionized the school buildings and school grounds of a whole state." The state is North Carolina and the women who inspired the movement were students in the Normal and Industrial College of Greensboro. The organization was formed in 1902 and now has a membership of several thousand. It has done or has caused to be done a vast amount of work in the betterment of schoolhouses and schoolgrounds. County associations were formed later on, to be members of which all white women of each county were invited. To give some idea of what the county associations have accomplished, I quote the report made by a committee appointed to decide a contest for a prize of \$100 offered by the Wayne County Association to the district of the county that would make the greatest improvement.

"This district, No. 1, New Hope township, Wayne county, Miss Bertha Casey, teacher, contains only sixteen families with children of school age. There are only forty children on the census. The average attendance for the four months' term was twenty-seven. The local association had a membership of seventy-five and held eight meetings during the school term. Of the sixteen families all are farmers and only eight own the land on which they live. Only one of them has had the advantage of a high school education. Seven of them tended only a one-horse farm. Not a mother in the district had any help except what the children could give night and morning. Most of these mothers were members of the association and were always present at the meetings.

They raised by entertainments \$141.70. They enlarged the grounds to twice their former size, taking up scraggy trees, stumps, and trash. They leveled the grounds, laid off walks and planted young trees and flowers. They built an addition to the school building, put in new lights, built new steps, and painted the building inside and outside. They paid the music teacher's board, laundry, and part of her salary. They bought an organ, a library, and several pictures which now adorn the walls. They polished the stove, cleaned the floor and desks, and provided places for hats and wraps. They did all this without cost to the school fund."



A MODERN RURAL SCHOOL BUILDING IN WISCONSIN.
District No. 4, Town of Darlington, Lafayette County.

I also quote what the president of the State Association says of the Local Association:

"It can have a new school house built, or the old one repaired and painted; it can have rough and uncomfortable benches exchanged for good desks; it can have black boards multiplied; it can have the floor scrubbed, the stove polished, the windows washed; it can have shades or curtains added to the windows; it can have pictures placed on the walls; it can secure a library and keep it growing; it can bring into the school good magazines and papers; it can give interesting and profitable entertainments, which will be of no less value to the community than to the school; it can beautify the school grounds by having stumps removed, grass and flowers planted and play grounds laid off. Finally it can uphold the hand of the teacher, help her, encourage her, and stimulate her in her difficult and trying work. The work will interest the community in the community's school and the community's children; it will teach the few to subordinate personal advantage to the welfare of the whole; it will discourage those two most bitter and most fatal foes to educational progress—local prejudices and neighborhood misunderstandings. This is the work that the local association, and only the local association, can do."

From these two quotations it may be seen what women of other communities have done to help other teachers. Let me ask the teacher of any Wisconsin rural school which has never been made beautiful—why not get the women of your community who are, most of them, so much better supplied with this world's goods than those spoken of above, to help you?

There are many ways of securing money to spend on the improvement of schoolhouses and schoolyards. The best way is to have the school board appropriate it. But the wants of the school may exceed even the generosity of the board and in that case school entertainments may be given. A concert is a quite usual means, I believe. Sociables sometimes meet with success, and exhibits of the work of the pupils might do well. The Chicago Art Education Co., 215 Wabash Ave., Chicago, Ill., and the Horace K. Turner Co., Boston, Mass., offer to lend exhibits of their pictures to schools desiring to raise funds for the

buying of pictures and other things necessary to a comfortable and pleasant schoolroom. These exhibits will fill a twofold purpose. Not only will they be a help in the raising of money, but they will also afford teachers and pupils and parents an excellent opportunity to study art. These two firms will send terms and full instructions concerning the lending of the pictures upon application. The exhibitors are not required to pay any guarantee. It is doubtful, however, if the plan will be feasible in any town having less than a thousand inhabitants.

The sensible teacher will determine what method of raising money will best apply in her community. It is usually wise for a teacher to consult with a few of the most progressive people of her town or district with reference to such matters before making a beginning.

CLEANLINESS.

Let your means of acquiring funds be what they may, see that the room is thoroughly cleaned. Omit no crack, nor corner, nor closet, nor shelf. Leave no dust anywhere. Take down from the walls and destroy all traces of old work and all decorations which have accumulated dust and smoke. If there are any really good framed pictures of course they should be saved, but if the pictures are not absolutely good, it is better not to put them up again. Bare walls are better than those decorated with specimens of poor art.

Go through your book shelves and cast out all rubbish which you may find there. The book case is often made a catch-all for odds and ends. It is intended for books and should be used for that purpose alone. Select the books which need mending and put them aside until you can find time to mend them. See that the others are upright on the shelves and ready for use.

If you have a chart or a map in your room which is torn, mend it neatly. All charts and maps should be hung with precision.

Scour up the old bell and the water pails and all the cups. The water bench, if you have one, should be painted to match the woodwork. Where there is no other arrangement for drinking

water, there should always be two pails, one for fresh water, the other for the water left in the cups after drinking. The use of the pail for slops should often be called to the attention of the pupils. Drinking water should not be allowed to stand long in an open pail in a warm room. It soon becomes infected. Fresh water should be supplied with frequency. Children should be encouraged to bring individual drinking cups and individual towels. A tank supplied with faucets for drinking water is a most excellent thing and may be bought or made at a small expense. Great care must be given such a tank as it will easily breed disease if allowed to grow foul. Where it can be arranged, the drinking font supplying running water is the very best thing.

Mats and scrapers should be placed at the outside door for cleaning mud off the shoes, but the mats themselves must be kept neat.

If you have a stove see that it is clean and in good condition. If it is not jacketed and is so placed in the room as to render children who sit nearest it uncomfortably warm, there should be some kind of screen provided to place between it and the pupils. These screens are often made of galvanized iron.

Sometimes unhinged doors are seen in schoolrooms. Do not let this condition exist in your room. Nothing gives a more dejected appearance to an interior.

Be careful of your curtains. They are easily torn from the poles and otherwise damaged. Keep them as well hung and as fresh looking as possible.

FLOORS.

If you have a hardwood floor you are fortunate, but if you have an old, wide board soft floor, it may be kept clean much more easily if you will have it painted. The best color for this is dust color as it shows tracks less than other colors. Give the floor at least two coats of paint. Once a week at least it should be mopped and wiped dry. There is a little device for wringing out mops that will help you to keep your hands out of the dirty water, if you are obliged to do your own janitor work. It is inexpensive and can be bought at nearly any grocery store.

WOODWORK.

If your interest in cleaning and putting in order has been deep enough you will surely by this time have interested others and will find plenty of help. But your next step, that of getting newly painted woodwork or newly tinted walls, or new curtains, or a picture, or any new thing which you may feel the need of most, must be taken advisedly. School boards and patrons of schools are generous if they feel that the expenditure of money will be followed by actual good to the pupils, but they are sometimes (and rightly too) unwilling to spend money for something for which they may not see the necessity. The task may require infinite tact and understanding and patience.

Take stock of what you have. What is your woodwork? How are your walls and your ceilings? Are they clean or dirty; restful or glaring? If the woodwork is dirty or high-colored, or the walls need doing over, have the necessary painting and tinting done at once. In most country schools the woodwork has been painted, and of course if that is the case, the only way to freshen it is to paint it again. But if the woodwork has been left natural color and varnished, it may be washed with water and possibly a little soap where it has become very much soiled.

When repainting woodwork it will be best to use the same color as that intended for the walls but a rather darker shade, or one which will harmonize with the walls, or perhaps a neutral shade somewhere near the color of natural wood. The last will not show dust nor soil very readily and on that account is good.

It is seldom well to use dark colors in a schoolroom. The blackboard furnishes quite enough dark surface.

If you are fortunate enough to have woodwork which has been neither painted nor varnished, you will find stains most satisfactory. After the stain has been put on, the woodwork may be varnished and rubbed down to a dull finish with pulverized pumice stone and oil or it may be left without varnish. Another good finish for stained hardwood is paraffine oil. This is comparatively easy to put on and its effect is very pleasing.



ONE OF THE MODERN RURAL SCHOOL BUILDINGS IN WISCONSIN.
District No. 3, Town of Amherst, Portage County.

WALLS.

Some of you may find the walls whitewashed, some may find them painted, and others will find only plaster. The last is of course the easiest to change. Whitewashed walls are much better than dirty ones and cleanliness is a first necessity, so if it is a choice between whitewash and soiled walls, take the whitewash. But do your best to have your walls tinted or painted or stained, because the glaring white of the whitewash is hard on the eyes.

Paint lasts well. It may even be washed with more or less success, and may easily be kept new by adding a fresh coat now and then. If you decide to paint your walls, you will have to put on at least two and probably three coats. The first need not necessarily be of the exact shade of the last two, but it should not greatly differ. Do not use for your walls paint which is hard and glossy after it has dried. The effect is too cold. The surface should be soft and velvety looking. This effect may be heightened by stippling the last coat. This is done with a large, flat brush with long bristles. The brush is set down on the freshly painted wall and moved slightly, taken up and set down in another place and so on until the entire wall is covered. This stippling breaks up the surface so that it appears much softer.

If your walls have been calcimined they may be re-calcimined or painted. In painting or calcimining walls it is well first to try the colors on a small part of the surface to be treated and to let them dry before going over the whole wall, so that you may be sure that they are satisfactory.

It may be that some of you will find rough plaster finish. This finish is beautiful if painted or stained with large sweeps of the brush. However, many object to rough finish plaster for school-rooms as dust clings to the surface so easily.

DESKS.

It is doubtful if you will be able to change the unpleasantly bright colors of the desks and seats. These desks and seats may, however, be made absolutely clean and kept whole and free from pocket-knife ornamentation. If desks are to be bought you can use your influence in securing those made of natural woods, varnished or stained to harmonize with walls and woodwork.

If the room is not furnished with adjustable desks and seats (those which may be made lower or higher or have the slope of the desk changed), or with several sizes of stationary ones, you should urge your board to supply them. Many pupils have been seriously deformed by occupying seats which are too high or too low or which do not fit them, or by sitting before desks too high or too low, too near the seat or too far away from it, or before those having a wrong slope. Adjustable seats and desks are the best; but in case you cannot secure these, there should be at least three sizes of desks and seats, and if there still remain pupils who are not comfortable, special measures should be taken to make them so. The smaller children may be given footstools and the larger pupils may, if necessary, be seated in chairs before tables. A pupil to be comfortable should be able to sit firmly back in the seat with his feet flat on the floor and his limbs bent at right angles at the knee. There must be sufficient room between back of seat and desk but there must not be so much that he will be obliged to bend forward or sit on the edge of the seat. The height of the desk should be such that his shoulders will not be lifted when his arms are on the desk, nor his body bent forward to lean on it. It is better to have desks, the slope of which can be adjusted to suit the needs of the various school occupations, but if these cannot be obtained a medium slope is best. Use judgment in seating your pupils. They should, as far as possible, be seated according to size but if there are any children who are defective in sight or hearing they must be given special consideration.

The old method of placing all the largest desks and seats in the rear, the medium sizes next and the smallest sizes nearest the front, is not the best. It is better to form one or two entire rows of the largest size, perhaps on the two sides of the room, then one or two or more rows of the medium sized seats next the large ones and toward the center of the room; and last, one or two or more rows of the smallest size in the center. This order may be reversed or otherwise changed. But, however the rows are arranged, this method affords an opportunity to place some of the larger pupils near the front if occasion demands.

WINDOW SHADES AND LIGHT.

Many of you will find fairly well adjusted window shades. There is a curtain fixture which allows the curtain to be so adjusted as to screen any part of the window, top, middle or bottom and that only. These fixtures are desirable. If you find no shades at all on windows which receive the sun, you should endeavor to get some, if nothing more than paper cambric tacked to curtain sticks and provided with cords so they may be rolled up and fastened. Windows that receive no sun need no shades. For those which receive much sun a blue gray, semi-opaque shade is doubtless best for the eyes, as the bright light shining through it becomes about the same in quality as a north light and is therefore a desirable light for students.

Do not make the mistake of keeping shades pulled down or half way down unless there is necessity for so doing. Light from the upper portions of the windows is needed for the distant parts of the room.

Light should come to pupils from the left and the rear. If you have windows on both left and right, it will be better to pull the shades over the latter most of the time on bright days. If there are windows in the front they should be screened, as bright light shining in the faces of the pupils is exceedingly injurious.

In buying shades for our own homes we select those which harmonize with the walls and furnishings, but in buying shades for a schoolroom it must be kept in mind that their purpose is to regulate the light, not to shut it out, and that a schoolroom is not a parlor but a workroom.

White muslin sash curtains make a room cozy, but they must be precisely hung and kept scrupulously clean. Otherwise it is better not to attempt them.

VENTILATION.

As much of the ventilation of rural schoolrooms is still accomplished by means of windows and doors, all sashes should move readily so that windows may be thrown open at every recess and at

other intermissions, or when pupils are taking gymnastic exercises.

Boards cut about 8 inches wide and as long as the width between the window casings, may be used to assist in properly supplying fresh air. They should be set between the casings at the lower part of the windows next the sills, leaving at least two inches between the sashes and the boards. The boards should be inclined inward at an angle of about 60°. If the sashes are then raised about 4 inches the air will pass in and be directed upwards between the boards and sashes, and not upon the children.

