

PRICE 15 CENTS.

NOVEMBER 10, 1894.

THE
AMERICAN ARCHITECT
AND BUILDING NEWS

VOL. XLVI.

* REGULAR EDITION *

NO. 985.

ARCHITECTURE

ENGINEERING

DECORATION

CONSTRUCTION

211 TREMONT ST.

BOSTON MASS.

CONTENTS.

EDITORIAL SUMMARY.
THEATRES. — VII: LAIBACH THEATRE.
NOTES ON FURNITURE DRAUGHTING.
LETTER FROM CHICAGO.
POMPEII.
REGULATIONS FOR THE PRESERVATION OF ANCIENT BUILDINGS IN ITALY.
COMMUNICATIONS.
EXHIBITIONS.
NOTES AND CLIPPINGS.

ILLUSTRATIONS.

STAIRCASE HALL, WOOD'S HOLL, MASS.
[Gelatine Print issued with International and Imperial Editions only.]
FITCHBURG HIGH-SCHOOL BUILDING.
HOUSE AT YONKERS, N. Y.
BURLINGAME COUNTRY-CLUB STABLE, BURLINGAME, CAL.
COLONIAL WORK AT NEWPORT, R. I.: TWO DOORWAYS.

STABLE AT WYCKOFF, N. J.
DESIGN FOR A STABLE.
HIGH-SCHOOL BUILDING, MEDFORD, MASS.

Additional Illustrations in the International Edition.

BETHLEHEM PRESBYTERIAN CHURCH, PHILADELPHIA, PA.
[Gelatine Print.]
CONSERVATIVE CLUB, GLASGOW, SCOTLAND.
SCHOOL-BOARD OFFICES, SALFORD, ENG.
A SHOP-FRONT MARQUISE.
THE FONTANA DEL CORPO DI GUARDIA, RAGUSA, ITALY.
HOUSES AND DETAILS OF THE SAME AT OSNABRUCK, PRUSSIA.
APARTMENT-HOUSE, STOCKHOLM, SWEDEN.
NEW CATHEDRAL HIGH-SCHOOL FOR BOYS, ESPLANADE, BOMBAY, INDIA.
VICTORIA INSTITUTE, WORCESTER, ENG.: ENTRANCE TO LIBRARY BLOCK.
THE LIBRARY BLOCK OF THE SAME.
THE SCHOOLS' BLOCK OF THE SAME.

Unsanitary Bath Rooms



The SANITAS REGAL CLOSET.

are the result of faulty closet fixtures, and no amount of ventilation will overcome the unpleasant odors inseparable from such fixtures. The difficulty is with the **flush pipe** rather than with the vent pipe.

The correct principle of construction is to have the flush pipe **always full of standing water**; this gives an instantaneous flush without the delay occasioned by the water falling from the tank and against the resistance of the enclosed air in the pipe.

Our New Sanitas Catalogue contains new cuts and data illustrative of the Sanitas Specialties. We have special facilities for carrying out the suggestions of Architects and Sanitarians, for realizing any desired result, and the services of our experts are always at the disposal of those interested in Sanitary Science.

SMITH & ANTHONY CO., BOSTON, MASS.

56 Beekman St., New York. 217 Lake St., Chicago.
Makers and Proprietors of Sanitas Plumbing Appliances.

The Best Galvanized Iron

ought not to require specification, for a first-rate job of difficult work can't be done without it, and a first-rate job costs less with it than an honest attempt at a first-rate job without it.

Every first-rate metal-worker probably knows that Apollo is true to gauge and flat and bendable.

It is of some little account that the top and bottom sheets of a bundle are cushioned against the bands; and so are delivered almost without blemish, just as the top and bottom sheets protect the inside sheets from the bands in other makes.

Apollo Best Bloom is the trade-mark. It costs a little more in large quantities. This is the only reason that other galvanized iron is sold at all.

APOLLO IRON AND STEEL CO
PITTSBURGH PENNSYLVANIA
WORKS AT APOLLO

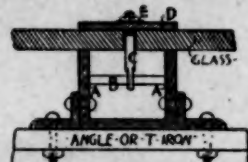
G. BICKELHOPT, PATENT



**METALLIC
SKY-LIGHT
WORKS.**

242 and 245 West 47th Street, New York.
Telephone: 675 39th St. a few doors west of Broadway.
Send for Catalogue.

PARADIGM SKYLIGHTS



See our full page ad. of June 2, 1894.

PARADIGM CONSTRUCTION COMPANY,
41 Pine Street, New York.

VAILE & YOUNG'S Patent Metallic Skylights.



Without Putty.
Construction adapted to all forms and styles of Skylights. Thousands of feet in use have proved its superiority. Particularly adapted for Depots, Mills, Factories, etc., where large and continuous lights are required.
Send for Illustrated Catalogue.

176 N. Calvert St., Baltimore, Md.

THE AMERICAN ARCHITECT AND BUILDING NEWS.

VOL. XLVI

Copyright, 1894, by the AMERICAN ARCHITECT AND BUILDING NEWS COMPANY, Boston, Mass.

No. 985.

Entered at the Post-Office at Boston as second-class matter.

NOVEMBER 10, 1894.



SUMMARY:—

Application of Centrifugal Action to Casting Iron.—Decision of a Custom's Suit over imported Iron Beams for the Boston Court-house.—The Movement to create a "Greater Boston."—Suit brought against the City of New York in the Matter of the City-hall Competition.—In New York, Granite "Pavers" can be laid only if cut in the City.—Action looking to the Preservation of the Palisades.—The Microphone to be used in the London Law Courts.—A New Theory of Steam Propulsion for Vessels.

THEATRES.—VII.: LAIBACH	53
NOTES ON FURNITURE DRAUGHTING.	55
LETTER FROM CHICAGO.	59
POMPEII.	61
REGULATIONS FOR THE PRESERVATION OF ANCIENT BUILDINGS IN ITALY.	62

ILLUSTRATIONS:—

Staircase Hall in the House of Edgar Harding, Esq., Wood's Hole, Mass.—Fitchburg High-school Building.—House at Yonkers, N. Y.—Burlingame Country-club Stable, Burlingame, Cal.—Colonial Work at Newport, R. I.: Two Doorways.—Stable at Wyckoff, N. J.—Design for a Stable.—High-school Building, Medford, Mass.

Additional: Bethlehem Presbyterian Church, Broad St., Philadelphia, Pa.—A Shop-front Marquise, Paris, France.—The Fontana del Corpo di Guardia, Ragusa, Italy.—Houses and Details of the Same at Osnabrück, Prussia.—Apartment-house, Stockholm, Sweden.—New Cathedral High-school for Boys, Esplanade, Bombay, India.—New Conservative Club-house, Glasgow, Scotland.—School-board Offices, Salford, Eng.—Victoria Institute, Worcester, Eng.: Entrance to Library Block.—The Library Block of the Same.—The Schools' Block of the Same.

COMMUNICATIONS:—

The Dry-closet Systems.—The Report of the Committee on Education.

EXHIBITIONS.	63
NOTES AND CLIPPINGS.	64

LA REVUE INDUSTRIELLE mentions a method of casting iron which, we hope, may be of interest to some of our readers. It is well known that iron castings are very liable to "blowholes," "cinders" and so on, which occur in the middle of the mass, and destroy its strength, or, at least, its appearance. These defects are caused by particles of scoria, oxide, or other impurities, which flow out of the melting furnace into the ladle, or are formed by the contact of the hot metal with the air, or with the sand of the mould. In fact, if the molten iron is watched, as it is drawn from the furnace, the surface is soon seen to cover itself with dull lumps of scoria and impurity, which rise to the surface. It is usual to fill the moulds more than full, so that the lighter substances may float to the top, and collect in the portion to be subsequently cut off; but this does not entirely remove them. M. Van Riet, to give the impurities time to separate from the melted iron before it runs into the mould, sets on top of the flask a sort of little bath-tub, lined with some refractory substance, and presenting three cylindrical hollows, of different sizes, communicating with each other by tangential channels. The iron is poured from the ladle into the larger hollow, where it whirls around for a time, and then escapes into the second basin, where it revolves in the opposite direction. From this it reaches the third compartment, which has a hole in the bottom, and, as this hole is set over the pouring-hole in the flask, the iron then runs out into the mould. When the metal is poured into the large end of the tub, it is seen to whirl around until the surface is covered with the larger particles of impurity, which collect near the middle, the centrifugal force developed by the whirling serving to separate the purer and more liquid iron from the light and spongy scoria, very much as cream is separated from milk by a centrifugal churn, or molasses from sugar in the centrifugal tanks of a refinery. By the tangential channel, the purer iron passes into the second division, where the same process is repeated, the scoria, which are now in fine particles, collecting in the middle, while the liquid metal keeps to the outside. The third canal, also tangential, leads this twice-purified iron to the third compartment, from which it runs into the mould, a few particles of dross floating up from the mould, and collecting at the top. On cooling, the first division

of the "bath-tub," or "*poche intermédiaire*," as its inventor calls it, is found to contain the large lumps of cinder; while the second compartment contains a spongy mass of impurity, in the shape of an inverted cone, the base of which occupies the whole area of the compartment, the pure metal having escaped around the sides below. In the third compartment nothing appears but a little ring of particles, the last to rise to the surface out of the mould. The castings made from iron thus purified are extremely sound and solid, and there is no loss of metal, all the pure and liquid iron escaping into the mould. The "bath-tub" is easily cleared out, and is relined for a second operation by plastering with fire-clay mortar.

ARCHITECTS will remember that, four or five years ago, an ingenious contractor imported some iron beams for use in the new Boston Court-house. At that time there was an enormous duty on structural members of iron, and a much smaller one on iron structures. The contractor, therefore, had the beams framed together somehow, and entered them at the Custom-house as an "iron structure." The collector refused to classify them under this head, and demanded duty on them as separate iron beams. The duty was paid, under protest, and the beams taken to the building, and suit was brought to recover back the excess of duties paid. The claim was resisted, on account of informality in the protest; but it has just been decided that the protest and claim were in proper form, and that the contractor, so far as these were concerned, was entitled to recover.

BESIDES the question of reviving its commerce by improving its dock accommodation, Boston has begun to agitate the matter of annexing the adjacent towns; or, at least, of combining them in a sort of "Metropolitan system"; and several hearings have been held in the suburban towns, to sound the feeling of the inhabitants. Naturally, the elements opposed to the abolition of the little independent municipal organizations have been most prominent in these preliminary hearings; but a good deal of sober opinion has been expressed in favor of a more comprehensive administration of the affairs of what is really a single great city, just as London, or Paris, or Chicago, are single cities, although some trace still exists of their ancient parish or township divisions; and the political consolidation of the communities which have long been united by all material interests will probably come about before long.

THERE is in the community represented by Boston, perhaps more than almost anywhere else in the world, unless in Italy, an intensity of local feeling which it will take some time to overcome. Cambridge, for example, which is really just as much a part of Boston as Lambeth is of London, is justly proud of its position in the world as the seat of the oldest and greatest American university, and the home of a large proportion of the men who have honored American science and literature; and it will not willingly give up its autonomy; while Brookline, which is not famous for anything in particular, unless it may be for the wealth of its inhabitants, has clung fanatically to its ancient town organization, and will with reluctance sacrifice its beloved town-meetings, and its Board of Selectmen, to a more modern form of government. Nevertheless, in the interest of the people of Boston, perhaps more than in that of the inhabitants of the surrounding towns, it is every day becoming more necessary that some control should be established over the whole metropolitan district, which now suffers, and will hereafter suffer much more, from the jealousy and indifference, to call it by no worse name, with which each little municipality treats the others. For example, Boston has had, in years gone by, an economical, and in some respects commendable system of garbage disposal, which consisted in collecting the kitchen-refuse separately, and selling it to the farmers of the surrounding country, who sent carts regularly for it. It was probably fed to pigs, but it was carefully collected, and the pigs might have had a much worse diet. The revenue to the city from this source had become quite considerable, when the suburban towns took it into their heads to interfere, and ordinances were passed in several of them, forbidding the transportation of any swill through the streets, except that produced within the limits of the village. This, of course, cut off the farmers from outside, who could only get at

the garbage by going through the streets of the suburban towns; and Boston, deprived of this outlet, is now experimenting with means for destroying its garbage at home.

IT must not, however, be supposed that the larger town has no means of revenging itself on its little neighbors. Recently, Brookline and Newton have been seized with what may be called the boulevard fever. Newton is, at present, building a vast street, a hundred and fifty feet wide, or so, and several miles long, which is to serve it as a main "artery of communication" with Boston. At the Boston end, this portentous thoroughfare collapses into a steep and narrow little road, called South Street, and many have been the representations made by the Newton authorities to their brethren of Boston about the desirability of widening South Street to dimensions commensurate with those of their colossal "boulevard." To these applications the Boston magnates listen gravely, hold a hearing or two, and then drop the subject. They are in no hurry to oblige Newton, nor have they any reason to be; and the consequence is that an improvement which, whatever its value, will be a very costly one, is carried out at an immense disadvantage; while, if one intelligent Board could control such undertakings for the whole district, they would be far more valuable to all concerned.

MESSRS. GEORGE ASHDOWN AUDSLEY and William J. Audsley, architects, have brought suit in the United States Circuit Court, against the City of New York, claiming one hundred and twenty thousand dollars for "services in designing, furnishing and delivering plans for a contemplated new municipal building." This is the first suit brought by architects in consequence of the abandonment of the scheme, for which competitive designs were invited some eighteen months ago; but it is said that other similar ones will probably be brought.

A MODE of feathering one's own nest at the expense of that of other people, which is much favored by walking-delegates, consists in having laws passed by subservient Legislatures, under which public work must be executed, of course at a liberal cost, exclusively by workmen belonging to a certain favored class. In New York, a law of this kind has been enacted, by which it is provided that all stones used in State or municipal work must be dressed and worked on the ground; or, at least, within the boundaries of the municipality. A contractor, named Pollock, was recently employed to pave Pearl Street, from Whitehall Street to Hanover Square, with trap or granite blocks. Every one knows that paving-blocks are made at the quarries from refuse pieces, which are split up into blocks of suitable size and shape by blows of a large hammer, which the half-grown sons of the quarrymen learn to handle very dexterously. Pollock ordered his paving-blocks, as usual, from the quarry, and began laying them. Before he had gone far, his attention was called, by the Commissioner of Public Works, to the statute in question; and, two months later, he was notified that his contract was rescinded, and was ordered to take up and remove the blocks already laid, on the ground that they had not been "worked and dressed" within the city limits. As a split block of granite is neither worked nor dressed, within the meaning which stone-cutters apply to these words, Pollock claimed that the statute did not apply to the case, and asked for an injunction to prevent the Commissioner of Public Works from interfering with his completion of his contract. His application for an injunction has now been denied, so that, in New York law, a split stone must be considered as being "worked and dressed," and, for the future, the tax-payers must have their paving-blocks brought to the city in shapeless lumps, or boulders, and trimmed into shape by local talent, whatever may be the cost of the process.

AN informal canvass of the present New Jersey Legislature shows that the members are nearly unanimous in favor of taking action for preventing further defacement of the Palisades. The first step will probably be to appoint a Commission, with instructions to present a plan by which the picturesque beauty of the cliffs may be preserved, with due regard to the rights of property-owners; and action on the plan presented will follow later. It may, therefore, be hoped that the conversion of this beautiful wall of rock into paving-stones will soon be terminated. Although the Palisades are

in New Jersey, it is really the people of New York who have the greatest interest in their preservation. To our mind, there is nothing more charming about the city than the view, which presents itself at every cross-street above Twenty-third Street, of the rocky escarpment, pink in the morning sunlight, or in deep shadow in the afternoon, which shuts out the western horizon. From the Riverside Drive the view is at its best, but at any point between this and the dividing ridge of the island, the rugged and inaccessible ledge, just far enough away for a romantic veil of dust and smoke forms a striking contrast to the straight, monotonous streets through which it is seen, and gives to New York an air of being only a step from wild nature, such as few other large cities possess.

