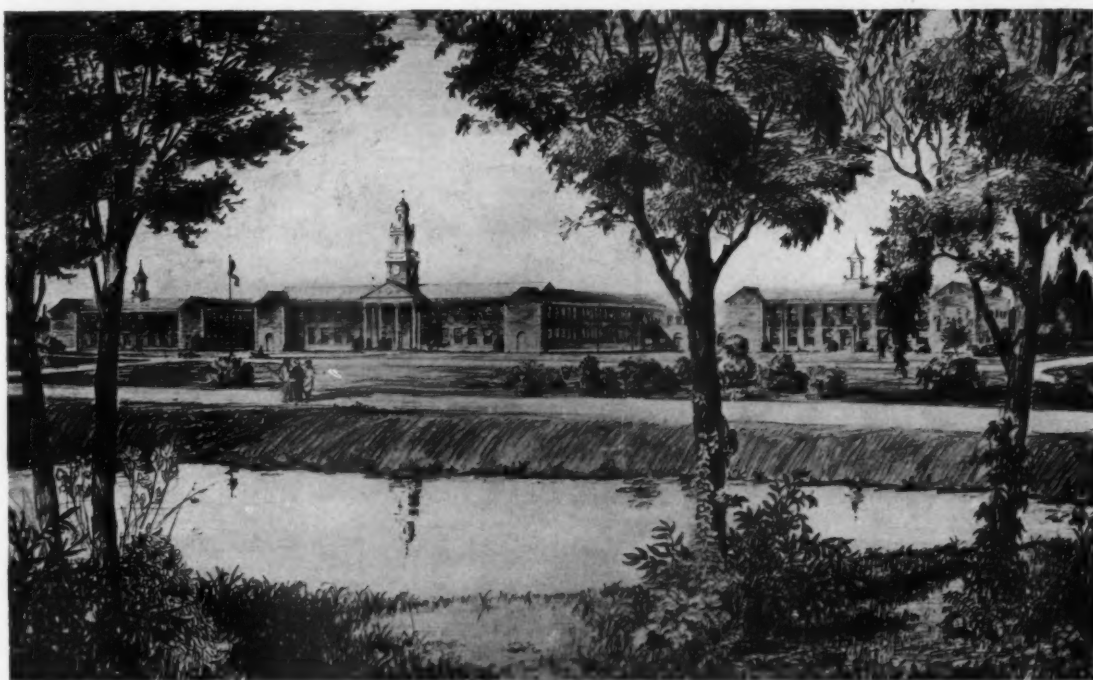


THE AMERICAN ARCHITECT

FOUNDED 1876



THE GROUP IS LOCATED ON A 39-ACRE SITE IN THE CENTRAL PART OF THE CITY'S RESIDENTIAL SECTION. THE SENIOR HIGH SCHOOL WILL OCCUPY THE CENTRAL UNIT, THE JUNIOR HIGH AND THE ELEMENTARY SCHOOLS, THE WING BUILDINGS. MR. R. A. LONG, PRESIDENT OF THE LONG-BELL LUMBER COMPANY, HAS PRESENTED THIS SCHOOL GROUP TO LONGVIEW

THREE-BUILDING SCHOOL GROUP, LONGVIEW, WASHINGTON

By WILLIAM B. ITTNER, F.A.I.A.

LONGVIEW, Washington, is the new home of the Long-Bell Lumber Company. It is located in the heart of the rich Douglas fir region in the Pacific Northwest. The city was laid out by the late George E. Kessler of Kansas City in association with Hare and Hare. Its streets are broad, its boulevards well planned, its open spaces assured and its public utilities developed at the outset to care for substantial and continuous population increases. Its school population totaling 4,000 repre-

sents a 300 per cent increase during the city's four years' existence.

The school building policy of Longview favors centralization, or planning for a restricted number of complete schools, rather than for a larger number of segregated schools. The complete school accommodates children from the kindergarten through the high school, and thereby represents a concentration of educational facilities so that children in all grades may enjoy enriched educational opportuni-

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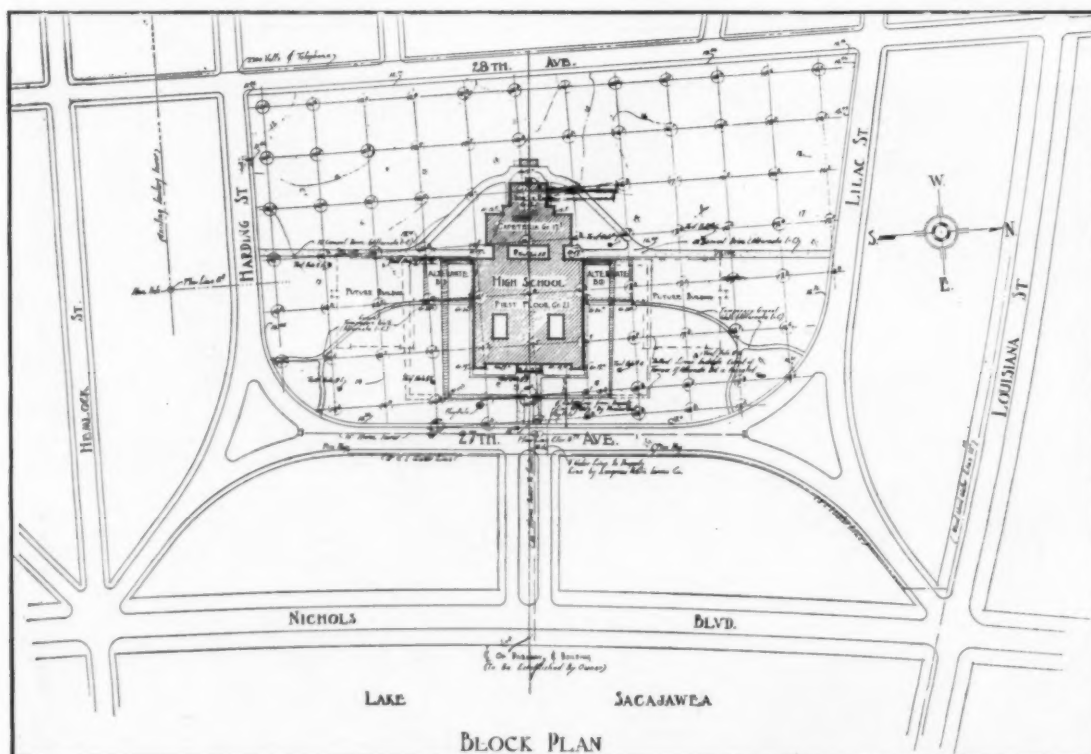
ties. The particular advantages of this centralization plan as set forth by its advocates are the following:

(1) An increased number of enriched educational facilities at a lower *per capita* cost; (2) a larger site and playground; (3) a better planned and designed building, owing to a more extensive diversification of facilities.

A connected three-building group on a 39 acre site in the midst of the city's residential section constitutes Longview's initial complete school plant. The three buildings when completed will accom-

of R. A. Long, president of the Long-Bell Lumber Company. Mr. Long thus presents to the city which bears his name a million dollar gift in buildings and provides in addition a location in the residential heart of the city, large enough in area for both school and city park and playground. There could be no more outstanding or fitting expression of good faith in the future of the city.

The group adds to the city an important architectural and civic asset. The architecture reflects the Colonial, since Longview is, in the strictest sense, an American city. The buildings are of brick with



BLOCK PLAN OF THE COMPLETE SCHOOL GROUP AT LONGVIEW, WASHINGTON, SHOWING THE DEEP FORECOURTS OPENING TO A BROAD TERRACED FOREGROUND, THE 10-ACRE PLAYGROUNDS AND THE 15-ACRE ATHLETIC FIELD AT THE REAR

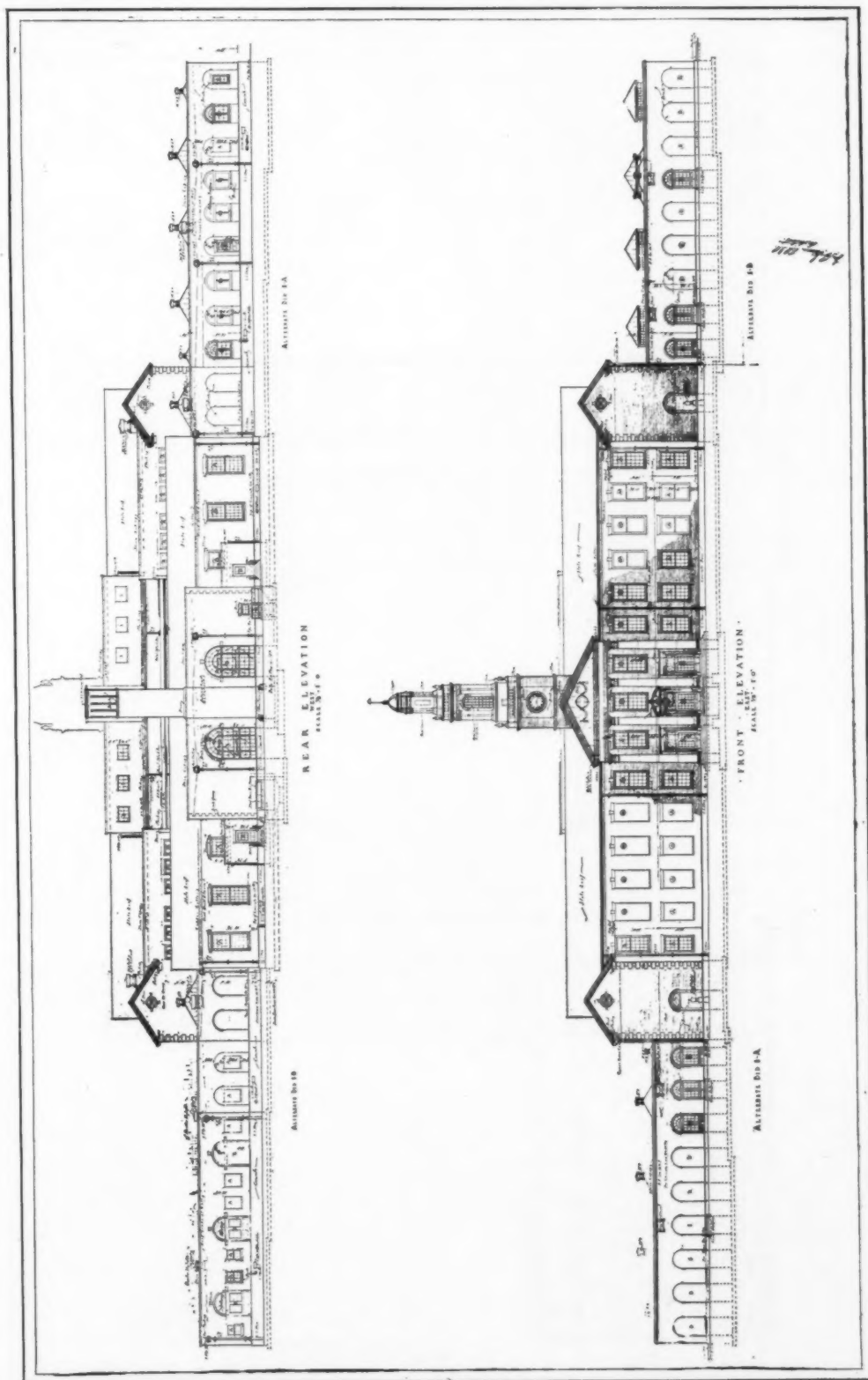
modate 2,800 students from the kindergarten through the high school. The group will also serve the community for assembly hall, recreational and educational purposes. The central and dominating unit of the group (now under construction) is planned for 1,200 Senior High School students. The Junior High School for 800, and the Elementary School for 600 pupils will occupy the two wing buildings. As will be noted by reference to the plans, the connecting links between the wing buildings and the Senior High School (central unit) take the form of household art rooms and the shops arranged as one-story closed-in pavilions.

The school group, including the site, is the gift

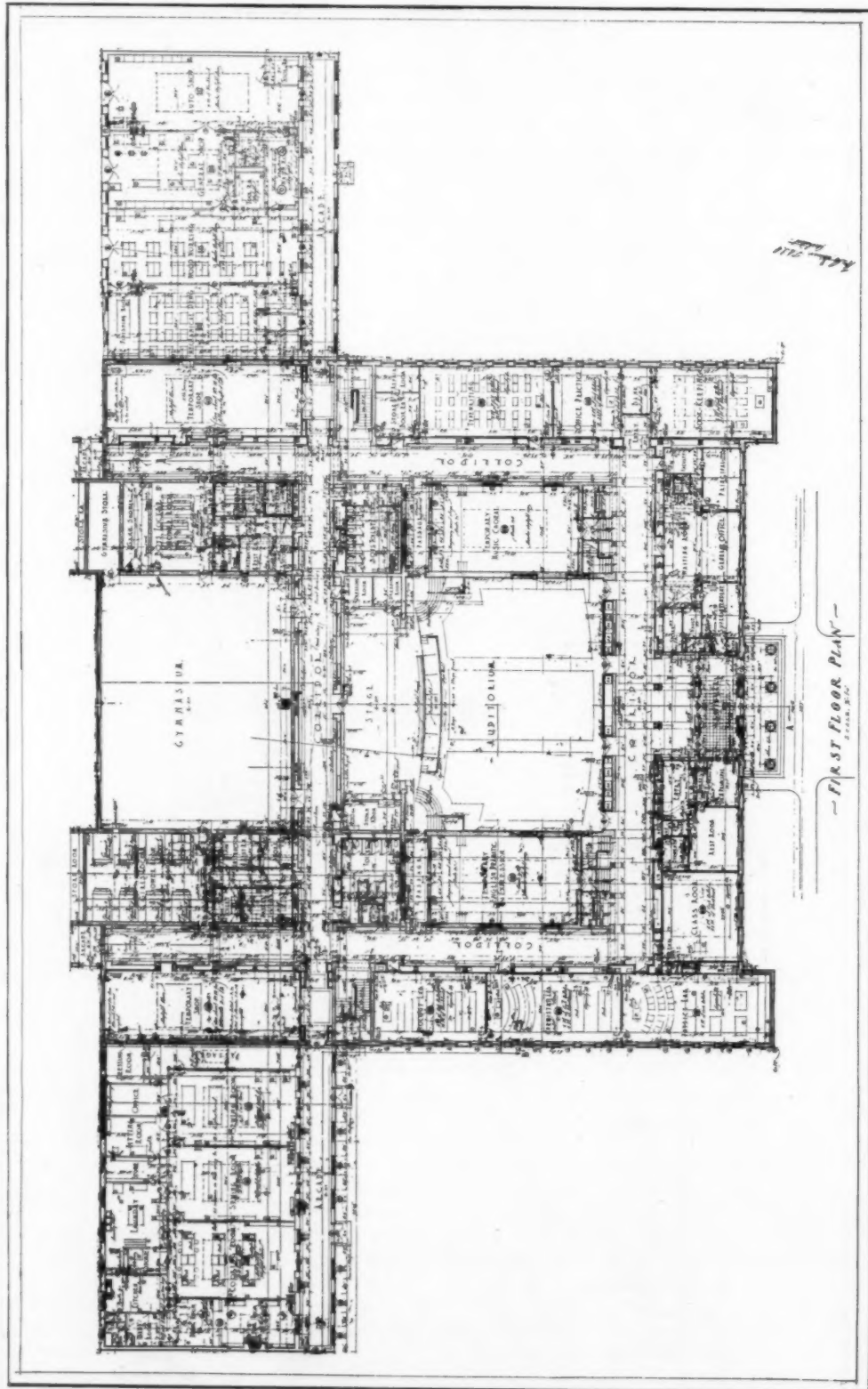
stone trim, two stories high, low and spreading in type. The group is arranged on either side of a long central corridor. Deep forecourts separate the buildings, assuring an abundance of light and air on all sides. The long corridor naturally becomes exposed at its juncture with the forecourts. The court side of the corridor will be arcaded. With formal gardens in the forecourts expanding to the broad front terrace, these corridor pavilions will serve many purposes for school and community.

There are several departures from the usual in schoolhouse planning and construction which deserve special mention:

(Concluded on page 148)



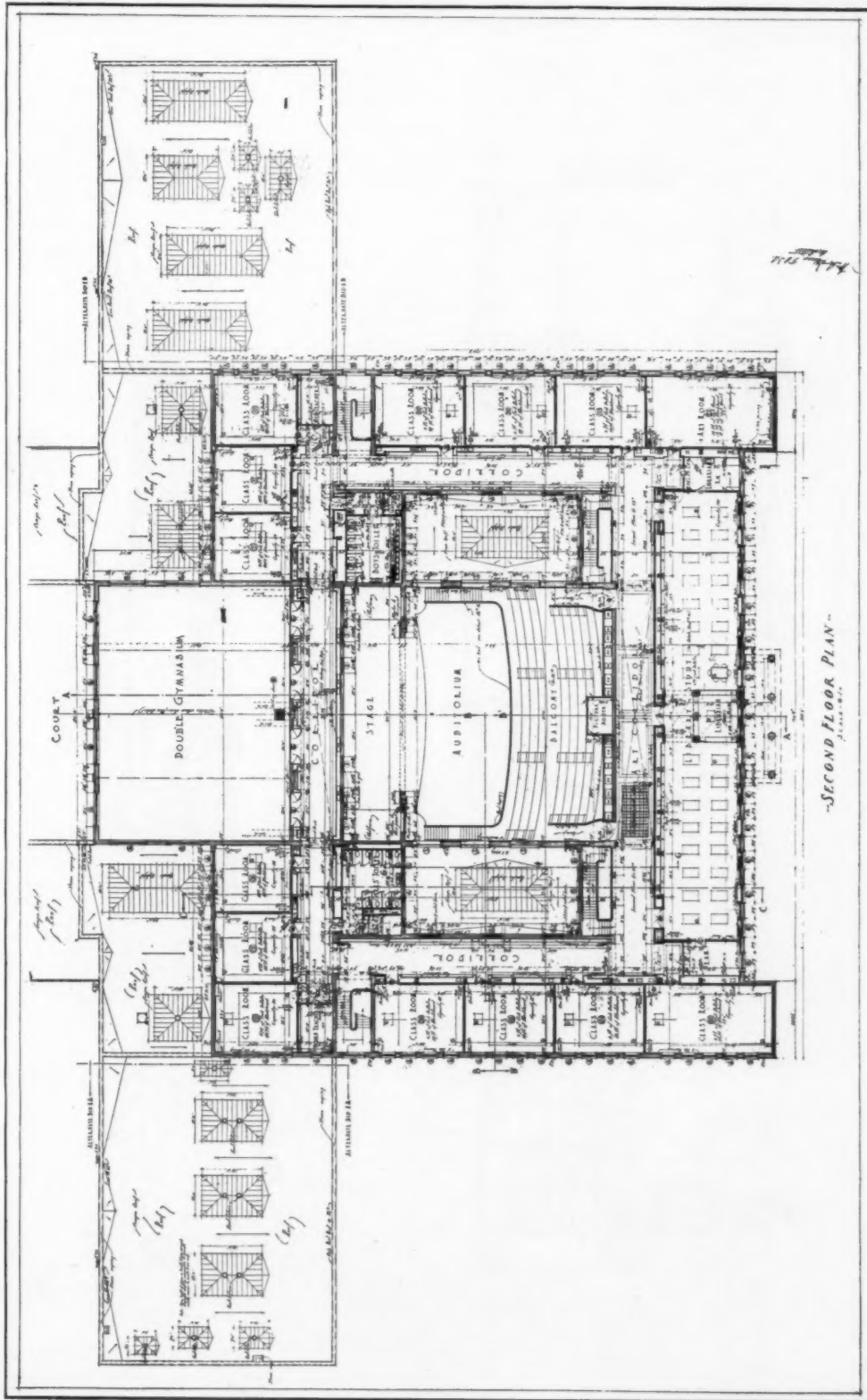
THREE-BUILDING SCHOOL GROUP, LONGVIEW, WASHINGTON
 WILLIAM B. ITTNER, INC., ARCHITECTS AND ENGINEERS



FIRST FLOOR PLAN, COMPLETE SCHOOL GROUP, THE THREE-BUILDING GROUP CONNECTED BY THE ONE-STORY HOUSEHOLD ARTS AND SHOP UNITS, IS ARRANGED ON EITHER SIDE OF A LONG CENTRAL CORRIDOR WHICH AT THE JUNCTION WITH THE FORECOURTS BECOMES AN ARCADED PAVILION

THREE-BUILDING SCHOOL GROUP, LONGVIEW, WASHINGTON

WILLIAM B. ITTNER, INC., ARCHITECTS AND ENGINEERS



SECOND FLOOR PLAN, LONGVIEW SCHOOL GROUP. THE SECOND FLOOR CONTAINS MOST OF THE CLASS ROOMS, THE HIGH SCHOOL LIBRARY ON THIS FLOOR PLANNED FOR 200 STUDENTS, THE ART ROOM OF THE JUNIOR HIGH AND THE LIBRARY OF THE ELEMENTARY SCHOOL ARE UNUSUAL AS TO SIZE, PLAN AND LOCATION

THREE-BUILDING SCHOOL GROUP, LONGVIEW, WASHINGTON

WILLIAM B. ITTNER, INC., ARCHITECTS AND ENGINEERS





WILLIAM B. ITTNER, INC., ARCHITECTS AND ENGINEERS

THREE-BUILDING SCHOOL GROUP,
LONGVIEW, WASHINGTON

(Continued from page 142)

(1) The entire finish of the school is creosote-stained Douglas fir.

(2) The adaptation of the one power plant for the three buildings to the consumption of the mill refuse as fuel.

(3) The large site makes possible a 15 acre athletic field and a 10 acre playground, immediately to the rear of the building. Both the Senior and Junior High Schools are provided with 60' x 80 gymnasiums. These are lighted and ventilated from three sides. Each may be divided by a folding partition so that the equivalent of two gymnasiums, one for boys and one for girls, may be secured from each. The locker and shower rooms open directly to the play field, and instructors' rooms command a view of gymnasiums, locker and rest rooms. A 60' x 160' covered playcourt opening directly to the playground on one side and to one of the long corridors on the opposite side, takes the place of a regular gymnasium for the Elementary School.

(4) The Senior High School auditorium is the only large assembly hall in the group. It has a seating capacity for 1200. A full equipment of overhung scenery and the most modern stage lighting effects, space for grand organ and motion picture apparatus are provided. Four smaller auditoriums, each approximately the size of two class rooms, are divided among the three buildings. These are equipped with small stages and furnish all kinds of opportunities for school and community activities

in music, dramatics, club work, visual instruction and the social sciences.

(5) The location, plan and arrangement of the cafeteria represent a departure from the usual in schools. Only one is required with dimensions 38' x 164'. It is located in the High School unit back of the gymnasium, and separated from it by an enclosed court. A unit of the gymnasium, the cafeteria and the court is thus possible whenever extraordinary occasions require such use. The room itself has a high wood wainscoting and open timber roof after the manner of the refectory rooms at Eton College.

(6) The science group is arranged along one of the formal garden forecourts and leads indirectly to it.

(7) The plans will reveal the fact that the second floor contains most of the class rooms. The High School library on this floor is planned for 200 students at tables. Located in a strategic position, it automatically becomes a community library. The second floor features an art room in the Junior High and a library in the Elementary School. These rooms are 20' x 45' and look out upon the inner courts.

The cost of the three-building group is estimated at \$975,000.00, exclusive of site. This amount of cost approximates \$350.00 per pupil. There are schools in the country with \$1,000.00 per pupil cost which are not offering as rich educational opportunities as Longview. The low cost of the Longview School is directly attributable to the policy of centralization and the development of the building plan to a definite educational program.



STEPS TO A SCHOOLHOUSE AT CHAPPAQUA

FOR Chappaqua might be written a type of American community where the city folks are moving in as commuters; the country folks are doing well, and the schools are vastly crowded.

Central School District No. 4 of the Towns of New Castle and Mount Pleasant, New York, by a vote of the inhabitants, adopted a resolution that the Board of Education construct a new school building, purchase fixtures and equipment, construct and equip a playground, and a tax therefor was voted in the sum of \$325,000. Central School District No. 4 is acting through its duly elected Board of Education.

Those who had resided long in the country, and those who had moved in more recently as commuters, are united by the common American belief in public school education for their children, and to that end bonded themselves for \$325,000 to build a schoolhouse designed to function as a combined high and graded school, complete in design and equipment in every particular.

An unusually central and slightly tract of eight acres was selected in the Village of Chappaqua and finally purchased. In the towns comprising the school district there was a goodly number of architects to select from, the majority of whom had offices in New York City. The Board of Education decided on a competition.

The competition was limited to such architects, residents of New Castle and Mount Pleasant, as were invited by the School Board. The Board was liberal; the architects were keenly interested, and ten entered the competition, the terms of which stated there will be no cash prizes; the design judged most meritorious will be placed No. 1, and its submitter will be designated as architect. The Board reserved the right to direct such changes of the accepted design as may seem expedient. The total number of pupils and other persons to be accommodated was indicated as that of the seating capacity of the assembly hall—five hundred. The building was to be designed to permit of future additions, and its design was to be influenced by the proximity of the site of the Episcopal Church. The usual technical requirements were included.

Sanction of The American Institute of Architects was named and approval, through the Institute's authorized Sub-Committee on Competitions of the New York Chapter, was sought and obtained.

This was the first competition held under the revised "Standard Form of Competition Program" of The American Institute of Architects, known as A. I. A. Document 219, which became effective this year; at least, it is the first held in the territory of the New York Chapter of The American Institute of Architects.

The Jury consisted of three architects selected by

the Board of Education from six nominated by the Professional Adviser. The Board considered the nominees, and, placing in a hat five named of six nominated by the Professional Adviser, drew them forth, one by one, at a public meeting. The first three: Messrs. Richard H. Dana, Arthur Loomis Harmon, and Pliny Rogers, became the Jury; the fourth, Mr. James Monroe Hewlett, first alternate; and fifth, Mr. Harry Polhemus, second alternate. All of the Jury was able to act and the services of the alternates were not required.

In the Jury was the authority to make the award, and its decision in the matter was final. Deliberations of the Jury were to be held outside of the school district, at the library of the Professional Adviser, appointed by the Board of Education, Charles H. Higgins, architect, in New York City, and the Jury was allowed ten days after the drawings were delivered to the place where they were to hold their deliberations. The drawings submitted were to be anonymous; a sealed envelope accompanying each set of drawings enclosed the name of the author. The Jury selected the most meritorious design, and the Professional Adviser, in the presence of the Jury, opened the envelope bearing the corresponding number. The opening of the envelope containing the name of the author of the selected design automatically closed the contract between him and the owner. The Jurors were compensated.

It was agreed that no drawings were to be exhibited or made public until after the award of the Jury, after which a public exhibition of all drawings was to be held in one of the public schools of the community interested. This exhibition lasted several days; aroused much interest, and was well attended.

