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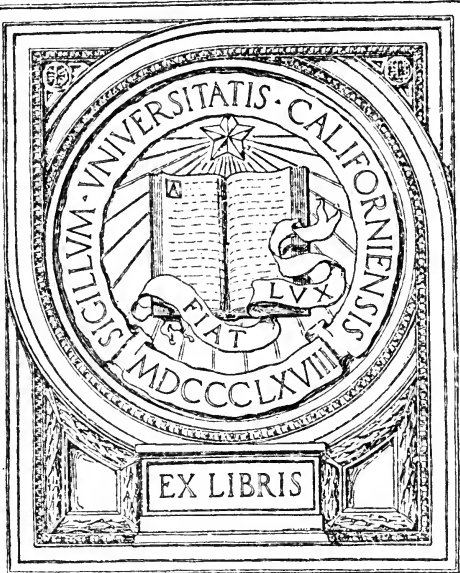
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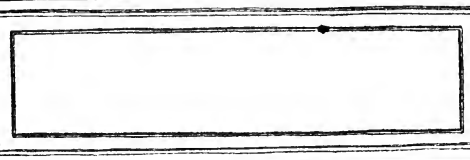
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School Architecture

Georgia

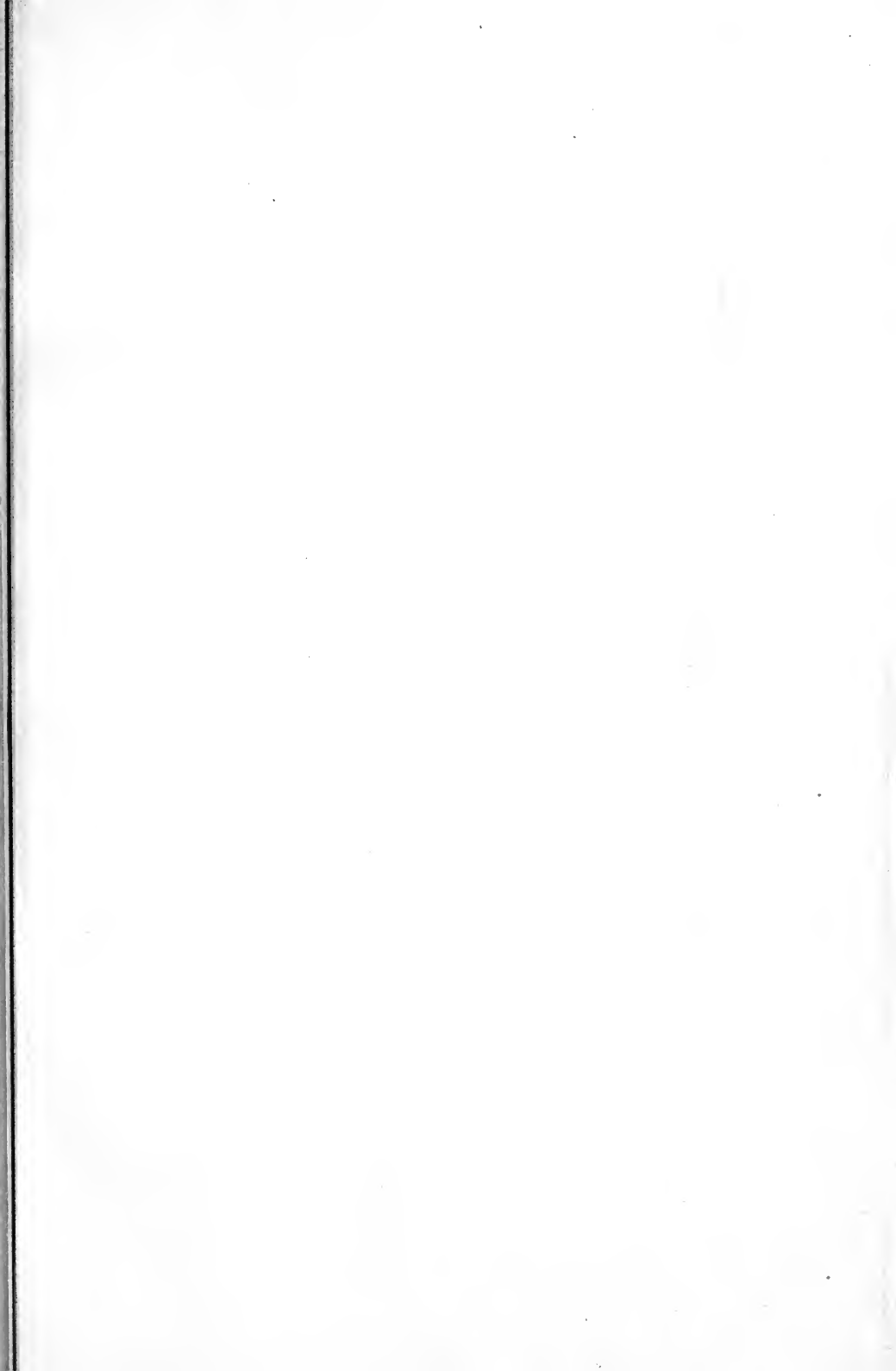


Department of Education

312 S. WASHINGTON STREET, SACRAMENTO, CALIF.

1917

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School Architecture

Plans and suggestions for building
one, two, three, and four-
room schoolhouses



Department of Education
State of Georgia

M. L. Brittain, State School Superintendent
Atlanta, Ga.

1911

LB3221
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Foreword

IT is almost as cheap to build an attractive schoolhouse as an ugly one. ❧ Georgia, like old Greece, is a beautiful land. ❧ Mountain and sea, forest and river, tree and flower unite to make it as fair as the poet's loved Italia. ❧ This beauty is a practical asset and should not be marred by dreary, stable-like school houses and unkempt grounds. ❧ Our boys and girls should not be trained in the midst of slattern and shiftless surroundings.

Preface

FREQUENTLY requests are received at the State Department of Education for plans and suggestions for school houses. It is a well-known fact that properly constructed buildings can be erected in many cases at a cost very little more than for poor houses. To aid by furnishing suggestive material and with the further idea of creating more interest in the matter of tasteful and appropriate school architecture, the services of Mr. Hal Hentz, of the firm of Hentz & Reed, architects, were secured in the preparation of the following plans.

They have been arranged in accordance with the modern principles of ventilation and light. As will be seen by the pages that follow, the instructions given the architect were to prepare three different styles each for the one, two, three, and four-room school house plans. The three designs are colonial, mission or bungalow, and a third as simple and economical as possible.

Besides these twelve plans, I am under obligations to Mr. L. A. Kolbach, of the United States Department of Education, for aid in securing several excellent designs which have attracted attention in other parts of the country.

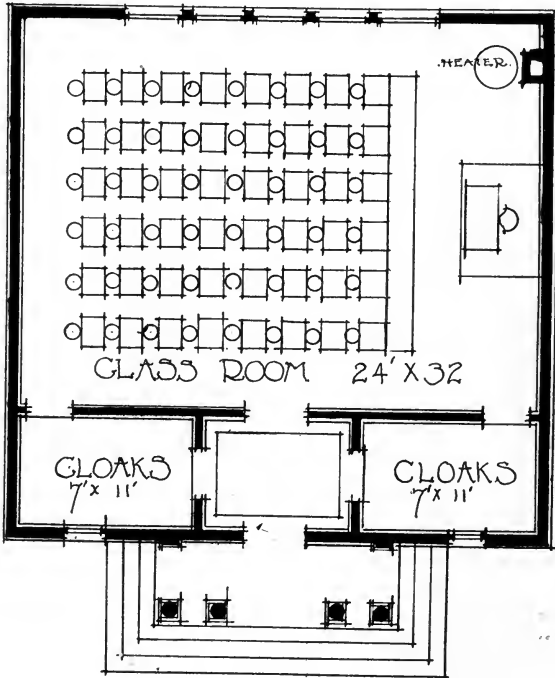
In addition, pictures and plans of other and sometimes more elaborate buildings will be found in the pamphlet, though these last are intended to be merely suggestive. If a community desires a house larger than a three or four-room building, it would be economy in the end to secure the services of an architect. The purpose of this pamphlet, mainly, is to furnish practical aid to those communities unable to secure the services of a trained expert, and who are compelled by circumstances to rely chiefly upon their own efforts in building.

Well-designed, well-built schools, with something of artistic grace and beauty manifest in structure and grounds, will have an influence for good, not only upon pupils, but upon the entire community. Preventable ugliness is a sin, especially when it is forced upon children in the formative years of their lives, and the pity of it is that the barn-like houses in which so many of our children are taught would cost little if any more if something of taste and beauty were evident in the houses and grounds. Let us make the school what it should be—the most attractive place in the community.

Sincerely,

M. L. BRITAIN,

State School Superintendent.



