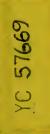
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PUBLIC INSTRUCTION
CIRCULAR 28.
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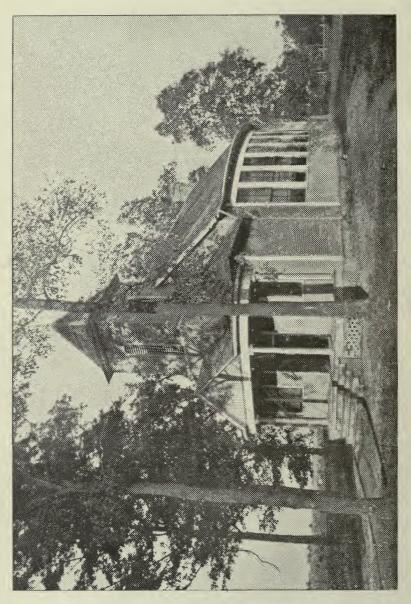
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A COUNTRY SCHOOL HOUSE NEAR PARIS, ILLINOIS; BUILT, 1899; N. C. GRANT, ARCHITECT. THERE ARE TEN OF THIS KIND IN EDGAR COUNTY

## STATE OF ILLINOIS

### DEPARTMENT

OF

# PUBLIC INSTRUCTION

1901

CIRCULAR 28
RURAL SCHOOL ARCHITECTURE.
School Room Decoration.

Appendix to the XXIII Biennial Report of the Superintendent of Public Instruction.



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### CIRCULAR 28.

RURAL SCHOOL ARCHITECTURE AND SCHOOL HOUSE DECORATION.

DEPARTMENT OF PUBLIC INSTRUCTION, SPRINGFIELD, ILL., February, 1901.

Forty years ago, in the third biennial report of this department, Newton Bateman referred to the then prevailing features of school architecture as follows: "A central location; boards and shingles to protect from storms and cold; just space enough for all the scholars in the district; an adequate supply of the plainest seats and desks, the former often backless; a "ten-plate" stove, a pail, tin cup, and broom—these are too often regarded as an ample endowment for a district school house."

At that time there were eleven hundred and two (1,102) school houses "totally unfit for the purpose for which they are used;" while forty-six hundred (4,600) were described as "in tolerably good repair, but with small lot, uninclosed, destitute of out-houses, poorly seated, and not large enough for the scholars of the district." There were also, at that time, fourteen hundred and forty-seven log school houses.

It must be conceded that great improvements have since been made—in places. That much remains to be done is evidenced by the fact that the county superintendents report twelve hundred and seventy-eight (1,278) "unsanitary or otherwise unsuitable" school houses, and but seventeen hundred and ninety-four "perfectly comfortable" ones. Between these extremes are all degrees of comfort and discomfort. There are twelve thousand eight hundred and nine (12,809) schools in Illinois, and every one of them ought to be comfortably and conveniently housed.

The purpose of this circular is to give to school directors and teachers some definite and up-to-date information relating to school house architecture and decoration, and, incidentally, to exhibit, graphically, existing conditions in country districts. It contains: (1) A paper read by Mr. Normand S. Patton, formerly architect for the Board of Education, Chicago, at the October, 1900, meeting of the Northern Illinois Teachers' Association at Freeport; (2) a paper read by Mrs. Orville T. Bright at the same meeting, both of which the Association, by a unanimous rising vote, requested this department to publish; and (3) a number of illustrations of existing architecture, some of which may well be used as working models, and

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cthers as examples of conditions to be improved. For many of these illustrations, of both kinds, I am indebted to County Superintendent Orville T. Bright, of Cook county, who is engaged in a most energetic crusade for better school houses in his own county, and to whom is due no small share of the credit for the renaissance now in progress, and promising to extend into every township in the State.

No attempt is made to discuss the architecture of the larger school building, for the double reason that architects are fully alive to that problem, and the large school building is but a repetition of the unit—the school room. The circular is a response to numerous calls for advice. It is hoped that it will aid the movement so happily begun to hasten the day when, in the interest of economy in money, health and teaching facilities, every school room in Illinois shall be perfectly COMFORTABLE, and all its surroundings be cheerful and beautiful.

OffmBayliss
Superintendent of Public Instruction.

#### THE SCHOOL ROOM IN GRADE SCHOOLS.

Size.—With artificial ventilation, which should always be provided, the size of the school room may be determined by the area required to seat the pupils, with a proper allowance for aisles and front space. Forty-eight pupils in the grammar grades may be seated in a room with an area of 775 square feet. If the number of pupils is to be limited to 40, it is best to retain this size and allow a more liberal spacing of desks. The primary grades with their smaller desks may get along with smaller rooms, but the desirability of open space for games and exercise and the liability of changing the grades are arguments against a reduction of size. On the other hand if the area is increased, there is a temptation to school boards to add extra seats and over crowd the rooms to the detriment of the school work. Therefore, it is wise to adopt 775 square feet as the standard area for a school room.

If provision must be made for 56 pupils, an area of 890 square feet will be required.

Shape.—This should not vary greatly from a square. The length should not exceed 35 feet, and when wooden joists are used there is a practical limit of the width to 27 feet, using 28 foot joist. With these limitations our 775 feet of area may be 25 x 33 feet, or 27 x 29 feet, and our 890 feet area, either 25 x 35 feet, or 27 x 33 feet. When the lighting is from one side only the 25 foot width is preferable; with supplementary lighting from the back the 27 foot width is sometimes more practicable. With rooms of these proportions the seats may face either the end or the side.

Height.—We may take 13 feet as a standard height, with a tendency to make rooms less than this down to 12 feet rather than more. The considerations affecting the height of a school room may be enumerated as—1, light; 2, looks; 3, cost; 4, convenience. Comparing a height of 13 feet with one of 12 feet on the side of the greater height is light, and of the lesser height, looks, cost and convenience. A height 12 feet gives a more homelike look than a greater one; the cost of construction and heating is less, and there is a saving of effort and time in climbing stairs to the upper stories. A high ceiling increases the light only when the tops of the windows are raised likewise; to leave the windows unchanged and raise the ceiling will decrease the light.

Light.—The object should be to provide (1) a proper amount, (2) from the proper direction, (3) uniformly distributed and sufficiently diffused, and do this under all conditions of weather.

Amount of Light.—The familiar rule to make the total window area one-sixth of the floor area is useful only as a rough approximation, as the amount of light admitted by a given area of glass is affected by the width of window, the height from the floor, thickness of walls, proximity of buildings, trees and other external obstructions, the color of these external objects, color of exterior window jambs and of the interior walls and ceiling, and the height of the room above the ground, the upper stories receiving more light than the lower. There can be no exact rule for lighting, but several considerations will be helpful as a guide to one's judgment.