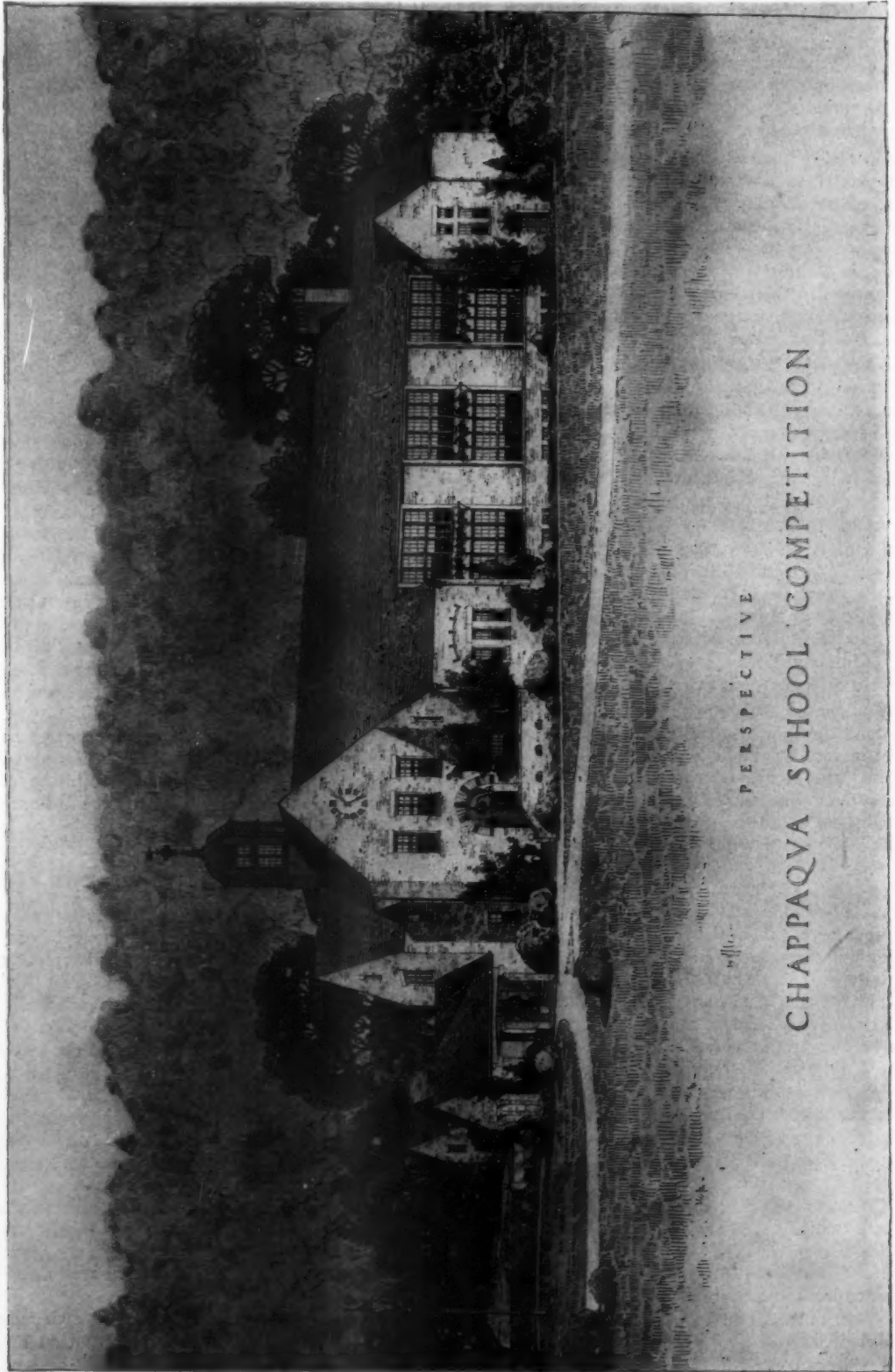
Following is the report of the Jury:

The Jury carefully examined the designs submitted, and was satisfied that they all complied with the mandatory requirements, as reported by the Professional Adviser. None of the designs, therefore, were placed out of the competition and each was carefully considered on its merits.

The Jury studied the program and the modifications of it. They held three sessions on three different days, in the library of the Professional Adviser, and considered all the designs submitted at two of these sessions. The award was made by secret ballot, and the unanimous vote of the Jury was for design No. 3.

In making the award the Jury affirms that it made no effort to learn the identity of the various competitors, that it has remained in ignorance of such identity until after the award was made and this report written and signed.

After the secret ballot was made, each member of the Jury made a list of the points that he specified.
(Concluded on page 172)

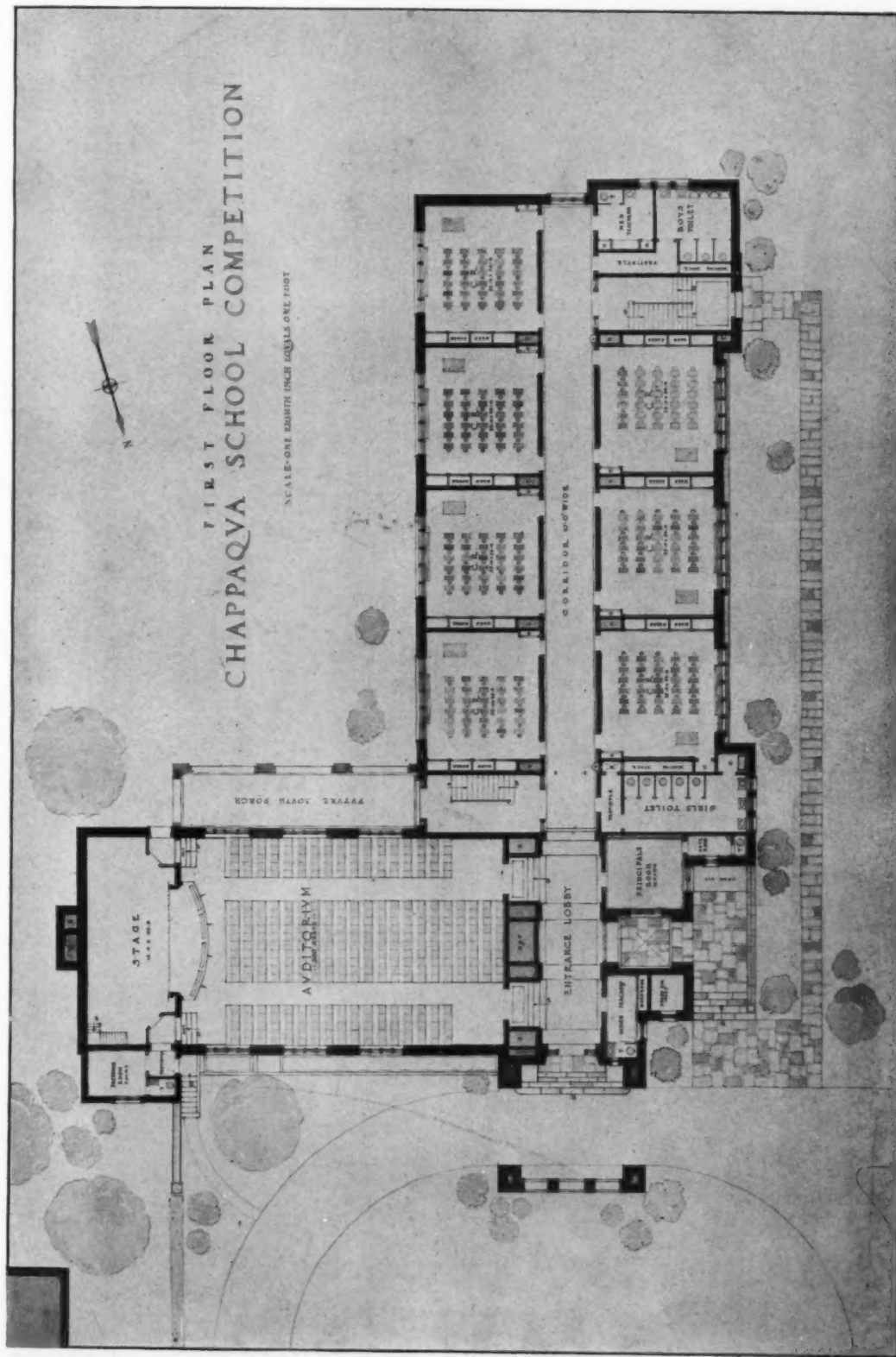


PERSPECTIVE

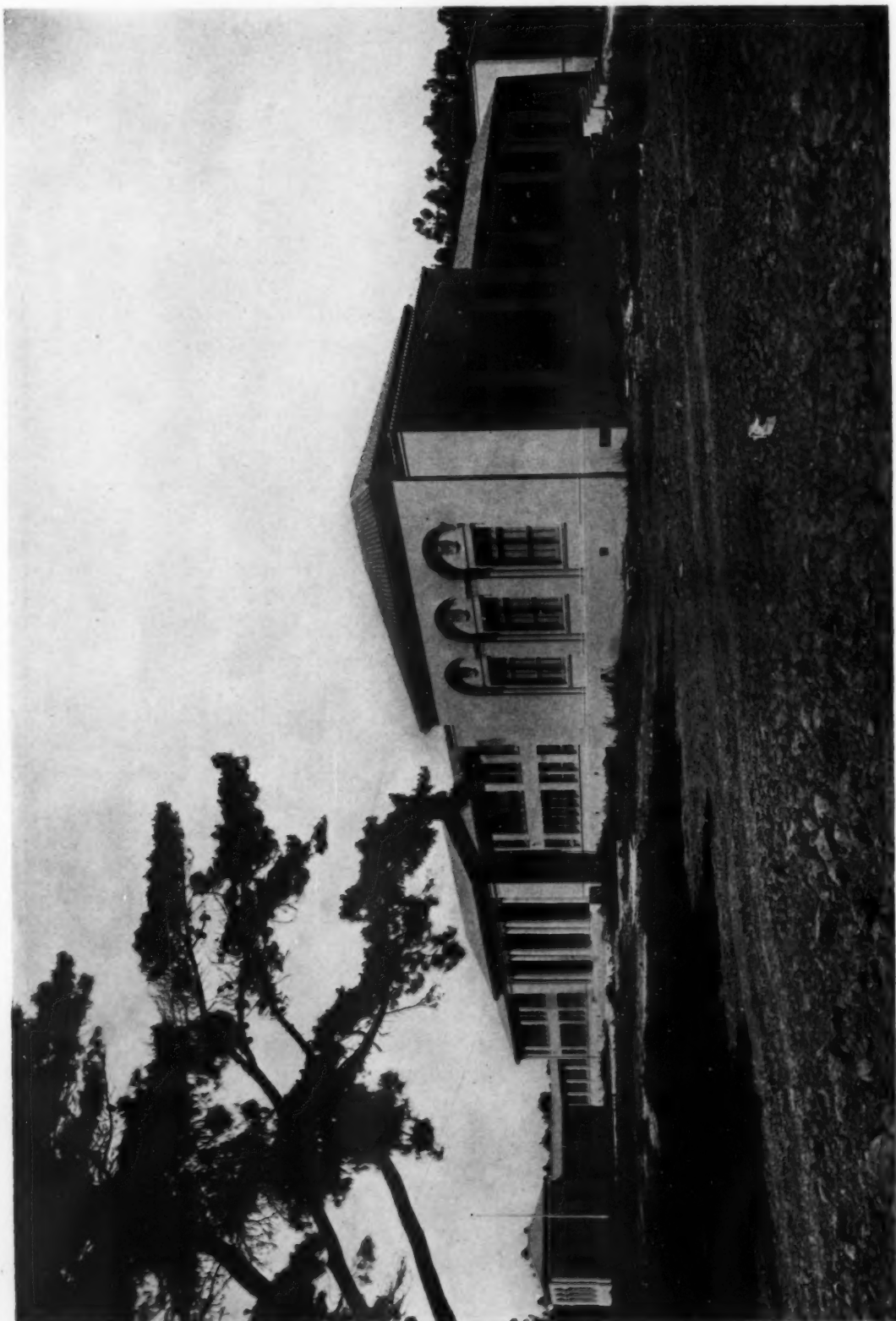
CHAPPAQUA SCHOOL COMPETITION

PRIZE WINNING DESIGN

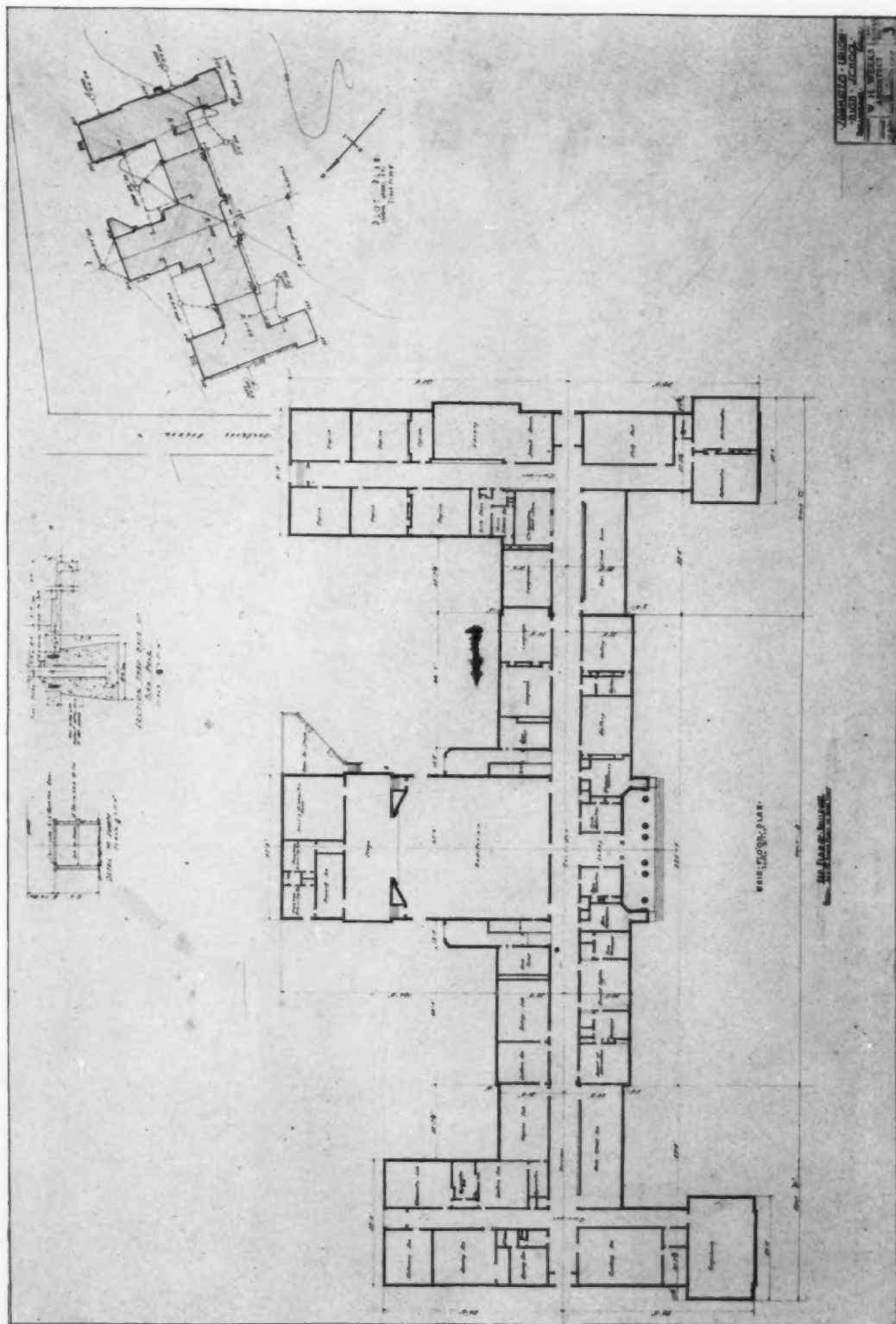
JAMES RENWICK THOMSON AND MANN & MACNEILLE, ASSOCIATED ARCHITECTS



PRIZE WINNING DESIGN
JAMES RENWICK THOMSON AND MANN & MACNEILLE, ASSOCIATED ARCHITECTS

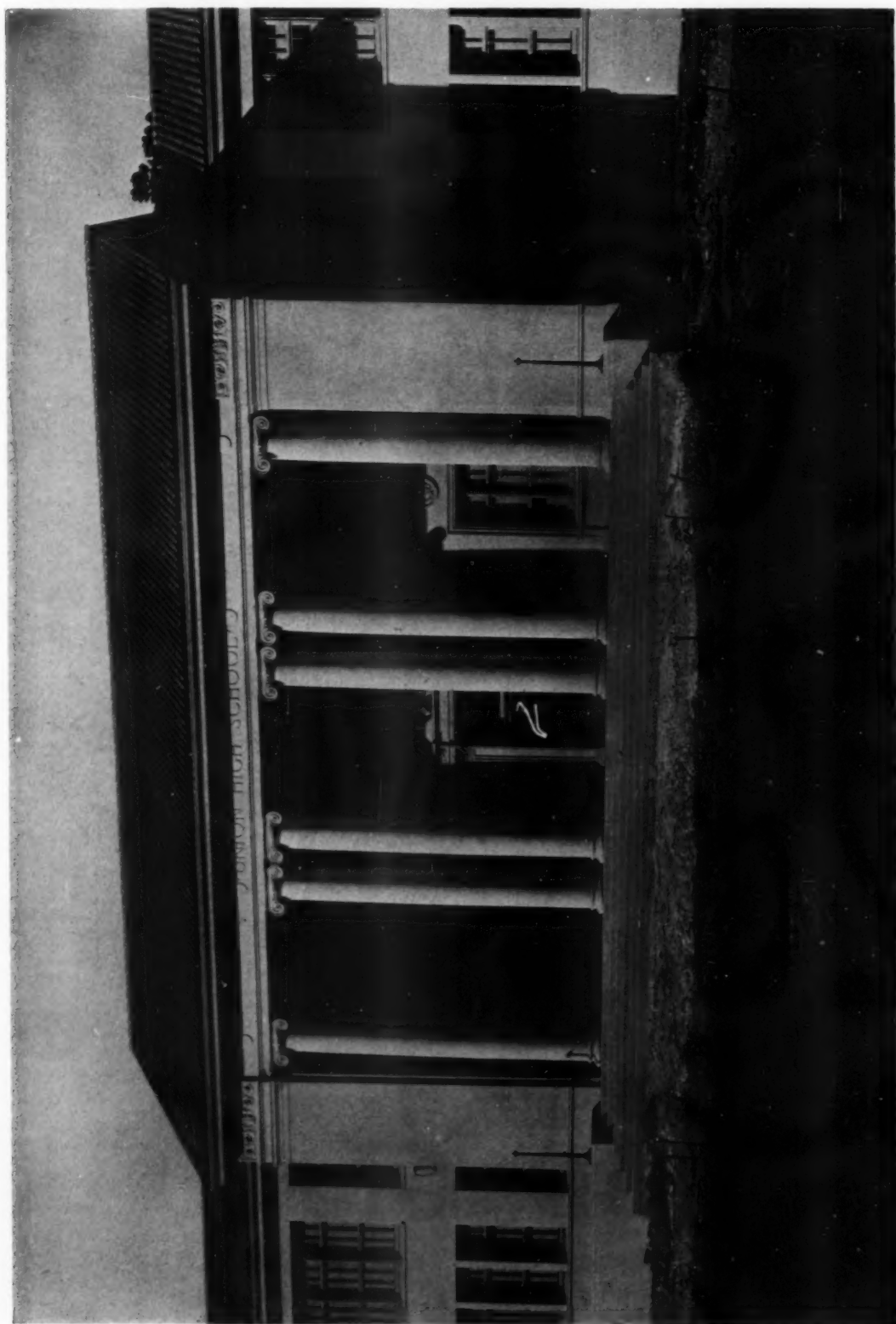


UNION HIGH SCHOOL, BURLINGAME, CALIFORNIA
W. H. WEEKS, ARCHITECT



UNION HIGH SCHOOL, BURLINGAME, CALIFORNIA

W. H. WEEKS, ARCHITECT



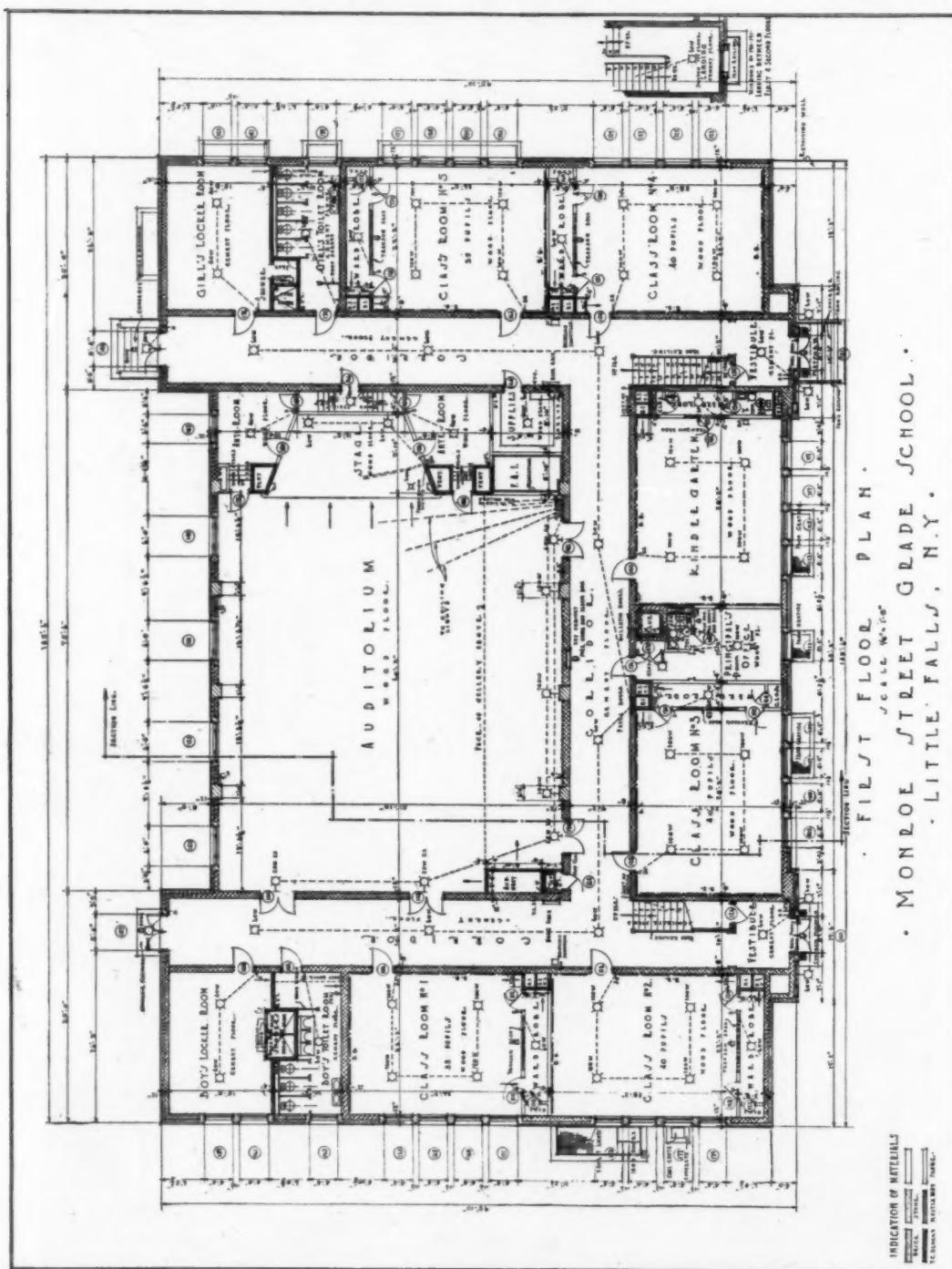
UNION HIGH SCHOOL, BURLINGAME, CALIFORNIA
W. H. WEEKS, ARCHITECT



GRADE SCHOOL, LITTLE FALLS, N. Y.

TOOKER & MARSH, ARCHITECTS

(See plan on back)

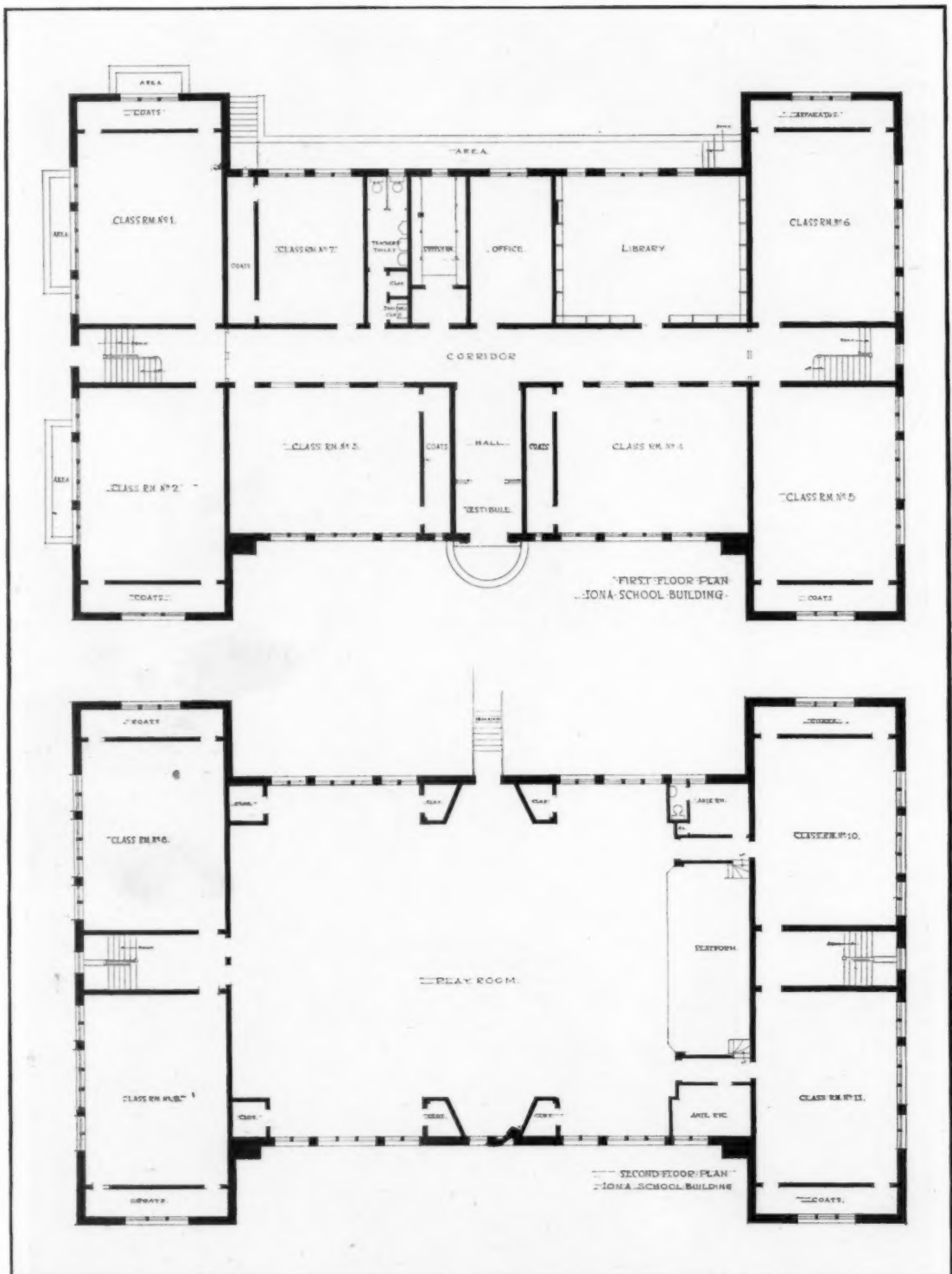




IONA SCHOOL, NEW ROCHELLE, N. Y.