A much better method of ventilation is that of the jacketed stove with piping for outside air. It may be installed in the following manner:

The school stove should be entirely enclosed in a circular jacket fastened to the floor. It should be placed six inches from the stove and extend at least one foot above the top of the stove when used to enclose a round oak heater, or to the height of a person of average stature, when used to enclose an old-fashioned box stove. The box stove should, however, not be used when it is possible to secure a round oak heater. Suitable openings should be made in the jacket through which the fuel may be placed in the stove and the ashes taken out, as well as suitable openings for draughts. Care should be taken to reinforce the opening made for fuel by strong iron straps in order that the jacket may not be bent or injured. Openings one inch wide and five inches long should be cut through the bottom part of the jacket about 2 inches from the floor and about 2½ inches apart. A "belt damper" just large enough to surround the jacket and 7 or 8 inches in width, with openings to correspond to those in the jacket should be made and fitted neatly to the jacket just over the openings in such a way that it will move easily back and forth over the openings. By this means the draft in the room may be regulated. Instead of this "belt damper" hinged doors 2 by 6 inches in size may be used to close the openings. Fresh air should be admitted by means of an air tight wood or galvanized iron conduit placed underneath the floor and extending from an opening in the outside

wall to one underneath the stove. This fresh air intake should, if a galvanized iron cylinder, be at least twelve inches in diameter. If a wooden box is used it should be at least 12 by 12 inches inside measurement. A damper should be placed in this flue at the point where it enters the basement in such a manner that it may be easily operated from the inside of the schoolhouse. Means for drawing the foul air from the floor of the schoolroom should be provided either by making an opening into the chimney at the level of the floor, where the chimney is built from the ground, or by an open stove pipe connected with the chimney and extending to within six inches of the floor. The foul air flue should be approximately of the same dimensions as the fresh air inlet and should contain dampers for the regulation of the draught. The mode of operation is as follows: the air surrounding the stove on the inside of the jacket becomes heated, circulates through the upper portion of the room, and as it cools, gradually falls to the floor, where it is taken out of the room through the foul air opening by the draught up the chimney. On cold mornings it may be well for the janitor to close the fresh air flue by means of the damper mentioned above, open the "belt damper" or hinged doors at the bottom of the jacket, and take the supply of cold air from the schoolroom until the temperature has reached a reasonable degree of warmth. The total cost of installing this system need not exceed twenty-five dollars.

There are other systems operating on much the same principles which have been patented and can be purchased ready for use.

BLACKBOARDS.

Blackboards should be placed low enough for the youngest pupil to use and should not extend too high for the teacher. Slate blackboards are the best, but there are a number of preparations for blackboard finish which may be bought and applied to old boards with fairly good results. The surface of the board should not be shiny. The finish should always be dull as is slate. Reading from a shining surface is injurious to the eyes. If the old boards are to be refinished I would sug-

gest that they be made to harmonize with the color scheme of the room. To do this, use coloring matter in the liquid preparation. Dark green boards look well in a room having a green color scheme and are restful to the eyes.

Boards and erasers and chalk troughs should be cleaned daily. When the blackboards are disagreeably large or seem to spoil the color scheme of the room, curtains of inexpensive material and of a color in harmony with the walls, may be adjusted so that they may be drawn over the boards when the latter are not in use. These curtains are also useful in hiding work placed on the board by the teacher for future use. Curtains, however, are dust catchers.

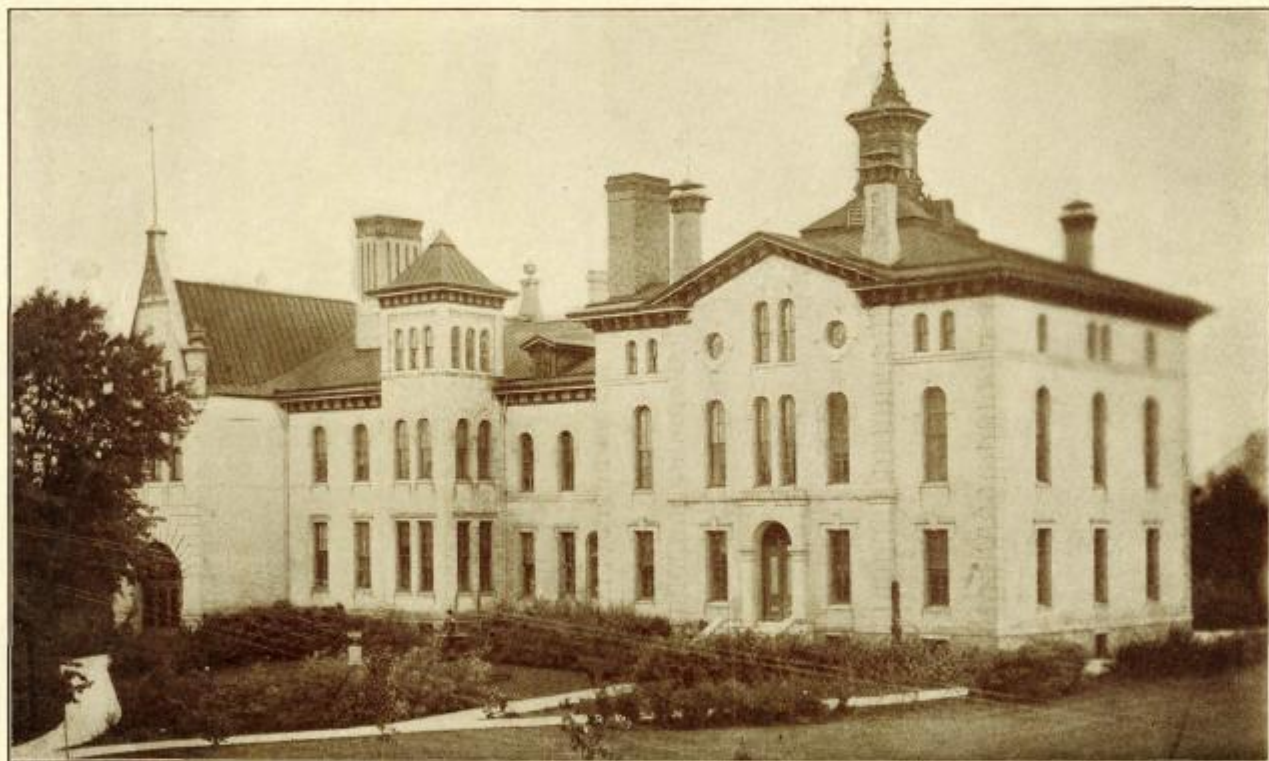
Do not allow careless blackboard work at any time. Everything written on the blackboard should be well and carefully done. Stenciled borders or figures colored or uncolored are sometimes attractive, but should never be allowed to remain long on the boards.

CLOAKROOMS.

Cloakrooms should be treated as to floors, walls, ceiling and woodwork just as the room proper has been treated. If it is possible, a separate compartment should be supplied for each child, in which to hang his wraps. This convenience would prevent much contagion and many misunderstandings. Cloakrooms especially should be well aired. They should be kept cool.

BULLETIN BOARDS.

A bulletin board in a schoolroom is a great convenience, almost a necessity. It may be made to fit into some open space on the wall or it may be swung on a standard. Felt is probably the best material for covering a solid board, as it is thick and easy to pin to or tack through, but a frame of two inch boards covered with burlap to match the walls does very well. A satisfactory board can be made by covering a cheap clothes rack with denim, and painting such parts of the woodwork as are left visible, to correspond with the colors used in the room. Interesting clippings



HIGH SCHOOL BUILDING AND GROUNDS AT JEFFERSON, WIS.
F. R. Hamilton, Prin.

from newspapers, good bits of work from the hands of the pupils, good pictures obtained from various sources and used to illustrate lessons, may be fastened to this bulletin board, left there as long as is necessary, then taken down and filed away, if they are worth filing, or destroyed if they are not. Sometimes the pupils may wish to take their bits of work home after they have been honored by display on the board and sometimes also they may bring interesting things from home which may be pinned there for a day or two and returned.

The bulletin board should never be allowed to grow stale. Things should not stay there for long periods of time; they must be kept moving. In fact, specimens of pupils' work, clippings, pictures of no great merit, but only pleasing for a time or useful in teaching some lesson, should never find a permanent place on the walls nor on the bulletin board of any schoolroom. Only the good in art should be long before the eyes of the pupil. Pictures used on the bulletin board and taken down may be mounted on cardboard, labeled and put away for future reference. Clippings may be treated in the same way, several of them relating to the same subject being grouped and mounted together.

COLOR SCHEMES.

The most difficult problem to be solved in connection with schoolroom decoration is that of making the proper selection of colors for the walls, ceiling and woodwork. On the harmony of these colors depends the success of any endeavor to make a room attractive and restful. On it also depends the effectiveness of all pictures, casts, pottery and other objects used for decorative purposes.

Not merely for beauty alone, however, should the walls be colored, but for the undeniable effect of colors upon the child. It is a fact now generally accepted by neurologists and physicians who have given the subject thought and study, that colors have a considerable influence upon the mental and physical condition of children. In recent years many cases of severe nervous headache and nervous irritation in children have been traced to the bare white or poorly colored walls of schoolrooms.

The location of the schoolhouse and the position of its windows have much to do with the selection of colors. A room with little sunlight needs lighter and warmer shades than one which receives the direct sun during a large portion of the day.

In deciding what colors to use you must keep in mind at one time the walls, ceiling, woodwork and furniture. If the color of the woodwork is satisfactory, or being unsatisfactory, cannot be changed, use it as a basis and adopt a shade for the walls which will harmonize with it. Walls and woodwork in certain shades of brown, ceiling in old ivory, and desks in natural wood, will all harmonize. Dark gray green woodwork, lighter gray green walls, still lighter green ceiling and natural wood desks are a very pleasing combination.

USE PLAIN COLORS IN SOFT DULL SHADES. Do not attempt borders or clouded effects unless you have a skilled and experienced designer to do the work.

It is always safe to select for a color scheme, shades of the same color, arranging them so that the lightest shade will appear on the ceiling and the walls down to the picture molding, the medium shade on the walls, and the darkest on the woodwork, if the latter happens to be stained or painted. By this, however, I do not

mean to suggest that there are no harmonies except in scaled colors.

C. J. Jorgenson of Milwaukee, a colorist of note, contributed an article to the American School Board Journal, December, 1905, from which both he and the editors of the Journal have kindly given permission to quote. The article will be very helpful to any teacher or school board about to decide on colors for a schoolroom. It is, in part, printed here:

"The necessity of congenial and cheerful surroundings in our public schools is being recognized and considered more from year to year as one of the several elements in the direction of cleanliness and sanitation.

The coloring in the schoolroom must appeal to the aesthetic feeling of the pupils, and not offend their color sense by unharmonious color combinations. The color must imbue the mind with a pleasing restfulness, and thereby heighten the faculty of conception of the pupil, as well as strengthen the energy and patience of the teacher.

In defining the proper colors for a room, the natural light must be considered first. It is a well known fact, that the diffused light entering through windows not exposed to the sun, is the most agreeable to read and work by. Therefore, the north exposure is preferable for such purposes. As most of our public schools receive light from all four directions, it is essential to adjust the light in a proper manner. The sunlight breaking into a room with unrestricted power, must be softened and diffused by window shades and curtains.

Sunlight passing through a perfectly white semi-opaque shade, will create a decidedly creamy color leaning towards the yellow orange. The same effect is observable where sunlight is thrown through a milky liquid. In order to overcome this yellowish light, and to produce more of the effect of the north light, the window shades should be colored in a light bluish gray, and thereby make the light in such a room as agreeable and neutral as may be found in a room not exposed to the sunlight.

Colors are often classed as warm or cold. Warm colors are also called advancing, and cold colors retiring. Warm colors are those in which red and yellow predominate; these colors have

no influence on the temperature of the room but they will make impressions of this nature upon the mind. This should be borne in mind when the interior wall coloring of a school house is undertaken.

On the north exposure, the colors can be warm and lean toward yellow and red; on the east, the colors should be less warm, i. e., blended with a little blue; the west and south sides can have a preponderance of blue, if the color of the hardwood, or other local conditions, do not demand a different treatment.

All primary and secondary colors should be blended to harmonize with woodwork and surroundings. All space not actually needed for blackboards, should be treated in the wall color. Blackboards should not be carried all around the room, but confined to the necessary minimum, in order to allow the wall color to predominate.

In older school buildings, where there is an insufficiency of light it is well to keep the colors of ceiling, walls and woodwork as light as possible to produce reflection. In the newer and well-lighted building, the color scheme should not be too light, especially in rooms finished in natural hardwood. The walls can be colored dark in such rooms. The colors should never form a direct contrast to the woodwork, but always blend with it.

The ceiling should be kept light, but never white or chalky. It is never touched by the rays of the sun, except by reflection from a mirror, or other polished surface; consequently, in the majority of cases it will receive diffused cold light only, and should always be treated in warm tints.

The spectral colors, yellow, orange, red, violet, blue and green, should never be used for ceiling and walls without combining or ornamenting them with softer colors. Such softer colors are also called broken colors, and are produced by mixing spectral colors in pairs, thus blending one color into the other. These many soft colorings, resulting from such mixtures, will please the educated eye and train the uneducated to distinguish and appreciate broken color tints. Equally objectionable are the bright color stains commonly used on school desks and other school furniture. Softer and darker stains would be in better taste and give more repose.



HIGH SCHOOL BUILDING AND GROUNDS AT MAZOMANIE, WIS.
F. G. Kraege, Prin.

This excerpt from Mr. Jorgenson's article requires no explanation, yet the rules laid down are so important and are so difficult to apply that a repetition of what has already been said may be helpful.

Never use bright colors on woodwork, walls or ceiling. *Never* use any unbroken color of the spectrum. The spectral colors must first be dulled by so mixing them with each other as to produce soft tones.

For instance spectral green when placed upon the walls is harsh and irritating, but when mixed with other colors so as to produce the stone greens or sedge greens or the rich olive greens or any one of the long list of neutral greens, its effect is restful and artistic.

Again, spectral red, the most irritating of all colors to the eye should never be used even in combination with other colors in such proportion as to stamp the combination with its quality. As Mr. Jorgenson puts it, "on the north exposure, the colors can be warm and *lean* to the red." Cardinal, pink, cerise and the like are not meant, but rather the soft reddish buffs and terra cottas.