- C -

SKETCHES SUGGESTING PLANS AND ELEVATIONS FOR ONE, TWO, THREE, AND FOUR-ROOM SCHOOLHOUSES

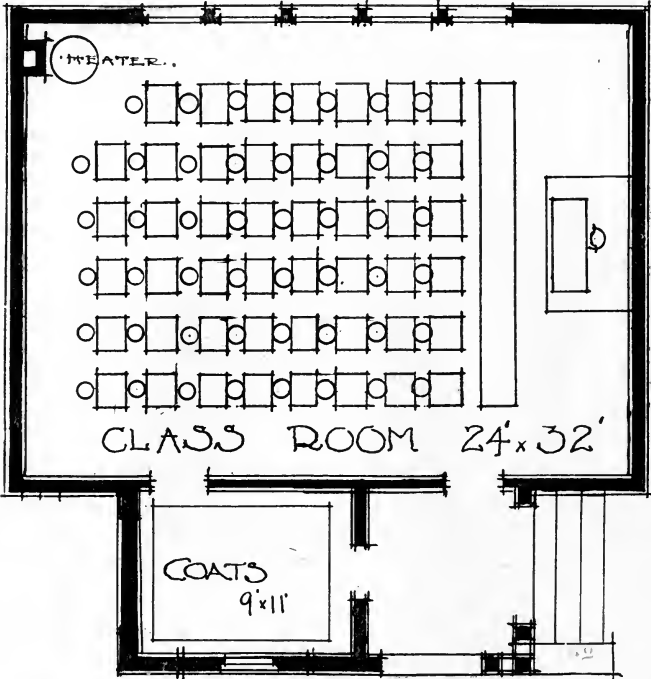
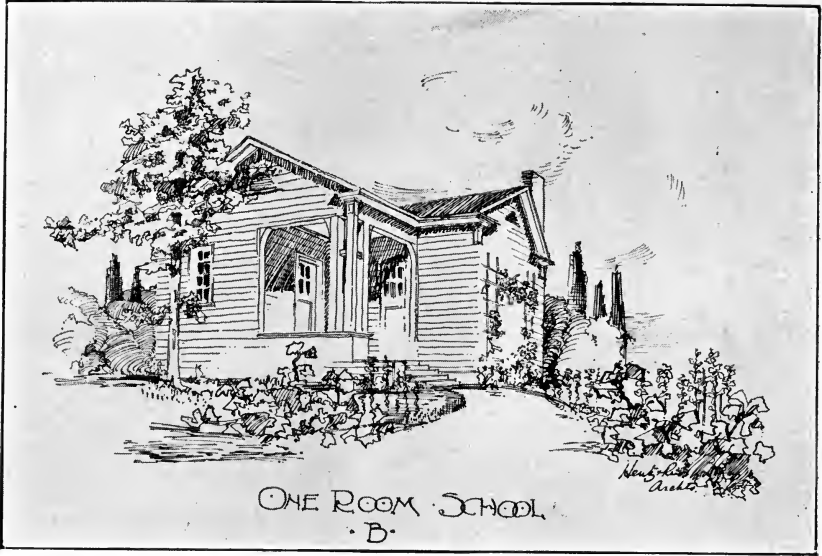
THE accompanying sketches of one, two, three, and four-room schools are suggestions for the rural school house, and are an effort to combine good taste and economy of construction with logical planning.

Special attention is called to light, ventilation, and sanitation. Simplicity of construction and of the structure does not necessitate ugliness. Good proportions and pleasing compositions can always be had.

Inexpensive features can be incorporated in the planning of the simple school house that will not only add to its beauty, but also will serve as a practical means in arousing the interest of the pupil. Experience has taught that one of the strongest appeals to the pupils is to interest them in beautifying the school. Therefore simple and inexpensive means of doing this are provided. The use of the trellis or lattice work and flower boxes under the windows is suggested. Lattice work made by simple $\frac{1}{2}$ x 1 inch material tacked together into simple, pleasing patterns, and blocked to walls, leaving a two-inch space between same and walls, not only affords a sparkle of light and shadow that gives to the wall a finished effect, but affords a stand for vines to grow. Flower boxes under the windows likewise are a part of the house, and have practical value as a place for flowers that are under the care of the pupil together with the teacher.

The importance of locating the school house on a high elevation with an abundance of shade trees can not be too strongly emphasized. The sketches are along practical lines, with suggestions that not only may add charm and quaintness to the effect, but should arouse the interest of the pupil.

The following outline briefly describes the sketches, and approximates the cost.

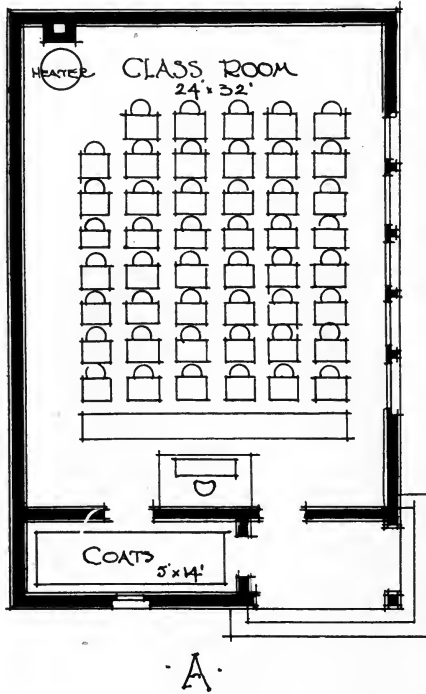


• B •

One-room school "A" is most compact and economical, providing for small entrance porch, coat closet, and large class room. The light is all from one side, pouring over the left shoulder of the pupil. If further light or ventilation is needed it should be on the opposite side, but never in the face of the pupil or the teacher. It should be built with weatherboard or shingle siding, with a shingle roof. It can be erected from \$275.00 to \$400.00. "B," essentially the same scheme, provides for a larger entrance porch, and is not quite as simple or economical in construction as "A." It should be built of weatherboards for exterior. Its cost is estimated at from \$300.00 to \$425.00. "C" is rather more elaborate in plan, providing separate cloak rooms for girls and boys. Its exterior is classic in treatment, and suggests more the public building than either "A" or "B." It should be built of brick, but can be made of wood frame with weatherboards for exterior. Its cost is estimated at from \$700.00 to \$900.00; in brick at from \$1,000.00 to \$1,200.00.

Two-room schools. "A" or "B" is an economical plan and provides separate class rooms for boys and girls, and a common stack for the heater flues. The exterior of "A" and "B" are similarly treated along the bungalow style. "A" is less expensive and simpler in treatment than "B." A lattice border around the windows of the cloak room is suggested. Each should be built of shingles or weatherboarding on the exterior, and should cost from \$900.00 to \$1,200.00. "C" is classical in treatment. Its plan elongated affords an opportunity for cutting windows in rear and providing cross ventilation and light without blinding either pupils or teacher. The use of columns give it the dignity of a public building. The bell tower suggests the school and adds to the effect, though it can be omitted without harm to the building. This can be built in weatherboard or brick. If in wood its cost is estimated at from \$1,100.00 to \$1,300.00; if brick from \$1,500.00 to \$1,800.00.

Three-room schools. "A," of the bungalow type, can be made quite charming with its separate entrances flanking the middle class room. Again the use of lattice work is suggested. In the gables plaster between the open timber affords a unique treatment.



“B,” with the same plan as “A,” is treated in the Mission or Spanish style. It can be built of either rough brick stuccoed over, or if frame, with metal lath nailed to a storm sheathing, and on this the stucco applied. If the tile roof is too great an expense, shingles stained red will give a similar effect.

“C” is again the classic treatment, presenting the same exterior treatment as the classic two-room school previously mentioned, and like that can be built of either brick or wood; if in wood the cost is estimated at from \$1,600.00 to \$1,900.00; if in brick from \$2,000.00 to \$2,500.00.

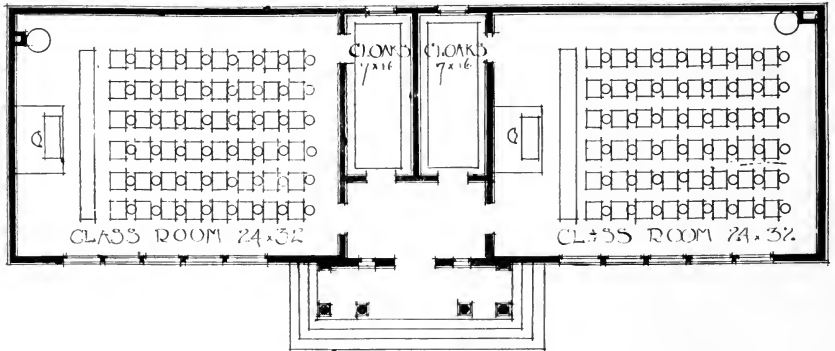
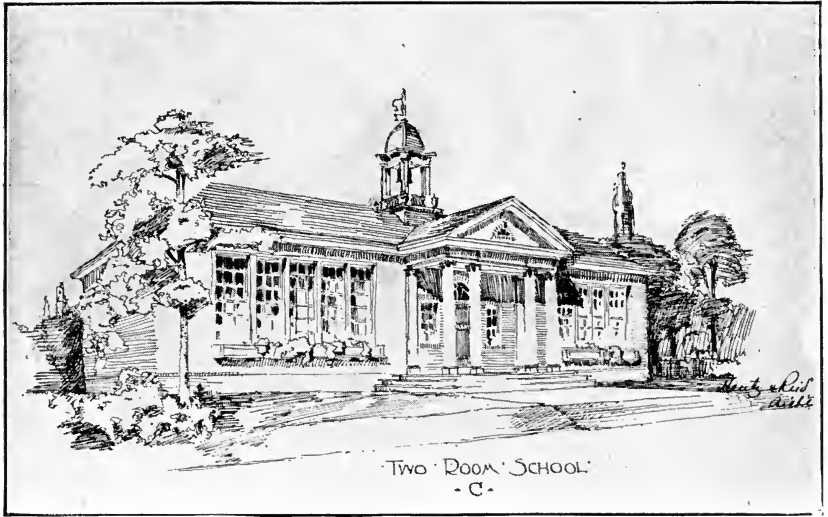
Four-room schools. “A,” “B,” and “C” of the four-room schools have similar plans, providing two class rooms and two coat rooms on the first floor and two class rooms on the second floor, with small library on one side and teachers’ room on the other, corresponding to two coat rooms of the first floor, each to be entered from stair hall. Double stairs are shown, providing ample facilities for exit in case of fire.

