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JULY 28, 1900.



SUMMARY:—

Electric Fire-pumps for the Fire-department.—The wider Distribution of fixed Fire-apparatus.—Bids for completing the New York Hall of Records returned unopened.—Further Delay for the New York Soldiers' Monument.—An illegally issued Permit and its Consequences.—An Average Architect's Income.—The Military Architects of China.—The Poulsen Self-registering Telephone.—Irresponsibility of the Building-owner for Elevator-accidents.	25
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THE *Electrical Review* suggests an advance, now easy to make, toward providing Manhattan Island with more efficient protection against fire. It points out how easily, now that the electric-power cables for surface and elevated cars are installed, these could be furnished with public junctions to which the fire-department could instantly connect the electric fire-pumps with which the department could be equipped in place of the heavy and dangerous fire-engines that have now to be drawn through our streets at a gallop, endangering the lives of those upon the street and the abutting property, in peril in the summer time from the boiler-sparks that may fall upon the window awnings, to say nothing of the risk to the firemen themselves, who are often hurt through the overturning of their top-heavy machines. Powerful electric-pumps capable of throwing several streams could, being lighter, be drawn through the streets more safely and at greater speed than the present cumbersome steam apparatus, and more of those precious "first moments" could be saved. The suggestion seems to us so sensible that we hope not only the New York fire-department will act on it, but other departments wherever electric-power cables are accessible. But the idea, good as it is, does not go far enough. The ubiquity, so to speak, of electric force nowadays suggests the possibility of putting the art of fire extinction on a more modern and scientific footing. The rush through crowded streets of ponderous fire-apparatus is uncivilized, and though it is exciting and picturesque it is not worth while to perpetuate the practice simply because of these attributes. It will be small compensation to the pedestrian to know that he has been maimed by the passing lighter electric-pump apparatus going at higher speed, and not by the heavier steam apparatus travelling at a somewhat slower rate. The citizen who succeeds in banishing these Juggernaut cars from our streets in all but exceptional cases will deserve well of his fellow-men. The powerful portable apparatus will probably always be needed to meet the exceptional circumstances and to cope with unusual conditions: but for most conditions it seems as if, now that electric power is so widely distributed, small stationary electric fire-pumps might take the place of the present apparatus to great advantage both to life and property.

IT has been our fortune to see from our own office-windows the outbreak of fire in three or four neighboring buildings, and observe not only how slow, seemingly, the first engine was in reaching the spot, but how agitatedly impatient the policeman on post was, and how simple a thing it would have been for him to put out the fire if he had had fire-apparatus at hand under his own control. It seems to us the time has come for

the establishment of auxiliary fixed fire-apparatus subject to the control of the policeman on post and the fireman on patrol duty, and that electricity can be called on to provide the needful power where hydrant-pressure is inadequate. To equip each of the four streets that bound a square with a serviceable length of light hose and a single electric-pump for each block would, of course, call for an enormous outlay, but at the same time the protection afforded would be commensurate, and very possibly building owners who now furnish their own buildings with fire-hose upon each floor would be willing to provide at their own expense the light hose we speak of for service from the street, and there is no building where the needed small space for the tunnel or tube needed to receive in unbroken lengths four or five hundred feet of light hose could not be provided without inconveniences, along the whole length, say, of a party-wall. A policeman or a fireman on patrol with such an apparatus, supplemented by extra hose on a hand-reel kept at a convenient place in the block, could extinguish many a fire before the distant department apparatus could reach the spot, and besides preventing destruction by fire, would avoid the great damage that is usually caused by the use of the large engine streams.

MR. J. R. THOMAS, architect of the new Hall of Records in New York, is not having an easy time in getting that structure into the condition where it can be occupied as intended, and we fear that he may be equally hampered in collecting payment on account of his professional services, as the present financial watch-dog of that city is a person of a very stern virtue. Our readers will recall that just a year ago Mr. Thomas was informed by the Mayor and his advisers that his scheme for treatment of the interior of the building was altogether too elaborate and costly for them to approve, and he was instructed to go over his plans and drawings again and effect a saving of at least a million dollars on his own estimate of their cost, two-and-one-half millions. We infer from the time that has elapsed that the unfortunate architect has found his task a very complicated and tedious one, and we can conceive the relief with which he knew that the day for opening the bids had come at last; but we shrink from imagining his feelings when he found that they were not to be opened, after all, because certain contractors entered complaint that through the obstructiveness of the architect they had not been allowed time and opportunity to examine the drawings, while certain favored contractors had been allowed to "take the drawings home." This last complaint we fancy was made by an old-fashioned contractor who supposed that all figuring had to be done upon a single set of drawings—the original ones—as used to be the case in the days before the introduction of the blue-print and manifolded typewriter. As New York officialdom has selected the Hall of Records as the public proof of its great virtue, no matter how much the unfortunate architect might suffer, it probably welcomed another chance of exhibiting its Spartan virtue, and it was voted that none of the four bids received should be opened, but that the contract should be readvertised. The fact that this ruling lays the city open to suit by the four bidders who have complied with the original invitation is a matter that causes the officials no distress: perhaps, even it may be a move to enable these bidders, if they happen to be political hangers-on of the dominant party, to get fat judgments against the city treasury because of breach of contract.

MR. THOMAS has companions in his misery, for the architects of the City Prison and the designers of the Soldiers' and Sailors' Monument have been treated quite as shabbily, on one pretext and another. The latter gentlemen doubtless felt that the recent dismissal of the injunction against placing the monument on its selected site on Riverside Drive removed the last bar to the orderly progress of their work, and were preparing to award the contract to a satisfactory bidder, when the award was delayed because of the protest of one of the unsuccessful bidders. This party alleged that the successful bid was informal and must be thrown out—probably to his own advantage—because a sample of the marble to be used had not been submitted with the bid. One would think that such an objection as this could be disallowed or admitted in five minutes by the architects or the Commissioners, who must have

been conversant with the fact that a sample of the material was or was not required to be submitted by the terms of the published advertisement or of the contract. But the authorities chose to delay this undertaking once more and ordered the matter to be submitted to the Corporation Counsel, a man greatly skilled in discovering ways of avoiding the doing of things which Tammany prefers should not be done, and Tammany, perhaps remembering the Draft Riot, seems to dislike the idea of a military monument.

It evidently behooves those who have charge of building operations in municipalities which require the issue of permits of various kinds not only to get the number and variety required, but to make sure that the official who issues them actually has the legal right to do so. A suit was recently brought in the New York Supreme Court by a householder on the Riverside Drive, at Eighty-second Street, to compel her neighbor to remove that portion of the front of his house which projected three and a half feet beyond the building line. The owner demurred and exhibited a permit allowing the encroachment, issued by the President of the Park Department. The Court, however, held that the department had no authority to issue such permit, and consequently awarded damages to the plaintiff in the sum of twenty-five hundred dollars. But it would not order the owner of the projecting structure to tear down his front and rebuild it within the proper line, assigning as the reason the fact that the complainant had seen the work of construction going on, had made no complaint and had asked for no injunction, a ruling which sounds as if the Court in question would hold any one blameless for breaking a law unless some one complained at the moment of the infraction.