But even colors which merely lean toward the red should be used advisedly. It is a well established scientific fact that the nearer a color is to the red end of the spectrum the more irritating it is to the eye, and the nearer it is to the blue end of the spectrum the easier it is for the eye, with the exception of the extreme violet rays which are also irritating. From the examination of many school children it has been ascertained that while red is irritating it is also exciting, and that while blue is quieting it is also depressing. From all this it would appear that the three middle colors of the spectrum used as bases are the most suitable for the schoolroom. The best of these is green in such combination as to produce soft tones. It should probably be used as the basic color for wall tinting in three-fourths of the schools of the state, the shades adopted depending largely, of course, upon the amount of light admitted to the room. In schoolrooms, however, enjoying a plenitude of sunshine, colors leaning toward the blue may be employed, and in rooms having little sunshine, colors leaning toward yellow and even red.

MR. JORGENSEN'S OFFER.

Teachers and school boards about to select color schemes for schoolrooms will be given advice free of charge upon application to Mr. Jorgenson. Sample colors will be furnished if a full description of each room giving all the information called for in the outlines appearing on the following pages accompanies the application. All communications should be addressed to C. J. Jorgenson, 521 Jackson St., Milwaukee, Wisconsin.

Two color schemes recommended by Mr. Jorgenson for two schools in Waukesha county with the descriptions upon which such recommendations were based are printed herewith.

Description of schoolroom sent to Mr. Jorgenson from District No. 6, Town of Summit, Waukesha Co.

School Room

Length, *24 ft.*

Width, *24 ft.*

Height, *14 ft.*

Windows

Length, *5 ft.*

Width, *3 ft.*

Number, *4.*

Which sides of building, *East, West.*

Doors

Where placed, *South end.*

Number, *2.*

Blackboards

On which sides of room, *North.*

Width, *4 ft.*

Color, *Gray.*

Material, *Slate.*

Seats

Color, *Birch*.

Face what direction, *North*.

Woodwork

Kind of wood, *Pine*.

Finish, *Painted*.

Color, *Brown*.

Walls

Finish, *Wainscot, 3 1-2 ft., painted*.

Color, *Light brown*.

Stove (if any)

Where located, *South end*.

Any other information, *Bookcase, dark oak; organ, walnut*.

Amount of money available for doing over, \$35.

Description of schoolroom sent to Mr. Jorgenson from District No. 4, Town of Brookfield, Waukesha Co.

School Room

Length, *29 ft.*

Width, *25 ft.*

Height, *13 ft.*

Windows

Length, *6 1-2 ft.*

Width, *2 5-6 ft.*

Number, *8*.

Which sides of building, *East, West, South*.

Doors

Where placed, *South side*.

Number, *3*.

Blackboards

On which sides of room, *North, East and West.*

Width, $3\frac{1}{2}$ ft.

Color, *Black.*

Material, *Slate, wall.*

Seats

Color, *Cherry.*

Face what direction, *North.*

Woodwork

Kind of wood.....

Finish, *Paint.*

Color, *Drab.*

Walls

Finish, *Kalsomine.*

Color, *White.*

Stove (if any)

Amount of money available for doing over, \$35.

Mr. Jorgenson's offer to the schools of the state is most generous and it is hoped that school boards and teachers will take advantage of it.

Colors advised for District No. 6, Town of Summit,
Waukesha County.



CEILING.



WALL.



WOODWORK.

Colors advised for District No. 4, Town of Brookfield,
Waukesha County.



CEILING.



WALL.



WOODWORK.

PICTURES.

The purpose of pictures in the schoolroom is twofold; first, to decorate the bare and silent walls, and, second, to direct the child's taste and sympathy toward the beautiful. A third but much less significant purpose is to familiarize the pupil with recognized works of art and methods of expression in art.

Every schoolroom should have at least one picture of artistic merit. If means permit, it is well to have more, but it is a great mistake to have too many.

For the guidance of those who will select pictures for the common schools of this state, the following suggestions may not be amiss:

Select pictures having a human interest. Pictures of animals and of children always appeal to the little folks. But whatever the subject let it be one which the child will be able to comprehend through experience or knowledge common to children of his age.

It is a matter of prime importance to consider the ages and environments of the pupils before selecting any picture for the schoolroom. The real problem always is to get some *work of art* which the child will appreciate and enjoy and which will at the same time prove a suitable decoration for the wall. In the solution of that problem, what old masters or other paintings appeal to you or me is of no consequence. Our taste and our ability to understand and appreciate have developed since we left the middle and grammar grades. To determine rightly what the pupils of today should have in the way of artistic surroundings, we must in part forget our present point of view and remember the limitations of the days of our childhood. The following is an excerpt from an article on *The interior decoration of schools* by W. J. Kenyon, State Normal School, San Francisco, Cal., printed in *The School Review*, November, 1906. "Let us avoid reading our own preferences too unreservedly into the children, and becoming their self-appointed proxies. The children have not that sense of historical values which is always in danger of giving their seniors a bias. We have not quite learned to distinguish between that which is imposing, from the art curator's standpoint, and

that which is inherently beautiful, regardless of its niche in the lore of art. It is one thing to stock a museum of art with the conspicuous milestones of art history. It is quite another to decorate a children's room with things intrinsically beautiful—and beautiful *from the child's view-point.*"

Select colored pictures if it is possible for you to obtain those which are true works of art. They are more decorative as a rule and are more appreciated by the child.

Be very careful, however, in your selection. If you have not a keen appreciation of color, it will be better to confine yourself entirely to the list of colored pictures given later on or to solicit the assistance of an artist.

Select pictures of simple outlines and of little detail. Complexity in design and in execution should be avoided. Much detail interrupts the attention of the child and often causes him to lose entirely the conception of the whole. All teachers who have taught drawing know that a child in attempting to make a picture of an apple having some slight imperfection on it, often makes the imperfection the most prominent feature of the picture. The detail has caught the attention. And so it is when a child stands before a work of art of much complexity of design. His attention is caught by one detail and then another until his interest flags and he turns away without having formed any conception of the picture.

Select bright, sunshiny or at least moderately cheerful subjects. Children are greatly influenced by subjects of pictures and sadness comes soon enough. It need not be lugged in. Avoid also subjects which give no food for thought and which will soon become tiresome.

In buying, look not only at the individual picture, but at the composition of the entire wall. Consider how the picture will look on the wall for which you are selecting it, and whether or not it will be in harmony with the pictures already hung. The color of the walls and ceiling, the pictures considered as decorative spots (not as pictorial subjects), all help to give a certain color and tone to the room, and to determine the prevailing atmosphere, which should in all cases be artistic and soothing.

Take into consideration the amount of wall space available and



ROOM IN SIXTEENTH DISTRICT SCHOOL NO. 2, MILWAUKEE WIS.
W. L. Smithyman, Prin. Pictures on side wall chosen with especial thought for the History Class.

the size of the room, so that you will buy pictures neither too large nor too small. A very small picture in a very large room is lost. A very large picture in a very small room looks out of place. Be sure that your picture will "carry," that is, that it will not lose its effectiveness when viewed at a distance.

REPRODUCTIONS OF THE MASTERS.

"Progress in art" says John Cotton Dana of the Newark Public Library, "is not progress in knowledge of Madonnas and Corots,—save in one narrow sense. Progress in art is growth in sensibility, growth in power of appreciation, growth in capacity to get pleasant thoughts and feelings from the sight of things which surround us every day,—the wayside flower, the waving grass, the tree naked to winter winds, the towering chimney, the familiar utensils of our homes, the pictures of the popular journals, and a thousand other things. The best course in art would begin with a waving spire of grass or a branch of the nearest tree, not with Raphael's Sistine Madonna or Michael-Angelo's David."

The opinion largely prevails among educators and those interested in schoolroom decoration in this country, that photographic reproductions of the works of the old and modern masters are the only pictures appropriate for schoolroom decoration and the study of art by school children. I have not been able to bring my thoughts into harmony with this opinion. The educational theory upon which it is based has, moreover, for some years past been exploded in Germany and other European countries. I do not mean to say that children should not be taught anything of the history of art during their school days or that they should have no familiarity with the pictures of the great masters in art but I do mean that reproductions of these pictures are better calculated for study as the pupil advances in years and knowledge than they are for the purpose of decorating the walls of rooms in which young children sit. Granting that the constant display of good or poor reproductions of pictures of this class may have some indefinite beneficent influence upon the child's character and upon his ability to appreciate what is ideally

or actually beautiful, nevertheless the proposition that a child in the common schools can be taught to recognize artistic expression or the beautiful in art through reproductions of Rembrandt's or DaVinci's or Michaelangelo's pictures, appeals to me as impossible as it would be to teach Middle Form pupils mathematics by illustrating problems in conic sections or calculus, or literature by reading to them *Faust* or the *Inferno*.

But leaving out of consideration the value of such pictures as a means of education in artistic expression, in what of the great art of the painting is the child able to find delight? What would there be in a rendition of *Parsifal* by the Chicago Orchestra that the average child could understand, that he could enjoy, that would tend to inculcate in him a love of music? What is there for him in all the angels and Madonnas painted in the indolent, elegant but withal ascetic days of the Italian Renaissance?

Let us take yourself and myself for examples. We may have had the advantage of University or Normal School training. We may have had courses in aesthetics. We may have visited the great art galleries of the world. We may have stood before the works of Rubens, Murillo, Van Dyke, Velasquez and Titian and many others. We gathered up the story of the past and our hearts and souls were filled with admiration for these mighty men. And then we turned away from *The Assumption*, *The Holy Family*, *Don Balthazar* and the rest, and it was not the technique, the conception, the detail, the color, all that distinguishes great masterpieces, which had most impressed us, but what each painting was about.

Perhaps you remember standing in the art gallery at the Columbian Exposition in Chicago and watching the crowds surging in front of the picture by Hovendon entitled *Breaking home ties*, while other and greater works of art went unnoticed. Why? Not because it is a great work of art. It is not. But because the canvas portrays a scene which touches the heart.

How many times in our visits to art galleries or art exhibitions do we pass by what is truly excellent as a work of artistic expression and then stop to admire some potboiler, dear at almost any price, the subject of which commands our interest.

If it is true of us that we are often unable to appreciate the artistic merit of many of the old masters, and are frequently less attracted by them than by the work of mediocrity, is it not also true that the child with its limited comprehension, its lack of training and education, will probably often fail to find in these famous paintings any beauty of expression? To him even the historical and human setting is lost. The religious impulses pervading the periods of our civilization during which most of the old masterpieces were painted, are not discussed in such histories as the child in our common schools would read, or, reading, would understand.

Let us go further, bearing in mind at the same time that our ideals of beauty frequently lie beyond our power of expressing them. Give the average child in the Primary Form a pencil and ask him to draw a man. He will probably begin by making something that looks like a circle for the head and two smaller circles for the eyes, with lines for the mouth and nose. Should he do better than this, his drawing at the best will be linear, without shading and without expression. Still, he will in all probability be very proud of his work. It is his graphic method of expressing his idea of a man. Give him a brush and colors and ask him to draw a cow. He will paint a large mass for the body and continuations of this mass for head and feet. If the picture at all resembles our domesticated animal and not some monster of another age, he is to be complimented, but his effort illustrates the method of childhood, and his conception and appreciation of art and artistic expression does not go far beyond this. The multiplicity of detail, of expression, and of light and shade; the infinite variety and blending of colors; the complexity of *motif* found in the great masterpieces and great works of art will only tend to confuse him and lessen the interest in art which he already has.

We should seek to develop the artistic instincts of the child along rational lines just as we seek to develop his faculties in other directions. Give young children simple pictures, those with little detail and dealing with some phase of life or thought which they can understand. From these they may be led on to an ability to distinguish between good and poor art in more diffi-

cult subjects, and to an appreciation of the good. But they should not be expected to have this ability at the start.

To summarize my objections to the use of photographic reproductions of the great masters for schoolroom decoration in the grades:

Much of the artistic excellence of many of the pictures of the masters lies in the manner of their execution and in their coloring. This is largely lost in a photographic reproduction.

They are usually executed in too much detail, and therefore distract the attention of the child from the conception of the artist.

They lack color and color is an essential in commanding the child's interest.

Many of the subjects are too difficult and complex; most are historical and foreign.

PICTURES FOR SCHOOLROOM DECORATION.

Having in mind all that goes before, I recommend the following prints for use in the common schools. Many of them are suitable for the High Schools. Each one is an original production by a modern artist, and in many instances they are printed from original lithographs engraved by the artists who painted the pictures. They are posters in style and are very simple yet very strong. Each is a work of art in itself. Many of them are designed especially for school use. They are all in colors and because of this also are more interesting to children.

Starred pictures have been seen by the writer. As to the others, although I have not seen the full size lithographs, I have reason to believe that they are correct in color and composition. L—indicates pictures desirable for the Lower Form; M—Middle Form; U—Upper Form; H—High School. R—indicates pictures desirable for rural schools where there are many grades. Prices given (not publisher's prices) were obtained in each instance from the Chicago Art Education Company, 215 Wabash Ave., Chicago, Ill.



HIGH SCHOOL LIBRARY, MARSHFIELD, WIS.
D. C. Gile, Prin.

FITZROY PICTURES.

Published by George Bell and Sons, London. The "Guild of the Iron Cross," Boston, Mass.

"With reference to our actual productions, they are color prints, not reproductions of paintings. Vitality of suggestion rather than imitative realization is their mark. Selection of essentials—essential form, character, action, color, and their recombination in the form we have adopted, that is, arrangement of color space *bounded by expressive line*, is our method, and its result is asserted as much by omission as by commission." *Artist's foreword*.

These prints are particularly well adapted for use in the Lower Form. They may also be used in the Middle Form.