Every foot of unnecessary glass is a detriment. It lets in the heat in summer and the cold in winter. Cold draughts are proverbial causes of illness, and the most dangerous draught is one that strikes the back. Therefore there should never be full length windows at the back of a school room unless they are provided with double sash and have steam pipes beneath sufficient to counteract the cold draught. Furthermore, unnecessary windows take from the wall space needed for other uses.

Wide windows let in more light than the same amount of glass in narrow windows. The diagonal rays are largely cut off by the thickness of the wall in narrow windows. Three wide windows will light almost any school room better than four or five narrow ones, and will have fewer cracks for cold air.

The most effective light comes from the clear sky, shining through the window directly upon the object to be lighted. In order that the farther side of the room shall receive such direct light it must pass through the upper part of the window. If there be enough light for the farther parts of the room, there will be more than enough for those near the windows, and hence the upper half of the window is more effective than the lower, and the higher the window from the floor, the more light from a given area of glass.

This principle should not be carried to such an extreme as to raise the window sills so high as to cut off a view of the landscape, especially when the surroundings of the school are pleasant.

Place the window sills at such a height that the children can see the ground when standing at the window, but not when seated. This will bring the lower edge of the glass from 3 min. to 3 min. 8 sec. above the floor.

Arched Windows.—The importance of preserving the light from the upper part of the window will lead to the use of square head windows in preference to arched forms; nevertheless arched windows may be used in certain situations as in corner rooms where there is light on two sides; on the upper floor where the light is best and and where extra height may be given to the room and its windows without increasing the stairs to be climbed; and in other situations when other conditions for light are favorable.

Direction of Light.—The light should shine upon the object to be seen and not in the faces of the pupils or teacher. For drawing or writing, the light should be from the left and front, for reading from the back and either side. The light should also come from above, at a considerable angle with the horizontal. Authorities appear to be unanimous that for a room no wider than the usual class room, the best lighting is from the left hand of the pupils only. With the eight room school, four rooms on a floor, all being corner rooms, it seems unnatural to leave one outer wall blank, and yet the windows at the back of pupils are objectionable. A compromise plan is to place half windows at the back of the room with their heads on a line with those of the side windows. These can be screened by shades on bright days and thus avoid annoyance to the teacher who faces them, and used on cloudy days to supplement the side windows. The half windows are also useful for cross ventilation in warm. weather.

School design now runs almost exclusively to symmetrical plans for such eight room schools. It is most convenient to make the rooms nearly square, say 27x29 feet, with three full windows on the left side of the pupils and three high half windows at their back.

Each face of the building will thus have three full and three half windows in the class rooms of each story, which feature though unsymmetrical in the design can be so treated as not to be an architectural blemish.

Uniform Distribution of Light.—The difficulty lies in lighting the inner part of the room without excess near the windows. To accomplish this and preserve the proper direction of the light on a bright day, we may screen the lower part of the windows and admit light from upper portion only.

Whatever shades or blinds are used they must be hung so that they can be lowered from the top while screening the lower part of window. Venetian blinds can have the slats so adjusted as to shut out direct sunlight while permitting a strong light to play upon ceiling and walls; but there are objections to these blinds on the grounds of expense both first cost and repairs and collection of dust. Shades should never be hung in the ordinary manner at the top, for then the lower part of windows cannot be screened without darkening the top entirely and cutting off all the effective light from inner side of room. To put the roller at the bottom of the window and pull the shade up, is better; but the roller in this position interferes with plants on the window stool and therefore must be ruled out. An improvement is to use two shades with both rollers at the center of height of window, one to pull down and the other to pull up; but the simplest device is to use one shade hung on a movable roller, so that light may be admitted both at top and bottom of window in any desired amount. There are a number of devices in the market that accomp-

There remains still the difficulty of direct sunlight entering the top of window when the shade is lowered. This may be cured by pulling down a white shade by which the direct rays of the sun are

intercepted and the light diffused over the room. Such shades are, however, apt to become quickly soiled by use, and a simpler remedy and a permanent one is to glaze the upper portion of windows with maze, florentine, or other translucent glass which diffuses the sunlight and illuminates the ceiling. For special cases where the near proximity of buildings cuts off direct light from the sky, prismatic glass may be used to catch the light and control its diffusion. use of translucent or prismatic glass in the upper portion of a window has such marked advantages over the ordinary clear window glass as to deserve special comment. Recent experiments conducted for Mr. Edward Atkinson, by Prof. Charles L. Norton of the Massachusetts Institute of Technology, prove that such glass not only softens the light but gives a marked increase to its effectiveness, especially in cases where a considerable portion of the sky is cut off by opposite buildings. The rays which would, with clear glass, shine on the floor near the window and be absorbed, are with translucent glass refracted and diffused over the inner part of the room and on the ceiling, which being thus illuminated radiates a soft light where most

Heating and Ventilation.—There must be a supply of warmed fresh air, which may be heated by a hot air furnace, or a steam coil. If the flow of fresh air is by natural draught over a steam coil, called an "indirect radiator" there should be also direct radiation in the room; but when the warm air is forced in by a fan, we may dispense with the direct radiation, notwithstanding eminent authorities to the contrary. The chief difficulty in ventilation is to prevent draughts when the incoming air is cool. The air inlet must not be in the floor to gather dirt, but at a height of 3 to 8 feet. The air should be directed upward rather than horizontally, then, the current of air will rise to the ceiling and spread out over the upper part of the room. Place both inlet and outlet on an inner wall, the outlet being at the floor and near the inlet.

The standard of ventilation advocated for school rooms gives a supply of 30 cubic feet of air per pupil per minute. If the ventilating apparatus supplies this amount there will be no need of opening windows for ventilation, indeed it is essential to the proper operation of any system of artificial ventilation that the windows be kept tightly closed. All school room windows should be made very tight with weather strips to prevent the entrance of wind and in those school rooms that lack proper ventilation, the windows should never be opened in cold weather when there are pupils in the room; but the room should be aired during a recess or intermission. Provision should be made for natural ventilation in warm weather by providing transoms over the doors and if there be windows on one side only, make extra transoms between inner wall and corridor.

Blackboards.—These are costly, are not ornamental, darken the room, and should not be made longer nor wider than demanded by the requirements of teaching. Chicago public school teachers some three years ago petitioned the Board of Education to confine the blackboards to two sides of the rooms, and this is recommended as

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sufficient. The chalk rail for primary grades should be two feet from the floor and for grammar grades not more than three inches higher. The board may be about  $3\frac{1}{2}$  feet wide, but back of the teachers desk it is well to carry the blackboard up to a height of  $6\frac{1}{2}$  or 7 feet. In Chicago good results are secured with composition blackboards, but these can be done only by experts. If so done they are better than slate. The blackboard maker must do the plastering on which the composition is laid or results can not be guaranteed.