It is asserted by those who undertake to keep records of the matter that in the first six months of this year, the most active months of the year, the gross estimated cost of new building operations in the New England States amounts to some fifty-three million dollars, a sum respectable enough in itself, but not imposing when the number and wealth of the population is considered. Accepting this statement as accurate, it is possible to deduce from it the maximum average income of the individual architect and ascertain how desirable a profession it is from the worldly point-of-view that architects are following. It is only fair to assume that at least half of the sum to be expended is for buildings of such small size or character that the aid of an architect is not required, and so this part of the total escapes being taxed for the architects' benefit. If architects secure a full five-per-cent commission on the remaining twenty-six millions they have an income of thirteen hundred thousand dollars gross to divide between them, or after deducting the inevitable fifty per cent for office expenses, the net sum of six hundred and fifty thousand dollars. This divided between the three hundred and fifty architects established in New England indicates a possible personal income for each of rather less than two thousand dollars, an income which would enable many professional men to live in quiet comfort and keep up appearances sufficiently to attract new clients. But owing to one circumstance or another this average income is not attainable. In the first place, the work is not evenly distributed, some offices getting a disproportionate share of it and others getting none at all; and in the second place the full commission is not collectable on all the work that architects do, those who have difficulty in getting any work to do being compelled to accept what they can get if they would keep soul and body together; moreover, all work done in New England is not in the hands of New England architects. If, then, the share which falls to the favored few who have the good fortune to do most of the expensive work be subtracted, it will be found that the income of the average practitioner more nearly approaches one than it does two thousand dollars, the income, that is, of the average clergyman, country doctor or book-keeper, upon whose shoulders rest a lighter load of responsibility. The income nominally to be derived from the work undertaken during the less-active last half of the year can be set against losses from disputed accounts, abandoned jobs and so on.

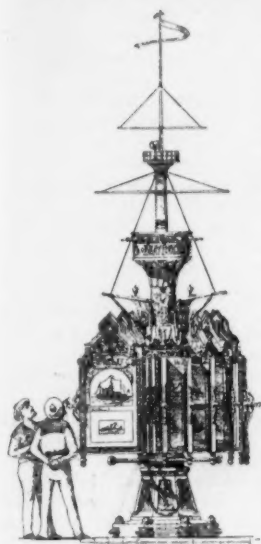
Of course movements in the making of international history are not exactly within the scope of a professional journal, but as all architects, from the time of the ancients down through Leonardo da Vinci to Viollet-le-Duc and later, have taken a quiet and often a lively interest in military architecture, we cannot forbear to call attention to the instruction presently

to be derived from a detailed description of the phenomenal character of the defensive fortifications about the British Legation buildings at Peking, fortifications devised with such incredible skill as to remain sound after being "under continued fire from shot and shell" for two or three weeks, as the astute Chinese diplomats would have us believe.

At the Paris Exposition is shown a device for registering telephone messages, which is already in use in Denmark, and seems likely to be of great value. Although the inventor, M. Poulsen, a Danish engineer, has been several years in perfecting the device, it is, like most deeply studied inventions, very simple. In substance, the registering instrument consists of a steel wire, of the kind known as piano wire, or a ribbon of the same material, which moves between the poles of a small electro-magnet, excited by the telephone current. Every one knows that steel, when magnetized, retains its magnetism indefinitely, and that steel can be magnetized by the action of an electro-magnet upon it. Whenever a current passes through the telephone wire, and around the electro-magnet, the latter is excited, and permanently magnetizes the spot on the steel wire, or ribbon, which is at that moment next its poles. A strong current strongly magnetizes the adjacent portion of the wire and a weak current magnetizes it weakly, so that, as the wire or ribbon is drawn between the poles of the magnet, it is impressed with a variegated succession of spots, which are permanently magnetic, and do not change in their relative position or intensity. In order to read the message impressed on the recording wire, it is only necessary to draw the latter, at a uniform speed, between the poles of another small electro-magnet, interposed in the circuit of the receiver of another telephone. As the differently magnetized spots pass the magnet poles, they induce currents, which repeat in the receiver of the instrument the message originally recorded. The magnetism of the record wire is not injured by the operation of reading, and this may be repeated indefinitely. By using a flat steel band instead of a wire, the width of the spots can be increased, so that the message can be read from the record in several receiving instruments simultaneously. The irregularly magnetized wire or band, simple as it is, gives a record of extreme delicacy. The impression produced by several persons talking at once is recorded and reproduced so clearly that the different voices can be distinguished and the contribution of each to the conversation separately understood. There is no difficulty about making the motion of the record wires automatic, so that a person can put a wire in his telephone, and go away and leave it, reading, after his return, the messages that have been transmitted through it, and the wires recording important conversations may be preserved. The other wires, which it is unnecessary to preserve, may be restored to their pristine condition by passing them at a uniform speed between the poles of an electro-magnet which is kept constantly excited. The steady and strong current obliterates the impressions made by the weak and irregular one, and the wire is then ready to be used again.

An editorial writer of the New York Times is very much agitated by the decision in an elevator-accident suit [Egan vs. Berkshire Apartment Association (31 N. Y. S. R., 545; 10 N. Y., Supp. 116)] which states that "the owner of a building is not bound to so provide for the safety of passengers that they shall encounter no possible danger and meet with no casualty in the use of the elevator," and he asserts his belief that whenever there is an elevator accident it is "prima facie evidence of a negligence which, if attended by death or a bodily injury, can only be regarded as a crime," and consequently the owner of the building should be punished for its commission. As to the writer of the editorial, whom from internal evidence we suspect to be the writer of an article inveighing loudly against the iniquity of assessing salvage claims upon the owners of the salvaged ocean-liner "*Kaiser Wilhelm der Grosse*," because the line of reasoning is so completely reversed, we hope he may never be held to a pecuniary responsibility for any of the accidents for which each man of us is more or less responsible at some time during his life. As to elevator accidents, we find the decision of the New York Court quite in accordance with our own expressed views, for we recall suggesting, some years ago, that owners of buildings served by stairs and elevators should place at the entrance to elevator-cars a notice to the effect that "the owner has provided stairs: elevators will be used only at the personal peril of the user."

SOME PHASES OF PUBLIC SANITATION.



Picture Show-case for the Russian Navy Department. From *Stroitel*.

WE are told that there are no such things as dirt or sin, what are commonly called by those bad names being good, useful material, and strenuous conduct in the wrong places. In our present social condition there are various matters that concern the physical well-being of people who live so near together that they cannot help influencing one another, matters which are partly controlled by public, or concerted action. To call attention to some of these is the purpose of this article. Without discussing the gospel of germs, good or bad, the mysteries of organic chemistry and biology, or the contradictions and complications of vital statistics, it will be assumed in these suggestions about public sanitation that cleanliness means health, and filth means disease.

As everybody knows, or ought to know, Springfield, the royal queen of the Connecticut Valley, the home of the United States Arsenal, of the doughty Springfield Republican, and the ubiquitous "Webster's Dictionary,"

is the most beautiful city as to its natural environment, the most civilized city as to its social and political condition, the most artistic city, barring its architecture, in the world, not excepting Chicago and the New Jerusalem. Still, I have ventured to take it as affording concrete illustrations of sundry faults, which, so far as I have been able to observe, exist in many, if not in all, of the provincial cities and towns of New England, not to mention other parts of the country. Concrete illustrations of moral and material matters are more impressive and convincing than abstractions; I could not, in courtesy, hold up the shortcomings of any other city, and I am sure it will be understood that chastisement in my own family, so to speak, is of the loving kind.

So much by way of preface; here is the beginning of this chapter.