- * 1. St. George and the dragon. By Heywood Sumner. 49x39 in. Colored by hand. Price \$3.50 (Publisher's price, \$1.40). L.
- * 2. Love rules. By Louis Davis. 37x19 in. Reproduced in colors by James Akerman. Price \$2.25. (Publisher's price, 65 cts.) L.
- 3. In the morning. By Louis Davis. 37x19 in. Colored by hand. Price \$2.50. (Publisher's price, 90 cts.) L.
- * 4. The months. By Heywood Sumner. Four prints, each R. 34x24 in. Reproduced in color by James Akerman. Price \$2.25 each. (Publisher's price, 65 cts. each, or set for \$2.50.) L. or M.
- * 5. The four seasons. By Heywood Sumner. Four prints, R. each 36x19 in. Reproduced in colors by James Akerman. Price \$2.25 each. (Publisher's price, 65 cts. each or set for \$2.50.) L. or M.
- 6. The plough. By Heywood Sumner. 37x24 in. Colored R. by hand. Price \$2.50. (Publisher's price, \$1.10.) L. or M.

RIVIERE PRINTS.

Lithographs from pictures painted for the purpose by the French artist Henri Riviere. Published by Eugene Verneau, 108 Rue de la Folie-Mericourt, Paris. 22x32 in. and smaller. Publisher's price in France, for largest size, 10 francs (\$2.00).

An eminent critic says: "I have praised Riviere many times. Words fail me to describe his charm and power. His work displays simplicity, feeling, invention, and the imagination of the true poet."

- * 1. The setting sun. (Le Coucher du Soleil.) By Henri R. Riviere. 24x36 in. Price, \$4.50. (Publisher's price, \$2.00.) M. or U.
- * 2. The evening star. By Henri Riviere. 9x24 in. Price, \$2.75. (Publisher's price, \$1.25.) M. or U. *Best adapted for use in city schools.*
- 3. The mountain. (La Montagne.) By Henri Riviere. R. 24x36 in. Price, \$5.00. (Publisher's price, \$2.00.) M.
- 4. The bay. (La Baie.) By Henri Riviere. 24x36 in. R. Price, \$5.00. (Publisher's price, \$2.00.) M.
- 5. Woods in winter. (Le Bois l'Hiver.) By Henri Riviere. R. 24x36 in. Price, \$5.00. (Publisher's price, \$2.00.) M.

VOIGTLANDER PRINTS.

Published by R. Voigtländer, Leipzig, Germany. Lithographs in colors, of paintings by German artists. The pictures are drawn upon stone by the artists themselves and are printed under their direct supervision. Publishers' prices, 28x40 in., 6 marks, 22x30 in., 5 marks, 12x16 in., 2½ marks.

The pictures published by Voigtländer are standard.

- * 1. A farmyard in the Palatinate. (Pfälzischer Bauernhof.) By Albert Hauelsen. 28x40 in. Price, \$4.00. (Publisher's price, \$1.50.) L. *Excellent.*
- * 2. Swabian village. (Schwäbisches Dorf.) By Georgi. 28x40 in. Price, \$4.00. (Publisher's price, \$1.50.) L.
- * 3. Twilight. (Dämmerung im Watt.) By Matthaei. 22x R. 30 in. Price, \$3.50. (Publisher's price, \$1.25.) M. or U.
- * 4. The iron guard. (Eiserne Wehr.) By Angelo Jank. R. 22x30 in. Price, \$3.50. (Publisher's price, \$1.25.) M. U. or H. *Excellent.*

5. A ruin. (Eine Ruine.) By Hoch. 28x40 in. Price, \$4.00. (Publisher's price, \$1.50.) U. or H.
6. Village street in lower Germany. (Niederdeutsche Dorfstrasse.) By Kallmorgen. 22x30 in. Price, \$3.00. (Publisher's price, \$1.25.) L. or M.
7. The Rhine at Bingen. (Der Rhein bei Bingen.) By v. R. Volkmann. 28x40 in. Price, \$4.00. (Publisher's price, \$1.50.) U. or H.
8. The brook in winter. (Bach im Winter.) By Hoch. 22x30 in. Price, \$3.00. (Publisher's price, \$1.25.) M. U. or H.
- * 9. An old castle. (Altes Schloss.) By von Ravenstein. R. 22x30 in. Price, \$3.00. (Publisher's price, \$1.25.) M. or U.
- * 10. Swabian city. (Schwabisches Städtchen.) By Adolf Luntz. 28x40 in. Price, \$4.00. (Publisher's price, \$1.50.) M. or U.

TEUBNER PRINTS.

Published by B. G. Teubner, Post-Strasse 3, Leipzig, Germany. Lithographs from pictures painted by German artists for this purpose. Publisher's prices in Germany 28x40 in. 6 marks; 22x30 in. 4 marks; 20x24 in. 3 marks.

"They find a wide welcome, and they leave the aesthetic conscience unimpaired."

- * 1. The wheatfield. (Wogendes Kornfeld.) By Hans von R. Volkmann. 28x40 in. Price, \$4.00. (Publisher's price, \$1.50.) M. and U. *Very beautiful.*
- * 2. Oak-trees. (Eichen.) By Edmund Kanoldt. 28x40. R. Price, \$4.00. (Publisher's price, \$1.50.) U. or H.
- * 3. The Matterhorn. By Wieland. 22x30. Price, \$3.00. (Publisher's price, \$1.00.) U.
4. Peasant ploughing. (Pfluegender Bauer.) By Georgi. R. 28x40. Price, \$4.00. (Publisher's price, \$1.50.) U. or H.
5. Roman Campagna. By Max Roman. 28x40. Price, R. \$4.00. (Publisher's price, \$1.50.) H.

6. Moonrise. (Mondaufgang.) By Kampmann. 28x40
R. Price, \$4.00. (Publisher's price, \$1.50.) M. or U.
* 7. May morning. (Maimorgen.) By Otto Fikentscher.
R. 12x16. Price, \$1.50. (Publisher's price, 65 cts.) M.
or U.

OTHER FOREIGN LITHOGRAPHS AND PHOTOGRAVURES IN COLOR.

- * 1. Let me live only on the Rhine. (Nur am Rhein will ich
R. leben.) By Erich von Nekutowski. 15x35 in. Price,
\$4.50. U.
* 2. Entengeschnatter. By Hans C. Ulrich. Price \$2.75. 16x
38 in. L.
* 3. Autumn on the heath. By Franz Kortyohann. 20x29 in.
Price, \$10.00. M. U. and H.
* 4. The poppy field. By Szinyei. 20x33 in. Price, \$10.00.
R. M. or U. This may also be had in an American print,
14x17 in. at \$4.00.
* 5. Return of the flock. By Mueller. This is a colored etch-
ing 20x29 in. Price, \$18.00. L. M. U. or H.
* 6. Evening after the thunder storm. By Merker. 27x30 in.
A colored photogravure. Price, \$20.00.
* 7. Scotch landscape. By Charles Collins. 13x27 in. Price,
R. \$7.50. M. U. or H.
* 8. Fisherman's wife. (Femme de pecheur.) By Houben.
A colored photogravure, 21x29 in. Price, \$15.00. L.
M. U. or H.

LIST OF COLORED LITHOGRAPHS IN USE IN VIENNA SCHOOLS.

Published by K. K. Hof and Staatsdruckerei in connection with the "Lehrmittelzentrale" Company in Vienna.

Selected by a jury of artists and educators. Engravings made by the artists themselves.

Size 27x26 in. Publisher's price, \$1.35. (5.25 marks.)

(The writer has seen none of these and can say nothing as to their excellence. The Chicago firms have not imported them.)

1st Series.

1. Bamberger.....Flood (Ueberschwemmung)
2. Compoj.....Cinderella (Aschenbrödel)
3. Danilowatz.....Railroad station (Bahnhof)
4. Ederer.....Polar bear (Eisbär)
5. Ederer.....Pyramid (Pyramide)
6. Kurzweil.....Fisherman (Donaufischer)
7. Lenz.....The mill (Mühle)
8. Suppantschitsch.....The valley of the Danube (Donautal)
9. Wilt.....Woods in the fall (Herbstwald)

2nd Series.

10. Barth..Farmhouse in winter (Stierisches Bauernhaus im Winter)
11. Engelhart.....Traveler in winter (Wanderer im Winter)
12. Ederer.....In the pasture (Auf der Weide)
13. Ederer...Farmhouse in winter (Bauernhaus im Winter)
14. Friedrich.....Potter (Töpfer)
15. Lenz.....In the carpenter shop (In der Tischlerwerkstatt)
16. Andri.....Farmer ploughing (Pflügender Bauer)
17. Wilt..Freighters in the harbor of Trieste (Frachtschiffe im Triester Hafen)
18. Wilt Semmering
19. Andri.....Harvesting wheat (Kornschnelden)
20. Andri.....Haying (Heuernte)

The *Langl* and *Hölzel* pictures are designed more for instruction than for decoration, though some of them are very decorative.

"These *Hölzel* pictures are so beautiful, so carefully prepared and so varied in instructive qualities and at the same time so astonishingly cheap, that every temperament can gain something from this fertile field of education."

Their sizes and prices follow :

LANGL'S PICTURES.

Published by Ed. Hölzel, Luisengasse 5, Vienna. Lithographs printed in oil colors. 23x30. Publisher's prices in Austria: (a) Historical pictures, seventy-one subjects, unmounted, each 50 cents; mounted, 75 cents. (b) Plans of famous buildings, twelve subjects, 30x39 in. Single 25 cents each. Can be bought in sets at lower prices.

HÖLZEL GEOGRAPHICAL PICTURES.

Published by Ed. Hölzel, Luisengasse 5, Vienna. Colored lithographs. Large size, 24x32 in. Forty subjects. Single pictures unmounted \$1.00; mounted, \$1.25. Can be bought in sets at lower prices.

AMERICAN COLOR PRINTS.

In addition to the European color pictures I wish to mention some American color prints which are desirable for school rooms.

- * Hiawatha (poster). By Elizabeth Norris. 15x22 in. Price, \$2.00. L.
- * Gouda. (Holland scene.) By Cassier. 16x20 in. Price, \$4.00. M. or U.
- * In the Oraibi plaza. (Indians.) By Aikin. 14x21 in. Price, \$6.00. U.
- * Breaking of the ice. By Fritz Thaulow. 15x23 in. Price, R. \$7.00. M. or U.
- * Play days in Holland. By F. Charlet. 17x22 in. Price, \$6.00. L.
- * The White house, Washington. By Jules Guérin. 16x24 in. Price, \$5.00.
- * The Capitol, Washington. By Jules Guérin. 16x24 in. R. Price, \$5.00.
- * Smithsonian institute. By Jules Guérin. 16x24 in. Price, \$5.00.

The Guérin pictures can be bought only from The University Art Shop, Evanston, Ill.

First steps in a child's life. By Jessie Wilcox Smith. 9x14 in. Price, \$1.00 each. L.

The first lesson.

The first dissipation.

The first love.

The first sermon.

The first punishment.

Children at school. By Jessie Wilcox Smith. 12x16 in. Price, 75 cts. each. L.

The first day at school.

Kept in.

The recitation.

Set of child pictures. By Jessie Wilcox Smith and Elizabeth Shippen Green. 11x12 in. Price 50 cents each. L.

- * In the hammock—Jessie Wilcox Smith.
- * Mushrooms—Elizabeth Shippen Green.
- * Playing parchesi—Elizabeth Shippen Green.
- * Eating apples—Elizabeth Shippen Green.
- * Christmas morning—Jessie Wilcox Smith.
- * By the fire—Jessie Wilcox Smith.

Any of these three sets framed in panels will make an attractive frieze for children's rooms.

Walter Crane's illustrations of children's classics. Picture books published by John Lane, New York. These are taken apart and framed in panels to be used as friezes. The books may be bought of John Lane, 67 Fifth Ave., New York; A. C. McClurg & Co., 215 Wabash Ave., Chicago, Ill.; Eau Claire Book & Stationery Co., Eau Claire, Wis.; or of local book dealers for 25 cents each. They include * Cinderella, Red Riding-Hood, Jack and the beanstalk, Hind in the wood, Three bears, Forty thieves, and other favorites. L.

The pictures so far listed with the exception of the Guérin lithographs, the Crane pictures and the pictures in use in Vienna schools can be obtained from any of the following firms:

Chicago Art Education Co., 215 Wabash Ave., Chicago, Ill.

Anderson Art Co., 178 Wabash Ave., Chicago, Ill.

W. Scott Thurber, Fine Art Dealer, 210 Wabash Ave., Chicago, Ill.

M. O'Brien & Son, 208 Wabash Ave., Chicago, Ill.

All of these firms allow discounts to schools.

However, there are New York firms who will import pictures for public institutions free of duty, that is at the prices given as "Publisher's price." They are:

G. E. Stechert, 9 East 16th St., New York.

The J. R. Lynch Co., 24 East 23rd St., New York.

It is sometimes many weeks or even months before an order for importation is filled. The money saved often makes the delay worth while.

LIST OF PHOTOGRAPHIC REPRODUCTIONS OF THE MASTERS.

Knowing well the predilection of many school men and women for the soft browns and grays of the photographic reproductions of the old and modern masters, for schoolroom decoration, and conceding that there are among the modern masters and some few of the old ones many subjects simple enough in *motif* and in execution to lend themselves to schoolroom use, I append a short list arranged according to Forms in which they seem perhaps most suitable, though it is impossible to say that any one of them belongs only in one Form and cannot be used to good advantage in other Forms. Most of the pictures listed in Lower, Upper and Middle Forms may properly be hung in High School rooms. In fact, the High School seems the place for photographic reproductions of masterpieces. Neither is this list thought or intended to be at all exhaustive. It is merely suggestive.