Cloak Room.—The hanging of clothes in the corridors is too primitive for consideration and the recently invented ventilated wardrobes with rolling fronts have yet to make their reputation. The usual cloak room has a door at one end into the class room and at the other into the public corrider. This invites sneak-thieving if the outer door be unlocked and becomes a dangerous trap in case of panic if locked, unless it be arranged so as to open always from the inside. Furthermore the numerous cloak room doors opening into the corridors have been found objectionable. To overcome these objections, the writer devised a form of cloak room that has proved very popular in the Chicago public schools. Both doors open into the class room. The cloak room can not be entered except from the room and no locks are needed. The opening nearest the room entrance may be an open doorway. The ventilation of this style of cloak room is accomplished in a simple manner. The fresh air supply enters the room as usual, but the exhaust is taken entirely from the cloak room. Thus all the air from the room is drawn through the open doorway into the cloak room, warming it and drying the clothing, then passing into the ventilating flue. Cloak rooms should be so located that the teacher may stand in one place and command class room, corridor and cloak room. If the cloak room is considered only as a place for hanging hats and outer clothing, there is no need of a separation of boys and girls in grade schools. There should be plate glass in class and cloak room doors opening into the corridor so that the superintendent may inspect without entering. It would seem that there should be some better provision for overshoes than leaving them on the floor of the wardrobe, simple racks on the wainscoting near the floor are used in some schools.

Teachers' Wardrobe—This may be in the cloak room or may open into the class room. In the later Chicago schools in place of teachers' wardrobes in connection with the class rooms there is a locker for each teacher adjoining the teacher's room. The teacher's room is located in the basement (which is high and well lighted) adjoining the main entrance. There are toilet conveniences connected with this room.

Bookcase—There must be a bookcase for each school room. According to the testimony of teachers it may be put in almost any part of the room, or in the cloak room. There should be glazed doors in front of the books and cupboards below.

Wainscoting—There is a strong tendency to abolish wood wainscoting as combustible and unsanitary and substitute some other form

of cement or hard plaster. At any rate the beaded ceiling of wood has become very tiresome and a change is desirable. The Chicago public schools are using wainscoting of plaster covered with prepared burlap to a height of six or seven feet wherever the walls are not covered with blackboards. This innovation has been received with great favor and the writer can recommend the material as the best for school room wainscoting. The typical Chicago school room has a picture moulding around all walls at about the top of the doors, seven feet. Below this moulding down to the narrow base of wood or cement, the walls are covered with burlap painted in oil. green makes an agreeable shade; but reds and browns are also acceptable. The blackboards have the appearance of being applied over the burlap, the narrow boards having the burlap on all sides, while back of the teacher the blackboard stops at the same height as the burlap. Pictures may be hung on the burlap from the moulding but cards and papers may be pinned or tacked directly to the walls without injury to the burlap. There is another picture moulding at the top of the wall from which pictures may be hung above the wainscoting.

Walls—Sand finish gives a more agreeable texture to the plastering to receive the tinting color than a smooth plaster of Paris finish. The subject of wall tints being treated so thoroughly by Mrs. Bright, I will not comment on this topic further than to endorse the importance of proper tinting. The contrast between the blackboards and white walls is especially trying to the eyes, but if the blackboard is surrounded by burlap painted a suitable color, the contrast is greatly softened even though the walls above are white. A subject now under investigation is the making of blackboards of other colors than black, so as to harmonize with the decorative scheme of

the room.

Woodwork—Yellow pine is the most available wood of low cost. It seems to me preferable to painted woodwork, although inferior to oak.

Floors—Of the two woods used for school room floors, Southern yellow pine must be quarter-sawed and kept oiled or varnished, or the grain will fill with dirt. Hard maple may be left without oil or varnish and can always be scrubbed clean. If some school board wants a school room floor more sanitary and noiseless than hardwood, it would be worth while to experiment with cork carpet or some of the new forms of linoleum.

A Drinking Fountain is a feature of a complete school room and should be placed near the door. A clock controlled from a central regulator and a telephone to the principal's office are modern school room luxuries.

Decoration—The efforts to beautify the school room with flowers and works of art should receive encouragement from the architect. The flower pots ruin the varnish on the window stools. Then what? Banish the flowers? No! Banish the varnish, and put in slate or marble stools that will stand water. A bay window that will give space for a flower stand will make the school room attractive and, perhaps, should not be considered an extravagance.

NORMAND S. PATTON.

## THE DECORATION OF SCHOOL HOUSES AND SCHOOL ROOMS.

"To be brought into tune with good things is the first step towards being good."

There is a great and growing interest on the part of school patrons and teachers in the subject of school decoration. The right of the child to some sweetness and cheeriness and beauty of surroundings has come to be recognized. The right of the public to school buildings of pleasing exterior and environment has been at least partially conceded. Much has been said and written on the moral influence and the silent teaching of beauty—and the dawn of a general awakening to the importance of these matters seems at hand. Teachers are asking eagerly what can be done for the improvement of their schools, and how it is to be accomplished. A few practical suggestions are appended which it is hoped may to some extent answer these questions.

That time in the history of any school when the subject may be most effectively considered is when its building is projected. The shape and size of the school rooms and corridors—the arrangement of window, blackboard, staircase and wardrobe—the design and finish of woodwork are vital matters and worthy the careful attention of superintendent and principal. The school officer whose duty it is to look after these and other essentials of a perfect building, and who neglects to do so, is guilty of a grievous wrong. Every school house is a monument to the shame or the glory of those under whose supervision it is erected. Other things being equal, the degree of beauty attainable may be in proportion to the amount of money expended—but that the best possible results for the money be forthcoming—that is what we have a right to expect.

Presumably school architects have been long in existence; only recent years, however, have developed a class worthy of the name, and have witnessed the erection of really beautiful school buildings in our midst. A sufficient number of these buildings is now in existence—buildings of good architectural design, well and honestly built, attractive both as to exterior and interior, carefully planned and carefully kept—to furnish the best and most practical hints to builders of new ones.

In the main the most successful of these new buildings have certain features in common. The broad stair and wide corridor which would have been condemned as waste room on the old-time plan, have come to stay, and have proved their right to do so. So far from being waste room, the light spacious corridor is in constant use for Indian club and dumb-bell exercises, wand drills and marches, and even takes the place of an assembly hall, in case of the lack of such, where public exercises may be held. Ceilings are lower, windows wider, less high, and not so deeply recessed; shades have superseded blinds; blackboards, hideous but necessary, are somewhat reduced in both height and extent; platforms are abolished, and soft and pleasing tints succeed on the walls the old dead white. The woodwork is designed with reference to cleanliness as well as beauty, the floors are of hard maple, and an occasional wall cabinet, or wide, low, hospitable fireplace is seen.