“A” is quite simple and economical in treatment, and does not suggest the school idea. It can be built for from \$1,800.00 to \$2,000.00.

“B” is brick up to the window sill of the second floor, and above this plaster with open timber, the plaster applied to metal lath nailed to sheathing. Its cost is estimated at from \$2,500.00 to \$3,000.00.

“C” is classic in style, and preferably should be built of brick. Its cost is estimated at from \$3,000.00 to \$3,500.00.

The estimated costs referred to are based on the simplest and most economical treatment, and will vary according to the locality, its accessibility to a depot for materials, etc., and the local cost of labor.



THE SCHOOL GROUNDS AND SCHOOL ARCHITECTURE

The School Site

THE school should be located as near as possible to the center of the district. It should be accessible to the principal public highway, but far enough removed from it to be free from dust and distractions. Where a consolidated district provides transportation for its more distant pupils, it is sometimes best to place the building nearer to one end of the district, so that the pupils from that section may walk to school, leaving only the distant pupils from the other section to be transported.

A school lot should not be less than one acre, and the wise school board will secure school grounds containing three or four acres. With a four-acre tract it is possible to have a play ground and space for a school garden.

The best shape for a one-acre lot is 10 rods front by 16 rods deep; for a two-acre tract 16 rods front by 20 rods deep; and for a four-acre tract 20 rods front by 32 rods deep.

The lot selected for a school house should be well drained, but not so rolling as to cause troublesome washing. Parts of it should be level enough to furnish satisfactory play grounds and athletic field.

In some sections it has been the custom to place the school house on the most barren spot in the district. With the advent of the school garden it is desirable that a more fertile soil should be selected.

Location of Buildings on the Lot

If the lot selected has the shape above indicated, it is best to place the building so that the school yard left back of it is a square. This gives a large back yard for play grounds, and front and side yards large enough for flowers, scrubbery, and a school garden. The school garden should never be allowed to trespass upon the play ground space.

If the school yard is small, the closets for boys and girls should be placed at the extreme back corners, and should have

screens, which should be covered with vines. If the yard is large the closets should be placed on the sides of the lot at a convenient distance from the school house, and the rear may then be reserved for a ball ground or athletic field.

It is frequently desirable to provide stalls for horses at the school building. These, too, should be placed on the rear of the lot, and a screen of vines should cover the walls.

Trees should be planted around the entire school lot, and it should also be enclosed by a good fence.

The School Building

The adaption of the school room to its purposes, and not the external appearance, should determine the architecture. The school room is the unit in all school house construction. The room should embody certain essential principles, and should not vary widely from the standard described below.

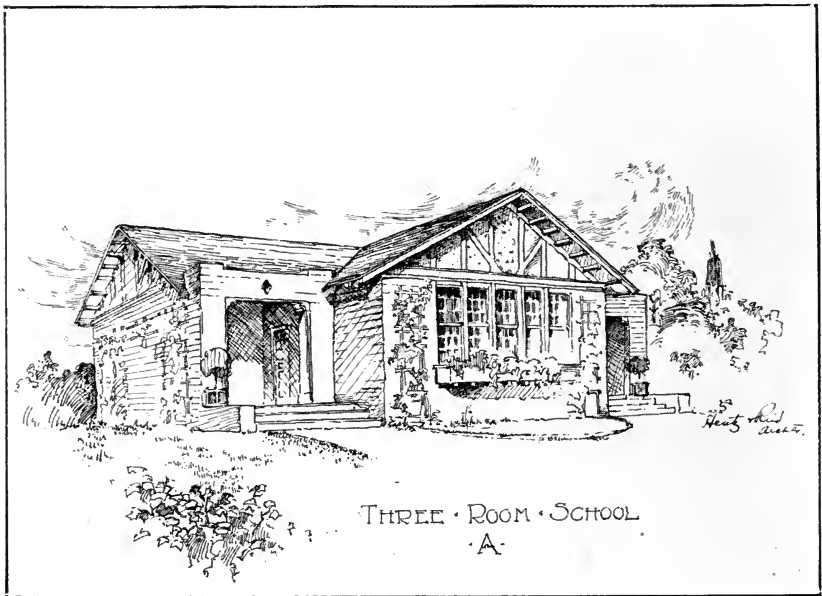
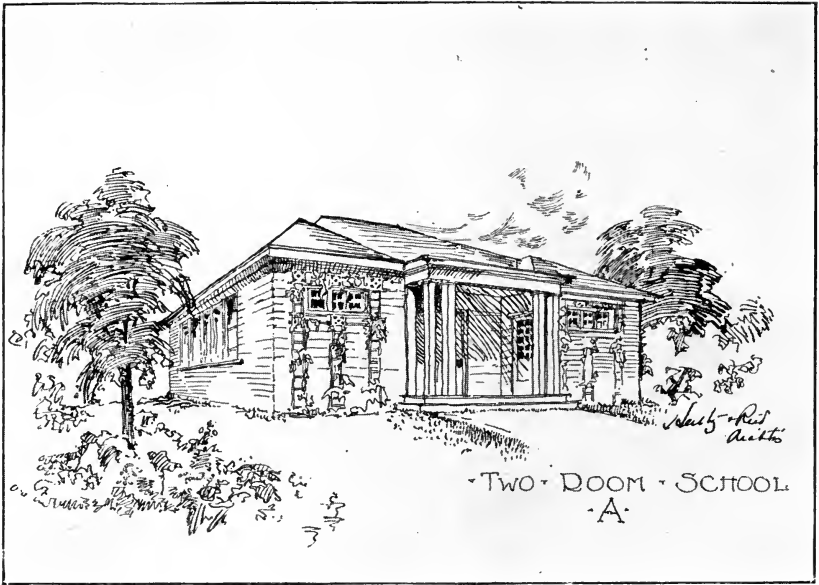
The number of these standard school rooms in a building will be determined by the size of the school to be accommodated, and the finish and architectural adornment will depend on the taste of the community and the money at the disposal of the trustees. It is possible to embody the essential principles of good school construction in a very inexpensive building, or in a very elaborate one.

The Standard Class Room

The class room for the average class should be 24 by 32 feet and 12 or 13 feet high.

Whenever possible, the building should be placed so that the principal light will come from the east or north. This avoids the direct glare from the sun.

The windows should be placed on the long side of the room, and on the left side of the pupils. They should be close together, so as to avoid cross lights and shadows. The front window on the side should not be placed beyond the front row of desks, and the rear window should be near the rear wall. No class room should have windows on opposite sides. It is better to have the light come from the left side of the pupils only. There should be no windows to the front or on the right of the pupils. Windows placed in the rear should either be transom



windows above the blackboard, or should be provided with shades to protect the eyesight of the teacher. Since the best light comes from above the heads of the pupils, the tops of the windows should be within six inches of the ceiling. The area of the glass in the class room should be one-fifth to one-fourth the floor space. The room 24 by 32 feet should have at least 150 square feet of window space. This would mean five windows eight feet high and three feet wide banked on the left side, and two such windows in the rear. All window sash should be hung on pulleys.

In the construction of the school house, we must consider the use of the room inside, and not our conceptions of exterior symmetry. The plans which follow this pamphlet will show how this standard school room can be worked into a building which is also presentable on the outside.