We who live in Springfield sometimes indulge in modest eulogiums of its cleanliness, beauty and progressive spirit. Our self-felicitations are usually based upon comparisons with other cities. But it is of no consequence whether we are cleaner or dirtier than our neighbors [of course we are cleaner] if we are a great deal dirtier than we ought to be, and it is unquestionably true that we are inexcusably dirty. We are so dirty that if we really knew what it is to be clean, if we had been clean long enough to have become accustomed to cleanliness, and then, by some magical and malignant influence should find ourselves back in our present condition, we should shut up our shops, send our women, children, old folks and invalids out into the woods, and not allow them to come back until we had been washed and dried and disinfected.

Our principal business street is not the dirtiest street in the city, far from it, neither is it the cleanest; it will serve as an illustration. Certain portions of it, like other streets in the city, are paved with granite blocks. To prepare for these, the bed of the street is excavated to the depth of about eighteen inches, and two-thirds of that depth is refilled with dry sand, into which the blocks are set edgewise. Their adjacent sides are so rough that the cracks between them will average half an inch in width. After the blocks are permanently put to bed and pounded down, those cracks are partly filled at the top with loose sand lightly swept into them. But they are not allowed to remain partially filled. The sweepings from the buildings along the street, the comminuted excreta of horses, dogs and sparrows, soaked and decomposed waste paper, parings of fruit in various stages of decay, cigar stumps and the ruminant results of the chewing habit, are all made into a sort of fluent paste by admixture with sundry fluids, mentionable and unmentionable, which paste is gradually washed by the street sprinklers and by the clean rains from heaven into the cracks between the stones, the cracks being merely conduits leading to the absorbent layer of sand underneath.

The originally clean and innocent bed of sand is rapidly adulterated until it becomes a rich, black, fragrant compost. The only days in the year when this blackness and sin are not brought to the surface in the interest of new sewers, or the rebuilding of old ones, of water and gas pipes, telephone, telegraph and electric-light tunnels, are the thirty-first days of June and November.

When there is a drizzling rain, the paving-stones are covered with a vicious and viscous slime that might have been taken from an old sink-drain or cesspool. A smart summer shower occasionally washes the most of the visible loose material into the sewers, but enough remains in frequent pools to send forth odorous exhalations, until they gradually dry up and are converted into street dust that is carried into all the buildings along the street that have open doors and windows, and into the lungs of all the people that have open mouths and noses.

Instead of giving the streets such a solid foundation, and their surfaces such shape that all the water would run off quickly to the sewers at either side, carrying the unclean sediment with it, the pavement, whatever its character or original form, soon becomes so sunken and hollowed in places that samples of liquid compost are always in evidence during the rainy and sprinkling seasons.

In addition to the local supply of raw materials for the manufacture of filth on our most important thoroughfares, they are constantly receiving accessions from the unpaved courts and alleys that pass behind the buildings. Here is the back-door output from groceries, restaurants of all grades, markets and saloons; here are the gathering places, the battle-fields for cats and dogs, and dumping-grounds for the sweepings that will not be tolerated at the front door. Out of the darkness and the dirt of these unholy regions the wheels of the heavy wagons and the feet of the draught-horses come laden with matter out of place, which is speedily shaken off upon the hard surface of the paved streets; then we wonder how the streets that were cleaned the night before can get dirty so soon. If the private owners of the back alleys in some portions of the city were obliged to pay one-half the cost of cleaning the principal streets, which would in some cases be no more than just, they would soon find it for their interest to keep the alleys themselves clean. If this would be good economy for the private owners it would be no less so for the city.

As for the sidewalks on which our wives and daughters and young lady friends trail the tails of their tailor-made gowns, they are perennially decorated with the expectorations of sufferers from nasal and pharyngeal catarrh, bronchitis and incipient tuberculosis. The fluid extract of tobacco and the contributions made by the saloon patrons who are suddenly attacked by uncontrollable nausea, may be less dangerous, but they are no more agreeable.

Disposing of the so-called waste of large cities is of ancient date. Babylon and Nineveh, Jerusalem and the dead and buried cities of Egypt had their sewers. The Cloaca Maxima, which is a small affair in comparison with some of the sewers of modern times, has carried more or less of the sewage of Rome to Father Tiber, and Father Tiber has carried it to the sea for twenty-five centuries. That the world to-day would have been vastly richer if much that has been poured into the sea could have been wisely resolved to earth again, is undoubtedly true,—Victor Hugo has told us how many millions Paris throws away every year,—but the sanitary side of the question of sewage disposal is more important to this generation than the economic.

It is only within a few years that we have made the astonishing discovery that it is dangerous to carry the drainage from sinks and water-closets to a leaking cesspool within a few feet of the spring or well from which our drinking water is drawn, and we are piously pleased to know that the opulent city below us is no longer compelled to drink the sewage of Holyoke, Springfield, Chicopee, Thompsonville and Windsor, variously flavored by the chemical mysteries discharged from the cleansing, dyeing and disinfecting departments of paper, silk, cotton and woollen mills. It is pleasant to observe a growing refinement, possibly a fastidiousness, in regard to drinks.

To speak soberly, even if it is true that the impurities that are poured into the Connecticut and scores of other rivers by the thousand gallons daily are diluted and filtered and distributed along the fertile banks of the streams (which the good Lord undoubtedly meant to be clean and beautiful), until the mischievous microbes in a square inch can be counted, say in a few hours, by the aid of a microscope and the multiplication table, even after this cleansing process, there must still be a moral and spiritual degradation in the consciousness that when we drink from the river, as we may at any time be compelled to do, we are drinking from an open sewer. How much worse are the cannibals? They eat one another, the choice portions, let us hope; we drink,—well, we can hardly afford to pursue the parallel any farther. Of course, this is a scientific, that is to say, a matter-of-fact, age, and science, if anybody, knows what is good to eat and drink; but sentiment is not wholly obsolete, and refined sentiment, natural instinct, the intuitive perception of the eternal fitness of things, all protest against slaking our thirst with water that has just been used to wash out sinks, latrines and dye-tubs, even if it has been diluted, filtered and boiled. But this is not pleasant, and I will pass on to more agreeable themes.

Speaking in a general way, corruption goes by water and purification comes by fire. It would be a great gain if all that is combustible of household and other waste could be burned. Every private house and every city should have its beneficent Gehenna. Not that actual waste, either of force or material, is possible in the universe, but the matter out of place and the change from one form to another is what disturbs us, and the slower the change the worse. Whether there is really anything harmful in the natural decay of vegetation, whether it affords a congenial garden for malignant microbes, can only be determined by consulting the latest reports of scientific research in that field; but in autumn, when the ground is covered with sodden and decaying leaves, and in the spring, when the liberated moisture from the throbbing earth is alternately freezing and thawing, and the exhalations from the loosened sod fill the atmosphere with the odor of fresh mould, then there comes that sense of lassitude and weariness that can only be accounted for by the assumption that it is "something in the air." That many of the ills to which human flesh is heir do most abound at those seasons of the year when there is the greatest amount of unemployed wetness

in the atmosphere is a generally accepted, if not a well attested, fact.

Now, if one-half the trees that are planted and expected to grow in nearly all New England cities and towns are allowed to reach maturity, as many of them do, alas too soon, they are sure to maintain a condition of dewiness and dampness from which there is no escape. A visitor from a Western State whom I had taken to the top of the arsenal tower to admire the view, first admired it properly, and then told me that in spite of the verdant beauty of the half-hidden city, it seemed to him like looking into the valley of the shadow—not of death, exactly—but what may be worse, of chronic debility, catarrhs and intermittent fevers. He promptly declined, before I had time to offer it, to accept the best place in the city, if obliged to occupy it. Perhaps he was that dangerous person, an extremist; but so far as Springfield is concerned there is this to be taken into account—the greater part of the city sleeps upon a bed of clay, a huge mattress, a spring-mattress at that, more or less deeply covered with blankets of sand, which in many places merely keep the constant sub-surface water out of sight till it rises in the form of dews and fogs. It is not merely that the pre-historic bed of the river is still occupied by the sound sleepers that were laid to rest millions of years ago and are now lightly covered by partially paved streets and gutters, house-cellars and cesspools, but the higher land, farther back from the river, is generally of the same formation, a solid bed of clay with a layer of porous sand above it. This is by no means an ideal site for a city, and calls for especial vigilance in counteracting the naturally unfavorable conditions of dampness, conditions by no means confined to Springfield.