To the teacher so fortunate as to be located in such a building the task of beautifying her school room is rendered easy. A few well-selected pictures and casts, some plants in the windows, a small table or two with a bit of bright color in the cover, a rug, perhaps, and an easy chair, and the thing is accomplished—or, no, not necessarily even yet, for it has been the painful privilege of the writer to visit a school room with all, or nearly all these things, which yet is most unbeautiful. Dirt and disorder are deadly enemies of beauty, and their nullifying powers are great. Neatness, order and arrangement are as necessary to a pleasing effect as are the possession of pictures and other beautiful effects. No amount of decoration will render attractive an untidy school room with messy blackboards and paper-strewn floor. It may be well for all, in schools old and new, antiquated and modern, to lay down the law that order is the first principle of beauty.

When the new building is completed, or the old one to be renovated, the first great question to be settled is in regard to wall tints. In the selection of these any advice which is given must follow to some extent the irritating fashion of the old cook book which directed ignorant young housekeepers to "season to taste" or mix "according to judgment." As a matter of fact the decoration of each school room is a problem by itself. The color of the wood and the height of the ceiling, the amount of blackboard space and other modifying features varying in different buildings or even in different rooms in the same building, must be taken into account, and in both rooms and corridors the amount and direction of the light received must enter in as an important factor. A few general rules for the selection of color have been drawn from observation and are as follows: Sunny rooms—those having south, southwest and west exposures—should be in cool tints, greens or olives. (Blue and gray are not successful school room tints, being dreary and cold in effect.) Rooms receiving little sun need warmth of color and may be done in red, terra-cotta or yellow-brown. Ceilings should be lighter than side walls; a contrasting ceiling is ordinarily most pleasing, and a color almost universally satisfactory for the purpose is a deep corn-yellow or canary. A side wall often looks darker when complete than in the sample, but it is safe to select for the ceiling a strong light tone, the effect being invariably lighter and milder when on. High ceilings may be made to appear lower by tinting the upper portion of the wall like the ceiling; the greater the depth of the wall space so tinted the more the ceiling is apparently lowered (the measurement being usually from 18 to 36 inches). Lew ceilings may be heightened in effect by the reverse process of continuing the side-wall color to the ceiling and placing the picture molding at the top. The best shades for dark rooms are on the yellow tones; tan, corn-yellow or buff, and light golden brown. The best corrective for a wall which has been made too dark is a ceiling (and, if possible, partial side wall) of cornyellow or canary.

The woodwork, when painted, is in general most safely made a lighter or darker shade of the wall color. Any dado which takes the place of a wainscot follows the same rule.

There are comparatively few desirable schoolroom colors, but there is a variety of shades of each color, so that many different combinations may be made, and it is neither necessary nor desirable to have all the rooms in a building alike. Red has proved one of the most effective colors for assembly halls and corridors and one of the least pleasing for school rooms. For the latter, the greens, olives, terracottas and tans are most satisfactory. It is difficult to account for the so frequent use of a color best described as a sickly pink. Possibly it is an attempt at a compromise with reds which are too dark or too intense for schoolroom purposes. Whatever the occasion of it may be, it is a complete and utter failure. Pink may be a good boudoir color, but for a school room it is useless as a background and utterly characterless. If it is desired to use red in a room for which the really rich and lovely shades are too dark, it may safely be done by making ceiling and the upper third of the wall cf canary or cornyellow. In this way a rich background may be obtained without any loss of the light, cheerful aspect of a room. With the green or olive walls the woodwork, if painted, may be either a deeper shade of same, or some pleasing contrast; with red or terra cotta it must of course be a contrast, and with tan a most pleasing combination is found to be leather brown.

Dark shades tend to lessen the apparent size of a room, light ones to increase it. The size of room or hall, therefore, as well as its lighting, must be taken into consideration in determining its tints. In offices and recitation rooms it is generally desirable to select a style of wall decoration which will lower the ceiling and enlarge the room. In the absence of blackboards such rooms look best done in three shades—the darkest for the dado which is topped by a molding three or four inches in width—the middle for the side walls ending at the picture molding eighteen inches or more from the ceiling—and the lightest (probably a contrasting shade) for the ceiling and that part of the wall above the picture molding.

This matter of the careful selection and artistic blending of colors is well worth the attention of teachers. Perhaps no other one thing will go so far toward hiding the defects and adding to the beauty of a school room.

The woodwork in most schools is hopelessly ugly. The Georgia pine which is almost universal may have much to recommend it from the builder's point of view, but from the æsthetic standpoint it has

nothing. Its harsh, ugly tones refuse either to blend or to contrast pleasingly with the wall tints; it must be either ignored or, better, painted. Some day, perhaps, when we shall have brought about a genuine and general public interest in these things, it may be replaced by oak or other woods, which, if slightly more expensive, admit of a variety of charming shades and finishes.

Many of the teachers who have devoted some thought to the matter, have proved very ingenious in inventing simple devices for beautifying their school rooms. A teacher of first grade in a school where the walls were white and the directors obdurate, covered the upper, unused portion of a high blackboard to a depth of ten or twelve inches with wall paper of a bright, rich red, using this as a background for pressed ferns, scissor work and inexpensive little reliefs, thus making a very charming little frieze about the room and adding a pretty bit of color. A simple thing enough, but it really transformed the place and was an inexpressible pride and delight to the children. Others have used burlap in green or red in a similar way, sometimes covering the whole area of a small board that could be spared and making it a background for displays of Prang platinettes, Perry pictures or relief casts, which, being readily fastened and unfastened by means of large pins, might be frequently changed and the interest in them thus sustained. Shelves over the blackboards for the support of an occasional vase or statuette have proved successful in some instances, and where the doorways are not too high the same idea has been carried out with good effect. ments in such instances should be of good size and not too abundant -the scattering of numerous small articles is far from pleasing in

All these devices may help to make the school room an attractive and pleasant place, but it is also possible to carry the idea of decoration to an extreme. A few good things are more to be desired than a superabundance of trash and it is best to be discriminating as to what is allowed to enter. Simplicity is not bareness—overcrowding is not art; ornaments and pictures should be kept to their proper places, among which doors and windows are not. The latter should be kept clear of everything but plants, the former should never be utilized for the hanging or pinning on of pictures. If it is desired to group a number of small pictures for study purposes and no space is available they may be mounted on large sheets of stiff cardboard and stood for the necessary time upon the chalk trough.

Good pictures are plentiful, easily accessible, and cheap; there is no reason why every school may not become possessed of a really fine collection. Tastes differ, of course, as to the kind of pictures most desirable.