PERMISSION has just been given for establishing, in the London Courts of Justice, a service, the value of which can be appreciated by all who have anything to do with courts. In each court-room, near the judge's table, is to be placed a group of three large microphone transmitters, ready to receive everything that may be said by the judges, clerks and lawyers. The transmitters connect with a multiple telephone circuit, by which the words spoken in the court-room may be reproduced in a hundred or more telephone instruments, which are to be set up in the offices of such lawyers as may subscribe for them. By means of these telephones, the subscribers can listen to the morning reading of the list of cases for the day; hear what cases are settled or postponed, and form an accurate idea of the hour at which the cases under their charge will be called; thus saving an immense amount of time, which is now uselessly spent, by litigants, counsel and witnesses, in waiting, often for several days, around the court-room, until their case is called. It is surprising that such a service should not have been first invented in busy and ingenious America; but, whoever invented it, there is no doubt that it will be quickly introduced here.

M. BAZIN, a French engineer of distinction, has proposed a new system of ship-building, which promises valuable results. Reasoning *à priori*, he reflected that, if a small boat were fitted with side wheels, like the so-called "water velocipedes," no great advantage would be gained, as the circumference of the wheels would be small in proportion to the power applied at the axle, and the circumferential speed would, therefore, be moderate; but if large wheels were used, the circumferential speed would be so much increased that, if power enough were applied, the vessel would be driven through the water at a more rapid rate than could be secured by any movement of mere sliding through the water. Keeping these principles in mind, M. Bazin constructed a small model, resembling a raft, on each side of which were fitted four hollow wheels which served at once for floating the structure, and for driving it through the water. Power was applied to the wheels, by some means which *Le Génie Civil* does not describe, and it was found that the little craft advanced through the water with a rapidity equal to sixty per cent of the circumferential movement of the wheels; or, in other words, that it ran over the water as a locomotive would on land, losing, as "slip," only forty per cent of the wheel movement. Applying these proportions to a vessel of five thousand tons, it would be easy to obtain a speed of thirty-two knots, or about thirty-six miles an hour. For steering his craft, M. Bazin employs a very original device. Instead of a rudder, the craft carries, near the stern, a hollow cylinder, the lower end of which is immersed in the water. The cylinder can be turned by the helmsman in any direction, and is so arranged that a stream of water can be forced horizontally from an opening at the bottom of it. When it is desired to turn the vessel in any direction, the cylinder-rudder is so set that the reaction of the stream of water issuing from it throws the stern in the opposite direction. In a ship of ordinary size, perhaps one-tenth of the power of the engines would be reserved for the steering-cylinder, which, by the force of the jet, accelerates, as well as directs, the movement of the craft, while the ordinary rudder acts as a constant drag. A steamer eighty feet long, and with wheels twenty-five feet in diameter, is soon to be built on this principle, and tried in the English Channel. M. Bazin thinks that, with further study of the ways of increasing the efficiency of the wheels, and preventing slip, the forward movement may be brought up to seventy per cent of the circumferential motion of the wheels. If so, a speed of nearly fifty miles an hour could probably be reached.

THEATRES.¹ — VII.

LAIBACH THEATRE, AUSTRIA.



0 5 10 20 30 METRES
0 10 20 30 40 50 FEET

THE Laibach Theatre is an example of one of the smaller Continental theatres upon an isolated site.

The exterior of this building, following the true tenets of good architecture, indicates the arrangements and planning of the interior, and the authors of the work, Messrs. J. V. Hrásky and Ant. J. Hruby, are to be congratulated upon the dignified and truthful treatment they have given to this theatre. There is no mis-

taking this for anything but a play-house; every line of the exterior tells this tale. Glancing, then, at the elevation, the entrance vestibule, with saloon over, is marked by three-quarter columns and pediment terminating with an emblematic group of figures. A carriage sweep leads to three pairs of doors which are the main entrance doors to the theatre; an awning over the central door affords protection in wet weather to those alighting from carriages.

The curved front of the theatre follows the lines of the internal corridors running around the seating of the auditorium. Ornamental tablets, on which to display play-bills, fill the lower panels of the rounded corners, while a niche filled with statuary is placed above.

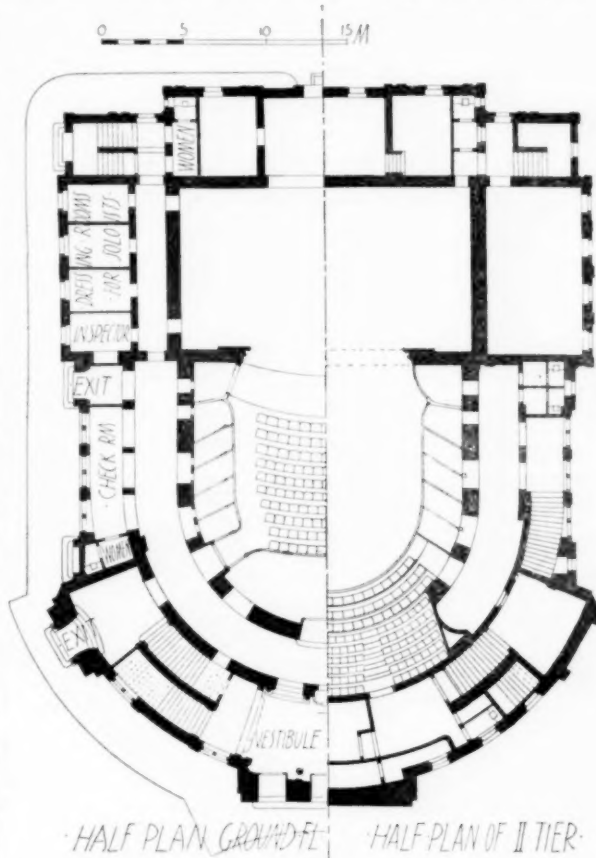
Where the circular front joins the straight lines of the side elevations, the architectural treatment of the main entrance is reproduced in emphasizing the side entrances to the theatre. The roof over the auditorium stands out, in lieu of the usual ugly hipped roof of a theatre, as a feature in the design. The circular form of the ceiling below is reproduced, and a series of round bull's-eye windows show that outlets are provided for the foul and heated air which must collect below the auditorium ceiling. The large central extract ventilator is made an ornament as well as a useful addition to the roof treatment.

Towering up above the portion of the building set apart for the spectators, stands the roof of the stage supported upon walls and a pediment which indicate strength and separation from the auditorium. The extra height given to the stage shows that due regard has been given to the necessity of having sufficient room above the stage for the manipulation and movement of the scenery without rolling or folding it, while the stage smoke-extractor in the roof is not omitted as a part of the architectural whole.

The dressing-room blocks at the side of the stage can be recognized, by the manner in which they are designed, from the outside as dressing-rooms. No one looking at the windows which light these rooms would suppose they lighted a scene-dock or workshop; they are arranged ostensibly to light a suite of rooms near the stage which must, therefore, be dressing-rooms.

From the outside of the theatre we learn all this of the inside

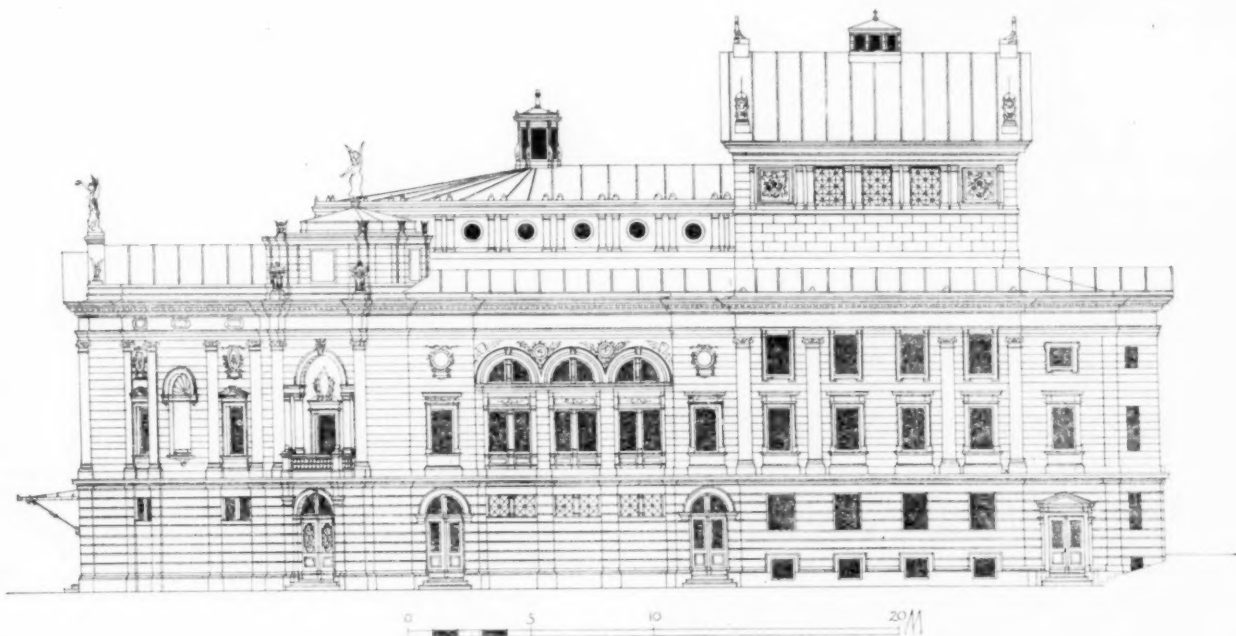
corridors, auditorium, stage and dressing-rooms can each and all be distinctly recognized as we glance at the building: and, yet, in spite of this distinction of parts, the building is designed as one whole, and



not as several parts tacked on to one another, as is too frequently the case.

The style and architectural details of the design are, and must ever be, to a great extent, matters of taste, yet I may venture to say all will agree that in this case the taste displayed is good taste.

Passing now into the interior of the building by one of the three

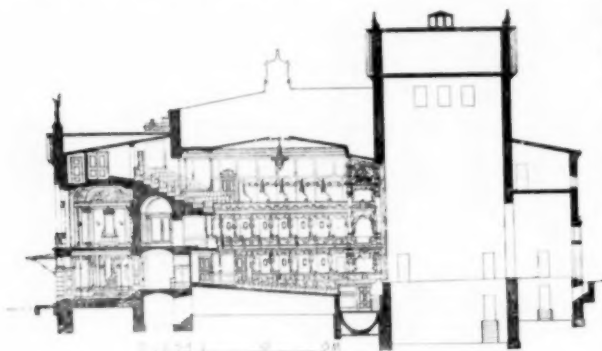


arrangement and planning, and being able to learn so much, we are bound to confess that the true spirit of architecture as an art to appropriately clothe a building with a becoming and beautiful cloak has been followed by the authors of this theatre. Entrances,

central entrance doors, the vestibule is entered. In the centre, immediately opposite the central doorway, is the box or ticket office, with doorways to the right and left leading to the wide corridor (2.65m. wide) which surrounds the seating on the ground-floor. On each side of the vestibule are staircases leading to the grand tier on the first floor.

¹ Continued from No. 982, page 26.

The seating of the ground-floor consists of a number of stalls in the area or parquet, with private boxes on either side and a space for pit at the back. Through the side vestibules, noticed while considering the exterior of the building, are extra exits from the ground-level, in addition to which there are also exits into the open air at the



ends of the corridors next to the proscenium-wall. There are, therefore, four extra exits in addition to the entrance to this part of the house.

The two exits which pass through the side vestibule are, however, not exclusively for the use of the occupants of the ground floor, as these vestibules form the entrances to the gallery above.

The planning of this theatre is in every detail symmetrical—whatever is placed on one side is also provided on the other. The corridors are separated from the auditorium on the one side, and the approaches on the other, by solid walls, affording strength and protection to the building, and they are of sufficient width on each tier to contain the whole number seated on such level.

On either side of the corridors are ample cloak-room spaces, so often deficient in English theatres, but on the other hand, the lavatory arrangements are as meagre as usually found in Continental play-houses. The steps shown outside the water-closet windows on the plan, which lead up to a blank wall, appear to be sadly sad errors in so truthful a design, and would scarcely have been expected.

The first floor is approached by staircases two metres wide on either side of the central vestibule. These staircases are, however, of excessive length, having as many as twenty-two steps in a flight. They land in a lobby over the side-entrance vestibules, from which, also, staircases lead on either side to the private boxes on the gallery level. The whole of the second tier consists of private boxes, while the gallery is divided into two classes of seats, which in England we should call amphitheatre and gallery.

There is a foyer over the central vestibule, with small external balconies, and similar balconies open out of the lobbies at the top of the staircases at the first-floor level.

The seating capacity of the house is small compared with the ground covered. In the stalls there appear to be only 135 fixed seats and 12 private boxes. A small space, not shown to be seated on the plans, is left behind the stalls for a pit. On the grand tier there are 21 private boxes, while there are 12 more on the gallery level. Two hundred and two fixed seats are all that are shown in the two divisions of the gallery.

The stage, which consists of a stage and back stage, is 18 metres wide by 9.85m. deep (the back stage being 7 metres wide by 4.8m. deep), and is divided from the dressing-room blocks on either side



by a corridor and solid walls of considerable thickness, effectually cutting-off the chances of fire spreading from the stage to the dressing-rooms.

The width of the proscenium opening has the average measurement, of about thirty feet with a height in proportion.

There are property-rooms at both sides of the back stage, and a large scene-door in the middle. The staircases and entrances to the stage are in duplicate, situated at corresponding angles on the plan, with lavatories for males and females leading from the landings.

The men's dressing-rooms are at one side of the theatre, the women's at the other, the rooms for soloists and "stars" are placed on the stage-level, while other performers find accommodation on the floors above. It will be noticed that there is no room provided for the storage of scenery, by which a great danger is excluded from the building.

The original plans from which these illustrations are taken show a complete system of heating and ventilating to all parts of the house, the fresh air being admitted under alternate seats, and the foul air extracted by flues in the walls.

On the section, it is worth while noticing the height of the stage-block compared with the auditorium, and to mention the hollow space left under the orchestra floor for acoustic purposes.

Some of the chief dimensions in metres are as follows:

	Metres.
Width between main walls of auditorium.....	16.4
Width of corridors.....	2.65
Distance from curtain line to back wall of auditory.....	16.4
Width of proscenium-opening.....	9.40
Width of stage.....	18.0
Depth of stage.....	9.85
Width of back stage.....	7.0
Depth of back stage.....	4.8
Depth of auditory staircases.....	2.0
Distance from curtain line to grand tier front.....	13.6
Distance from curtain line to gallery front.....	13.85
Height from stage level to the ceiling of auditorium.....	11.75
Height of proscenium-arch.....	9.3
Height from stage floor to wall-plate of roof.....	16.9
Height of stage cellar.....	5.0
Height of back stage opening.....	6.0

This theatre commends itself to our notice as an example of a symmetrical plan where every exit, cloak-room, lavatory, dressing-room, etc., is provided in duplicate, the same on the one side as on the other. There is no doubt of the distinct advantages in safety to be obtained by such planning: the exits and staircases are so easily found by the audience and performers. The separation of the various parts of the structure by solid walls of considerable thickness is one of the greatest safeguards against the spread of fire, while the system of corridors between the seats and the exit, the dressing-rooms and the stage tend, in a large measure, to assure the protection of the people, should a fire occur.

E. A. E. WOODROW.

(To be continued.)

NOTES ON FURNITURE DRAUGHTING.

IN what follows, an attempt is made to arrange and put in available form the answers to a few of many questions that have been asked by draughtsmen from time to time.

Three kinds of joints occur in furniture making: the angle, butt, and framing-joint. Each of these may be made in several different ways, the method being adapted to the position of the joint or the grade of the work.

Angles may be mitred, keyed, corner-pieced, rounded, or dovetailed. And dovetailed joints may be plain, lapped, or mitred.

The *mitred angle*, (Fig. 1), is a joint familiar to every one. The edges joined are cut at a bevel bisecting the angle between them when united. The union is made by butting the pieces and gluing them together. As this does not make a strong joint unless supported in some way, it is sometimes keyed. That is, the joint is mitred in the usual way; then when the glue has set, saw-cuts, some inclined upwards and some downwards, are made across the angle so as to cut equally into both of the pieces forming the mitre. In the saw-cuts, thus made, are glued small strips of wood. These are the keys. They do not, however, materially strengthen the joint, and are suitable for small work only. Where greater strength is necessary, corner-pieces, blocks square or triangular, are glued on the inner side of the angle of the mitre.

