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NOTE.—Officers elected enter upon their term of office January 1, and continue until December 31, unless reelected, except in the case of Directors for two and three years.

New Argument in favor of the McKaig Bill.

On another page in this issue will be found a letter written by Mr. John M. Carrère, of New York, in answer to the inquiry of the Secretary of the Treasury, regarding Mr. Carrère's disposition should the office of Supervising Architect be offered to him. It is an interesting document in more ways than one, as it shows that one of the first architects in the United States has carefully inspected the condition and method of operation of that office, and after this careful inspection announces that no architect, no matter what his ability might be in any direction, could carry out its work satisfactorily, nor could he long sustain even his own good repute. This should at once cause every representative of the people to understand that a change in the present methods of erecting buildings by the government is most imperative. If in a business way a banker of equal standing with Mr. Carrère in his profession should pronounce a financial scheme as wasteful and inoperative, as the Supervising Architect's department is pronounced, it is certain that not one dollar would be expended until a radical change was made. It is almost beyond belief that legislators have not long ago, in special session if necessary, unanimously passed the McKaig bill. Not because, perhaps, that it is the very best possible solution to the problem, but because no change could further injure the interests of the people than does the present vogue every hour of its existence. In passing the Chicago postoffice bill it was understood by many of its supporters that the new building should be constructed according to the proposed law, and if this was not the intention of legislators, it were better to allow the old building to stand until it fell into ruins and the government rent some large office building for postal purposes, rather than spend \$4,000,000 in erecting a building upon which it is most certain the money would be worse than thrown away. Mr. Carrère has for almost a year given a large amount of his time to the work of securing for the country a better method of constructing buildings, and as a return for such services no honor is too great to confer upon him; but to offer him a clerkship under the Secretary of the Treasury at a salary equal to that he is probably paying more than one office man, and with an attached responsibility that in money aggregates millions a year, seems to us either a joke or an insult. It is fortunate, however, that the largest appropriation ever made for a government building comes at this time, for if the McKaig bill is not placed in operation the people will probably remember at whose door the fault lies. For since the refusal of Mr. Carrère no architect of ability will accept the office. The design prepared will meet with greater condemnation than that of the Detroit or Buffalo postoffices; and, lastly, the delays and in the completed building the inconveniences and costly mistakes will thoroughly convince the public of the utter folly of continuing the present system. It is probable, however, that the bill will shortly pass, as the promises made by the Secretary of the Treasury and the approval of the Committee on Buildings and Grounds cannot well be ignored without bringing those concerned under general condemnation.

MECHANICAL HEATING AND VENTILATION.

BY M. C. HUYETT.

SEVENTH PAPER.

SUPPLEMENTAL.—ANALYSIS OF ALL HEATING SYSTEMS.

DIRECT HEATING.

STOVES, high and low pressure steam, and hot-water systems, having the radiating surfaces in the room to be warmed, class as above; they warm only the air in the room and maintain the heat.

Direct heating and ventilation on a sanitary basis is an impossibility; the two factors are a unit, inseparable; separated, heating is possible, but heating and ventilation is impossible.

STOVES.

A stove ventilates to the extent of the volume of air admitted to the combustion chamber to aid combustion; when the draft is closed ventilation ceases.

In most rooms heated by stoves a comfortable and reasonably equable temperature cannot be maintained; cold drafts exist, caused by the downflow of cold air at windows, which travel at and near the floor line to the stove, where the cold air is taken up by the heat producing power and is again started on its round of travel toward the ceiling, and thence to the coldest side of the room.

GRATES.

A grate fire is bright and cheerful, but it is an expensive means of heating, at least fifty per cent of the heat-producing power of the fuel passes upward and out through the chimney to heat outdoors. An open fireplace, *with a fire in it*, ventilates to the extent of the quantity of air that can leak into the room; to that extent it is an air pump exhausting air from the room, and by the natural law of gravity and atmospheric equilibrium it is replaced by cold air, with the result that one side is "too warm," the other side "too cold," and the lower limbs are exposed to cold drafts. When an open fireplace has no fire in it, in cold weather cold air will fall into a room in volume equal to the leakage of warmer air outward, caused by the heavier cold air falling into and occupying a lower space than the warm air; this action will decrease in proportion as an equilibrium of temperature, as regards internal and external temperature, is restored. An open fireplace should have a closing front or a damper in the throat of the chimney. Make a room air-tight except a keyhole in the door, and the volume of ventilation produced by a grate fire can be measured by the quantity that can leak in through that hole.

HIGH AND LOW PRESSURE STEAM, AND HOT-WATER SYSTEMS.

High and low pressure steam, and hot-water systems, having the radiating surfaces in the room to be warmed, are direct systems, and on the basis of results produced they are synonymous terms.

In most such applications no attempt is made to secure ventilation; in some cases flues are provided for the outflow of air, but they DO NOT VENTILATE; no provision is made for the inflow of air, because to admit air that has not first been warmed is impracticable—it is never attempted.

If heat-force is applied to a ventilating shaft, the volume of ventilation will depend on the size and height of the shaft, amount of heat supplied and maintained, direction and velocity of external air currents, and the quantity of cold air that leaks into the room above sashes and doors; *no more air can be exhausted from a room than the quantity admitted.*

A comparison of the three gradations of the same system shows high pressure steam—at 25 pounds pressure—the internal temperature of the radiator will be 265° Fahr.; low pressure steam—5 pounds pressure—225°, and hot water at from 150° to 212° temperature; with equal radiating surfaces high pressure will heat a room to a required temperature quickest, low pressure next, and hot water requires the longest time. They will cool in reverse ratio.

The radiating surfaces required will be in proportion to the temperatures, hot water requiring the most, and high pressure steam the least quantity.

Heat is force developed by the combustion of fuel, and when transmitted to water changing it into steam is efficient and economical in proportion to pressure.

Advocates of hot-water systems CLAIM that they are more economical in the consumption of fuel than steam, but the claim

does not make a fact; a given quantity of fuel will produce a certain quantity of heat units, and a given quantity of heat is required to heat a given quantity of air from a given lower to a required higher temperature; the heat is distributed by the contact of air with the radiating surfaces; in the hot-water application that contact reduces the temperature of the water in proportion to the heat transmitted from the water to the air, and the water containing the remaining heat circulates back to the boiler where it absorbs additional heat and is again started on its mission of circulation and transmission.

The advocates of hot-water systems, and many others, have a notion that hot-water heating is healthful, and is preconceived, no doubt, by reason of the sense of feeling. Air so heated has a softness grateful to the sense of feeling and is produced by the accumulation of watery vapor exhaled through the pores of the skin and the result of respiration.

The average quantity of vapor of water exhaled from the lungs daily is 8,100 grains, and from the skin 13,500 grains insensible transpiration without exercise or rise in temperature; 8,100 plus 13,500 equals 21,600, which divided by 24 equals 900 grains per hour.

Now, to fix in mind quantity, assume an average congregation to be 500 persons; $500 \times 900 = 450,000$ grains = $78\frac{1}{2}$ pounds = 933-83 gallons of water per hour; this product is not eliminated by the contact of the air with the radiating surfaces—that can only be accomplished by condensation or displacement. By reason of the expanded condition of the air caused by heat the product is absorbed, increasing the relative quantity of vapor of water as compared with natural conditions; to the air thus contaminated by transpiration and respiration is added carbonic dioxide, which, taken together, form conditions weakening and predisposing the system for taking cold, and with exposure to cold drafts or to external air at a low temperature is a frightful source of bronchitis, pleurisy, pneumonia.

The condition is equivalent to a vapor bath, the *only difference is degree*. Occupants of rooms heated by direct systems are more predisposed to the diseases stated than are those who occupy rooms heated by indirect systems.

Dr. F. A. Adams, commenting on the prevalence of pneumonia among persons employed in steam-heated office buildings in an article contributed to the *Philadelphia Record*, rightly suggests that the cause is found in the fact that in the large majority of cases no provision is made for the ventilation of the rooms in such buildings. He says that many of these buildings are admirably constructed to keep out air, whether cold or hot, this very perfection contributing to their insalubrity. In these hermetically sealed office rooms that abound in business buildings the steam heats the atmosphere to a delightfully comfortable degree, the occupant breathes and rebreathes the air during zero days when an open window cannot be endured, the effect being to silently undermine his powers of resistance, so that when he goes forth, exchanging such tropical air for the keen breeze of unrestricted nature, it happens that, through some subtle change in his system which has robbed his lungs of their power of resistance, their capacity to endure the onset or transition is gone, and the subtle poison of unrenewed air does its deadly work in the form of pneumonia.*

The fact that a room is allowed to cool does not purify the air or remove the animal exhalations. It simply condenses the vapor impurities to be taken up by absorbents; at times the impurities are visible, or sensible to the touch, on non-absorbents such as walls and glass surfaces; after a time the product becomes putrid, but is warmed over time and again, adding to the health-depriving and death-dealing qualities of the air.

DIRECT INDIRECT HEATING.

Direct indirect heating consists of any application of heating apparatus with the radiating surfaces located in the room to be warmed, and, drawing a part of the air contact therewith from exterior to the room, it warms a portion of the interior air. Such applications are possible with high and low pressure steam and hot-water systems, but, by reason of long and slow circulations and consequent danger of freezing, it is seldom applied; *in most cases where the system has been applied it has been abandoned*. When it is applied, the danger of freezing is in proportion to temperature and quickness of circulation. When the system is applied, the volume of ventilation depends on the size and exposure of the

* "Heating and Ventilation."

radiating surfaces, temperature of the radiating surfaces, temperature of the exterior air, direction and velocity of external air currents, atmospheric pressure, size and height of ventilating shaft, and quantity of heat-force applied therein. It is impossible to plan or construct such a system to supply a volume of ventilation based on known requirements, constant and controllable.

An application of this kind means long circulations slow to act, subdivision of heat-force, lack of power to cumulate heat-force at the point of maximum exposure, largely increased radiating surface as compared with direct heating, and which adds proportionately to the cost of plant, and the ever-existing danger of freezing.

Practically, the system is obsolete.

INDIRECT HEATING.

Indirect heating consists of any system having the radiating surfaces exterior to the building or room to be warmed.

To treat the subject properly it must be subdivided into several parts, namely: high and low pressure steam and hot-water heating, furnace heating, and hot-blast or mechanical heating.

High and low pressure steam and hot-water heating practically has been covered by the statements of essential elements under the head of direct indirect heating; the only difference is that the indirect system takes its entire air supply from exterior to the building or room to be warmed, it heats none of the air over again. The radiating surfaces must be increased, which adds to the expense, and the liability of freezing is largely increased. For ventilation, it depends upon the same conditions which control in direct indirect heating; IT IS IMPOSSIBLE TO SECURE A VOLUME OF VENTILATION, BASED ON REQUIREMENTS, CONSTANT AND CONTROLLABLE.

FURNACE HEATING.

Furnace heating is an indirect system; when the apparatus is properly proportioned and applied, it will comfortably warm and sufficiently ventilate private residences.

In residences, the air space or "breathing space," in proportion to the number of occupants, is large, and, as a rule, the building or rooms are aired daily. If the radiating surface is sufficiently large to warm the rooms with economy in fuel consumed, it will have power to remove the volume of air required for ventilation when used in connection with residences.

When furnace heating, for such a purpose, is not satisfactory, it is caused by the "penny wise and pound foolish" policy of the owner of the building, or the force of competition, or the ignorance and disregard of the natural laws which govern heat and cold by the architect who made the plan, or the person who made the application; possibly condition is the result of two or more of the elements stated.

In ninety-nine cases out of one hundred the furnace is too small, the result is over-heating of the radiator, which warps the joints, so that they disperse the fuel gases with the heat product and burn the air to a degree that lessens its life-giving power. A furnace that is "too small" must be "forced," which, by reason of the short circuit for radiation, results in at least fifty per cent of the heat produced by the fuel being rushed up the chimney to "heat all outdoors."

The quantity of fuel consumed by a furnace will be in proportion to the air space to be warmed, area of glass exposures, number of occupants, equable diffusion of the heat product, area of the radiating surface, and volume of ventilation.

In furnace heating, the volume of ventilation depends upon the area, construction, and temperature of the radiating surface, size, length and protection of the hot-air delivery pipes, size and location of the fresh-air inlet, size and location of inlet openings from hot-air pipes, and their location with regard to exposures, size and location of foul-air outlets, external temperature, and direction and velocity of external air currents.

The first essential is to have a proper plan, provided by a competent heating and ventilating engineer, which shall provide for circulation to give diffusion and for ventilation. It is possible to control adverse conditions, and make them servants, but to do so definiteness of plan and common-sense applications must be made.

In furnace-heated houses, cold drafts prevail and are caused by faulty applications, the result of ignorance. Efficiency of apparatus, comfort for occupants and economy in fuel consumption CAN BE SECURED, but are matters of chance as long as anybody can sell a furnace and plan the application. It is safe to state

that the efficiency of most furnaces can be increased at least twenty-five per cent, perfect comfort for occupants be secured and fuel bills be reduced from twenty-five to fifty per cent.

The unwholesomeness of furnace-heated air is caused in many instances by the source from which the air supply is taken — frequently from a cellar, or near the ground line, or, possibly, from under a porch, and by contact of the air with over-heated radiating surfaces — a condition that does not exist provided the radiating surface is of ample size.

Furnace heating, when properly proportioned and scientifically applied, is simple, safe and economical for residences, but should be unqualifiedly condemned for use in connection with churches, schools and public buildings where numbers congregate.

Medical experts unanimously agree that the life-giving power of air is greatly lessened by contact with over-heated radiating surfaces; in furnace heating that danger is ever-existing.

In furnace heating "expansion of air" is part of an indefinite theory advanced by interested parties. That the reader may understand that factor:

At 32° Fahr., 1,000 cubic feet of air is accepted world-wide as a normal or true basis.

" 50° "	it equals.....	1,043 cubic feet.
" 70° "	"	1,089 "
" 75° "	"	1,099 "
" 90° "	"	1,132 "
" 100° "	"	1,152 "
" 200° "	"	1,354 "

150 degrees is a high average inflow temperature, and at that the expansion is about twenty-five per cent.

FUEL.

For furnaces — when the furnace is surface feed — the use of Connellsville crushed coke, furnace size, will result in a saving of twenty-five to forty per cent in fuel cost; it is free from cinders, does not make clinkers, and the ash requiring removal will be at least fifty per cent less than from anthracite coal. It requires no more care than coal and retains fire, from fall until spring, with ordinary care; it does not require as much air supply as coal, hence less heat product is forced up the chimney.

ARCHITECTURE IN INDIA.*

BY N. N. WASLEKAR, C.E., M.E. (LATE OF BOMBAY, INDIA, NOW OF CHICAGO).

PART II.

THE KAILAS HINDOO TEMPLE.

WE now come to the Kailas Hindoo temple at Ellora. It is, gentlemen, a very remarkable specimen of a Hindoo temple, now dated at 800 A. D., and is also very much admired by all, and even by European travelers who cannot restrain their admiration when they behold this relic of antiquity. I shall quote a Frenchman's sentiments, since translated into good English, later on. It stands there admired after a lapse of 1,100 years. It at once impresses one with awe; the boldness of the undertaking, the felicity of the execution, the beauty of the plan, the richness of its details and the variety of its ornaments are simply marvelous. It is not executed as other caves and excavations at Ellora or elsewhere, or as the one I have just mentioned — Elephanta — the whole forming a part and parcel of the mountain it is carved from; but this Kailas temple is hewn out of a living rock, black and gray basalt and quartz, and completely isolated from it! And although the whole mass of this structure is one unjointed block, it appears to the eyes of the beholder as if it was never hewn out, but has the appearance of a structure built stone by stone, the same as other buildings are; there lies the grandeur of this structure, and how marvelously this is done can only be realized when seen; the structure, therefore, comes under a distinct heading called *Mono-lithic*. It is composed of three parts, and each is remarkable for its design in itself: these are, the pavilion at the entrance; the Chapel of Nandi or Bull in the center, the sign of its being a temple of Siva; and the temple itself. The pavilion has two wings forming a façade, and the portico lies toward the mountain slope. The rock out of which it has been cut is about fifty feet distant on this side and toward the two sides about one hundred feet. The center has a story with a number of rooms down below, and this opens into a space where, no doubt, musical and solemn festivities must have been held. This forms an indispensable adjunct to any Hindoo temple.

Just as a Mohammedan mosque has its minaret, so a Hindoo temple has its *nowbutkhana*, or a place allotted to musicians. The passage to go to the top story is from the two side rooms. This story brings us to a bridge. We can then have a glimpse of the inner court, and, by a flight of steps, we enter the Chapel of Nandi. This is in the form of a square, the sides literally covered with sculptures, and, from a door exactly opposite the one we

* Paper read before the Illinois Chapter of the American Institute of Architects at Chicago, on November 19, 1894.

entered, we find ourselves on another stone bridge, and then we have the view of the gorgeous temple of Siva itself, about one hundred feet high. We go up a few steps and come to a peristyle surmounted with stone balustrades. From here we again go up a few steps, and enter a door guarded by gigantic statues, similar to those I have described of Elephanta, and we enter the temple, which then looks about sixty feet high. The whole of this temple rests on stone elephants only. These are in every possible attitude, feeding, fighting, tearing each other to pieces, and executed with considerable skill, but all seeming to support the temple above. We can distinctly see a vein of quartz on the back of one of these elephants. The ceiling is supported by two rows of pillars and the middle path takes us by a few steps to the sanctuary, *sanctum sanctorum*, as is the case in all the Hindoo temples where Sheva's *linga* is kept. There are magnificent sculptures intervening and the ceiling is covered with stucco, called in native language, *Churna*, and you will be astonished to hear, but nevertheless it is a fact, that it still retains the traces of paintings, and neither time nor the ravages of Emperor Aurungzebe could efface them. At the rear of the sanctuary are two doors. They lead you to a terrace which encircles it with five or six chapels ornamented by Hindoo artists.

I forgot to mention to you that before we come to the first bridge there is a bas relief representing the goddess Parvati seated on the "sacred" lotus flower as if floating on the water. On her two sides rise two elephants who empty water on the head of the divinity, and lower down are other two elephants engaged to fill the pitchers of those above, and to the right and left of the goddess are two statues, her companions; and at its end are seen three pillars destroyed by the orders of Aurungzebe who thought that by so doing the whole Hindoo structure would crumble to pieces, but he was disappointed. It stands there this day the wonder of the world! The French traveler, Monsieur Langlois, M. In., Pre., who visited the temple one hundred and twenty-five years ago, thus describes this structure (rather the English translation by Mr. Arundale runs thus):

"What can it be which thus strikes the mind and fills it with ecstasy? It is not the height of the monument, its forms are heavy and flat; it is not the extreme regularity of the lines, the unevenness of the ground has in some instances done violence to the principles of art; it is not the variety of the design, as everything affects square figure; it is not the number of ornaments, for they are too profusely lavished. But it is that the vast ensemble of the performance bears witness to the power of man and gives birth to a just feeling of pride in the spectator of these almost superhuman efforts. He applauds the genius of the artist who commanded the stony mass to square itself into chapels and pillars, to emboss itself into sculptures, to part asunder and open into spacious halls and porticos. The rock was obedient to his word and the sovereign intelligence of man shines in every part, whatever imperfections we may discover on criticising it as a work of art. The uniformity of the lines is calculated to diffuse a religious calm over the mind; the variety of the ornaments distracts and agitates it. If the low ceilings do not raise it to its God, it would seem that in weighing upon it they make the presence of the Deity more acutely sensible. A single being under multifarious forms is the grand mystery of the Indian religion, and this mystery in a manner is exemplified by this monument, which combines with its systematic unity so great a multiplicity of details. Whatever the thoughts of its author may have been, the hardihood of the undertaking, the skill shown in the arrangement, the spirit of its execution, surprise, delight and enchant the beholder." Such has been the effect produced on European travelers that they all agree in saying, "*It must be seen to be appreciated.*"

Colonel Fitzclarence, in his "Route Across India Through Egypt," says: "In what an original and expanded mind must the idea first have been conceived of hollowing out and decorating by the hand of man a very '*rib of the world*,' spurning the detail of piecemeal building, and then taking advantage of the primeval materials placed by nature on the spot, and wresting from her very bowels a place of worship! Some of the sculptured decorations and the taste in the ornaments would do credit to the best period of the Grecian school."