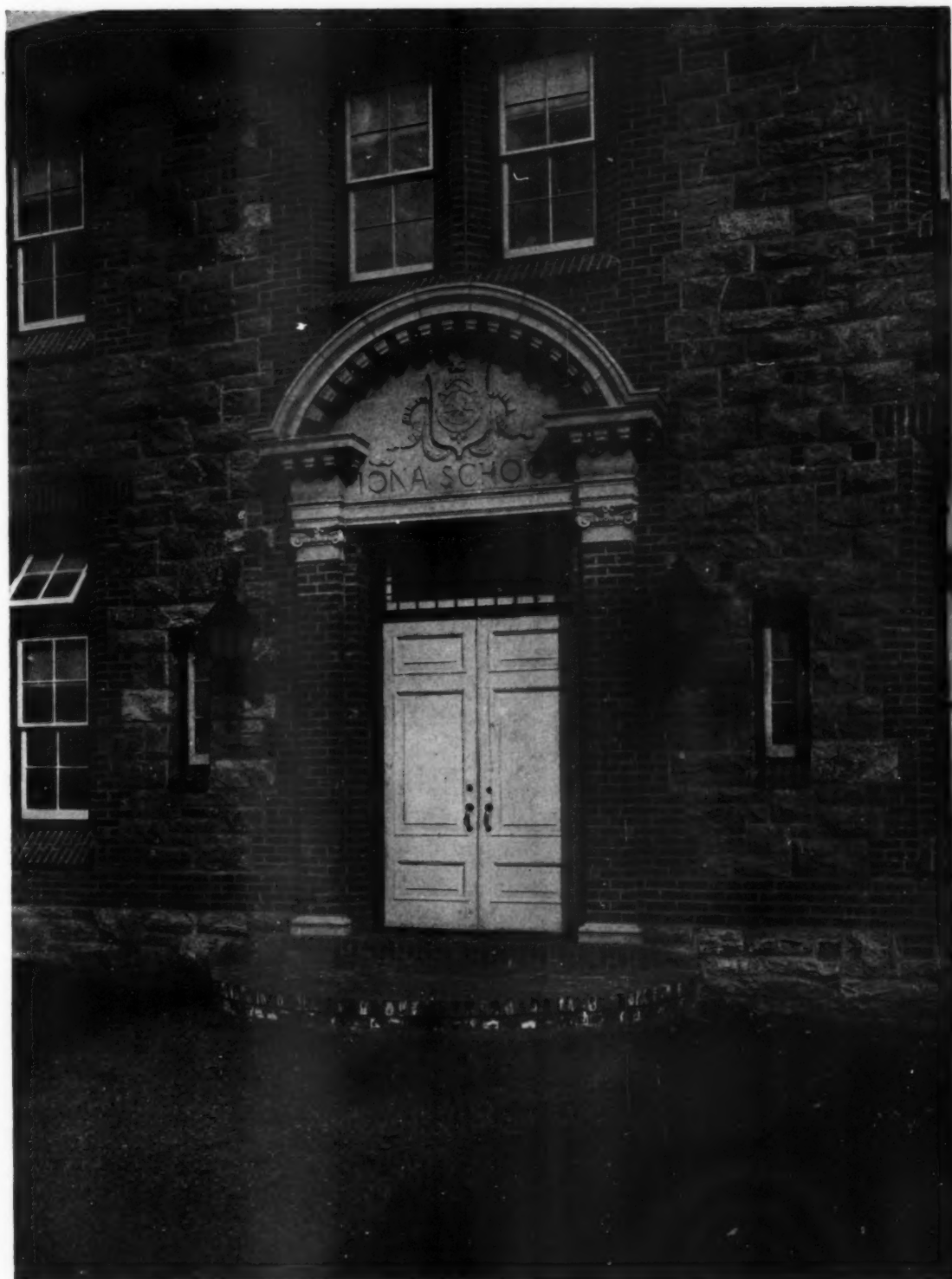
EDWARD F. FANNING, ARCHITECT

(See plans on back)



IONA SCHOOL, NEW ROCHELLE, N. Y.

EDWARD F. FANNING, ARCHITECT



IONA SCHOOL, NEW ROCHELLE, N. Y.

EDWARD F. FANNING, ARCHITECT

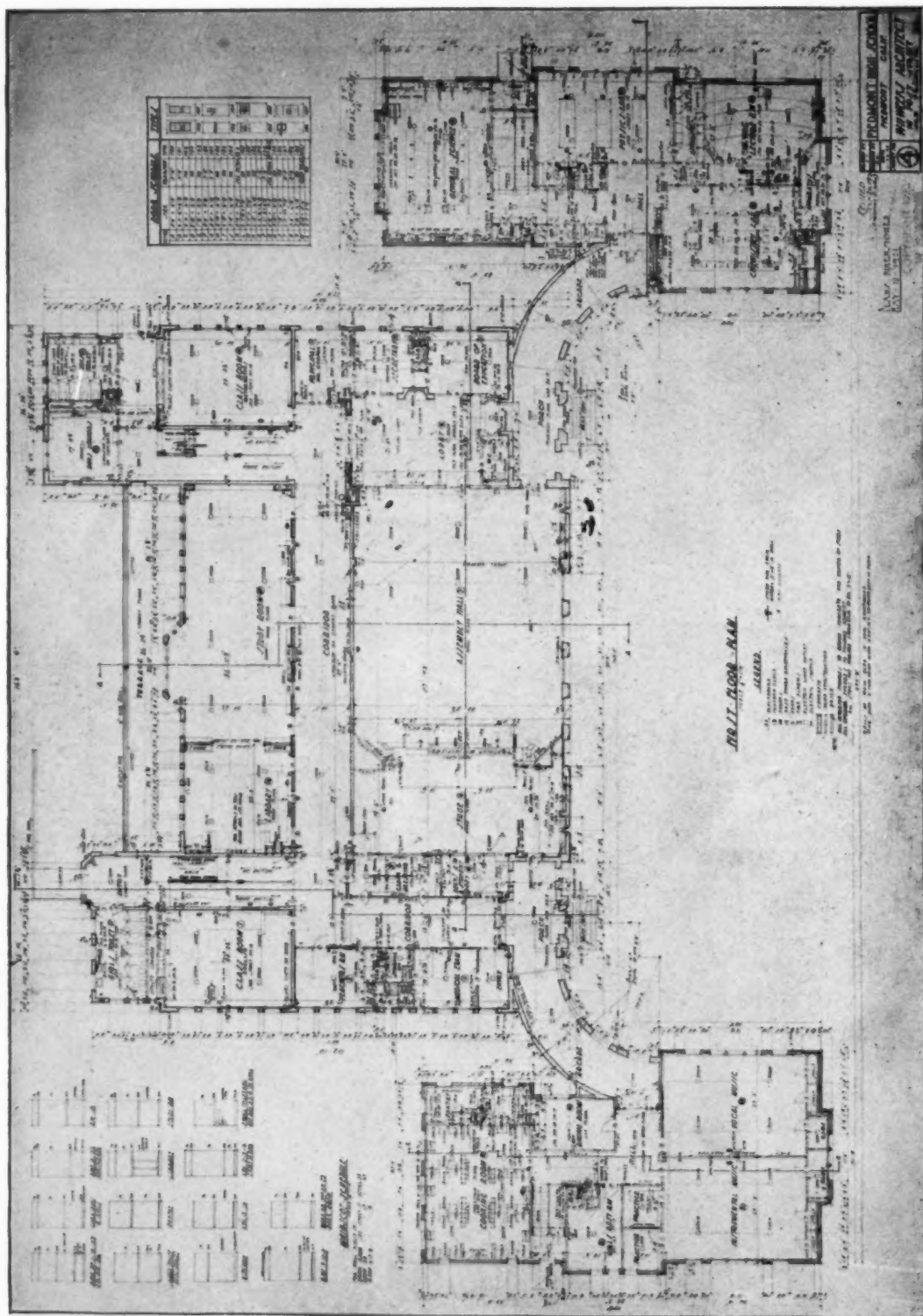




PERSPECTIVE VIEW, PIEDMONT HIGH SCHOOL, PIEDMONT, CALIFORNIA

W. H. WEEKS, ARCHITECT

(See plan on back)



PIEDMONT HIGH SCHOOL, PIEDMONT, CALIFORNIA
W. H. WEEKS, ARCHITECT



PIEDMONT HIGH SCHOOL, PIEDMONT, CALIFORNIA

W. H. WEEKS, ARCHITECT

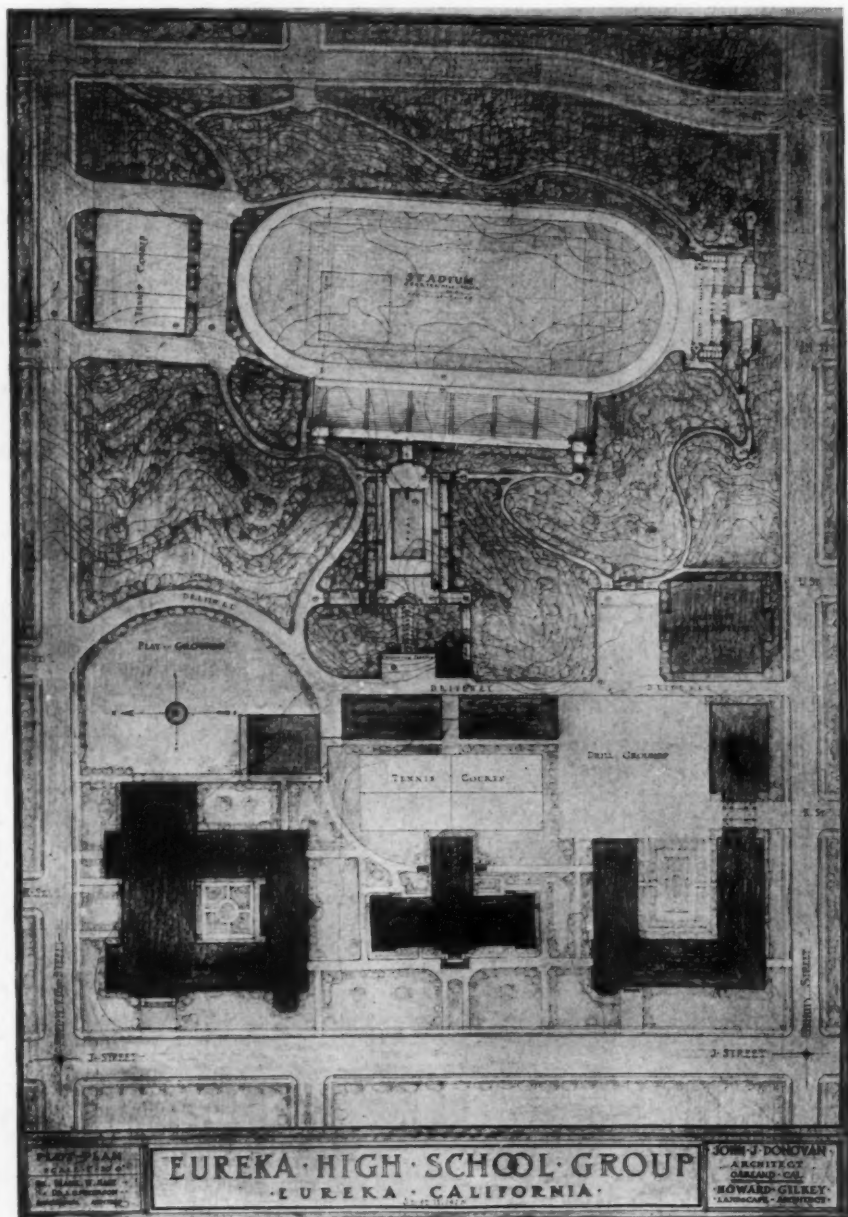




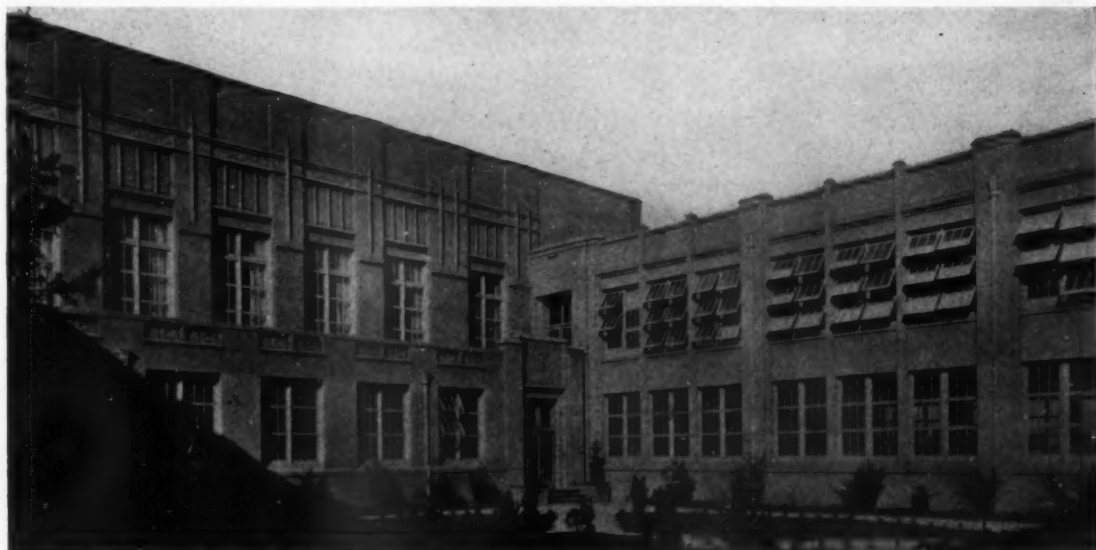
EUREKA JUNIOR HIGH SCHOOL, EUREKA, CALIFORNIA

JOHN J. DONOVAN, ARCHITECT

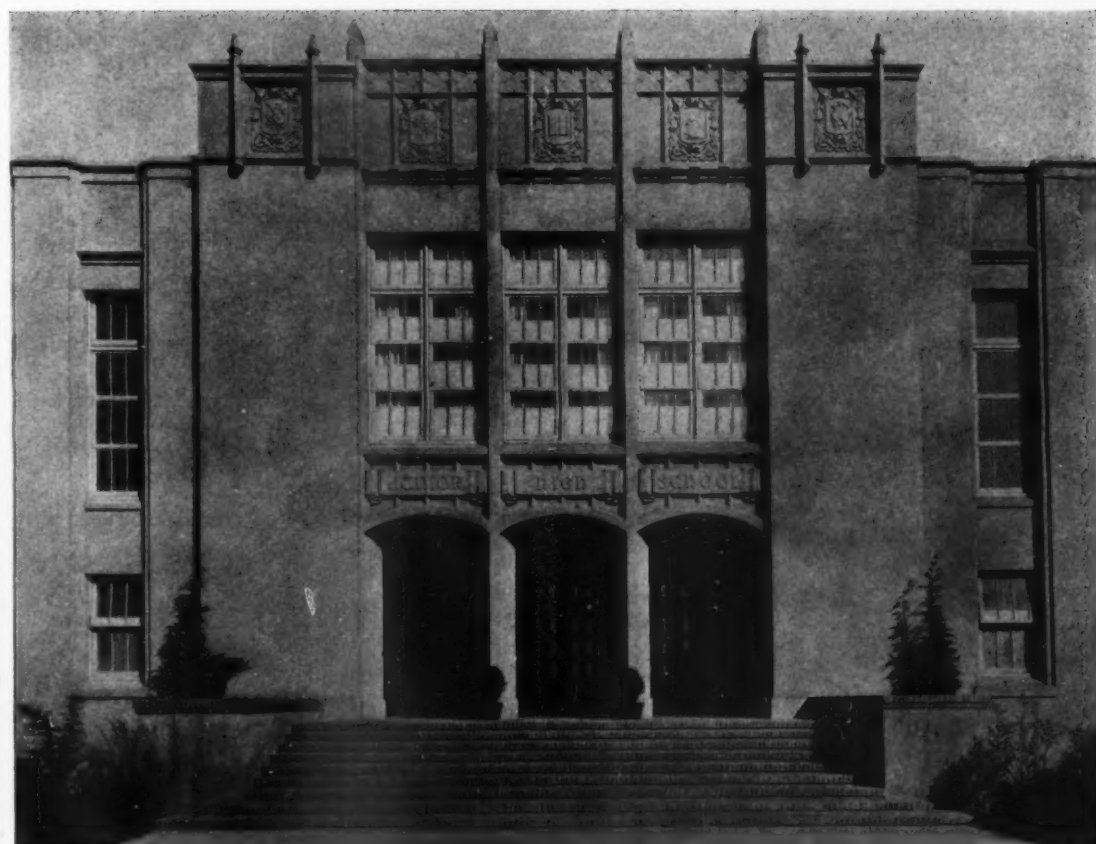
(See plot plan on back)



PLOT PLAN
 JOHN J. DONOVAN, ARCHITECT



INTERIOR COURT

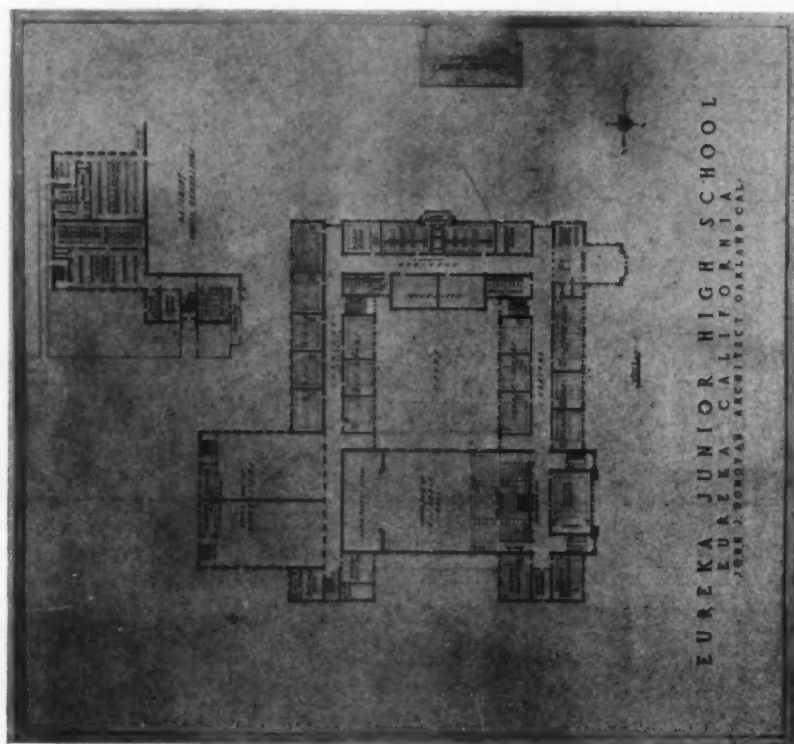


MAIN ENTRANCE

EUREKA JUNIOR HIGH SCHOOL, EUREKA, CALIFORNIA

JOHN J. DONOVAN, ARCHITECT

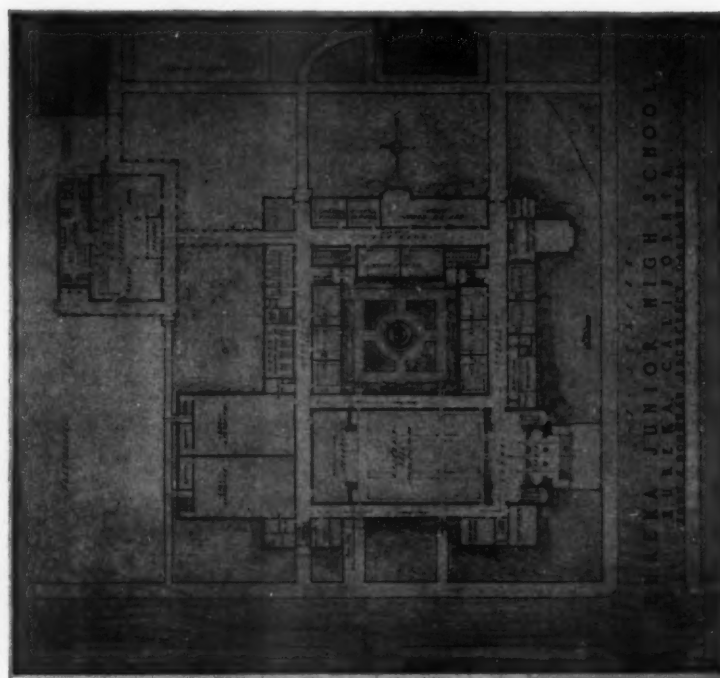
(See plans on back)



SECOND FLOOR PLAN

EUREKA JUNIOR HIGH SCHOOL, EUREKA, CALIFORNIA

JOHN J. DONOVAN, ARCHITECT



FIRST FLOOR PLAN



SEWING AND MILLINERY ROOM



AUDITORIUM



COOKING ROOM



MAIN ENTRANCE HALL

EUREKA JUNIOR HIGH SCHOOL, EUREKA, CALIFORNIA

JOHN J. DONOVAN, ARCHITECT



EDITORIAL COMMENT



A PROPOSITION has been made in perfect good faith to ask the British Government—you might almost say demand—that the so-called "Elgin Marbles" and other spoils of the various edifices on the Acropolis at Athens should be returned to Greece, inasmuch as they are peculiarly the product of Greek civilization and are best judged and appreciated when in their original setting.

The history of how these wonderful sculptures came to England is quite interesting. Lord Elgin in the early years of the last century and shortly after Greece had achieved its independence from Turkish rule, asked permission of the Government to take away certain stones which were lying more or less in disorder among the ruins of the Greek temples on the Acropolis. No one in the then existing Greek government seemed to have any clear idea of the value of these relics and Lord Elgin interpreted his permit very liberally, with the result that the best of the Greek sculptures which formerly adorned the Greek buildings are now in the possession of the British Government. It is, of course, idle to speculate what would have been the result if these marbles had not been removed from Athens. Government has never been any too stable in the Greek peninsula, and it is quite possible that had Lord Elgin not so liberally helped himself there would be very few of these relics now in existence. One cannot but sympathize, however, with the desire of the Greeks to have their buildings properly adorned with the sculptures intended for them. It is only a question of expediency and what course would really be most desirable from an artistic as well as from a practical standpoint.

The sculptures as they are now have become, through nearly a century of possession, identified with the British Museum. During that time they have been a constant source of inspiration to millions of people: They have played a very important part in the art development of England, and to take them away now would be an irreparable loss and one which would be justified only by a greater good to a greater number of people. It is hardly contended that modern Greece, which is a very different country from the country which produced these works, has an ethical right to them. Certainly, all claim was relinquished by the permission given to Lord Elgin, and the question naturally arises if the British claims were waived, to whom would they be returned, who would undertake to be responsible for their being set in a position where they would endure and be properly displayed. Certainly, to put these sculptures back on the Parthenon and Erechtheum while these build-

ings are in their present state would mean ruin for the sculptures and they would not add an iota to the artistic possibilities of Athens. They would be practically buried there and lost to the artistic world and unless something far more extensive is contemplated than the mere return of these sculptures, they would be far better off in London, where they have been known and admired for a century and where they have been given the care that has enabled them to be in practically just as good condition as they were when Lord Elgin took them away.

But there is an alternative which is by no means impossible of realization, and which would settle the question both as to ethics and equity. The Acropolis is the most remarkable group of ruins in the world. The Parthenon, with all its fragmentary condition, still remains one of the ten best buildings known to history. Now if the Acropolis could be intelligently and carefully restored by an International Commission representing all of the countries who have an interest in art and who know how to care for such things; if the Acropolis and the buildings thereon could be restored to at least as near as we can approximate the condition they were 2000 years ago, then by all means these sculptures should be returned, restored, added to and put in place where they belong. By all means the sculptures on the Acropolis which are so fundamentally a part of the design should be set on their native heath, and we can well imagine what a splendid thing it would be for Athens to have the relics of the most glorious antiquity the world has ever seen restored, properly cared for and made as perfect as modern art and science coupled with archaeological information would permit. What a chance this would be for some of our American millionaires! Our citizens have spent millions in restoring some of the damaged buildings in France and Belgium, an altogether praiseworthy expenditure of money, but the buildings on the Acropolis were so preeminent in their pristine condition, the art which they represented was so perfect in its development, that there is hardly a possibility of spending money for restoration of buildings which would count for so much as in Athens. Of course there ought to be some guarantee that if this were done, the work should not be at the mercy of the local politicians, that the settings would be made right and kept right and that the Acropolis with its art treasures would be open to the world, but that could undoubtedly be arranged and it would seem a fine chance for our philanthropic millionaires to give the few millions

necessary to restore these wonderful buildings, and then if that were done rightly and thoroughly and proper guarantees given for the future, it is hardly conceivable the British Government would decline to present the originals to Greece.

But that may be an artist's dream. Our millionaires do not always spend money as artists wish, and the Greek government is not sufficiently stable to inspire a great deal of confidence in its permanence; and so, until all those conditions of money, of restoration, care, etc., can be absolutely fulfilled, the Greek sculptures will be doing far more good in the British Museum than they would anywhere else.

C. H. BLACKALL, F. A. I. A.

MASS production, curtailment of cost, and wrong ideas as to what constitutes efficiency, have taken strong hold in this country. As long as these features of what is mistakenly regarded as evidences of our progress were confined to purely business problems, or manufacturing enterprises, there could be no justified adverse criticism. But in matters referring to education, or more specifically speaking, to schools and their size and management, it is not possible successfully to advance the arguments of mass production. It has been a slogan in this country to urge "bigger and better" conditions. But it is not true that if you increase production, you invariably will get better results, particularly where school buildings are concerned.

The report of the Institute Committee on public school buildings, referred to editorially in our last

issue, substantially urges smaller and better schools. It deprecates the building of large public school buildings and urges the adoption of a type of building that will not admit of a larger number of pupils than twelve hundred and favors schools of one thousand pupils. The point advanced by the Institute Committee, that the average School Board is made up of successful local business men, trained in mass production and the production of products at minimum cost, is well taken. Naturally, the sentiment of such boards would be that a method that had so successfully worked out in their respective business ventures would be equally sound when applied to educational methods. But it is conclusively shown by results in all of our large cities that large schools and large graduation classes are not conducive to the best educational results.

It is not correct to conduct the education of our children of school age along lines similar to a commercial enterprise. Material and its various processes of manufacture may be standardized and the goods turned out in units of hundreds of thousands each one exactly like the other. But the mind of the young cannot be compared to a machine-made product, where one man and a machine successfully turn out hundreds of gross a day.

The Institute's report has been so recently issued that no widely expressed opinion has been given as to its various recommendations. But we look forward to a discussion of this matter of school buildings too large in size, that will, we believe, mark the beginning of a new point of view of the communities' needs in school buildings and lead to some radical changes.

STEPS TO A SCHOOLHOUSE AT CHAPPAQUA

(Continued from page 149)

cially liked in the winning design. The consensus of these points is briefly summarized as follows:

THE PLANS: The requirements are fully provided for in an economical, compact and straightforward way. This gives a building of smaller size than most of the other designs submitted. The two rows of class rooms on either side of a central corridor further this compactness and economy. The lighting and ventilating at both ends of the central corridors are also especially commended. The cross ventilation and lighting of the gymnasium and auditorium are especially good, and the stage facilities are ample. The access to the building in bad weather, with the driveway coming directly under a covered porte-cochere, is also commended. The entrance lobby outside of the auditorium is suitably spacious.

THE PLOT PLAN: The location of the building and the layout of the driveways seem more

practical than any of the others, for the use of school buses and automobiles reaching the building in bad weather. A future extension indicated to the east is as large again as the present building. If a smaller extension were preferred, this could be made at the south end more easily.

EXTERIOR: The economy of the exterior is due to its simplicity and absence of cut stone, carving and other expensive features. The pleasing effect is obtained not by ornament but by good proportions and skillful composition of roofs and gables. This exterior is the most pleasing of all submitted. It is informal as requested. It is unsymmetrical yet well balanced, and not lopsided. It is in harmony with the neighboring church, due to the use of the good local stone; yet it wisely does not have any ecclesiastical character. It looks its part, an especially fine schoolhouse, well above the average. In short the Jury heartily approves of the skillful design from every point of view, and feels that it is distinctly better than any of the other designs, many of which were of a high order.

ENGINEERING AND CONSTRUCTION

PLANNING AND EQUIPPING HIGH SCHOOL CAFETERIAS

Some Administrative Problems of the High School Cafeteria," by Willard Stanley Ford, Ph.D., is a book recently published by the Bureau of Publications, Teachers College, Columbia University. The text sets forth the result of an investigation of the planning and administration of high school cafeterias conducted by Dr. Ford. This investigation, covering a large number of schools throughout the United States, made available statistics and data of importance in the planning of cafeterias in high school buildings. In the preparation of the accompanying article, Dr. Ford's book has been freely drawn upon. Acknowledgment is also due Professor N. L. Engelhardt of Teachers College, Columbia University, for his kind assistance.—The Editors

ASSUMING that the school building program has determined upon the desirability of including a cafeteria, the first step in planning is to estimate the number of pupils who will require lunch service, in order to provide rooms of suitable size, adequate kitchen and counter service and equipment. While

many factors, such as distances of the homes of pupils from the schools they attend, economic circumstances of parents, type of city, comparative price of food served in the school with that outside, size of city, and type of high school organization, may be involved in forecasting the number to be provided for, the two important considerations are size of school, and whether school operates on the lunch hour period or continuous session system.