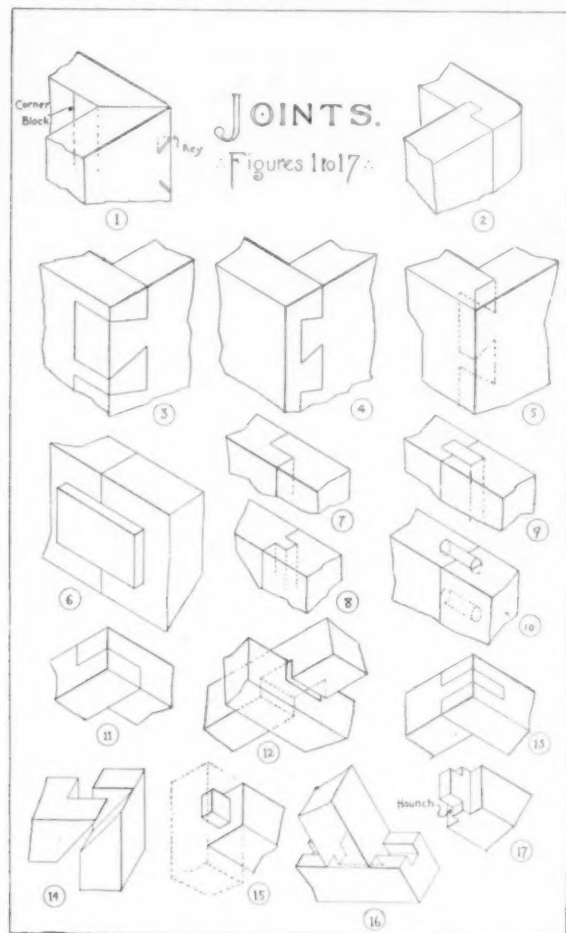
The *rounded corner*, (Fig. 2), might be called a tongue-and-groove joint, as the parts joined are practically tongued and grooved together. The tongue is placed on the inside of the angle, so that as much wood as possible may be left between the groove and the end of the piece cut.

Dovetailing is, perhaps, the best and strongest method of joining two pieces at an angle. When the joint is made in such a way that the full thickness of each of the pieces joined shows, and the shape of each dovetail can be seen, the joint is a *plain dovetail*, (Fig. 3).

This is the opposite of the *blind dovetail*, (Fig. 4), which is made in such manner that the joint is seen at the side only. A joint of this kind is sometimes called a *lap dovetail*. It is commonly used for fastening the sides and front of drawers together. In some instances, it is desirable to have all indications of the dovetailing hidden. Then use is made of the *mitred dovetail*, (Fig. 5), a combination of the mitre and the dovetail. The dovetails are cut-in half the thickness of the pieces, and the mitre in the remainder. There is also a combination of the dovetail and rounded joint, in which the dovetails are, as in the mitred dovetail, but one-half the thickness of the pieces.

The butt-joint is used where two pieces of wood are joined together in the same plane. It may be plain, strengthened, rebated, matched, slip-tongued, or doweled.

The plain butt, (Fig. 6), is the joining of two pieces to make a larger, the only connecting medium being glue. This, properly made, becomes quite strong, the wood often giving way before the



joint opens. It is almost invisible in the majority of woods, if made so the grain of the wood is nearly parallel with the line of contact, as the amount of glue used is small. There are, however, occasions when the plain butt is not strong enough and it is desirable to stiffen it.

Where one side of the pieces joined is not exposed to view, blocks glued across the joint will do this. The grain of these blocks should lie in a direction parallel with the grain of the boards, otherwise the block, glued fast to these boards, will prevent them from contracting as the wood dries, causing cracks to appear; or the block will become loose. But when the grain of the pieces and of the blocks are parallel, both shrink together.

A joint, not as commonly used in furniture as in architectural woodwork, is Figure 7, called the *rebated joint*. It has very little, if any, advantage over the plain joint when used in the same manner.

The *matched joint*, (Fig. 8), is the same as the matched-and-beaded joint of the joiner, with the bead omitted. A tongue or projecting piece along the middle of one piece is matched to a groove in another. When well made, this is a good joint, but it is not as much used as is the *slip-tongue*, (Fig. 9), formed by cutting grooves in each of the edges to be joined, so they are directly opposite each other throughout their entire length. Into them is glued a hardwood strip called the tongue, or slip-feather.

The joint most commonly used by cabinet and furniture-makers is the *dowel-joint*, (Fig. 10). It is undoubtedly the best where the wood is of sufficient thickness to permit its use. A dowel is a wooden pin used for fastening two pieces of wood together by inserting part of its length into one piece, the rest of it entering a corresponding hole in the other. Sometimes a number of dowels are fitted tightly into holes bored for them in one of the pieces to be joined. The other piece has corresponding holes bored in it, in which the dowels also fit tightly when the two pieces are glued together.

Framing-joints are mitred, halved, half-mitred, tenoned, stub-tenoned, haunch-tenoned, and doweled. The first and last of this list need no further explanation, they having been described as angle and butt joints. The second *halved* or *half-lap* joint, (Fig. 11),

is used to join two pieces at angles to each other, or end to end in the same direction. As can be seen from the illustration, it is made by cutting away half the thickness of the pieces to be joined, and then pinning or gluing them together. This is neither a neat nor good joint, though it has strength and the ease with which it is made to recommend it. Its true use is shown in Figure 12, where two pieces crossing each other are halved together.

A combination of this joint and the mitre is termed the *halved-mitre*, (Fig. 14). The face exposed to view is mitred, the other face, usually hidden, is like the ordinary halved joint.

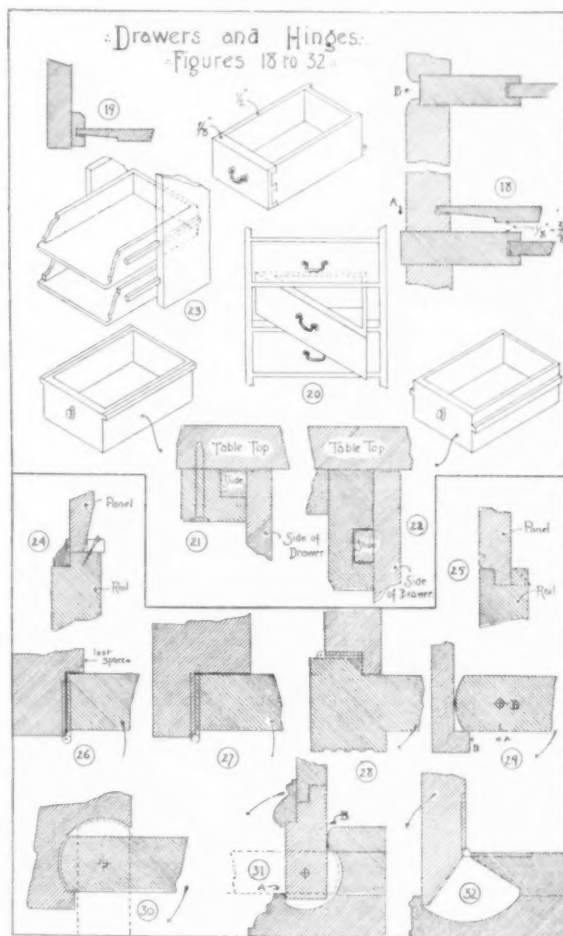
Perhaps the true framing-joint is the mortice and tenon, with its combinations. But since the introduction of dowels, the tenon has almost gone out of use with furniture-makers. They consider it old-fashioned. And owing to the shrinkage of the tenon, or the carelessness with which it is made, it does not seem as strong or equal to a dowel-joint. Its simplest form is where a tongue on one of the pieces is fitted into a notch, as it were, sawn in the end of the other, (Fig. 13).

The true mortice is cut near the end of one piece to receive the tongue (tenon) of the other, (Fig. 15). The tenon is not the full width of the piece on which it is cut, as in the first example.

A method somewhat similar to the first is sometimes employed in making the frame for a panel. Particularly if the panel is one of several set in a groove ploughed in the frame. Then the groove is run the whole length of two of the framing pieces, and those at right angles have tenons cut on them which fit in the grooves as does the panel. This kind of framing has been given the name of *stub-tenon*, (Fig. 16). When the pieces to be joined are wide, the tenon would be so large that too much wood would be cut away for the mortice, consequently two narrow tenons are cut, and between them is left a sort of half tenon, called the *haunch*. The haunch is sometimes used on each side of a single tenon, and it is so shown in Figure 17.

The joints described above include types of nearly all those met with in furniture work. Others that may be used will probably be found to be a modification of those mentioned.

In laying out the details of furniture, such as usually come within the province of the architectural draughtsman, the drawer



occurs as frequently as any part. It usually slides, though, as will be seen later, it may swing.

The front is made from three-quarters inch to seven-eighths inch thick; the bottom, back and sides, three-eighths to one-half inch. A method for determining the depth of a drawer inside is to add one-eighth inch to the thickness of the bottom, and deduct the sum

from the exterior depth; or *vice versa*, the exterior face of a drawer equals the sum of the interior depth added to the thickness of the bottom plus one-eighth inch, (Fig. 18).

The sides are usually lap-dovetailed to the front, and dovetailed to the back. The bottom may be grooved into the front and sides, or into strips glued on the sides for the purpose, (Fig. 19). It is made a little longer than the drawer, to allow for shrinkage, and the back rests on it. That shrinkage will take place is certain, and that it may be in the direction desired, the grain of the wood should run across the width of the drawer. It is not advisable to fasten the bottom, except, perhaps, it be nailed, or screwed at one end only, preferably the front. Then when the bottom moves, it does not pull away from the front, or crack, leaving an opening for articles to fall through. A drawer for a corner cabinet or closet may be of such shape that it is impossible to have it slide; then it is pivoted, or hinged, to open like a door, (Fig. 20).

Drawers of either of the above kinds are separated from each other by a frame about three-quarters of an inch thick on which they slide. This frame ought to be filled with a "dust" panel, that when the drawer is removed from the pocket, it is impossible to reach the contents of the drawer below. The appearance of the front is very much improved if this frame is allowed to project one-sixteenth inch or more beyond the drawer; or, the drawers made to lap over the rail a little, (Fig. 18)—*A* and *B*.

There is in use on hall stands and tables of a similar description, a species of drawer which may be said to hang beneath the top. A crude form of this drawer is seen on nearly every carpenter's bench or draughting-table, (Fig. 21). It has, at least, one fault which renders it quite unsatisfactory for use in good work. The friction of the sides against the top causes it to run hard and unevenly unless loosely hung.

To avoid this, the drawer may be hung between two pieces fastened to the table top, and having in them grooves, in which strips screwed to the sides of the drawer slide, (Fig. 22).

On tables having an overhanging top, a drawer cannot always be pulled out sufficiently to permit the full interior being seen. This occasions the pulling of the drawer entirely out, and it, with its contents, drops to the floor. Such a drawer may be provided with a stop, and the back placed in such a position that it is on a line with the edge of the table when the drawer is full out. That is, the sides of the drawer are longer than the interior length, and support it when it is pulled out.

Another class of drawer is the so-called "English drawer," which is a drawer without a front, hung between the two sides of a cupboard, (Fig. 23). They are used for wardrobes, etc., and are placed close together with no parting strip between them.

Mention was made above of a dust panel between two drawers. This is set in a groove in the bearing-rail and runners. Care is taken not to glue or fasten it anywhere. Too much stress cannot be laid on the fact that panels should never be glued in the frames. If they are, they will surely split when shrinkage causes them to move a little. It may be well to call attention once more to the correct way of framing panel-work so as to avoid accidentally fastening the panel, (Fig. 24). It will be noticed that the moulding is set in a rebate on the style. This moulding is first glued in place, the panel then set-in from the back, and the loose moulding tacked in. The brad holding it passes through into the rail and does not interfere with the panel in any way.

Panel-work for dust-panels, back-boards, etc., may be flush on both sides, or on one side only. The panel, flush on both sides, is an application of the tongue-and-groove joint previously described, (Fig. 8). The panel flush on one side is a sort of rebate joint, in which the panel is held by a bead or loose moulding tacked in the rebate, (Fig. 25).

There are two common methods of hanging doors; either with hinges or with pivots.

The door in Figure 26, when open at right angles, reduces the opening nearly the entire thickness of the door. To obviate this, when using a hinge, the door is hung in a rebate, as deep as the door is thick, on the hanging style or post, (Fig. 27). Or, the pilaster itself is made a part of the door and hinge, (Fig. 28). Many times it is desirable that the hinge should not be seen. Then the pivot, or pin-hinge, is used, (Fig. 29). This may have the fault of diminishing the door-opening, unless the whole thickness of the door is rebated in the post, (Fig. 30). It is obvious from the figures how to lay out the position for the pivot of such a hinge; but it is well to notice that the centre is placed so the distance, *BA*, is a sixteenth or one-eighth of an inch more than the distance, *DA*, (Fig. 29).

Desk or cabinet lids opening down need to be supported in some way. Elbow-braces or chains are used by some manufacturers. Yet when strong pivot-hinges are employed, visible supports can be done away with, particularly in cabinets, or places where no great weight is likely to be placed on the lid. To accomplish this result, construct the lid as shown in Figure 31, so when open, it rests on *A* and bears against *B*.

A similar method, employing a hinge, is shown in Figure 32. This is not as strong a method as that previously described, for the entire strain comes on short hinges. When pivots are used, the strain also comes on the hinge, but the method of putting it on,

and its peculiar construction prevents the screws holding it from pulling out. It may also be made large and strong, as it is entirely hidden from view.

Chairs are the most difficult of the different pieces of furniture to draw. The dimensions depend so much on the statures of the persons who are to use them, that it is almost impossible to give any fixed sizes. Moreover, the proportions vary with the purpose for which the chair is intended.

The average figures taken from a variety of good chairs are: height of the seat above the floor, eighteen inches; depth of the seat, nineteen inches; the top of the back thirty-eight inches above the floor. A chair built to these dimensions might not look badly or be uncomfortable.

Usually, the seat increases in depth as it decreases in height, while the back is higher and slopes more. This will be noticed in easy-chairs, or large, upholstered pieces. It is only the small occasional chair found in reception-rooms, or the chairs for use at a desk, or table, that are as high as eighteen inches in the seat.

Chairs for ladies are sometimes made as low as fourteen inches, but unless deep and well-upholstered they are not comfortable. Twenty inches inside is a comfortable depth for a seat of moderate size; increasing this from one to four inches for large or easy-chairs. The width of the seat is largely a matter of design, except for arm-chairs, which ought not to be less than nineteen inches at the front, nor less than eighteen at the back, between the arms. Chair-arms are about nine inches above the seat. The inclination of a chair-back should seldom exceed four inches, or the slope should not be more than one-fifth the depth of the seat.

A chair with arms may have a more sloping back than one without. In order to give a chair which has a back sloping considerably an appearance of stability, it is usual to incline the rear legs somewhat, so as to spread them where they touch the floor.

Dining-chairs are high, and have straight backs; easy-chairs are low with a reclining back; rocking-chairs are low in the seat, seldom higher than sixteen inches, and have high backs that the head may rest against them.

Most chairs have casters, and an allowance is made for them of one and five-eighths inches from bottom of wheel to the lower end of the chair-leg.

Sofas, divans and lounges differ from chairs principally in the increase in depth and length of seat. A lounge is six feet long, and thirty inches wide, about. The length of sofas and divans is governed by the space they are to fill, and their depth is from twenty to twenty-four inches.

Tables vary in shape and size almost as much as chairs. Writing and dining tables are made two feet five inches high, and the species of sideboard, called a carving-table, is made three feet high to the principal shelf; but tables for general use are two feet six inches high. The constructive work on a table is largely confined to the making of the top and fastening it in place. As the top is exposed to view perhaps more than any other portion, nicely-figured wood is desirable. The best figures are found in veneers, fortunately, for large tops should be veneered to prevent their cracking. When it is desirable that the edge of a table-top appear to have considerable thickness, even more than is necessary constructively, a frame, plain or moulded, is fastened to the under side of the top all around the edge. If possible, the grain of the wood used in this frame should run in the same direction as that of the top. It is well to note that this frame ought not to be fastened so as to prevent the top from shrinking or swelling. That is, if the grain for any reason does not correspond with that of the top, but is at right angles to it, no glue should be used to hold the parts together. The table-top should not be fastened so that it cannot move as it swells or shrinks. For small stands, where the shrinkage is slight, screws driven through the rail of the table, from beneath, into the underside of the top are sufficient to hold it in place. But when the top is large, it is better to screw tongued blocks to the under side in such a manner that the tongue fits in a groove ploughed in the frame of the table. The frame is tenoned or doweled to the table-legs.