And yet, because we feel that it is an irreparable loss when one of our venerable elms is destroyed, sacrificed to some supposed demand in the way of public convenience, or to private greed, which rarely regards the public welfare at all, we fly to the other extreme, and allow ourselves to be overrun by trees as the ancient Egyptians must have been overrun by cats when they were considered sacred.

It can hardly be said of a city, as of a chain, that its weakest spot is the measure of its strength, but it is true that an unhealthy slum in any quarter is a constant menace to the whole. A truly civilized community would no more allow any precinct or street or tenement-house to remain with unsanitary surroundings, however hidden from common observation it might be, than an intelligent householder would allow that abomination of desolation known as a "back-yard" upon his premises, where decaying rubbish, open drains, rotting weeds and vegetables, broken bottles, empty fruit cans and piles of nameless garbage are left to their own unclean devices.

It may not be possible to compel the poverty-stricken residents of these unfortunate regions to love cleanliness for its own sake and because they understand how it affects their welfare, but there can be no doubt that if all the public and private alleys and streets that lead to the slummy districts and unclean tenement-houses were kept as clean as those in the best parts of any city the saving heaven would gradually work across the threshold. What else but dirt and filth have we a right to expect within the unwholesome abodes of the poor and ignorant, when there is nothing but ghastly uncleanness under their windows and beside their doors? Dirt, both moral and material, is as contagious as disease, in fact it is disease, and cleanliness, like health, is also stimulating and under favorable circumstances may happily become epidemic. Even if no higher motive can be found, that half-civilized sentiment known as enlightened selfishness should prompt us to use all possible means to compel the abject poor and the wilfully ignorant into sanitary conditions as we compel them to be educated for the safety of the community.

Among other things, this would lead to the paving and cleaning of streets for the benefit of the whole city, instead of following the lead of real-estate speculators and promoters, who, in spite of their visible enterprise in the way of rapid expansion, easily become a curse instead of a blessing. It is beyond all question the work of wisdom and benevolence to provide public parks for the enjoyment of those who have leisure to enjoy them on foot, wheel, or in their own two-horse chariots and automobiles; it is the work of angels to maintain clean, healthful and attractive surroundings for those who have no time, nor strength, nor clothes, and, alas, no desire to visit beautiful parks.

Of course we take pride in our school-houses. It has been suggested that we are inclined to excessive outlay for the higher and highest grades, to the comparative neglect of the younger innocents who are more susceptible to unsanitary surroundings. If that has been so in the past, it is probably not so at present, though it is not without significance that for the accommodation of eight hundred high-school pupils we have recently spent enough to have furnished the most complete, commodious, and, as far as we know how, the most sanitary accommodations for five thousand of the smaller children. The point which I wish to emphasize is that our sanitary efforts, at least in the matter of liberal expenditure, are directed mainly towards ventilation, which is by no means the whole of the gospel of health. It is not certain that Massachusetts people deserve much credit for this, because our good mother the Commonwealth threatens us with an application of the birch if we fail to give each pupil in the public schools thirty feet of outside air every minute. We hire a man to watch us and see that we are not delinquent, the expense of "installing the plant" is considerable, the patents bearing on the subject are numerous and delightfully intri-

cate, and when it comes to rectifying the mistakes and omissions of former architects, builders and committees, the field for experiment at the public expense is practically unlimited.

Of course, this is all well as far as it goes; we cannot, at least we are not likely to, have too much oxygen, but the outside air may be better and it may be worse than that indoors; it depends upon what sort of germs happen to be floating around near the mouth of the cold-air box; but ventilation by dilution does not absolutely ensure the healthful condition of public school-rooms. These same school-houses that are so generously supplied with outdoor air are swept with a dry broom once or twice a week, and a portion of the dust that accumulates is thrown into the dust-bin; the floors are mopped once a month—sometimes—and the porous, water-tinted walls are liable to be dusted twice a year. There is no good reason for supposing that the pathogenic germs, which would find comfortable quarters in the cracks of the floors and other woodwork, and in the porous substance of the plastered walls, are more than temporarily disturbed by this occasional sweeping and dusting. In fact, they are more likely to be waked up and stirred to greater activity.

It appears that in few, if any, of the principal cities of New England are the school-houses thoroughly washed more than twice a year, and only occasionally are disinfectants used with any regularity. When books are furnished by the State, they are passed from one pupil to another, and, in spite of rules to the contrary, lead-pencils are often taken from the common box. I think it would puzzle a bacteriologist to find a more satisfactory vehicle for the conveyance of undesirable germs than the moistened end of a chewed lead-pencil.

It is time for something besides coarse mortar, coated with white-wash or kalsomine, or water-colors of any sort, to be used for finishing the inside walls of school-rooms; something that can be washed with hot water and soap, something to which efficient disinfectants may be applied. It is time for such frequent and thorough disinfecting of all school-houses that epidemics of measles, mumps, diphtheria, scarlet-fever and grip, of which the school-house is often the central distributing station, shall not be considered matters of course when once the disease has been planted. Doubtless, such thoroughness would cost something,—it costs something in hospitals,—but the ounce of prevention is worth the pound of cure, and the most elaborate and radical cleaning that could be devised would not cover the cost of a dozen first-class cases of diphtheria, leaving the value of life out of the question.

By all means, let us have pictures and statues and frescos if we can get them and keep them clean. In mediæval monasteries, convents and churches, art and dirt are perennial twins. In a modern public school, as in a hospital, it is better to be clean than to be artistic. The elaborate tables of vital statistics give but a partial idea of the dangers that lurk in unclean school-buildings and their evil results. We may learn that so many died in each month of the year, in each ward, of diphtheria, croup and scarlet-fever, so many more were sick and did not die. But the long and patient nursing, the wearing nights and days, the agonies of anxiety, and the serious, often permanent debility or derangement that follow those whose lives are spared—these things are not recorded. But the proper sanitation of school-buildings is a subject for books, not for a single chapter.

Sanitary precautions are practically non-existent in all our vehicles for public conveyance, from Pullman cars to one-horse herdies. Some of the "washable" materials must be cleaned occasionally or the great public would refuse to ride, the glass windows and the linen covers that "show dirt." The common coaches of the steam cars are so erratically heated and ill ventilated that the open-window nuisance is everywhere and has all seasons for its own. The only ventilation for the "box" electric cars is by means of revolving windows at the top. When the inside atmosphere becomes intolerably hot and insufferably foul, they are opened and the passengers receive the cold air—not slangily, but literally speaking—in their necks.

When the open cars have been brought out in the spring—the pneumonia cars—and once out they are never put back except in case of a thunder-storm in the hottest of dog-days all the passengers, whether they like it or not—and there is no doubt that many of them do like it, even if it kills them—are exposed from head to foot to a gale of wind blowing from five to thirty-five miles an hour. This is no open buggy drive, where feet and legs are protected by the front of the carriage and a lap robe, but the wind sweeps through the cars and through the by-no-means air-tight garments of the passengers like a blizzard on an open prairie. There is no reason why we should not have cars so constructed that a certain part of them must be sufficiently closed all the time to afford protection for those who desire it. There would be but few days in the year when it would not be grateful to some of the occupants. It is an impertinence even for the majority to say that because they like to ride in a gale of wind, everybody else must be compelled to, whether he likes it or not.