THE TAJ OF AGRA.

Let us quote Milton:

"From the destined walls
Of Cambalu, seat of Cathaian can,
And Samarchand of Oxus, Temir's throne
To Pagan of Sindan kings; and thence
To Agra and Lahor of great mogul,
Down to the golden Chersonese."

THE DELHI PALACE AND THE TAJ MAHAL.

We now approach that wonder of wonders of the world, the Taj Mahal of Agra, near Delhi, the only beautiful remnant now left of all edifices built by Emperor Shah Jehan; but before I begin to describe this wonderful piece of art, I will draw your attention to another magnificent edifice built by the same emperor, the Delhi Palace, which existed till the mutiny of 1857, but the palace proper now no longer exists. Although it is since demolished, it deserves a passing notice when I tell you that the equal of such a palace never existed, and perhaps never will exist. True, the Taj Mahal, from its very situation and surroundings, is more picturesque and historically more interesting, but the Palace of Delhi was built of *one uniform plan*. In that of Taj more taste is shown, being the production of later growth, for

Shah Jehan himself, gentlemen, never saw it finished, as he was put in prison by his own son, Aurungzebe, while his devoted daughter, spurning royalty and royal pleasures, tended him in prison, and the cherished desire of her heart since was that she be buried near the Taj but not in it, and her unpretentious tomb can be seen close by at this day in the outer yard of the Taj.

The Palace at Delhi was situated near the Junna and spread over an area of sixteen hundred by thirty-two hundred feet, and was encircled by a grand wall of red sandstone, which can be seen now, relieved at short intervals by towers surmounted by seats. Chandi Chowk, of Delhi, is a wide street, a mile long, and the principal entrance to the palace is just in its middle. Two rows of trees are planted on each side of this noble thoroughfare, which is now the business quarter of the town of Delhi. When you enter the portal mentioned above, you find yourself beneath a vaulted hall with its sides double storied and extending probably four hundred feet, and it has the appearance of a huge Gothic cathedral, the noblest entrance belonging to any known existing palace anywhere. This opens into a courtyard, also of the same length; on each side of it is a bazar, and this too is double storied, but not vaulted as before. One side of it leads to what is called the Delhi gate and the other to the garden. At the entrance in front is a *nowbutkhana* or music hall, like the one described at Kailas; in this case it is always the accompaniment of a palace to keep everyone amused, and in the other, to gather together and amuse the devotees. Beneath this the visitor enters the second or great court, which is much larger and about six hundred feet long, and in the center of this court is the *dewani adalat* or great audience hall, and in the center of this hall is a highly ornamental niche, in which on a marble slab facing the entrance was placed the celebrated Peacock Throne of the Delhi emperors, the most gorgeous of its kind, set with jasper, diamonds, pearls and emeralds, and which history tells us was robbed by Nadir Shah, of Persia, when he invaded India. Behind this hall was the garden, and in the midst of that garden was the *Rang Mahal* or the palatial bath, and other apartments. A range of buildings extended sixteen hundred feet beyond, and at its farthest end near the river was the celebrated *Dewani Khas* or the private audience hall and palace proper, the most exquisite and highly ornamental of all Shah Jehan's buildings. In the center of this hall was the inscription, "If there is a heaven on earth, it is this, it is this." Then there were fountains, pavilions, zenana, close by this palace. A detailed description and its inner arrangements no one but the architect who designed and built it knows, and the British never thought of leaving a plan of it to posterity. All that remains now is the wall, the entrance hall, the *nowbutkhana* and the *Rang Mahal*, now used as a messroom, and the rest as British barracks. The guns of the then palace are now rotting in the yard. We now come to the *Taj Mahal*.

THE TAJ MAHAL.

As I have said before, it is the only magnificent and elegant edifice in India which at once soothes the eye of the beholder and the only *complete* remnant left to the posterity of all Shah Jehan's noble structures. There is no record to tell us what it cost, but it is known it took twenty-two years to build it, and was finished in 1647. Perhaps no other building in India is so often drawn and photographed as this, but with all this it is simply impossible to convey the slightest idea of its grandeur and magnificence to those who have not seen it. It is because of its extreme delicacy and beauty of material employed in its construction, white marble throughout, as also of the extreme complexity of its design that it is held in such a high estimation. The polished white marble platform, 313 feet long and wide, or 313 feet square, with the four tall minarets about 135 feet high at its four corners, is a work of art in itself. The archway of the mausoleum in the center, on which the whole Koran is inscribed, is likewise a work of art in itself. Besides this are two *wings*, one of which is a marble mosque, and is a work of art as well. This group of buildings forms one side of the garden court, about nine hundred feet square, and beyond this is an outer court of half the depth. This has three gates and the central gateway is the largest gateway, a worthy accompaniment of the Taj. It is beautiful in itself, of exquisite design and workmanship. The courts are divided in sixteen sections from gate to platform. The long rows of cypresses which line the marble paths, now of venerable age, surrounded by evergreen foliage, lend a charm to the whole. Each of the main avenues has a canal running through its center; interspersed at intervals are marble fountains, twenty-three in number, and each leads the beholder to some architectural object. The combination of all these beauties, and the perfect manner in which they are harmonized, give to the grand mausoleum a rare charm, and which never fails to impress one with its architectural beauty, whether an architect or not.

I have already referred to the marble platform. It is raised about eighteen feet high, faced with marble and approached by a flight of marble steps, in the center of which is the mausoleum itself, about 185 to 190 feet square, with the four corners cut off about thirty-five feet, perhaps not only to prevent the harshness that would come from the rectangles, but to give the opportunity for the great niches, one above the other, when the shadows play hide and seek the whole day. In the center of this mausoleum is the principal central dome, about sixty feet in diameter and eighty feet high, and under this central dome is an inclosure, formed by a screen of beautifully carved trelliswork of polished white marble, and of most exquisite design, which shows at a glance the perfection of Indian art. Within this, in the center, lies the tomb of

Shah Jehan's beloved wife, Mumtaz-in-Mahal, for whose memory the devoted emperor built the magnificent tomb. His tomb lies by her side. The bodies do not lie in the marble tombs. They lie in a vault, beneath plainer tombstones, flush with the surface of the ground and placed exactly underneath the aforesaid marble tombs. Inside of the tomb are small domical apartments of two stories at each angle of the building, connected by various passages and halls. The light to the central hall is admitted only by double screens of polished white marble trelliswork of most exquisite design, one in the outer and one in the inner face of the walls. In a climate like Chicago, it would be completely dark inside, but in India, in a structure wholly constructed of pure polished white marble, this was essentially required to keep away the glare which otherwise would have been intolerable. As it is, no words can adequately express the chastened beauty of that central chamber seen in the soft gloom of the subdued light that reaches it through the distant and half-closed openings that surround it. One feels here that he is in a place where the voice should only whisper and the feet should take slow and gentle steps. If used for pleasure parties, it would be the coolest and most pleasant spot in India; but now that it is sacred to the memory of the dead, it is the most graceful and impressive of the sepulchers of the whole world! I must not forget the *inlaying*. The inlaying with precious stones is a great characteristic of the Mogul architecture. All the spandrels of the Taj, all the angles and more important architectural details are heightened by being inlaid with jasper, agate, bloodstone, etc. These are to be seen here in wreaths, scrolls and frets, most exquisitely designed, and present a beautiful color, especially when in this case they are relieved in pure white marble, and the complete decoration so presented stands unequalled. Among the rich reliefs vine and lotus are the most prominent. The tombs themselves are lavishly ornamented this way, as also the screen that surrounds them. The judgment with which this is distributed is remarkable, and gives to the beholder an adequate idea of India's architects of that period, and, as it would not be out of place here, I shall close by quoting Dr. Hurst's views about the workmanship, etc. He says:

"If the whole building is of stainless marble and one can find no wood or brass, there must be a coldness to the picture. The way to get rid of this was half performed when the sharp angles were cut off. An abrupt line can nowhere be found. Whenever one supposes he would come around to something harsh, he is disappointed. The very spot where the abruptness would begin has been chosen to prevent it. There is a curve, a fanciful turn in another direction, a willowy drooping, perhaps—anything to take away the keen edge of monotony and coldness. Yet even a new turn to things is hardly enough. This would go far; but there must be something more, and richer, to ward off all possible danger. Here is where the coloring comes in—the letting of the choicest foreign stones into this bed of purest marble. You see this on all the outer walls of the Taj. These stones are thrust into the exterior walls with such profusion, such a wealth and waste, that one wonders why the display. But when you come to look at them as a whole, and see the design, or as ladies would say, the 'pattern,' there is not one too many. You could not spare a single bud from a rose, or a leaf from a lily. These outer mosaics are all in keeping with the luxuriance of the outlying nature. They fall in with the palm, the fig, the cypress and the peepul in the garden. They are like those great roses which now grow all about the spot where the body of the empress rested through the years while her mausoleum was being built. But let us go within, where everything grows richer. The lattice of marble which as a wall surrounds the two ornamental tombs would be as chill as frostwork, were it not for the brightening of its surface by the letting in of this world of botanic stones. Nothing known to the flora of Ceylon or India seems to have been forgotten. Those rarer plants which Baron Van Reede found out and put into the twelve great folio volumes of his '*Hortus Indus Malabaricus*' are here reproduced in the stones of corresponding colors. Look as closely as one may, he can hardly tell where the lines between the stones are, so minute is the workmanship, so deft the hand, all up the walls, in all the recesses, over all the doors, away up the posts of the inclosing screen of marble, over the archway by which one enters the tomb, and then all along the tombs, from top to bottom, there run these luxuriant mosaics, until one is fairly lost in the very glare of their splendor. The stones are not overminute, like the Roman mosaic, nor are they too large, like the Florentine. They are midway, and as to color they simply reproduce faithfully the wild irregularity of this wanton Indian nature. There is no sparing of labor. If a violet needed ten stones to give it the highest effect, the ten would be there! My friends Professor Foote and the Rev. Mr. Fox and myself counted in one rose and its stem thirty-one separate precious stones. Here was a shading which was marvelous. It seems that every individual stone had shading, so accurate was the selection and so skillful the placing. But no; the variety of color came from new stones. Each stone had a color of its own and to produce another one, there was a new stone let in. One gets weary in a short time and it does not answer well to hurry or to try to see much at a time."

With the Junna in front, and the garden with its fountains and gates in the rear, with its own purity of material and grace, the Taj may challenge comparison with any manual creation of the same sort of the whole world. Its beauty is unsurpassed, and well may every visitor, when once within its walls, exclaim "must be seen to be appreciated."

NOTES FROM OUR FRENCH EXCHANGES.*

THE ART INDUSTRIES AND PROFESSIONAL SCHOOLS OF THE UNITED STATES.

THE New World is noted for the rapid advances made in practical applications of recent scientific discoveries, but M. Victor Champier, the editor of the *Revue des Arts Decoratifs*, has just shown us that country in an entirely new light.

In a very extended and remarkably illustrated lecture at the Conservatory of Arts and Sciences, he tells us that it is marching with giant strides upon another road even more interesting to us, that of the industrial arts. He shows to us an entirely unknown America, artistic, tasteful and poetical, which he says will soon take the lead and leave far in the rear the Old World with its old ideas and notions.

Without entirely agreeing with the ideas of the speaker, it certainly is interesting to follow his theories, which cannot but be of interest and instruction.

M. Champier commenced by speaking of American architecture, of which he has just written a history. After the War of the Revolution, the nation which had the most influence upon that people was France, the country which had most contributed to aid in their independence. Two Frenchmen, Lanfranc and Allays, carried to them our architecture of that time; Lanfranc made the plans for the city of Washington and Allays built the capitol. For a long time the style of Louis XVI. ruled supreme. Everything was built according to the French fashion of the end of the eighteenth century, customhouses, postoffices, mint, etc. It was the official art of the government. With this was necessarily implanted the classic virus. Happily, however, these so-called savages soon perceived the awful disease they would contract, and quickly deposed this imported architecture, so that now one only finds examples of this Louis XVI. architecture at Washington, Boston and New York, which are now shown as archaeological curiosities. "Competition" has been the watchword adopted, and from it has resulted an odd and awkward architecture, perhaps, but still one containing the germs of a powerful originality.

M. Champier divides the new American architecture into two classes, one comprising the buildings in what they call Romanesque, the other in the Italian Renaissance. In a long series of magic lantern views he shows their great buildings and their immense hotels. Then their small country houses, in which the inhabitants of the great cities love to take refuge when they leave their commercial establishments or the vast office buildings, are next brought before us. Having the especial aim, however, to study the industrial arts of the United States, the lecturer prefers rather to show us the interiors of these great and these small houses, and the series of photographs thrown upon the screen was truly of the highest interest. What harmony, what original and unexpected comfort, and what a luxury of good taste in all these interiors! After having visited with the lecturer all these halls, drawing-rooms and libraries, tinted and decorated, covered with rugs of all kinds, furnished with rare pieces of china, cabinets, and rare and choice objects of art, one can comprehend the disgust of a Frenchman returning from Chicago, when he sees again our apartments, with bare walls, commonplace curtains and uncovered floors.

After the interiors of the houses Mr. Champier spoke of the interior of the railroad cars—those moving palaces, where one finds dining-rooms, drawing-rooms, bathrooms, restaurant and promenades. These views ought to stir up in the minds of the stockholders of our own railroads no very high opinion of the directors of those roads, since our first class coaches bear about the same relation to those of the American, as do the old stage coaches of other days to the modern railroad carriage.

After the railroads, the lecturer entered into the very heart of his subject, and in turn reviewed the art industries, bronzes, wrought iron, silversmiths' work, pottery, furniture, stained glass and woven goods. As for bronze, the Americans are yet in the infancy of that art; they have gas fixtures, lamps, etc., in most marvelous designs, which they call "oriental," "empire," etc.; but even now, as in architecture, they commence to leave behind the models of the old world, and inspired by the vegetable forms of their own country, manufacture fixtures with garlands, volutes, bouquets, etc., which are the buds of an art that will soon be in full power.

In wrought iron, art is in full headway. Their elevator cars and inclosures, as well as stairs and metal and glass doors, all made by native workmen, are remarkable for new combinations full of charm and delicacy. In the same way their silver work, while showing traits of French, Japanese and oriental forms, yet will soon, in the hands of their skilled artists, become a national style in the true sense of the word. Especially the works of Mr. Tiffany, which he showed, evince a purity of form and taste which makes them all works of high art. As for their pottery, the lecturer showed less praise, still he thought that the tenacity of the Yankees would finally bring them success. Already their adaptations of tile and faience into certain parts of architecture have been remarkably successful; especially he cited their tile mantels, bar rooms and soda fountains as showing great progress. The principal reason for the success of this branch, he attributes to the fact that it is almost entirely in the hands of the women, who, permeated with studies of local flora in the schools, decorate, with exquisite taste, tile, panels, plates and china. What astonishing

* Translated and arranged for THE INLAND ARCHITECT by W. A. Otis.

results the introduction of women in art has accomplished for America!

The furniture industry in America is at present extremely prosperous and the importation of Louis XIV. chairs, Louis XV. dressing cases and Louis XVI. bureaux is gradually disappearing. Here also originality is gaining strength and the designs are new—*extremely* new, some of them. Mr. Champier is exceedingly enthusiastic about the rocking chairs. But as for the beds folding up into wardrobes with mirrors in front, and those pieces of furniture that can be transformed into anything and everything in a moment, they really give us chills down the back. They may be very utilitarian, but they are exceedingly disagreeable. However, let us not despair, it may later change.

The speaker finished his lecture with a special glance at the technical schools, the great inspiration of all these novelties. Space is lacking to follow his remarks in detail, but what he especially brought out was the enormous progress made by the schools, and that they are all the result of private initiative without any government support.

In conclusion, let us then say, with the lecturer, that the national genius of a people is developed by liberty and by the study of nature, which alone is the true source of art. In America everything is based upon the application of this principle and it is because of it that the art industries have succeeded so remarkably. Let us French accept the lesson that our neighbors are giving us, and profit by it. To remake the Gothic, the Renaissance, Louis XIV., etc., is to work in a circle which soon becomes bad, because, as Michelet says, "To imitate is to die, to create is to live."—*La Semaine des Constructeurs*.

THE PRINCIPLES OF ANTIQUE DRAPERY.

A long and interesting paper upon the antique drapery and its application in the art of that period, was recently read by a member of the Academy of Fine Arts, at Paris. In this essay are clearly brought out numerous points not generally fully understood.

The principles of Greek drapery are in direct opposition to the "fitted" costume of the moderns in that these latter are not formed by the natural folding and draping of the material itself. When a piece of cloth had been woven with all the qualities of suppleness, brilliancy, fineness and perfection that the women's hands had been able to give it, the Greek usage forbade any methods which would detract from this chef d'œuvre of domestic industry by cutting out or setting in any other pieces of cloth. This work of art was accepted without change, just as the workmen had given it to the world. The form which seemed to be wanting would be given it by the human body which it should cover.

Applying this simple and natural principle of a rectangular piece of material as it comes from the loom, the Greeks deduced the consequences with as much sculptural feeling as common sense, and from it brought forth numberless combinations and unexpected variety.

All that was necessary for them was to modify the dimensions or proportions of this rectangular piece, to double it, to fold it, or to fasten it with ingenious art by means of scarf or ornamental pins. The points thus rendered more fixed, produced different adjustments which satisfied all the necessities of life, as well as good taste, and at the same time could be modified according to conditions, suiting itself either to the activity of manly sports or to the refinements of feminine life.

It is with these astonishingly simple elements, coming from a primitive and almost savage life, that the Greeks have formed their costume, and that they have made one of the most beautiful accompaniments, in fact, a veritable work of art, for the human form. The drapery, as they understood it and used it, served not only as decoration to the figure, but accentuated proportion and expression, those two things which are the essence of beauty.

Our modern clothing, formed of pieces cut out and sewed together, represents a system entirely the opposite of the Greek, and is one derived from the almost general usage of the ancient Gauls, Germans and Scythians.

Fashion, constantly changing, has at times brought forth some charming forms and some beauties of color, but in comparing the esthetic qualities of the two systems, the artist cannot fail to accord the superiority to the free and expressive arrangement of the Greek drapery.—*L'Architecture*.

THE HIGH BUILDINGS OF THE UNITED STATES.

At the conclusion of a long series of articles upon the high buildings of the United States, recently published in the *Semaine des Constructeurs*. The author summarizes as follows: As regards the treatment of the exterior in these buildings there is a great variety, but they may possibly be crudely divided into three classes: Buildings purely utilitarian, where one sees only the four walls pierced with holes, having artistic qualities about equal to a checkerboard; buildings where the artistic effect grows principally from the applied decorations; and thirdly, buildings where the effect is sought after in a superabundance of fantastic detail.