Dining-tables are made to extend from twelve to sixteen feet by means of slides within the frame. This frame should not be so deep as to interfere with the knees of any one sitting at the table; that is, there must be about two feet clear space between it and the floor.

The smallest size practicable for the knee-hole of desks and library tables is two feet high by one foot eight inches wide. The width to be increased as much as possible.

Dressing or toilet tables are made with a swing glass. As they are used by a person sitting, the centre of the glass is on a level with the eye of the person seated, about three feet six inches from the floor.

Bedsteads are classed as single, three-quarters and double. A single bed is three feet to four feet wide inside; a three-quarter bed, four feet to four feet six inches; a double bed, five feet. Three feet six is a good width for single beds. All bedsteads are six feet six inches to six feet eight inches long inside. Footboards are from two feet six inches to three feet six inches, and headboards from five feet to six feet six inches high. The sides are from six to twelve inches wide, and are doweled or tongued into the posts where they are held in place by screws specially made for the purpose.

Bureaus vary in shape and size to such an extent that it is impossible to say that any dimension is fixed.

Convenient sizes are: 3 ft. 5 in. wide, body; 1 ft. 6 in. deep; 2 ft. 6 in. high: or 4 ft. 0 in. wide, body; 1 ft. 8 in. deep; 3 ft. 0 in. high.

Commodore are 1 ft. 6 in. square on the top, and 2 ft. 6 in. high.

Chiffoniers are 3 ft. 0 in. wide; 1 ft. 8 in. deep; 4 ft. 4 in. high.

Cheval glasses are made, if large, 6 ft. 4 in. high; 3 ft. 2 in. wide: If small, 5 ft. 0 in. high; 1 ft. 8 in. wide: If medium, 5 ft. 6 in. high; 2 ft. 0 in. wide.

Washstands of large size are 3 ft. 0 in. long, 1 ft. 6 in. wide, and 2 ft. 7 in. high. Small sizes are 2 ft. 8 in. long.

Wardrobes may be 8 ft. 0 in. high, 2 ft. 0 in. deep, and 4 ft. 6 in. wide. Or, 6 ft. 9 in. high, 1 ft. 5 in. deep, 3 ft. 0 in. wide.

Sideboards may be 5 ft. 0 in. to 6 ft. 0 in. long, and about 2 ft. 2 in. deep.

ALVAN C. NYE.



THE SCHEME TO PROCURE A NEW COUNTY COURT-HOUSE.—THE ACTION OF THE ILLINOIS CHAPTER, A. I. A.—OTHER OPPOSITION TO THE SCHEME.—THE REBUILT ARMORY.—THE ORRINGTON LUNT LIBRARY AT EVANSTON.—THE ART INSTITUTE AND ITS ARCHITECTURAL DEPARTMENT.—GIFTS TO THE INSTITUTION.

DURING this fall a subject which has given rise to much discussion has been the most extraordinary plan for the erection of a new county building. The scheme was one which was brought forward under the supervision of one of our largest firms of contractors, and the plans for the proposed edifice were furnished by one of our most prominent architects. These contractors, with the assistance of the architect, have placed before the County Board of Commissioners proposals to erect a fourteen-story building to cost nearly five millions of dollars. The plan not only embraces a county building, but an adjoining similar structure to take the place of the present City-hall, should it be considered wise for Chicago to imitate the county, and put, like it, five millions of dollars into a municipal building. The plan is to connect the Court-house and City-hall by means of a central tower, thus bringing them together in one magnificent whole. The city authorities, on being appealed to by the County Commissioners, have unhesitatingly refused to have anything to do with the scheme and have insinuated that no assistance was needed in the matter from the city officials. The proposition submitted to the Commissioners at first dwells upon the urgent need there is for a new county building, the impracticability of remodelling the old one, and the horrible sanitary condition of the present structure.

The authors of the scheme say: "The proposition which we have to submit for your favorable consideration is that we build such a building as set forth by the plans and specifications hereto attached for \$1,832,000, payable in four per cent Cook-County gold bonds, payable in twenty years from their date: the bonds to be placed in the hands of a trustee to be mutually agreed upon by your honorable Board and ourselves. Said trustee is to turn over the bonds to us in monthly instalments in proportion as the work progresses, and two hundred and fifty thousand of them to be reserved by said trustee for forty days after the building is completed. And we will also supply suitable quarters, conveniently in the business centre of Chicago, for all the departments of the county free of rent. Such quarters cannot all be secured in one building, but will be so planned as to not interrupt the business of the county while the new Court-house is being constructed. As you will see from the plans, the building will consist of one story below the sidewalk level and fourteen above. This will give ample capacity for all the needs of the county and seven or eight entire floors to be rented to private individuals, from which a revenue can be derived of from three hundred and fifty thousand to four hundred thousand dollars per annum. This will pay the interest on the bonds and create a sinking-fund that will pay off the principal of the bonds at their maturity. Thus the county will get a new and entirely satisfactory court-house that will pay for itself, and at the end of twenty years the county will have the building not only free of cost, but in such shape that a very large annual revenue will be derived from it until such a time in the far future when our county has so increased as to utilize the eight floors that are now to be rented out."

The rest of the space of the document is taken up with a description of the proposed building, and arranging for the matter of the issuance of the bonds by a vote to be taken on the subject at the approaching November election. The Board of Commissioners, on the reading of this proposition, passed a resolution that the vote for the issuing of the five-million-dollars worth of bonds be taken in November. Further, it was resolved at the same time, that is, on the fourth of September, "That on the twenty-sixth day of September, 1894, complete plans and specifications describing the building the bidder proposes to erect will be received at the office of C. Maurer, Superintendent of Public Service for Cook County, Court-house,

Chicago, Illinois. All proposals must be accompanied by a certified check for two hundred and fifty thousand dollars, to be retained by the Comptroller until the bonds of the contractor herein referred to are duly approved, etc.

"The Board of County Commissioners reserves the right to reject any and all bids, and in selecting proposals for acceptance will consider the amount of bids, the plans and specifications accompanying the bids, the advantages offered the county by the accompanying bids."

This is the sum and substance of a matter which has been the text for lengthy editorials in the local press and of most animated discussions and condemnation in architectural circles. The fact that but three weeks were allowed by the Commissioners for plans to be made, and for contractors to get in their bids, has naturally given rise to unfavorable comment, not only among members of the architectural profession, but by the public at large. The time allowed before the plans should be handed-in makes the request for them a perfect farce. Every one who knows anything of such matters knows that three months is none too much time to allow for the preparation of such plans for such a building, and even this amount of time consumed in such work would make no allowance for the preparation of specifications and the receiving of bids. The three weeks allowed by the Commissioners would barely be sufficient time for the preparing of simple sketches, and although a certain amount of ignorance on the part of the general public concerning matters architectural is to be expected, this becomes the most glaring case of it on record. It would seem as if even the Commissioners must have known that to get ready working-plans for a five-million-dollar building would take considerable more time than three weeks.

The renting part of the scheme makes of the financial side of the enterprise an attractive feature, but the contractors fail to note, that in the abundance of high office-buildings at present in Chicago, the desirable leasing of them is not always a foregone conclusion, otherwise this same firm might not have the large part of a modern and commodious structure, in which it is largely interested, to place at the disposal of the county officials during the construction of the proposed court-house.

At the regular monthly meeting and dinner of the Illinois Chapter of the American Institute of Architects, in September, this subject was discussed. N. S. Patton in an address on "The Architectural Responsibility to the Community as the Conservator of good Architecture" incidentally dwelt upon the court-house scheme. He spoke with force against the proposed plan, and advocated the placing on the Lake Front, where in combination with the Art Institute and the Public Library it would form part of a really fine group of buildings, a court-house which should not be without architectural pretensions, and at the same time be of a character suited to its use, and not a fourteen-story office-building similar to any number of other office-buildings in the city. At the close of his address Mr. Patton offered the following resolutions:

Whereas, The agitation for a new County Court-house, a new Custom-house and other public buildings is evidence that Chicago is likely to erect, within the next few years, a number of important public structures, which if not carefully considered as to location and character of architecture, will be a disgrace rather than a credit to this city; therefore,

Resolved, By the Illinois Chapter of the American Institute of Architects, that before any of those buildings are started, there should be devised and adopted a general scheme for the location and grouping of such buildings, in a manner to contribute to the beauty of our city, and that a method should be adopted for the selection of designs that will secure the services of our best architects, and insure to the city edifices that will be practical in arrangement, economical in cost, and at the same time will stand as noble monuments of art. It is acknowledged that the chief glory of the recent Columbian Exposition was its architecture, for which credit must be given to the architects who worked in the carrying out of a carefully studied general plan. We believe that in the same manner the architects of our city, working in harmony, can give the city a group of buildings worthy to be perpetuated. We believe that this Chapter can be of service to the public in accomplishing this result. Therefore, it is further

Resolved, That this Chapter proceed to elect by ballot a Standing Committee on Public Buildings and Grounds to consist of three members, to serve until October, 1895, and thereafter such committee to be elected at the annual meeting in the same manner as the officers, to serve one year. It shall be the duty of this committee to consider the question of the character and location of our future public buildings, including municipal and Government buildings, museums and other public institutions in the interest of good architecture. It shall be the duty of this committee to consult with citizens and organizations interested in the beauty of our city, and to prepare and recommend to the proper authorities a comprehensive plan for the location of our public buildings. This committee shall report from time to time to the Chapter in regard to its work. In case any public building is to be erected by the city or county, it shall be the duty of this committee to represent this Chapter and endeavor to secure a fair and proper method of selecting designs, referring, when possible, important matters to the Chapter for ratification.

The communication to the County Board was as follows:

"Gentlemen,—The proposal to erect a new County Court-house is one of especial interest to the architectural profession. If the present building is inadequate for the uses of the county, it should be replaced by a new structure that will be suited to its purpose and an honor to the country. We believe that the method of securing plans by the advertisement recently published will not accomplish such a result. In the first place, it will be impossible for an architect to prepare plans in the space of three weeks. Three months would be a short time for such a plan and additional time would be needed to secure proposals. Therefore, there can be no competition

and no proposals can be submitted other than the one already laid before your Board. We believe, also, that no good result can come from a consideration of proposals until the plans have been first made and adopted by your Board. Furthermore, we most respectfully protest against the erection of such a building as the one that has been proposed, or any similar building, without a careful examination into its merits. We believe that this county should have a building that would be a creditable monument of art as well as an economical and useful structure, and we believe that in this we voice the sentiment of this community. We believe that our architects are capable of giving to the country a satisfactory building, if the opportunity be given them. Believing that your Board is seeking to serve the best interests of the people in regard to the proposed building and that you desire the cooperation and advice of all who are interested enough to study the problem, we respectfully tender the cooperation of the Illinois Chapter of the American Institute of Architects, and, as an indication of the attitude of our Chapter, we submit herewith a set of resolutions, which we have adopted."

After the adoption of the resolutions and the framing of the above communication, the proposed committee was appointed.

The Real Estate Board is also strenuously opposed to the proposed Court-house plan, and is taking active measures to defeat the authorizing of the issuing of the bonds at the approaching election.

One proposal has been sent in to remodel the old Court-house building at a cost of one million dollars. It is proposed in this plan to eradicate the objectionable features of the old building, while the public character is still retained. This idea does not seem to be accepted with enthusiasm, however, and will probably not be seriously entertained by the Board. The fact that the city ordinance against high buildings would be violated by the erection of the proposed fourteen-story sky-scraper does not seem to have troubled the official conscience of the County Board. This conscience is, however, liable to a change of setting at the approaching election, so even should the issuance of the bonds be authorized, the new commissioners may be entirely opposed to the whole scheme.

Several public buildings have this last month been formally taken possession of, one being the new Armory which takes the place of the old one which was burned a year ago last spring, just as it was nearing completion. It was possible to use, in the main, the old walls of the former construction, and, in fact, as far as the memory of the casual observer can be trusted, the new building seems to be a reproduction of the former one. The walls up to the height of forty feet are of stone, entirely without openings, while above this they are of brick. The chief feature of the façade is the large arched entrance for the passage of troops formed in marching order. The building, though having but few architectural features, could be called a successful one, as is usually the case when the use and character of the building are in harmony. Small three-story round towers are at the corners of the structure, which, with their embrasured windows, could command both Sixteenth Street and Michigan Avenue in case of riots or in times of disturbance. The building occupies a ground-space of nearly one hundred and seventy-five feet square. The ground-floor is devoted to the drill-hall, being a space without supporting columns or pillars, the upper floors being suspended from the roof of the building. The gallery above the drill room contains the headquarters of the regiments, comprising seven company-rooms, twelve other rooms and banquet-room, library and dining-room. On the floor above this are the twelve company-lockers, rooms for the bugle and drum corps, the cycle corps, the non-commissioned staff, the Gatling section, the veteran corps and the gymnasium. The attic and a billiard-room, a hundred and twenty feet long, occupy the third floor, while four rifle-ranges and eight bowling-alleys occupy space in the basement.

Another semi-public building, which has this month been made ready for occupancy, is the Orrington Lunt Library at Evanston. This building is situated on the college campus of the North Western University. It bears the name of the man whose large gift made its existence possible. The building is of buff Bedford stone, with red tile roof, and is in style an adaptation of the Italian Renaissance. It embodies in its interior arrangement many of the ideas of the late Dr. William Poole, the old stack-system being abandoned. The outlines of the exterior are good, and in the matter of detail, the style of the whole has been well carried out. The beauty of the interior has been considerably increased by the fact that the building-committee was wise enough to allow some expenditure to be made in the matter of wall-decoration. In fact, in this special feature, the building is conspicuous among similar structures of its kind in this vicinity, and, indeed, is probably the most artistically-decorated building of its kind in the West. In the vestibule is found the most elaborate work, four large panels painted on canvas being introduced into the walls. The subjects of the panels are Roman Law, Hebrew Prophecy, the Greek Libation Pourer and the Truth Seeker before the Sphinx, all representing different types of Mediterranean culture, Greek, Roman, Hebrew and Egyptian. The subjects are treated in a decorative manner, and are in keeping with the Classic feeling of the building, the Egyptian one being especially fine. In the reading-room there is a frieze, the chief feature of which are shields, thirty-two in number, bearing book-marks of different publishers.

In October, at the regular monthly meeting of the Illinois Chapter of Architects, the annual report was read, and part of it, as showing what this Chapter is doing, may be, when compared with work of

other Chapters, of general interest. Among the most important subjects to which this Chapter has lent its attention and influence are the following: The successful effort to suppress the irregular methods of appointing Chicago building-inspectors under the new ordinance; the assistance given by it to the American Institute of Architects in the matter of the controversy between that body and the Secretary of the Treasury; its action in protesting against the proposed plan for a new Cook County building, and in electing a standing Committee on Public Buildings and Grounds. Many interesting papers have been read before the Chapter, and the membership, which at the beginning of the year numbered seventy-six, now makes a showing of eighty-one names.

The Art Institute has just published its annual report and it is most pleasing to note the decided advance the institution has made within the last two years. During the years '92-'93, the number of students in all the departments numbered nine hundred and twenty-nine, while in '93-'94 there was a slight falling off, owing, no doubt, to the financial depression, the number of students being only nine hundred and twenty-three. The capacity of the school-rooms was, however, taxed to its utmost, and this year several new school-rooms have been added. The opening registration of students this year shows a figure of over six hundred, which is larger than the opening list of any previous year, and will, without doubt, bring up the number of attendants to a larger figure than that of any preceding terms. The school itself is self-supporting and more than that even, the receipts this last year exceeding the expenses by one hundred and fifty-seven dollars. A medal was conferred by the Columbian Exposition upon the department of ornamental designing, "a department," so says the annual report of the Director, "which is doing work parallel to that of the best schools of design in the East." It is hoped that before long a workshop will be added to the study rooms, where students may carry out in the actual their designs for wood-carving, frescoing, mosaics, stained-glass, etc.

The architectural school opens with unusual enthusiasm this year, and a more systematic course of study than heretofore is to be the result of exertions on the part of those connected with this department. Connection has been made between the Art Institute architectural classes, and those of the Armour Institute, which will permit of more extended and thorough courses in the scientific branches. This department is now said to be third in point of numbers among the schools of the country. The usual course of lectures will begin in this department, each course being more fully elaborated and illustrated than in the preceding years. The Institute authorities have determined to popularize these lectures, and will consequently throw them open to all members holding their annual membership ticket. It is to be hoped that in this way some little knowledge of the history of architecture may be scattered broadcast.