Many of these pictures may be had in colors, but it is not safe to buy them unless first judged by an artist. It is next to impossible to reproduce the complexity of color of an oil painting by the lithographic process. Then, too, the color reproductions of famous paintings are but reproductions of reproductions, and for that reason also are often inaccurate in tone. It is quite different with the German and French lithographs which are made directly from the originals painted for the purpose and which are printed under the supervision of the artist himself.

Primary.

Feeding her birds.....	Millet
A distinguished member of the humane society.....	Landseer
Little Rose.....	Whistler
R. Shoeing the bay mare.....	Landseer
The sheepfold.....	Jacques
Escaped cow.....	Dupre
Mother and daughter.....	Douglas
Spring.....	Mauve
Soft persuasion.....	Elsley
R. Shepherdess knitting.....	Millet

Primary school in Brittany.....	Geoffroy
The first step.....	Millet
The pet bird.....	v. Bremen
Madonna of the rosary.....	Murillo

Middle.

R. Horse fair.....	Bonheur
Children of Charles I.....	Van Dyke
R. Spring	Corot
R. At the watering trough.....	Dagnan-Bouveret
R. Sir Galahad.....	Watts
Ploughing.....	Bonheur
R. Haying time.....	Dupre
Deer in forest.....	Bonheur
Penelope Boothby.....	Reynolds
Angels' heads.....	Reynolds
Portrait of his sons.....	Rubens
Equestrian portrait of Prince Don Balthasar.....	Velasquez
The return to the farm.....	Troyon

Upper.

Washington's farewell to the army.....	Gow
R. Washington.....	Stuart
R. Martha Washington.....	Stuart
R. Abraham Lincoln.....	St. Gaudens
Vikings.....	Douglas
Washington crossing the Delaware.....	Leutze
R. The haymaker.....	Adan
A reading from Homer.....	Alma-Tadema
R. The sheperdess.....	Millet
R. The fighting Temeraire.....	Turner
R. Song of the lark.....	Breton
The lake.....	Corot
R. Water gate.....	Marcke
Capitol at Washington.....	



SHOWING ARRANGEMENT OF FLOWERS IN TALL VASE.

High School.

Napoleon and the old guard.....	Crofts
Arch of Constantine, Rome.....	
Arch of Titus.....	
Hunting with falcons	Fromentin
The golden stairs	Burne-Jones
Flight of night.....	Hunt
Roman Forum. View from Coliseum	
The sphinx, Egypt	
By the riverside.....	Lerolle
Parthenon, Athens.....	
Aurora.....	Guido Reni
Moses.....	Michael Angelo
Cicero denouncing Catiline.....	Maccari
Evolution of the book (series of six) (frieze)....	Alexander
Holy Grail series (frieze).....	Abbey
Advancement of literary knowledge (frieze).....	Oakley
Frieze of the prophets.....	Sargent

Probably the best reproductions of these subjects or at any rate the ones most to be depended upon, are the carbon photographs. The process by which they are made produces *fadeless* reproductions—a point greatly in their favor.

The following are excellent:

Berlin Photographic Company's Reproductions of famous paintings, 14 East 23rd St., New York. Photogravures. 21x29 in., \$12.00; 20x28 in., \$10.00; 15x19 in., \$5.00; 10x14 in., \$3.00; 7x9 in., \$1.00. Good catalog sent on application.

Braun's Carbon prints. Braun, Clement & Co., 249 Fifth Ave., New York. Photographic reproductions of paintings, sculpture and architecture. 36x54 in., \$80.00; 24x30 in., \$18.00; 14x18 in. to 16x20 in., \$5.00; 8x10 in. (old masters), \$2.00; 8x10 in. (modern), \$2.00; 11x14 in., \$3.00. Special discounts to educational institutions. Catalog on application.

Hegger's Carbon Photographs. Published by Frank Hegger, 288 Fifth Ave., New York. 36x48 in., \$40.00; 24x36 in., \$15.00; 18x24 in. (old masters), \$7.50; architectural, \$6.00. Will probably send catalog.

The *Copley prints* also deserve mention. They are published by Curtis & Cameron, Pierce Building, Boston, Mass. Prices as follows: 10x12 in., \$2.50; 16x21 in., \$5.00 and \$7.50; 24x26 in. or 28 in., \$10.00; 30x40 in., \$15.00. They come both in sepia and in gray. Many of the subjects are not suitable for school use, but a few are very desirable. The friezes mentioned in High School list are very good in these prints.

All, or nearly all, of the pictures enumerated above can be obtained direct from one or another of these firms or from any of the art firms in Chicago heretofore mentioned, or from the F. H. Bresler Co., Milwaukee, Wis. Do not buy too small photographs for framing. They are entirely uninteresting unless they can be seen plainly.

It will be well to obtain catalogs from the Berlin Photographic Co., Braun, Clement & Co., Frank Hegger and Curtis and Cameron, before purchasing, as many of the subjects are there shown.

CHEAPER REPRODUCTIONS.

Seemann's Wall Pictures. Photographic reproductions of masterpieces of architecture, painting and sculpture... Published by E. A. Seemann, Leipzig, Germany. 18x26 in. 250 pictures, in 25 parts. Price, \$5.00 each part. A selection of any 10 plates, \$7.50. Single plates, \$1.00. Varnished or unvarnished. Mounted on card-board (unvarnished or varnished) at an additional cost of 25 cents for each picture.

These can be imported through the New York importing firms at publisher's prices.

Turner brown prints. Published by Horace K. Turner Co., 221 Columbus Ave., Boston, Mass. Reproductions from the originals of famous paintings, sculpture, and architecture in Europe

and America. 14x17 in., \$2.50; 16x20 in., \$3.50; 18x22 in., \$4.00, etc., to 50x70 in., \$50.00. Good catalog sent on application.

Not having seen any of these in use I am unable to say how long they will keep their color.

Reproductions of carbon photographs. Published by The Prang Educational Company, 378-388 Wabash Ave., Chicago, Ill. A few of the pictures mentioned in the list may be had in this style, 20x26 in. at \$1.00 each. Catalog sent on application. These reproductions are, of course, not as lasting as the photographs, but are good for the price.

Bromide enlargements. Reproductions of famous pictures by special process. Published by Soule Art Publishing Company, 500-510 Dudley St., Boston, Mass. They range in size from 8x10 to 40x60 in. and in price from 60 cents to \$22.00. They may be had in black and white or in sepia. Cannot say from experience how long they will last.

It will be safe for a teacher to order any picture given in the list of colored lithographs from any one of the Chicago art companies listed. It will also be safe to order any one of the famous pictures in carbon photographic reproduction from any one of these firms or from the F. H. Bresler Co., Milwaukee. All of these firms offer discounts to schools. Any one of them will send two or three pictures on approval with the view of assisting those who wish to purchase reproductions in color which will harmonize with the color scheme of the room. If sample of color scheme be sent the dealers will give aid in selecting pictures in tones which will look well against the background for which they are intended.

In towns where a number of pictures are to be bought, it will be worth while to import through the New York firms mentioned, but I would not advise this course when only a few pictures have been selected. It requires several months to make importations from Europe and in case there is anything wrong in the filling of the order there is little chance for redress at so

great a distance. By purchasing the German and French lithographs and English prints from dealers nearer home it is probable that much delay and annoyance will be avoided and that more satisfactory selections will be made, all of which will be sufficient compensation for the higher prices.

Where it can be arranged the exhibit of the Chicago Art Education Company, or the Horace K. Turner Company, which are spoken of earlier in this pamphlet, will be found a help toward selection. The W. Scott Thurber Co., 210 Wabash Ave., Chicago, Ill., also sends out exhibits occasionally, and with them sends a lecturer. In arranging for exhibits state kind of pictures which you particularly wish to see.

SMALL PRINTS FOR STUDY, REFERENCE AND NOTE BOOK
ILLUSTRATION.

Geo. P. Brown & Co., Beverly, Mass.

Birds and nature pictures in color, 2 cents. Reproductions of famous pictures, size of Perry pictures. Also famous reproductions in miniature.

The Thompson Publishing Co., Syracuse, N. Y.

4x5 blue prints for note book illustration.

Perry Picture Company, Malden, Mass.

Perry pictures, regular size, 1 cent.

New York edition (sepia), two cents.

10x12 in. (sepia), five cents.

Elson prints (photogravures made directly from negatives from the originals), 5½x8 in. on paper 9x12 in., 10 cts.

Pictures in colors (birds, animals, fruits, etc.), 2 cents.

Perry pictures, 3x3½ in., ½ cent.

Chicago Art Education Co., 215 Wabash Ave., Chicago, Ill.

Prang platinettes (for class picture study), 2 cents unmounted, 5 cents mounted.

Douglas Art Co., P. O. Box 176, Washington, D. C.

Douglas prints of Library of Congress.

A. W. Mumford & Co., 378-388 Wabash Ave., Chicago, Ill.

Colored photographs of birds, animals, flowers, minerals, 2 cts.

A. M. Kashine, 22 W. 99th St., New York, N. Y.

Set of silk worm photographs, \$2.50 per set.

Nature Study Publishing Co., Chicago, Ill.

Colored photographs of birds.

MATS.

There is no rule governing the use of picture mats. Usually large reproductions are best framed without a mat, while small reproductions of the same sort often need one. Pictures having much in them frequently look crowded if framed to the print (without a mat). It is best to try the effect both with and without a mat before framing, as the question must be settled anew for every picture.

The choice of color in mats depends upon the nature of the picture. In most cases it should be of the same general color as the picture, but leaning rather toward its middle shades. Color prints often look better with white or cream mats.

The thing to be guarded against is the bringing of the mat into too much prominence. It should serve only to bring out the beauty of the picture and should attract no attention to itself.

FRAMING.

When choosing a frame, select a *plain* molding of natural wood. A gilt lining is not necessary and is also expensive. Do not choose natural wood in which the grain is too noticeable. Never use gilt frames in schoolrooms.

The natural wood molding may often be stained to harmonize with some tone of the picture. In general it should lean toward the darker tones.

In framing color prints, a dull green or black molding is often very good. Use wider moldings when framing without a mat than when framing with a mat.

There must be nothing in the frame which will attract the eye before it is caught by the picture. Let simplicity be the rule.

HANGING.

Hang pictures low and where pupils can see them plainly. If hung above the blackboard a space of at least 8 inches should be left between the board and the frame. A picture with the wall color as a background all around it will "stand out" better.

Every picture should have as good a light on it as is possible. Never hang between two windows set near together. Hang flat or nearly flat against the wall, the picture so hung becomes more a part of the room.

If you have several pictures for the same wall space, avoid hanging so that the tops or bottoms of the frames will form a straight line across the wall. Also avoid any other regularity in the hanging such as the forming of geometric designs by exact grouping.

Do not hang many pictures on any wall space. By hanging too many you dissipate their effect and distract the attention. Before hanging always study the shapes and sizes of your wall spaces and the shapes and sizes of your pictures and then arrange as effectively as you can.

Always have a molding extending entirely around the room, from which to hang pictures. The wall should never be defaced with nails and tacks.

CASTS.

A plaster cast reproduction of some piece of antique or modern sculpture often adds greatly to the effective decoration of a schoolroom. Those "in the round" may be placed on the book shelves, the teacher's desk or on a pedestal for the purpose, and those in relief may be hung flat against the wall. As much attention should be paid to getting the right light on a cast as to getting it on a picture. This can be determined only by trial. Light should, of course, come from only one side. Some of the best casts for school use are the following:

M.	Lion walking	Bayre
L.	A Bambino (relief)	Della Robbia
L.	St. John	Donatello
M.	Choir boys with book (relief)	Della Robbia
H.	Apollo Belvedere (bust)	
H.	Augustus Caesar	
H.	Doryphorus (bust)	Polycletus

U. Hermes (bust)	Praxiteles
H. Minerva Giustiniani	
U. Wrestlers	
M. Boy extracting thorn	
H. Ajax (bust)	
H. Minerva of Velletri	
U. Grant	Simmons
U. Longfellow	Brock
H. Shakespeare	Roubilliac
M. Washington	Houdon
M. Franklin	Houdon
U. Lincoln	Volke
H. Winged Victory of Samathrace	
H. Triumph of Alexander	
H. David	Michaelangelo
H. Sections of Parthenon Frieze (relief)	

Do not have too many casts nor casts that are too large. It is better to have no casts than to have too many, though they are very beautiful if appropriately chosen and well placed. Old ivory finish is much more desirable than pure white.

P. P. Caproni and Brother, 1920 Washington St., Boston, Mass., make and sell good plaster cast reproductions.

The Chicago Art Education Company carries a good line at reasonable prices. Catalogs sent from either firm.

POTTERY.

There are now made many forms in pottery, simple and beautiful in outline and color, which can be bought at reasonable prices. They are largely reproductions of Japanese forms but some original designs come from the kilns of home artists. They may be had in gray-greens, blues, browns, terra cotta and metal effects, and in dull glaze and range in price from twenty-five cents to five dollars or more. A few pieces of this pottery will be found very effective for decorative purposes. Some of the better glazes may be used for cut flowers and all occasionally for



SHOWING ARRANGEMENT OF FLOWERS IN BOWL-LIKE RECEPTACLE.

dried leaves and grasses. To drawing classes they are of great service.

The Prang Educational Company, 378-388 Wabash Ave., Chicago, Ill., and the Chicago Art Education Company, 215 Wabash Ave., Chicago, Ill., have good things in the pottery line at reasonable prices.

VASES.

If you have money enough you may wish to buy a beautiful vase for decoration. The selecting of this must be done carefully, and the whole room taken into consideration so that the colors in the vase and on the walls will be in harmony. Its beauty may add the one last touch necessary to a perfect room, or on the other hand, its note of color may mar an otherwise harmonious whole.