Present practice of designing the dining room seating area on the basis of about 30% of the student capacity, regardless of the size of the school, appears an unsatisfactory method of arriving at the requirements. This method overlooks the demonstrated facts that the per cent served increases with the size of the high school enrollment, and that in schools having a continuous session three lunch periods are better than one. This indicates that the seats are used three times per meal period or that provision need only be made for one-third the predicted number of patrons. School enrollment is the most important factor upon which the patronage forecast should be made.



CAFETERIA, ORANGE HIGH SCHOOL, ORANGE, N. J.

ERNEST SIBLEY, ARCHITECT—LAWRENCE C. LICHT, ASSOCIATE

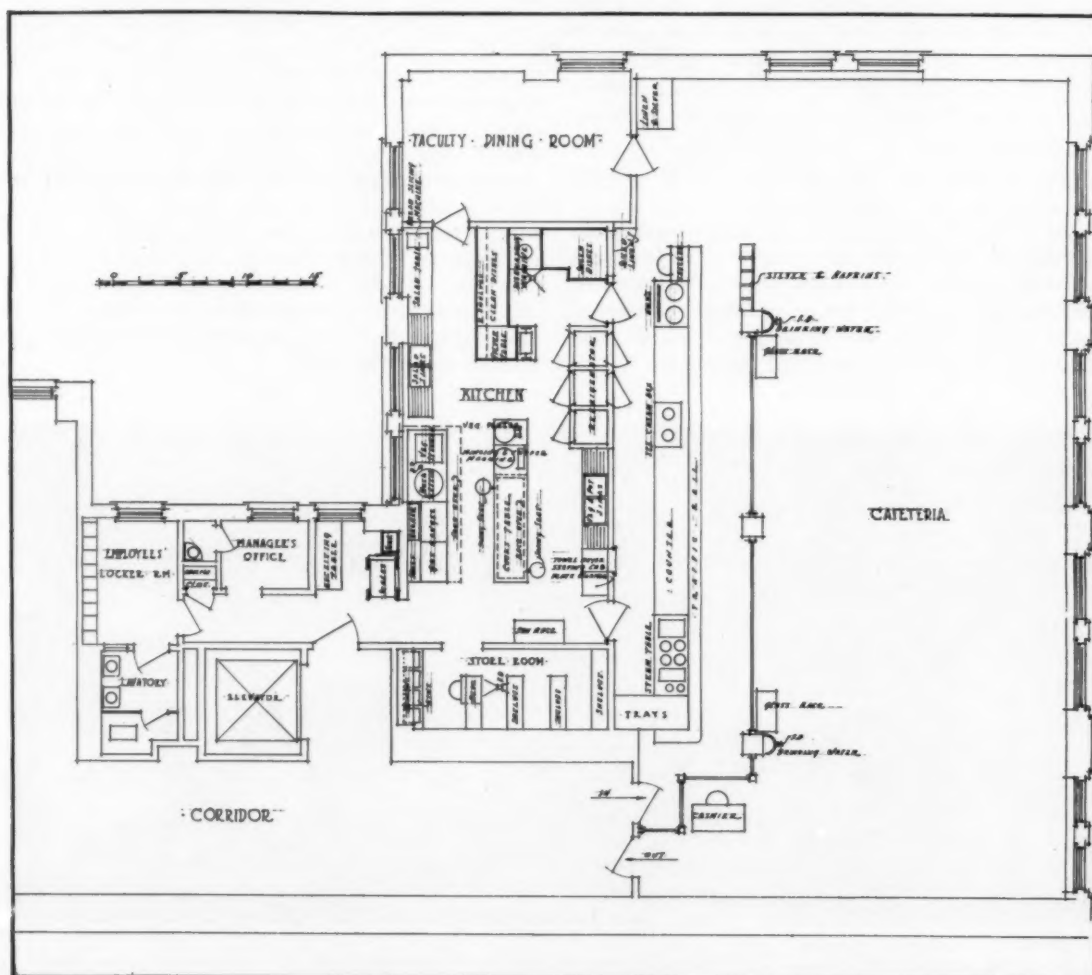
THE CAFETERIA IS USED AS A STUDY HALL BEFORE AND AFTER THE LUNCH PERIOD. A FOLDING PARTITION SEPARATES THE CAFETERIA SERVICE COUNTER FROM THE STUDY HALL

Investigation has disclosed that there is no significant difference between the number of students served in junior and senior high schools of the same enrollment; there is no significant difference between the number of students served in schools of the same number of pupils located in different parts of the country; the size of the city does affect the number of pupils served when the school enrollment is constant; there is a significant difference between the proportion of pupils served in schools with continuous session and those which dismiss for the noon hour; and the regression between the number of students served and the school enrollment may be considered linear.

Investigation has made it apparent that a reasonable cafeteria attendance forecast in schools having a continuous session is 80.3% of the enrollment less 187. Where pupils are dismissed for a noon lunch

hour period 16.5% of the pupils will probably purchase their lunches in the cafeteria. In addition, from 10% to 15% of the school membership will, it is assumed, carry their lunches to school but will require seating space in the dining room. The above basis, as a method of forecasting school cafeteria demands, was developed by Dr. Ford after investigating actual conditions in a large number of representative schools.

Having estimated the number of pupils to be accommodated in the cafeteria, the next step is to determine the size of the dining room. The number of seatings required depends on whether one, two or three lunch periods are to be scheduled. For economy and simplicity of administration three lunch periods are generally favored. In this case the total number to be provided for divided by three indicates the number of seats required. The area per



KITCHEN AND CAFETERIA, LINCOLN SCHOOL, TEACHERS COLLEGE, COLUMBIA UNIVERSITY, NEW YORK
STARRETT & VAN VLECK, ARCHITECTS

seat that has been provided in cafeterias has varied from 8.68 to 14.38 square feet, or an average of 11.53 square feet, exclusive of serving space. Under normal conditions 9 square feet of floor area per seat exclusive of serving space should prove adequate.

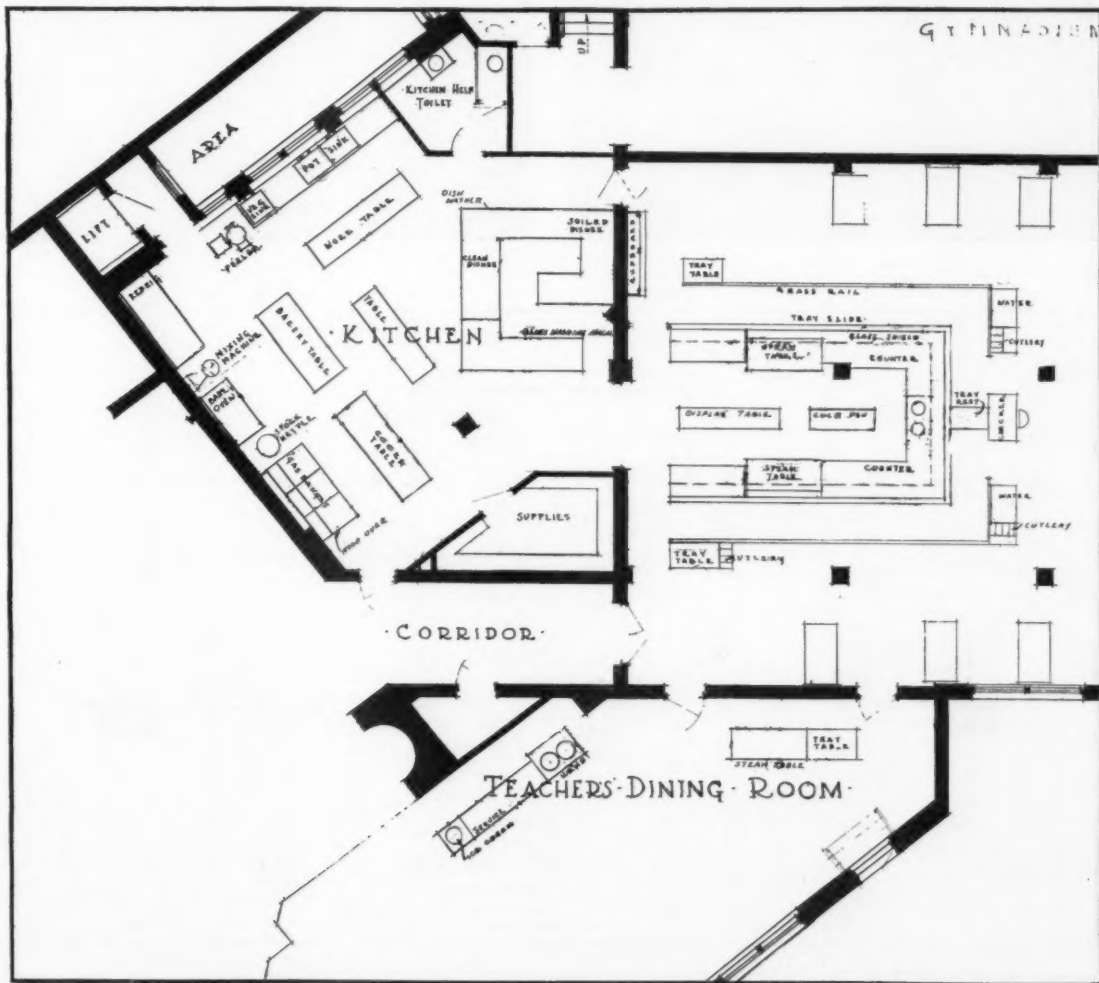
Long tables in the dining room are more economical of space than small square tables. Desirable sizes are 28 to 30 inches wide and 5'-6" to 9'2" long. Each pupil should be provided 22 inches of table frontage. Long tables with one end butting against the wall should be spaced 44 inches apart. Where side aisles are provided this may be reduced to 36 inches. Aisles should be 4 feet wide in the clear.

Since the kitchen equipment requires a certain amount of fixed space without relation to the number of students to be served, it is difficult to arrive at a square foot allowance per cafeteria seat. Small schools require proportionately greater kitchen area

than large schools. For cafeterias seating 500, one square foot per seat is adequate. For schools with fewer seats this should be increased to 1.5 square feet per seat. No kitchen should have an area less than 300 square feet. These areas include the dishwashing space. The kitchen must be planned for the efficient conduct of this department and a minimum of interference between the kitchen units such as sandwich preparation, baking, cooking, vegetable preparation and dishwashing.

Serving room, store room, office, locker room and lavatories should be provided adjacent to the kitchen. The tendency has been to provide too little area for these rooms. An allowance of at least two square feet per dining room seat should be made for these auxiliary rooms.

The approximate total area required for cafeteria purposes per student served, allowing for dining

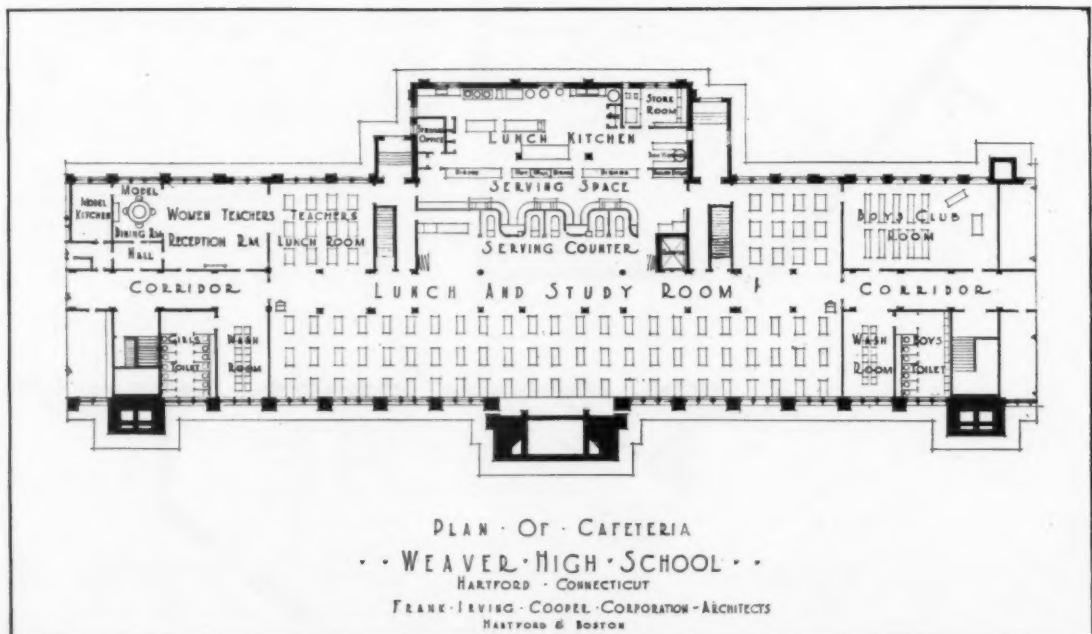


KITCHEN AND CAFETERIA SERVICE COUNTER LAYOUT, NEW ROCHELLE HIGH SCHOOL, NEW ROCHELLE, N. Y.

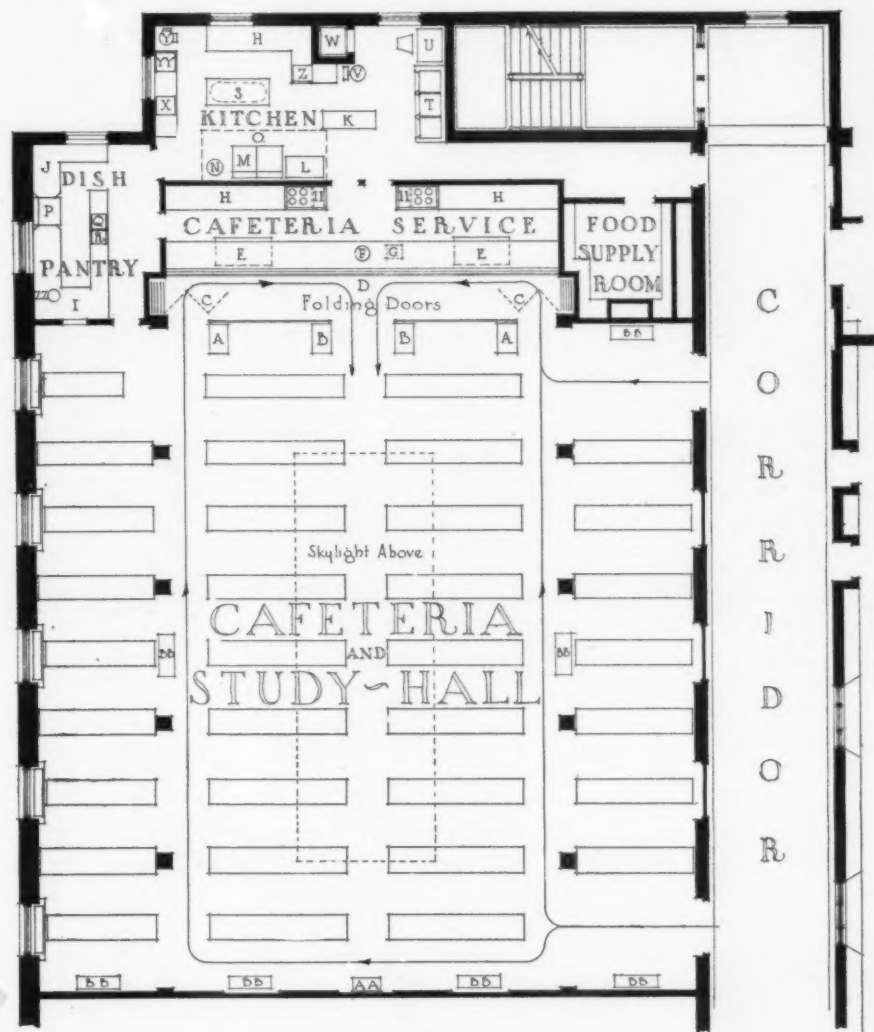
GUILBERT & BETELLE, ARCHITECTS

room 9 square feet, kitchen 1.5 square feet and auxiliary rooms 2 square feet, is 12.5 square feet. The relation of cafeteria volume to total building volume in a number of schools as built ranges from 1.09% to 7.9% or averages 3.84%. Individual requirements of different schools may dictate the providing of special rooms for baking, linen, separate dishwashing pantries, refrigeration rooms, help's locker rooms, and separate dining rooms for boys, girls and faculty. The cafeteria should not be placed

in the basement unless it is well lighted and ventilated. Located on the first floor the cafeteria kitchen has the advantage of a separate entrance for supplies and avoids the necessity of an elevator required when it is located on an upper floor. The disadvantage of the first floor location is the tendency of kitchen odors to pass upward through the building. For this reason, as well as to secure better light and ventilation, an upper floor is generally accepted as preferable. The dining room should have a central



A TYPE OF CAFETERIA PLANNED FOR MAXIMUM USE. A SOUNDPROOF FOLDING PARTITION SEPARATES THE SERVING COUNTER FROM THE CAFETERIA WHICH IS ALSO USED AS A STUDY HALL. THE MAIN ROOM IS LOCATED BETWEEN THE AUDITORIUM AND GYMNASIUM TO FACILITATE THE SERVING OF FOOD AT COMMUNITY GATHERINGS. LUNCH ROOM, 9600 SQ. FT., 450 SEATS. KITCHEN, 1920 SQ. FT. DINING ALCOVE FOR TEACHERS, 24 SEATS



KEY

A Table for Trays
B Cashiers Desk
C Folding Doors
D Tray Rail
E Steam Table
F Warmer Under
G Chocolate Urn
H Sink Under
I Counter Shelves Under
J Soiled Dish Counter

II Ice Cream & Milk
J Clean Dish Counter
K Bakers Table
L Gas Oven
M Gas Range
N Stock Kettle
O Hood Over
P Dishwasher
Q Glass Sink
R Silver Sink
AA Water Cooler
BB Soiled Dish Truck

S Cook's Table
T Refrigerator
U Chef's Desk
V Kitchen Machine
W Dumb Waiter
X Pot Sink
Y Vegetable Parer
YY Vegetable Sink
Z Sink
ZZ Garbage Hopper

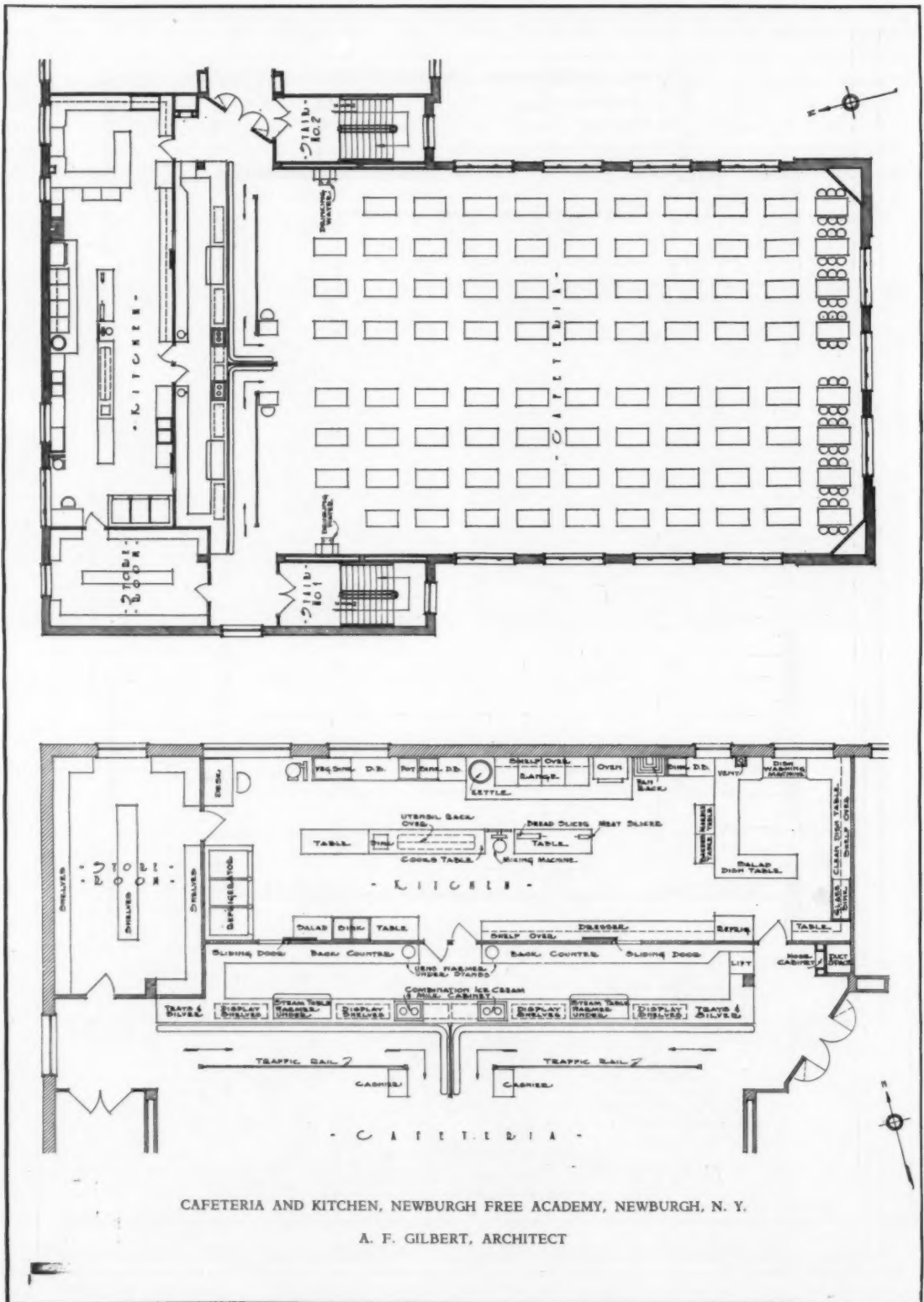
CAFETERIA AND STUDY HALL
ORANGE HIGH SCHOOL

ERNEST SIBLEY
ARCHITECT
PALISADE N.J.

ORANGE NEW JERSEY

LAWRENCE C. LIGHT
ASSOCIATE

Reprinted from "Some Administrative Problems of the High School Cafeteria," by W. S. Ford, Ph.D.



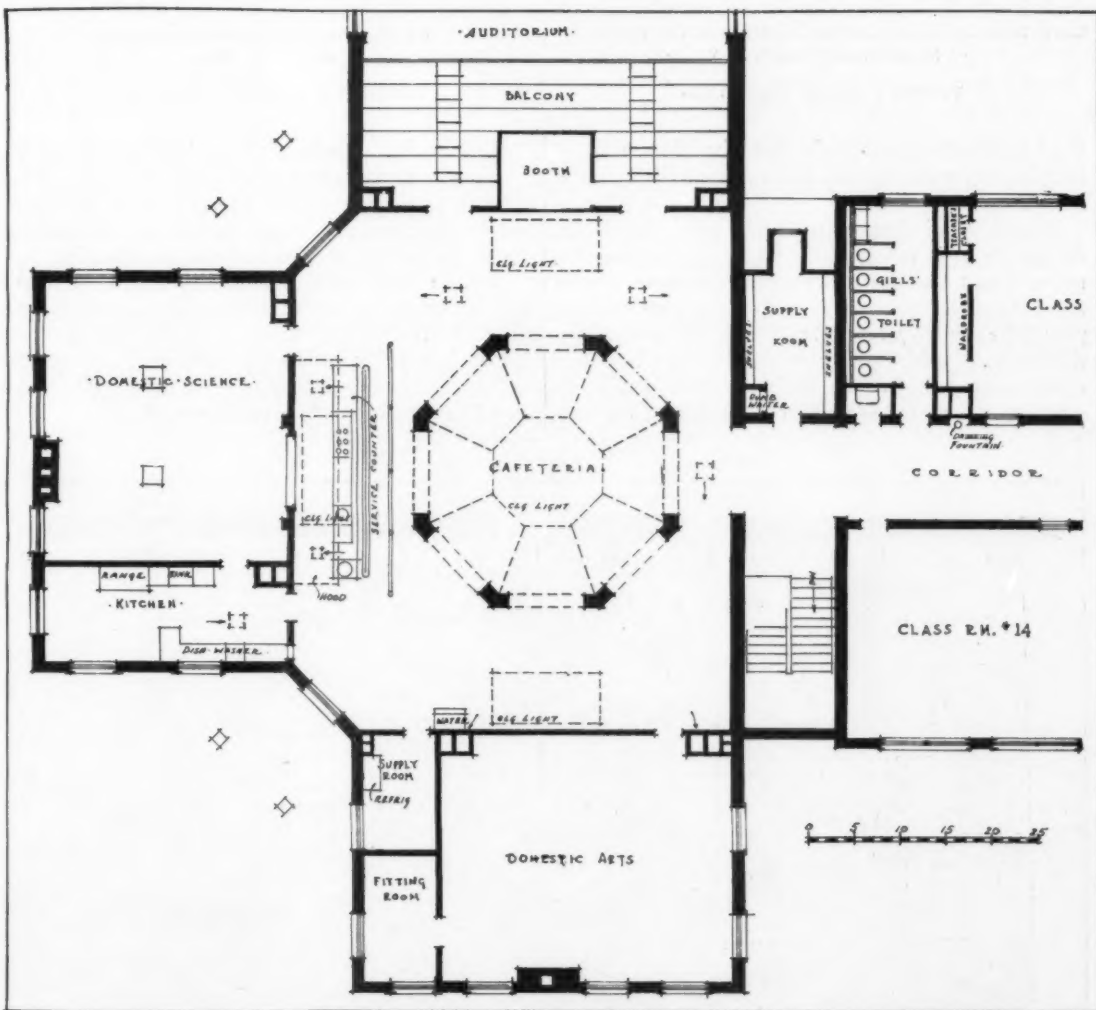
CAFETERIA AND KITCHEN, NEWBURGH FREE ACADEMY, NEWBURGH, N. Y.

A. F. GILBERT, ARCHITECT

location in the plan and should be architecturally treated to provide a pleasing atmosphere. If possible washrooms of generous size should be located near the dining room for the convenience of pupils before and after lunch. Since the domestic science rooms and the cafeteria are designed for two distinct purposes, there is seldom any advantage in locating these in adjacent areas insofar as use is concerned.

The cafeteria area should be well lighted both naturally and artificially. That portion of Dr. Ford's investigation covering the provision for artificial lighting discloses that the average watts per square

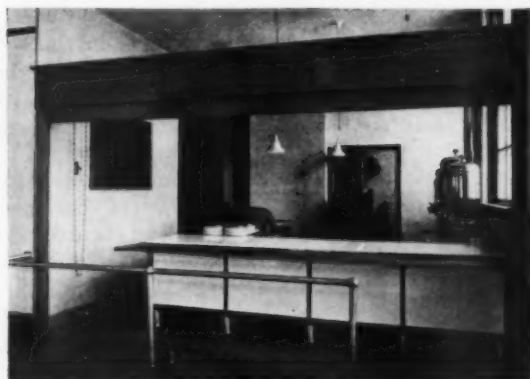
foot used in 45 schools was found to be .596 in the dining room and .643 in the kitchen. In thirteen schools where results were particularly good, the dining rooms were provided with an average of 1.00, and the kitchen .94 watts per square foot. Since the type of fixture, size of globe, height of globe above the floor, spacing of outlets, color and finish of walls and ceilings, are factors that enter into this question, the number of watts actually required to produce satisfactory illumination will vary with individual conditions. In the kitchen it is advantageous to provide lighting fixtures for each working unit. To secure adequate natural light, Dr.



CAFETERIA, LOCUST VALLEY GRADE SCHOOL, LOCUST VALLEY, N. Y.

COFFIN & COFFIN, ARCHITECTS

THE CAFETERIA IS LOCATED ON THE SECOND FLOOR IN AN AREA THAT COULD NOT BE OTHERWISE USED FOR SCHOOL PURPOSES. THE INTERIOR OF THE CAFETERIA IS LIGHTED BY THE LANTERN OR OCTAGONAL TOWER ABOVE. THE KITCHEN SERVES THE CAFETERIA AND THE DOMESTIC SERVICE DEPARTMENT



CAFETERIA COUNTER, NORTH TONAWANDA HIGH SCHOOL,
NORTH TONAWANDA, N. Y.