Indianapolis has recently acquired a great reputation for the work of her schools along art lines. They have raised and spent many hundreds of dollars for pictures, and their purchases have been entirely original works of local artists. Some of the Chicago schools also have chosen to contribute to the encouragement of home industries and have ordered copies by art students of mas-

terpieces in the Art Institute. Of course this sort of thing is productive of many good and desirable results. In Indianapolis the artists have become so interested in the schools through the purchase of their pictures that they have contributed much in valuable suggestions and in actual decorative work. So far as the idea looks toward mutual help and cooperation it is ideal, but on the other hand it is a question whether for the children—and we must not forget that all this is for the children—there is not a greater value in acquaintance—even through a copy—with a very great artist, a world artist, than with first-hand knowledge of a lesser light. It is an open question, perhaps, and is likely to remain such for some years. amount of money now at command for decorative purposes in most schools, however, makes it not an immediate or pressing question for them and we may proceed to the consideration of the many good copies of good pictures available at small cost. Of these there is a great variety, but here again we must go "according to judgment." The difference of a dollar or two in price often means the difference between a really good picture and a very poor one. For school purposes foreign photographs, lithographs, carbons and platinotypes are the copies most used, with occasional photogravures, steel engravings and colored prints. For one who has had little experience with pictures it might be well to see many copies of the same thing before deciding upon one. (Do not hesitate to ask to see fine and expensive copies, simply because you know you can not afford them. Nothing is any trouble to a picture dealer, and besides, he is as anxious to educate you as you are to be educated.) The excellence of one may point out the defects of another and lead to a wise choice. Many things enter into a judicious selection besides the quality of the copy. Among these the subject considered as to moral tone and suitability takes first rank.

The subject should be one which appeals to the child, but that it appeals to him is not a sufficient test of its fitness. It should be such as may wholesomely and with benefit appeal to him. All that is painful or morbid should be tabooed, all false sentiment should be excluded, but whatever satisfies the simple, natural, childish taste, it is right to have. If teachers select pictures entirely from the adult point of view they may meet with disappointment in the fact that the children do not care for them. It is the taste and the comprehension of the child that must be considered, and this should be guided and developed by the greater knowledge and experience of he teacher.

After the picture is carefully chosen let equal care be used in its mounting, framing and hanging. The beauty of some pictures is greatly enhanced by the use of a mat. In general the mat serves one of three purposes: that of adding an effect of space and roominess to the picture, of enlarging it or of bringing it out clearly. In Jules Breton's "Song of the Lark" for example, the fine sturdy, robust figure of the young girl seems cramped and confined if framed close, while a 3 or 4 inch mat carefully selected to harmonize with the general tone of the picture, restores to it the sense of spirit and freedom which largely make up its charm.

Millet's "Sower" requires the mat to bring out the figure distinctly. It is a twilight picture and a good copy gives the dusky twilight impression. Framed close the picture is lost; a mat carrying out the lightest tones in the picture adds greatly to its effectiveness.

There is a forty-cent photogravure of St. Mark's—very clear and distinct, but so small that framed close it could not well be hung as a single picture; a five-inch mat and a narrow molding make of it a picture suitable for a school room of any size.

If the mounting of a picture is a matter of care and study, its framing is no less so. The frame of gilt must be excluded from the school room list as unsuitable; certain pictures in color, however, such as Guido Reni's "Aurora" (of which the colored copy is preéminently the one to buy), really require the gilt to bring out their full richness of coloring. Some genius in framing has originated a most happy way out of the difficulty, by combining a broad, plain molding with a gold facing next the picture an inch or less in width. The result is a frame rich, yet simple, durable, easily cleaned, and in every way suited for schoolroom use. A similar device is followed in framing many of the platinum pictures, except that the facing is of silver, and not more than a quarter of an inch in width. Anton Mauve's "In the Lane" and "Going Home" are exquisitely framed in this way with an ebony molding.

Platinum pictures call almost invariably for frames of black; for this reason, if for no other, where an equally good brown copy can be procured—carbon, photograph or whatever it may be, it is to be preferred. There is no objection to an occasional black frame, but any great number of them is apt to give to the walls a funereal aspect unless the background is particularly rich and warm. Generally speaking, it is best to select for frames moldings which are a continuation of color tones found in the picture. It is the province of mat and frame to form a finish for the picture without obtruding themselves. The soft, flat-finished frame so much used just now lends itself most readily to this idea, the "White, Potter and Page" moldings being especially suited to many of the carbons. When a contrasting frame is desired a dark mahogany is often very satisfactory.

In hanging pictures the mistake of placing them too high is most common. When there is a blackboard no margin should be left between it and the base of the frame. Where there is no blackboard the middle of the picture should be slightly above the level of the eye of the average person. If any mistake is made it would better be in hanging the picture too low rather than too high.

Many teachers make the serious error of considering their work as done when the pictures are bought, framed and hung. On the contrary, the most important part of it has just begun. Children can no more be expected to learn to love pictures from their mere presence than to learn to love books without knowing how to read. The teacher must be their inspiration, her understanding must teach them to interpret—her appreciation teach them to enjoy, and this can never be until she herself is inspired. For the teacher who must educate herself with her pupils the following reading is recommended:









19 G





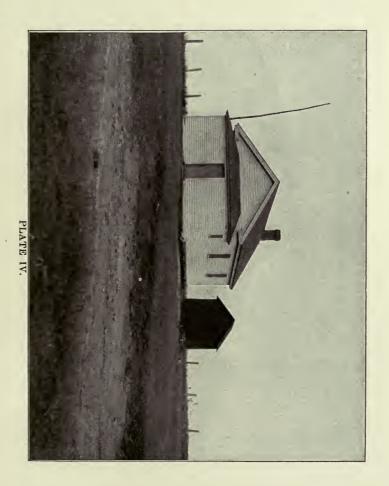








PLATE V.









P ...





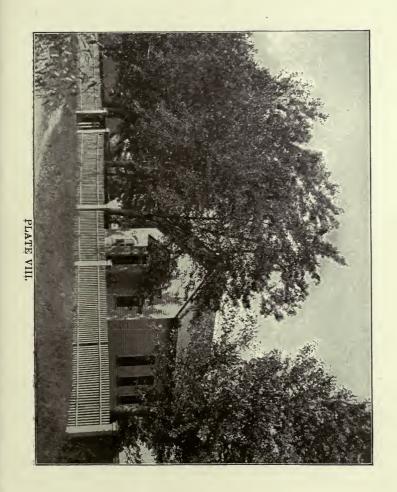








PLATE IX.





PLATE X.