The second class is unquestionably the preferable, and it will be acknowledged that in the best examples the American architect has most skillfully struggled with the almost insurmountable difficulty with which he here finds himself brought face to face, namely, the exaggeration of height. His process in this struggle is ordinarily to divide the height into three parts, which for convenience may be roughly called the base, the body and the entablature. The

two lines of division are marked by strongly accentuated band courses or cornices, while the largest of the divisions, the body, is divided by pillars, which strongly accentuate a perpendicular division into bays of two or three windows each; while the bays themselves are usually crowned by semi-circular arches, giving the effect of a greatly elongated arcade.

In the base the entrance way, usually extending through two or three stories, is often treated in a striking manner. As to the uppermost division, here called the entablature for lack of a better name, it contrasts with the body by a different grouping of the windows and bays while terminating with a monumental sized cornice in terra cotta.

If the roof is not flat, gables, towers, dormers, etc., break most decidedly the monotony of the lines.

In the young cities of the West, like Milwaukee, Minneapolis, Tacoma, etc., where extraordinary flights of architecture are permitted, frequently a central portion rises three or four stories above the remainder like a huge belfry.

To enter into the details of forms and decoration is not here possible, it would be as easy to undertake and discuss the subject of infinity. Let us confine ourselves to the general remark that the Americans, like the Europeans, are fond of speaking of their buildings as the Italian Renaissance, the Byzantine, the Romanesque, etc., but with them it is absolutely nothing but an affair of words. The whole spirit of the American architect seems to be opposed to slavishly copying one of the styles of the past, even when it recalls it more or less. The American does not copy—he grabs, right, left, everywhere, and throws his booty into the crucible, where the commonplace ingredients are changed into something new, something belonging to himself.

This process is not always a success, in fact it frequently happens that it is only ridiculous, but occasionally, when it is good, it is not so by halves.

WOMEN AT THE SCHOOL OF FINE ARTS.

The recent vote on the fine arts appropriation in the Chamber of Deputies gave rise to a lively discussion, particularly caused by an amendment to materially increase this appropriation; and strange sight! this increase was opposed by the government.

The phenomenon is, however, explained when one is told that the amendment also had for object to open after next year the Ecole des Beaux Arts to women students. The amendment was supported with great ability by the mover, who showed the exclusion of women was contrary to the interests of art and the French traditions. And he laid especial stress upon the point that a school which received free of charge all sorts of foreign male students refused to admit the French women.

The minister in replying said that what was perfectly a satisfactory arrangement among the English or Slavonic races would have serious objections when applied to the race of a temperament like the French. It seemed to him that the artistic tendencies of women could be directed in a more satisfactory, more useful and more practical channel, both for themselves and for men, not in the direction of the so-called Fine Arts, but rather toward Decorative Art, which has not yet attained in France all the development desirable.

In a word "M. le Ministre" finds that we are overwhelmed with too many sculptors and painters, and fears that we shall soon be in turn overwhelmed by too many "painteresses" and "sculptoresses," and he prefers to see the number of working decorators and artistic designers increased.

Instruction in decorative art should no doubt be open to women, but is that any reason why the Ecole des Beaux Arts should be closed to them?—*La Semaine des Constructeurs*.

J. M. CARRERE'S LETTER TO SECRETARY CARLISLE.

THE following interesting correspondence has recently passed between Mr. John M. Carrere and the Secretary of the Treasury, supplemented by a letter from a number of well-known architects:

January 28, 1895.

Hon. John G. Carlisle, Secretary of the Treasury, Washington, D. C.:

SIR,—As promised to you in our interview at the Treasury Department, on January 24, I have been carefully considering the possibility of accepting the position of Supervising Architect, understanding that you are willing to offer the appointment to me on the terms of my letters and memorandum to you and to Mr. Price, and my several interviews with you and Assistant Secretary Curtis.

Having had the question of public architecture at heart for several years, and having devoted much of my time to promoting the interests of the "McKag" bill, when called upon by a large number of the leading men in my profession to accept this office, and also understanding that your department was willing to tender the office to me at their request, although I was in no sense an applicant, I felt obliged as a matter of duty to my profession, laying aside all questions of personal sacrifice, to take the subject under earnest consideration.

I have had every opportunity, owing to your courtesy, to fully investigate the office, and I have been trying for the last two weeks to convince myself that under certain conditions, which I asked for and which I understand you are prepared to grant, I might accept the office with a fair chance of accomplishing the purpose which both you and the profession have in mind, namely, to raise the artistic standard of our public architecture.

In my anxiety to respond promptly and fully to the confidence which has been placed in me, I have at times thought that the task might at least be attempted, and have stood ready to accept the office. After further reflection, and after having fully explained the situation to several leading architects of the country, and after consultation with them, I am now convinced that if I should accept the office and meet even with partial success, I would be defeating the true object which both you and the profession have in view. To our minds the undertaking is a physical impossibility and must fail.

It is therefore with the greatest regret, and with a true appreciation of the efforts which you, personally, have made to help this branch of the service,

that I find myself compelled to advise you that I will not be able to accept the office, if tendered to me.

In explanation: The work of this department, irrespective of its present organization, or of any improvement that can be made in the same, consists of a staff of about 120 employees, their duties comprising:

First. A legal department, having charge of all contracts, purchases of sites, deeds, interpretation of laws, classification of the same, and other legal matters relating to this department.

Second. An extensive system of accounting, burdened by the vast number of small accounts resulting from the maintenance and repairs of buildings, and needing a very great amount of detail.

Third. The technical or drafting division, in which all computations of quantities, and cost of work, are made; the auditing of all accounts; all original designs and working drawings; specifications and calculations; most comprising both the artistic and the practical work, and involving sanitary heating, elevator, lighting, ventilating and other plants of a purely technical nature. Also the superintendence, supervision and inspection of all these works.

The work itself is scattered over the entire United States, and is absolutely beyond the reach of any one man excepting by proxy, and practically beyond his control. The number of buildings now in course of construction—some of them well advanced, others hardly started, and many of them untouched as yet, is 115; ranging from marine hospitals, the appropriation for which is only \$2,000, but involving much troublesome detail and waste of time, up to buildings like the San Francisco postoffice, the appropriation for which is about \$2,000,000; the Buffalo postoffice, \$1,500,000; the Kansas City postoffice, \$1,000,000; the New York appraiser's stores, \$2,000,000; these being the most important buildings, the others ranging all the way from \$500,000 to \$50,000 and under. In addition to these, eight buildings are about to be appropriated for, ranging from \$100,000 up to \$4,000,000 for the Chicago postoffice; the latter to be constructed within a period which I understand is not to exceed two years.

In addition to the above, Congress appropriated about \$200,000 a year for the maintenance of over two hundred and fifty buildings. Most of this money is spent in small amounts, ranging from \$50 upward, for repairs, etc., involving infinite trouble and drudgery and demanding much time and attention.

The present condition of the work is in such a disorganized state, that it would take the best part of any man's time to organize the work itself, irrespective of the department. The accumulated waste of money is beyond belief. The department, in the main, seems to be well organized though cumbersome. The personnel is efficient in a measure, but ill-adapted to the class of work which the country expects of our government, and absolutely deficient in artistic worth. The tenure of the office is controlled either by civil service rules or by political influence, and with this state of affairs the office of Supervising Architect, legally, is merely that of a clerk of the department, appointed by the Secretary of the Treasury, and though his responsibility is supposed to cover all of the above work, his authority is absolutely dependent on the Secretary of the Treasury, and much of it is divided with heads of departments.

Any man, no matter what his ability or his power for work and concentration, and no matter what conditions might be offered to him, even those of absolute responsibility with absolute authority, would have to devote himself either to managing the office, allowing the designing to be done by draftsmen, as at present, or to designing, allowing the office to be managed by heads of departments, as at present, and no man of ability, with a reputation to lose as an artist, would be presumptuous enough to accept the office, even if his duties were to be confined to the designing irrespective of any other work or responsibility, because it is absolutely beyond the grasp and the ability of any one man who has ever lived to imprint his personality upon this much work, and much less to design it and study it himself.

The time must come, and I believe has come, when this work should be divided and intrusted to the best architects in this country, as suggested by the bill proposed by the architects, and known as the "McKaig" bill, leaving the administrative portion of the work only in the hands of the government, where it belongs.

My examination of the office and its possibilities convinces me that the underlying principle upon which it is based is radically wrong, and that it is beyond the power of any one man to make a success of it. The system, not the man, should be changed. Yours respectfully,

JOHN M. CARRERE.

John M. Carrere, Esq.,

WASHINGTON, D. C., January 29, 1895.

DEAR SIR:—We have read your letter of this date to the Honorable Secretary of the Treasury with much interest.

We united to request your appointment to the office of Supervising Architect of the Treasury Department, in the firm belief that you might be able in that position to advance the object which we have at heart, namely, the improvement of the federal architecture, both in its artistic character and in its economic construction.

Your statement of the amount of work in the office awaiting design alone, shows that it would be a physical impossibility for any man to accomplish any good result, and we believe, therefore, that you are wise in declining to consider the appointment.

We remain, yours very truly,

GEORGE B. POST,
C. F. MCKIM,
H. J. HARDENBURGH,
R. M. HUNT,

BRUCE PRICE,
WARREN R. BRIGGS,
JOHN DU FAIS,
THOMAS HASTINGS.

GENERAL BUILDING STATISTICS FOR 1893 AND 1894.

THE following table of building statistics has been prepared with a view to contrast the year just closed with the previous year as regards building activity. Unfortunately the plan of keeping an accurate record of new buildings does not prevail in all cities, and consequently from over fifty inquiries sent out only about half that number of replies were received, and these in some instances were incomplete. Nineteen cities sent complete returns covering the number and cost of all buildings erected during 1893 and 1894, and as these cities embrace a territory extending from Pennsylvania to Utah, and from Minnesota to Tennessee, they may be considered fairly representative.

A summary of totals from all the cities having complete figures shows a falling off in number of buildings erected from 24,186 in 1893 to 21,079 in 1894; and in cost of the same from \$54,661,256 in 1893 to \$44,840,311 in 1894. In other words, the number of buildings erected in 1894 in these nineteen cities was 12.8 per cent less than the number erected in 1893; and their cost was 17.9 per cent less.

While these figures are fairly representative, it is but just to say that several cities show an actual increase in building activity for 1894 over 1893. Evansville, Indiana, records 494 new buildings last year as against 466 in 1893, though the aggregate cost is less. Indianapolis built 2,022 structures in 1894, as compared with 1,924 in 1893, and at greater cost. At Kansas City 295 buildings were erected in 1894, against 172 in 1893, but the average cost was much less. At La Fayette, Indiana; Louisville, Kentucky; Memphis, Tennessee; and St. Louis, Missouri, there was an increase both in number and cost. The South makes a good showing in this comparison.

In Chicago, evidently, there is a steady rise from the low-water mark of 1893, following the over-activity of the period immediately preceding the World's Fair. The figures of 1889 were surpassed in 1894, but those of 1890, which was, perhaps, a normal year under the then new policy of annexation, were not approached. Until the \$50,000,000 per annum point is again reached, Chicago can hardly be said to have attained to its old-time rate of progress in the erection of new buildings.

CHICAGO.

	1894.	1893.	1892.	1891.	1890.
No. of buildings.	9,736	8,265	13,118	11,805	11,608
Feet frontage	221,100	214,427	326,222	282,672	266,284
Cost	\$33,805,565	\$28,517,700	\$63,463,400	\$54,001,800	\$47,322,100

	1894.		1893.	
	No. of Buildings.	Cost.	No. of Buildings.	Cost.
Allegheny, Pa.	948	\$1,298,021		
Burlington, Iowa	92	165,640		
Cincinnati, Ohio	2,352	3,131,980	2,603	\$3,673,939
Cleveland, Ohio	2,622	4,171,690	3,388	3,766,087
Columbus, Ohio	1,044	1,475,968		
Davenport, Iowa	106	165,760		
Dayton, Ohio	722	1,000,000	782	1,250,000
Denver, Colo.	536	765,180	1,018	2,278,340
Des Moines, Iowa	312	598,515	397	549,635
Detroit, Mich.	1,631	3,876,025	2,463	3,898,400
Erie, Pa.	352	786,047	435	967,851
Evansville, Ind.	494	370,891	466	387,797
Indianapolis, Ind.	2,022	2,107,115	1,924	2,061,500
Kansas City, Mo.	295	825,835	172	901,085
La Fayette, Ind.	106	371,800	102	315,700
Louisville, Ky.	1,730	1,823,575	1,098	1,529,587
Memphis, Tenn.	110	368,775	104	315,300
Milwaukee, Wis.	1,961	5,843,246	2,219	8,660,919
*Minneapolis, Minn.	68	1,868,500	87	2,558,200
New Orleans, La.		2,522,431		2,879,104
Omaha, Neb.	272	491,530	380	814,925
Pittsburgh, Pa.	1,365	4,123,439	2,359	6,615,984
Quincy, Ill.	568	1,137,700		
St. Louis, Mo.	3,853	11,844,700	3,837	12,857,667
St. Paul, Minn.	460	2,051,605		1,605,339
Salt Lake, Utah	276	471,468	352	1,282,340
Totals of comparative figures.	21,079	\$44,840,311	24,186	\$54,661,256

* Does not include dwellings and churches.

ASSOCIATION NOTES.

CLEVELAND ARCHITECTURAL CLUB.

At the first regular meeting in January a paper upon "Colonial Architecture" was presented by Mr. Herbert B. Briggs, and competitive drawings were submitted at the second meeting for a "Transfer Station for the Public Square." Mentions were made as follows: First, Benjamin B. Hubbell; second, W. D. Beues; third, Charles S. Schneider and H. Gauzenmuller; fourth, W. M. Hall, A. E. Skeel, Herbert B. Briggs, Harry S. Nelson, G. B. Bohm; fifth, Leland Ray Rice. Architect C. F. Schweinfurth was the judge.

Drawings will be submitted February 20, for a "City Café," on a 20 by 60 foot lot.

The subject for the March competition is "A Scheme for the Location of Cleveland's Public Buildings."

40 Blackstone Building. HERBERT B. BRIGGS, Secretary.

MEETING OF BOARD OF DIRECTORS A. I. A.

The Board of Directors of the American Institute of Architects met at Chicago, January 8 and 9, 1895, President D. H. Burnham, of Chicago, in the chair.

The secretary, Alfred Stone, of Providence, reported the receipt of letters of acceptance from the honorary and corresponding members selected at the annual convention held in New York in October.

The treasurer's report was read, received and ordered to be placed on file.

The report of the Committee on Competition Code was received and adopted, and the secretary was directed to print the same with the Schedule of Charges and on a separate sheet for general distribution. The secretary was also directed to print with the Schedule of Charges the following resolution, substantially as adopted at the annual convention:

Resolved, That the practice of soliciting patronage and furnishing sketches and work under terms other than as provided for in the adopted Schedule of Charges, is considered as unprofessional.

The secretary was directed to correspond with the president of the Grant Monument Association in regard to the return of plans of Bruno Schmitz, of Berlin, Germany, which have never been returned to him.

The secretary was directed to prepare uniform stationery for the use of the Chapters of the Institute, and to furnish the same to the Chapters upon orders of the officers of the Chapters and at the expense of the Chapters.

Applications were received from Messrs. Charles T. Mathews, of New York, and Charles W. Hopkinson, of Cleveland, and they

were provisionally elected Fellows of the A. I. A., subject to election by letter ballot, which the secretary was directed to issue.

The following Fellows, Vice-Presidents George B. Post and W. S. Eames and Messrs. L. H. Sullivan and Thomas Hastings, were elected to serve with the president, D. H. Burnham, the treasurer, S. A. Treat, and the secretary, Alfred Stone, as members of the Executive Committee.

The president appointed as members of the Committee on Publication and Library, Messrs. W. L. B. Jenney, R. W. Gibson, Henry Van Brunt, T. C. Link and Cass Gilbert.

As Committee on Foreign Correspondence, Messrs. R. M. Hunt, W. L. B. Jenney, R. S. Peabody, Henry Van Brunt and C. F. McKim.

As Committee on Education, Messrs. Henry Van Brunt, T. P. Chandler and A. W. Longfellow, and Profs. William R. Ware and N. C. Ricker.

As Committee on Uniform Contract, Messrs. S. A. Treat, Alfred Stone and George W. Rapp.

As Committee on Fire Protection, Messrs. T. M. Clark, Napoleon Le Brun and Alfred Stone.

As Committee on Conservation of Public Buildings, Mr. R. M. Upjohn and the presidents of the several Chapters.

After the appointment of the committees, the president urged the necessity of more active work on their part.

The ballots were opened, and the following were found to be elected Fellows of the A. I. A.: Frank Miles Day, Philadelphia; William B. Tuthill, New York; William C. Hough, New York; Frank L. Packard, Columbus, Ohio; Isaac Edward Ditmars, New York; H. P. Fowler, New York; Sam'l Booth Snook, New York; Charles Edwards, Paterson, New Jersey; Frank J. Schlotter, Evansville, Indiana. Several resignations were received and accepted.

The secretary was directed to print the proceedings of the Twenty-ninth Annual Convention, held in New York on October 15, 16 and 17, under the direction of the Committee on Publication and Library.

It was also voted that the secretary be directed to print and distribute the following vote:

Resolved, That the practice on the part of an architect of publishing, or allowing to be published, advertisements of builders and manufacturers of building materials in connection with his designs is unprofessional.

The question as to the continuance of the arrangements now existing between the New York Chapter and the Institute for the joint occupation of the offices in the Welles building, 18 Broadway, New York, was referred to Messrs. Hastings, R. W. Gibson and the secretary.

The question of the relation of the Institute to the Chapters as affected by the amendments to the By-Laws passed at the last annual convention was referred to Mr. W. W. Clay to present at the meeting of the Executive Committee in Chicago, to be held April 1, 1895, with suggestions regarding the election of members and the connection of the main body of the Institute with its Chapters, as far as membership is concerned, and the Executive Committee was directed to prepare necessary amendments to be acted upon at the next annual convention, which it was voted shall begin its sessions at St. Louis, September 15, 1895.

It was voted: That hereafter the treasurer be authorized to make arrangements for transportation of members to the annual convention at reduced rates.

It was voted: That each and every Chapter be requested to hold its annual meeting during the month of September, so that their annual reports can be placed in the hands of the secretary on or before October 1 of each year.

The thanks of the Board of Directors were voted to the Illinois Chapter for the generous hospitality extended to the board in giving a dinner in their honor on the evening of the 8th instant, and to the president for the use of his offices for the meeting of the board and for other courtesies extended to them.

CHICAGO ARCHITECTURAL SKETCH CLUB.

The first of the series of Bohemian nights at the club was given Monday, January 14. The invitations said red-hots and cold tea. The red-hots were genuine, but the tea never saw China or Japan. An attractive musical programme had been arranged and was enjoyed by the members.

On Monday evening, January 21, Mr. Thomas Hastings' paper on "Planning" was read, and illustrated by stereopticon views. The paper and slides were very kindly loaned the club by Mr. Hastings, of New York. Despite the furious storm, an audience of forty braved the wintry blasts; they were amply repaid by hearing a paper upon a subject which, in the rush of an architect's everyday practice, is alas! too often lost sight of.

The class in architecture under Mr. Millet began the term with a good attendance. This class will have a series of *projets* which will be worked out during the term. The Illinois Chapter gold medal *projet* will be criticised in this class by Mr. Millet. This class has been especially arranged for draftsmen, and is of a practical and utilitarian value to earnest men in the profession.

The modeling class, under Mr. Richard Bock, has been characterized by the earnest attention of its members. This class will confine itself to architectural detail, beginning with organic forms of ornament. As ornament cannot be correctly expressed without a thorough knowledge of form, how often are draftsmen disappointed with the results of a carefully drawn detail!