TOOKER & MARSH, ARCHITECTS



CAFETERIA, KEARNEY HIGH SCHOOL,
KEARNEY, N. J.

GUILBERT & BETELLE, ARCHITECTS

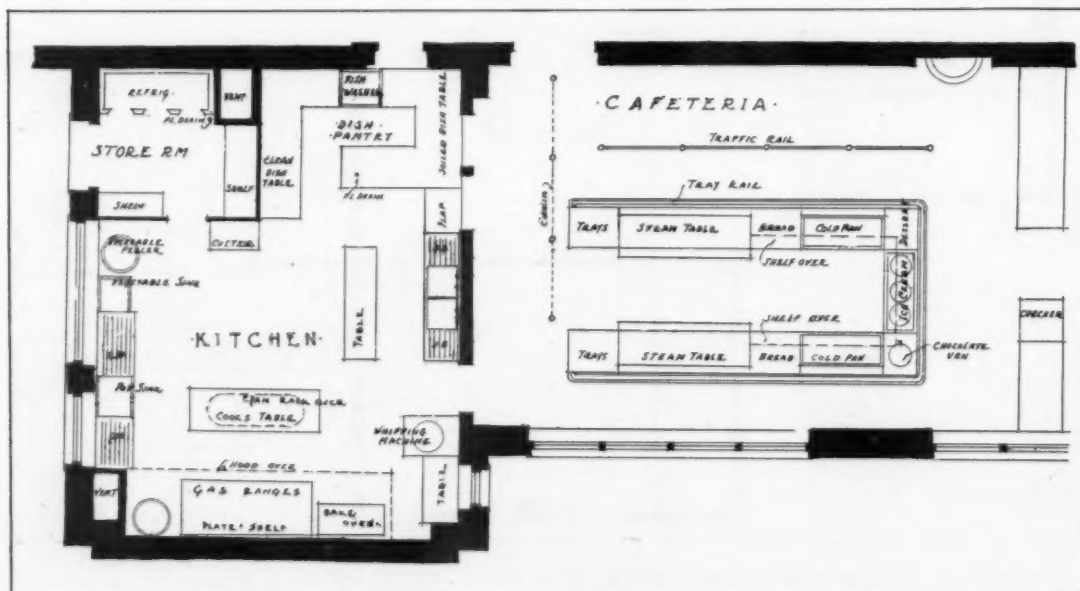
Ford's report recommends that the glass area of both dining room and kitchen be made 20% of the floor area.

Ventilation is important in the cafeteria. In the dining room it is especially important where this room is also used for other school purposes. Steam from the dishwasher requires that the dishwashing pantry be properly ventilated. Needless to state, ventilation of the kitchen is absolutely essential. It is recommended that the cafeteria ventilation be separate from the general system. It should be easily con-

trolled in the cafeteria for use when and as desired.

Since a certain amount of noise in the handling of dishes and preparation of meals is unavoidable, the ceilings and partitions separating the cafeteria from class rooms should be soundproofed.

Since a large number of students must be served in a comparatively short time, facilities must be provided to handle the work in an efficient manner. Three factors determine the number of counters required—rate of service, length of lunch period and number of pupils to be served per period.



KITCHEN AND CAFETERIA SERVICE COUNTER LAYOUT, KEARNEY HIGH SCHOOL, KEARNEY, N. J.

GUILBERT & BETELLE, ARCHITECTS

INTERIOR ARCHITECTURE

DESIGN AND EQUIPMENT OF SCHOOL INTERIORS

SUCH strict and rigid stipulations are imposed upon the design of schools by state building codes and boards of education that architects find infrequent opportunity for original expression in the treatment of the interior, and even then have difficulty in presenting an interesting design, from an architectural standpoint, in a majority of the rooms. The size of class rooms is governed by law, the different states varying in allowing so many square feet per pupil; the glass size of windows in each room is similarly fixed by law, regulations averaging twenty per cent of the floor area, and even the ventilation is under surveillance of those who administer the building codes. The number of pupils that a class room shall seat is, however, flexible, although architects specializing in this type

of work have set certain standards which they consider most essential. In a grade school, it has been found that the most satisfactory class room shall seat forty pupils, the size of the room varying from twenty-two by thirty-two to twenty-four by thirty-eight feet, allowing, approximately, eighteen square feet per pupil. In a grade school, all class rooms are the same size. Class rooms in junior high schools run slightly smaller, seating satisfactorily thirty-five pupils. All class rooms are the same size, also. In senior high schools, due to the special subjects that are taught, the size of rooms varies, the average room seating, as it does in junior schools, thirty-five pupils.

It can readily be seen that there is a certain flaw in the building codes which require the same num-



TYPICAL CLASS ROOM, ST. SIMONSTOCK PAROCHIAL SCHOOL, NEW YORK

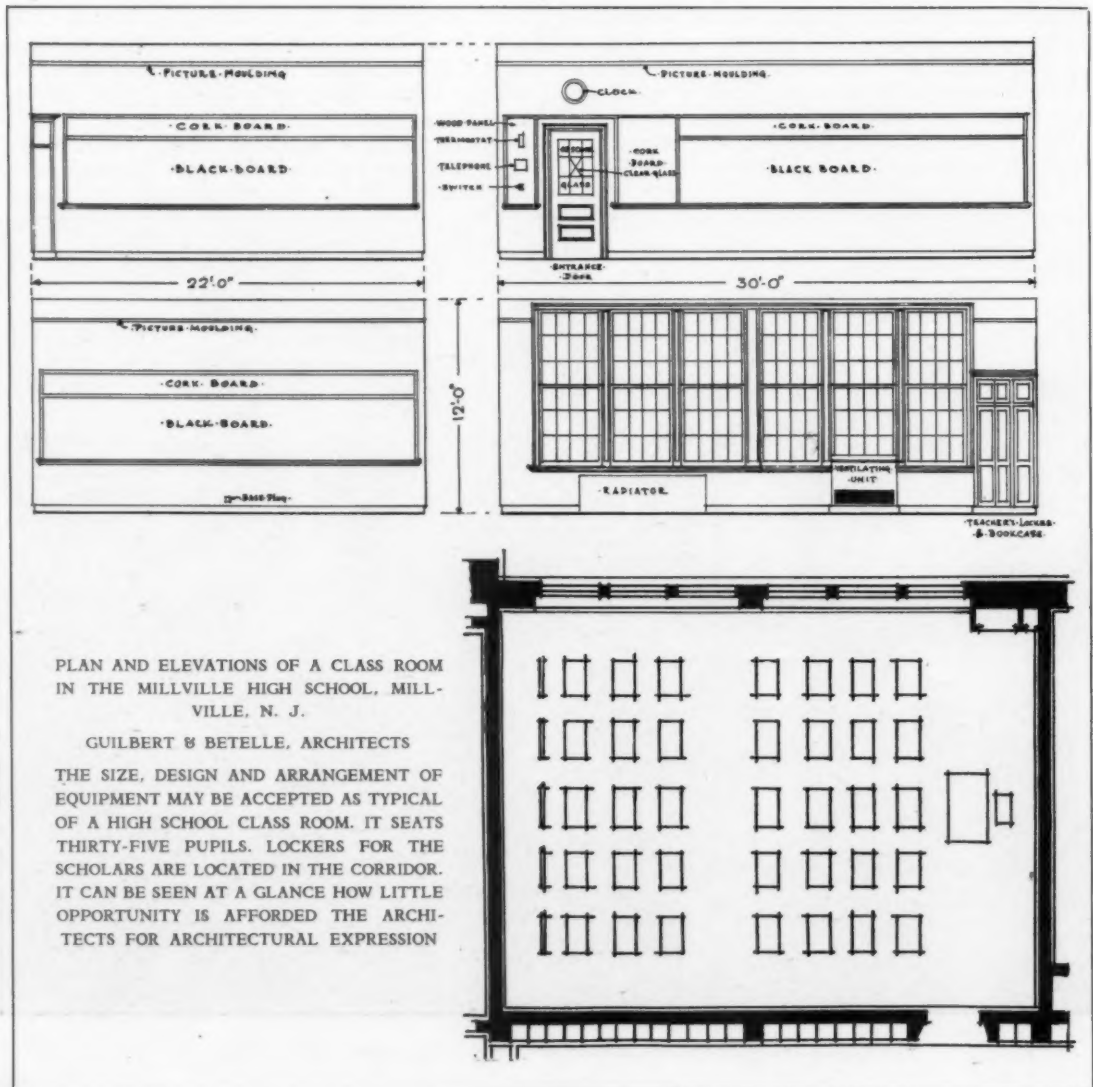
EDWARD F. FANNING, ARCHITECT

ber of square feet per pupil for the kindergarten and elementary grades as is required for the older scholars in senior high schools.

Although the plan and design of class rooms further than this is not directly under control of building regulations, there are certain other stipulations which still further standardize the interior treatment. The most successful class room should have but one door, located at one end of the room, near the teacher's desk, so that he may have perfect control of the goings and comings of the scholars, and that the pupils may not be tempted to turn around at every opening and closing of the door. Blackboards, with cork board panels above for the exhibiting of students' work and school notices, take up most of the wall space, the height of the blackboards from the floor varying according to

the grade. Although these are all elementary details, with which school architects are perfectly familiar, they are recorded here simply to emphasize how little opportunity is afforded architects in developing designs of school interiors.

There are two types of school rooms, however, in the design of which the architect may exercise a freer hand—kindergartens and auditoriums. The kindergarten is in reality more of a play room than a class room. But it is a play room with an educational motive. There are no desks; what furniture there may be is not what is generally considered as school furniture, and wall decorations are often more suggestive of a nursery than a school. A fireplace is desirable, as at certain seasons of the year it allows of special exercises for the pupils. It is ad-





KINDERGARTEN, MARSHALL SCHOOL, SOUTH ORANGE, N. J.—GUILBERT & BETELLE, ARCHITECTS



KINDERGARTEN, LINCOLN SCHOOL, EVANSTON, ILL.—CHILDS & SMITH, ARCHITECTS



AUDITORIUM, GLASSBORO NORMAL SCHOOL, GLASSBORO, N. J.—GUILBERT & BETELLE, ARCHITECTS

THE GYMNASIUM IS ON THE SAME LEVEL AS THE STAGE AND OPENS DIRECTLY ON TO IT, ALLOWING FOR STAGING CERTAIN PERFORMANCES WHICH AN ORDINARY STAGE WOULD NOT PERMIT

visible for the kindergarten to have a southeastern exposure, so that the sun may lend its cheery light to the room, and, if possible, it should open on to a terrace or courtyard where, weather permitting, games in the open air may be indulged in.

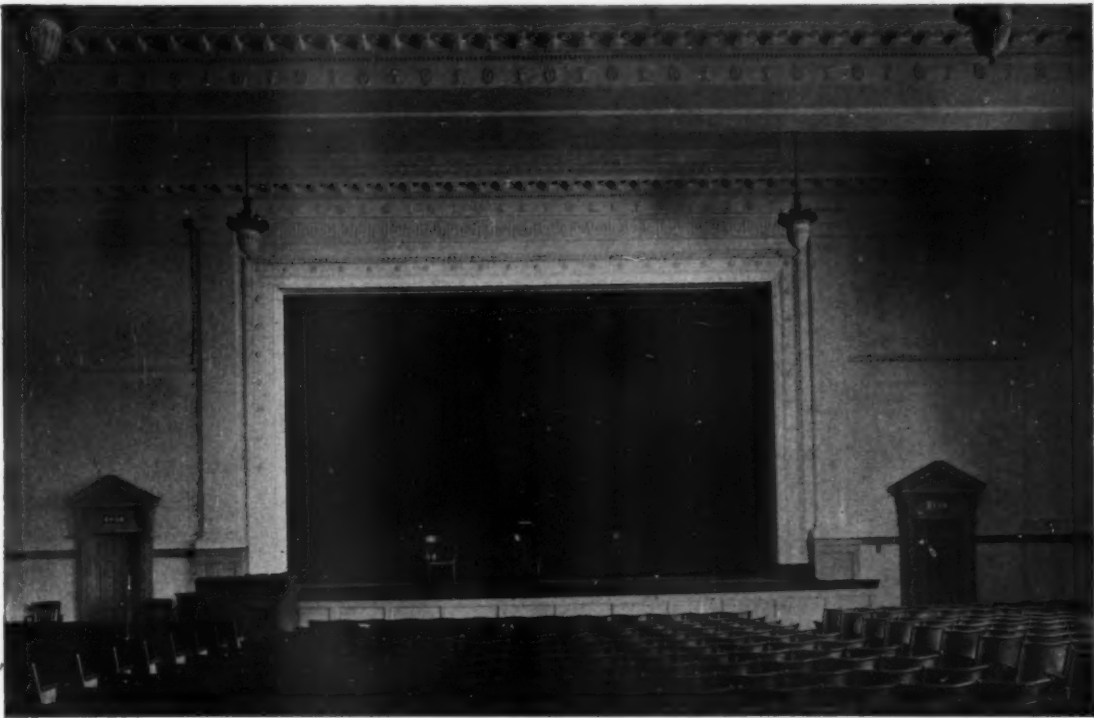
The auditorium is a room of many usages. In

smaller communities it is often used as a town hall, as a lecture hall, or for certain social functions, as well as for those purposes which are more directly associated with school life. This is the one place in the school where architectural design has an opportunity for expression. There are certain stipula-



SCIENCE LECTURE ROOM AND PHYSICS LABORATORY, NORTH TONAWANDA HIGH SCHOOL, NORTH TONAWANDA, N. Y.

TOOKER & MARSH, ARCHITECTS



GYMNASIUM, NORTH TONAWANDA HIGH SCHOOL, NORTH TONAWANDA, N. Y.—TOOKER & MARSH, ARCHITECTS

THE SAME STIPULATIONS ARE NOT IMPOSED ON THE DESIGN OF AUDITORIUMS AS ON OTHER SCHOOL ROOMS, ALLOWING, THEREFORE, OF GREATER OPPORTUNITIES FOR ARCHITECTURAL EXPRESSION

tions to be adhered to, as exits, location of stage, seating capacity, and so forth, but the room must make a certain architectural appeal in order to serve its varied purposes satisfactorily.

Furniture in class rooms is conventional. The various lecture rooms and laboratories devoted to

special subjects allow of special furniture to suit their peculiar needs. Illustrations of several of these types of rooms are shown in which the equipment is especially interesting. Certain principles which have already been described as governing the plan and design of class rooms are also applicable here.



CHEMISTRY LABORATORY AND WOODWORKING ROOM, NORTH TONAWANDA HIGH SCHOOL, NORTH TONAWANDA, N. Y.

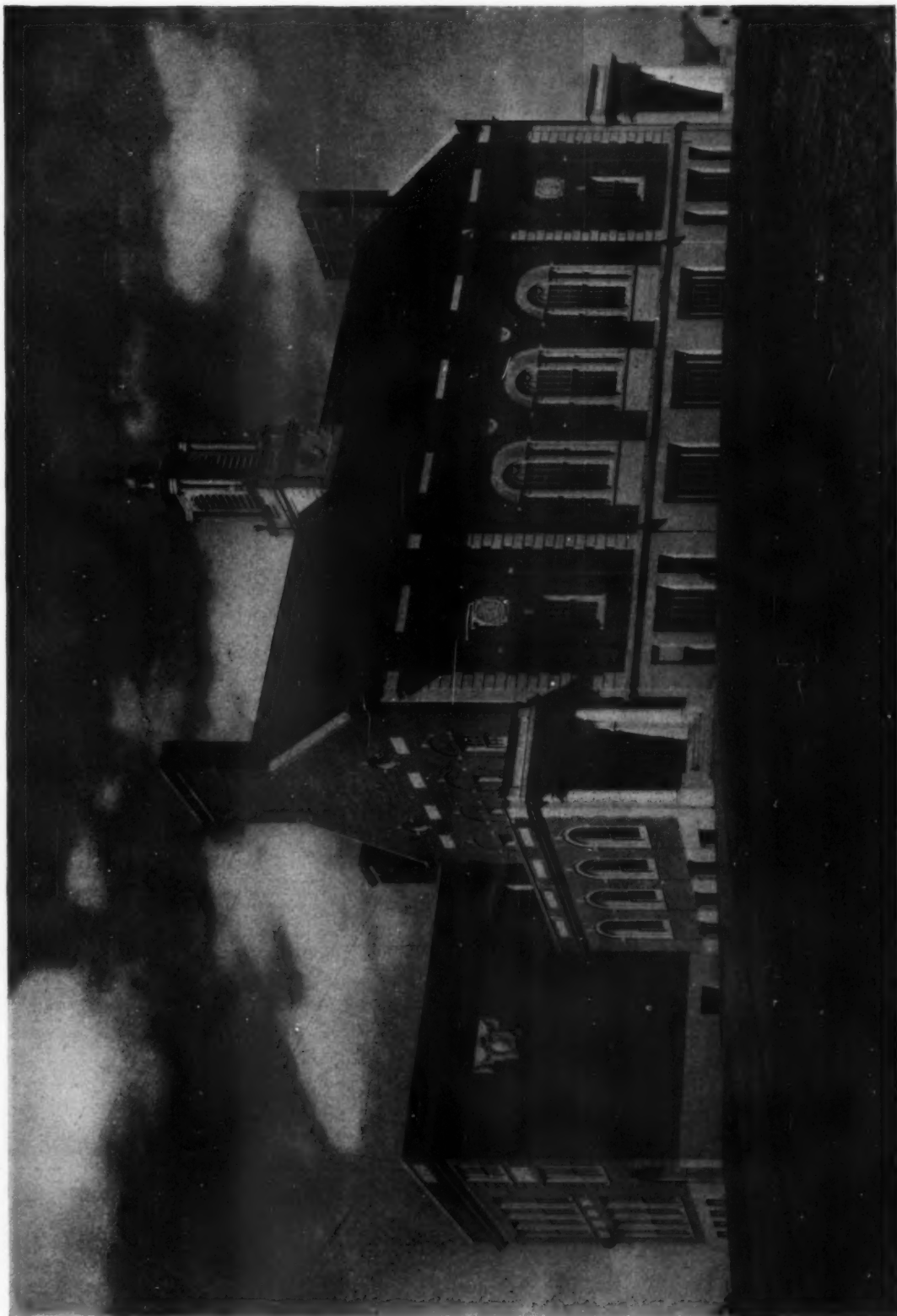
TOOKER & MARSH, ARCHITECTS



AUDITORIUM, NORTH TONAWANDA HIGH SCHOOL, NORTH TONAWANDA, N. Y.—TOOKER & MARSH, ARCHITECTS



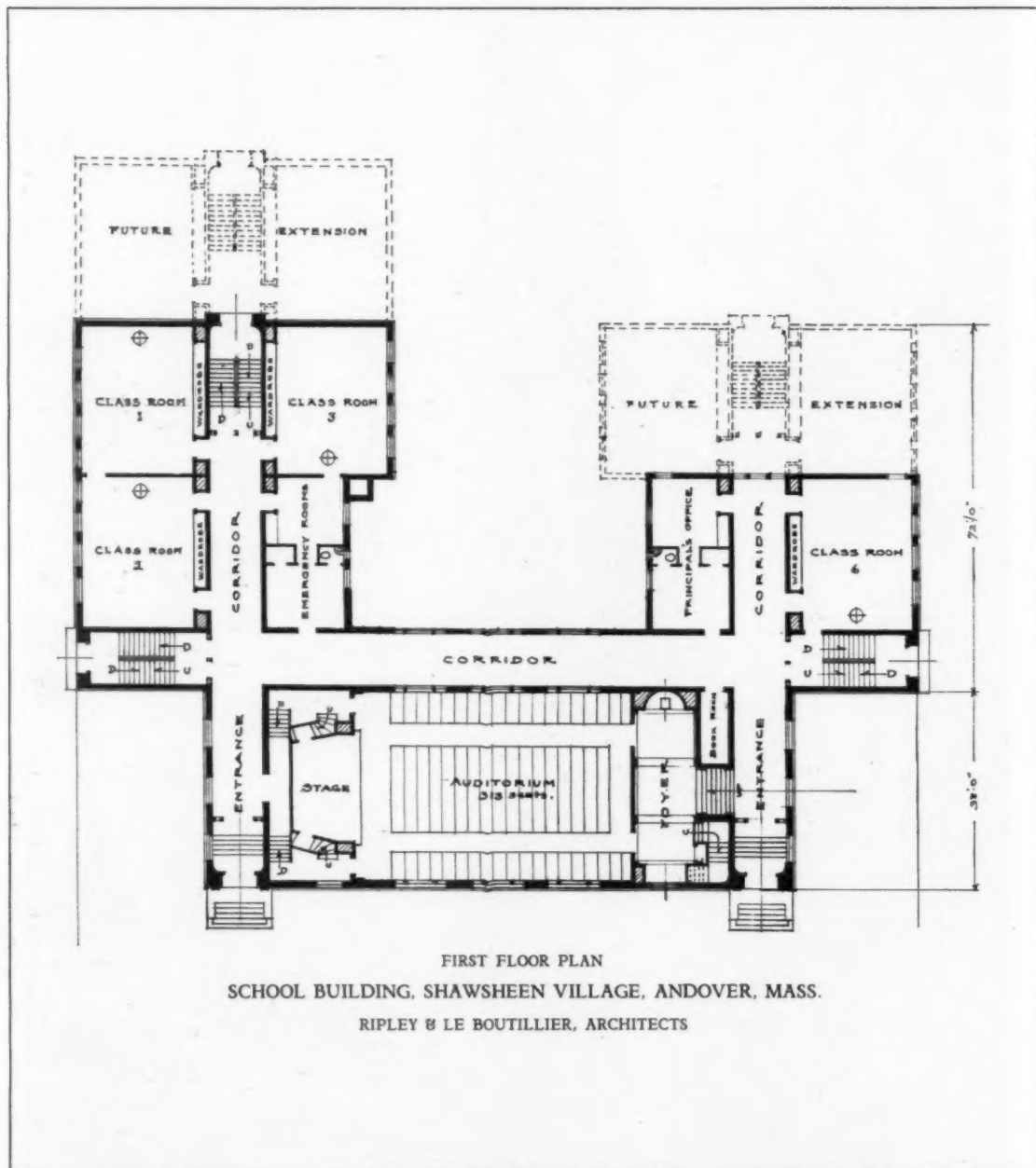
AUDITORIUM, PELHAM HIGH SCHOOL, PELHAM, N. Y.—TOOKER & MARSH, ARCHITECTS

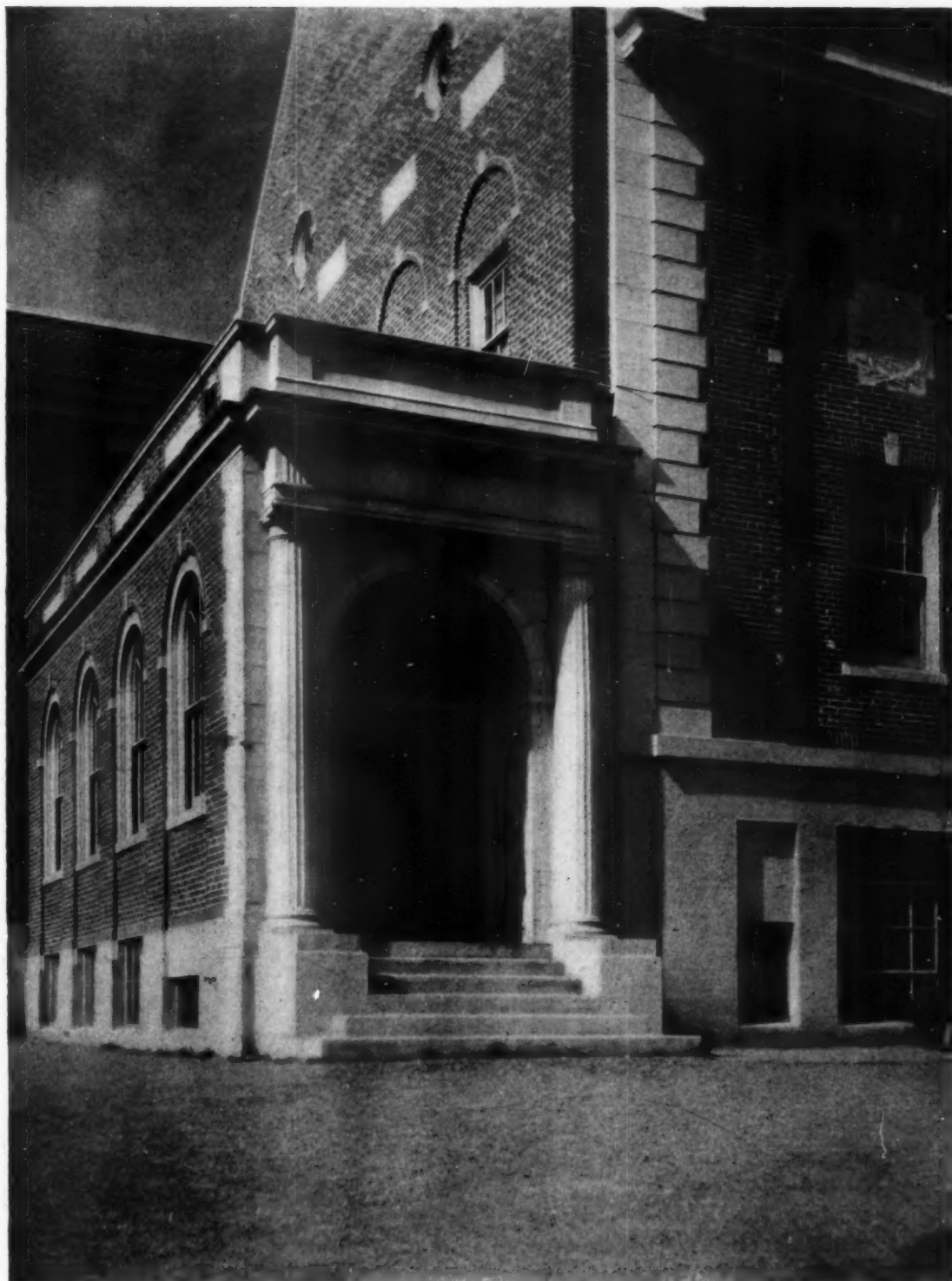


SCHOOL BUILDING, SHAWSHEEN VILLAGE, ANDOVER, MASS.

RIPLEY & LE BOUTILLIER, ARCHITECTS

(See plan on back)





SCHOOL BUILDING, SHAWSHEEN VILLAGE, ANDOVER, MASS.