Window Shades

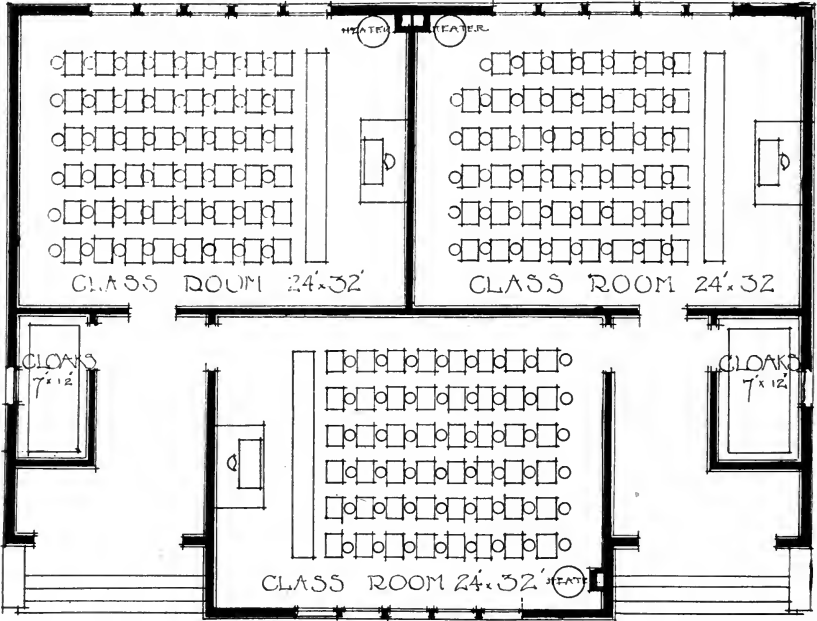
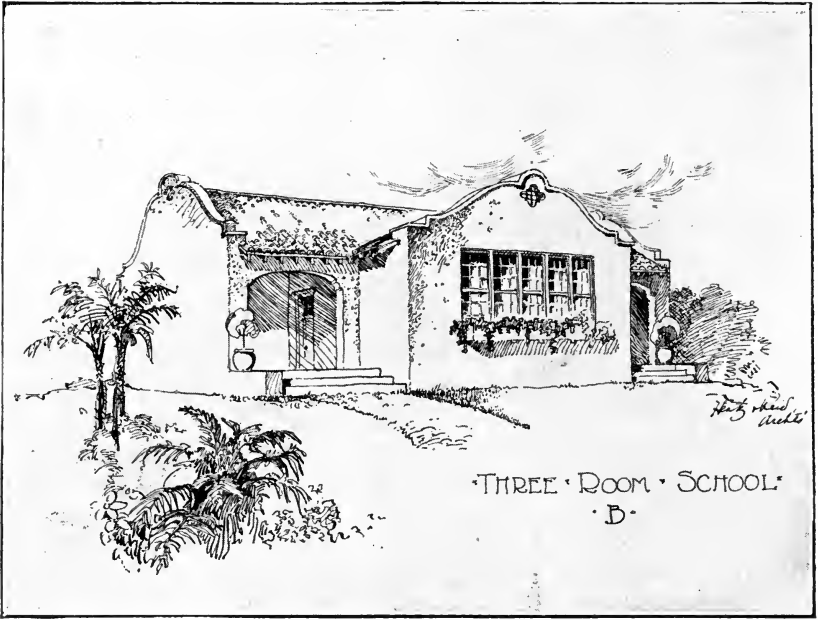
The best shade for a school room is one which rolls from the bottom on a spring roller with handle attached and which is hung on a cord running through a stop pulley at the top of the window. Such a shade may be placed in any position on the window.

Blackboards

Blackboards 36 to 48 inches wide should be placed on all walls where there are no windows. They should be placed 28 inches from the floor in rural schools. All boards should be provided with ample chalk rails for holding crayon and erasers.

The most economical material for blackboards in the ordinary school is the woodpulp composition board, now manufactured under various names. This may be had in convenient lengths, and is durable and easy to put in place. The dark green board is very agreeable to the eyes. The writing surface of this board may be renewed by an application of liquid slating.

In the front of each class room should be a movable platform five by six feet and six inches high for the teacher's desk and chair. This platform gives the teacher a better command of the class during general exercises and study periods.



· A & B ·

Library Cases

Near the teacher's platform, or in some other convenient place in the class room, a book case with glass doors and with locker underneath could be built in the wall. This should be provided with lock and key.

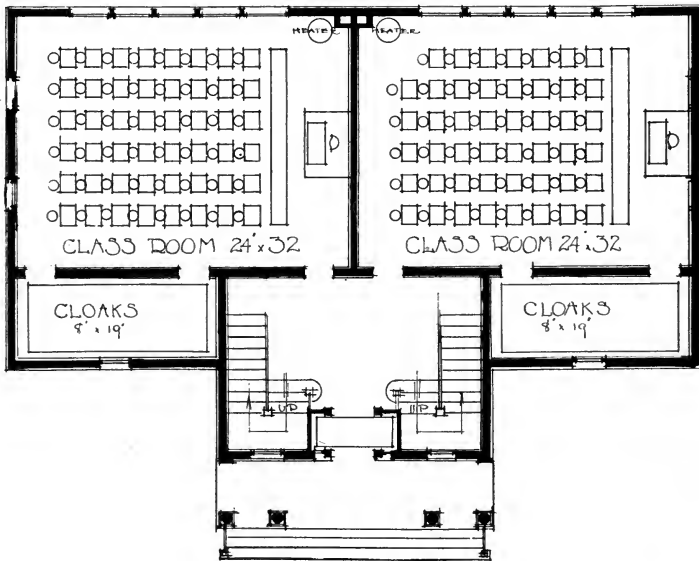
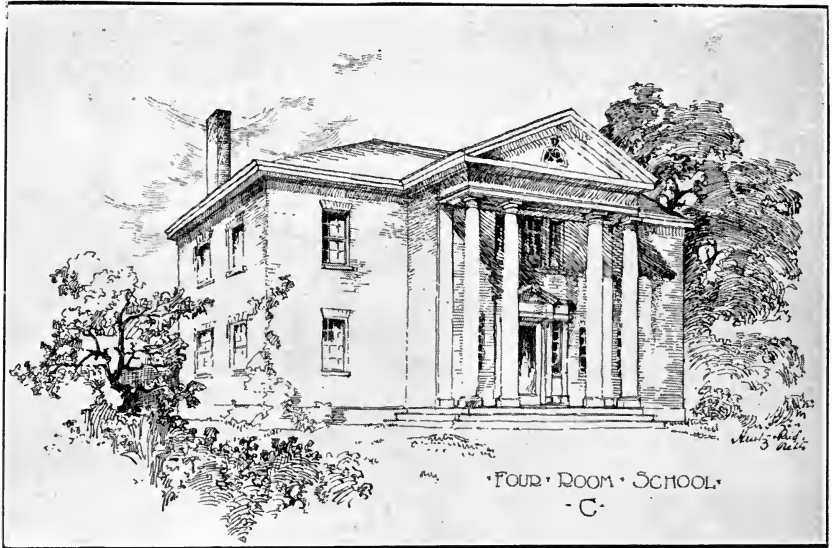
The Floor

The floor of the room should be double and air-tight, the lower floor being laid diagonally, and the top floor tongued and grooved, with building paper between, and should be stained with a dark oil stain. Much sickness, discomfort, and poor work in school are caused by defective floors. The entire exterior of the building should be covered with storm sheathing, nailed diagonally; on top of which is nailed the weatherboarding, with building paper between. The double floor and sheathing will make the building much more comfortable and will make quite a reduction in the fuel bill.

Heat and Ventilation

This subject has never received sufficient attention in the rural school. The ordinary heating apparatus of these schools consists of a square box stove, placed in the center of the room, from which heat is received by the pupils through direct radiation. This usually means that pupils seated near the stove are too hot, and that those distant from it are too cold. Its position in the center of the room interferes seriously with the seating arrangement.

A slightly greater investment will secure for the school a jacketed stove which heats the room by producing a circulation of warmed air through all parts of it. The principle of this stove is very simple. The cold air is taken through a pipe from outside the building, and is carried through or under the sheet iron into contact with the hot stove on the inside. It is there heated, rises to the ceiling, and settles down over the entire room, producing a uniform temperature. As the impure air in the room settles to the floor, it is forced up through a pipe or wall register into a section of the flue, and carried from the