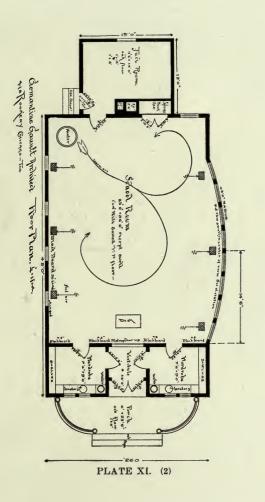


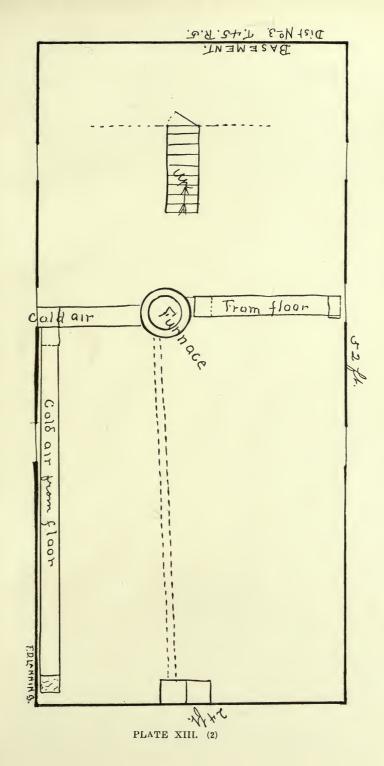






PLATE XIII.







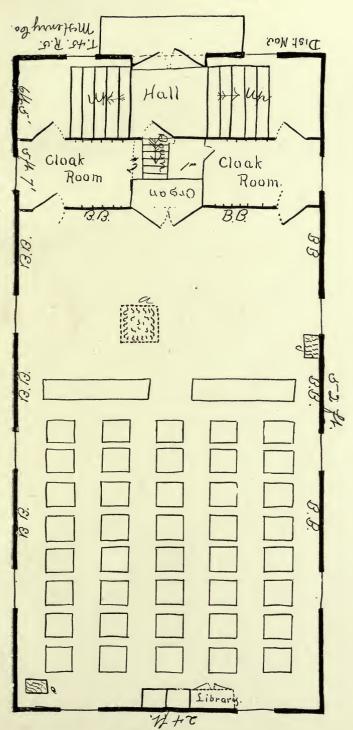
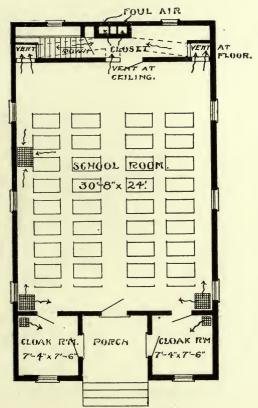


PLATE XIII. (3)



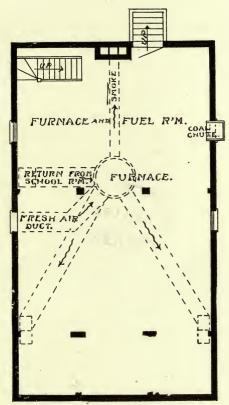




FLOOR PLAN.
5GALE:1-8"=1".
S.A.BULLARD, ARCH'T.
5PRINGFIELD, ILL5.

PLATE XIV. (2)





BASEMENT PLAN.

SCALE:1-8"=1".

S.A. BULLARD, ARCH'T.

SPRINGFIELD, ILLS.

PLATEIXIV. (3)





PLATE XV. (1)



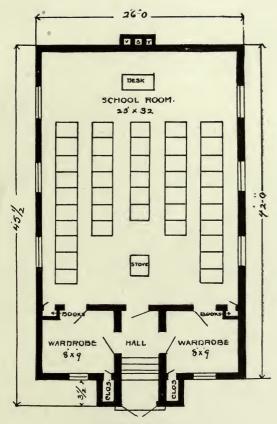
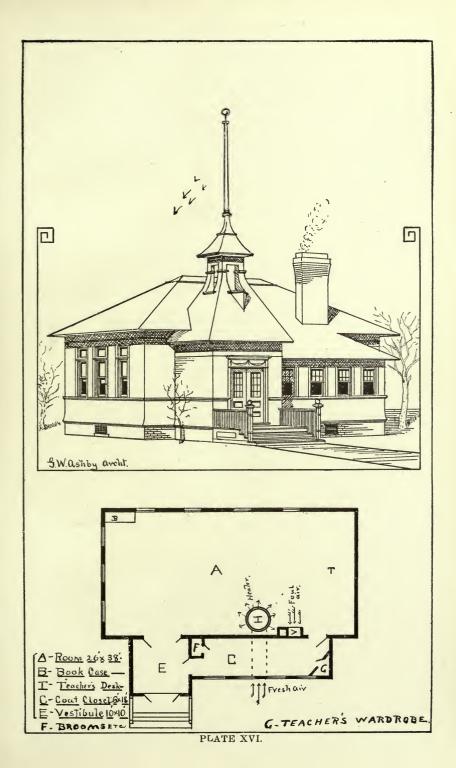


PLATE XV. (2)









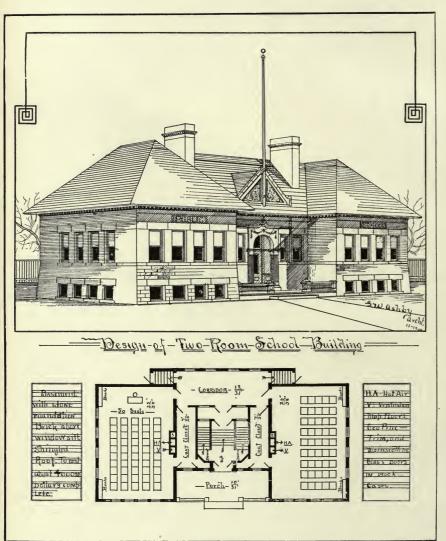


PLATE XVII.



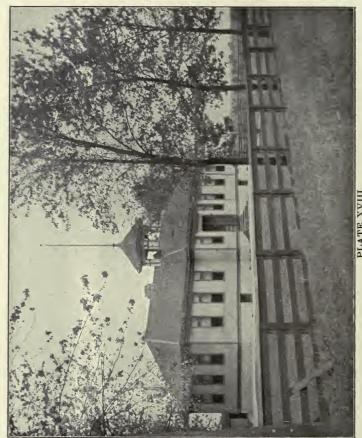


PLATE XVIII.