In general, seek a vase with refined curves, good proportions, and a smooth surface. All pretzel forms and gingerbread ornamentation, and flowers and scenes in bright colors should be avoided.

There are probably few schools able to afford expensive vases and it is doubtful if they are often desirable.

FLOWERS AND RECEPTACLES FOR FLOWERS.

Cut flowers, and many of them will be brought to you by your pupils. There may often be an embarrassment of riches in this direction. It is hard to arrange tastefully many flowers, or flowers of many different colors. It is better to have a few at a time and those all of one or two varieties. Too many flowers in a vase produce a clublike effect. They should stand loosely and in some cases much of the stem should be exposed.

By exercising a little tact you will be able to arrange with the children so that you will be supplied with a few fresh flowers each day in the spring and fall. Vases holding bouquets should

receive daily attention. Withered blossoms should never be permitted to stand in the room.

In buying vases for flowers, select those having good lines and no ornamentation. The plain clear glass vases are as a rule to be preferred and are inexpensive. Many of them are excellent in design. There should be at least two of these in each room, one tall and the other bowl-like, because different flowers need differently shaped vases. The glass bowls commonly used for keeping gold fish are excellent for large bunches of roses, nasturtiums and wild flowers.

PLANTS.

A few growing plants will lend as much cheerfulness and attractiveness to a schoolroom as any other decoration. Unfortunately but few schools in Wisconsin possess a heating plant which keeps the temperature always above the freezing point. For those which do, the variety of plants which may be grown is large: oxalis, primrose, amaryllis, begonia and German ivy are among the best. Others must confine themselves to those varieties of dwarf pine which will not freeze and which are decorative.

All plants in the schoolroom should be placed in earthen pots and arranged upon a zinc lined table or window board. If there is a sunny window removed some distance from the desks use a table. If not, use a window board where it will least interfere with free use of the aisles.

The zinc covering should be made with raised edges so that it will form a shallow pan. In this way all superfluous moisture will be kept from dripping on the floor.

Paint the table or window shelves the color of the woodwork of the room.

Select large pots and rich friable soil for planting.

SMALL PICTURES AND PUPILS' WORK.

A word as to the penny Perry pictures and others of the same kind. They are excellent half tones, and a good collection of them is valuable in a schoolroom. You should not, however, make the mistake of using them for decorative purposes. They should be cut from their white margins; neatly mounted on cardboard and filed away for later study. They will be helpful in teaching many lessons in history and geography; in the study of great men's lives and great deeds, and will help to familiarize pupils with the paintings of great artists.

Whenever these small pictures are needed, they may be brought out and fastened to the bulletin board for a few days, or the pupils may be given access to them. But at all times their main purpose should be for study, not for decoration.

I also want to caution you about decorating the rooms with the work of the children. It is very gratifying to the pupils to have their efforts recognized in this way. They like to see their work on the walls, and it is right that some of the best work should be placed there, but it should not remain longer than a few days. The best work of the pupils, no matter how good, is not good enough for other pupils to copy, hence it should not be allowed to hang permanently before their eyes.

OUTDOOR DECORATION

OUTDOOR DECORATION.

A first essential in beautiful schoolgrounds is tidiness. No loose sticks, stones, pieces of paper or other offending material should be seen lying about. It is never impossible to keep the grounds neat. It is impossible to make them beautiful if they are not kept neat.

While many of our schoolhouses are ideally located, there are very many which stand in barren and bleak places and which make little or no pretense to beauty of surroundings. The location of the schoolhouse cannot be changed, but the surroundings may be made beautiful. Trees and shrubs, vines and flowers may be induced to grow in any part of Wisconsin. Desolate playgrounds may be made shady and delightful. Ugly fences and buildings may assume lovely and graceful shapes. Corners and odd places may be made spots of beautiful color.

It is certainly due the pupils in a school that they should have as much beauty about them as possible. The beautifying of the schoolgrounds will not only give them pleasure through the eye, but will create in them a love for growing things which will be of benefit to them all their lives.

"Two primary objects should be kept in view in the decoration of the school grounds: (1) Instruction; (2) Beauty and utility.

The primary object of the school is instruction. The work of beautifying the school grounds should also carry with it an element of instruction. The grounds should serve as an object lesson for the residents of the community in which the school is located. They should be laid out on sound principles of landscape gardening, and be so well executed as to induce residents of the vicinity to copy the general idea of the plan and possibly the details of the shrubbery groups. The idea of beauty can be emphasized in the proper grouping of trees and shrubs in rela-

tion to walks, drives, and vistas, and utility can be subserved by so placing the heavy plantings as to serve as a shield from the wind or sun. Shrubbery groups can be arranged so as to separate one portion of the grounds from another and yet not interfere with large open spaces which can be used as playgrounds, such as ball fields, tennis courts, etc." *

Before anything is done toward improving the grounds, it is best to try to awaken an interest in the pupils and in the older members of the community. You will work against odds if you undertake to work alone. It may require tact and patience, but the friends of the school must be brought to a desire to improve the schoolgrounds, to take pride in them, and to wish to help in making them beautiful. Do not despair if this is difficult of attainment. It has always been so.

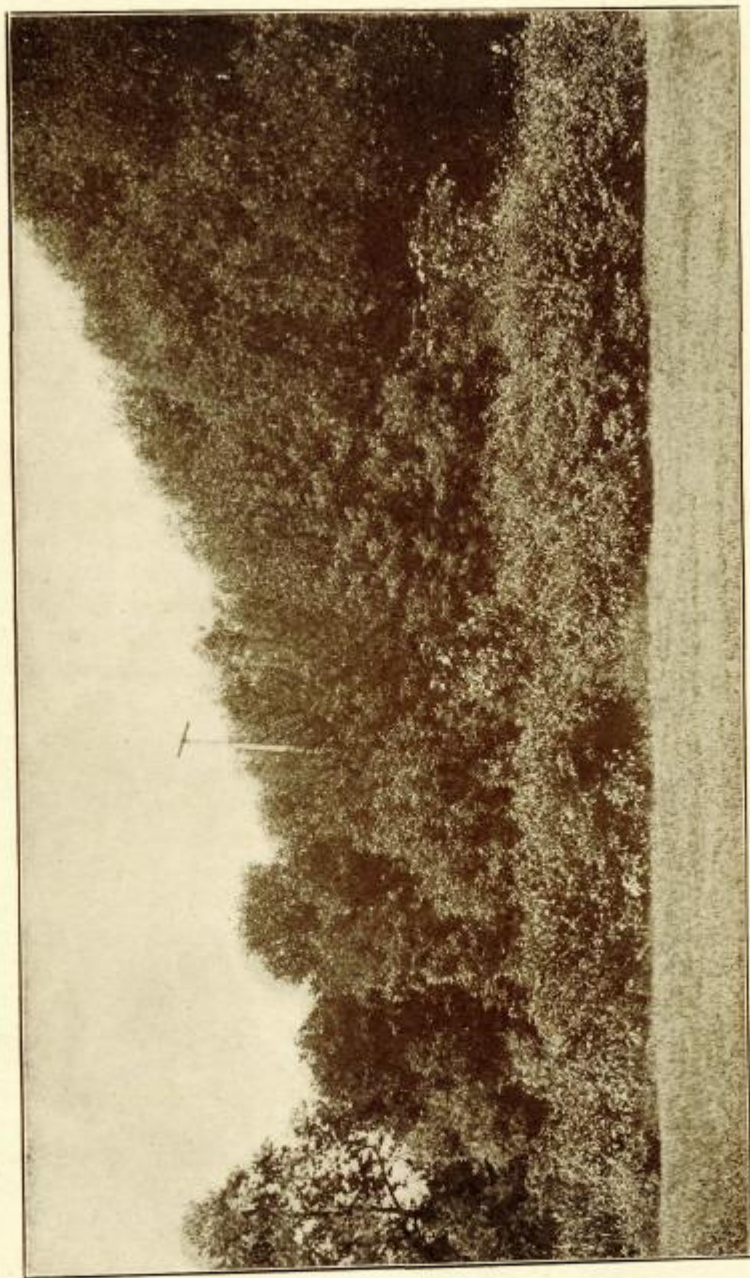
Central Park was secured to the people of New York only in the face of the bitterest opposition, but it has proven itself to the people a blessing of beauty and rest, and to the city a great financial aid, as it has not only paid for itself, but has brought to the city many millions of dollars in taxes on surrounding property. This beauty spot has certainly been worth while, and yours will be worth while.

Every schoolhouse site should contain at least one acre of land. When much planting is to be done it would be better to have an acre and a half, or two acres. In schools where there is a large attendance more than this is desirable.

A plan of the grounds should always be made before any work is done, and on this plan should be indicated the exact spots for planting trees, shrubs, vines and flowers. The first thing to locate, however, is sufficient playground for the children. The latter must always have room to run and play and must never feel restricted by the too near presence of flowers and shrubs. But even after large clear play spaces have been set aside you will find ample room for ornamentation. Then plan with care and for the years to come. Trees and shrubs are so slow of growth that no mistakes in original planting can be afforded.

Let me urge on you in making your plan not to waste your energies in placing great quantities or varieties of plants and

*L. C. Corbett in *The School Garden*.



AN EFFECTIVE WAY OF USING WILD RED DOGWOOD IN BORDER PLANTING, OR IN FOREGROUND OF LARGER TREES.

flowers in the space given, or in stripping away all the old landmarks and reducing your grounds to formal gardens of walks and beds and borders, but to take things as you find them, to study them closely and in detail and in their relation to the whole that you may know best what use to make of them, and above all to get such a conception of the possibilities of that bit of landscape which you have set about to beautify, that you will arrange for the planting of no tree or shrub or vine without first being able to see just what its relation to your whole scheme will be. Ruskin says, "almost all natural landscapes are redundant sources of more or less confused beauty, out of which the human instinct of invention can by just choice, arrange not a better treasure, but one infinitely more fitted to human sight and emotion, infinitely narrower, infinitely less lovely in detail, but having this great virtue that there shall be nothing that does not contribute to the effect of the whole." Let this guide you when you are planning and planting.

THE PLAN *

"The first essential for the work of beautifying the grounds will be a plan. The beginning of this plan may be a rough sketch of the area on which the school building stands, with directions and distances marked upon it. Next, locate the permanent objects, such as trees and buildings. Determine next the main lines of travel leading to the schoolhouse and use these as a basis for the permanent walks, unless there is some good reason for changing the main paths. The walks and drives should be straight, if distances are less than 100 feet, and gently curved if longer, so as to admit of the use of trees and shrubs along the border. The outlook from each door and window should be carefully inspected before determining which objects in the landscape should be retained in view and which hidden or concealed by the use of trees and shrubs.

Trees and shrubs should be confined chiefly to the borders of the place, an open and unbroken lawn being preserved in front

*L. C. Corbett in *The school garden*.

and at the sides or rear where playgrounds are to be maintained. In rural districts the trees should be so located as to give protection from storms in winter and from the sun in summer, and at the same time to produce a pleasing effect. Shrubs may be employed to advantage in screening unsightly objects. The plans of the grounds will serve both as an exercise in geography and in arithmetic, and if the pupils are encouraged to make such designs their interest in the work will be assured and a practical application of the principles taught in the schoolroom will be a result of no little value.

WALKS.

The walks leading to and from the school should be direct, but where space will permit they should have gentle and pleasing curves which conform to the contour of the ground. Upon level areas it is well to allow an artistic use of shrubs in groups in the bays, which shall serve to break the monotony and obtrusiveness of an unscreened straight walk across an open lawn.

The material used in the construction of walks will be determined by circumstances and by the locality in which the work is to be done. When the walks are to be made permanent, nothing fills the requirements better than cement or artificial stone. When gravel or cement is used the walks should be made slightly crowning, and the highest point in the surface should be at least 2 inches below the general level of the greensward. No coping or borders should be allowed, and the grass should be brought up to the edge of the gravel or cement. A slightly sunken walk makes the care of the lawn easier, besides hiding it very effectively from view when looking across the lawn, thus giving the grassplot an unbroken appearance and having the effect of enlarging its extent.

LAWNS.

Lawns are the foundation of all decorative planting. A good, well-kept lawn contributes more to the beauty of grounds than any other single factor. For this reason special attention should



SHOWING VALUE OF GROUPING SHRUBS, AND BORDER OR BOUNDARY PLANTING.
Could be adapted to any schoolgrounds.

be given to the grading, cultivation, and enriching of the area to be devoted to the lawn. After good preparation come good seed and care.

The variety of soils which will be encountered and the special treatments which they need render it possible to make only the broadest generalizations here. For localities north of St. Louis, Mo., and Richmond, Va., lawns can be formed chiefly of bluegrass, redtop, and white clover."

TREES.

You may have some fine trees growing on the school grounds, but if you have not, a few strong specimens should be set out. Some may also be planted outside of the grounds, along the road and walks.

According to Professor I. N. Mitchell of the Milwaukee Normal School, the following varieties of trees are best. They are placed in the order of their desirability:

1. Elm; 2. Norway maple; 3. Basswood; 4. Oak, white; 5. Ash, white or green; 6. Sugar maple; 7. Tamarack; 8. Cutleaf birch; 9. Wild black cherry (attractive to birds); 10. Russian mulberry (attractive to birds); 11. Colorado blue spruce (evergreen).

Professor Craneheld, Secretary of the Wisconsin State Horticultural Society, gives the following list in his bulletin, *Trees and shrubs for shade and ornament*. The more desirable ones are double starred and a further selection of five is indicated by single stars.