Many of the gifts to the Institute have from time to time been mentioned in these letters, but the entire list, as found in the curator's report for the years '93-'94, is most gratifying to those interested in the institution. In his report the librarian says, "The library at present contains one thousand three hundred and forty-six volumes, eight hundred and thirty-two in the Reference Department, that is, books not to be taken from the room, and five hundred and fourteen in the Circulating Department, circulating to students only. During the past two years we have added one hundred and sixty-five volumes. An occasion which overshadows all other acquisitions of the library is a gift from Dr. D. K. Pearsons, of the collection of autotypes, under the name of the 'Mrs. D. K. Pearsons's collection of Carbon Photographs.' The whole collection will number eighteen thousand six hundred sheets, of which fourteen thousand eight hundred and eighty-seven have thus far been received. They are conveniently installed, are freely open to all who consult the library, and are much used." It is to be hoped that the architectural department will receive full attention, as it would be of inestimable value to the student not able to provide even the foundation of his own library. The growth must necessarily be slow, owing to the expensiveness of technical books, and the comparatively small amount the Institute has to expend on the library. The chief additions must naturally come in the way of gifts.

A recent present has been made in the form of a bulletin-board. Heretofore, a blackboard placed at the really beautiful entrance of the building has somewhat marred the artistic effect, but has nevertheless posted the public as to the hours for visiting the galleries, and the amount of entrance-fee to be paid. The new bulletin-board consists of a bronze sheet on which is cast the words "Art Museum of the Art Institute of Chicago. Open daily from nine until five, Sunday, one to five. Admission, twenty-five cents. Free, Wednesday, Saturday and Sunday," in letters which harmonize with the Classic lettering in the front façade of the building. The bulletin rests between two uprights supported on claw-feet and surmounted by two griffins holding in their mouths a bronze rod. From this rod can be hung on certain days a bronze piece bearing the inscription "Free to-day." The whole thing, though but a small matter, adds a great deal to the general beauty of the principal entrance, and is a great improvement on the former blackboard of primitive style.

The fall exhibition of American painters is now being held at the Institute, and aside from the interest which this exhibition always excites, an additional zest is added, by the fact that the Field Memorial room is for the first time opened to the public. This room is the one set apart to hold a collection of valuable paintings

once the property of the late Henry Field, and has been decorated and adorned by Tiffany. A description will be given of it in a later letter.

POMPEII.

THE Naples correspondent of the *Daily News* in a recent letter asks how many people, when they visit Pompeii, remember anything of what has been learned of its early history? To know something of it adds so much to the interest with which the dead city is contemplated that every one must feel grateful to Professor Man for having prefaced his most admirable "*Führer durch Pompeii*," quite lately published under the auspices of the German Archaeological Institute in Rome, with a readable brief introduction. As the guide is not to be published in England until two or three years are passed, I will here give a sketch of what Professor Man, the greatest living authority on Pompeii, tells us about its history.

The city of Pompeii already existed in the sixth century B. C., as is proved by the remains of its oldest public building, the Doric temple. But the date of the first foundation of the city is quite unknown. It was first inhabited by the Oscans, a race whose language is imperfectly known through some inscriptions. The name of Pompeii is derived from a word belonging to this ancient language, the word "pompe," or "five." The city was wrested from its original inhabitants by the Samnites when they advanced from the mountains to the coast in about the year 420 B. C. The Oscans and Samnites together, under the influence of the neighboring Greek colonies, developed a civilization probably far outstripping that of the contemporary Romans. In the years 342 B. C. and 290 B. C. the Samnite wars led to the subjection of Pompeii by Rome. The city was drawn into the Roman confederacy, during which it preserved its independence as to its home affairs. It was only in the year 80 B. C., when the Samnites were conquered by Rome, that Pompeii became Romanized by a colony of veterans under P. Sulla, a nephew of the then Dictator. The city was presently named Colonia Cornelia Veneria Pompeianorum, after the family name of the Dictator Sulla and the goddess of whom he was a special devotee, and who then became, as the Venus Pompeiana, the tutelary divinity of the city. At the same time a suburb was founded, probably by the citizens who had been driven out in favor of the Roman veterans, which was named Pagus Felix, after the by-name of the Dictator, and later, in honor of Augustus, Pagus Augustus Felix. The inscriptions which have been found at Pompeii show that many state offices existed in pre-Roman times. There was a Kombeñion, National Assembly or Senate, it is not known which; a Medix or Medix Tutix, the chief of the city; a Koaisstur, or Questor, who was probably entrusted with the city treasury; and two aidilli, ædiles, employed in the making of roads. Under the Romans, after 80 B. C., there were the usual decuriones, ædiles and other public officers, also many priests, priestesses, ministers and magistrates. Pompeii was built on the point of an ancient stream of lava, running towards the sea, close to the then full-flowing river Sarno. The city was the natural southeastern port of the plain through which the river flowed. The sea was then not more than 1,500 feet distant from the city, the river serving as a harbor. On the banks of the river stood a small suburb of the city. From the busy port were exported not only the produce of the country in the interior, but also the products of the plain itself, namely, wine and vegetables. The lava was cut into millstones, which formed a large article of export in the second century B. C.; but later on, this source of profit ceased to be cultivated, and millstones were even imported into Pompeii from abroad. The harbor town grew more and more wealthy, from the fact that the Roman aristocracy, attracted by its beautiful situation and fine climate, began to settle in the environs. The inhabitants of Pompeii at that time numbered probably 30,000.

It will be remembered that the volcanic mountain, on the slopes of which Pompeii stood, re-awoke after ages of inactivity in the year 63 A. D., when many buildings in the city were damaged or destroyed. Traces of the earthquake that happened then are still to be seen in the excavated city. Then in 79 A. D. came the awful eruption which, while the people were still repairing the damage done in 63, buried the city to a depth of more than six feet in small pumice-stones, and some time later with a rain of ashes to a similar depth. Those pumice-stones and ashes were not red-hot, as is generally believed, as the wood which has been found seemingly carbonized has only been thus changed by chemical processes. Traces of real burning on the mural paintings are very easily distinguished from the red tint which, in some unexplained way, overspreads a great portion of the wall-paintings where these have come in contact with the ashes. The manner in which Herculaneum was buried was very different, for there the pumice and ashes do not lie in regular strata as in Pompeii, but are mixed together in a sort of muddy paste, which, hardened into stone during the course of time, makes excavation difficult. After the catastrophe the upper stories of the houses in Pompeii protruded above the ashes, showing where the city lay. Digging on a large scale then took place, and building-material and valuable objects were carried away. All the marble, except a very few fragments, were removed in ancient times. Later on, the remaining upper stories of the houses were destroyed by time, as very little of them has been found. In 73 A. D. most of the inhabitants escaped.

It has been calculated that only 2,000 of the 30,000 were killed on the spot, but how far the fugitives were able to run is not known; the fact is that many of them were overtaken and buried by the falling ashes at a place on the banks of the Sarno not far from the city, for in 1880 and 1881 many skeletons, together with many valuable objects now kept in the Naples Museum, were found there.

Though the existence of Pompeii under the fields that then covered it was discovered as early as 1594, the city has only been regularly excavated since 1748, and till the year 1825 only the public buildings round the Forum, the Theatre, the Street of Tombs had been laid open to the view. The present reasonable and scientific mode of excavation was begun by Professor Fiorelli in 1881, and continued by Professor Ruggieri, who has only just resigned his office in consequence of his advanced age. At present nearly half of the whole city is excavated, and the circle of its walls determined. It is probable that the still unexcavated part will not contain many public buildings, perhaps a few temples and baths, but if the present slow rate of excavation be continued it will take another fifty or sixty years to lay the whole city bare. The shape of Pompeii is nearly oval; the city walls follow the slope of the lava-hill on which it is built, only crossing that hill at the part where it rests against Mount Vesuvius. Pompeii was laid out on a fixed plan. The two principal streets, Strada di Mercurio and Strada di Nola, crossed it from north to south and from west to east. The side streets run crossways to these two, and only slightly deviate from the straight line at certain points. The city wall is preserved in its northern part and a great portion of its southern course, but on the west and at the west corner of its southern course it was already pulled down in ancient times, and its place occupied by houses. The wall has eight gates, to which distinguishing names have been given. The public buildings that have been found are situated in two groups—one around the Forum and the other near the Stabian Gate. But the public baths are distributed irregularly all over the city. The most important houses have been named according to very different reasons, some after distinguished persons who have witnessed their excavation; for example, the "House of the Grand Duke of Tuscany," others after objects of art found therein, as the "House of the Faun," and others again after their supposed proprietors, as the "House of Sallust." It is well to take notice of these names, as it is under them that the guides point out the buildings. A more reasonable method of naming is that from the bronze seals discovered in the houses, engraved with the names of the owners, or from inscriptions.

The oldest building in Pompeii is the destroyed Doric temple, which belongs to the sixth century B. C. The city wall is also extremely ancient, but even an approximate date cannot be determined. The rest of the buildings belong to two distinct groups, according as they were built before or after the founding of the Roman colony in 80 B. C. The pre-Roman edifices are artistically the best. They were built under the direct influence of Greek culture, and show the pure, beautiful forms of the Doric, Ionic and Corinthian styles. Especially remarkable is the spirited style of the Corinthian capitals, built of no costly material. The columns and the beams are generally of gray tufa-stone, coated with white or colored stucco; marble is rarely found. The technical work is also imperfect. But the Roman buildings, though of an inferior and often coarse style, are made of superior material, such as marble, or the fine limestone called travertine, and the workmanship is better. The Basilica, the Temple of Apollo, and probably the Temple of Jupiter, the oldest portions of the Forum, the so-called "School," the Stabian Baths, the large Theatre, the colonnades of the Triangular Forum, the barracks of the gladiators, the Palæstra, the outer portion of the Porta Marina, and the inner portion of the other gates all belong to the public edifices of the pre-Roman period. To the early time of the Roman colony belong the Baths near the Forum, the small Theatre, the Amphitheatre, the Temple of the Capitoline Divinities, and the inner portion of the Porta Marina. All the other public buildings were built in the later Roman time.

The mural paintings belong to four successive styles. The first style, that of the pre-Roman period, consists in imitations of marble decorations in plastic stucco-work. There are no figures or pictures in this style. The second style, belonging to the time of the Roman Republic, consists in painted imitation of marble, and also in realistic, not fantastic, pictures with architectural subjects, showing edifices such as might have actually existed. The third style, that of the Roman Imperial period, till about 50 A. D., is ornamental decoration in the Egyptian taste, distinguished by pure and beautiful forms in tender and graduated coloring. The fourth style, belonging to the time immediately previous to the destruction of the city, shows a peculiar love for fantastic, slender, playful architectural subjects, and is the kind generally understood when we speak of Pompeian wall-paintings. The coloring is less delicate, the ornaments not so pure in form, but all are stronger and more effective. Especially admirable is the rich fancy displayed in the architectural decoration. Almost all the figure-subjects in the paintings of Pompeii belong to the third and fourth styles.

Pompeii was well and entirely paved in its earliest days, and well provided with drinking-water. The Oscan and Latin inscriptions engraved or painted in red color generally relate to elections; a few are announcements of games. What can be deciphered of the "graffiti" or scratched inscriptions show that they were individual effusions, the expressions of good wishes, the mention of games, verses, etc. A number of wooden tablets, coated with wax and

inscribed, which were found in the house of the banker, L. Cæcilius Jucundus, have now been deciphered in the Naples Museum and are mostly receipts.

The few fragments of the ancient Doric temple on the Triangular Forum show that it greatly resembled the famous temples of Paestum and Selinus. The temple was already destroyed in the early days of Pompeii, and a shabby sanctuary erected in its place.

REGULATIONS FOR THE PRESERVATION OF ANCIENT BUILDINGS IN ITALY.¹

1. THE entireness of a building extends in *limine* to that portion of it which remains, as well as to any traces which may indicate original portions which have been destroyed. It follows, therefore, that in the ordinary course it is not right to proceed to the rebuilding of destroyed portions, inasmuch as such rebuilding may interfere with the study of, or the imaginary completion of the building, and may prevent the recognition of the original portions.

2. The renewal or substitution of portions, even if of secondary importance, of an architectonic building should only be employed as an extreme measure in order to preserve what remains, and should, therefore, be restricted to those portions which no longer fulfil their specific purpose or can no longer be repaired.

3. The works of repair (*consolidamento*) and renewal considered necessary to assure the integrity of a building should be carried out so as to interfere as little as possible with the general effect of the building.

4. In this respect, it should always be borne in mind, that the artistic value of a building is frequently to be referred to the modifications occasioned naturally to the materials, which testify to the past age of the building and accentuate the good and evil of the materials, as well as of the methods of construction, and constitute a proof and a guaranty of their duration and normal stability. The pictorial effect of a building should be taken into account, as well as its relation to the atmosphere (*ambiente*) formed around it by time.

5. The restoration of a building may be undertaken under the following conditions: — The reestablishment of portions of a building in their original position, or the removal of additions without particular historical or artistic value, and which do not add to the stability or good preservation of the original portions.

6. Before commencing a work of restoration it is necessary to collect the written or figured particulars relating to the building, having regard to the assistance which may be afforded by a study of works of a similar character and age to that which it is proposed to restore; to study the materials and constructive and decorative methods employed in the building, and to re-constitute, by means of historical records and inquiries, the injuries inflicted on the building.

7. The graphic portion of the preliminary study founded on the results of the foregoing researches should consist of making careful drawings of the structure and condition of the various portions of the building; of taking the necessary tests and plumbings; preserving a record of all the indications of constructive or decorative work, referring to photographs or engravings of such parts as are proposed to be altered; and preparing geometrical drawings of the works considered necessary, and the results to be arrived at, reserving power to make any alterations which may be found requisite in the course of carrying out the works.

8. When, for reasons of stability or the attainment of a special aesthetic result, it is desired to have recourse to the completion of any part of a building, care should be taken that when the work is finished, the essence, reason and scope of the renovation should be apparent. With this object, while employing materials similar to or allied to the original materials, a simplified workmanship should be adopted in harmony with the general effect, so that there may be no uncertainty as to the extent of the work of renovation.

9. It is permissible to demolish or remove any addition to a building in order to open out any important part of the structure or original decoration, provided the general effect of the building is enhanced thereby, and that such demolition does not result in the further exposure of the mutilations and disfigurement to which the building has been subjected. Before commencing any work of a similar nature, it should be ascertained as accurately as possible what are the essential characteristics, and the state of preservation of the original portions of the building, in order to avoid uncertainty, surprises, difficulties and unforeseen expenditure during the progress of the works. When the portions removed have any artistic or historical importance, they should be preserved in a place apart, or the fragments of the greatest interest collected, and drawn or photographed as a whole.

10. In every restoration which extends to the subterranean part of a building of a monumental character there will occur: — 1. The opportunity of tracing the remains of any edifices anterior to the building to be restored, or the remains of other original arrangements of the same building. 2. The necessity of taking account of the most minute peculiarities of the fragmentary material obtained by means of excavation, especially with regard to its position or accidental deposit, from which it is often possible to deduce an indication of the original plan of the building.

11. This special attention to the material obtained by excavation should extend to material resulting from pulling down, among which

may be found portions which may be made use of in the work of restoration, or may be usefully preserved on account of the indications presented with regard to the original arrangement of the building. These decayed artistic or scientific materials, together with any fragments which may be found in the vicinity of the building, which can be identified as undoubtedly belonging to it, should be carefully collected in view of the possibility of their being re-used, or from their interest in connection with the building.

12. Whenever it is found necessary to remove the coloring or limewhiting which conceals any monumental portions of a building, it is before all things necessary to ascertain if there are any traces of decoration underneath which are interesting from an historical or artistic point-of-view, and if such be found, to proceed with caution, so as not to injure the structure of the edifice nor the original surface, avoiding the use of metal tools, and using solvent or corrosive agents only when it has been ascertained that the ancient material, having regard at the same time to the damaged condition in which it may be found, will not suffer injury. Any work for the completion of wall-decoration with paintings considered of historical or artistic importance shall be carried out by a special expert under the particular instructions of the Minister.