The exhibit of the Clark Testimonial Drawings was a pronounced success. The exhibit of classwork by members was enjoyed by the draftsmen, especially the younger men.

The following is the club syllabus for the year:

SYLLABUS.

On each alternate Monday night, beginning January 7, there will be a lecture or illustrated paper on an architectural subject by men prominent in their profession. Every other Monday night will be devoted to entertainment, at which refreshments will be served.

CLASSES.—The class in architecture will be held every Tuesday evening, beginning Tuesday, January 15, continuing for fifteen weeks; Mr. Louis J. Millet, instructor.

The drawings for the Illinois Chapter Gold Medal competition will be criticised in this class by Mr. Millet. The fee for this class will be \$4 for the term, payable in advance.

The class in pen-and-ink drawing, free to members, is held every Thursday evening; Elmer C. Jensen and J. W. Johnson, instructors.

The class in modeling, free to members, is held every Friday evening; Richard W. Bock, instructor.

The class in water-color, free to members, is held every Sunday morning at 10 o'clock. W. Bryce Mundie, Arthur Heun and George R. Dean, instructors.

July and August will be vacation months.

There will be a regular club competition due every two months; programmes for these competitions will be announced two months before each competition is closed. The members making the best three averages in these competitions will receive prizes as follows:

First Prize.—Buehlmann's "Architecture."

Second Prize.—Vignola.

Third Prize.—INLAND ARCHITECT for one year.

The subjects for these competitions are as follows:

February 25—A Park Shelter.

April 29—Pen-and-ink Rendering from Photograph.

June 24—A City Front.

August 26—Picturesque Chicago.

October 28—Mosaic Floor.

December 30—Full Size Detail Archaeological Subject.

Drawings to be mounted on bristol board, 22 by 28 inches, and delivered at the clubhouse sealed and addressed to the secretary.

Nom de plume must accompany each design.

The subject for the competition for the gold medal, given by the Illinois Chapter American Institute of Architects:

A BUILDING FOR THE STUDY OF BOTANY.—This competition will close April 20, and is open only to members of the club. Programmes will be furnished by the secretary.

The annual spring exhibition will be held at the Art Institute in May. Detailed information will be given in due time.

The subject for the Clark Medal Competition:

AN ART SCHOOL.—This competition will close November 15, and is open to architectural draftsmen under thirty years of age, residents of the United States, and not practicing architects. The awards will be made by the Adjudicating Committee on the Robert Clark Testimonial Competition, and are:

First prize, gold medal; second prize, silver medal; third prize, bronze medal.

Those designs receiving honorable mention will receive special bronze medals.

The secretary will furnish the programme on application.

The officers of the club are: President, George R. Dean; first vice-president, Elmer C. Jensen; second vice-president, Frank M. Garden; secretary, John Robert Dillon; treasurer, Edgar S. Belden; assistant secretary, Harry C. Starr.

Executive Committee.—George R. Dean, Frank M. Garden, Edgar S. Belden, Elmer C. Jensen, John Robert Dillon, J. W. Johnson, Arthur Woltersdorf.

Adjudicating Committee.—Louis J. Millet, chairman, Irving K. Pond, T. O. Fraenkel.

The subject and conditions for the second annual competition for the Illinois Chapter American Institute of Architects gold medal is as follows:

CONDITIONS.—The competition is open to active members of the Chicago Architectural Sketch Club who are not practicing architects of over two years' standing.

The prize drawings to become the property of the Chapter.

PROGRAMME.

A memorial building erected for the study of Botany, Zoology and Mineralogy.

This building would be situated in a Botanical Garden and would consist of:

1. A broad vestibule or portico.

2. A lecture hall arranged in the form of an amphitheater with a seating capacity of 700 to 800.

3. Three rooms, easy of access to the main hall, and containing specimens to be used for the illustration of lectures.

4. Three smaller rooms connected with the above for the use of instructors, lectures, etc.

The designers should be careful in planning the seating and aisles of the lecture hall to so arrange that the instructor should suffer the least possible interruption from the exit and entrance of persons during the lectures.

A broad avenue would connect the main entrance of the building with the paths of the garden and the street beyond.

The greatest dimension of the building would be 160 feet.

The following drawings are required:

1. Plan and one section at the scale of 1-16 inch to 1 foot.

2. Main elevation at the scale of 1/8 inch to 1 foot.

The plan should show an arrangement of the paths and avenues in the immediate vicinity of the building. The section should suggest a simple decorative scheme in the lecture hall.

Drawings to be rendered in monochrome. They are to be mounted upon heavy bristol board, 24 by 36 inches, and must be marked with a device or *nom de plume*. An envelope marked in a similar manner containing the name and address of the author must accompany each design.

Drawings must be delivered to John Robert Dillon, Secretary Chicago Architectural Sketch Club, at the clubhouse, 274 Michigan avenue, Chicago, on or before Monday, April 29, 1895.

The adjudicating committee will be appointed by the Chapter.

NEW YORK CHAPTER A. I. A.

A regular meeting of the New York Chapter of the American Institute of Architects, was held at the Chapter quarters, on Wednesday, January 9, 1895, President R. M. Upjohn in the chair.

The special committee on the revision of the By-Laws to suit the new laws recently adopted by the Institute, reported active progress.

The special committee for a seal for the Chapter reported progress.

The subject of coöperation, *pro bono publico*, of the Chapter with other societies representing art was called up. After considerable informal discussion a vote was passed requesting the president to appoint, at his convenience, a special committee of three, "to act in conjunction with a committee of other kindred societies, as an advisory board to the municipal government to

influence anything for good which may come before them in the line of art; or of the conservation of parks or public buildings."

On motion of Mr. Kendall, President Upjohn was requested to act with the committee. [This committee, exclusive of the president, consists of Messrs. Kendall, Carrère and the secretary.]

After some explanations and debate, the secretary, on motion of Mr. Bigelow, was desired to write to His Honor, Mayor Strong, in relation to the claims of the architects who, under municipal regulations, competed, some time ago, for a new city hall, proposed to be built for this city.

Mr. Carrère moved a further consideration of the question (before the Chapter on a previous occasion) as to the coalescence, with reference to quarters and appliances, of the Chapter with other societies, more or less representative of architectural practice. After some discussion, the question was referred to the Executive Committee, and that Mr. Carrère be invited to join the deliberations of that committee on the question.

Mr. N. LeBrun called attention to the fact that his son, Mr. P. L. LeBrun, had succeeded in finding and purchasing a copy of that volume of Viollet le Duc's "Dictionnaire Raisonné," in which the Chapter's set had always been deficient, and suggested that it should be acquired for the Chapter Library. Mr. LeBrun's communication was referred to the Committee on Library and Publications.

The secretary said that a member of the Chapter desired to present it with a very valuable addition to the literature of American architectural practice, long a desideratum in the profession, namely, T. M. Clark's "Architect, Owner and Builder Before the Law." The volume was accepted, with the thanks of the Chapter to the donor.

OUR ILLUSTRATIONS.

Store Building, C. E. Joy, architect, St. Paul, Minnesota.
Gate Lodge, Cherbourg, France. Birch B. Long, del., Chicago.
A Residence in Brookline, Massachusetts. J. A. Schweinfurth, architect, Boston.

A Residence in Brookline, Massachusetts. J. A. Schweinfurth, architect, Boston.

Old Colonial Work, Salem, Massachusetts; a double page, showing eight views.

Competitive Design, The Country Club, St. Louis, Missouri. E. A. Manny, architect.

Brightwood, Bristol, Connecticut. H. Neill Wilson, architect, Pittsfield, Massachusetts.

Small Temple of San Pietro in Montorio, Rome. Rendering from photograph by Edward T. Wilder, Chicago.

Pen-and-Ink Rendering. Examples of Classwork, Chicago Architectural Sketch Club; four pages from foreign subjects.

Passenger Station at Twenty-second street, Chicago, for Chicago, Rock Island & Pacific Railroad. John T. Long, architect.

Woman's Building, Cotton States Exposition, Atlanta, Georgia; exterior and interior views. Miss Elise Mercur, architect, Pittsburgh, Pennsylvania. Of thirteen designs submitted, hers was considered of the highest merit and was accepted. As a preparation for her professional life Miss Mercur studied four years at the Philadelphia Academy of Fine Arts and subsequently continued her artistic studies in Germany. The lady has been a resident of Pittsburgh for four years and has been engaged upon practical architectural work in the office of Architect Thomas Boyd, whose foreman she now is. Miss Mercur assisted in the preparation of the plans for the new city Poor Buildings at Marshalsea and superintended their erection.

Photogravure Plate: Residence of W. H. Reid, 2013 Prairie avenue, Chicago. Beers, Clay & Dutton, architects. The Cummings Hotel Building, 257-259 Ontario street, Chicago. T. O. Fraenkel and Richard E. Schmidt, architects.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure edition.

Residence in Chicago. Shepley, Rutan & Coolidge, architects.
Hotel Ste. Claire, Detroit, Mich. Donaldson & Meier, architects.

Detroit Boat Clubhouse, Donaldson & Meier, architects. Also, Interior View in same.

Mantels in Residence of J. W. McClymonds, Massillon, Ohio. C. F. Schweinfurth, architect, Cleveland.

Residence of J. F. Pocock, Massillon, Ohio. C. F. Schweinfurth, architect, Cleveland. Also, View in Dining Room of same.

MOSAICS.

FREDERICK W. PERKINS and Edmund R. Krause, of Chicago, announce that they have entered into partnership as architects. Mr. Krause has removed from his offices in the Schiller building to those of Mr. Perkins in the Montauk block, where business is being conducted under the firm of Frederick W. Perkins and Edmund R. Krause, architects.

On the regular monthly inspection day of the Chicago Institute of Building Arts, the architects and other visitors were entertained by a paper read by Mr. Schlessinger, upon the estates of King Ludwig, of Bavaria, "the crazy king," illustrated by a large number of lantern-slide views. Mr. Schlessinger is a native of Bavaria and had peculiar facilities for obtaining photographs from the interiors of these castles, and being an architect by profession and an artist in temperament, his description of these

architectural wonders is peculiarly graphic. Mr. Schlessinger was assisted by W. A. Morse, president of the Chicago Lantern-Slide Club, in the production of the stereopticon views.

ON February 1, 1895, the firm of Brede & Zimmerman, Detroit, Michigan, was dissolved by mutual consent, architect Herman A. Brede continuing business at the old location, rooms 39 and 40, Kanter building.

MR. J. A. SCHWEINFURTH, of Boston, who, as head draftsman in the office of architects Peabody & Stearns during the past thirteen years has attained a high standing as a practitioner, has opened an office for the practice of architecture at 1033 Exchange building, Boston. Mr. Schweinfurth's experience in charge of the work of one of the most notable offices in this country places him at once in a position to secure the confidence of his clients and insures the character of the work that may be intrusted to him. He is a valuable addition to the professional ranks.

JAMES JOHN, of Chicago, who has been known to architects for twenty years as a reliable and expert plasterer, and who abandoned work in this line while serving as secretary of the Builders' and Traders' Exchange, has again resumed his old vocation. Mr. John will make a specialty of solid partition work, and in the line of fireproof plastering and good mechanical work generally he cannot be excelled. In regard to "fireproof" plastering, note was made in these columns some ten years ago of the plastering of the boiling room in a varnish factory, which had withstood the heat without cracking when a large quantity of varnish was burned. This was some of Mr. John's plastering.

NEW PUBLICATIONS.

THE annual report of the Chicago Health Department for the year 1893, recently issued, states that during the World's Fair year the department secured the abatement and remedy of over 25,000 nuisances and defects of plumbing, drainage, filthy premises, foul vaults, etc. The privy vault is declared to be an intolerable nuisance, and the cause of much avoidable sickness; it can only be dealt with by its abolition by ordinance on all streets where sewers are laid. Chicago's death rate for 1893 was 16.92 per thousand. This was the lowest death rate of any large city in the world, and also the lowest in the history of the city itself. Chicago was not originally a healthy locality. All that has been attained in that respect has been done by careful drainage, improved water works and sanitary building restrictions, to supplement the natural advantages of an inexhaustible supply of pure water and unobstructed ventilation by winds from every point of the compass. Even so late as 1849 there were 1,701 deaths in a total population of 23,047—the frightful mortality of 73.8 in every thousand, and in 1854 there was a death rate of 64 per 1,000. Contrast this with 16.92 for the World's Fair year! A tabular statement of the building trades of the city included in this report puts the total number of firms engaged in the building trades at 2,966, with employes numbering 37,810. Carpenters and contractors number 950, with 20,500 workmen; next in number are painters, 350, with 3,500 workmen; plumbers, 500, with 2,150 workmen; marble and stone workers, 150, with 1,250 workmen; brick, lime, cement and drain pipe, 125, with 5,500 workmen; roofing, 80, with 650 workmen; glass manufacturers, 60, with 750 workmen; paving contractors, 35, with 1,500 workmen; sand dealers, 25, with 410 workmen; terra cotta, 6, with 550 workmen. Architects are said to number 385, with assistants to the number of 1,050.

By actual count the Standard Dictionary contains, exclusive of the appendix, 301,865 vocabulary words and phrases, and the appendix of proper names, foreign phrases, etc., contains 47,468 entries, making the total vocabulary of the dictionary 349,333—this after great care has been exercised to exclude all useless words. The immense increase of the vocabulary of the English language appears from the fact that the vocabulary of Webster's International Dictionary is 125,000 and the Century Dictionary is 225,000. It is remarkable to note the high testimonials the Standard Dictionary continues to receive from leading educational authorities in Europe and America, as Dr. John T. Duffield, of Princeton College, New Jersey, who writes: "It will be conspicuous among the enduring monuments of intellectual life at the close of the nineteenth century. . . . For comprehensiveness of vocabulary, accuracy of definition, judicious arrangement of material, instructive illustrations and admirable typography, it is superior to any other work of its class, and ere long will supersede them, and be recognized as the Standard Dictionary." *Nature*, London, England, J. Norman Lockyer, the celebrated astronomer, editor, says: "It passes the wit of man to suggest anything which ought to have been done that has not been done to make the dictionary a success."

If the first number of this new publication may be taken as an index of its future worth, the *Landscape Architect* is destined to be a valuable exponent of the profession to which it is devoted. The publishers describe the paper as "the only journal of its class published in the world." Certainly there is room for such a journal, and the initial number shows that the publishers are able to make their magazine both interesting and profitable to the growing profession of landscape architects. The first number very appropriately opens with an article on "Landscape Art and Rural Architecture," in which William Webster, L. A., outlines the work and importance of the profession. George Savage contributes a column on orchids, and Herr Forstermann graphically describes

the perils of orchid-hunting in the jungles. Dankmar Adler writes of the "Tall Office Building," and P. H. Egan on "Street Pavements." A curious account of recent French experiments with electricity as a fertilizer deserves mention. These with numerous shorter articles on forestry and gardening make up the subject matter of the initial number. The weakest point is the small number of engravings. This, it is fair to assume, will be remedied in time.

BUILDING OUTLOOK.

OFFICE OF THE INLAND ARCHITECT,
CHICAGO, ILL., February, 1895.

It is not to be wondered at that there is so much unrest, uneasiness and lack of determination among the manufacturing, commercial and constructing interests throughout the country as there is at this time. The bankers' panic of 1893, that terrible object lesson, furnished for a purpose, has not been forgotten. The people have for months past been treated to a surprise for which they were not prepared—that of a rich and productive country borrowing money to pay its running expenses. This strange fact affects enterprise. The possibility of a collapse of credit is another cause. Business men, without being timorous, are very conservative, knowing the power of the banks to call in loans at any time or their power to refuse needful discounts to permit of the smoothly running machinery of trade. Just now business men are watching, never were they as solicitous to plunge into new enterprises, material of all kinds is low, labor is on a fair basis, productive capacity is enormous, credit is good, money is fairly abundant. Speculation is not doing harm, the crops are promising. Our export trade is improving, our treaties are helping to develop foreign markets. With all these things in our favor there is unrest. Builders are anxious to go ahead, especially in cities where trolley lines have opened up suburban districts. Lumber is abundant and cheap. Iron and steel have reached their lowest known level. Houses rent and sell well. The rate of interest in cities and for ordinary investments is fractionally lower. The bottom was reached many months ago. We have not yet entered on the up-grade; but it is not far distant. Improving tendencies have been at work for months. They are already perceptible on the surface. There is an abundance of capital awaiting investment. It will seek employment as soon as the danger signals are withdrawn. The people have confidence in themselves and in the country, and a spirit of enterprise akin to enthusiasm is ready to flame out as soon as the errors of what might not unfairly be called misgovernment are righted. In all sections there is information leading to the conviction that building operations will be entered upon on a liberal but not unusual scale, as soon as the weather permits.

SYNOPSIS OF BUILDING NEWS.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than \$5,000 are not published.

Chicago, Ill.—Architect C. O. Hansen: For P. J. Benson, a two-story, basement and attic residence, 38 by 64 feet in size; to be erected at 21 Ewing place; it will have a very handsome brown stone front, slate roof, hardwood interior finish, the best of modern plumbing, electric light, hot-water heating, etc.

Architects Simeon B. Eisendrath & Co.: For Leo Dorges, a three-story store, flat and hall building, 50 by 90 feet in size; to be erected at the corner of Jefferson and Maxwell streets; it will have a front of pressed brick with buff Bedford stone trimmings, the sanitary improvements, gas fixtures, Georgia pine interior finish, electric bells, speaking tubes, etc.; there will be a large dance hall on the top floor. For H. Merrill, a four-story and basement apartment house, 52 by 60 feet in size; to be erected at Evans avenue near Forty-seventh street; the first story will be of stone and the rest of pressed brick, with blue Bedford stone trimmings, the interior to be finished in oak and have hardwood floors, the latest sanitary improvements, gas fixtures, mantels, laundries, furnaces, etc.

Architects Dwen & White: For ———, a three-story residence, 25 by 70 feet in size; to be erected at Michigan avenue near Thirty-eighth street; the front will be of a handsome design in Raindrop brownstone, the interior to be finished in maple, oak, cherry and mahogany; have the best of open, nickel-plated plumbing, electric gas lighters, hot-water heating, etc. For F. A. Crane, at Wilmette, a two-story frame residence and barn; stone basement, hardwood interior finish, gas fixtures, modern plumbing, mantels, etc.

Architect George A. Shonberg: For Dr. McKillop, a three-story livery stable, 125 by 50 feet in size; to be erected at Erie street just west of Clark street; to have pressed brick front with buff Bedford stone trimmings; the second floor will have stalls for sixty horses, first floor for wagons, third for fodder, storage, etc.

Architect C. M. Palmer: For J. M. Gaitside, a three-story and basement residence, 24 by 87 feet in size; to be erected at 4327 Drexel boulevard; it will have a pretty front of stone, hardwood interior, gas and electric fixtures, hardwood interior finish, mantels, ranges, fireplaces, etc.

Architect M. E. Bell: For Monroe county, at Sparta, Wisconsin, a three-story and basement courthouse, 100 by 67 feet in size; to be of stone all around, have hardwood interior finish, marble wainscoting, tile floors, plumbing, electric light, steam heating, etc.

Architect H. R. Wilson: For George Gill, a three-story residence, 23 by 68 feet in size; to be erected at Grand boulevard near Ione place; it will have a handsomely designed front of buff Bedford stone, elaborate hardwood interior finish, specially designed mantels and sideboards, the very best of modern improvements, heating, etc. For M. Morganthau and M. Frank, two handsome three-story residences, to be erected at Forty-fifth street and Drexel boulevard; they will have stone fronts, hardwood interior finish, the best of modern improvements, and hot-water heating.