If plush cushions grew on the seats of public carriages as bark grows on trees, they would hardly be more universal. The only excuse for them is their economy. Nothing could be better adapted to hold matter out of place and keep it out of sight. Leather, real or artificial, has the merit of being washable, and bacilli-bearing dust can be swept off instead of being swept in. The draperies, blankets and foot-stools of the drawing-room and sleeping cars belong in the same category, only more so.

It is not always pleasant to think who and what have occupied the venerable hacks whose downy beds of ease and fringed upholstery have been in use for many generations, and in which whole families of microbes, with and without wings, have founded empires and sent forth colonies.

Speaking of hacks naturally suggests the paying for them, and he is a happy man who can pay the exact fare. Otherwise, in exchange for a large bill he is liable to get a handful of lucre so unmistakably filthy that, before putting it into a clean pocket he instinctively looks for a piece of paper to wrap around it, as if it were a sample of Peruvian guano or a piece of Limburger cheese. Not that the hackmen are the only or chiefest of sinners, in this respect; we are all guilty; the original sin is with the banks, who cannot, or will not, renew the dirty old paper.

Sidewalks are supposed to be made for the comfort and safety of pedestrians. When they are so covered with water and ice that they cannot be used without danger of wet feet and broken limbs, there is a question of public sanitation involved. Yet in many of our most aristocratic streets, all the water from the adjacent lawns, whether it comes down in the form of rain or snow, must flow across the walks before it reaches the gutter where it belongs. This is one of the inexcusable follies to which we are so much accustomed that we forget to protest. It is entirely unnecessary; it is idiotic.

I can find no evidence that regions adjacent to burial-grounds are unhealthy, but we cannot escape the fact that cemeteries, built, so to speak, in sand that rests on a bed of clay, are often an important part of the subterranean water-shed from which the water used for domestic supply is drawn. Just what lines these underground water-courses take, is known only to the wizards of the witchhazel wand, but there can be no doubt that the rain that falls on these quiet graves steadily finds its filtering way to the hidden sources of the wells that supply us with water.

And, finally, not because the list is exhausted; in fact, it is hardly begun, but to bring this chapter to a close, if, for the benefit of the public, milk and butter and meat are inspected and condemned if found wanting, and apothecaries are held responsible for the poisons they dispense, should not the men who take the lives of peaceful citizens in their drunken hands be deprived of all liquors, except such as simply impoverish and stupefy (that is to say, pure liquors), without producing the insanity of dangerous intoxication?

Just how many people are made sick, or die every year on account of any or all of these shortcomings, or whether anybody has sickened or died in any year, I will not undertake to say, but logic is logic and dirt is dirt; if we are not sick, we ought to be. It is easy to say, by way of consolation for our sins, that we have lived comfortably in the past, that our population increases, numerically, at the rate of ten or some other per cent, that we are as healthy as Philadelphia—which the most of our smaller cities are not, by the way, notwithstanding the Schuylkill—as New York, Chicago or Washington; all of which has nothing to do with the case. We have no shadow of right to say that a death-rate of from twenty to twenty-five per thousand every year, and that, mostly among children and from diseases that are considered preventable, is not vastly beyond what it should be. Moreover, the death-rate in any community is by no means a fair measure of the sanitary condition of those composing it. Theologians of the cheerful sort assure us that in this "vale of woe" we are foreordained to live at a poor, dying rate, but, if I may be permitted to intimate that anything can be more true than a theological dogma, this is far more true hygienically than it is theologically.

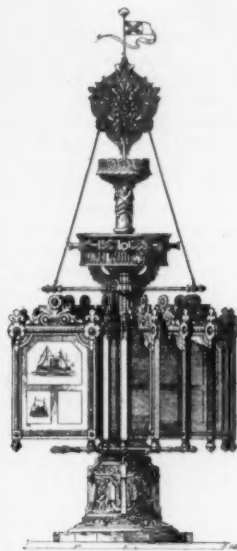
Why must we all, even in the best regulated families, have measles and mumps and whooping-cough? Why do nine-tenths of the adult population of New England have some form of catarrh? Why does biliousness brood over us like a yellow sunset, and malaria masquerade at all our evening entertainments? Is it wholly owing to the graceful mosquito? If so, why mosquitoes? Why is rheumatism in the blood and neuralgia in everything? Why do the majority of our militant women enlist under the most tyrannical of all officers, Gen. DeBility? How many of our wise men escape the tediousness of gradually approaching senility, instead of retaining full strength of body and mind, not to threescore and ten but to fourscore and ten? I am inclined to think that the tacit acceptance of the Hebraic allotment of years is a damaging suggestion to mankind, already handicapped by chronic precocity, and too much oppressed by a painful consciousness of the brevity of human life.

It goes without saying that people bring the most of their physical ills upon themselves by ignorance, greed and thoughtlessness; but making due allowance for this, there still remains a large contingent of sickness, discomfort, disease and death which may justly be ascribed to conditions for which neither the individual nor his heritage but the public in its corporate capacity is responsible.

E. C. GARDNER.

SWISS STEEL WORKS.—Switzerland has, up till now, not been noted as a centre for steel production, though her engineers have long held a high position in the mechanical world. Recently, however, a company has been formed to work the great deposits in the Bernese Oberland, where there are many million tons of ore available, averaging 50 per cent of iron. It is intended to attempt to smelt the metal electrically, the large water-power, cheaply obtainable, giving the plan a reasonable prospect of success.—*Engineering*.

THE IDEAL CITY.¹



Picture Show-case for the Russian Navy Department. From *Stroitel*.

THE object of my paper to-night is to try and precipitate, by means of discussion and suggestion, some conclusions as to what an ideal city should be, and also some agreement as to what a city should not contain that sets up any claims to be beautiful. What is it we want? We go up and down this city of London, for instance, open-eyed and open-mouthed, eager to observe and loud in our expressions of disapproval; but what do we want? What are our ideals? Abstract disapproval is so easy, and often so unhelpful—almost any one of us can condemn, but when bidden to specify alterations, difficulties—the difficulties, in fact—at once begin to appear. Are we agreed as to what we want? And by we I do not only mean architects, I mean amateurs of architecture, cultivated people, men of taste, those who have given thought to the matter, made their observations on other towns and digested them, county councillors, all those who have the care and the guardianship of this our city. What is it you want, and are you agreed upon it? What are your ideals?

We architects want to know. They are your ideals that are being carried out. Architecture, so far as it is living art, is the realization of the aims and needs of those that produce it, and the vernacular architecture of any given period is the index of the general feeling and temper of that age. The few sporadic attempts to do scholarly, antiquarian, or reactionary work have little influence on contemporary work, except where it happens to find itself in sympathy with those views; the great mass of building and construction generally is the true exponent of the popular view of architecture. Are you content? and, if so, why do you grumble? We talk of a city being beautiful, but we smile at the idea of making London so. Why? Even if, in these humble-minded days, that were too much to propose, could we not, if we wished, prevent its growing uglier? As it is, London gets more and more hideous every day. We never see an old house threatened with demolition but what we have to fear a loss in its successor; we never see a concerted design in architecture, such as some of our squares, a few streets like Stratford Place and others, but we know their harmony is soon to be disturbed, and that quality of unity got by gracious co-operation will be burst in upon and flung into the gutter. We have buildings we call masterpieces; can we not at least preserve them unharmed? We allow the appearance of Somerset House to be defaced by mean additions. We talk of alterations to Waterloo Bridge; Hawksmoor's Church is undermined by a railway station; the moment a monument comes in the way of what is called the "the convenience of the public," it is doomed and disappears.