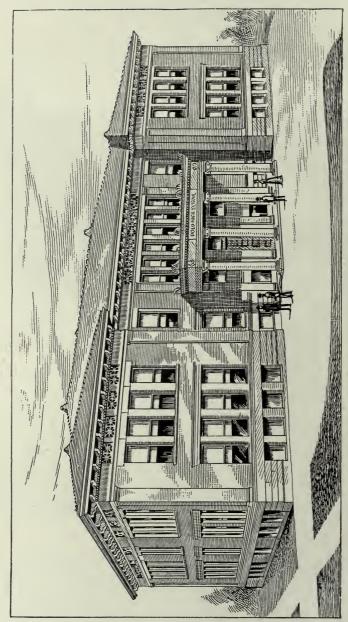


PLATE XIX-POLO PUBLIC SCHOOL BUILDING, ERECTED 1899,



PLATE XX. (See page 50-53.)







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PLATE XXII-A HEATING TERROR,





PLATE XXIII. THE "TERROR" MADE COMFORTABLE AND EFFECTIVE.

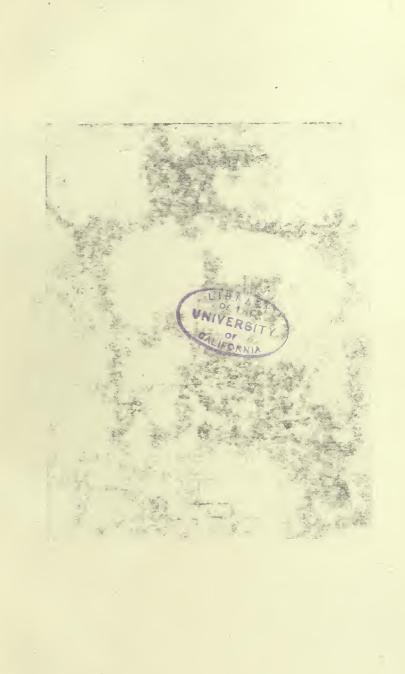








PLATE XXV-OUTSIDE PLAIN AND UNATTRACTIVE, INSIDE CHARMING. TINTED WALLS.





PLATE XXVI-GOING HOME FROM SCHOOL. (See page 52.)

	2.1	
History of Painting		
MADONNAS.  Sistine Madonna, Raphael, 24x30	Coliseum, Rome, 22x60.       18 00         Coliseum, Rome, 21x35.       10 00         Coliseum, Rome, 21x32.       8 00         Erectheum, Athens, 14x18.       4 00         Parthenon, Athens, 20x33.       10 00         Parthenon, Athens, 16x22.       3 00         Pantheon, Rome, 20x32.       10 00         Pantheon, Rome, 20x26.       1 00         Roman Forum, 21x32.       8 00         Roman Forum, 21x32.       8 00         Roman Forum, 20x23.       7 50         Square of St. Marks, 16x21.       4 00         St. Marks, 10x13.       2 50         St. Marks, 9x13.       40         St. Marks, 20x26.       1 00	
Apollo Belvidere, 16x22	Ann Hathaway's Cottage, 16x23 \$ 5 00 Capitol at Washington, 20x34 10 00 Castle of St. Angelo, 20x33 7 50 Castle of St. Angelo, 20x33 10 00 Concord Bridge, 20x33 10 00 Concord Bridge, 17x23 5 00 English House of Parliament, 17x23 5 00 Grand Canal, Venice, 16x21 3 00 Stratford-on-Avon, 17x25 5 00 Stratford-on-Avon, 16x21 3 00 View on the Tiber, 16x22 3 00 View on the Tiber, 20x32 6 00 Venetian Views (40 subjects, photogravures) 9x13 each' 40  PICTURES OF ANIMALS.  An Old Monarch, Rosa Bonheur, 15x18. \$ 6 00 A June Morning, Loveridge, 10x15 1 00 Ancient Britons, Douglas, 14x18 6 00 Defiance, Landseer, 22x24 4 50 (Any subjects of Landseer's are good	
Dancing Boys, Della Robbia, 16x22	except painful ones.)  Early Springtime, Riecke, 12x17. 1 25 Highland Pets, 19x13. 5 00 His Majesty, Dicksee, 16x26. 6 00 Homeward Bound, Derrick, 17x24. 5 00 Horse Fair, Rosa Bonheur, 23x33. 12 00 Hound, Rosa Bonheur, 16x22. 3 00 I Hear a Voice, Maud Earle, 23x29. 6 00 In the Lane, Craig, 13x19. 5 00 In Clover, Derrick, 13x19. 5 00 Meadow Pool, Von Marcke, 12 <sup>1</sup> 2x15 <sup>1</sup> 2, 4 50 Meadow Pool, Riecke, 12x17. 1 25 Meadow Pool, Riecke, 12x17. 1 25 Meadow Brook, Proctor, 13x19. 5 00 Morning Freedom, 20x24. 5 00 Norman Vikings, Douglas, 14x18. 6 00	

### List of Pictures—Continued.

On Guard, Rosa Bonheur, 26x34	Holy Night, Correggio, 14x18. 4 00 Head of Child, Greuze, 12x17 1 25 Head of Child, Greuze, 12x17 3 00 In the Country, Le Rolle, 20x30 15 00 In the Country, Le Rolle, 20x30 5 00 In the Country, Le Rolle, 14x18 4 00 In the Country, Le Rolle, 10x16 75 Lazarus (head), Vedder, 10x13 4 00 Mother and Child, Toulmouche, 18x23 1 50 Madame Le Brun, 17x21 5 150 Madame Le Brun and Daughter, 16x22 3 00 Queen Louise, Richter, 14½x20 5 00 Reapers, Breton, 18x31 5 00 Sir Galahad, Watts, 19x36 18 00 Sir Galahad, Watts, 19x36 5 00 Sir Galahad, Watts, 19x36 5 00 Sir Galahad, Watts, 18x26 5 00 Sir Galahad, Watts, 18x26 5 00 St. Michael and the Dragon, Raphael, 16x22 3 00 Santa Barbara (figure), Vecchio, 16x22 3 00 Santa Barbara (figure), Vecchio, 16x22 3 00 Santa Barbara (detail), Vecchio, 16x22 3 00 Santa Barbara (detail), Vecchio, 16x22 3 00 Song of the Lark, Breton, 24x30 5 00 Song of the Lark, Breton, 24x30 5 00 Song of the Lark, Breton, 18x25 3 00 The Prophets, Sargent, 17x93 200 The Prophets, Sargent, 17x93 200 The Prophets, Sargent, 17x93 200 The Prophets, Sargent, 10x55 9 00 The Prophets, Sargent, 10x55 9 00 The Shepherdess, Millet, 20x26 1 00
, , , , , , , , , , , , , , , , , , ,	LANDSCAPES AND SEA VIEWS
Angelus, Millet, 18x22	Dance of the Nymphs, Corot, 22x30
reeding the Chickens, Millet, 14x18 4 00 leeding the Chickens, Millet, 11x13 4 00	COLORED PICTURES.
Holden Stair, Burne-Jones, 16x36     15 00       Holden Stair, Burne-Jones, 7x20     4 00       Heaners, Millet 20x26     1 00       Heaners, Millet, 16x22     3 00       Hope, Burne-Jones, 18x36     15 00       Hope, Burne-Jones, 7x20     4 00       Hosea (figure), Sargent, 8x21     3 50       Hosea (high per losses)     2 00       Hosea (head), Sargent, 612x812     2 00       Hosea (head), Sargent, 612x812     1 00       Hosea (head), Sargent, 612x812     1 00       Holy Night, Knauss, 12x17     1 25	Aurora, Guido Reni, 19x40
Tope, Burne-Jones, 7x20 4 00	COLORED PHOTOGRAPHS.
Josea (figure), Sargent, 8x21	
Hosea (head), Sargent, $10x12$ 2 00         Hosea (head), Sargent, $10x12$ 2 00         Hosea (head), Sargent, $6^10x8^{12}$ 1 00         Holy Night, Knauss, $12x17$ 1 25	St. Mark's Cathedral, Venice, 16x22.       \$2 50         Grand Canal Venice, 16x22.       2 50         Grand Canal, Venice, 12x18.       1 00         Bridge of Sighs, Venice, 16x22.       2 50