RIPLEY & LE BOUTILLIER, ARCHITECTS

(See plan on back)



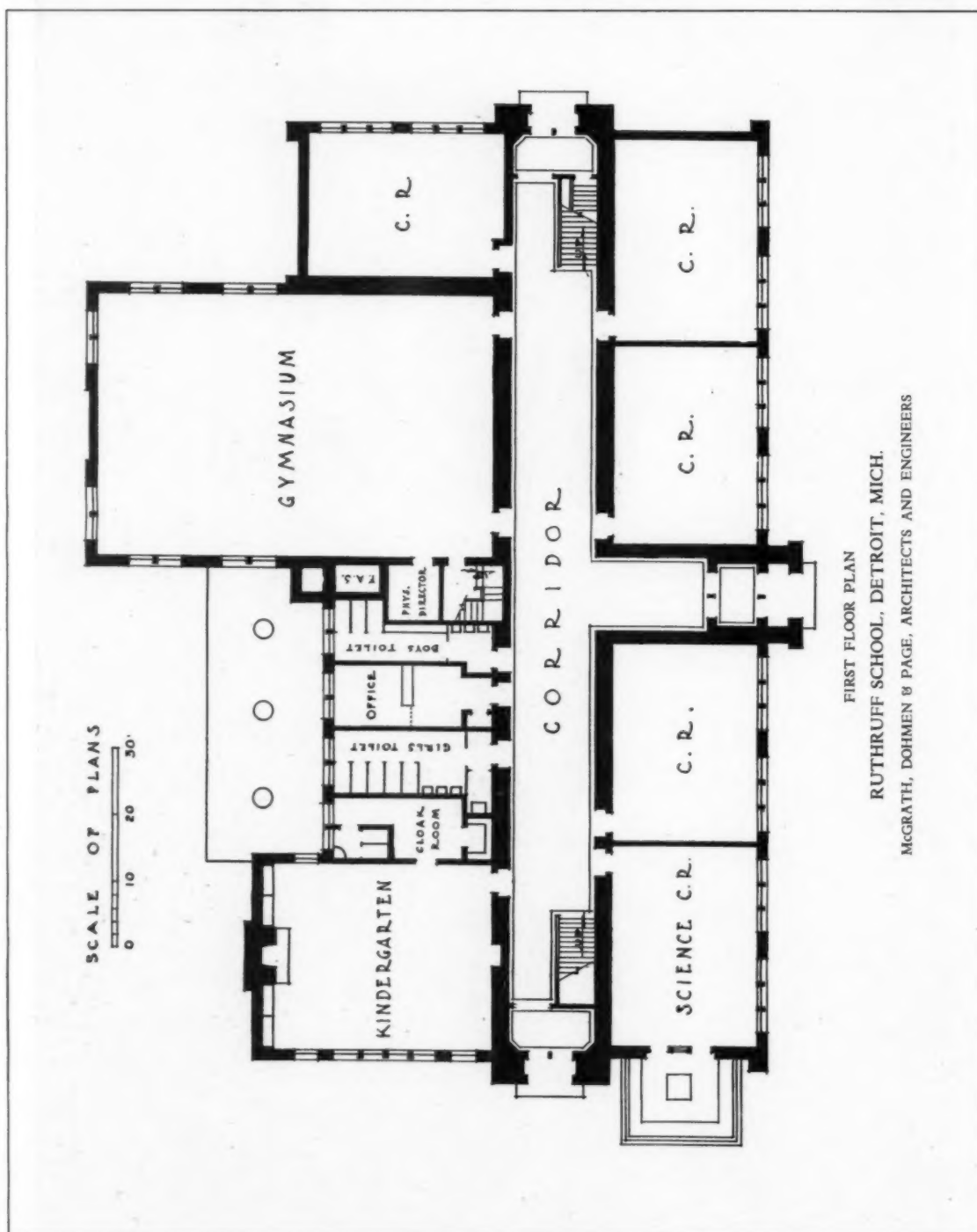
SECOND FLOOR PLAN
SCHOOL BUILDING, SHAWSHEEN VILLAGE, ANDOVER, MASS.
RIPLEY & LE BOUTILLIER, ARCHITECTS

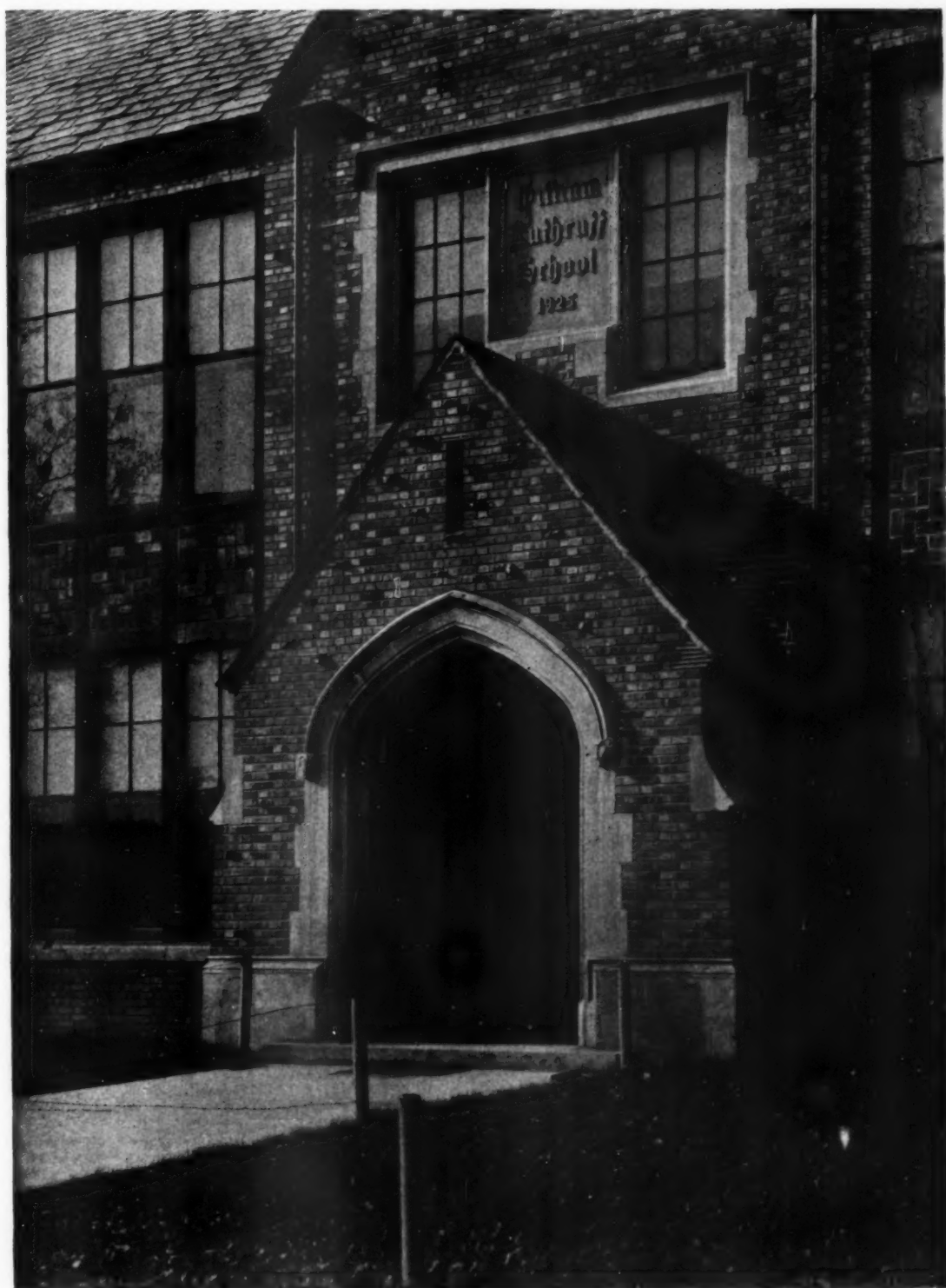


RUTHRUFF SCHOOL, DETROIT, MICH.

McGRATH, DOHMEN & PAGE, ARCHITECTS AND ENGINEERS

(See plan on back)

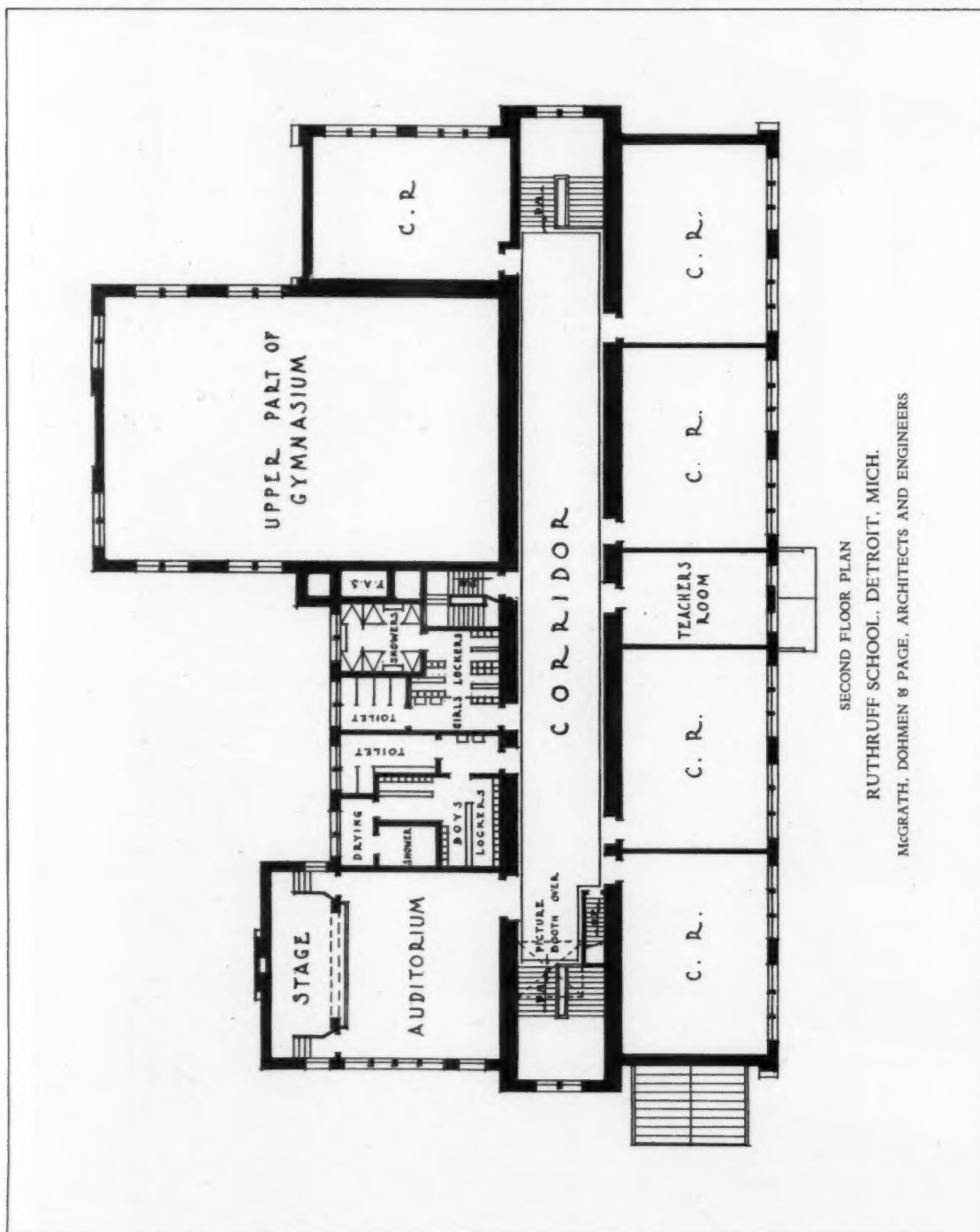




RUTHRUFF SCHOOL, DETROIT, MICH.

MCGRATH, DOHMEN & PAGE, ARCHITECTS AND ENGINEERS

(See plan on back)

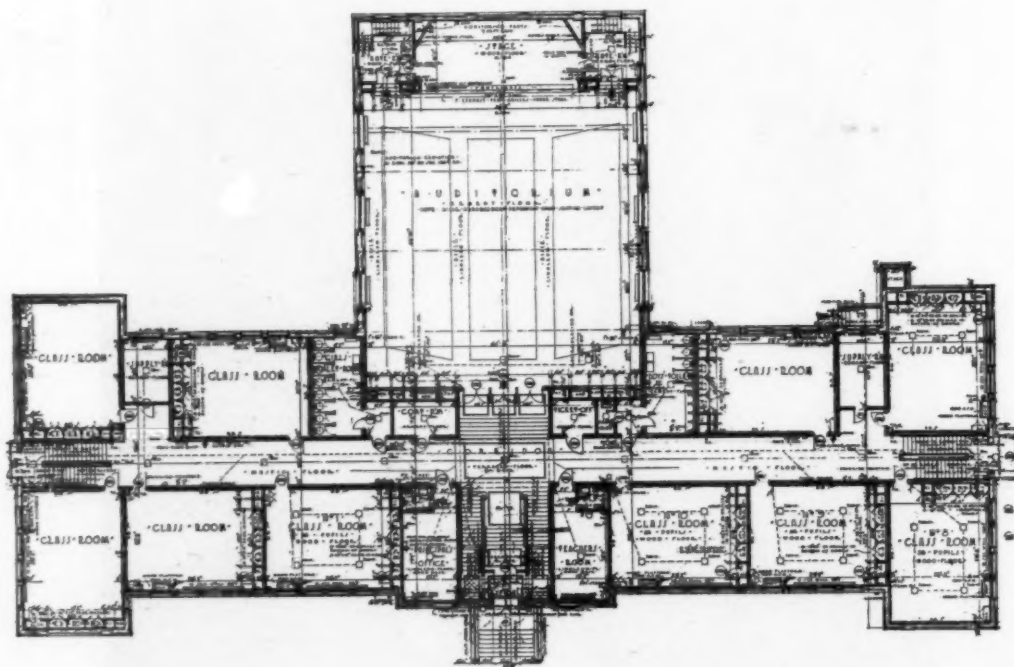
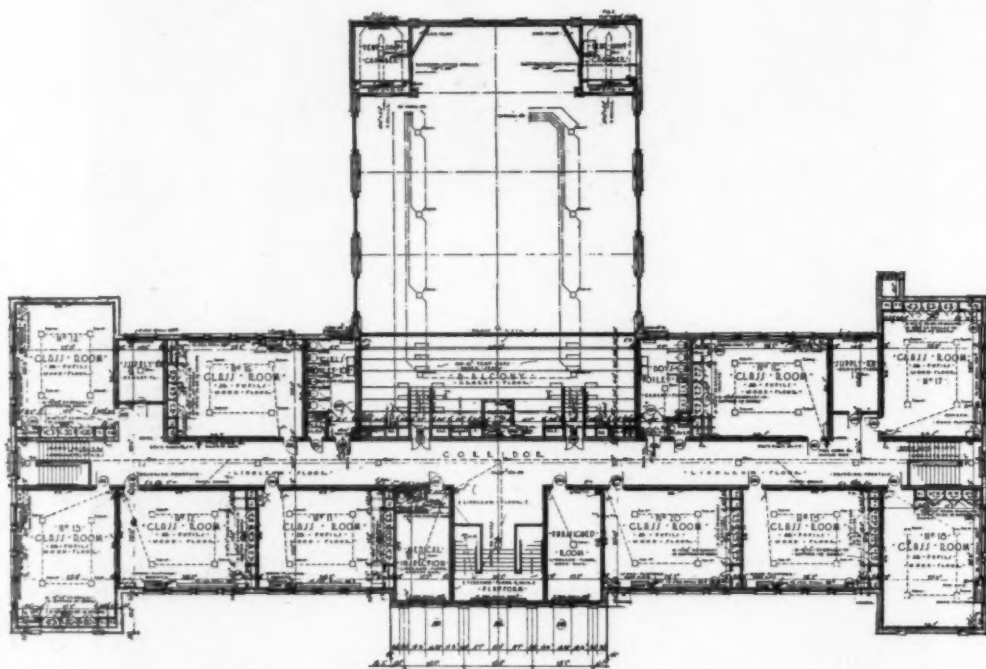




GRADE SCHOOL, HARRISON, N. Y.

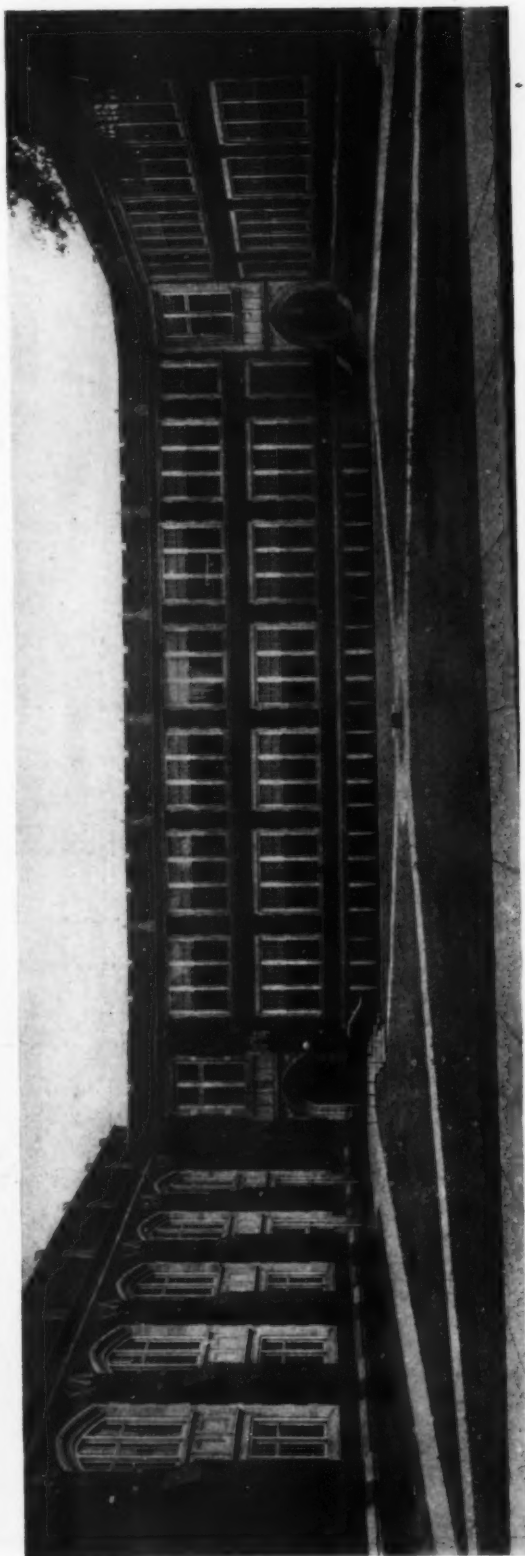
TOOKER & MARSH, ARCHITECTS

(See plans on back)

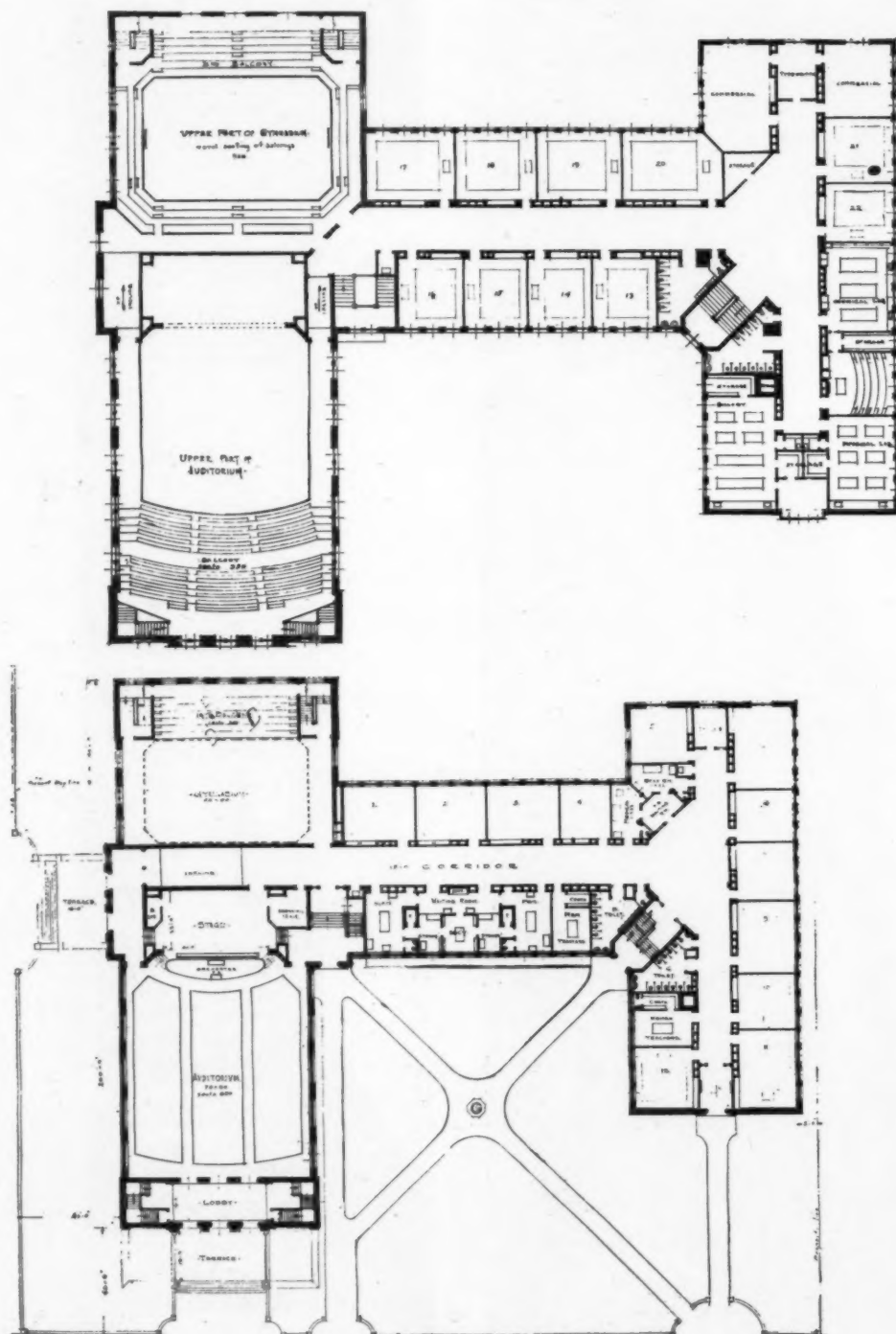


GRADE SCHOOL, HARRISON, N. Y.

TOOKER & MARSH, ARCHITECTS



HIGH SCHOOL, MEADVILLE, PA.—W. G. ECKLES COMPANY, ARCHITECTS
(See plans on back)



HIGH SCHOOL, MEADVILLE, PA.

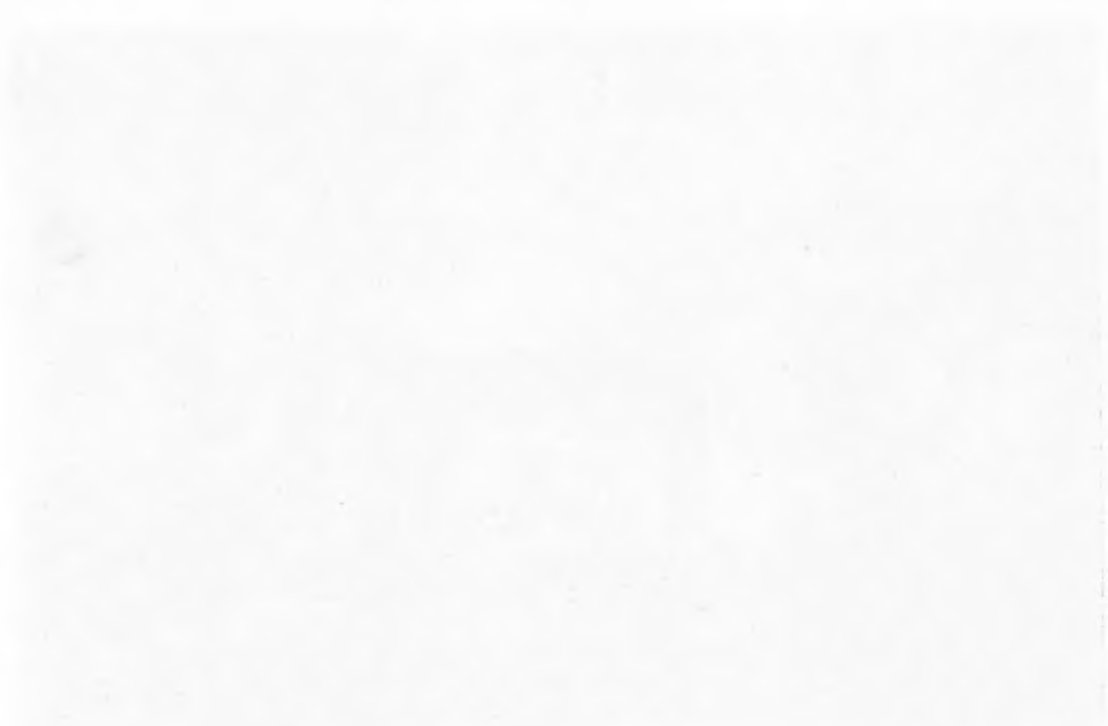
W. G. ECKLES COMPANY, ARCHITECTS



DETAIL, PRINCIPAL ENTRANCE
HIGH SCHOOL, MEADVILLE, PA.
W. G. ECKLES COMPANY, ARCHITECTS



HIGH SCHOOL, MEADVILLE, PA.
W. G. ECKLES COMPANY, ARCHITECTS



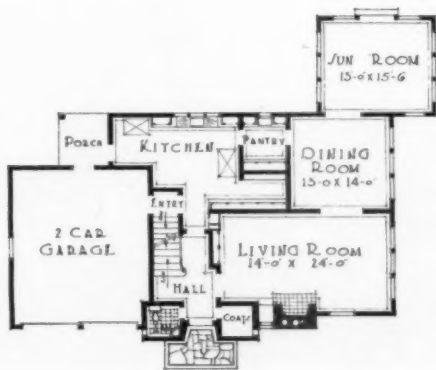
A GROUP OF BUILDINGS OF MODERATE COST

WITH DETAILS OF CONSTRUCTION, MATERIALS AND CUBIC COST

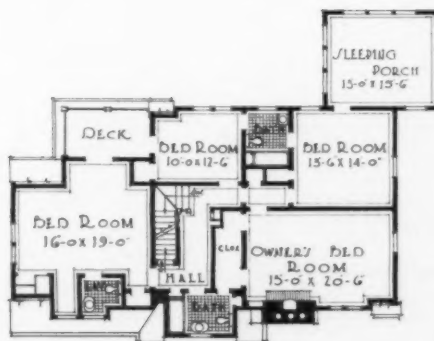


HOUSE IN BUFFALO, N. Y.—FREDERICK C. BACKUS, ARCHITECT

AN UNUSUAL PLAN WHICH LENDS ITSELF TO AN INTERESTING EXTERIOR DESIGN. THERE ARE ON THE FIRST FLOOR A FAIR SIZED LIVING ROOM, SMALL DINING ROOM AND SUN PORCH AND KITCHEN, AND A TWO CAR GARAGE ADJOINS THE HOUSE. THERE ARE FOUR BEDROOMS AND A SLEEPING PORCH ON THE SECOND FLOOR