Architect Oliver W. Marble: Made plans for a four-story store and apartment house, 77 feet front; to be erected at Forty-fifth street and Evans avenue; it will have a handsome blue Bedford stone front, hardwood interior, the modern open sanitary plumbing, gas and electric fixtures, gas ranges and fireplaces, heating, etc.

Architect R. G. Pentecost: For John Crosby, a three-story and basement flat building, to be erected at 1095 Oakley avenue; it will have a stone front, the sanitary improvements, oak interior finish, mantels, gas fixtures, heating, etc.

Architects Curry & Foster: Have begun work on the foundations for the three-story and basement apartment house, 125 by 75 feet in size, at the corner of Taylor and Lytle streets, for Messrs. R. C. Curry & Co.; it will have two floors of pressed brick, with buff Bedford stone trimmings, gas fixtures, mantels, etc.; cost, \$75,000.

Architects Hallstrom & Strandel: For J. Johnson, two three-story flat buildings, 25 by 58 feet each; to be erected at Wilton avenue between Addison and Waveland; to have blue Bedford stone fronts, Georgia pine finish, the modern sanitary plumbing, mantels, gas fixtures, laundry fixtures, etc. For Messrs. Johnson & Anderson, remodeling a two-story building, situate at Oak street near Market; it will be made into a four-story store and flat building, 22 by 70

feet in size; have new front, plumbing, gas fixtures, mantels, heating, etc. For V. Wallstrom, a two-story and basement flat building, 24 by 58 feet in size; to be erected at Austin; it will be of pressed brick and stone front, have the modern plumbing, gas fixtures, mantels, etc.

Architects J. F. & J. P. Doerr: For F. Goedeke, a four-story and basement apartment house, 50 by 85 feet in size; to be erected at 5008 and 5010 Cottage Grove avenue; it will have a handsome buff Bedford stone front, Georgia pine finish, the modern sanitary improvements, gas fixtures, mantels, steam heating. Same architects made plans for a four-story and basement store and flat building now being built at Thirty-ninth street and Vernon avenue, for Jacob Mueller; Roman pressed brick front with buff Bedford stone trimmings, hardwood interior finish, mantels, gas fixtures, ranges and fireplaces, steam heating, etc.

Architect Julius H. Haber: For John Wood, a two-story flat building, 22 by 74 feet in size; to be erected at Evanston avenue near Balmoral; stone front, hardwood interior finish, mantels, gas fixtures.

Architects Swift & Hall: For Mrs. E. J. Garnet, a three-story flat building, 22 by 80 feet in size; to be erected at Forty-fifth street and Elaine avenue; to be of pressed brick and stone front, the modern sanitary improvements, mantels, gas fixtures, laundries, steam heating, etc.

Architects Hessenmueller & Meldahl: For Messrs. Gainer & Koehler, two three-story residences, 30 by 60 and 27 by 68 feet in size; to be erected at Humboldt boulevard near Palmer square; they will have stone fronts and pressed brick and stone sides, oak interior finish, mantels, gas and electric fixtures, the best of sanitary improvements, electric light, etc.

Architect C. W. Nothnagel: For Charles Murray, two two-story residences, 40 by 65 feet in size; to be erected at Greenwood avenue near Sixty-fourth street; the fronts will be of stone, the interior to be finished in oak, have mantels, gas and electric fixtures, laundry fixtures, heating.

Architects Thomas & Fuller: For Thomas Sandborn, a three-story and basement flat building; to be erected at Woodlawn avenue south of Fifty-fifth street; to be of stone front, have oak finish, gas and electric fixtures, electric bells, speaking tubes, steam heating, etc. For B. R. Crouch, a two-story livery stable, 130 by 50 feet in size; to be erected at Thirtieth street near Michigan avenue; to have a front of stone and pressed brick, plumbing, heating, etc.

Architect E. M. Newman: For Irving Cone and W. Ross, a three-story flat building, 25 by 70 feet in size; to be erected at Wilcox avenue near Western avenue; to be of stone front, have the best of plumbing, mantels, gas fixtures, etc. For E. Davidson, a two-story frame residence; to be erected at Rogers Park; to have a stone basement, hardwood finish, gas fixtures, mantels, furnace, etc. For G. L. Hastner, a two-story residence, 30 by 50 feet in size; to be erected at Rogers Park; it will be of frame construction with stone basement, have hardwood finish, the modern plumbing, gas fixtures, furnace, etc.

Architect Theodor Karls: For W. Henning, a two-story residence and barn; to be erected at Grace street; pressed brick and stone, hardwood finish, furnace, etc.

Architect Ira C. Saxe: For Dr. Messenger, a two-story residence and office, 25 by 70 feet in size; to be erected at Sixty-third and Loomis streets, sanitary improvements, mantels, gas fixtures, electric light, heating, etc.

Architect E. H. Turnock: For J. C. Cooper, a three-story apartment house, 75 by 125 feet in size; to be erected at Campbell avenue and Adams street. To have two floors of pressed brick and stone, the sanitary improvements, mantels, gas fixtures, etc. For M. Riordan, a three-story store and flat building, 75 by 80 feet in size; to be erected at Polk and Dearborn streets; pressed brick front with buff Bedford stone trimmings, hardwood finish, gas fixtures, mantels, steam heating, etc. For W. T. Basey, on Armour avenue, a three-story flat and building, 23 by 90 feet in size; to be of buff Bedford stone front, have the sanitary improvements, gas fixtures, laundry fixtures, steam heating, etc.

Architect S. S. Beman: For the Pullman Company, two new wings to school at Pullman; they will be two stories, 44 by 96 feet, of pressed brick and stone, have plumbing, steam heating, electric light, etc. Also for same place a fire engine house and tower, 34 by 88 feet in size; to be of pressed brick and stone.

Architect Frederick Ahlschlager: Made plans for the Old People's Home, to be erected at Bensenville, Illinois; it will be a handsome three-story building, 42 by 87 feet in size; to be constructed of stone and pressed brick, have the interior finished in Georgia pine, all the modern plumbing, gas and electric fixtures, steam heating, etc.

Architect J. L. Meriam: For Conrad Labeck, a two-story flat building, 22 by 58 feet in size; to be erected at Sixty-fifth street and Drexel avenue; it will have a stone front, mantels, gas fixtures, furnaces, etc. For Robert Colvin, a two-story residence, to be erected at Sixty-fifth street and Drexel avenue; stone front, hardwood finish, gas fixtures, mantels, laundry fixtures, furnace, etc.

Architect W. L. Klewer: For Christian Grawe, a two-story residence, 21 by 56 feet in size; to be erected at Leland and Dover streets, Ravenswood; hardwood interior, gas fixtures, mantels, etc.

Architect J. A. Miller: For William Seymour, a three-story store and flat building, 25 by 66 feet in size; to be erected at Forty-fifth street and Emerald avenue; pressed brick and stone front, plumbing, etc.

Architect Francis J. Norton: For I. Goldberg, a three-story store and hall; 50 by 60 feet in size; to be erected at Highland Park; it will have a stone front, hardwood finish, electric light, steam heating, etc.

Architect G. L. Harvey: Has finished plans for a two-story store and flat building; 41 by 60 feet in size; to be erected at 5440 and 5442 South Halsted street, for C. A. Gurnsey; to be of pressed brick and stone front, have sanitary improvements, mantels, gas fixtures, hardwood finish, etc.

Architects Patton & Fisher: Are taking figures on the Kenwood Clubhouse; to be erected at Lake avenue and Forty-seventh street; it will be of a handsome design, two-story basement and attic, to be of pressed brick and stone, have hardwood interior finish, modern plumbing, electric light, steam heating, etc.

Architect James Burns: For M. J. Dawson, a two-story flat building, 25 by 47 feet in size; to be built at 456 Hamlin avenue; stone front, sanitary plumbing, etc.

Architects Schroeder & Koster: For Peter Conraths, a three-story and basement flat; 25 by 65 feet in size; to be erected at Twenty-fourth street near Portland avenue; stone front, Georgia pine and white pine finish, the modern plumbing, gas fixtures, furnaces. For M. Donohue, a two-story and basement store and flat building, 25 by 78 feet in size; to be erected at Fifty-fourth and Carpenter streets; to be of pressed brick and stone front, have all the modern sanitary improvements, gas fixtures, furnaces, etc.

Architect Louis Martens: Making plans for a two-story store and flat building, 60 feet front; to be erected at Forty-fourth and Fulton streets; to be of pressed brick and stone front, have hardwood finish, mantels, gas fixtures, modern plumbing, steam heat.

Architects Murphy & Camp: For T. G. McElligott, a three-story flat building, 25 by 72 feet in size; to be erected at 4518 Indiana avenue; to be of Bedford stone front, have hardwood finish, gas fixtures, steam heating, etc.

Architect S. M. Crowen: Made the plans for the six-story and basement flat building now being erected at the northeast corner of Dock and River streets, for J. B. Legnard; to be of pressed brick, stone and terra cotta, have plumbing, steam heating, electric light, etc.

Architect A. G. Ferree: For Charles A. Marsh, a two-story frame residence, to be erected at Seventy-fifth street near Webster avenue; stone basement, plumbing, mantels, gas fixtures, etc. For John Fonicairre, a two-story store and flat building; to be built at 5745 South Halsted street; plumbing, mantels, gas fixtures, etc. For C. A. Marshall, a two-story frame residence; to be erected at Auburn Park; stone basement, mantels, gas and electric fixtures, laundry fixtures, electric light, and heating.

Architect Jules De Howath: For L. Deutsch, a two-story basement and attic residence, 27 by 40 feet in size; to be erected at Rhodes avenue south of Forty-second street; to have a pressed brick and stone front, hardwood finish, mantels, hot-water heat. For S. Cohen, a two-story basement and attic residence, 28 by 55 feet in size; to be erected at the corner of Seventy-second street and Vernon avenue; stone front, hardwood interior, gas fixtures, heating, etc. For G. H. Rohrer, a four-story store and flat building, 70 by 87 feet in size; to be erected at the corner of Van Buren street and Stanley terrace; to have a fine-looking front of pressed brick, stone and terra cotta, hardwood

finish, gas and electric fixtures, steam heating, etc.; the cost will be about \$60,000. For B. Ziesing, a handsome ten-room residence; to be of frame construction with stone basement, hardwood finish, gas fixtures, mantels, heating, etc. For W. B. Kennedy, a three-story apartment house, 50 feet front and 76 feet deep; to be erected at Calumet avenue, east front, between Forty-seventh and Forty-eighth streets; it will have a handsome buff Bedford stone front, Georgia pine and oak interior finish, the best of modern sanitary plumbing, laundries, electric light, steam heating, etc.

Architect Maurice G. O'Brien: For Joseph M. Crennan, two two-story residences, 50 by 62 feet in size; to be erected at 709 to 711 Forty-ninth street; they will have handsome stone fronts, the modern sanitary plumbing, mantels, hardwood finish, gas and electric fixtures, heating, etc. Also for same owner, at 4825 Vincennes avenue, a two-story basement and attic residence, 25 by 63 feet in size; to have a buff Bedford stone front, hardwood interior, mantels, gas fixtures, heating, etc. Also taking figures on a four-story and basement apartment house, 30 by 107 feet in size; to be erected at the corner of Washington boulevard and Wood street for M. Leonard; the fronts will be of pressed brick with Bedford stone trimmings, have hardwood finish and mantels, gas and electric fixtures, heating, etc.

Architects L. K. & A. B. Pond: Making plans for a Congregational church, 90 by 100 feet in size; to be erected at Fifty-sixth street and Madison avenue; to be of pressed brick with stone trimmings, have slate roof, hardwood interior finish, electric light, steam heating, etc.

Architects Shepley, Rutan & Coolidge: For Sprague, Warner & Co., a five-story warehouse, 100 by 100 feet in size; to be erected at Harrison street near Desplaines; pressed brick and stone front, plumbing, elevators, steam heating, etc.

Architect H. B. Wheelock: For C. S. Hutchins, a three-story and basement house, 71 by 90 feet in size; to be erected at Indiana avenue between Twenty-ninth and Thirtieth streets; stone front, hardwood interior, the modern sanitary plumbing, gas and electric fixtures, mantels, laundry fixtures, gas ranges and fireplaces, electric light, marble and tile work, steam heating, etc.

Architect L. T. Shipley: For D. S. McMullin, a two-story basement and attic residence; to be erected at Evanston; to be of frame with stone basement, have all the modern plumbing, gas fixtures, mantels, hardwood finish, furnace, etc.

Architect Joseph Molter: For S. Wood, a four-story store and flat building, 22 by 70 feet in size; to be built at 66 Center avenue near Adams street; to be of stone front, have all the modern sanitary improvements, hardwood finish, gas fixtures, etc.

Architect Julius Wegman: For T. C. Mohor, a two-story frame residence, 23 by 48 feet; to be built at Hinsdale; stone basement, mantels, gas fixtures, furnace, etc. For Joseph Stein, a two-story store and flat building, 26 by 68 feet in size; to be erected at West Pullman; pressed brick and stone front, sanitary plumbing, gas fixtures, mantels, furnaces, etc.

Architect C. W. Melin: For A. W. Waldman, a three-story apartment house, 25 by 78 feet in size; to be erected at Diversy street near Park avenue; it will have a stone front, the interior to be finished in red and white oak, have the best open plumbing, specially designed mantels, etc.; cost, \$15,000.

Architect Franklin P. Burnham: For F. W. Klein, five three-story residences, 24 by 60 feet each; to be erected at the corner of Central Park boulevard and Jackson boulevard; they will have pressed brick and stone fronts, hardwood finish, mantels, gas and electric fixtures, laundries, furnaces, etc.

Architects Cowles & Ohrenstein: For Edward Biesenthal, a three-story store and flat building, 26 by 85 feet in size; to be erected at the corner of Division and Leavitt streets; it will have a stone front, hardwood interior, sanitary plumbing, mantels, etc. For William Zeuch, a three-story apartment house, 50 by 65 feet in size; to be erected on Florence avenue; it will have a front of blue Bedford stone, hardwood finish and electric light.

Architect J. N. Emmons: For Mrs. Sophia H. Clover, three three-story residences; to be erected at Ritchie place and Goethe street; to be of pressed brick and stone fronts, have hardwood finish, gas and electric fixtures, best of plumbing, heating, etc.

Architect M. E. Bell: For M. E. Stone, a very handsome two-story, basement and attic residence, 54 by 74 feet in size; to be erected at Glencoe; it will be of stone and brick, have elegant interior finish in different hardwoods, the best of open nickel-plated plumbing, electric light, laundries, steam heating, etc. Also made plans for a two-story residence and apartment building for J. P. Vidall.

Architect William Thomas: For D. A. Price, a handsome three-story residence, 25 by 74 feet in size; to be erected at Washington boulevard near Sacramento avenue; the front will be of Bedford stone, the interior to be finished in hardwoods, have all the modern sanitary improvements, mantels, gas and electric fixtures, heating, etc.

Cincinnati, Ohio.—With a mantle of snow covering everything, combined with cold freezing weather, it is not to be expected that building operations should be lively. The plumber, however, must be exempted, for he goes about with his soldering lamp and pliers, wearing a broad smile and an overcoat. Owing to the dull season, it is a wonder that more distress does not exist among the mechanics. Perhaps it is a case where the wind has been tempered to the shorn lamb.

Architects Samuel Hannaford & Sons: Have prepared plans for a new market house for Cincinnati; size, 34 by 384 feet; cost \$60,000; materials: buff brick, terra cotta, slate or tile roof, gas, plumbing, cement floors, refrigerators, etc.; this will be a beautiful addition to our municipal architecture. Residence for George B. Cox, Cincinnati, Ohio; materials: stone, tile roof, hot-water or steam heat, gas, plumbing, stained glass, hardwood, etc.; cost \$30,000. Residence for Simon King, Cincinnati, Ohio; materials: stone, slate roof, gas, grates, mantels, furnace, plumbing, stained glass, etc.; cost \$10,000. Dye-house (cotton) for Putnam, Hooker & Co., Cincinnati; size, 80 by 110 feet; cost \$15,000; materials: brick, tin roof, dyeing machinery, boilers, etc. Hillsboro (Ohio) schoolhouse; materials: pressed brick, slate roof, hot-blast system, slate blackboards, desks, etc.; size, 85 by 100 feet; cost \$35,000. Residence for F. McCorn, Hyde Park, Cincinnati, Ohio; materials: stone and plaster, slate roof, furnace, grates, mantels, stained glass, etc.; cost \$6,000.

Architects John H. Boll & Co. report as follows: For A. G. Brunsmann, Grand avenue, Price Hill, Cincinnati, a residence; materials: pressed brick, terra cotta, slate roof, hardwood, gas, plumbing, furnace, stained glass, etc.; cost \$18,000. For W. L. Granger, attorney-at-law, Cincinnati, two frame residences; materials: frame, shingle roof, gas, furnace, stained glass, plumbing, grates, mantels, etc.; cost \$10,000.

Architect Joseph G. Steinkamp is drawing plans for a large apartment building for Thomas Emery's Sons, Cincinnati. The building will be very complete in its details, and cost in the neighborhood of \$100,000.

Architects Gianini & Moorman report as follows: For Mrs. William Burton, Clifton, Cincinnati, Ohio, a residence; materials: frame, shingle roof, grates, mantels, furnace, stained glass, gas, plumbing, etc.; cost \$10,000.

Architect John P. Striker has prepared plans for Miss M. J. Easton (A. D. Easton, insurance agent, Cincinnati); the materials for residence will be frame and brick, slate roof, furnace, grates, mantels, stained glass, etc.; cost \$5,000.

Architect S. S. Godley reports as follows: Residence for A. Freiberg, Cincinnati; materials: brick, slate roof, hardwood, grates, mantels, furnace, gas, plumbing, stained glass, etc.; cost \$18,000. For W. J. Davidson (St. Paul Building, Cincinnati), a residence; materials: buff brick, slate roof, plumbing, gas, grates, mantels, stained glass, etc.; cost \$5,500.

Architects Crapsey & Brown: Have prepared plans for Scott Street M. E. church, Covington, Kentucky; materials: pressed brick, slate roof, hardwood pews, etc., hot-air furnace, stained glass, gas, plumbing, church furniture, etc.; cost \$30,000. Also plans for the Lincoln Park Baptist church; materials: either pressed brick or stone, slate roof, gas, steam heat, stained glass, organ, etc.; cost \$40,000. This church will be quite an innovation in church architecture and construction, provision being made for many social features, in the way of reading and other assembly rooms.

Cleveland, Ohio.—More activity has been shown in architectural and building circles during the month of January than was shown during nearly the whole of 1894. Many projects are being advanced, that have more than talk behind them. Steps are being taken that will soon culminate in a new city hall, public library, chamber of commerce and probably an art gallery.

Benjamin S. Hubbell, a recent graduate and post-graduate of the architectural department of Cornell University, has opened a most conveniently and neatly arranged office at 1001 Garfield block. Mr. Hubbell is the president of the Cleveland Architectural Club.

Messrs. Kirtland K. Cutter and Karl G. Malmgren, from Spokane, Washington, have recently opened an architectural office in the Garfield block.

Preparations are being made to erect a business block upon the site known as the Convent property on Euclid avenue; C. H. Strong, Cuyahoga building, is the local representative of a New England syndicate that is building the block; McKim, Mead & White, of New York, are the architects; the building will have a frontage of about 150 feet and at present only five stories will be built; five stores will be occupied on Euclid avenue and 60 feet of the building will run through to Prospect avenue.