'A' B & C
FIRST FLOOR

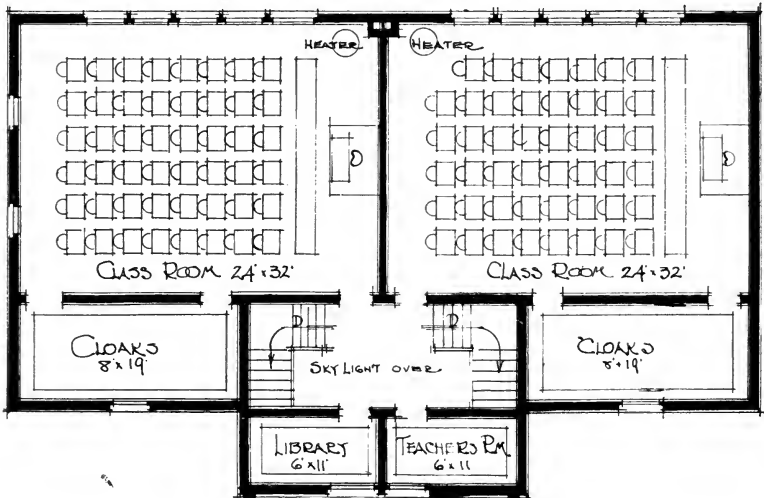
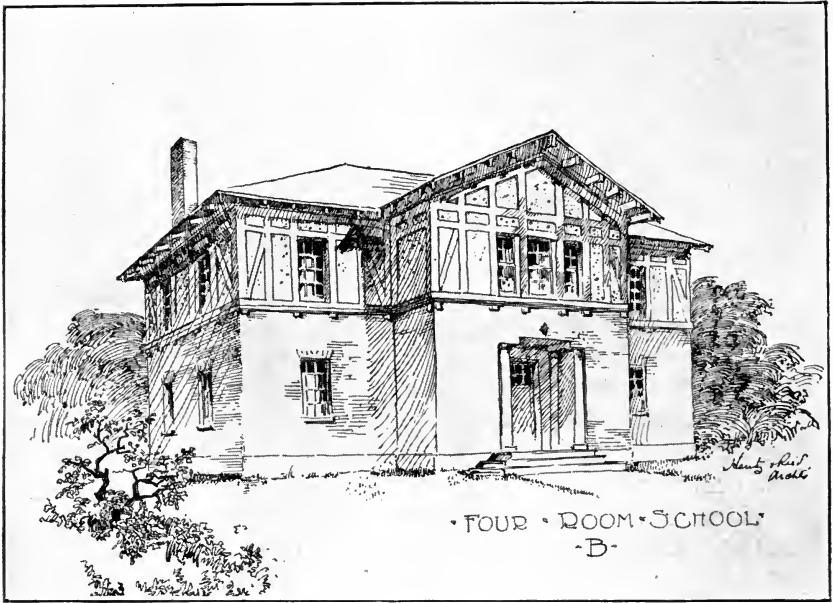
building. The jacket prevents undue heat for the pupils seated near the stove.

There are a number of patented stoves of this type which are said to be very satisfactory. A tinner or blacksmith, however, can very easily make a tin, zinc, or sheet iron jacket for the ordinary stove, which will be very satisfactory. The jacket should extend at least eight inches above the stove, and should, of course, be provided with a door, which may be opened for putting fuel in the stove. The cold air may be brought to the stove through a grated opening in the floor within the jacket, to which a duct two feet square, or equivalent, leads from under the floor outside of the building. The exit of the impure air should always be placed near the floor, and the smoke flue and the ventilating flue should be placed side by side, so that the heat from the first may assist in causing the draft essential to satisfactory ventilation through the second. If this opening is placed near the ceiling, the air warmed in the jacket will pass out of the room immediately without settling. The temperature of the school room should be kept between 68 and 70 degrees. The windows should be opened and the room thoroughly aired at recess and at the close of the school session. Thirty cubic feet of air per minute per pupil, or 1,800 per hour, is the accepted standard for school room ventilation.

Seating

A room 24 by 32 will easily seat 48 pupils in single desks. The initial cost of single desk seating is greater than that of double desks, but this is more than balanced by the better order and discipline made possible by the single desks. The desks in such a school room will be arranged in six rows, each containing one "front," one "rear," and seven "completes." School desks are made in standard sizes, and are numbered from No. 6, the very smallest desk, adapted to kindergarten and primary pupils, to No. 1, made for college students.

For a one-room country school with 48 pupils there would be needed two rows of No. 5, two rows of No. 4, and one row each of No. 3 and No. 2. In an ungraded school two No. 4 recitation benches six feet long should be provided. For a larger school, desks should be ordered in about this same proportion of sizes.



• • • •

A B+C
SECOND FLOOR

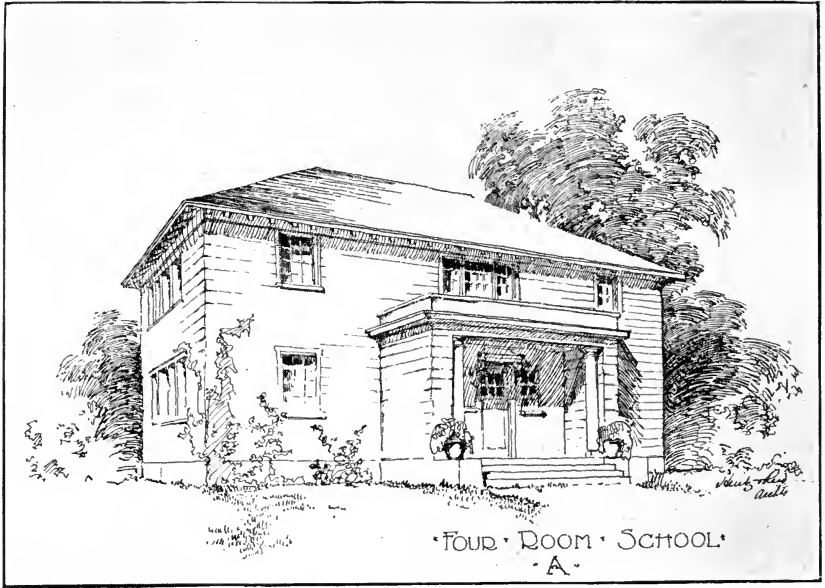
The desks of the numbers given above vary in height and size of tops, and the size should determine the distance between backs as they are placed upon the floor. The spacing distance from back to back for a No. 5 is 22 inches, for No. 4 is 24 inches, for No. 3 is 26 inches, and for a No. 2 is 28 inches. Any attempt to place desks of varying sizes in line across the room will necessitate improper posture by the occupants of some of them. Especial care should be taken to see that desks are properly put together. This will double the life of the desk.

Many school authorities prefer to screw the desks to one and one-half by three inch strips, instead of fastening them to the floor. The rows are then easily moved for cleaning the floor or for convenient seating when two or more rooms are thrown into an auditorium. The aisles should be about two feet wide, and a broad aisle should be left all around the school room.

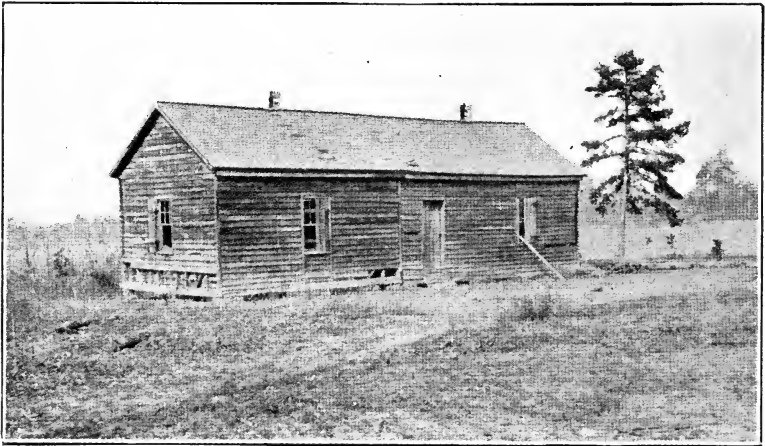
The cost of seating a room with the best desks, according to the above specifications, should be about \$115.00 at the factory. There are great differences in the quality of school desks. It is always poor economy to purchase a poor desk at any price. The cheap all wood desk, sometimes sold, should be avoided.

The Tinting of the Walls

The beauty and attractiveness of the school room will depend largely on the painting and the tinting of the walls. This subject is usually very much neglected. The glaring white walls, and deep blues, yellows and reds should be avoided. For rooms where the lighting is not the best, a cream is desirable. In general the best color for the school room is green. The wainscoting and woodwork should be a deep olive, the walls up to the picture moulding a sage green, and the ceiling a lighter stone green or cream color. All inside coloring should be "dull finish." For the woodwork the green stain and a "wax finish" is the cheapest as well as the best. An inferior grade of lumber can be used on the interior if well painted. All interior woodwork should be flat and plain, and all deep cut moulding avoided as far as practicable. These mouldings catch dust and are difficult to keep clean. A picture moulding should be put on the walls of the room about 18 inches below the ceiling. A good finish can be gotten by wainscoting the space around the room



COMPARE THE FOREGOING PLANS WITH THE SHABBY OLD SCHOOLHOUSE BELOW
NOTE THE DREARY SHIFTLESSNESS IN THE VERY ATMOSPHERE OF SUCH A SCHOOL



below the blackboard level, although this is not as sanitary or desirable as the plaster and baseboard. A sanitary finish can be obtained by omitting all wood casing around the windows, and plastering the corner round against the window frame, and using a very narrow baseboard and few mouldings. The plastering should have a very fine sand finish.

Cloak Rooms

It is unasnitary to pile hats and wraps promiscuously in the corner of the class room, or to allow wet coats and umbrellas to dry out in the room occupied by the pupils. Every class room in a school building should be provided with a cloak room adjacent to it sufficiently large to accommodate the hats and cloaks of the occupants. It should be provided with shelves and two rows of hooks for hats and coats. It should in all cases have outside ventilation by windows.