13. When it is proposed to strengthen a building by iron ties, care should be taken that the architectural lines and the picturesque effect of the building are not injured, and in no case should the original building be altered with a view to concealing, in whole or in part, such subsidiary portions of the building. Care should be taken to obviate, by the exercise of timely caution, the injury which may be occasioned by the oxidization and consequent swelling of iron ties, and in all cases where the original building is of costly material or delicate workmanship, the use of copper should be preferred for the purpose.

14. The patching of decorative or ornamental features made with the single object of concealing marks of natural decay in the material employed in a building should be avoided, inasmuch as such operation involves the destruction of some original portions; and the chisel-work necessary to prepare the cavity for the patch may, in many instances, jeopardize or decrease the harmony (*consistenza*) of the adjacent parts. It is also to be remarked how rarely the operation of patching (*tassellatura*) sensibly improves the aesthetic effect. Alterations occasioned by atmospheric influence or accidental damage when not affecting the stability of a building should be respected. Where the damage is so extensive as to threaten the stability of other portions of a building, partial rebuilding should be adopted with the precautions recommended in the preceding articles.

15. When it is found necessary to repair the roof-covering of a building, every trace of the original mode of covering should be preserved and displayed, and the original system followed as far as possible. Where the original form of roof-covering cannot be restored, a system should be adopted differing as little as possible from the original, and in no case altering the effect of the whole in the least degree.

16. Special care should be taken in respect to the regular and safe removal of water by means of arrangements which are consistent with the original condition of any building, preserving always any traces of previous arrangements for that purpose, even when they may have become unserviceable, or are not adapted for re-use.

17. When a building which has been injured by frost or rain is to be repaired, and it is found necessary to use a special roof-covering, whether temporary or permanent, care should be taken, in carrying out the work, that the general effect of the building may not be sacrificed thereby.

18. All works relating to stained-glass of an historical or artistic interest should be executed under the personal direction of an expert acting under rules laid down by the Minister.

19. Works for the restoration of pavements of particular importance, whether as regards the value of the material or the fineness of the workmanship, should be undertaken with no other object than the better preservation of the material and its original arrangement. Recourse should be had to the renovation of original portions only when cavities are disclosed which may become dangerous, or which may promote or accelerate the destruction of adjacent parts. The portions re-laid should be constructed of materials differing from the original, in order that the extent of the ancient pavement may be made evident.

20. Decorations of an historical or artistic interest, such as inscriptions, ledger stones, etc., should not be removed unless with the object of preserving them from possible injury.

21. Shoring should be executed of materials sufficiently strong for the time necessary for the execution of the works of restoration. It is recommended from considerations of economy that brickwork or other permanent materials should be used whenever it is probable that the work will last so long a time as not to justify the use of timber.

22. Provision should be made to free buildings from any vegetation which may constitute a direct cause of deterioration; this operation should, however, only be resorted to when its efficacy compensates for the risk of injury which may be occasioned to the building by its frequent repetition.

23. Care should be taken to prevent the improper use of placards which conceal the important portions of a building, or which injure the artistic or picturesque appearance of the same, and similar placards already in existence should be removed when opportunity offers.

¹ Translated by John Hebb in *The Architect*.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

STAIRCASE HALL IN THE HOUSE OF EDGAR HARDING, ESQ., WOOD'S HOLE, MASS. MR. H. M. STEPHENSON, ARCHITECT, BOSTON, MASS.

[Gelatin Print issued with the International and Imperial Editions only.]

FITCHBURG HIGH-SCHOOL BUILDING. MR. H. M. FRANCIS, ARCHITECT, FITCHBURG, MASS.

SIZE of building: 220' long, 108' deep at centre, 80' at ends and 68' high, to cornice at centre. The exterior, which is practically completed, is laid up with yellow brick with terra-cotta trimmings; basement and porches are Berea sandstone; sub-basement, Fitchburg granite. The cornice is copper, and roof is slated. Inside finish is quartered oak and brown ash. The first floor is of "metalloid"; stairs are iron. Building is plastered with Windsor cement. There are about 40 rooms, including a hall, seating with gallery about 1,200 persons. The drawing-rooms and chemical laboratories are on the fourth floor; physical laboratories on third floor; assembly-hall, library and principal's room on second floor; and gymnasium, locker and toilet rooms, etc., on first, or basement floor. The boilers, heating-coils and fan are in the sub-basement. The contractor is J. R. Hosmer of Fitchburg, associated with Hascal Dodge of Springfield. The price, \$112,100, does not include the heating and ventilation, which is in charge of Prof. S. H. Woodbridge of Boston, nor the electric-wiring, gas or electric fixtures, fittings or furnishings of any rooms. The total cost will be about \$165,000.

HOUSE AT YONKERS, N. Y. MESSRS. PARISH & SCHROEDER, ARCHITECTS, NEW YORK, N. Y.

THE house is designed for a suburban street-lot of fifty feet width. The exterior, as represented, is to be covered up to the second floor with shingles, the remainder to be half-timber work and stucco, stippled. The stucco to be applied to plaster boards, fastened to the sheathing. The roof to be covered with cypress shingles, left to weather. The interior to be finished, in the hall, parlor and dining-room in oak throughout. The remainder of the house to be finished in whitewood, to be painted. The plumbing to be of the latest improvement, with all the pipes exposed. The preliminary estimate for the masonry, carpentry, painting, plumbing and hot-water heating amounts to \$6,435.

BURLINGAME COUNTRY-CLUB STABLE, BURLINGAME, CAL. MR. A. PAGE BROWN, ARCHITECT, SAN FRANCISCO, CAL.

THE stable has a frontage of 141' with a depth of 110', enclosed on four sides. Stable provides stabling for eighty horses, polo ponies, etc., ample carriage-rooms, men's quarters, etc. The exterior of the building is finished entirely in plaster and hardwood. The roof is covered with cedar shingles. An enormous oak tree in the centre of the court forms a pleasant feature, with seats arranged about same. The court-yard is filled with broken shells.

COLONIAL WORK AT NEWPORT, R. I.: TWO DOORWAYS. MEASURED AND DRAWN BY MR. P. G. GULBRANSON.

STABLE AT WYCKOFF, N. J. MR. E. G. W. DIETRICH, ARCHITECT, NEW YORK, N. Y.

DESIGN FOR A STABLE. MR. E. G. W. DIETRICH, ARCHITECT, NEW YORK, N. Y.

HIGH-SCHOOL BUILDING, MEDFORD, MASS. MESSRS. HARTWELL & RICHARDSON, ARCHITECTS, BOSTON, MASS.

[Additional Illustrations in the International Edition.]

BETHLEHEM PRESBYTERIAN CHURCH, BROAD ST., PHILADELPHIA, PA. MR. T. P. CHANDLER, JR., ARCHITECT, PHILADELPHIA, PA.

[Gelatin Print.]

A SHOP-FRONT MARQUISE, RUE DU PONT NEUF, PARIS, FRANCE. M. F. JOURDAIN, ARCHITECT, PARIS, FRANCE.

This plate is copied from *La Construction Moderne*.

THE FONTANA DEL CORPO DI GUARDIA, RAGUSA, ITALY.

This plate is copied from *Architektonische Rundschau*.

HOUSES AND DETAILS OF THE SAME AT OSNABRÜCK, PRUSSIA.

These plates are copied from the *Zeitschrift für Bauwesen*.

APARTMENT-HOUSE, STOCKHOLM, SWEDEN.

This plate is copied from *Teknisk Tidskrift*.

NEW CATHEDRAL HIGH-SCHOOL FOR BOYS, ESPLANADE, BOMBAY, INDIA.

THIS building is to be erected on a site east of the General Mews on the Esplanade. The building is from designs and estimates prepared by Mr. John Adams, Architectural Executive Engineer and Surveyor to Government. The extreme length of the main building is 156' 9" and breadth including the wing on the South side is 111' 0". The total height of the building from ground to underside of the tie-beam is 53' 6". The ground-floor affords accommodation as follows: three class-rooms, each 24' x 21'; one school-room, 65' x 24'; boys' refectory, 30' x 24', as also day-teachers' rooms, dispensary and godown. A corridor 8' in width runs around the building in front and rear of the main rooms. The first floor contains a chapel, three class-rooms, an office and library with quarters for the headmaster, consisting of drawing, dining and two bed-rooms and bath-rooms. On the second floor there are two dormitories, affording accommodation for forty-four beds. In the corridors attached to the dormitories there are six bath-rooms for small boys. There are also provided two bed-rooms for masters, and a room for the matron with bath-rooms. Connected with the main building by covered ways are two blocks, one to accommodate servants and the kitchen, and the other for baths, water-closets, etc., for boys. The estimated cost of the building is 175,994 rupees. The plate is copied from *Indian Engineering*.

NEW CONSERVATIVE CLUB-HOUSE, GLASGOW, SCOTLAND. MR. R. W. EDIS, ARCHITECT.

This plate is copied from *The Builder*.

SCHOOL-BOARD OFFICES, SALFORD, ENG. MESSRS. WOODHOUSE & WILLOUGHBY, ARCHITECTS.

This plate is copied from the *Building News*.

VICTORIA INSTITUTE, WORCESTER, ENG.: ENTRANCE TO LIBRARY BLOCK. MESSRS. J. W. SIMPSON & E. J. MILNER ALLEN, ARCHITECTS.

VICTORIA INSTITUTE, WORCESTER, ENG.: THE LIBRARY BLOCK. MESSRS. J. W. SIMPSON & E. J. MILNER ALLEN, ARCHITECTS.

VICTORIA INSTITUTE, WORCESTER, ENG.: THE SCHOOLS' BLOCK. MESSRS. J. W. SIMPSON & E. J. MILNER ALLEN, ARCHITECTS.



[The editors cannot pay attention to demands of correspondents who forget to give their names and addresses as guaranty of good faith; nor do they hold themselves responsible for opinions expressed by their correspondents.]

THE DRY-CLOSET SYSTEMS.

NEW YORK, N. Y., November 3, 1894.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—I have just read X. Y.'s communication about the Smead system of closets in school-houses.

I do not know who X. Y. is, but it is quite evident he does not know that when there is not great heat in the stack-heater, or in vacation, or in warm, moist weather, provision is made to maintain the required circulation in the stack-heater in a satisfactory manner.

I built a large school-house on the banks of the Hudson River several years past and used this Smead system. Just when the fires were not going and when there were no children in school, I went down into the dung vaults and I found that the excrement was dried and the circulation of air was from the foul-air chamber towards the stack.

Of course, if parsimonious School Boards are to allow a "shortage of fuel" or will not use the "auxiliary heater," it is quite evident human ingenuity is handicapped.

If, however, the engineering requirements are strictly carried out by the architect without reference to well-meaning busy bodies, who do more harm than good, I feel that such carping criticism as I have just read will have no foundation in fact.

Yours faithfully,

GEORGE MARTIN HUSS, Architect.

THE REPORT OF THE COMMITTEE ON EDUCATION.

KANSAS CITY, MO., November 2, 1894.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—In your report of the third day's session of the Convention of the Institute in New York, the following paragraph occurs: (*American Architect*, No. 983, p. 36).

"Mr. Van Brunt took the floor to explain that the report of the Committee on Education was really nothing but an inquiry as to

the causes of the disorderly results of architectural education in this country as evidenced in executed work, and that it was in no sense intended to be a reflection upon the schools or on those who conducted them. He emphasized his point by stating his belief that should a dozen architects be called on at the same time to design each one a separate building in the same block, no one of them would think of consulting with his fellows with the intention of securing for the block as a whole a proper architectural effect."

What I really did say — and the point of difference is very essential — was, in substance, that should a dozen modern architects of thorough training in the best schools be called upon separately, each one without knowledge of the other, to design adjoining buildings in the same block, the result would be, not the unity in variety, not the unconscious harmony of pure style, as in any sixteenth-century street in North Italy or France, but a more or less turbulent disagreement.

By this I did not mean the vulgar intentional discord of professional rivalry, but the inevitable confusion of tongues, the almost necessary conflict of irreconcilable formulas, brought about by our present methods of using historical precedents.

The fact that this confusion and conflict exist cannot be questioned; and every thinking mind will admit that it is significant of something wanting in the architecture of the end of the nineteenth century — an architecture, which, as it is the most learned and the most conscious the world has ever known, should at least have the sanity of system. Apparently, however, the Institute is not as yet prepared to consider seriously this important, though, perhaps, somewhat abstract question, and he who attempts to draw attention to it and to make inquiries as to a possible remedy must, until the fulness of time, run the usual risk of being considered an impracticable dreamer or crank, and must patiently endure the usual demonstrations of conservative condescension.

HENRY VAN BRUNT.

EXHIBITIONS

BOSTON, MASS. — *Exhibition of the Works of Adolf Menzel; also, Drawings by John Trumbull*: at the Museum of Fine Arts, in October and November.

Water-colors by Childe Hassam: at Doll & Richards, 2 Park St., closes November 14.

CHICAGO, ILL. — *Seventh Annual Exhibition of American Oil paintings and Sculpture*: at the Art Institute, October 29 to December 17.

NEW YORK, N. Y. — *Loan Exhibition of Portraits of Women*: at the National Academy of Design, November 1 to 24.

Loan Exhibition: at the Metropolitan Museum of Art, New North Wing, opened November 5.

Ehrlich Collection of Old Masters; also, Group Exhibition by American Painters — William M. Chase, J. Alden Weir, Childe Hassam and others: at the Galleries of the American Fine Arts Society, 215 West 57th Street.

Tschille Collection of Arms and Armor: at Tiffany & Co.'s, Union Square.

PHILADELPHIA, PA. — *Sixth Annual Exhibition of the Art Club of Philadelphia*: opens November 19, closes December 6.

PROVIDENCE, R. I. — *Paintings by Providence Artists*: at the Art Club, closes November 10.

NOTES AND CLIPPINGS

THE METAMORPHOSES OF A BUST. — English sculptors are not half up to date — perhaps because our fewer political changes have not sharpened their wits. The Parisians just now are laughing at the vicissitudes of a bust of Louis XIV over the colonnade on the east side of the Louvre. When Perrault erected the colonnade, the bust was an exact likeness of the "Roi Soleil," but under the First Empire the official sculptor chipped off the flowing wig, and pared the nose down to the Napoleonic proportions. When the Bourbons came back, the wig was replaced, and the necessary hump put on the nose, but both were removed during the Hundred Days. But after Waterloo, the peruke and the aquiline nose were restored, and the troubled bust had rest, though now that the subject has been raised, possibly M. Casimir-Perier may wish to add his moustache to the long-suffering work of art. — *Building News*.

HOW SHALL ONE HOUSE DISGORGE THE OTHER. — A very peculiar case is reported from Frankton, a small village west of this city, in Madison County. The subject of the story is Henry Over, aged about fifty-five years. He is an upholsterer by trade, but for thirty years past has been engaged in building a new house. He resides in a small two-room house in the centre of the city. Soon after the war, Henry had a good bundle of money, and decided that he would build a larger house. He wanted to locate it where the old one stood, but did not care to go to the expense of moving it. The new building was to be larger, and he decided to leave the cottage standing and build the other one around it. In the meantime, he would have some place to live. The foundation was placed in, and work began as above stated. He decided that he would do the work alone. Since then, he has kept

pecking away with his hammer and saw, and the house is not yet completed. As it now stands, a part of the roof is on, and nearly all of the weather-boarding up, but some of it is so badly spoiled from exposure, that it will soon have to be replaced. When the work of roofing the structure was begun two years ago, it was found that the sills placed on the big boulder-foundations, back in the sixties, had become so badly decayed that new ones had to be placed in. The work is now being delayed by the old gentleman while he contrives some idea how to get the old building out of the new one without tearing it to pieces. He says the present trouble could have been averted had he been familiar with the "new-fangled" idea of moving houses on rollers. — *Cincinnati Commercial-Gazette*.