Architects Lehman & Schmitt have under construction a fine stone and brick residence in East Cleveland, Ohio, for J. M. Henderson.

Architects Coburn & Barnum have prepared plans for and are securing bids upon a seven-story—steel, brick and terra cotta—store and office building, for Henry C. Rouse, to be built on Superior street, between Seneca and Bank streets; it will be 52 feet 6 inches by 154 feet in size; gravel roof, steam heat, two passenger and one freight elevators; plumbing; the front hallway will be in marble and mosaic; cost \$100,000.

Architect C. F. Schweinfurth, 33 Blackstone building, has prepared plans for a stone library building for Western Reserve University, to be built in English Gothic style; the main part of the building will be 33 by 94 feet in size and two stories high, with one-story wings on either side 27 by 37 feet in size; the building will be equipped with every modern device for convenience in library work and will have a stack room to hold 38,000 books. The building will be a gift to the university by H. R. Hatch, of H. R. Hatch & Co., and will be known as the "Hatch Library."

Architect J. N. Richardson, 204 Superior street, has just let contracts for a \$15,000 four-story brick carriage manufactory, at the corner of Woodland avenue and Maple street, for Mr. Beaber; the building will be 51 by 108 feet.

Architect C. F. Cramer, 89 Euclid avenue, has let contracts for a \$30,000 carriage repository, for the J. O. Greene Carriage Company; the building will be of brick, gravel roof, Georgia pine finish and will be four stories high.

Architect F. C. Bate is receiving figures for a \$35,000 building for the Standard Lighting Company, to be built on Perkins' avenue; the building will be about 60 by 200 feet in size; to be of brick, gravel roof, and will be three stories high.

Architect E. E. Smith, 44 Euclid avenue, reports: A \$7,000 frame residence on Bolton avenue, for Mr. Z. S. Stocking; slate roof, furnace heat, part hardwood finish, mantels and grates, plumbing, gas, and electric bells.

Architect W. S. Dutton, 813 Society for Savings: Has just let contracts for a building on Sheriff street; to cost about \$10,000.

Architect Henry J. Harks reports: A frame residence building on Willson avenue for Frank Buttner; it is 36 by 66 feet in size, slate roof, hardwood, hot-water heat, and will cost \$5,000. For Mr. Frank J. Dillhoefer, he is building a modern two-story frame dwelling on McBride street; hardwood, hot-water heat, and plumbing. He also has at Elmwood City, Pennsylvania, a frame church; furnace heat, modern conveniences, seating, etc.

Architect A. N. Oviatt, the Arcade: Has under process of construction five frame dwellings on Euclid avenue, for the Real Estate and Building Company, to cost from \$8,000 to \$10,000 each; they are frame, slate roofs, furnace heat and every modern convenience.

Architect Frank B. Meade, Garfield block, reports: A \$10,000 frame residence for Mr. H. C. Corsar, at Akron, Ohio; it will be 49 by 50 feet in size, and will be in the Colonial style, slate roof, hot-water heat, all modern improvements. For Capt. F. A. Kendall he has under process of construction a frame residence on Cornell street, 42 by 57 feet in size; shingle sides and roof, hardwood finish, mantels, hot-water heat, plumbing, electric bells and everything modern; cost \$8,500. For Mrs. Cline, of Norwalk, Ohio, he has a \$5,000 modern frame residence.

Architect A. Kohler, 8 Euclid avenue, reports: A \$50,000 opera house, at Erie, Pennsylvania, nearly completed.

Denver, Colo.—Architect W. E. Fischer: For C. B. Van Zant, a two-story brick dwelling; size 29 by 45 feet; cost \$5,000.

Architect Dan Woods: For the W. P. McQuown Company, a two-story residence; size 30 by 40 feet; brick; cost \$5,000.

C. H. Benedict will erect a two-story brick dwelling; size 30 by 48 feet; cost about \$6,000.

Twenty-seven permits issued in January, \$35,400.

Detroit, Mich.—Architect William Joy: For William W. Hannan, a three-story brick store and flat building, to be erected on north side of Michigan avenue near Twelfth street; cost \$20,000. For Edgar S. Dean, a two-story brick residence, to be built on corner of Second and Pingree avenues. Also plans for a large apartment house on corner of Brush and Watson streets; size 125 by 90 feet; pressed brick and stone trimmings; cost \$40,000. Also a four-story office building on south side of Elizabeth near Woodward; size 25 by 90 feet; buff pressed brick and Ohio buff stone trimmings; to cost \$10,000.

Architects John Scott & Co.: For John Scott, a five-story brick factory on River and Sixth streets; size 50 by 80 feet; cost \$10,000.

Architects A. C. Varney & Co.: For R. E. Frazier, a brick residence on Woodward and Josephine avenues; cost \$7,000. For the Wildwood Cemetery Association, a field-stone chapel, keeper's lodge and gateway; to cost \$10,000. For John Mellish, a two-and-one-half-story brick residence on Delaware avenue near Woodward; cost \$5,000. Also a two-story frame dwelling, stone foundation and first story, on Trumbull avenue corner of Baker street, for J. Thomas Gibson.

Architect J. E. Mills: For Dr. T. W. Robbins, a two-story brick residence on Forest avenue near Second; to cost \$8,000. For E. C. Van Leyen, for the Highland Park Driving Club, a grandstand, 160 by 50 feet in size; cost \$7,500. Also plans for a three-story brick apartment dwelling on Third avenue near Forest avenue; size 80 by 90 feet; pressed brick and stone trimmings; to cost \$45,000.

Omaha, Neb.—Building operations are considerably on the mend and business appears favorable for the spring. A number of nice buildings are in prospect for the Fair Grounds, to cost about \$50,000; a \$10,000 opera house, a large new hotel, and quite a number of smaller buildings. The Builders' and Traders' Exchange has elected the following officers for the year 1895: J. W. Phelps, president; J. W. Percival, treasurer; J. F. Smith, vice-president; W. L. Wedge, secretary. Directors—C. Baxter, Thomas Herd, C. W. Hull, M. B. Copeland, John H. Harte, W. M. Dodge.

Pittsburgh, Pa.—Architect J. L. Beatty: For James Hardie, a five-story factory; size 100 by 60 feet; brick and stone, tin roof; to cost \$30,000.

Rochester, N. Y.—Architect W. Foster Kelly has built a stone and frame residence for Thomas Lewis, Granger place; to cost \$10,000. Also a house on Seyle Terrace, for same party. A brick supply house for Rochester Fire Department; to cost \$6,000. Brick block for William Wheley, corner Grand and Webster avenues; cost \$15,000. Frame residence for Henry Baker, on Alexander street. Frame residence for J. C. Freidell, Hammondsport, New York. Frame flats for Thomas Hollihan, on Acoit street; to cost \$7,000. Residence for John Swanton, Union street; cost \$5,000.

St. Louis, Mo.—Architect J. S. Wees: For N. Brown, a two and one-half story dwelling, size 36 by 57 feet; brick and stone, with slate roof; to cost \$15,000.

Architect A. B. Ridington: For John P. Boyce, a two and one-half story brick residence; stone foundation, size 24 by 50 feet; cost \$5,000.

Architect W. A. Sprague: For F. L. Sprague, three two and one-half story brick dwellings; slate roof, size 78 by 35 feet; to cost \$12,000.

Architect J. B. Legg: For Mrs. H. D. Pittman, two two-story brick and stone residences; size 40 by 45 feet; cost \$8,000.

St. Paul, Minn.—Architect A. F. Gauger is preparing plans for C. E. Dickerman, for a four-story business block; to be erected corner of Sixth and Minnesota streets; the building to be brick with stone foundation.

THE INLAND ARCHITECT AND NEWS RECORD

Vol. XXV.

ADVERTISERS' TRADE SUPPLEMENT.

No. 1

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JOSUE SMITH SOLAR, Architect, Santiago de Chile.

UNIVERSITY OF CALIFORNIA, Department of Drawing, Berkeley, Cal.

MILLARD F. DAVIS and HARRY C. RAYNES, Architects, 49 Hildreth building, Lowell, Mass.

PLANS INVITED.

The Public Library Board of Champaign, Illinois, are to erect a library building, the cost of which is not to exceed \$30,000. Architects wishing to submit plans, and who desire particulars, are invited to correspond with H. S. Capron, secretary, Champaign, Illinois.

A CALENDAR WORTH HAVING.

Almost everyone has use for a calendar, and by the same token, they ought to have one that is of some use. A calendar that you have to study or "set" has little excuse for existence. One we like is that published by N. W. Ayer & Son, the newspaper advertising agents of Philadelphia.

The handsome copy for 1895 carries on its seal their famous motto, "Keeping Everlastingly At It Brings Success," which will alone each day be worth to all who use it far more than the price of the calendar. The size is generous, and the work a beautiful specimen of the printers' art. Each day, as is becoming to such an important slice of time, is printed large enough to be read across a room. Then, too, the matter on the flaps deals with a subject in which there is a growing general interest.

That the demand for this calendar increases each year, we can easily understand, for we do not believe that anyone who has spent one year in company with it, will be willing to spend another without it.

The price is 25 cents, delivered everywhere postpaid, and in perfect condition.

CALENDARS.

Vierling, McDowell & Co., manufacturers of architectural ironwork, have issued an appropriate calendar for 1895. The illustrations represent an interior of a modern steel frame building in process of construction, the detail of an iron stairway, molders at work on a casting and an exterior view of Vierling, McDowell & Co's factory. The

whole presents a pleasing and interesting appearance.

Samuel H. French & Co., manufacturers of paints and builders' supplies, issue a calendar illustrating their extensive works in Philadelphia and the Reading Terminal Station, in the construction of which their materials were used. A line at the top, "Established 1844," adds interest to this yearly record of fleeting time.

AN IDEAL HEATER.

Oil heating stoves have become universally popular of late; with this as with other things, the best is the cheapest.

The A. C. Barler Manufacturing Company, 111-113 Lake street, have earned a reputation for their "Ideal," not only in this country, but abroad, as being an article of more than ordinary merit. It is entirely free from the objectionable odor of oil, and circulating and heating as it does most of the air in the apartment entirely separate from the flame, it is recommended by physicians as a sanitary heater of the highest type. Their booklet, "A Reason Why," relating to this heater, is an exceedingly artistic production, and will be gladly mailed to any address on application to them.

CANTON HEATERS.

The J. H. McLain Company have moved their Chicago office from Lake street to 58 Dearborn street, where they are showing their full line of heaters for steam, hot water and hot air. In addition to their well-known Humber and Cambridge heaters they are putting on the market for this season five distinctively new types of heaters—the Amherst and Princeton for hot water, the Cornell and Rugby for steam, and the Oxford Perfect Blast for hot air. The Chicago office of the company will remain under the efficient management of Mr. C. B. Matteson.

TRADE NOTES.

THE Southern Heating Company has been incorporated under the laws of Kentucky, to manufacture and erect steam and hot-water heating apparatus. The headquarters of the company are at Louisville, Kentucky. The stockholders, directors and officers are as follows: President and treasurer, Walter E. Mellinger, heating engineer, member of the M. S. and H. W. F. Association of the United States, and for nearly ten years connected with Baker & Smith Company, of Chicago and Louisville; vice-president and superintendent, David O. Gorman, late with Baker & Smith Company; secretary, M. H. Mellinger. The company will handle all standard articles pertaining to heating and ventilating, and will also act as special agents for the Canton heaters, the Buffalo Forge Company's fan blast, the Powers temperature regulator and the Deane pump.

THE Stokes & Parrish Elevator Company, of Philadelphia, in their new catalogue, give some very valuable suggestions to architects relative to the planning of elevator space in buildings. This company's experience of over twenty years in the manufacture of elevators and machinery gives the weight of

authority to their advice. Their catalogue illustrates the Ellithorpe air-brake safety device, which will gradually stop the car; also the Stokes & Parrish centrifugal governor, which acts automatically in conjunction with the air-brake. Their patent hand-wheel device for starting and stopping an elevator has direct connection with and control of the main valve and has all the advantages of the lever device, without the use of any intermediate valve. It is simple and easy of control and stops and starts the car with certainty and gradual motion.

A SYSTEM of wire lathing is now considered indispensable for fireproofing where wood is used in interior construction. The Gilbert & Bennett Manufacturing Company, of Chicago and New York, have issued a pamphlet descriptive of their "G. & B." system of wire lathing with Hammond's metal furring, in which all the advantages of metal as compared with wood lathing are fully set forth. Where wood lath are used there is always great risk from fire and constant danger of falling plaster. Wire lath without furring was the first step in advance. Following this has come the system of metal furring, in which steel rods fastened to studs or joists, at a distance of one-half to one inch for an air space, are used as a stiffening base on which to stretch the metal lath. The plaster is thus given a perfectly firm and open hold. The advantages of the "G. & B." system are fourfold. An air space is afforded, which insulates the timbers; the rods and bearings under the lath are so small that no "dead surface" remains to repel the mortar; the furring stiffens and supports the lathing, enabling it to resist the trowel; the surface when finished is even and regular and as rigid as stone.

RAILROAD NOTES.

MARDI GRAS, FEBRUARY 25 AND 26, 1895. —The Queen & Crescent Route will sell tickets from Cincinnati, Lexington, Junction City, and intermediate points, account Mardi Gras, at one fare for the round trip. Selling February 19 to 24, inclusive, good until March 15 to return. Be sure to travel via the Queen & Crescent. Chas. W. Zell, D. P. A., Cincinnati, Ohio; W. A. Beckler, N. P. A., 111 Adams street, Chicago, Ill.; C. A. Baird, T. P. A., Detroit, Mich.; W. W. Dunnavant, T. P. A., Cleveland, Ohio.

THE Queen & Crescent Route offers its patrons a rare chance to secure at a low price that handsome publication, Mrs. John G. Carlisle's "Kentucky Cook Book." It is a compilation of new recipes never before published. A book of 256 pages, containing a careful selection of practical cookery suggestions to every housewife in the land. An *edition de luxe* printed on heavy enameled paper and bound in white vellum, with chrysanthemum design on cover in five colors with gold, and in every way a most elaborate specimen of artistic book-making. Mrs. Carlisle has been assisted in this collection by Mrs. Grover Cleveland, Mrs. Walter Q. Gresham, Mrs. General Crook, Mrs. W. A. Dudley, and other housekeepers of equal note. The retail price is \$2.50, but we will send it to any address postpaid, on receipt of 75 cents. Don't miss the opportunity. Address, W. C. Rinearson, G. P. A., Cincinnati, Ohio.

SAYLOR'S PORTLAND CEMENT

MANUFACTURED BY COPLAY CEMENT CO., ALLENTOWN, PA.

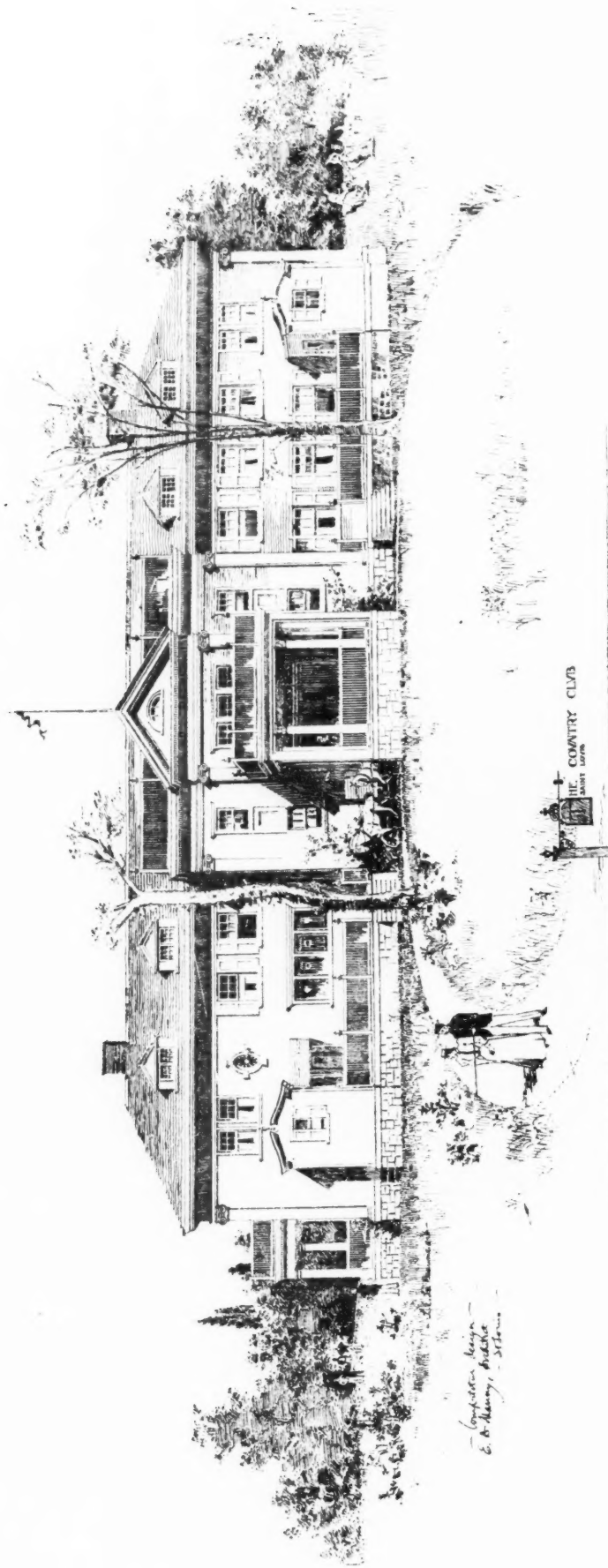
Used on the heaviest engineering work constructed in this country during the past twenty years—13,000 bbls. New York Docks, 15,000 bbls. Hudson River Tunnel, 12,000 bbls. Mississippi Jetties, 16,000 bbls. Edgar Thompson Steel Works, 10,000 bbls. Reading Railroad Terminal, Philadelphia, and many other places. Guaranteed the most economical for making Artificial Stone. Excelling all others for fineness, strength and constancy of volume. Prices, testimonials, and blue-print showing test on Portland Cements used on public work in Philadelphia, sent on application to the Selling Agent,

COMMERCIAL WOOD & CEMENT CO., 304 Girard Building, PHILADELPHIA.