Is it true, is it probable that we cannot have what we want? What is it stands in the way? It isn't money. We can afford to have our way. We hear ourselves described as an indomitable people, and we accept the epithet with complacency; it is not from want of saying that we know we are rich. We may not be an artistic people, but we are good organizers and governors, and such a standard of magnificence as Rome achieved might be ours, did we desire it. The trouble is that we are not agreed as to what we want, and we are not sure that we ought to want it. Directly we are all agreed upon some public matter an architecture springs up in response, and according to the quality of the sentiment so is its interest. The national conscience has for long been deeply stirred by the sight of helpless suffering, and the hospitals we have built to alleviate that and to increase our knowledge as to its prevention form one of the contributions of fine living architecture to the nineteenth century. So, too, are the great asylums. The care and thought, the quintessence of medical observation and research, have been gathered up and sublimed into formulated necessities, which have dominated the buildings erected in compliance, and by their insistence have given strength, and history, and interest to these structures.

Other contributions to the architecture of our time are our board schools, museums, public libraries and technical institutes, based also on a popular desire to improve the conditions of our life. Abate something of the virtue of the impulse, and the standard of interest in style of architecture falls immediately. The theatres, restaurants and gin-palaces all rise in response to the popular call, and the nobleness of the demand dictates, in proportion, the nobility of the architecture. But in these instances there is, broadly speaking, a general agreement and codification of our desires; it is not so as regards the general treatment of our city. What is the view one is to take of London? That it is a vast workaday centre, from which all who are fortunate enough flee, after the day's work is done, to a bed in

¹ A paper by Mr. Halsey Ricardo, read at the Congress of the Royal Institute of British Architects on Wednesday evening, June 20.

the country? If so, let us at once set about accentuating the position and importance of the railway stations, let us widen and straighten the routes between them, let us concentrate within a ring, if possible, the industrial nucleus, and separate the residential from it with an insulating zone of open space. We shall not make the city beautiful, it is true, but possibly we might its suburbs.

The day has gone by when the city was walled round for shelter and defence, and the great gates of old time have been replaced now by those huge vomitories—the railway termini. But the gates of the walled city were prominent features both from within and without; their purpose was unmistakable and resulted in characteristic form. Cannot we do as much for our railway-stations? Merely to clear away a wide space in front of them and to make the route spacious and direct would do much to give them distinction. Although I myself repudiate the idea of treating London as a mere workshop, still it is at least a definite treatment, a definite conception, and definition is what is at present so forcibly lacking in the handling of our city. The anxious, fevered scuttle from station to office, and from office back again to catch the train, is not a particularly fine idea, and is not likely to bring about particularly fine results; but poor as they would be, they would be preferable to the present welter and the sense of compromise got from adjusting small individual claims. Or shall we take the view of London that it is a place to be proud of, and that we mean to be proud of it and keep it as a source of pride? There are many things that would justify us in this attitude—the river and some of the bridges that span it, and the Embankment that confines it; the Abbey, the Cathedral, the many churches and public buildings, some few of our squares and streets—possibly our parks.

And what should we do? Well, I am talking of the ideal city, and I permit myself some flights of fancy that may be condemned as not altogether practical, though I try to keep on the hither side of Utopia, and so I answer, "Keep them." Keep our public buildings, keep our bridges, our squares and our streets (those that we are agreed upon as embellishments of our city), keep them as they stand, at least for the present. As they are the subjects of our pride, let us treat them so; let the access to them be obvious and direct. Take the river for example. Let it be embanked on both sides, and let us have occasional glimpses of it from the Strand, wider and less squalid than the few grudging peeps which we can with difficulty now get. We are incessantly increasing the span of its bridges to facilitate the water traffic; let us have a traffic that may be pleasant to the eye and handy to the passenger.

A swift service of small steamboats, trim and tidy, would help to relieve the congestion of our streets, and in many weathers and to many people would be a welcome alternative to the pavement. I said "trim and tidy," because on the grounds, seemingly, that we are rich and industrious, we can't afford to be clean and decent, and haven't the time to be bothered with the necessary trouble; so London is disgusting and smelly, owing to our slovenliness. The pride in a neat and perfect turn-out still clings to the stable, the harness-room, and the coach-house, and, by an association of ideas, somewhat affects the railway train; but the pavement is a fixed, interminable spittoon, and the tops of omnibuses a travelling one. In my ideal city, my impracticable Utopia, I would have a higher standard of cleanliness and scavenging. I would have more pageantry, more processions, and I would make many of them go by water. The Lord Mayor and his state-barges should be a familiar sight on the Thames. And I should like more music, especially on the water. The organ-grinder, the solo instrumentalist, "the German band," and all such small enterprise I would banish utterly from the streets, as well as yelling ruffians, street cries, and newspaper pitches; but in compensation I would increase the quantity of music already provided by the County Council, and I would provide a supply of kiosks in the streets where people could buy their papers in peace. We are surely all agreed that noise and disorder are ugly features in a city as well as in a house; and yet we permit great shouting letters, winking and glaring lights, every form of eye-torture that may sear itself indelibly on the brain—for the object of many of these advertisements is that you may never forget them again for the rest of your life. In the "ideal city" there would be a control over these street distractions, so as to secure some uniformity of effect. Nor should the streets preserve their haphazard character, so far as their general growth and expansion may give us chance for correction. The great streams of traffic should cross each other at right angles. The railway stations, the great creators of the swift-going traffic, should be recognized and their influence accepted, and the shortest direct routes to them taken in hand and developed to meet the case.

But life is not all a hurrying from one ant-hill to another; there is such a thing as leisure and the enjoyment of it; there is such a thing as work which may be done deliberately and in quiet. Let us preserve, then, the backwaters and retreats, where we can find them in London, and ensure that they shall not be arbitrarily invaded. They should be the shelters of our monuments. Each year we erect fresh statues in memory of famous men, but we have nowhere to put them, and they stand in the howling chaos of our streets, pitiable and helpless, horribly misplaced—or else they are thrust out of sight in narrow streets or chance corners. What a terrible misprision of their qualities, this argues! It is part of the same temper that treats a piece of sculpture, an obelisk or a fountain quite without reference to the site it has to occupy or its proper function, which

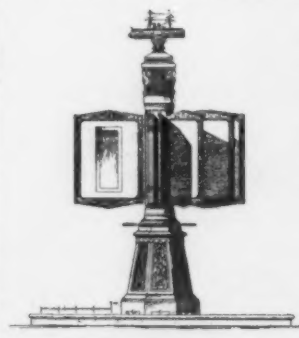
is to add to and accentuate the general architectonic character of the locality it is to adorn. Architecture and decorative and monumental sculpture are not, as it seems to be thought, matters merely of detail, and immaterial how they may be combined, having no necessary connection—architecture in our cities should be the expression of our ideas, the ideas of a community, our corporate, not our individual desires. The aspect of our streets concerns us all, and such individuality as there may be in it is pleasant to us, so far as it reflects the history of the locality and such human characteristics as are obviously gracious and kindly.