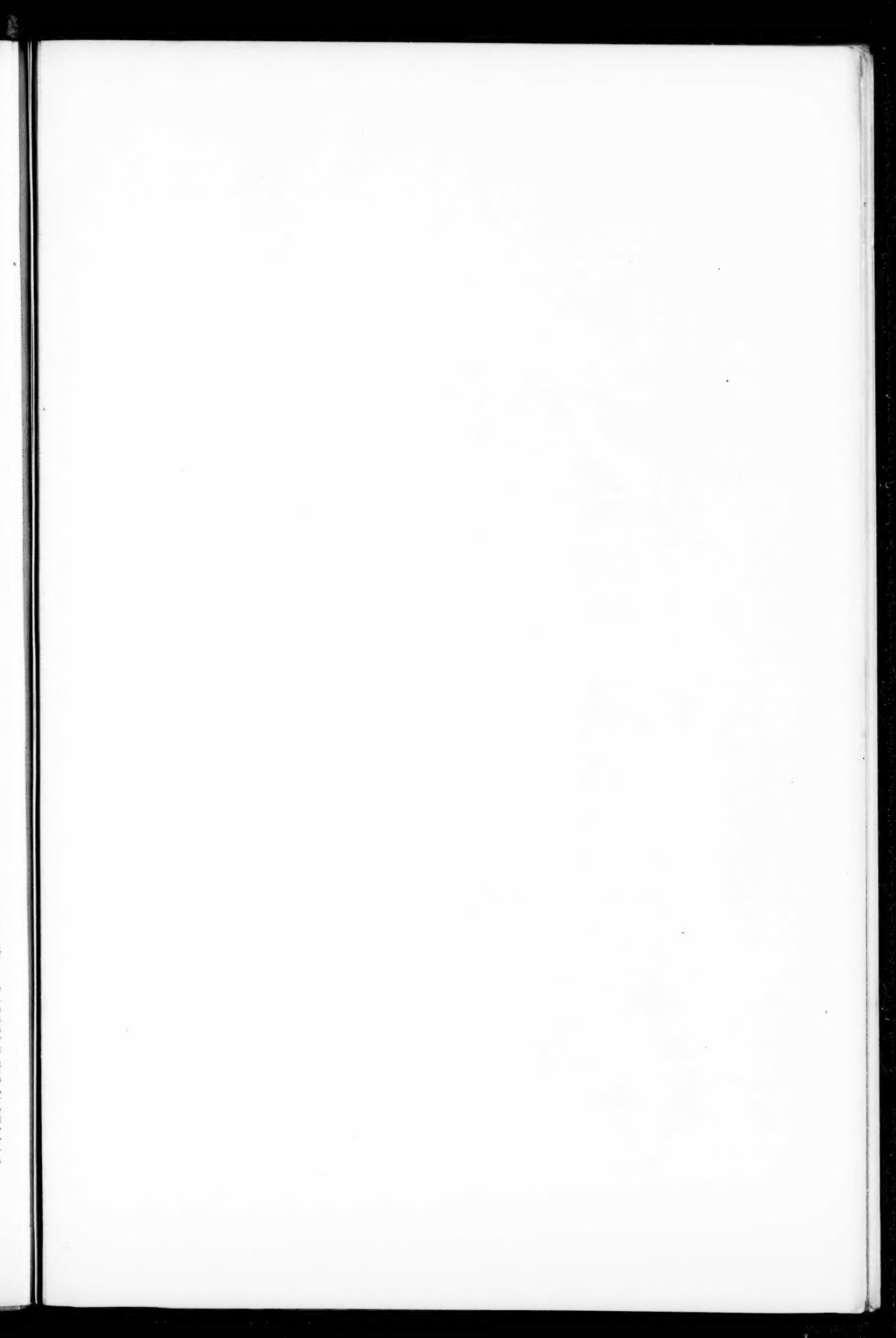
A "COCHON." — A rather curious and unusual case of building rights is attracting considerable attention at Paris at this moment. No. 88 of the Rue des Martyrs, a well-known street leading up the hill of the church of the Sacré Cœur, comprises two large houses having the same staircase and entrance. One of these houses is the property of a Madame Vincent, the other has lately been bought by a M. Bonnard, who stipulated when buying that he would pay no ancient rights. The new proprietor, as soon as the sale was proved, forbade the inhabitants of the adjoining house the use of the staircase. The case was taken before the law-courts, where it was decided that M. Bonnard had a perfect right to erect a barrier between his house and that of his neighbor. After a short lapse of time, the new landlord, acting on the decision given in his favor, ordered the passages acceding to the staircase from his neighbor's house, and those leading to the water-closets, to be walled up, thus imprisoning the tenants in their apartments. These latter are now obliged to leave their rooms by means of ladders in order to descend to the street, and haul up all their provisions by means of ropes from their windows, a position scarcely convenient for the tenants, but highly amusing to the passersby and neighbors. This state of things, it is hoped, will not last, however, for several of the councilors of Montmartre are taking the matter in hand, in order either to arrange an amicable understanding between the joint proprietors of the staircase, or make an appeal to law. — *Paris Letter in the Builder*.

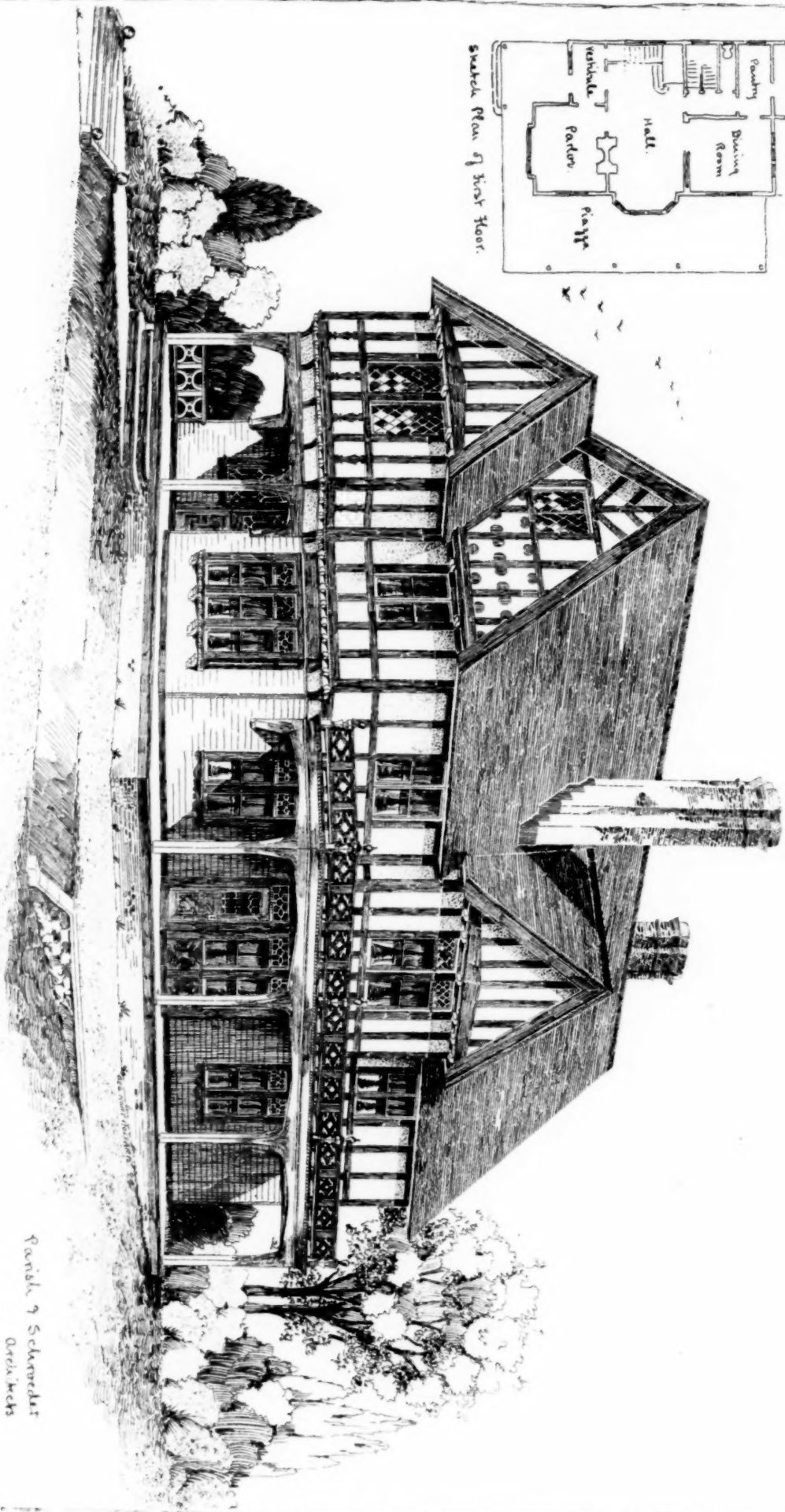
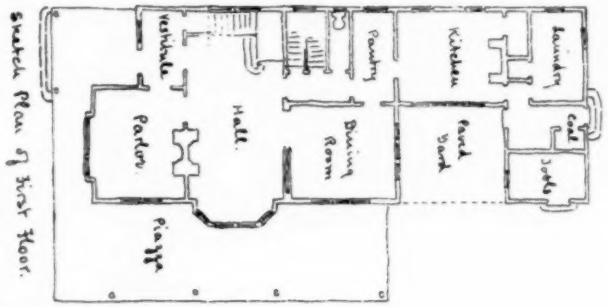
JEWISH LEGEND ABOUT SOLOMON'S TEMPLE. — The Jews have a legend to the effect that Solomon did not employ men in building the great "House of the Lord," but that he was aided in the gigantic undertaking by the genii. Having a premonition that he would not live to see the building finished, Solomon prayed to God that his death might be concealed from the genii until the structure was finished. Immediately after, he made a staff from a sprout of the tree-of-life, which was growing in his garden, and, leaning upon this, he died, standing bolt upright in the unfinished temple. Those who saw him thought that he was absorbed in prayer, and they did not disturb him for upward of a whole year. Still the genii worked day and night, thinking that they were being constantly watched by him whose eyes had been closed in death many weeks. All this time, so the legend says, little white ants (one account says red mice) were gnawing at the staff, and, when the temple was finally finished, the staff gave way, and the body of the dead Solomon fell prone upon the floor. Mohammed alludes to this queer legend in the Koran, where he says: "When He (God) had decreed that Solomon should die, nothing discovered his death unto them (the genii) except the creeping things of the earth." — *Philadelphia Press*.

AN ALL-IRON RAILROAD IN ASIATIC TURKEY. — One of the curiosities of railroad building is the construction of a road running from Ismid, a harbor about sixty miles from Constantinople, to Angora, about three hundred miles. The bridges, sleepers, stringpieces and telegraph poles, as well as the rails, are of iron, nine-tenths of which are of German manufacture. The bridges average about four to the mile, there being 1,200 of them, the longest having a stretch of 590 feet. In addition to these there are sixteen tunnels, the longest measuring 1,430 feet. This is the only railroad which penetrates the interior of Asiatic Turkey, the Smyrna lines being near the coast. — *N. Y. Tribune*.

PARIS AND THE SMOKE NUISANCE. — The Corporations of Paris are, it is announced, prepared to receive, until November 1, detailed designs for the suppression of the smoke nuisance, the prizes being 10,000, 5,000 and 2,000 francs. A similar competition has been determined upon for the purification of the River Seine. Tests are to be made by a specially-appointed commission and that result will be considered most successful which gives a clear, colorless water without disagreeable taste and free from microbes of a character dangerous to health. The prizes vary from 1,000 to 3,000 francs. The designs or details of existing systems were to be sent in before September 15. — *Invention*.

WHITE CADIZ. — Every traveller is astonished at the excessive whiteness of Cadiz. The streets might be cut out of shining marble, and are all decorated with bright-green jalousies and balconies. Of such an immaculateness are the pavements, that you could dine off them without a tablecloth. Of a prettiness so dainty and regular, that you weary of it before the first day is over, for each street is like another street, and there is no escaping the contrast of white and green. Night decorates it with some variety — everybody is abroad; streets, squares, alamedas, and gleaming café-fronts are all alive with the hum of humanity. You are enticed along by the smiles and lovely allurements of the maidens and matrons, with their exquisite walk, their mantillas, and their long-fringed shawls. You are kept amused by the vivacity and volubility of the men. Here, at least, the guitar twangs and the mantilla is still worn, sometimes, even, with the traditional rose; and often a dark-eyed nymph passes with her slight Andalusian swagger and its message of charming provocation, flaunting a rose between her lips. But only sometimes, alas! The fashions of Paris have encroached so far, and the ladies of Cadiz are not unacquainted with a passion for the shoddier articles of England. — *Good Words*.



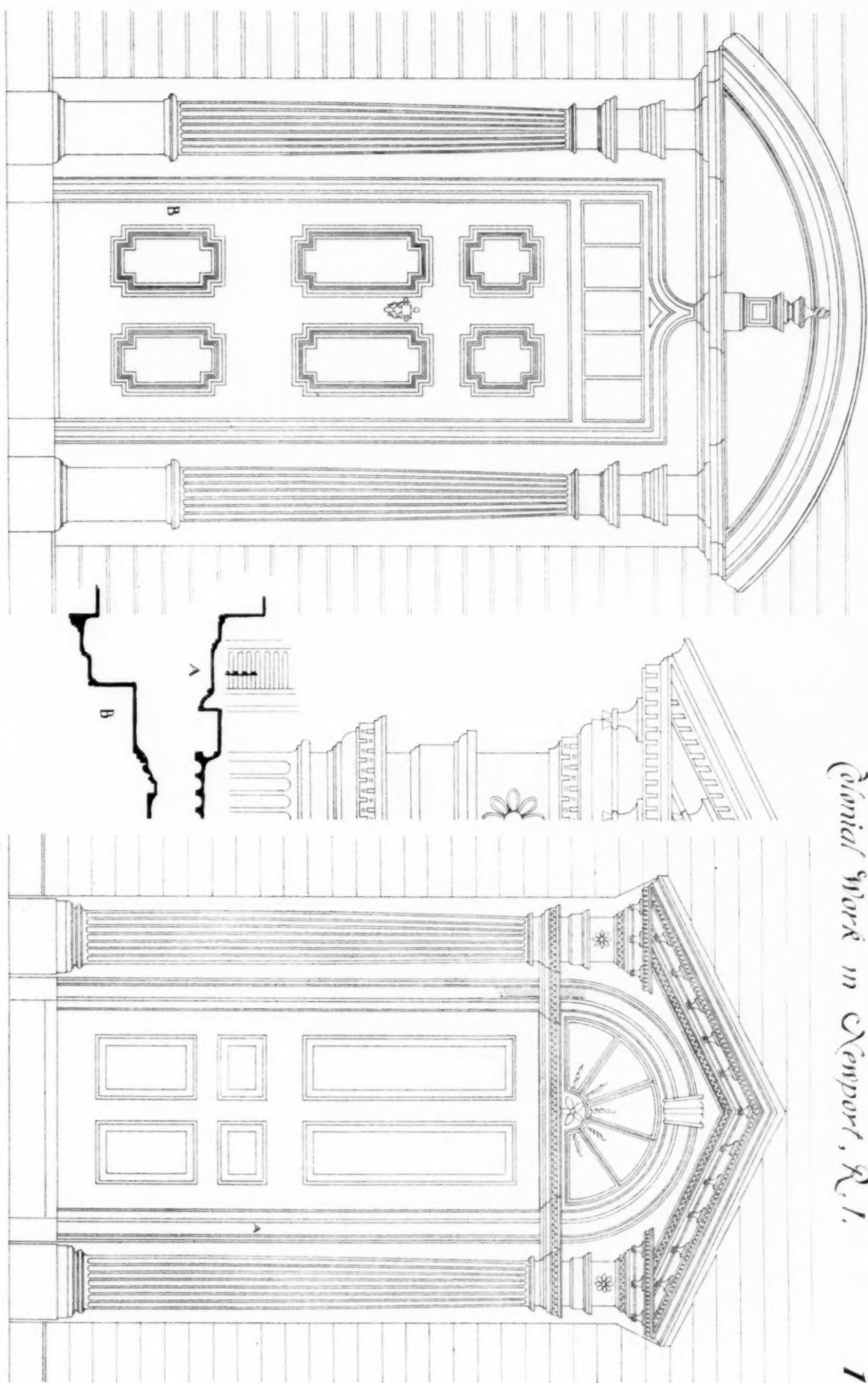


HOUSE AT YONKERS, N.Y.
PARISH & SCHROEDER ARCHTS. N.Y.

Parish & Schroeder
Archts.
Madison Ave. N.Y.

Colonial Work in Newport, R.I.