Fuel and Work Room

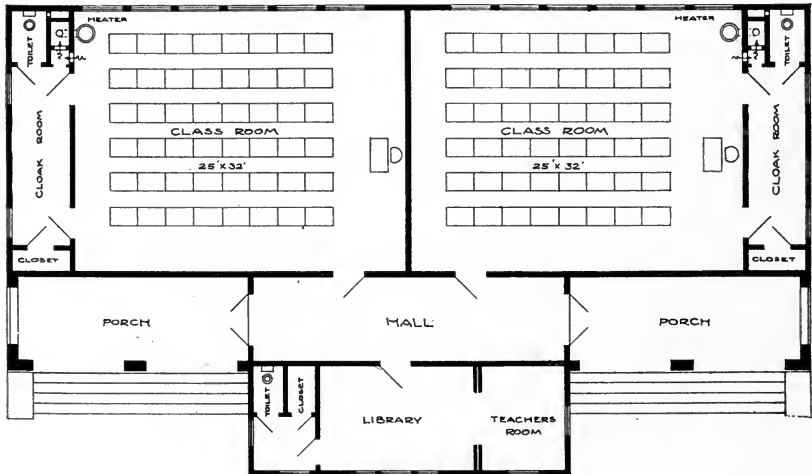
Every school building should have a place in which fuel can be stored. A pile of wood in the room itself does not contribute to an orderly class room.

The best schools everywhere are recognizing the fact that there are many exercises other than study and recitation from the text books of the course which can be profitably conducted in connection with the rural school.

In the city schools manual training is now recognized as a subject worthy of a place in the curriculum. For the country boy the varied exercises of the home and farm may take the place to some extent of the formal manual training course. Nevertheless, we believe that in every country school there should be the ordinary tools of the country home, such as the hammer and nails, brace and bit, paint and brushes, saw, axe, and plane; and the boy should be encouraged to use them in making the school house and grounds more comfortable and attractive. An admirable beginning for a school improvement league among the children of a district would be the acquisition of a few school tools and a little lumber, coupled with a few suggestions from the teacher as to desirable repairs and improvements in the building and surroundings.



DESIGN FOR A TWO-ROOM BUILDING IN THE MISSION STYLE.



FLOOR PLAN OF THE SAME

Auditorium

As the school becomes more and more the center of community life, the school auditorium will become more important and necessary as a part of the school building. When the finances of a district will not allow the construction of a separate auditorium, it is possible to arrange the building so that two rooms may be thrown into one when the occasion demands. If the desks are not screwed to the floor, but are attached to strips, as indicated above, they may be easily shifted so as to face in one direction when desired. If the teacher's platforms are movable, they, too, may be shifted to form a temporary stage. In the plans presented the rooms may easily be thrown together in this way.

The Equipment of the School Room

The school room should contain the accessories named below as a minimum equipment for good work:

1. A commodious teacher's desk with drawer and locker.
2. A comfortable teacher's chair and two extra chairs for visitors.
3. A call bell.
4. A box of good crayon, and a dozen wood-felt erasers.
5. Two or three blackboard pointers.
6. A good set of maps, including political maps of the world, the United States, North America, Europe, Asia, and Africa, and a physical map of North America. It is most economical in the end to buy these maps in the steel case mounting.
7. A good medium-priced 12-inch globe.
8. A good dictionary.
9. A clock.
10. A thermometer.
11. A school library.

In addition to these, the school should gradually acquire sets of weights and measures, charts to assist in the teaching of the school subjects, and other auxiliaries suggested by the teacher. The skilled teacher and responsive pupils will gradually develop a school museum which will greatly enrich the work.



FRONT ELEVATION

ALABAMA STANDARD SCHOOLHOUSE DESIGN. ELEVATIONS



SIDE ELEVATION

ALABAMA STANDARD SCHOOLHOUSE DESIGN. ELEVATIONS.

School Room Decoration

A school room arranged and equipped as described above, kept clean, and occupied by an enthusiastic teacher and busy, interested children, will require very little decoration to complete it. Avoid especially burdening the walls with cheap chromos. A few good pictures, which appeal to the understanding of the children, framed in good taste and hung artistically, will do much to cultivate the æsthetic sense of the pupils.

Doors

All exterior doors should open outward, and the doors should be kept unbarred and unlocked while school is in session. It is best for the class room doors to open inwards so the teacher can have control over her pupils in case of panic. All entrances should be wide and be provided with a porch or vestibule so children can find shelter if they come before school is opened.

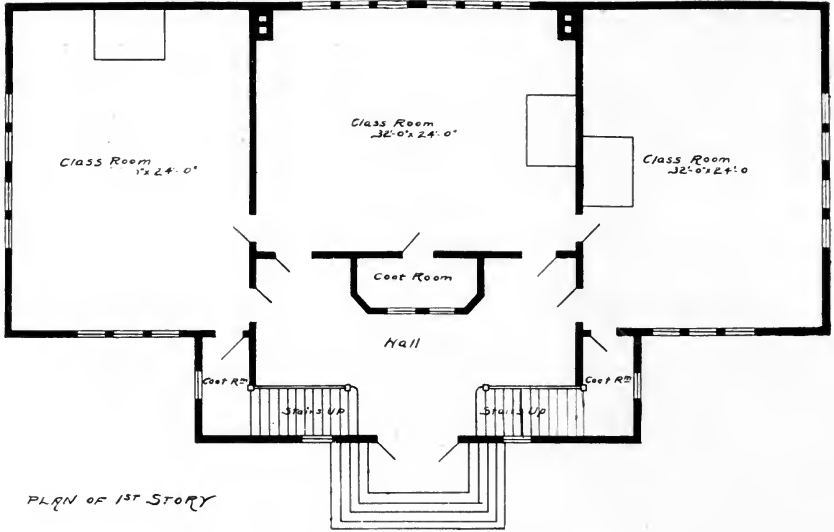
Corridors and Stairways

In schools of more than two rooms the corridors should be at least ten feet wide. The stairways should be at least five feet and the flights should be broken by landings whenever this is possible. Winding stairways, sharp turns, irregular treads, and steep ascents should, of course, be avoided.

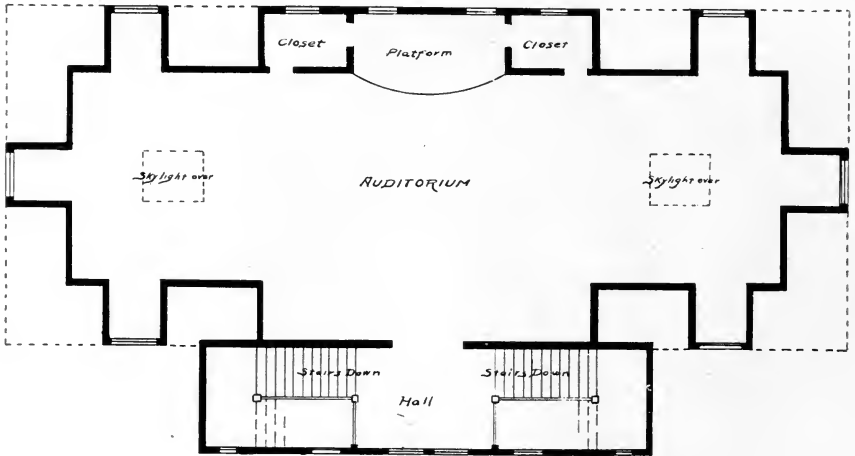
Exterior Painting

No school house should be considered as complete until the whole exterior has been given three coats of good lead and oil paint. This not only adds to the beauty of the building, but prolongs its life as well. In selecting the paint, glaring colors should be avoided and neutral tints selected. Good taste in the selection of colors and harmonious trimmings will make the school building contribute to the elevation of the æsthetic taste of the whole community. Good results can be gotten by the use of stained shingles on the sides of the building.

—Adapted from *Clemson College Bulletin*, by R. E. Lee.



ALABAMA STANDARD SCHOOLHOUSE DESIGN. FIRST FLOOR PLAN



ALABAMA STANDARD SCHOOLHOUSE DESIGN. SECOND FLOOR PLAN.

The School Yard

With an attractive school building, do not stop until the yard is in harmony with the house. Strive to make this the most attractive in the neighborhood. It ought to be the one place where its young life is gathered almost daily.

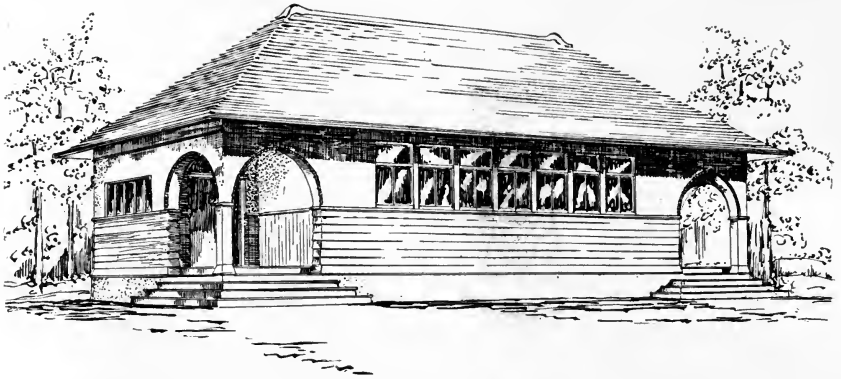
Remember that the permanent effect is to be obtained by trees and shrubs rather than flowers. Arrange in groups or mass, leaving the center open as far as possible.