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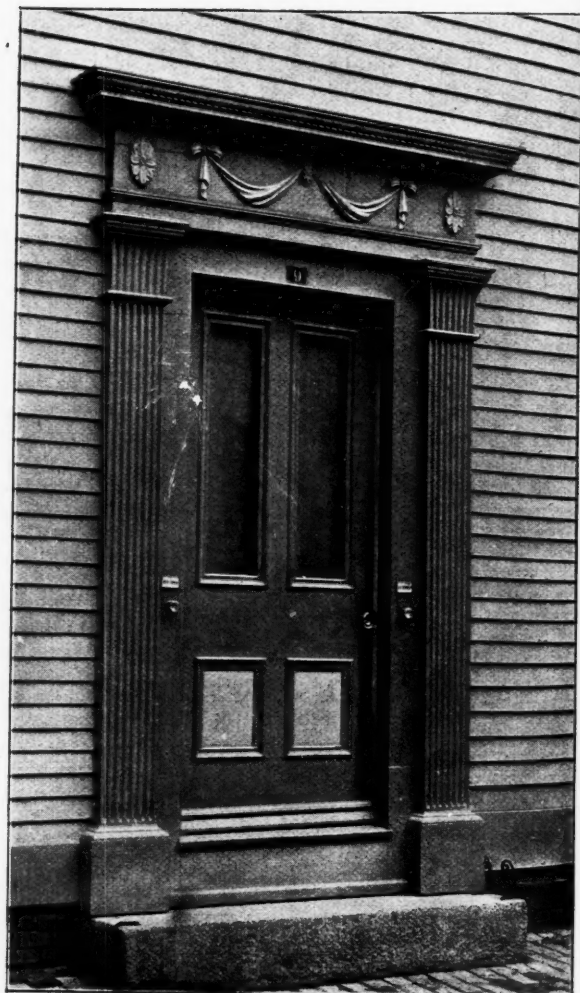
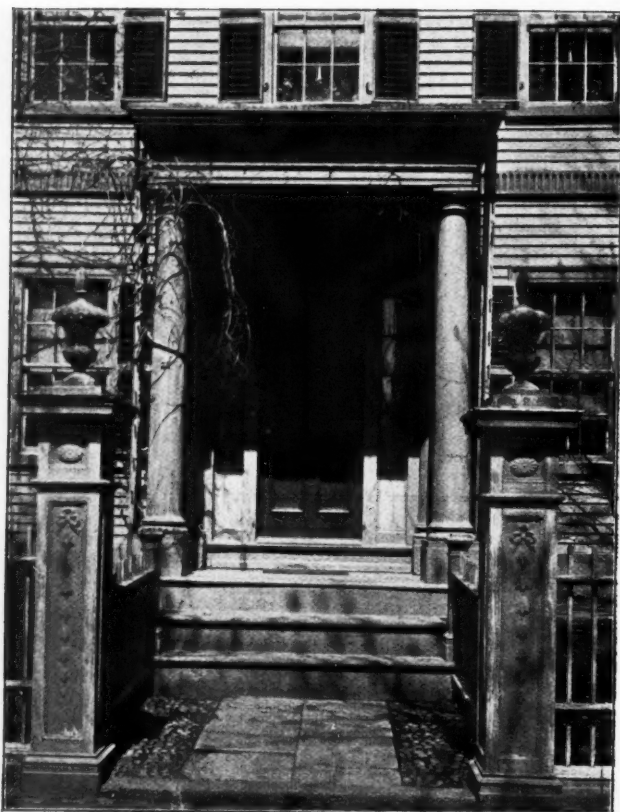
PEN AND INK RENDERING, EXAMPLES OF CLASSICAL ARCHITECTURE.

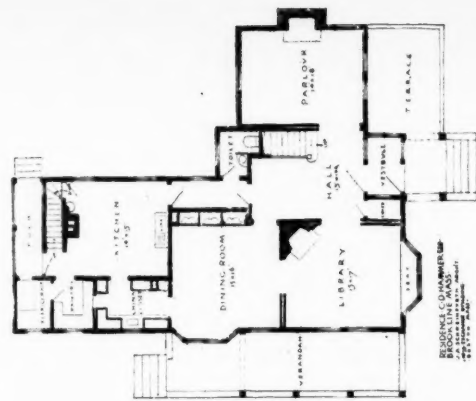
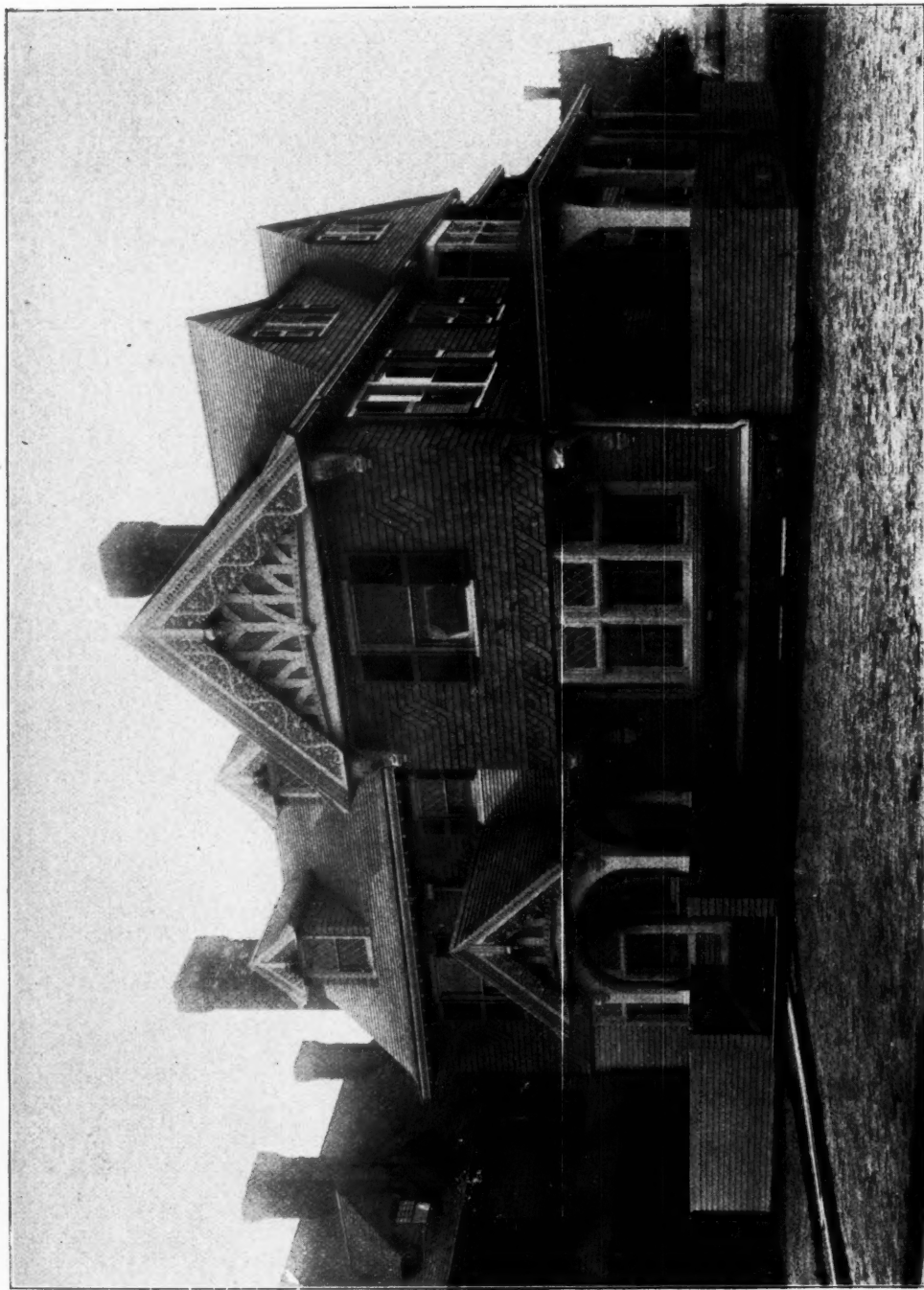




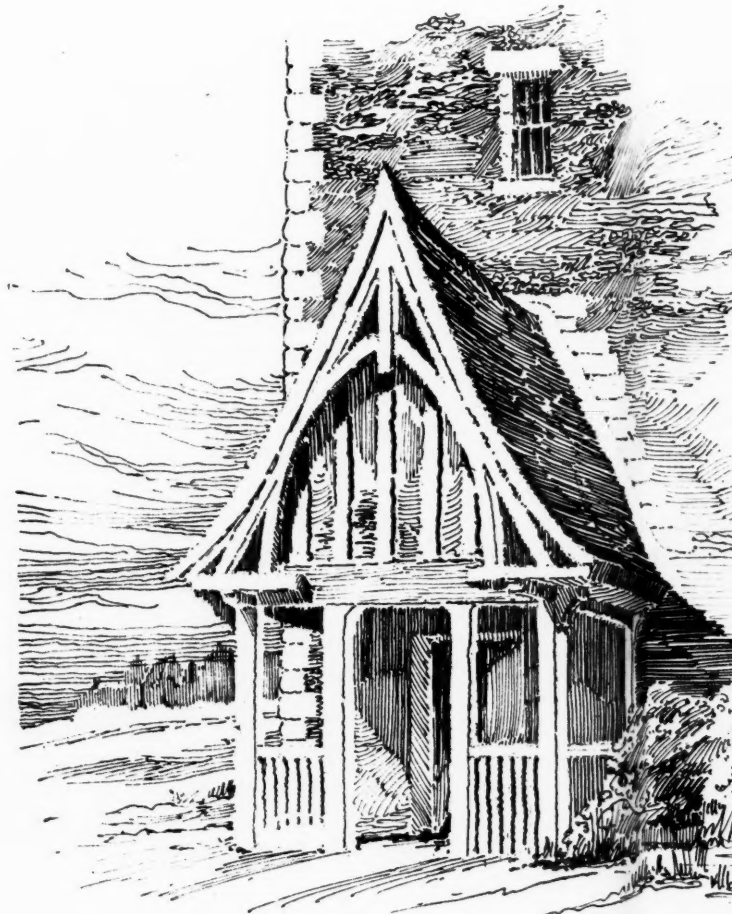
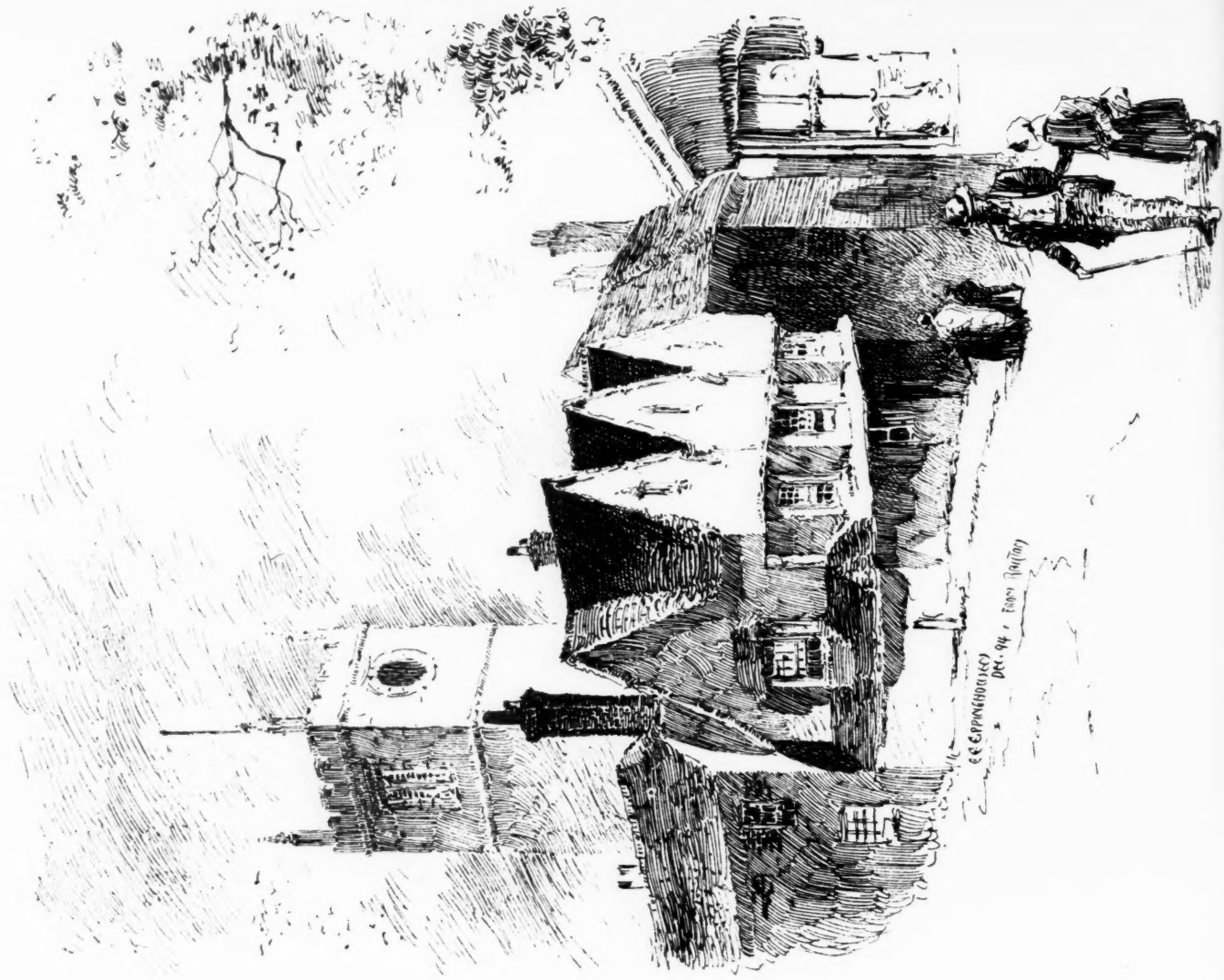
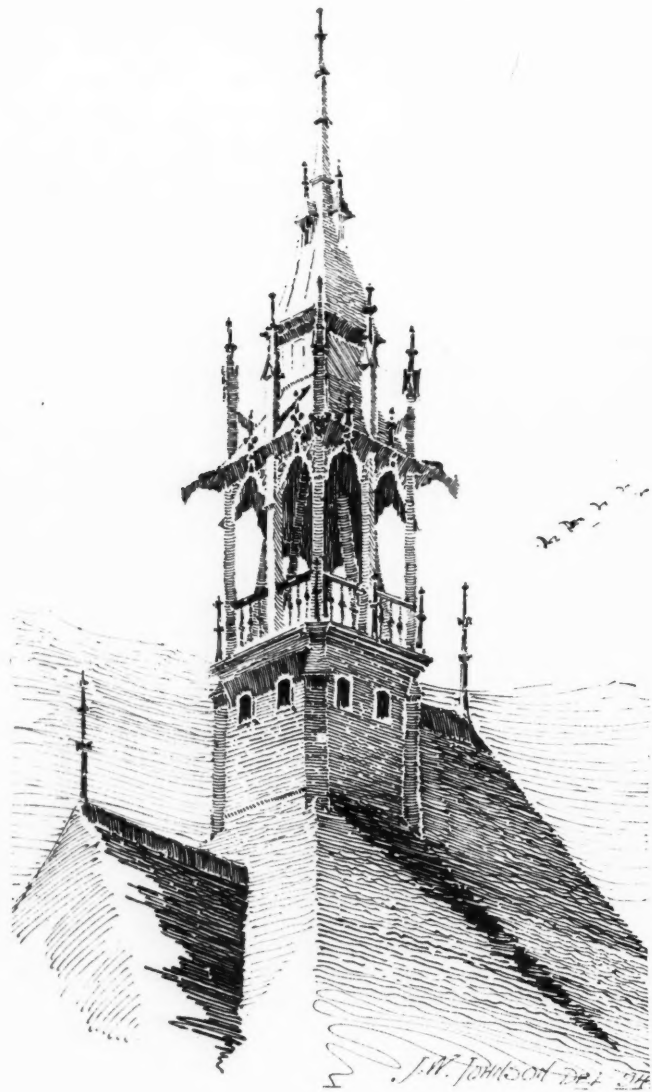
GATE LODGE, CHERBOURG, FRANCE.

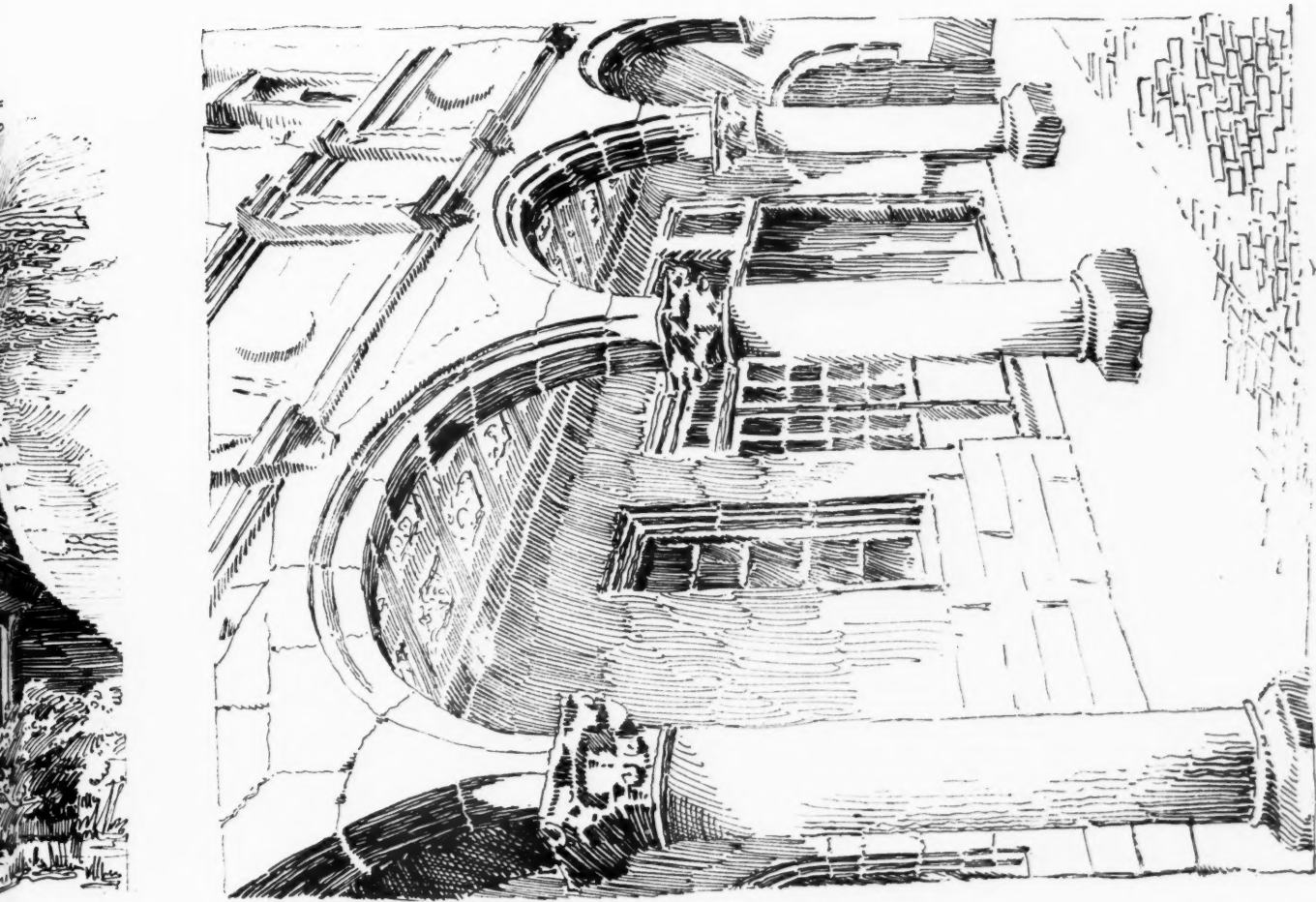
RENDERING BY BIRCH B. LONG, CHICAGO.