- ** American Elm
- * Box Elder
- Black Cherry
- Carolina Poplar
- ** Green Ash
- * Hackberry
- Honey Locust
- Larch
- ** Linden (Basswood)
- ** Norway Maple

- * Scarlet Maple
- ** Silver Maple
- * Sugar Maple
- Scarlet Oak
- * White Oak
- White Ash

Following is his list of "best" sorts of evergreens for general planting:

- Norway Spruce
- Colorado Blue Spruce
- Arborvitae
- White Spruce
- White Pine
- Savin Juniper (dwarf)
- Mugho Pine (dwarf)

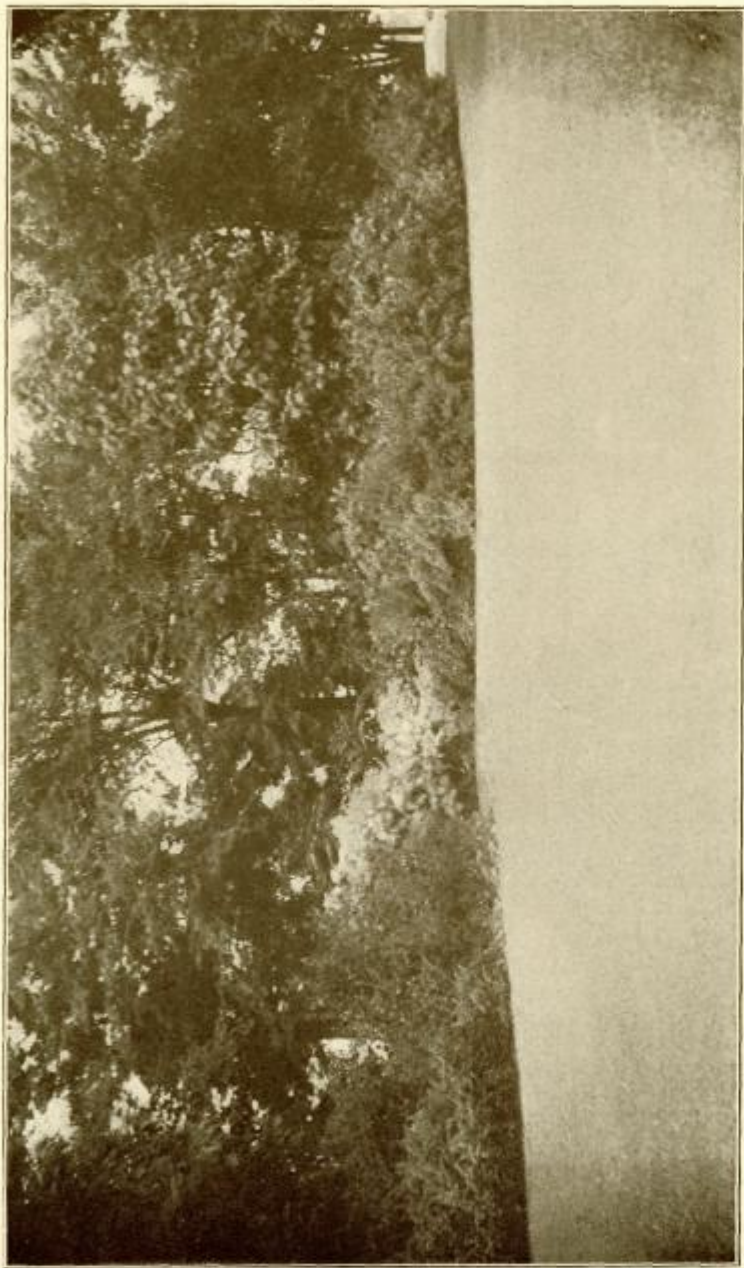
Most of these evergreens are slow growing. If there are no trees on the school grounds, it might be well to use at first one or two varieties of quick growth such as the soft maple and box elder, these, however, to be cut out as soon as the better trees attain any considerable size.

TREE PLANTING.

Do not try to transplant very large trees. If forest trees are used it is better to select those growing on the edges and thus most isolated, because they have already learned to protect themselves by growing heavier bark. If trees growing in thick woods are taken up and transplanted, they are almost sure to die, no matter how much care is given them, because they are accustomed to protection from surrounding trees and brush.

Before planting a tree, examine its roots and cut off with a sharp knife all those which have been injured.

Transplanting must always be very carefully done because the tree is at a most critical period in its life. If no gardener is in charge of your grounds, solicit the assistance of some person who has had experience in the planting of trees. However, should the work devolve entirely upon you and your pupils, study the following rules laid down in a pamphlet sent out by the United States Department of Agriculture:



SHOWING AN EFFECTIVE WAY OF PLANTING SHRUBS IN FRONT OF LARGE TREES.
By this method the greensward is carried upward besides hiding the lower portion of the trees. This kind of planting is also intended to give extent to small grounds.

"Planting is best done by two or three persons. A, who manipulates the tree, is the planter, and is responsible for the results; B and C do the spading under his direction. A places the tree in the hole, to ascertain whether this is the proper size; a board or stick laid across the hole aids in judging the depth. Trees should not be set deeper than they stood before, except in loose, poor soil. More trees are killed by too deep planting than the reverse. If the root system is developed sidewise but not centrally, as is often the case, a hill is raised in the hole to fit the hollow space in the root system, and the earth of the hill is patted down with the spade.

"When the hole is in proper order, A holds the tree perpendicularly in the middle of the hole, with the side bearing the fullest branches toward the south or southwest, for better protection of the shaft against the sun. B and C spread the roots into a natural position and then fill in the soil, using the good surface soil first—small spadefuls deliberately thrown over the roots in all directions—while A, by a slight shaking and pumping up and down on the stem, aids the earth in settling around the rootlets. A close contact of the soil with the rootlets is the secret of success in planting. Only fine, mellow soil, free from stones and not too moist, will permit such adjustment to the rootlets, which should also be aided by hands and fingers filling in every crevice. A, while setting the tree, must exercise care to keep it in proper position and perpendicular, until the soil is packed so as to keep the tree in place. Then B and C rapidly fill the hole, A treading down the soil firmly after a sufficient quantity is filled in, finishing off a little above the general level to allow for settling, and finally placing stones or any mulching around the stem.

"Do not use water while planting unless it is very carefully applied with a 'rose' after the soil is well filled in and packed around the fibrous roots. It is not uncommon to see water poured in the hole while it is being filled up. This practice does harm rather than good, for it washes the fine soil away from close contact with the roots, leaving empty spaces between the roots, or even leaving, as the water dries and the earth hardens, the rootlets in the midst of hollows like the insides of pipe-

stems. In such a case they cannot touch the earth, which gives them nutriment, and they die. More trees are killed by too much water in transplanting than by too little. Water after the transplanting is useful, and should be applied during the hot season, the late afternoon or evening being chosen for its application."

RULES FOR PRUNING SHADE AND LAWN TREES AFTER
TRANSPLANTING.*

"All deciduous leaf trees after transplanting should be pruned or cut back to the extent of the injury to the root system caused by transplanting. As a general rule one-half of the top should be removed. What portion of the top should be cut back depends upon the kind of trees planted and upon the shape and size. The larger the tree the more severe should the pruning be.

If trees are not pruned after transplanting, they are very apt to die, or at least suffer severely. The injured roots are unable to supply enough water to all the leaves, hence these wilt and die, while if one-half of the leaf area is cut back, the roots are able to supply the remainder with water for evaporation and for the growth of wood.

If large branches are cut off, they should be cut close to the main body and a coat of paint applied to the wound to prevent decay. All pruning should be done with a sharp knife so as to leave a smooth surface, and thus permit a rapid healing of the wound. Some prefer pruning before planting but ordinarily it is better to prune after the tree is set out as one can better judge the symmetry and general shape of the tree. Before planting the bruised and torn roots should be cut off smooth; otherwise, decay is very apt to set in.

Evergreen trees should not be pruned at all as it injures the shape. For this reason it is better when planting evergreens to plant nursery grown trees as these have a more fibrous root system and are better able to stand the shock of transplanting. It

*By Prof. E. P. Sandsten, University of Wisconsin.

is advisable in most cases to mulch around the tree after planting. Evergreen trees, as above stated, should not be pruned at all, not even the lower branches as the chief beauty of the evergreens lies in their natural growth. The branches should be permitted to reach the ground so as to form a continuous line of green on the ground with the lawn."

SHRUBS.

Shrubs should never be planted singly in the schoolyard, but should be grouped in masses in fence corners and elsewhere. The location of the shrubbery should be very definitely indicated on the schoolground plan. Large groups of shrubs may be used as screens for outbuildings. Use the taller varieties as a background and plant the lower in front. If it is desired to plant shrubbery along a fence line, do not plant with geometric exactness, but let the outline waver, showing high dense masses in some places and perhaps only single low bushes in others. Pine trees make a good background for shrubbery.

All shrubs used in schoolyards should be hardy. Many good specimens may be found in the woods. Professor L. H. Clark of the River Falls Normal School, who has had great success in beautifying his own premises, gives the following list of shrubs native to Wisconsin which are fairly well adapted for schoolground planting: Sumac; Leatherwood or Moosewood; Black haw; Wahoo; Prickly ash; Nine-bark (a spirea); High bush cranberry; Wild rose; Elderberry; New Jersey tea and Kinnikinnick. He also mentions among cultivated shrubs the tartarian honeysuckle as being one of the best of shrubs for screening purposes. Professor Mitchell's list of desirable shrubs is as follows: 1. Persian lilac (10 ft.); 2. Spirea Van Houttii (6 ft.); 3. Rosa rugosa, red and white (4 ft.); 4. Hydrangea paniculata (2-3 ft.); 5. Syringa, Mock orange (7-10 ft.); 6. Weigelia, rose, white (3-7 ft.); 7. Black-berried elder, common (3-5 ft.); 8. Staghorn sumac (6-18 ft.); 9. Red osier dogwood, common (5-7 ft.); 10. Deutzia gracilis (18 in.).

Below is a list of exotic shrubs from Professor Cranefield. They are all hardy.

Common lilac, purple and white; Persian lilac (4-6 ft.); Tartarian honeysuckle (12-15 ft.); Syringa (8-12 ft.); *Rosa rugosa*; Amur tamarix; Common barberry; Thumberg's barberry (3-4 ft.); Snowberry (3-4 ft.); Oleaster (8-10 ft.); Weigelia (6-10 ft.); Van Houten's spirea.

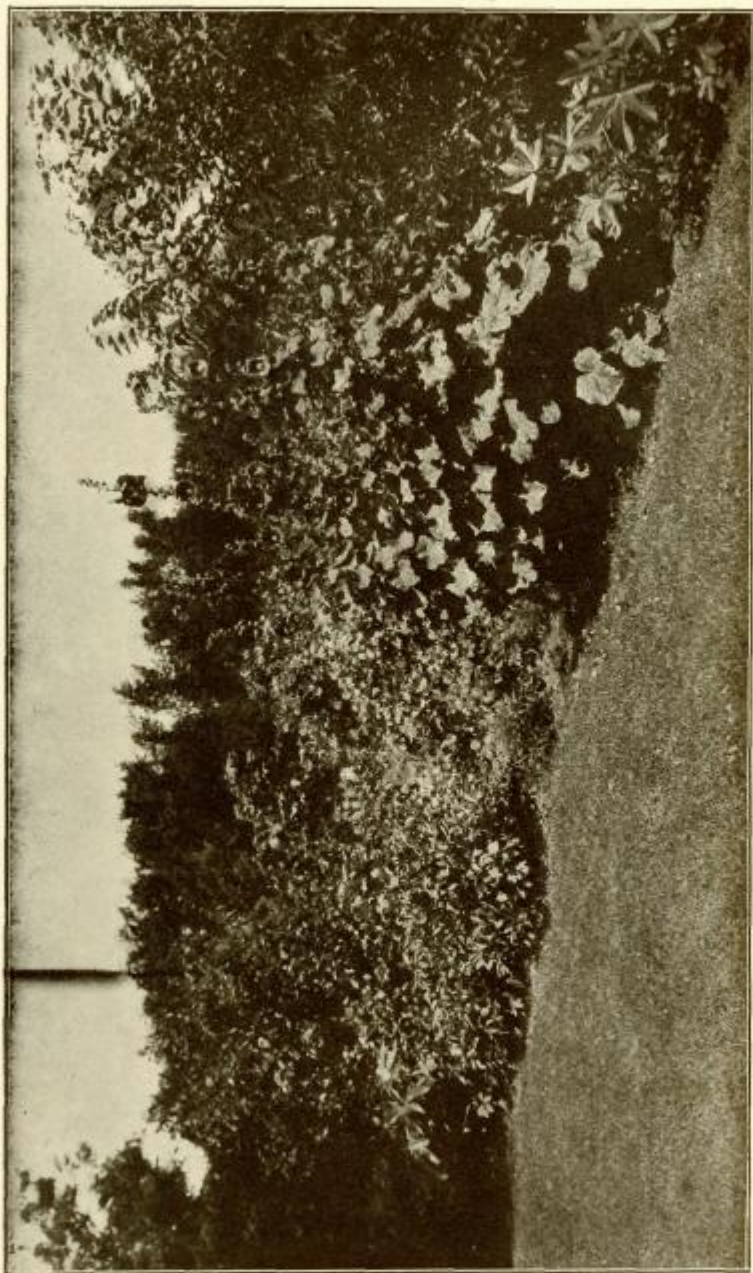
To these he adds a list of hardy native shrubs: Ninebark spirea; Red osier dogwood; Wahoo; Thimbleberry; Common elder; Currants (red and black); Wild rose; Willow-leaf spirea or Meadow sweet; Button bush; Sumac and Leatherwood.

VINES.

Vines are wonderful beautifiers and may be used to cover or screen almost any unsightly spot on the schoolgrounds. They look well climbing over porches and between windows, over old stumps and along fences.

Probably one of the best for hiding objects which are not pleasant to look upon is the Virginia creeper or common woodbine. The wild grape looks well running into old trees. The wild hop is also desirable, and the *Clematis paniculata* and *Clematis Virginiana*, the latter being native to many parts of the state. The crimson rambler rose is good for porches and fences. If quick growing vines are wanted, plant the wild cucumber or morning glory.