FIRST FLOOR PLAN



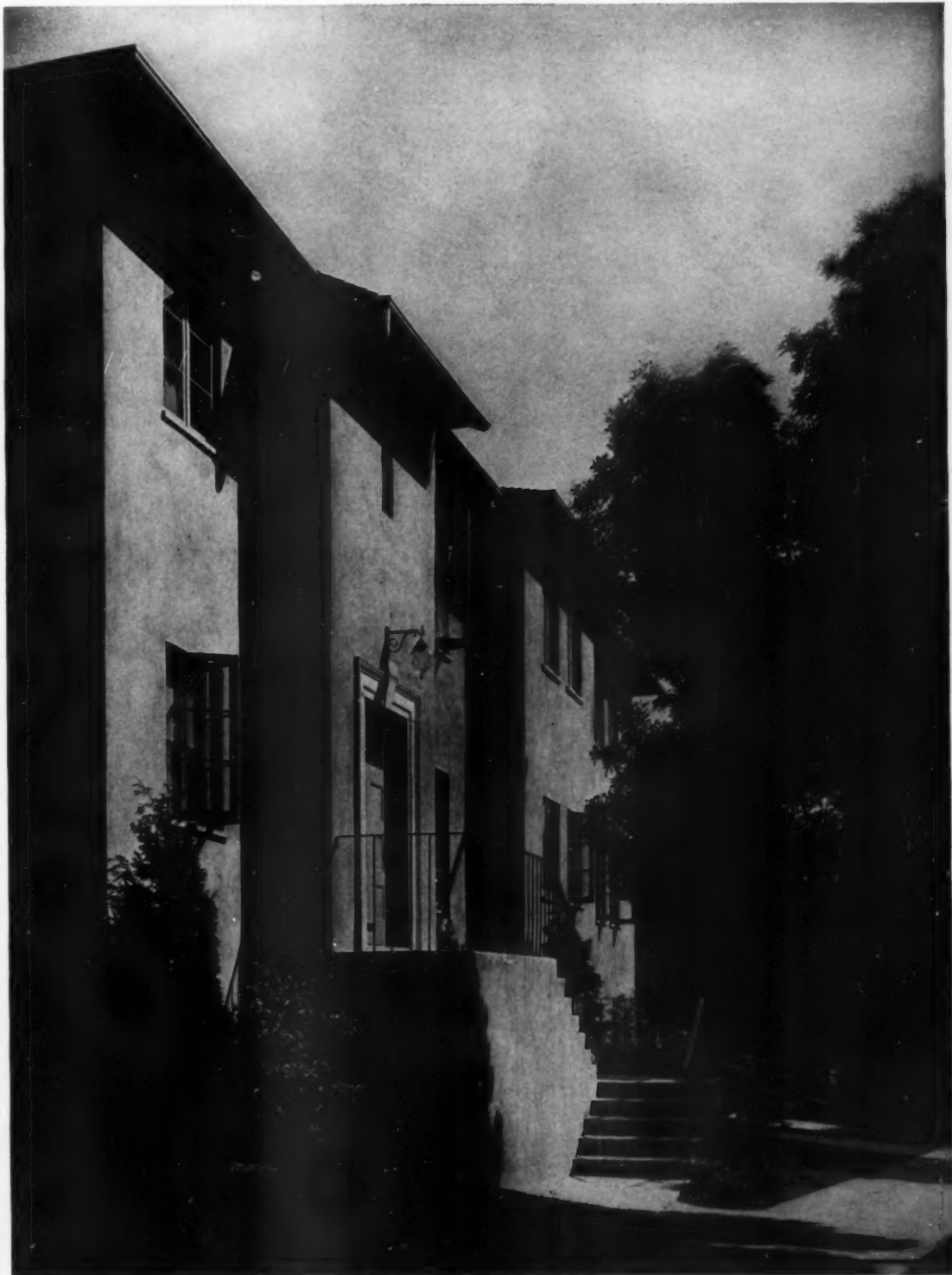
SECOND FLOOR PLAN



PROPOSED HOUSE—HARRY C. STARR, ARCHITECT



BASEMENT WALLS OF CONCRETE. FIRST STORY EXTERIOR WALLS OF BRICK VENEER ON FRAME CONSTRUCTION; SECOND STORY EXTERIOR WALLS OF HALF TIMBER AND STUCCO. CHIMNEY OF BRICK. ROOF COVERED WITH STAINED SHINGLES. EXTERIOR TRIM OF STAINED CYPRESS. VESTIBULE TO HAVE TILE FLOOR. FLOORS OF LIVING ROOM TO HAVE RANDOM WIDTH OAK PLANKS. FLOORS OF BATH AND KITCHEN TO BE OF LINOLEUM. BATHROOM WALLS TO HAVE TILE WAINSCOT. WALLS AND CEILINGS OF LIVING AND DINING ROOMS TO BE ROUGH CAST. ALL OTHER WALLS AND CEILINGS TO BE PLASTERED AND PAINTED. KITCHEN TO HAVE GAS RANGE, STEEL CUPBOARDS WITH ELECTRIC REFRIGERATOR IN REAR ENTRY



CROWNWOOD FLATS, LOS ANGELES, CALIFORNIA

WITMER & WATSON, ARCHITECTS

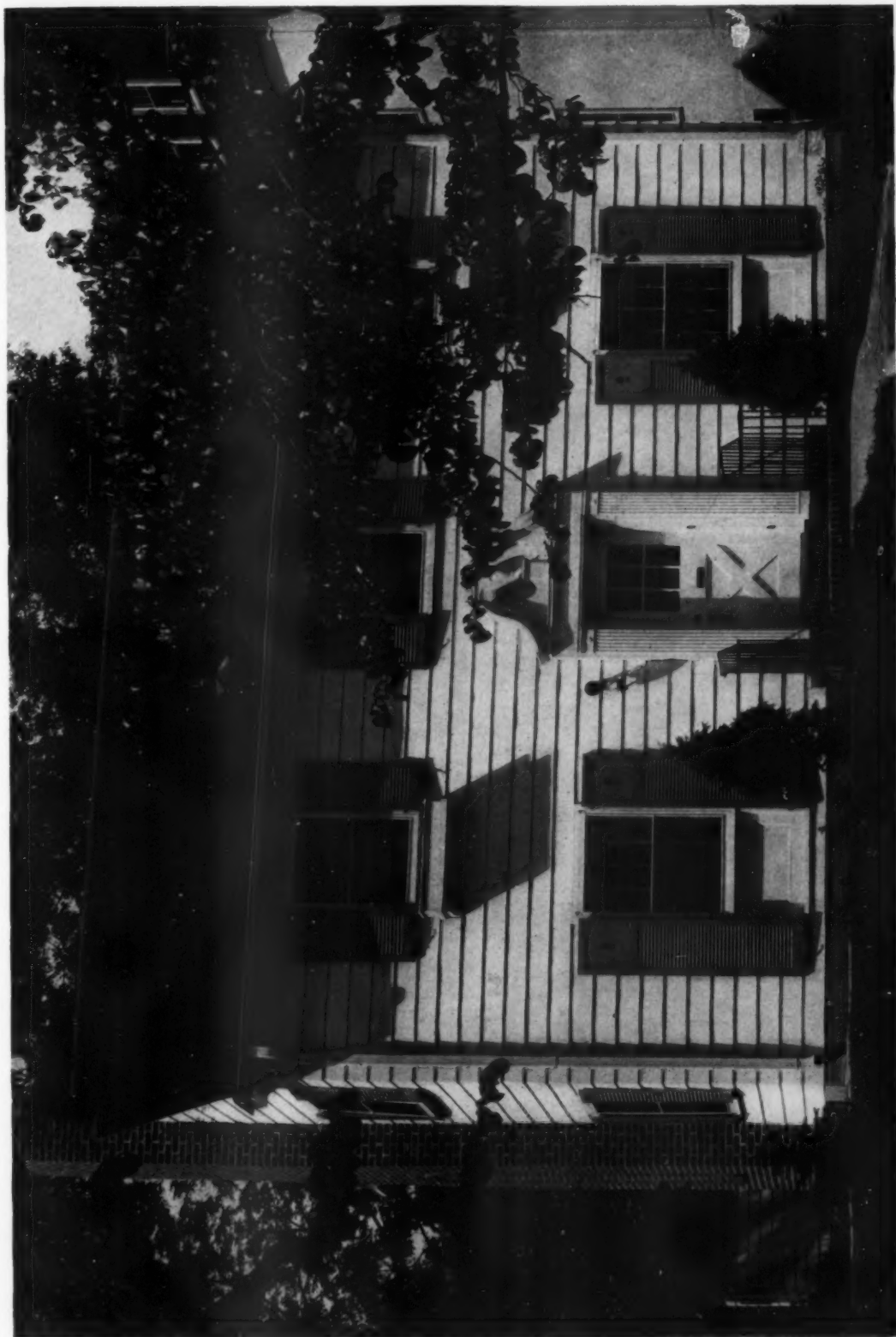


BUILDING CONSTRUCTED OF WOOD FRAMING SHEATHED SOLIDLY, COVERED ON THE OUTSIDE WITH METAL LATH AND CEMENT PLASTER. ROOF IS OF SHINGLES DIPPED. PARTITIONS ARE OF WOOD AND PLASTER, AND FLOORS OF OAK. TRIM IS OF OREGON PINE. BUILDING IS HEATED WITH INDIVIDUAL GAS FURNACES, ELECTRICALLY OPERATED. ELECTRICITY IS USED FOR LIGHTING. BUILT IN 1922 AT A COST OF 40 CENTS PER CUBIC FOOT

CROWNWOOD FLATS,
LOS ANGELES,
CALIFORNIA

WITMER & WATSON,
ARCHITECTS





HOUSE OF M. R. MACDONALD, MINNEAPOLIS, MINN.

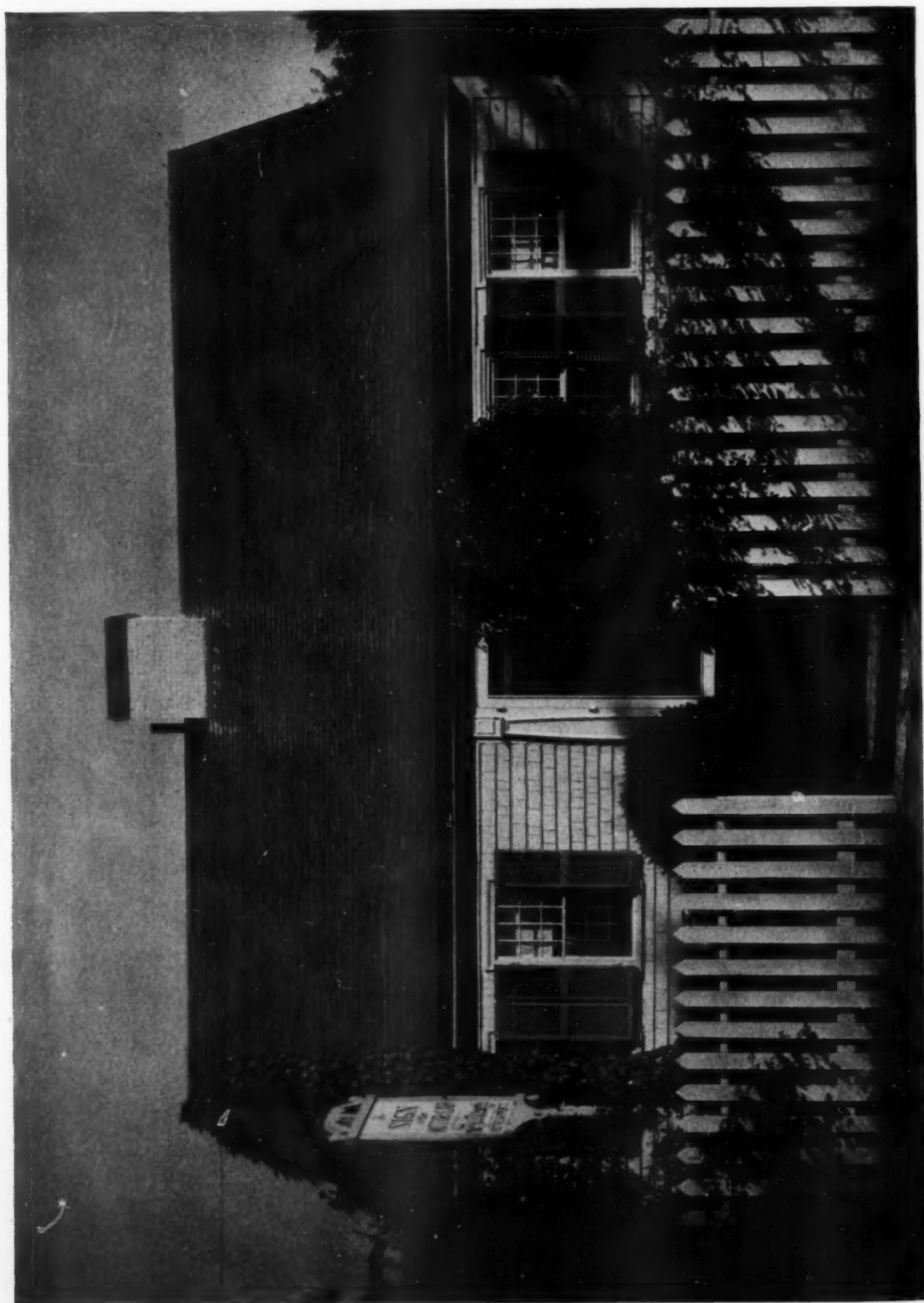
LARSON & McLAREN, ARCHITECTS



HOUSE OF M. R. MACDONALD, MINNEAPOLIS, MINN.
LARSON & McLAREN, ARCHITECTS

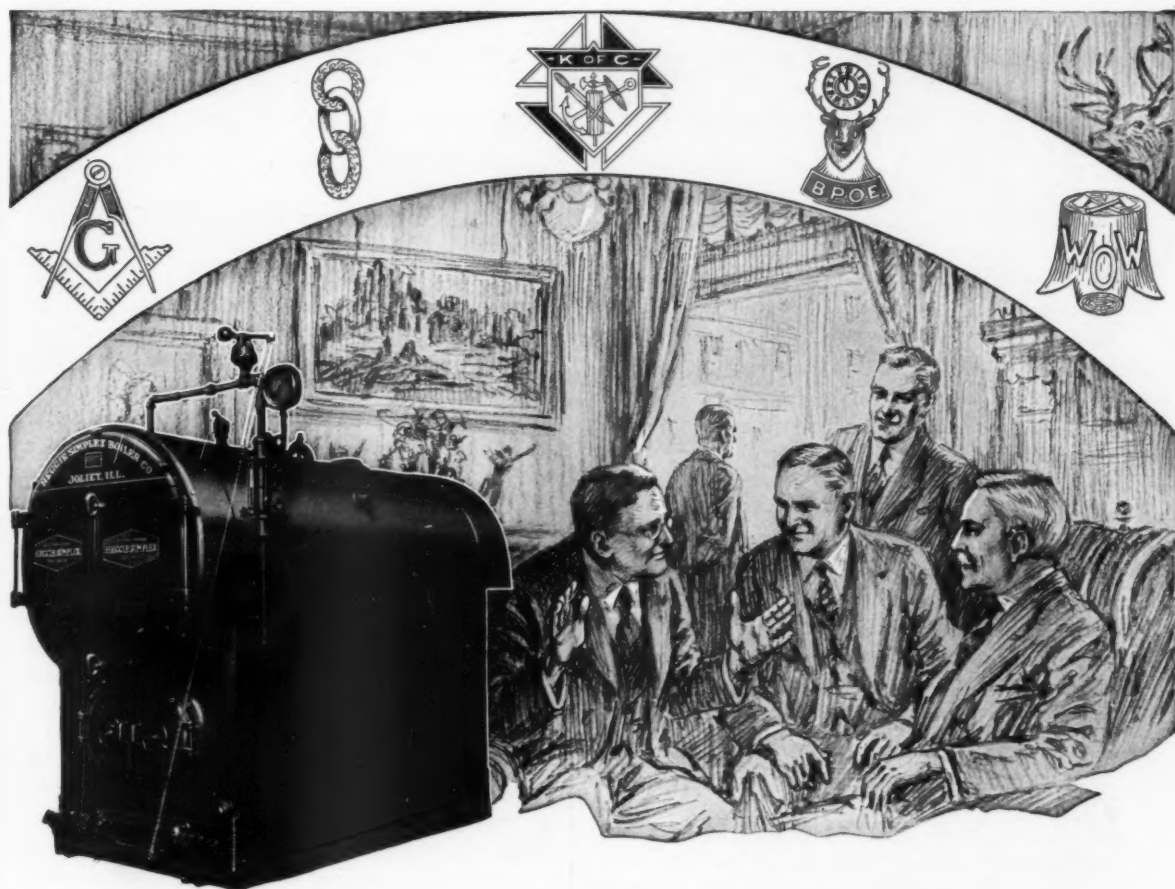


THE NEW CAPE COD PRESENTED IN AN OLD MANNER
WORKING PHOTOGRAPHS—SERIES II
FROM THE ORIGINAL NEGATIVE BY DWIGHT JAMES BAUM, ARCHITECT



OLD HOUSE, NEAR BARNSTABLE, ON CAPE COD
WORKING PHOTOGRAPHS—SERIES II

FROM THE ORIGINAL NEGATIVE BY DWIGHT JAMES BAUM, ARCHITECT



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BUILDING HIGH-WAGE ERA NEARING CLOSE

MONTHLY REVIEW SEES END OF UPWARD MOVEMENT OF LABOR COSTS AND REDUCTIONS PROBABLE

THE peak of the high-wage era in the building industry appears to have about been reached and a slight recession in labor costs in some sections of the country is not unlikely during the next six months, according to the national monthly building review of the American Bond and Mortgage Company, New York.

"The upward swing of wages in the construction industry is gradually losing its momentum," said the review, "and there is little likelihood of any further widespread major increases being granted building craftsmen. With the exception of a few cities, laborers' demands for increases appear to have subsided and present scales are being amicably maintained. Such movement as exists for wage advances seems largely confined to cities where the rates are below the average.

"Building activity, however, continues sufficient to prevent any immediate widespread radical downward revision of present scales, although during the last thirty days some building trades in four southern cities, St. Petersburg, Fla.; Daytona Beach, Fla.; Columbia, S. C.; and Norfolk, Va., accepted wage cuts ranging from 15 to 35 cents per hour. Further reductions are expected in the South and other sections of the country as the building industry slackens its pace and returns to normalcy.

"Where building craftsmen are demanding increases the employers are putting up a pronounced resistance, which is resulting in a number of important strikes and wage controversies. In Providence and Pawtucket, R. I., and vicinity, upwards of \$12,000,000 worth of building is affected by a strike of approximately 4,500 Rhode Island carpenters, hod carriers and common laborers, who are demanding a 15 cent an hour increase. In Brooklyn, N. Y., 1,000 painters, for the second time this year, have walked out, demanding a \$2.00 a day increase. The strike of hod carriers and building laborers in Syracuse, N. Y., for a 15 cent an hour increase, continues to impede building operations in that city. Other cities reporting major labor controversies were Newark, N. J.; New Haven, Conn.; Hartford, Conn.; Montreal, Quebec, and South Bergen County, N. J.

"The carpenters at Reading, Pa., have returned to work without a wage increase, and the plumbers of Salem, Ore., have failed to win advances de-

manded. The bricklayers and masons of Portland, Ore., who asked \$12.00 per day, have been allowed \$11.60 by arbitration. Strikes at Erie, Pa.; Bridgeport, Conn., and Cedar Rapids, Ia., have been settled by the granting of increases.

"The plumbers' strike in the New York district has been called off and the demands of the workers for \$13.20 per day and the five-day week, against the present rate of \$12.00 and the 44-hour week, will be subject of further negotiation.

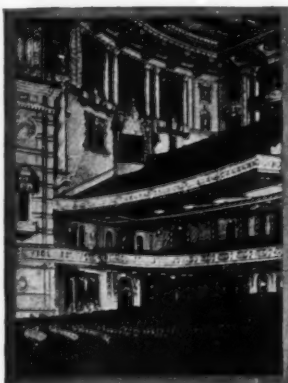
"Cities in which some crafts were granted wage increases during the last month are Akron, Ohio.; Buffalo, N. Y.; Erie, Pa.; Dayton, Ohio; Memphis, Tenn.; Milwaukee, Wis.; New Haven, Conn.; Portland, Me.; San Antonio, Tex.; Seattle, Wash.; Sioux City, Ia.; St. Joseph, Mo.; Ottawa, Ont.; Newark, N. J., and Somerville and Bound Brook, N. J.

"In New York City the municipal authorities have increased the wages of 25,000 skilled workers by \$1,300,000 a year. These increases, retroactive to January 1st, bring the earnings of the building trades workers in the city's employ up to a point equalling the prevailing wages paid by private employers.

"Reports from the principal cities of the country indicate that there is little unemployment in the building trades and that the productivity of the building workers seems to be on the increase. Some over-supply of craftsmen was revealed in reports from Birmingham, Detroit, Philadelphia, Boston, San Francisco and Seattle. In Canada, however, the recent upward trend in building activity has resulted in a scarcity of bricklayers and other building mechanics.

"Although skilled labor rates are at least five per cent above the 1926 levels, the *Engineering News-Record* Construction Cost Index shows building costs as a whole are about 1.9 per cent below July, 1926, 26 per cent under the peak, June, 1920, and 103 per cent above 1913. The decrease is this year largely due to the continued recession in the prices of materials such as structural steel, cement, lumber, paint stuffs, etc.

"During the last month price declines have taken on increased importance in the building materials market, due to a further recession in demand, and the end of the downward movement is not yet in sight."



THE ROXY THEATRE, New York City



ARAGON DANCE HALL, Chicago, IL



DISPLAY ROOM



FIRST TRUST & SAVINGS BANK, Hammond, Ind.

A year ago we ran a piece of copy that read as printed below. Today we repeat the question "When will the use of Craftex end?" And show a few of the many different places where it has been used.



RESIDENCE

INTERIOR

"Around the corner a great theatre blazes forth decorated with Craftex in rampant and bizarre effects. Next to it a show window depends upon it for beauty of display. Then perhaps up the street a group of homes, Colonial, English, Spanish—of any period—are decorated throughout with this versatile material.

Still wondering about its limitations, we step into a quiet memorial library and find

Craftex, subdued, restrained, dignified, in perfect keeping with its surroundings.

Again, you will find great churches, famous art galleries, public buildings, office buildings, using Craftex. Can't you imagine why?"

Craftex is a plastic interior wall paint applied by painters. With it limitless textures of character and color are possible. For complete details address Dept. D.

CRAFTEX COMPANY

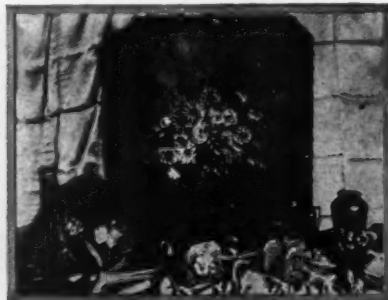
37-39 Antwerp St., Brighton Station, Boston, Mass.



BUSINESS OFFICE



PRIVATE RESIDENCE, Devonport, Iowa



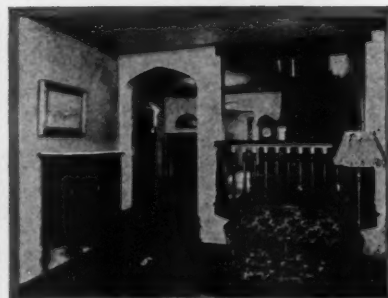
ART OBJECTS



BEAUTY PARLOR, Cincinnati, Ohio



MAROTT HOTEL LOBBY, Indianapolis, Ind.



RESIDENCE, Kansas City, Mo.

Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual

AN INN IN THE WILDERNESS

ON March 1st, a wilderness, the haunt of the grizzly, the wild horse and the coyote. On June 1st, a hotel as handsome as an exclusive country club.



GALLATIN GATEWAY INN
SCHACK, YOUNG & MYERS, ARCHITECTS AND ENGINEERS

This Aladdin-like transformation in 90 days is believed to establish a record in hotel building in this country. The feat is even more striking when it is considered that 40 miles of railroad had to be reconstructed to haul the building materials.

On February 23rd the Chicago, Milwaukee & St. Paul Railway decided to shorten by 32 miles its line to Yellowstone Park and to erect at the terminus a large and handsome hotel. Both the line and the hotel must be completed before the opening of Yellowstone Park in June, was the order.

Country so primeval that it has been described as the "last American frontier" presented great difficulties to transportation of supplies, but by



LOUNGE, GALLATIN GATEWAY INN

March 1st construction of the hotel near the northwest border of Yellowstone had begun. Schack, Young and Myers, the architects and engineers, of Seattle, supervised the carrying out of their plans, which called for a building 250 feet long and 54 feet wide.

The exterior is stucco in a warm, light color; the trim about doors and windows in pale green. The roof is of tile in variegated red and buff.

Not only was the entire building completed before the opening on June 17th, but all furnishings had been installed in the hotel ready for guests.

To supply electricity in so isolated a section, a cable had to be laid from the Inn 40 miles to the main electrified line of the Chicago, Milwaukee & St. Paul Railway.

39

INTENSITY OF STREET LIGHTING AFFECTED
BY BUILDING FRONTS

THAT 75 per cent of the lighting costs on many of America's "intensive White Ways" is made necessary because of the type of facing materials used on the buildings along the streets, is indicated in the first results of a survey made by the General Electric Company with the co-operation of the National Terra Cotta Society. The work was under the supervision of W. D'Arcy Ryan, director of the company's illuminating engineering laboratory.

There are more than 50 streets in America which are classified as intensive White Ways, the standard being an illumination of 300 lumens or more per linear foot of street.

Light-colored materials which can be kept clean by washing, such as terra cotta, were declared to afford the best surfaces for purposes of general illumination. Aside from laboratory tests conducted by the General Electric engineers, streets were cited where buildings of this type stand out in bright display beside their darker, sootier neighbors.

Terra cotta with certain texture surfaces was declared preferable to the usual surface finishes for illumination which is usually accomplished by light thrown from below. The new surface finishes, unlike ordinary surface treatments, do not deflect all the light upward but return it to the eye of the beholder.

"We see by reflected light," explain the engineers. "If an object does not reflect light we do not see it, although we may get an impression of its form or outline if it is silhouetted against a bright background."

"The amount of light reflected by an object in the direction of the eye is not a measure of its visibility, however. In other words, photometers do not measure visibility. Glare should be avoided wherever possible."



Constant use means
constant wear

He must have
used it as
an ash tray!

Worn and battered, bruised and beaten, lined and maligned, this veteran of the drafting board is the cherished treasure of Robert Blodget, Chief Specification writer for Ludlow and Peabody, designers of the H. W. Johns-Manville Building, New York City. It boasts eight years of service. Count the wound-stripes yourself.

Ball Bearing Butts give
constant wear for life

NOW, gentlemen, you ask, "What does it all mean, anyway?" Do you consider it a far cry from triangles to butts?

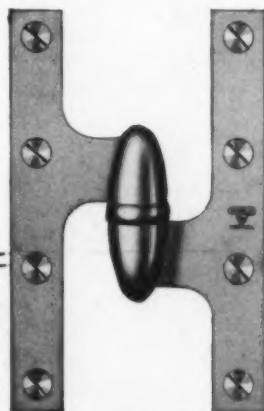
Not at all. The above tool of the Architectural Craft has been worn out by constant wear. When you wear out a triangle you can buy a new one—no trouble at all.

But when you wear out a door butt, the expense and trouble of replacement overshadows the additional cost of a

Ball Bearing Butt many times over. Stanley Ball Bearing Butts will still be swinging free and easy when your building has crumbled into dust and the plain-joint type has been replaced several times over. There's our story.

And, oh yes, better send for our Architects Manual of Stanley Hardware. It is put up in just the form you architects like to get. Concise, interesting, usable. You will find good use for it. Also see Sweet's catalog.

THE STANLEY WORKS, NEW BRITAIN, CONN.
New York Chicago San Francisco Los Angeles Seattle



The Stanley Wrought Steel Ball Bearing Paumelle, a French design adapted to American practices. Neat, strong and wear-proof. Made of bronze, brass, and Stanley steel.

STANLEY

BUTTS

BALL BEARING

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EVERYBODY'S BUSINESS

By FLOYD W. PARSONS

FORECASTING tomorrow has come to be the common sport of the day. Glibly we are told of outcomes that are said to be inevitable. But when we analyze most of these flights of imagination, we find that the self-appointed prophets in drawing a picture of the future have merely multiplied and enlarged the latest things of our own age. Very little is presented that is new for the reason that the human mind finds it difficult to depart from the beaten road we are now traveling.

If we are using small airplanes, those of tomorrow are to be monsters in size. If our buildings are so high, those of the new age will be twice as tall. People throughout the earth are to see and talk to one another instantly, if they so desire, with distance and space practically eliminated. The atom is to give us power and wireless waves are to transmit it. On and on goes the story until the writer has exhausted every possibility in the development and use of all the marvels about us. These are the folks that appear to believe that everything new will supplant everything old.

Then there is the other school of thought which adheres to the idea that civilization in the future as in the past will continue under the influence of the forces of action and reaction—progress and retrogression.

One may well question the soundness of either viewpoint. The advance of civilization has not been straight ahead, but over a road that has twisted and turned in all directions. It will be even more winding in the future and no living person can see around the curves. Our recent progress has come as a result of dire necessity caused chiefly by a rapid growth of population. We have constructed higher buildings; established one-way streets for traffic; developed immense systems of sewage and sanitation; provided extensive facilities for the speedy distribution of heat, power and light; accustomed ourselves to subsisting largely on canned foods; and enacted laws to prevent the pollution of air and water, all because such changes were demanded by new living conditions.

It is folly to assume that there will ever come any kind of reaction that will cause us to retreat

down the same road over which we have traveled. The old order is dead beyond recovery. There can be no "back to nature" movement on any large scale. Nature will have to be brought to us by those who have perfected ways and means to provide artificial sunlight, properly conditioned indoor air, and all the other health essentials that new customs and methods have taken away from dwellers in congested cities.