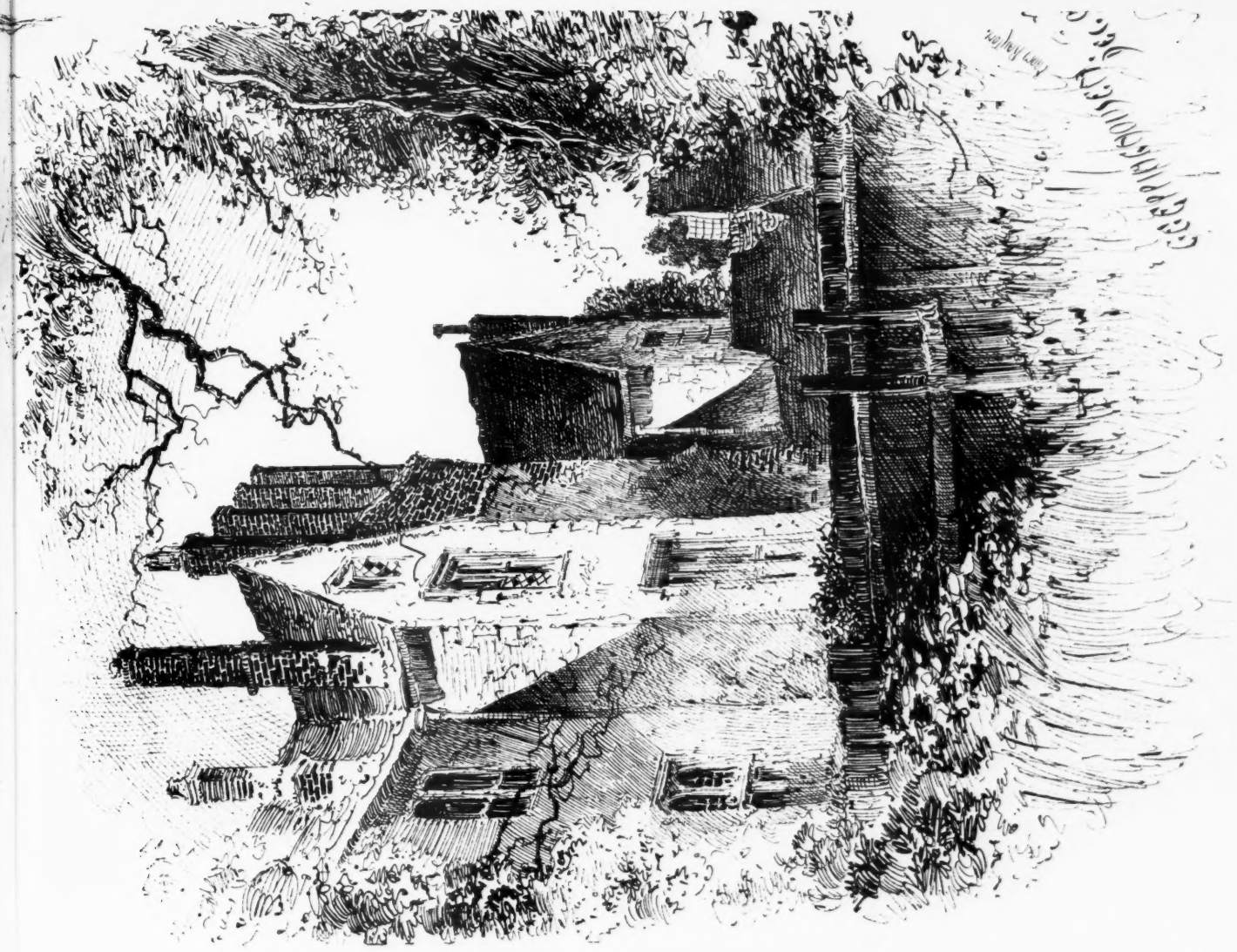


A RESIDENCE IN BROOKLINE, MASSACHUSETTS.
J. A. SCHWEINFURTH, ARCHITECT, BOSTON.





J.D. BAARS.
1894.



PEN AND INK RENDERING, EXAMPLES OF CLASS WORK, CHICAGO ARCHITECTURAL SKETCH CLUB.



RESIDENCE OF W. H. REID, CHICAGO.

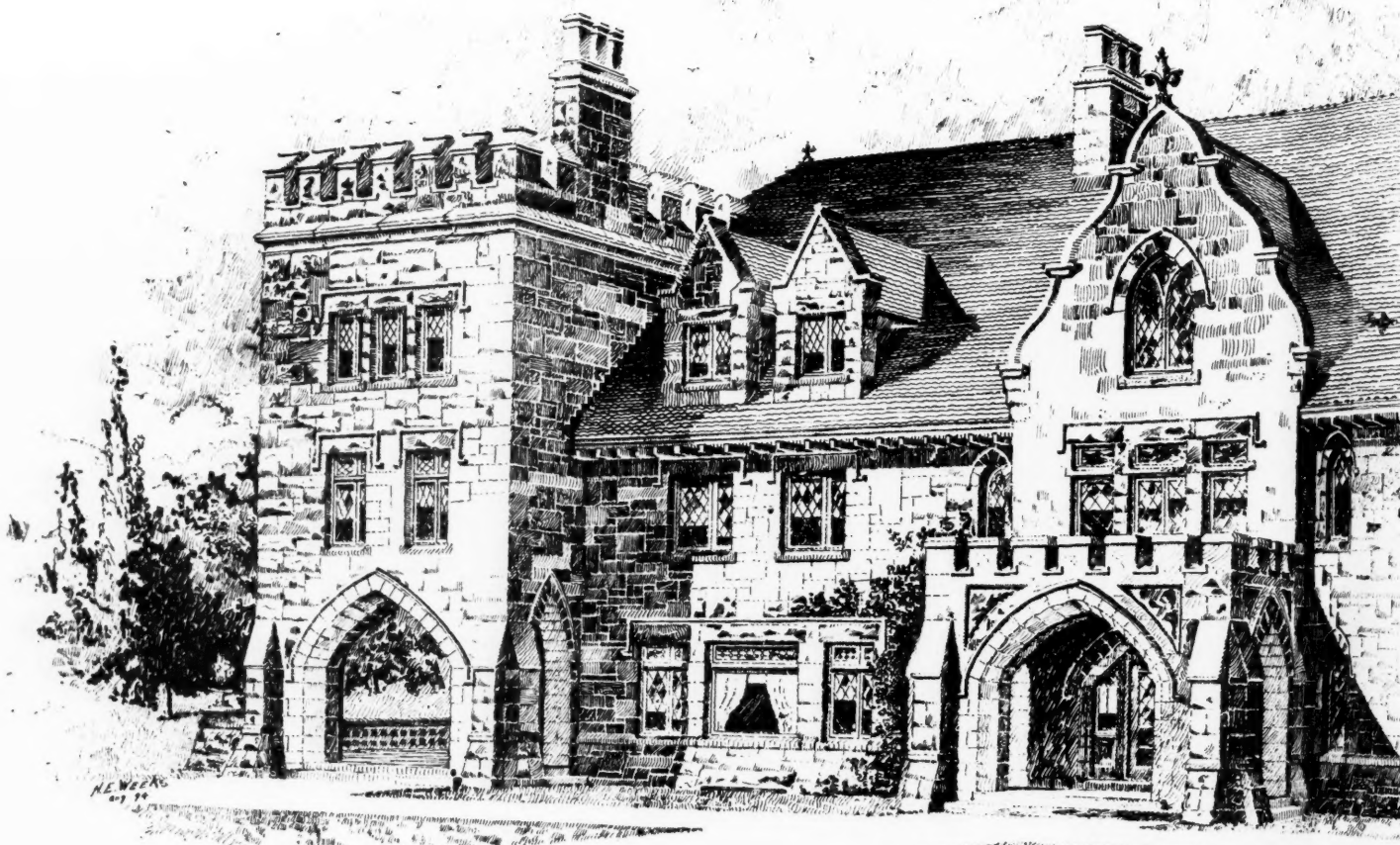
BEERS, CLAY & DUTTON, ARCHITECTS.



THE CUMMINGS HOTEL BUILDING, CHICAGO.

T. O. FRAENKEL AND RICHARD E. SCHMIDT, ARCHITECTS.

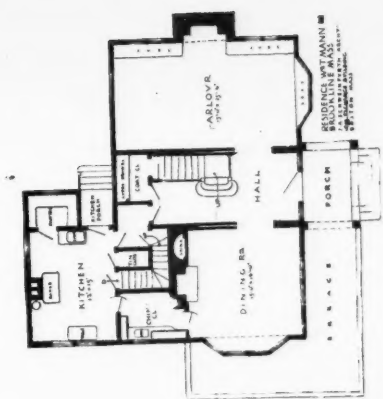
INLAND ARCHITECT PRESS.



- BRIGHTWOOD -
BRISTOL — CONN.



H. NEILL WILSON, ARCHT.
PITTSFIELD, MASS.

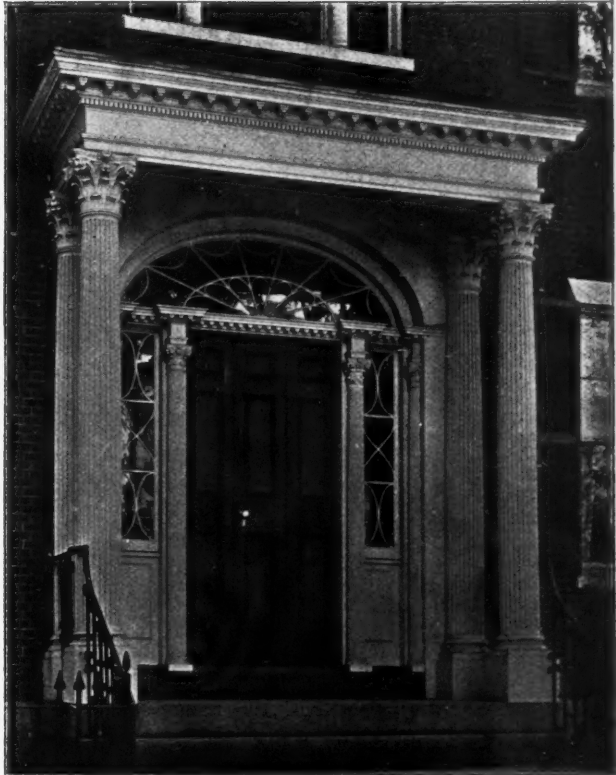


A RESIDENCE IN BROOKLINE, MASSACHUSETTS.
J. A. SCHWEINFURTH, ARCHITECT, BOSTON.

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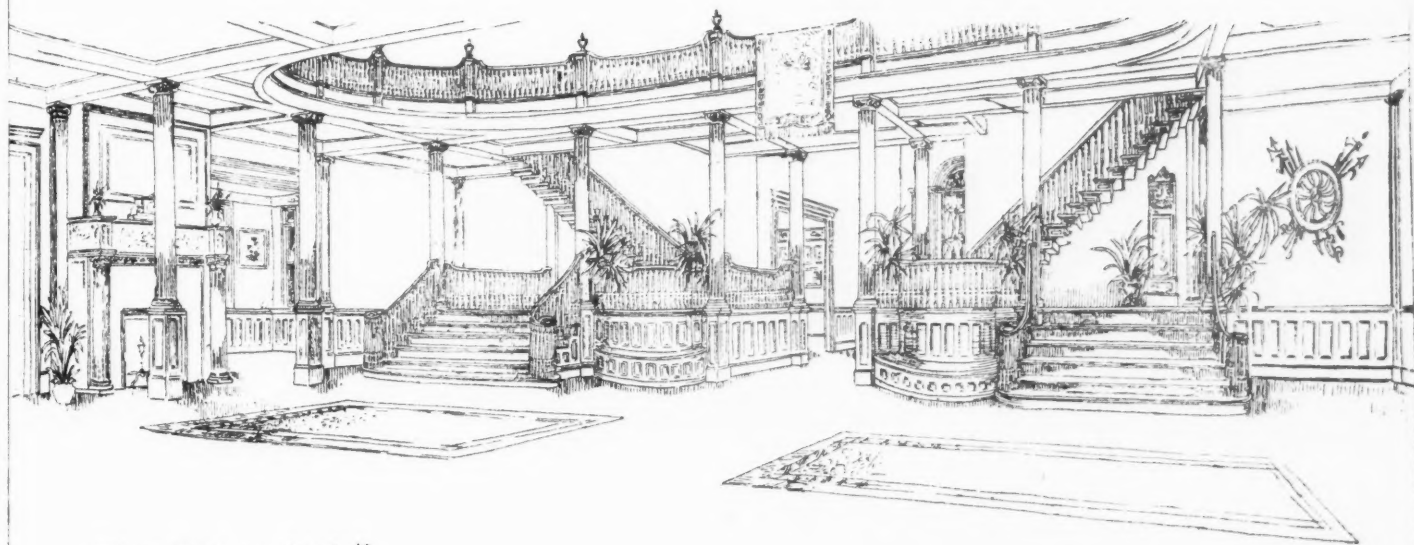




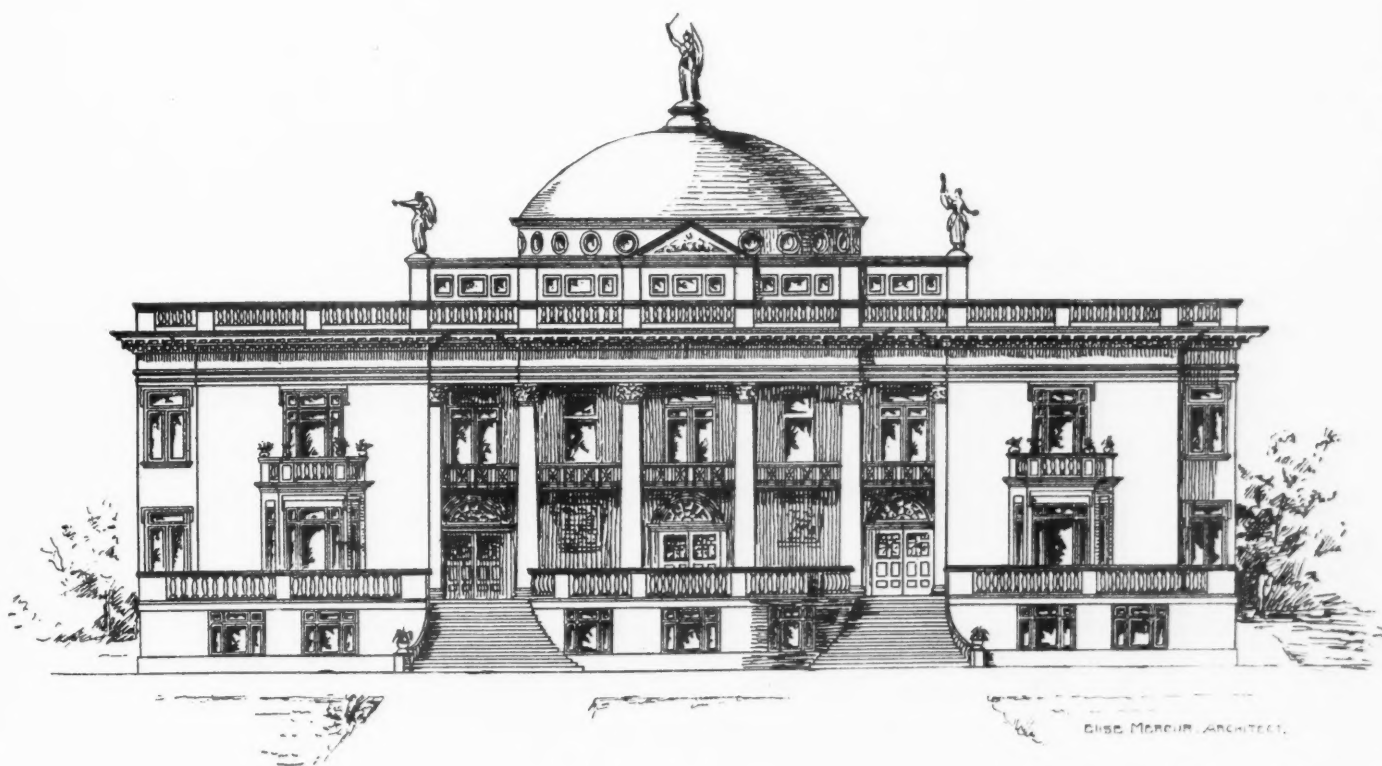
SMALL TEMPLE OF SAN PIETRO, IN MONTORIO, ROME.

RENDERING FROM PHOTOGRAPH BY EDWARD T. WILDER, CHICAGO.

Sketch of
Reception Hall in
Woman's Building.
Cotton States and International Exposition
Atlanta Ga



Elise Mercur Architect
Pittsburgh Pa.

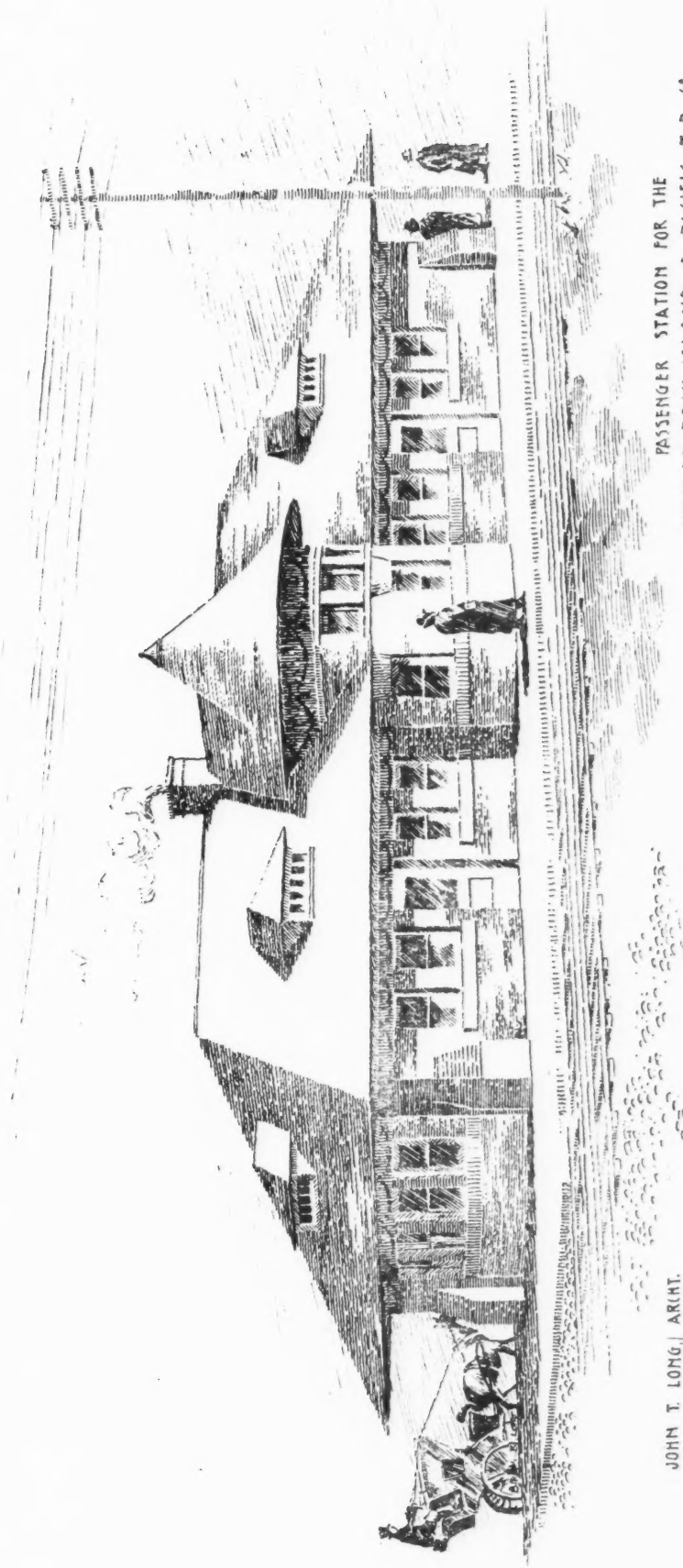


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WOMAN'S BUILDING, COTTON STATES EXPOSITION, ATLANTA, GEORGIA.

ELISE MERCUR, ARCHITECT, PITTSBURGH, PENNSYLVANIA.





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