In selecting plants, choose those which are most common. There are at least a dozen different trees in your vicinity that would adorn the school grounds. Some of these are the oak, elm, maple, dogwood, ash, tulip-tree, and poplar.

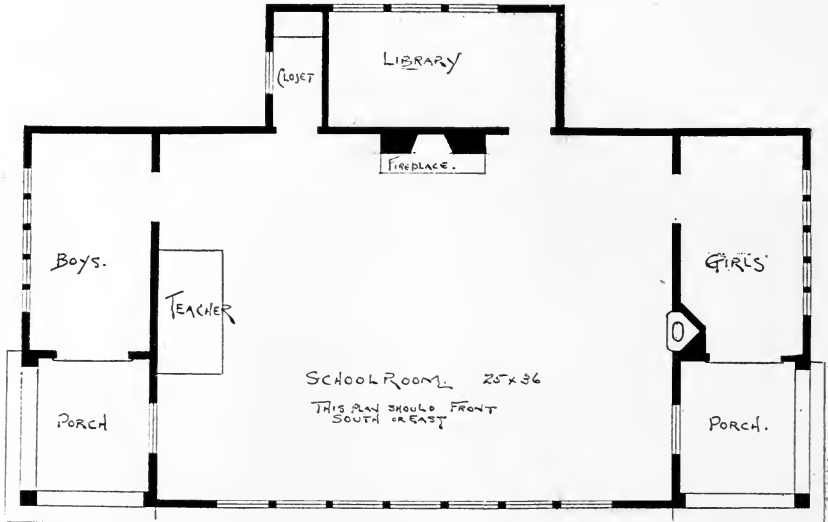
The red or scarlet maple is almost ideal for group planting. Its crimson blossoms give a "joyous color note in the very beginning of spring's overture." These are followed by brilliant samaras or keys and in the autumn the leaves have a splendid coloring with their rich scarlet hues. In early spring the dogwood presents a beautiful array of showy white leaves, incorrectly called flowers, and in the fall its red berries are also effective. Nor must the peach and apple trees be overlooked. The truth is nearly all trees are beautiful.



MODEL ONE-ROOM SCHOOL AT THE WORLD'S FAIR, ST. LOUIS.



PERSPECTIVE OF A CALIFORNIA ONE-ROOM SCHOOLHOUSE. HENRY F. STARBUCK, ARCHITECT.



FLOOR PLAN OF A CALIFORNIA ONE-ROOM SCHOOLHOUSE. HENRY F. STARBUCK, ARCHITECT.

The prettiest fence around any school is that formed by the privet—California or Amoor river—while the wistaria, honeysuckle, or wild rose should be trained over the lattice work in front of the outbuildings.

Such shrubs as the cape jasmine, lilac, snowball and syringa will add much to the appearance of the grounds within a few months. Plant according to some definite plan, securing the help of the mothers in the neighborhood.

The highest educational authority in the world—the National Educational Association—says that children should be daily surrounded by influences that elevate them, that make them love flowers, pictures, and proper decorations, until at last they reach that degree of culture that nothing else will satisfy them. When they grow up and have homes of their own they must have them clean, neat and bright with pictures and fringed with shade trees and flowers, for they have been brought up to be happy in no other environment.

Contrast the two little schools below. What would a stranger think as to the comparison of the two communities in culture and refinement?

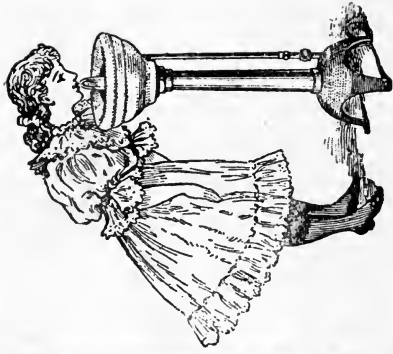




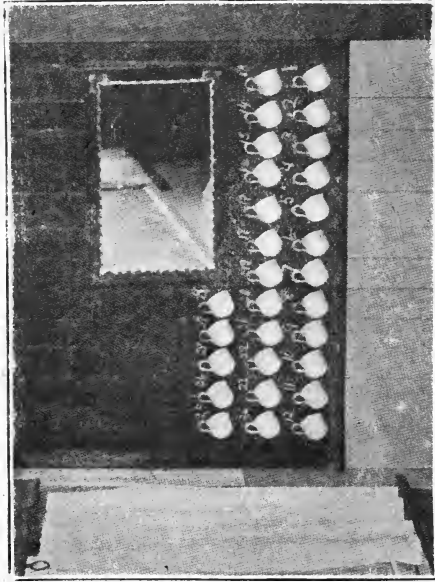
TYPE OF THE GEORGIA DISTRICT AGRICULTURAL SCHOOL BUILDINGS.



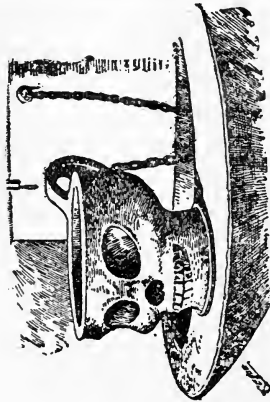
ILLUSTRATION OF CONSOLIDATED SCHOOL BUILDING, FULTON COUNTY, GEORGIA.
 THE THREE SMALL SCHOOLS ABOVE WERE CONSOLIDATED AS SHOWN IN THE LOWER PICTURE DURING THE SPRING OF 1910.



OR THE FOUNTAIN



USE INDIVIDUAL DRINKING CUPS



DON'T USE THIS

CLOSETS

BEYOND doubt the feature of our schools which most needs attention (and has frequently never received it) is the closet. It appears to be regarded as a nuisance without remedy. We seem to be resigned to the idea that our children must be confronted here daily by shameful and sometimes obscene conditions which are a disgrace to civilization. These conditions should no more be allowed at school than at home. The school closets should be kept clean. The responsibility for this should not be placed upon the teacher alone—particularly if she is a young lady.

How should this be done? Put the closets in good condition, provide a lock and key, and require frequent inspection. Furnish lime or other disinfectants when needed. There should be little trouble with ordinary care and attention where there are systems of water and sewerage. The dry closet is the most difficult to keep in a decent and sanitary condition. To aid at this point I have secured the help of Dr. A. G. Fort, of the State Board of Health, who furnishes the following suggestions as to construction:

At the request of Mr. M. L. Brittain, State Superintendent of Education, we have prepared plans and specifications for the building of sanitary surface closets. While incinerators and sewage are better, yet, we realize that it is not every community that can install these systems at their schools, so we here present the next best method, which is considered about 75 per cent. perfect.

It is impossible to overestimate the value to health of the proper building, use, and care of the closet. By properly building the same, flies can be screened from the contents of the vaults, thereby preventing the spread of typhoid fever and summer diarrhœas. The refuse material can be properly disposed of, thereby preventing soil pollution and the spread of hookworm disease, with its fearful results; also the protection of the water supply from contamination. Privacy is insured and the scholars are most apt to form habits, the value of which to health, not to speak of character, will be great.

Adequate means of caring for same should be made in order to make it attractive, so far as possible, and to avoid the dangers attendant on the careless disposal of "night soil."

We present the following plans and specifications as meeting as near as possible the demands of economy, simplicity, and safety.

We are indebted to Mr. E. C. Emerson, of the Savannah Public Schools, for the cuts and for the greater part of plans and specifications here given.

A. G. FORT,
*Director of Field Sanitation,
Ga. State Board of Health.*

Approved by:

H. F. HARRIS,
Sec'y. Ga. State Board of Health.

BILL OF MATERIAL NEEDED

- 36 running feet 2 x 4.
- 100 running feet 2 x 3.
- 16 running feet 4 x $\frac{7}{8}$.
- 2 pieces matched boards 4 ft. long by 9 in. wide, or 1 piece
4 ft. long by 18 in. wide.
- 250 ft. $\frac{7}{8}$ in. boards.
- 250 ft. strips or battens.
- One spring or pulley for door.
- 8 ft. screen, 15-mesh copper or galvanized, 12 in. wide.
- 2 hinges, 6-in. strap, for front door.
- 2 hinges, 6-in. "T," for vault door.
- 4 hinges, 3-in. "butts," for covers.

Cost.—From \$6.00 to \$12.00, depending on local price of lumber and grade of stock used.

Explanation of Cuts

Figures 1, 2, 3, and 4 are flat views. It is preferable that vault door as shown in Figures 2 and 4 should open on inside at point as shown in Figure 3 marked seat, and not in back.