It is probably best not to plant vines so that they will come directly in contact with the outside of the school building, though in some cases they may preserve rather than injure it. Professor Clark gives the following device for protecting the building: "If it is deemed advisable to have them (vines) on the school building, netted wire fencing may be attached to the cornice. First drive staples into the cornice where it is desired to fasten the support for the vines. Then bend the free ends of the wire and hook them directly into the staples. The lower end of the fencing may then be fastened securely to hardwood stakes driven into the ground directly below the cornice. The support can be taken down without injury to the vines, whenever it is desirable to paint the schoolhouse."



SHOWING THE USE OF PERENNIALS IN SHRUBBERY BORDER.

This arrangement adds color and variety to the landscape. Well adapted for school grounds.

FLOWERS.

Do not too greatly indulge your taste for flowers. Flowers require more attention than hardy shrubs and vines, and when school is closed for the long vacation they are apt to suffer. However, if arrangement can be made to give them proper care, a few perennials and even some annuals may be planted if they are confined to borders and out of the way places. They should never be allowed to interfere with the children's playgrounds.

It should also be remembered that flower beds are unsightly mounds during a great portion of the year. A few hollyhocks near one of the buildings will help to decorate, and a bunch of golden glow is beautiful in late summer.

Professor Clark has had great success in planting wild flowers in a bed extending around his house. This plan might be followed on schoolgrounds. The children will be glad to bring wild plants and ferns from the woods. A bed two or three feet wide close to the building may be made without interfering with the playgrounds. The soil must of course be rich. With care in transplanting and a little attention such a bed will prove a joy.

THE LAWN.

All grass plots should be kept cut, and a lawn mower bought for the purpose. If pupils are interested in the appearance of the grounds there will be no difficulty in keeping the lawn mowed. Toward the end of the summer the cut grass should not be raked off the lawn but should remain where it falls. Never allow a new lawn to mature seed.

PROFESSOR SANDSTEN'S OFFER.

E. P. Sandsten, Professor of Horticulture in the University of Wisconsin, has offered to make, free of charge, plans for arranging and planting schoolgrounds surrounding schoolhouses in two

districts of each county in the state, and to give advice free of charge to teachers and school boards in the state, desiring to beautify the schoolgrounds under their charge.

Each county superintendent is earnestly urged to make selection of two schools under his supervision and to apply to Professor Sandsten for plans for the beautification of these grounds, and further, to see that the plans are carried out with exactness.

DIRECTIONS FOR MAKING MAPS OF SCHOOLGROUNDS
FOR PROFESSOR SANDSTEN'S USE.

It is very important that a teacher make as complete a plan as possible of the grounds and buildings, otherwise the landscape gardener cannot properly arrange the planting and the laying out of walks.

First. Make a plain sketch or outline of the grounds with the dimensions for each side.

Second. Mark the buildings, size and outline and give their location on the grounds, measuring from at least two points on connecting boundary lines.

Third. Fill in each tree and shrub in its approximate position giving distances from two points on connecting boundary lines.

Fourth. Fill in the existing walks and mark their location from two points on connecting boundary lines.

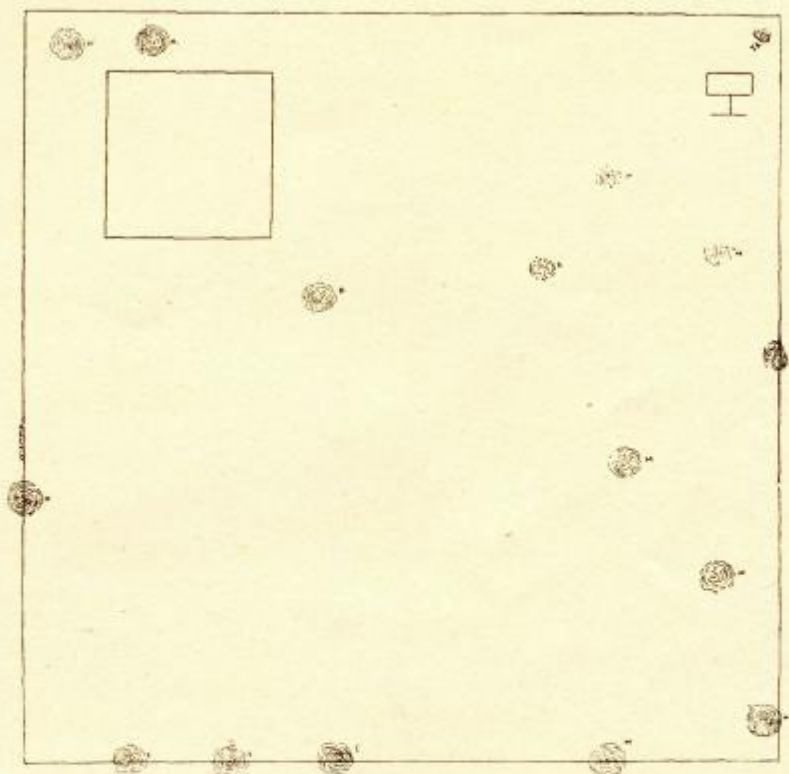
Fifth. Indicate on the plan whether there is more than one highway leading to or by the school.

Sixth. Tell briefly the nature of the immediate surroundings of the school grounds.

Seventh. State briefly the topography of the grounds and indicate whether a separate playground is desirable.

On the following pages appear two maps of schoolgrounds prepared under the supervision of Miss Julia Rockafellow, Superintendent of Schools for Waukesha County. The landscape plan prepared by Professor Sandsten follows each map.

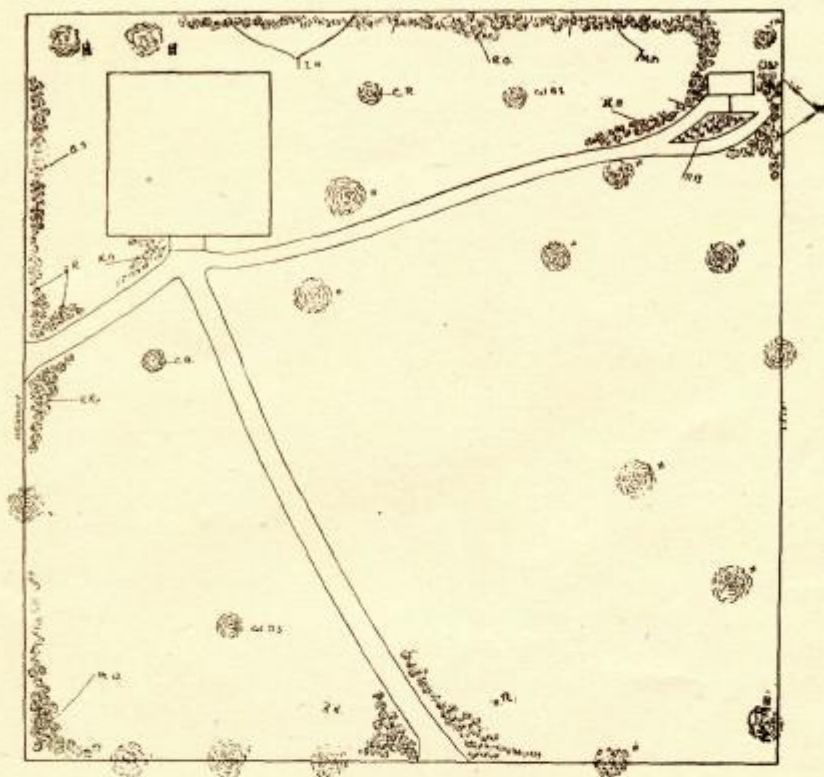
The numbers following the names of shrubs mentioned by Professor Sandsten indicate how many of each kind are needed for suggested planting.



DISTRICT NO. 4, TOWN OF BROOKFIELD, WAUKESHA COUNTY, WIS.

Simple map of grounds prepared by the teacher and submitted to Prof.
Sandsten.

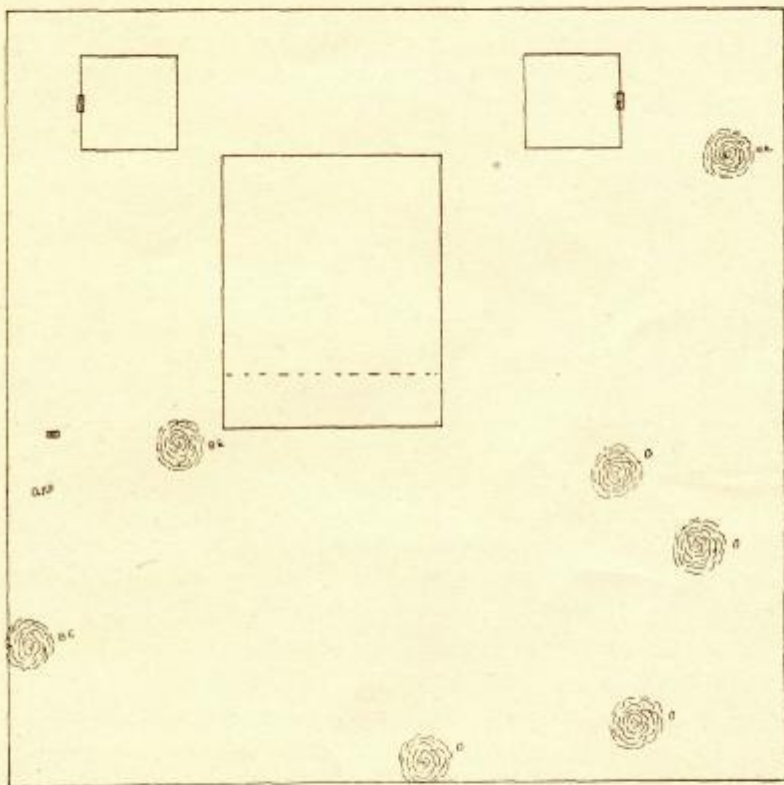
H.	Hickory.
B.	Basswood.
M.	Maple.
E.	Elm.
T. A.	Thorn Apple.
F. P.	Flag Pole.



DISTRICT NO. 4, TOWN OF BROOKFIELD, WAUKESHA COUNTY, WIS.

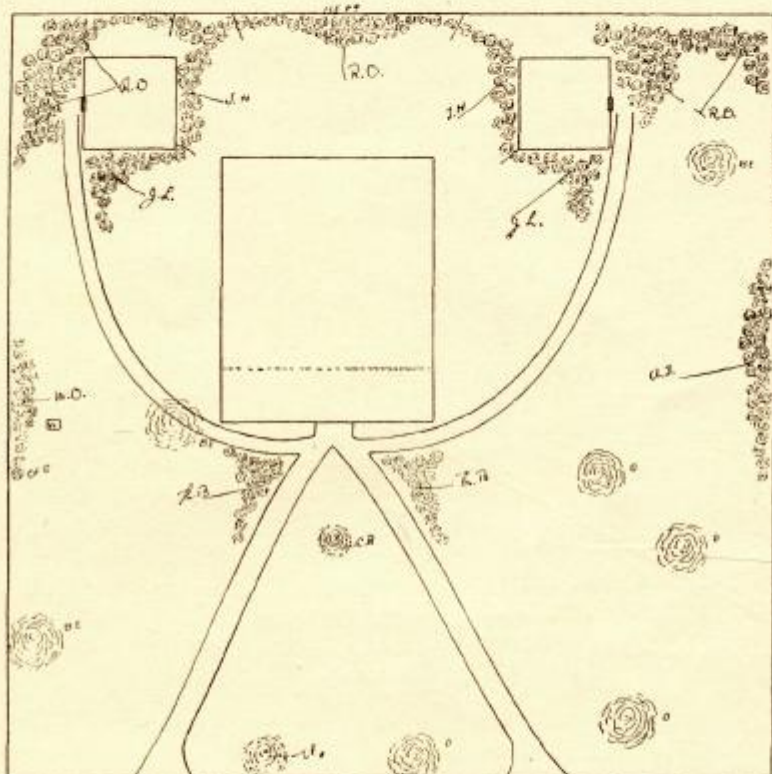
Plan for planting grounds prepared by Prof. Sandsten.

H.	Hickory.
B.	Basswood.
M.	Maple.
E.	Elm.
T. A.	Thorn Apple.
F. P.	Flag Pole.
A. T.	Amur Tamarix, 36.
R. O.	Russian Olive, 52.
Th. B.	Thunberg's Barberry, 34.
R. D.	Red Dogwood, 40.
R. R.	Rosa Rugosa, 90.
M. O.	Mock Orange, 36.
T. H.	Tatarian Honeysuckle, 24.
P. B.	Purple Barberry, 18.
C. B.	Cut Leaved Birch, 2.
Col. S.	Colorado Blue Spruce, 2.



DISTRICT NO. 6, TOWN OF SUMMIT, WAUKESHA COUNTY, WIS.
Simple plan of grounds prepared by the teacher and submitted to Prof.
Sandsten.

B. E.	Box Elder.
O.	Oak.
W.	Well.
F. P.	Flag Pole.



DISTRICT NO. 6, TOWN OF SUMMIT, WAUKESHA COUNTY, WIS.

Plan for planting grounds prepared by Prof. Sandsten.

B. E.	Box Elder.
O.	Oak.
W.	Well.
F. P.	Flag Pole.
R. D.	Red Dogwood, 100.
T. H.	Tartarian Honeysuckle, 40.
J. L.	Lilac (Japanese), 35.
M. O.	Mock Orange, 18.
Th. B.	Thunberg's Barberry, 36.
A. T.	Amur Tamarix, 30.
R. O.	Russian Olive, 28.
C. B.	Cut Leaved Birch, 1.
El.	Elm. 1.