Each succeeding day discloses more clearly the multitude of limitations that surround our conception of the future. On every hand are hundreds of things which not even science can explain. We know that due to the laws of gravitation a liquid runs downhill. But no one can satisfactorily tell us why the coffee in our cups runs uphill when we touch a lump of sugar to the surface of the liquid. Pages of discussion about capillary attraction still leave us in the dark.

Not everything can be reduced to a mere matter of chemical analysis or mathematical solution. Things like the business cycle that are caused chiefly by the action of human nature still remain riddles. We have found it possible to provide our leaders of industry with facts and figures which reduce buying and selling to a science, thereby lessening the dangers of over-inflation, but no one is able to suggest a practical remedy for the ever-present urge within us to take a chance. On every golf course one will find some of the oldest and most experienced players trying to get distance out of the rough with a brassie instead of playing safe with the club intended for the job.

In many ways we are more clever than our ancestors, but nothing has been devised to take the place of human instincts in business and social affairs. No one has revealed any satisfactory substitute for our ancient methods of judgment, trial and error in selecting a business partner or a political party. We are more conscious than ever before of our shortcomings, and as a result we all agree that "something must be done," but our visionary powers appear to surpass our creative ability. We are long on "good intentions" and short on ways and means.

"NIGHT ARCHITECTURE"



*A
Challenge
to
Imagination*

PACIFIC Gas & Electric
Co. Bldg., San Francisco,
California, Bakewell &
Brown, Architects. Entirely
in Terra Cotta Illuminated
by the General Electric
Company.

In the new art of illuminating building exteriors, with its boundless possibilities of superb "night architecture," the expense heretofore necessary has deterred property owners and communities from thus making famous their principal buildings and thoroughfares.

Recent developments in Terra Cotta now enable any projected building to be illuminated at a fraction of the lighting cost heretofore encountered and in effects of unduplicable splendor and dignity. Inquiries from those interested in applying these developments to contemplated buildings will be welcomed gladly by this Society or by any of its member companies.

NATIONAL TERRA COTTA SOCIETY

19 WEST 44TH STREET

NEW YORK, N. Y.

UNIVERSITY OF MICHIGAN YEAR BOOK

WE have received the Year Book (1927) of the University of Michigan School of Architecture and find it an exceedingly attractive presentation of the student work of this dignified architectural school. The book has been dedicated to Professor Emil Lorch, A. M., "in recognition of his untiring endeavor to establish the College of Architecture more firmly in the profession it serves through the institution of the highest ideals." A portrait of Professor Lorch accompanies the dedication.

In looking through this well-made-up Year Book, we notice that the student work indicates a wide range of originality of expression, evidently the result of exactly the sort of training that Michigan has developed under Professor Lorch.

The Architectural School at Michigan may celebrate this year its "coming of age" for it has reached its twenty-first year. By careful consideration of the principles that underlie a correct preparation on the part of the student to fit him for successful practice of his profession, Michigan has been able to avoid many of these mistaken ideals that so often accent theoretical knowledge to the suppression of a really practical result. The work illustrated in this Year Book presents striking evidence of this tendency toward a thorough grounding in the big essentials.

STRATFORD-ON-AVON INTERNATIONAL
COMPETITION

DESIGNS submitted for the Shakespeare Memorial Theatre Competition have been judged and the jury's award in the first preliminary competition announced. Of the six plans selected from the seventy-four submitted by British, American and Canadian competitors, three were by American and three by British architects. The Americans whose plans were selected are Robert O. Derrick, Detroit; Albert Mohr and Benjamin Moscovitz, New York, and Albert J. Rousseau, Ann Arbor, Mich. The final competition will take place in November.

PRIX DE ROME FOR LANDSCAPE ARCHITECTURE
AWARDED

A JURY of the American Academy in Rome recently awarded the Prix de Rome for landscape architecture to Michael Rapuano, a twenty-three-year-old Cornell graduate, of Syracuse, N. Y. The prize is a fellowship of three years' study at the Academy in Rome to begin next October. It provides a residence and studio together with traveling expenses on the Continent and is valued at \$7000.

The award was for designing a site for a museum

of fine arts in a municipal park. Of more than a dozen entrants, the field was finally narrowed down to four. Two of the four finalists, Thomas D. Rice of Cambridge, Mass., a graduate of Ohio State and Harvard Universities, and Charles R. Sutton of Ottawa, Ill., a graduate of the University of Illinois, were awarded honorable mention prizes of \$50.

The jury was made up of Ferruccio Vitale, Chairman; Arthur F. Brinckerhoff, Noel Chamberlin, Arthur A. Shurtleff and Albert D. Taylor. The present award was the last of the season, fellowships having already been awarded for architecture, sculpture, painting, musical composition and archaeology.

AN INTERESTING LINE OF LIGHTING FIXTURES

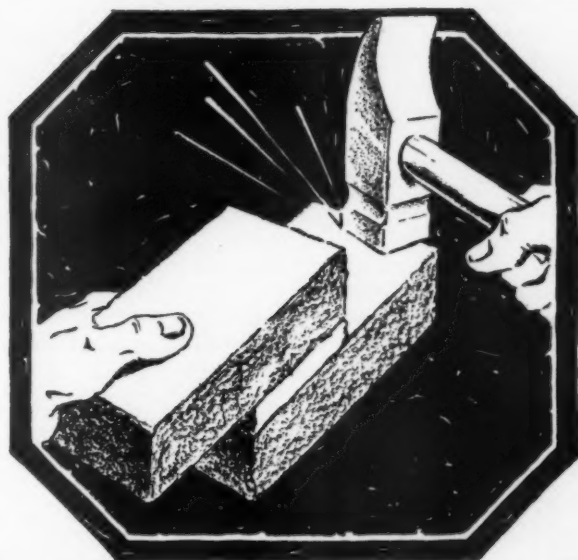
A FIRM which specializes in the design and manufacture of lighting fixtures has recently added to its stock patterns a line of lighting fixtures which reflect the spirit of early American craftsmanship. The designs suggest in certain details the old oil burning lamps, while the glass shades follow the lines of the cone shaped chimneys of that period. The several designs are manufactured in pewter which further emphasizes their character. The line consists of single and double wall brackets, chandeliers and lanterns. They lend themselves especially well to rooms which are designed to suggest early American influence. The designers and manufacturers are Shapiro and Aronson, of New York. A series of plates showing these fixtures is available on request.

QUEEN ELIZABETH'S STATUE

A STATUE of Queen Elizabeth in side paniers and farthingale is now said to be the oldest public statue in London. It bears the date 1586. Originally set up on Ludgate Hill, the stone Queen survived the great fire and in 1760 was placed outside St. Dunstan's Church, where she still reigns. The soot of ages has laid its sombre folds over rich coloring, traces of which an antiquarian one hundred years ago noted were "at one time" visible.

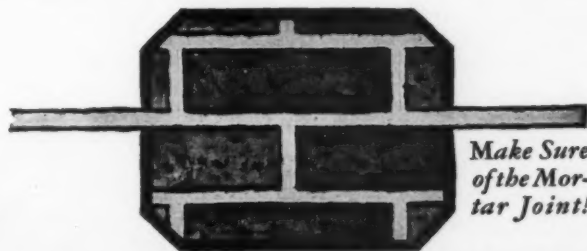
JERUSALEM IS DEVELOPING NEW WATER SUPPLY

A NEW provisional water supply system for the city of Jerusalem, carrying 200,000 gallons daily from Ain Farah Springs, 7 miles away, with a rise of 2,000 feet during transit, was put in operation in July, 1926, according to a report to the United States Department of Commerce from O. S. Heizer, consul at Jerusalem. Extensive plans for developing water supply and hydroelectric power from the River Jordan are under way.



Tighter Bonds!

BRIXMENT is ground much finer than portland cement. It is more plastic. Mortar made with BRIXMENT works deeper into the pores of the brick and makes a tighter, stronger bond—a bond that grows harder and stronger than the brick it binds. Architect's handbook on request. Louisville Cement Company, Incorporated; General Offices: Louisville, Kentucky. MILLS: BRIXMENT, NEW YORK, and SPEED, INDIANA



*Make Sure
of the Mor-
tar Joint!*

Use
BRIXMENT
for  *Mortar*

Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual

BRICKS

I LIKE bricks. I like horses, dogs, men, but also I like bricks, writes Astragal in *The Architects' Journal*, London. There are some to whom the phrase "bricks and mortar" may be anathema, some who care more for mountains and trees. Well, we have all seen bricks put to poor uses, but that was so by some mistake of the user, was no fault of the brick. A man—but he would not be an architect—might take a brick for an ordinary bit of burnt clay, fit only to build the ugliest streets of Suburbia, and to become a brickbat, and be kicked to pieces in an old alley. But its very manufacture is illustrious with antiquity—with the morning beams that touched the house-tops of Shinaar; there is a clatter of brick-making in the fields of Accad; and the work looks almost as ancient to this day. There are times when I like bricks so deeply that I go in search of good bricks, piled one on another as in Westminster Cathedral, or stacked in wagons in railway sidings and awaiting that end in life to which they may be called.

OLD MASTERS

A RATHER interesting little controversy has arisen in *The Times*, London, over the incursion of the scientist into the ranks of the judges of old paintings, states *The Architect and Building News*. It is apparent, however, as Dr. A. P. Laurie suggests, that when the aforesaid experts are in doubt, a dispute over the authenticity of a reputed old master can often be settled authoritatively by enlisting the services of the chemist and the X-ray expert. For the modern faker of old masters is a man of no mean ability; and he is the product of conditions arising out of the more skillful and analytical art criticism that came into existence two or three decades ago. A first-hand acquaintance and prolonged study of authentic works armed the progressive critic of those days with a profound knowledge of the brushwork, the pigments and the more intimate details of execution of a particular master, and enabled him to speak with authority when a work of disputed attribution was submitted to him. But as such critics put reasons for their views and deductions upon paper, it was inevitable that the forger should avail himself of this accumulated knowledge, and, knowing what the expert looked for, set to work to supply it. The expert now seems to have lost some of his certainty; and one may expect that the American millionaire, seeking old masters, will demand, in future, guarantee certificates from the chemists and the radiographer. It is an indication of the steady march of science, but it will be a sad prospect for those who, like the venerable old gentleman known to a friend of Dr. Laurie's, retorted: "I don't restore old masters; I make 'em."

PERSONALS

Walter H. Simon, architect, has moved his office to 1526 Lincoln Street, Denver, Col.

Dudley C. Chaffee, Shelbyville, Ill., would be pleased to receive manufacturers' catalogs and samples.

Maurice G. Uslan has opened an office for the general practice of architecture at 76 Canal Street, Stapleton, Staten Island, N. Y.

John Paul Jones, architect, has opened an office for the practice of architecture at 901 Central Building, Pasadena, Cal.

Shreve & Lamb, architects, have moved their offices from 331 Madison Avenue to the seventeenth floor, 11 East Forty-fourth Street, New York City.

George W. Kelham, architect, is now located in his new offices at 315 Montgomery Street, San Francisco, Cal.

Thomson & Swaine, architects, have changed their address from 1203 S. W. Life Building to 508 Construction Industries Building, Dallas, Texas.

Jack B. Hosford, architect and engineer, has opened offices at 24 West Central Avenue, Sierra Madre, Cal., and would appreciate receiving manufacturers' samples and literature.

Hal F. Hentz and Rudolph S. Adler have formed a partnership with Phil Shutze for the practice of the profession of architecture under the firm name of Hentz, Adler & Shutze, successors to Hentz, Reid & Adler, 1330 Candler Building, Atlanta, Ga.

Announcement is made that all business formerly carried on under the names of Shields, Fisher & Lake; Fisher, Lake & Traver & H. R. Lake, has been merged into one corporation, namely, Trewhitt-Shields Company, architects and engineers, with offices at 801 Edwards & Wildey Building, Los Angeles, Cal., and 1501 Pacific Southwest Building, Fresno, Cal.

R. E. Lee Taylor and D. K. Este Fisher, Jr., announce that J. Harleston Parker and Arthur Wallace Rice have retired from the Baltimore firm formerly known as Parker, Thomas & Rice, architects, and that the practice of that office will be continued by the remaining partners, to be known as Taylor & Fisher, architects, 1109 Union Trust Building, Baltimore, Md.

THE AMERICAN ARCHITECT

IN TWO PARTS

PART II

AUGUST 5, 1927

TOPICAL ARCHITECTURE SECTION

ITALIAN DOORWAYS

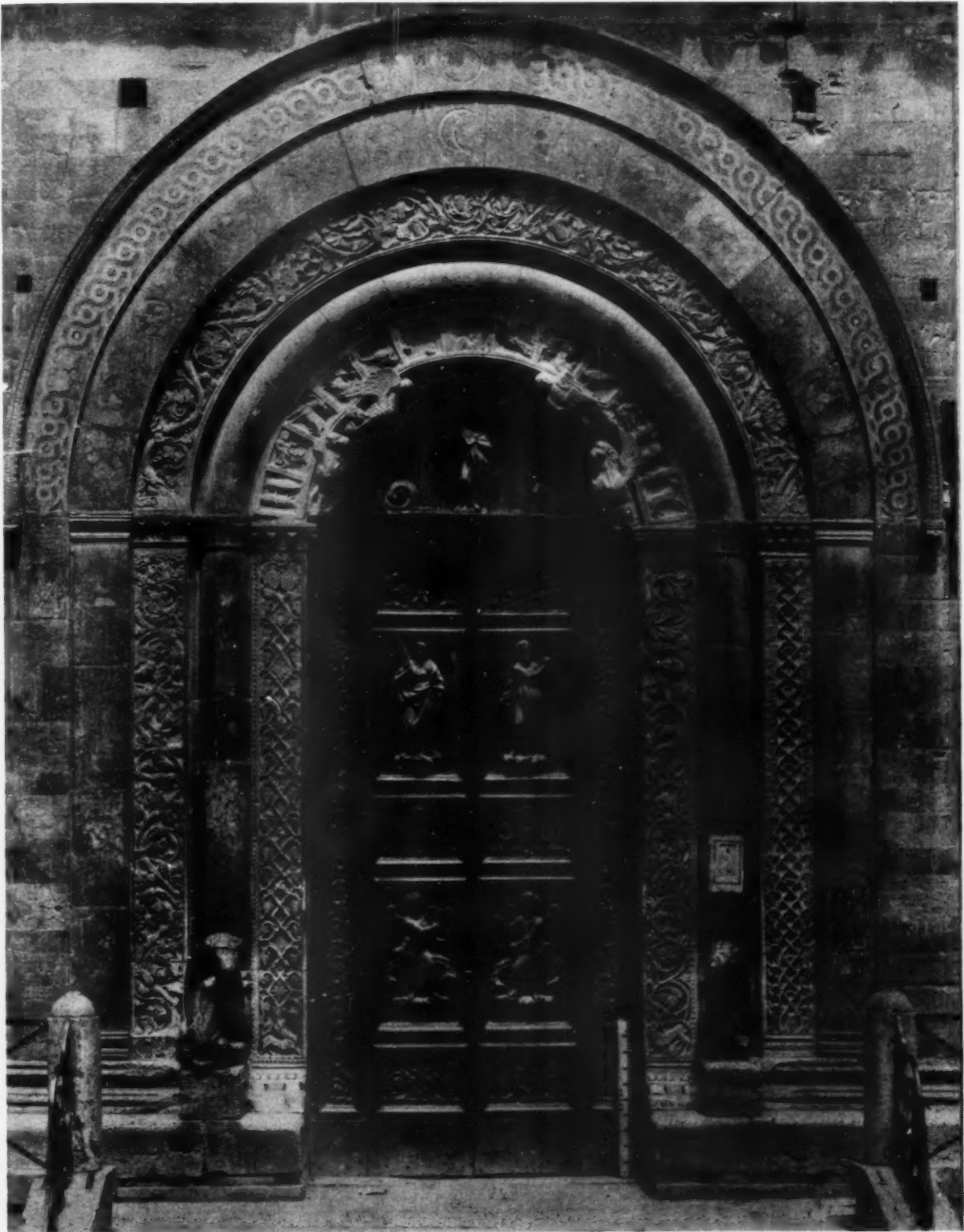


XIII CENTURY ITALIAN DOORWAY. PIENZA

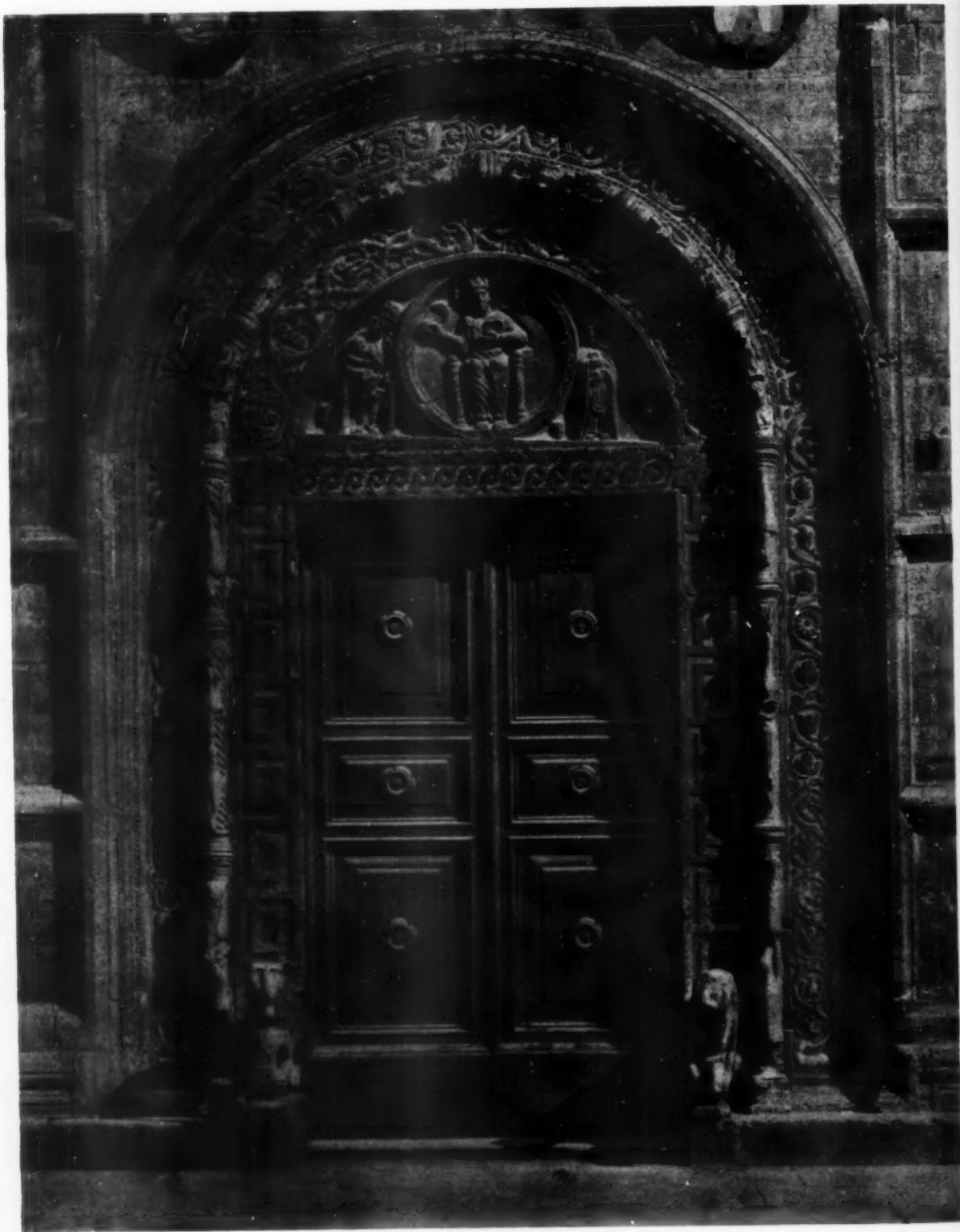
(Copyright, 1927, The Architectural & Building Press, Inc.)



SIDE DOOR, BASILICA, S. ANTIMO



DOORWAY, THE CATHEDRAL, FOLIGNO



XII CENTURY DOORWAY, ASSISI

THE PUBLISHERS' PAGE

INTRODUCTORY to a review of a series of lithographs by Vernon Howe Bailey, illustrating "skyscraper Manhattan," Mr. Kineton Parkes, in *The Architects' Journal* of London, states as follows:

"Reality has again resulted in romance. In the ever-recurring cycle of the arts there is change and decay, evolution, revolution, and devolution. Architecture, since the eighteenth century, has been struggling with a problem which New York has at length solved. It has revolved round old styles and evolved itself into something new and strange. The world has been waiting for the American architect. He has arrived with a pyramid. The pyramid is not that of Egypt, a vast uninhabitable, and uninhabited verticism, but a populated beehive harboring thousands of workers; an upright city within a city reared above the outgrown horizontalism of the past and passing present. It has but one possible antithesis, the underground dwelling and workshop foretold by knowledgeable novelists. These are far away on the horizon of time; the New York skyscraper is here with the world today."

Here in New York, where building is carried forward with a speed that fairly stuns the foreign visitor, we are, by reason of proximity, more or less apathetic. We only realize just what is being accomplished in the architectural development of this country when a competent architectural observer from abroad visits with us and sets forth his impression as, for example, in this present instance.

Tall building, as applied to the apartment house hotel, seemed to have reached the zenith of architectural possibilities, but down on lower Fifth Avenue, right at the very entrance to Greenwich Village, Helmle & Corbett have been erecting a structure some thirty-two stories in height. Naturally we were not pleased to learn that so tall a building was to throw out of scale that stately, fine row of red brick old houses that were the aristocratic homes of wealthy residents forty years ago. These houses are the culminating excellence of the Greek Revival of the early seventies. But as Helmle & Corbett's building thrust its way to its unusual height, we began to realize that it was a beautiful addition to a locality marked by many of the best examples of architecture to be found in New York.

By arrangement with the architects, we shall illustrate the No. 1 Fifth Avenue building as soon as it is ready. We are glad it is where it is. It makes a splendid landmark, but we do not want to see further excessively tall buildings in that locality. The skyline looking Northeast from Washington Square is now superb. Any radical change in it by the addition of further high structures would be to destroy a silhouette as interesting as that seen when approaching the city from the lower bay.

Our next issue, September 5th, will present the prize winning designs in the West Coast Woods Architectural Competition. It is interesting to note that this competition closed on August 10th, was judged and the prize winning designs reached us by airplane mail August 15th. Contrasting these rapid methods with those of not more than a decade ago, is to marvel how fast and far we have gone in a practical use of what was not so long ago a scientific toy. As announced in an earlier issue, this nationwide competition was held to secure the best possible designs for a house and garage built of native West Coast woods. The competition was sponsored and conducted by the Washington State Chapter of The American Institute of Architects, and the prizes aggregating \$3500 were offered jointly by the West Coast Lumber Bureau and C. W. Stimson, of Seattle.

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It is amusing to learn from an item published in the Editor's Forum of an architectural journal for August that "there has been opened a competition for designs for the new Shakespeare Memorial Theatre at Stratford-on-Avon."

This competition was announced in *THE AMERICAN ARCHITECT*, issue of March 20th, in an article fully illustrated. The first preliminary competition was closed some time ago, and the American prize winners' names announced in our issue of August 5th. The final competition, participated in by the winners in the first preliminary will take place next November.

As our contemporary's announcement is apt to convey the impression to those who may not have seen the earlier mention in this journal that this competition is yet open to entrants, it is thought advisable to state the facts as above.

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There is a wealth of good material to be presented in forthcoming issues. The following is but a partial list:

The Neils Esperson Building at Houston, Texas, John Eberson, architect, an office building of unusual size and architectural treatment; will appear soon.

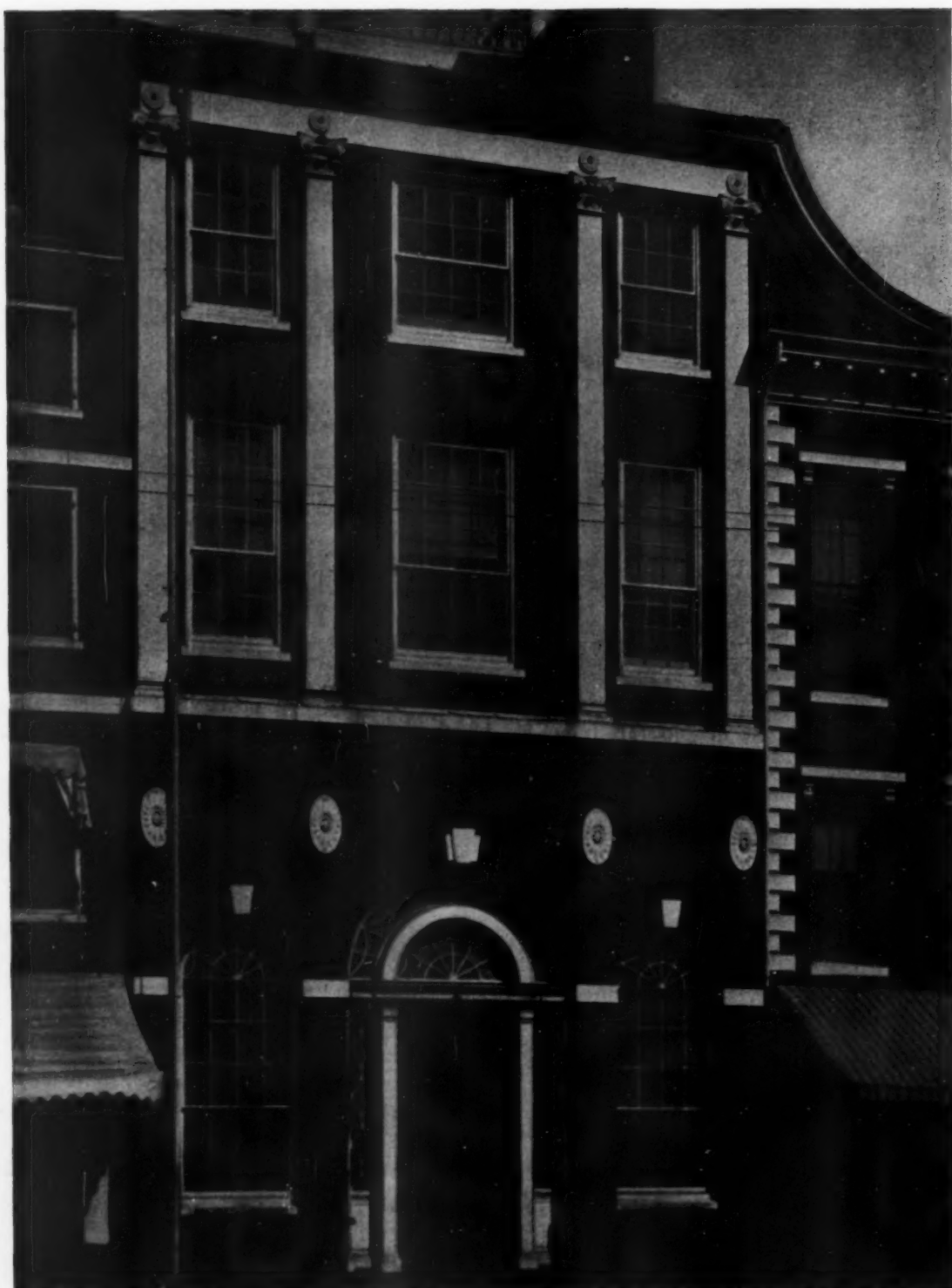
The Downtown Branch, St. Louis Y. M. C. A., La Beaume & Klein, architects, will receive a most complete presentation.

The new Public Library, Philadelphia, Pa., Horace Trumbauer, architect.

The new house for the Timberpoint Golf Club, on Long Island, Charles M. Hart, architect.

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Look for the insert, *Topical Architecture*, in this issue.



AN OLD BUILDING BY BULFINCH, AT PORTSMOUTH, N. H.
WORKING PHOTOGRAPHS—SERIES II
FROM THE ORIGINAL NEGATIVE BY DWIGHT JAMES BAUM, ARCHITECT

THE AMERICAN ARCHITECT