1



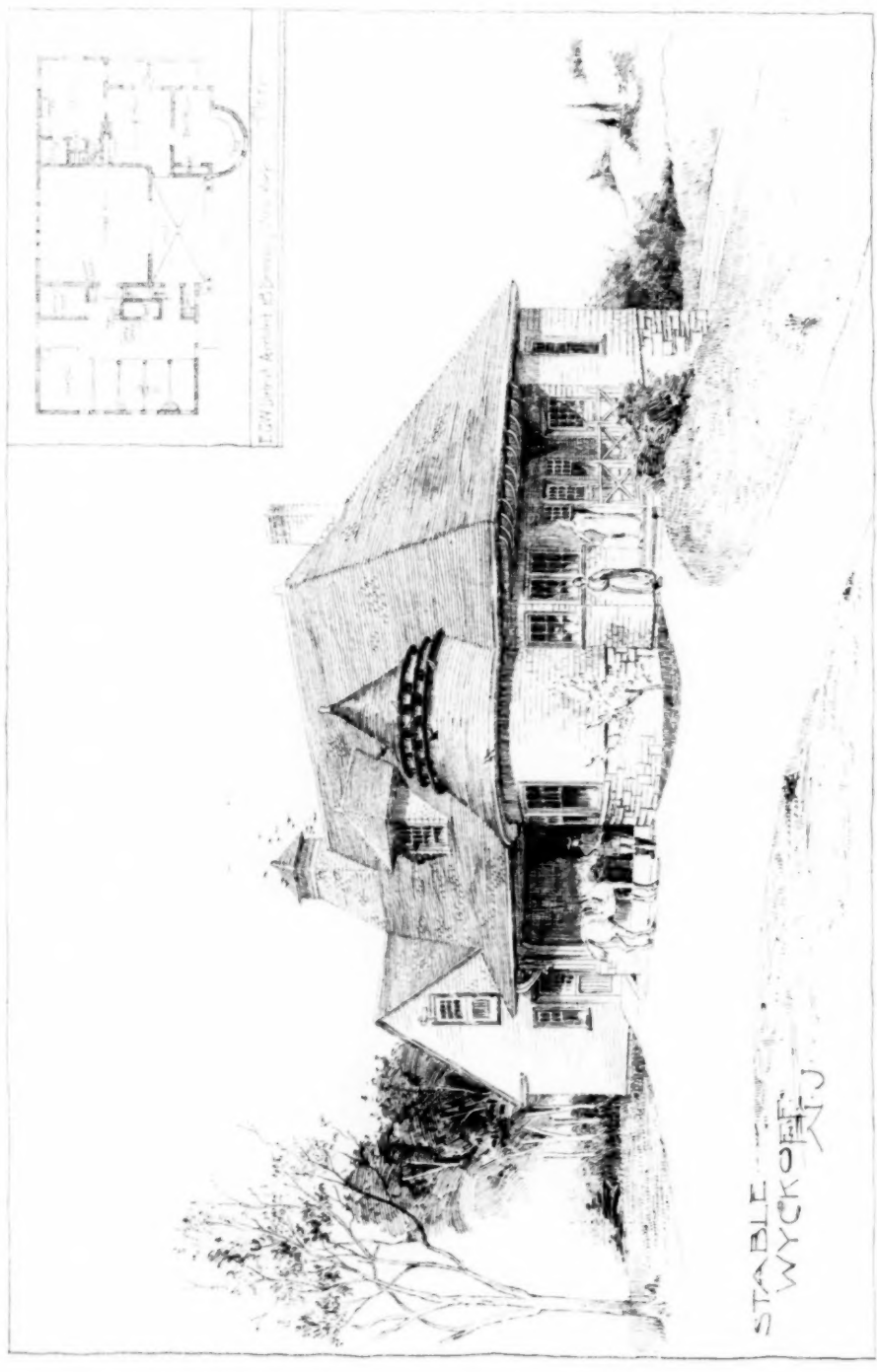
41 Mill Street



23 May Street

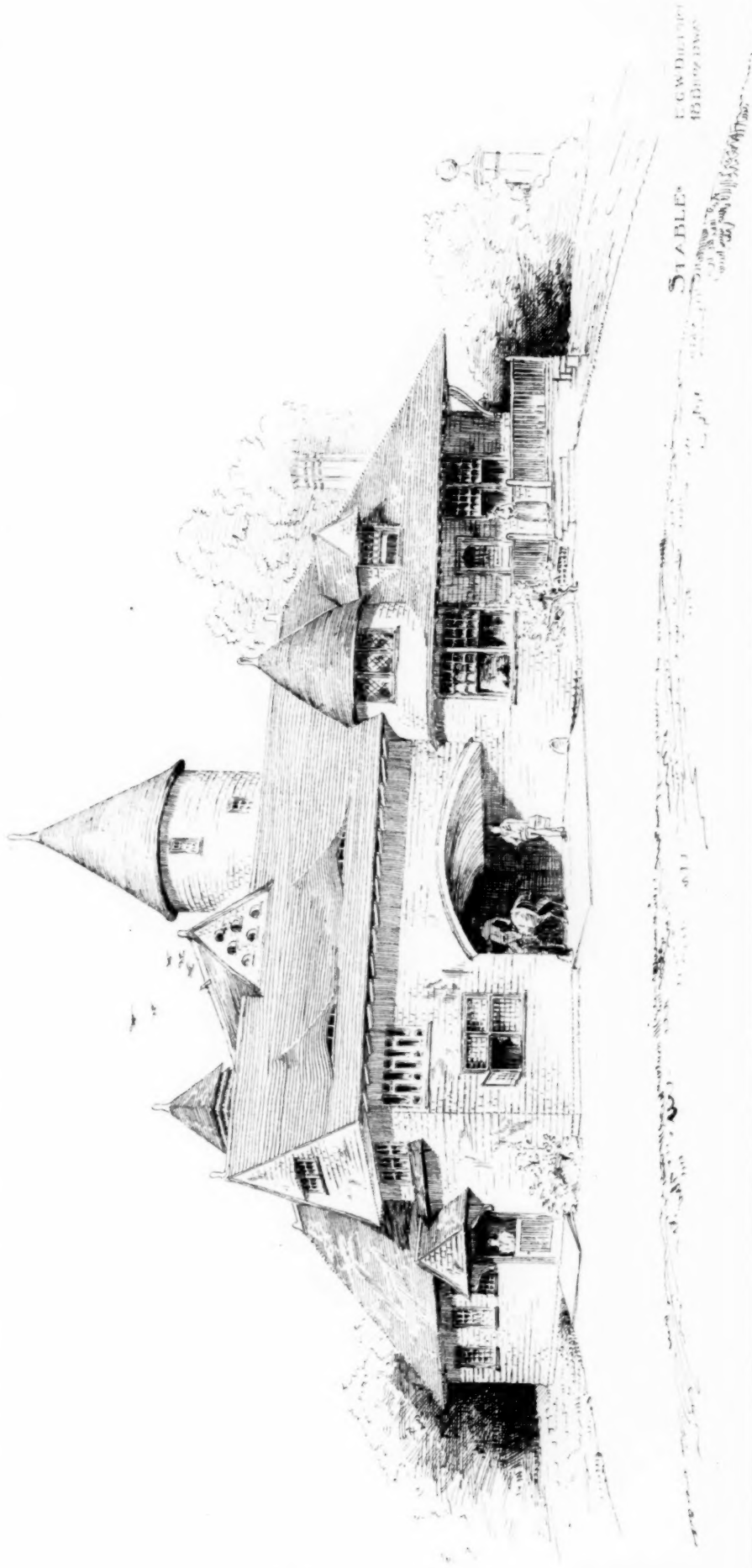
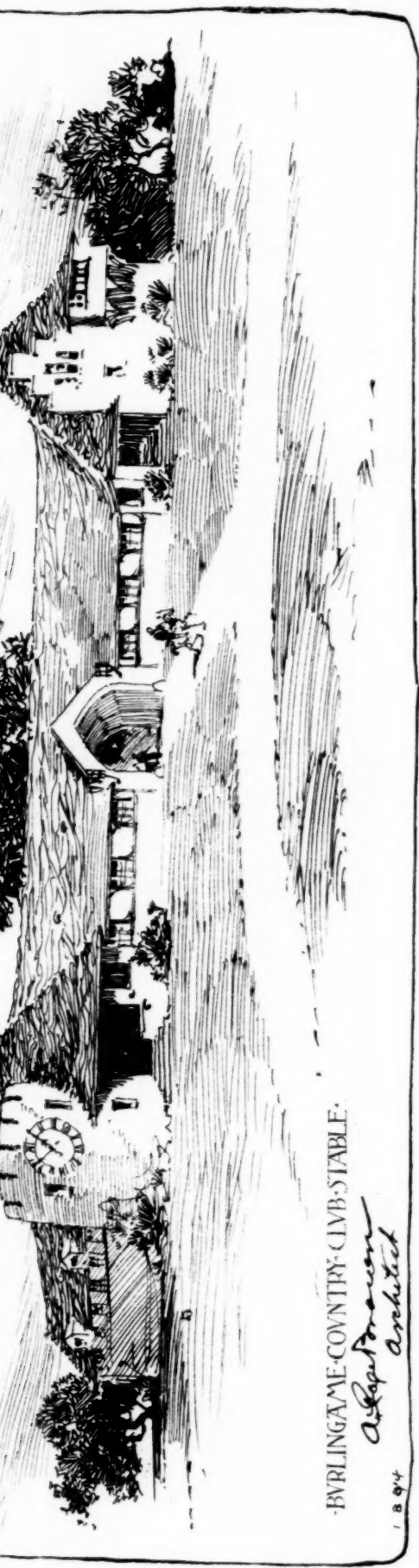
Measured and drawn
by P. C. Robinson, 1894

REPRODUCED FROM THE ORIGINAL

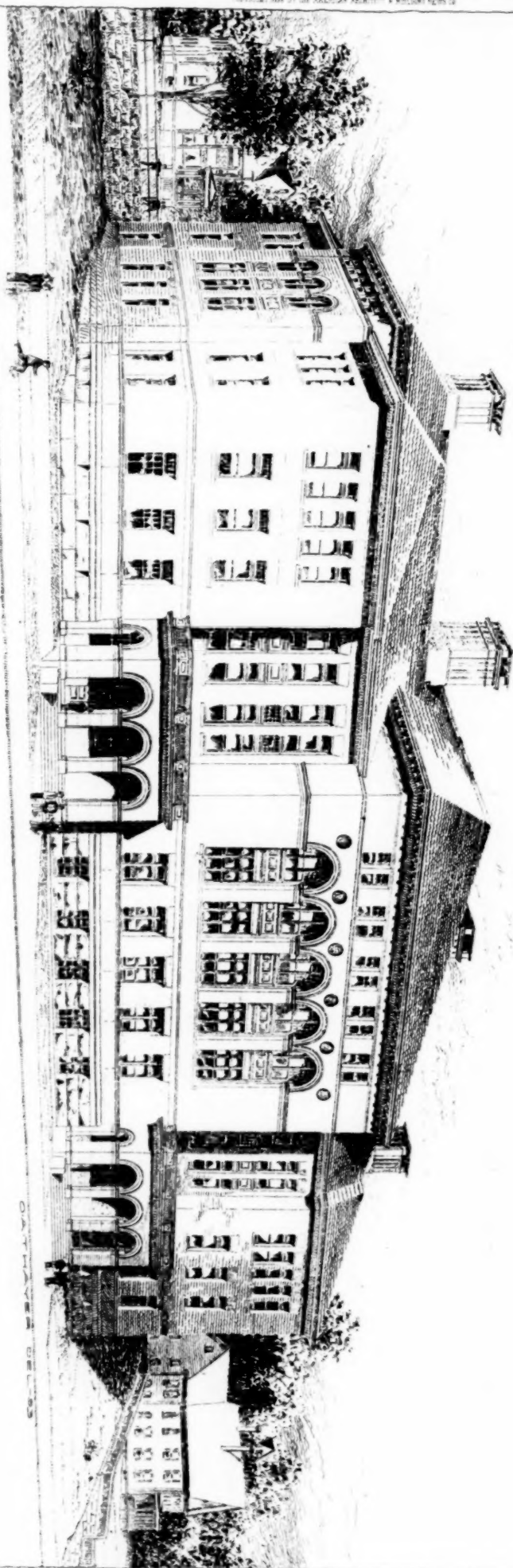


STABLE
WYCKOFF





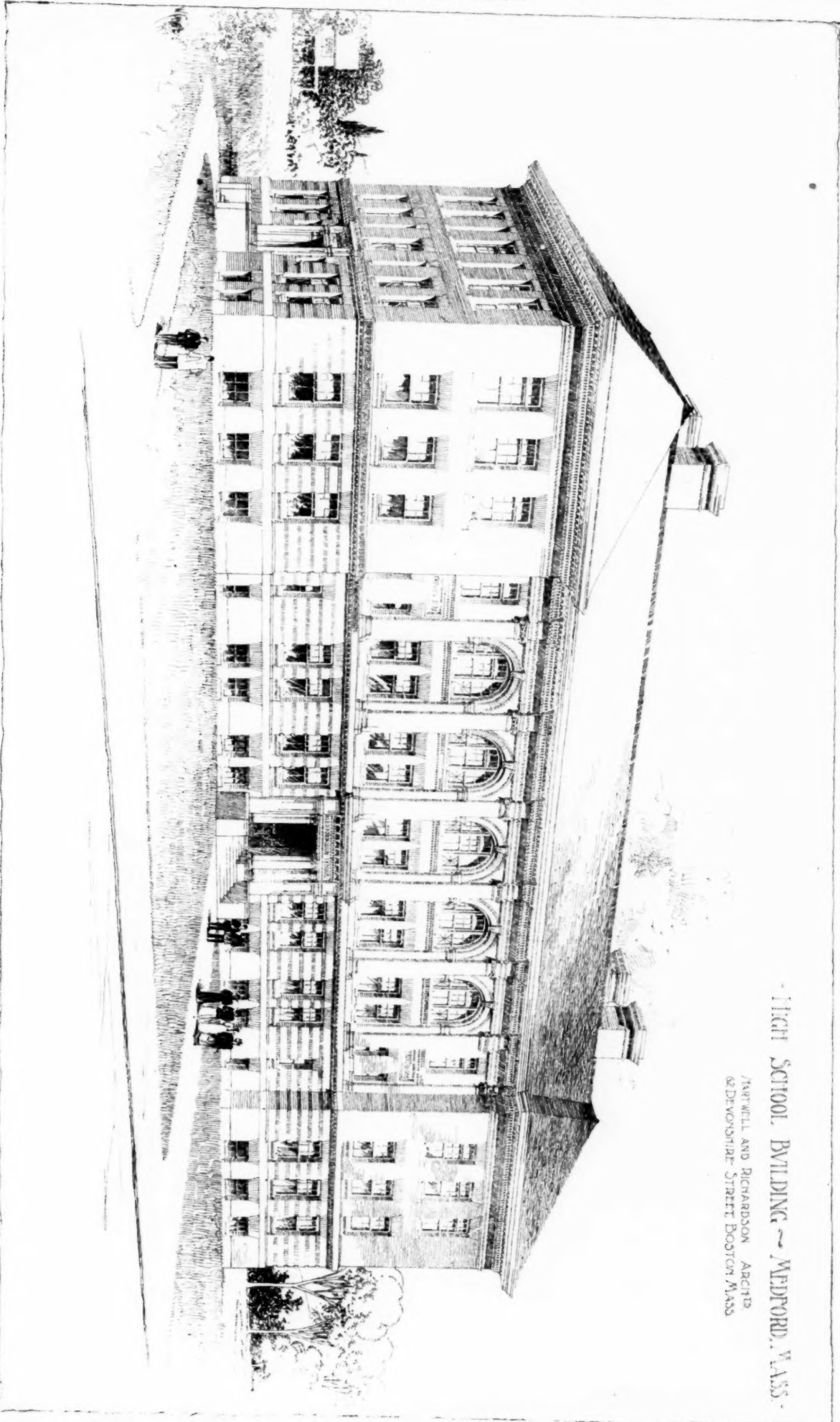
Copyright 1894 by THE AMERICAN ARCHITECT & BUILDING NEWS CO.



FRANCIS ARCHT

HIGH SCHOOL FITCHBURG MASS.

RELIQUARY FRAMING IN BOSTON



HIGH SCHOOL BUILDING - MEDFORD, MASS.

WATKINS AND RICHARDSON ARCHTS.
62 DEVONSHIRE STREET BOSTON MASS.