## List of Pictures—Continued.

FACSIMILES IN COLOR.	COLORED PICTURES.
Bridge of Sighs, 12x18.       \$1 00         On the Canal, Holland, 11x16.       50         The Windmill. Holland, 11x16.       50         Apple Trees in Bloom, Bruce Crane, 11x16.       50         Mother and Child, Toulmouche, 18x24.       1 50         The Columbus Caravels, J. G. Tyler,       150	Night on the Sea, Henri Riviere, 22x33.\$ 5 00 Daybreak at Sea, Henri Riviere, 22x33 5 00 The River, Henri Riviere, 22x33 5 00 (Flat decorative treatment, suitable for kindergarten or first grade.)
17x25	POSTERS.  The Piper, 19x25
(Large colored prints in simple col- ors suitable for primary rooms and kindergartens.)	CASTS.
(II) a Disamb (II) banasa misushina)	CASIS.
The Plough (Two horses ploughing).       \$2 00         Heywood Summer.       \$2 00         "In the Morning Sow Thy Seed," Louis Davis.       \$2 50         Love Rules His Kingdom.       2 00         St. George and the Dragon, Heywood Sumner       3 00         Spring, Heywood Sumner       1 75         Summer, Heywood Sumner       1 75         Autumn, Heywood Sumner       1 75         Winter, Heywood Sumner       1 75	Samothrace Victory, height 48 inches \$8 00 Samothrace Victory, height 18 inches 2 50 Venus de Milo, height 36 inches 3 50 Venus de Milo, height 18 inches 1 00 Diana the Huntress, height 42 inches 15 00 Flying Mercury, height 30 inches 1 70 Young Augustus, height 22 inches 2 55
SERIES OF TEN COLOR PRINTS.  (Illustrating "Mother (toose" stories. Suitable for lower grades. Size 13½x18½ inches.) By Mrs. Perkins.	Laughing Boy, Donatello, height 16 inches
The King in the Countinghouse         50           The Queen in the Parlor         50           The Maid in the Garden         50           My Mary, She Minds Her Baby         50           Dance to Your Daddy         50           Gray Day         50           Blow, Wind, Blow         50           The Knave of Hearts         50           The King of Hearts         50           There Was a Girl in Our Town         50	RELIEFS.  Singing Boys, Della Robbia, 15x20 \$2 50 Singing Boys, Della Robbia, 7x11 50 Trumpeters, Della Robbia, 10x11 75 St. John, 10x20 1 50  ANIMALS (CASTS.)
INDIANS.  Burbank, E. A.—Series of ten portraits of famous chiefs. Color prints.  Mounted on gray mat; 10x13, each 25 Ostertag, B. Reading the Declaration of Independence. Color print; 26x32 3 00	Lion, standing, Barye, 6x10.       \$1 00         Lion, crouching, Barye, 6x10.       1 00         Tiger, crouching, Barye, 6x10.       1 00         Wolf, Barye, 6x10.       1 00         Horse, 6x15½.       2 00    October, 1900.

#### SOME TYPICAL ILLINOIS SCHOOL HOUSES.

Compare plates I, II, III, IV and V with VI, VII, VIII, IX and X. The buildings in the two groups do not differ much in cost. The surroundings of the first group are a reproach to any district, however small. A live teacher can improve them by planting even one tree. The county superintendent should aid him by a timely appeal to the pride and public spirit of the directors and people. Such surroundings as are shown by the second group are possible anywhere in Illinois. They tend to increased respect for the school as well as increased self-respect on the part of pupils and teachers. There are two thousand of the first kind in Illinois. They must go!

# SOME OF THE BEST COUNTRY SCHOOL HOUSES IN ILLINOIS.

Plate XI.

Lane's school house, near Paris, Edgar county. Built 1899. Cost, \$1,200. Directors: Wm. Dickenson, John Moffitt and C. A. Austin. County Superintendent, George H. Gordon, Paris. Architect, N. Gaunt. A model.

Plate XII. District 2, township 45-5, McHenry county. W. E. Wire, Hebron, County Superintendent.

Plate XIII. District 3, township 45-5, McHenry county. Basement and floor plans sketched by Superintendent Wire.

Plate XIV: "Cottage Hill" school, Sangamon county. S. A. Bullard, Springfield, architect. Charles VanDorn, County Superintendent.

Plate XV. A one-room building in Cook county. Patton, Fisher & Miller, architects, Chicago.

Plate XVI. A one-room building in Cook county. G. W. Ashby, architect. A model.

Plate XVII. A two-room building in Cook county. G. W. Ashby, architect.

Plate XVIII. A two-room building in Cook county.

Plate XIX. The Polo, Ogle county, school building. Dedicated December 1899. A model.

Plate XX. An Ohio idea. The Kingsville school. Pioneer in that state in consolidating small schools. See page 51, XXIII biennial report.

### SOME RURAL SCHOOL INTERIORS.

- Plate XXI. A country school house where it was said that "trees will not grow." Interior of the same. The nearest farm house.
- Plate XXII. A "heating terror." Observe the stove in plate XXI also.
- Plate XXIII. A school room stove made comfortable and effective. The only substitute for a basement heater.
- Plate XXIV. A cozy interior in Cook county, which so pleased a Chicago gentleman who happened to look in out of curiosity, as he was driving by, that he sent to the school the fine picture seen above the blackboard.
- Plate XXV. An unattractive exterior, made charming within by tinted walls, pictures and the good taste of an artist teacher. May her tribe increase.
- Plate XXVI. "Going home from school."









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