Figures 5, 6, and 7 show all sides of building, together with vault during construction. The door in back as shown in Fig-

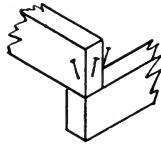


Fig. 11



Fig. 13



Fig. 14



Fig. 15

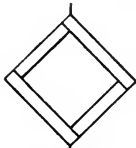


Fig. 17

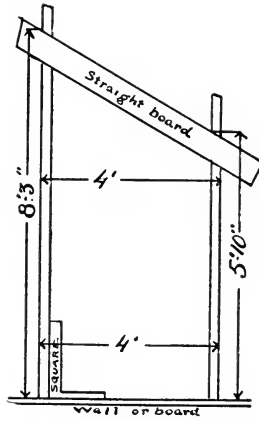


Fig. 12

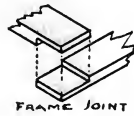
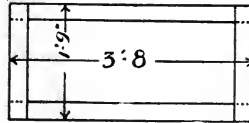


Fig. 16

FRAME JOINT

ure 6 can be swung in front of vault, Figure 7. This is preferable.

Figures 8, 9, and 10 show construction of door, screen holes, and seat.

Frame.—Heavier framing can be used, and is of course preferable; 4 x 4 could be used in place of 2 x 4, and 2 x 4 instead of 2 x 3. We will refer to the lighter material.

Cut 7 pieces 2 x 4 4 ft. long. Place 3 of them on level ground at right distance for girders. (G, Fig. 5.) Toe-nail (Fig. 11) firmly the remaining four joists (J, Fig. 5). Care should be taken to have the corners of this frame square. Raise same about 2 in. above ground by placing brick or flat stone under it. Carefully level it.

Floor.—Nail on floor boards, making a square platform 4 ft. square.

Posts.—Take 4 pieces 2 x 3 and saw one end of each perfectly square. The square end should fit well on the floor. Place 2 of these against a straight piece of board (Fig 12), so that the ends are 4 ft. apart and the pieces square to the board. Now measure upon the outside edge of one piece 8 ft. 3 in. and on the inside edge of the other 5 ft. 10 in. Place a straight board across these marks and draw a slanting line across the 2 x 3 (Fig. 12). Saw on these lines and you have two posts, Make other two same way.

Braces.—Cut 5 pieces 3 ft. 8 in. long, and 3 pieces 3 ft. 6 in. long (x and y, Fig. 6). Be careful that the brace in back is right height to make header for door, if you prefer door in back.

Rafters.—Nail a piece of 2 x 3 lightly across side of posts, and even (flush) with the slanting ends. Mark the piece on the inside, knock it off, saw and fit in. (R, Fig. 6.)

Nail other two braces (x) between the rafters, turned just right to carry the roof boards.

Walls.—Select 8 pieces of board, mark out openings for the screens (Fig. 9), be careful that the one for the vault is far enough down. (See Fig. 2.) Take the planks, mark them to fit as shown in Fig. 5. Be sure to leave the opening for vault door, if the open back style is used.

Roof.—Cut the roof boards 5 ft. 9 in. long. They should hang over 6 in. in front and back, and 4 or 5 in. at the sides. Nail them in place as shown in Figs. 5 and 6. *See that there are no cracks for flies to crawl through. If so, cover them.*

Battens or Strips.—If matched boards are used no battens or strips will be needed on walls, but to make the roof water tight, they must be used over the cracks, as shown in Figs. 4 and 6.

If matched boards are not used, they must be used over the whole house.

Seat.—Frame the seat as shown in Figs. 5 and 6 and nail on the front as shown in Fig. 7. It is better to have same braced with 2 x 3s and the door made to open in the front of the vault, care being taken to make it sufficiently large for the easy removal of the receptacle.

The seat is made of 2 pieces of board 4 ft. long and 9 in. wide, or 1 piece board 4 ft. long and 18 in. wide, matched boards to be used. See Fig. 7 for construction of the hole.

Fig. 13 shows an easy method of marking off the hole by means of a cardboard. Nail is driven through one hole, and



ILLUSTRATION OF A WELL SCREENED CLOSET.

4 in. from it a pencil is inserted into the other. Round the front of the seat as shown in Fig. 15. All openings left back of seat should be completely closed. Nail a strip (V) at the back to carry hinges for the covers.

Make the covers and nail the strips (W) in place at the sides.

Doors.—Make the door for the front as shown in Fig. 8, and for the vault, if the open back method is used, as shown in Fig. 6, but preferably the door for the vault should open in front, as shown in Fig. 7.

Screens.—Every opening should be screened. Make a frame, Fig. 16, to fit tight over the door, tack wire screening (copper is best, but galvanized iron is good) over each opening and cover the edges with strips as shown in Fig. 17.

Never leave the door or vault open. Put a spring or pulley on the door so it can not be left open carelessly.

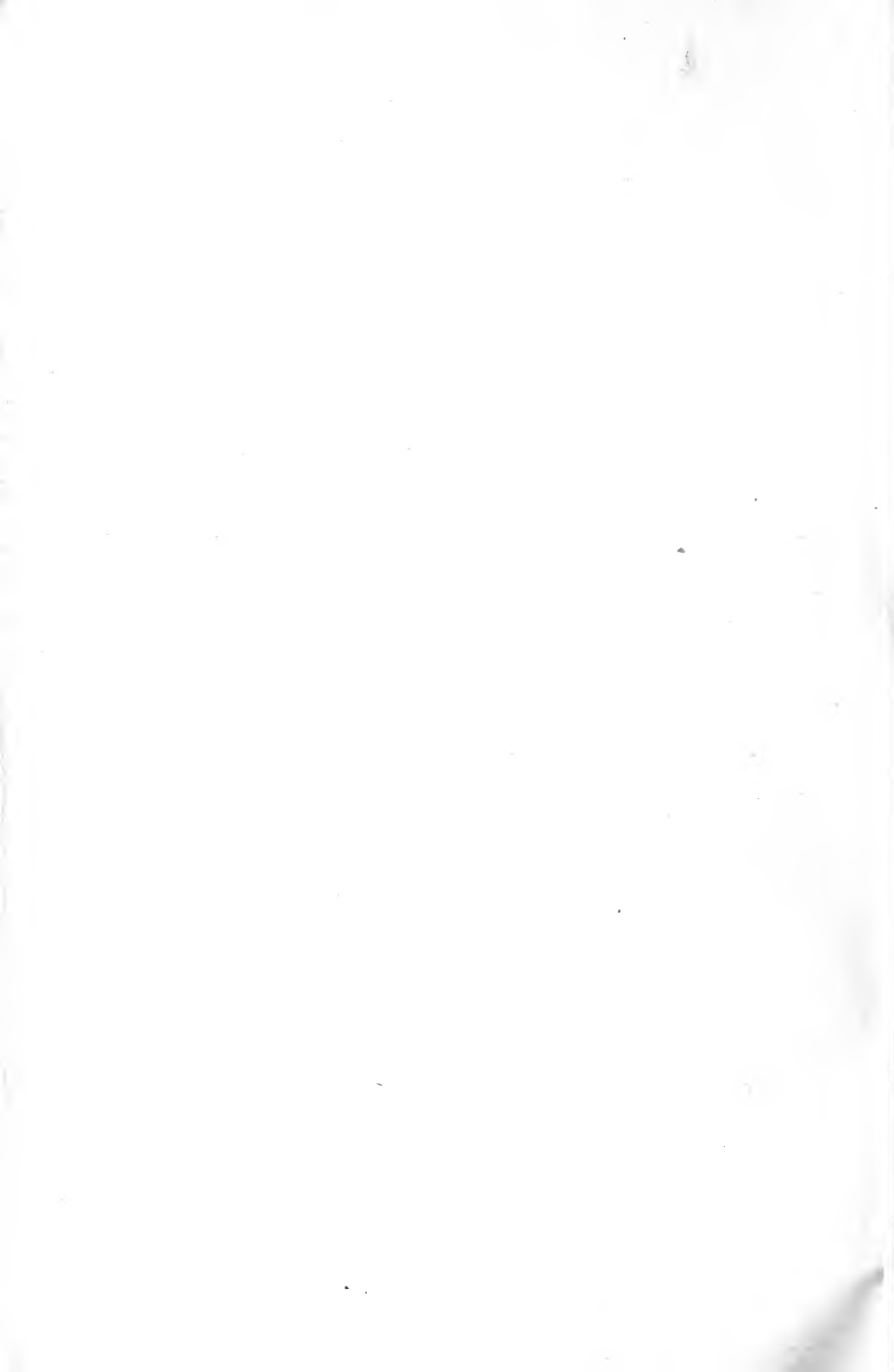
Vault Bucket.—The best is a large coal scuttle, but any can or tub may be used; care being taken that the top of same should be only 2 or 3 in. from the hole.

These cans should be cleaned at least once a week, or more often if necessary. The fecal material should be burned or buried at least 200 ft. from the well and at a place slanting from the house and well.

A little dirt or disinfectant can be sprinkled into the vault occasionally, and will greatly aid in keeping down bad odors.

“The country should be, in the fundamental elements of architecture and sanitation, as good a building as there is in the community. As the cathedral, town hall, public library, or capitol building represents the civic pride of a municipality, so the rural school house should represent the pride of the rural community. It should be a model of architectural adaptation to use and of sanitary excellence. It should, if possible, be a building a little better than any other building in the community, because here you have the young brought together and subject to influences either harmful or beneficial. The problem here is the care of the growing child. This building for the training of the young may be made in any community, by intelligent planning and without unreasonable expense, a structure of genuine beauty and of continual joy and comfort.”

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