Lastly, there is the question of color in our ideal city—color, natural and artificial—both of great consequence as regards beauty and both requiring broad, concerted treatment. Natural color resolves itself into grass, trees, shrubs and flowers.

I will leave the parks as outside the province of my paper and consider the use of grass and foliage as it concerns our streets and open spaces. That much can be done by a mere strip of grass is shown by the breadth in front of the National Gallery. But why should we pause there? Why not compress to half their area the fountain-basins in Trafalgar Square and turf the square—introducing, during the summer months, a few formal-shaped trees in tubs or boxes, to give contrast and variety to the green? Then the trees in our streets. At present they are planted at the sides of our streets, in the pavements, and the contours of the trees chosen are incompatible with the position assigned. They cannot grow properly without interfering with the light and air of the adjacent houses. Trees, such as planes, with spreading foliage, should be planted in the centre of the streets, where they can flourish unmutated and be of service in dividing the traffic. Where practicable, our streets should open to disclose a vista of green, or a peep into the verdure of our squares or a glance on to the parterres of our Embankment. Of artificial color little has been tried, and that little, done in experimental, isolated ways, is worse than useless. Color must be treated broadly and in mass; in small quantities it is mainly irritating by its spottiness and the want of co-operation from the rest of its surroundings. Color, quite as much as any other quality of architecture, must be used to express not merely individual whim and fancy, but must symbolise some general purpose and inspiration. Consequently, if we are to have color in our streets, we must treat it heraldically. This has been recognized in some measure already, where color has been employed by bodies of men—such as the State, vestries, parish councils, railway and other companies. Here in London each parish colors its lamp-posts the parish colors—the dust and water carts carry the proper parochial bearings and legends; throughout Great Britain scarlet is the official tincture of the Post-office, black and white the traditional heraldry of the coast-guard stations. Our railway-trains and our omnibuses tell, by their color, the companies to which they belong and the routes they take. We have London already divided up into various divisions—electoral, parochial and the like. Let us take advantage of these and display those divisions outwardly to the eye. Already the parish lamp-posts and other obstacles are distinguished from each other by pattern and color; we might go farther and define the boundaries of the parish by the color of the area-railings, and some form of superposed tint or quartering in part might define the electoral divisions. Moreover, the vestry-hall and parish-library would gather up in concentrated form the accepted heraldry of their office and locality, making them landmarks in the neighborhood by the splendid richness of their color, containing in their accumulation the separate badges and symbols elsewhere distributed through the locality, and explaining in the sum of their achievements the various voices whose utterances form the chorus of civic life.

Many are the "ideal cities" that might be shadowed forth—but our first concern is to settle what is to be our attitude towards the city as at present. Are we here on sufferance only, or do we mean to reside in it, and consequently, make it worth residing in? This point settled, the conditions of our residence will help to formulate our ideal, and by organized co-operation we can work towards this end, and once clear in our minds what we want, we can push confidently towards the fulfilment.

THE ROLLS HOUSE AND CHAPEL, LONDON.



Picture Show-case for the Russian Navy Department. From *Stroitel*.

THE destruction of the Rolls Chapel a few months ago was one of the worst acts of vandalism that has been perpetrated for many years. The house, which was built in 1724 upon the site of a more ancient one erected as a home for converted Jews, was of little interest; but the remains of the chapel, which was originally founded in 1232, ought to have commanded some respect even from those who plan "improvements." The building had been patched and tinkered until little remained of the original edifice; but when the demolition was undertaken, several precious relics

of the past were discovered, built up into newer walls or encased in

rubble and stucco. The chancel-arch had been filled-in and a square opening made in the centre of the rubble. The proportions of the arch were excellent, the mouldings, pure Early English, springing from what appear to be corbels upon flat jambs, but possibly the shafts have been destroyed. In a document dated 16 Jan., 1232, the king (Henry III) gave 700 marks to found a home for converts from Judaism, and for building a church and house; the health of his own soul and the souls of his ancestors and heirs being the motive power for the foundation. Money went farther in those days than in ours, for we find a few months later that the Treasurer of the Kingdom, the Bishop of Carlisle, was enjoined to support two chaplains out of the 700 marks, the said clerics not only being destined for the services of the church, but also, probably, to be managers of the house. We read that Walter, one of them, admitted converts and distributed to them their liveries. Matthew Paris's Chronicle says that the king founded a similar institution at Oxford; and on the margin of Matthew Paris's manuscript (at Corpus Christi College, Cambridge) there is a curious drawing of the Rolls Chapel, London, showing, by means of the draughtsman's curious perspective, both ends of the building in the same drawing.

In 1236 the king bestowed the Church of St. Dunstan, "near the New Temple," upon the House of Converts, this church and its fruits and profits having been given over to Henry by the Abbot and Convent of Westminster.

The Rolls Chapel and House were situated in Fetter Lane, now the site of the new Records Office, and the Church of St. Dunstan being in Fleet Street, at the corner of Chancery Lane, it may be assumed that the land between these two buildings was a part of the estate bestowed upon the Rolls House.

Men, women and children occupied the house, but they were allowed to pursue their work elsewhere. Thus two bowmen of the king's had their daily necessities found them at the Tower, that their work there might not be hindered by returning to their house. The number of converts in 1256 seems to have been large, as cloth for 150 robes was distributed before Christmas, and the next year cloth for 171 tunics for Easter and 164 for Pentecost was required.

It is curious to note that although the Jews were converted, they were still living under certain disabilities: all their goods and chattels were, wholly and by right and custom, the king's property; but being, in his own sight, good and just, he bestowed a moiety of the value of their entire possessions upon them for a period of seven years. If, however, the inmates earned money, it was arranged that their allowances should be withheld. The house also seems to have received the *cheage*, or poll-tax, levied on Jews — 3d a head in the reign of Edward I, there being then 1,179 Jews in all England. The number of converts in the house varied from time to time.

About the year 1529 the house became a court of law, and the "Master of the Rolls" was converted into a judge, a title which is still held by one of Her Majesty's judges. Thomas Cromwell, Henry VIII's henchman, held the post; and, earlier, one John Young seems to have been an important Master, for a beautiful monument by Torrigiano was erected to his memory. In 1538-9 a survey of the house was taken, which gives an account of as many as twelve "chambers," besides a parlor, hall (with painted cloth round it), kitchen and other offices. There was also a garden; but when this survey was taken there was only one inmate, and during the next twenty-six years masters, clerks and chaplains received their salaries for having the charge of an otherwise empty house. Then for a few years a few Jewish converts trickled into the house, most apparently, by their names, foreigners; but, under the Commonwealth, although the Jews returned to England, there is no account of the Masters of the Rolls receiving any converts into their ancient house. Petitions were frequently sent up, as time went on, for participation in the benefits of the Rolls House; but they were generally shelved, and either there were no converts or the law took the endowments to itself and gave doles in charity.

In 1708 the church must have been much rebuilt, for we read of "doors and windows of the Gothic order," a slate roof, and Ionic and composite columns in the interior. These "Gothic details" are the fragments of the thirteenth-century building which have lately been exposed to view, having been covered up by more modern work for a century and a half. That the chapel ought to have been preserved there can be no doubt; and it seems strange that antiquaries, archaeologists and the Society for the Preservation of Ancient Buildings could not have prevailed upon the authorities to preserve so interesting a relic of the past. There was a considerable outcry at the time of its destruction, but it ended in futile condemnations of the vandalism, and in the place of the old chapel we have seen modern buildings arise which are dedicated to utility, and the "Gothic doors and windows" are now as much memories of the past as the Jewish converts and their liveries.

Most of this account (and much more) upon the subject of the foundation for converted Jews is culled from an interesting little illustrated brochure by Mr. W. J. Hardy, F. S. A.; but as the "History of Rolls House and Chapel" is mainly historical rather than architectural, and the sort of history beloved of the antiquary, I refer readers to the original pamphlet published by F. E. Robinson, 20 Great Russell Street, London, at 1s. Some additional facts may be found in the "Report of the Deputy Keeper of Public Records" (Sir H. C. Maxwell Lyte), published by Eyre & Spottiswood, upon this most interesting subject of Jewish converts.

S. BEALE.

BOOKS AND PAPERS

If the American draughtsman of to-day — the architect of to-morrow — is really a scoffer of "precedent," a scorner of things that have once been done, and well done, by someone else, publishers of architectural works will do well to heed the fact and no longer waste their money in manufacturing books they vainly imagine may be useful to the architectural student. But why use that last term when shortly there are to be no architectural students, since the schools are all wrong, their teaching being founded on precedent, and the teachers are unworthy of a following? The "indigenous" and the "inventive" have no need of books.

But if there be here and there one or two students or draughtsmen in whom a sense of modesty lingers they may like to have their attention drawn to a useful little hand-book¹; that is, it is useful to those who are willing to be somewhat guided by precedent in the development of their indigenous inventiveness. Like all hand-books, particularly when they are small ones, this of Mr. Glazier's is warranted not to have in it the exact representation of the bit of decorative detail which the draughtsman, at the end of his inventiveness, and doubtful whether he is a true *indigène*, at length shamefacedly decides to hunt for "in the books." But in this respect this hand-book is no more deficient than any other, as such publications very rarely contain the matter that is sought presented in just the manner in which one desires to use it. But they do contain precedents, principles, the essential features and characteristics of a style, data which can be used even by the most egotistical of *indigènes* without loss of self-respect.

A little book of 135 pages, of which 43 are occupied by full-page plates, while the remaining pages of text are liberally sprinkled with smaller cuts, does not give space for more than a very concise treatment of the history and characteristics of Egyptian, Greek, Roman, Byzantine, Gothic, Renaissance, Japanese and Indian ornament, to say nothing of similar discussions of mosaics, stained-glass, furniture, ceramics, metal-work, textiles, etc. But the illustrations are so abundant and so admirably presented, and the brief discussions are so lucid that the work forms an admirable school-book for the pupils of art-schools, and has a certain value for the architectural draughtsman as well.

ILLUSTRATIONS

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

HUGUENOT LODGE CHAMBERS, NEW ROCHELLE, N. Y. MR. GEORGE KRAMER THOMPSON, ARCHITECT, NEW YORK, N. Y.

THIS building is just being started and is to be built of stone. The first floor is to be used for a library, and the second and third stories for lodge rooms.

DESIGN FOR A MONUMENT TO THE "Maine." MR. J. H. FREEDLANDER, ARCHITECT, NEW YORK, N. Y.

DETENTION HOSPITAL. MR. J. H. FREEDLANDER, ARCHITECT, NEW YORK, N. Y.

THIS plate was accidentally forgotten at the time of publishing the companion drawings in our issue for July 2, last.

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METALWORK, — IX: ENTRANCE TO NO. 112 WASHINGTON PLACE, NEW YORK, N. Y.

[The following named illustrations may be found by reference to our advertising pages.]

STAIRCASES IN THE MAGASINS DUFAYEL, PARIS, FRANCE. M. RIVES, ARCHITECT.

THIS plate is copied from *La Construction Moderne*.

HOUSES AT WALTON-ON-THAMES AND WEYBRIDGE, ENG. MESSRS. NIVEN & WIGGLESWORTH, ARCHITECTS.

THIS plate is copied from the *Building News*.

¹ "A Manual of Historic Ornament," treating upon the Evolution, Tradition and Development of Architecture and other Applied Arts. Prepared for the Use of Students and Craftsmen. By Richard Glazier, A.R.I.B.A., Head Master of the Municipal School of Art, Manchester. With 470 illustrations by the Author. New York: Charles Scribner's Sons. London: B. T. Batsford. 1900. Price, \$2.50.

[Additional Illustrations in the International Edition.]

ROMAN CATHOLIC CHAPEL, WEST POINT, N. Y. MESSRS. HEINS & LAFARGE, ARCHITECTS, NEW YORK, N. Y.

[Gelatine Print.]

HOUSE OF JULES S. BACHE, ESQ., NO. 8 EAST 67TH ST., NEW YORK, N. Y. MR. C. F. H. GILBERT, ARCHITECT, NEW YORK, N. Y.

[Gelatine Print.]

ENTRANCE TO THE CONSTABLE BUILDING, NO. 111 FIFTH AVE., NEW YORK, N. Y. MESSRS. WM. SCHICKEL & CO., ARCHITECTS, NEW YORK, N. Y.

[Gelatine Print.]

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THE WEATHER BUREAU ON LIGHTNING.—In view of the presence of the cyclonic period of the year when thunderstorms are of almost daily occurrence a report prepared by Professor Henry, of the United States Weather Bureau, on the subject will be read with peculiar interest. It is unpleasant at the outset to note that the number of deaths from lightning stroke is increasing. For the year 1899 it was the largest on record. During the twelve months 562 persons were killed instantly, or received such injuries as speedily resulted in their death. In addition 820 received shock more or less severe, from which they ultimately recovered. Some of these recovery cases presented peculiar features. In several instances the clothing of the persons struck was set on fire and their bodies were badly burned, yet they ultimately experienced complete recovery. In some of the fatal cases there was no outward injury visible, while in others discoloration of the skin was observable all over the body. Some valuable hints are given in the report regarding the precautions that should be taken to avoid danger while a thunderstorm is in progress. Many housewives are partial to wire clotheslines, and insist in having them strung across their back yards. By so doing they not only subject the laundress to danger, but imperil any building to which the wires may be attached. Twelve persons were killed last year either in the act of stripping such lines or by coming in close proximity to the wires during the storm. Several fires were started through wire clotheslines being stretched between trees in the yard and the house. It is never wise to take shelter under a tree during a thunderstorm. About eleven per cent of all deaths that occurred last year were caused in that way. People in the house during a storm should keep away from the chimney and should not sit between open doors or by open windows. Riders should dismount from their horses and stand as far from them as possible during the storm. The greatest number of deaths from lightning in 1899 in any State of the Union was 56. These occurred in Pennsylvania. Illinois was second in the list of fatalities, 41 having been stricken here. Pennsylvania also was first in the number of injuries, 124 having happened in that State. New York was a close second in that respect, with a total of 103. Illinois had more people killed than injured. It also had the greatest increase in the number of fatal cases as compared with the previous year, though there was material increase in Pennsylvania, Ohio, North Carolina, Minnesota and Michigan. The States in which the greatest decreases occurred were Texas, New York and Alabama. No certain theory can be advanced to account for the increase or decrease of such cases. The lightning flieth where it listeth, and no man can tell where, when or why it is going to strike. It is questionable if the laws that govern its motion will ever be discovered. Investigation in this direction is considerably handicapped by the general reluctance to fool too much with the lightning buzz-saw. — *Chicago Evening Post.*

FOOTPRINT RECORDS OF VISITS.—On the roof of the tower of Goudhurst Church, in Kent, numerous outlines of men's and women's feet have been scratched on the lead. They are, for the most part, simply outlined by a plain line, but in a few instances by a narrow zigzag, such as would be produced by a brad-awl pushed forward, whose right and left edges cut alternately. The inside of the outlines is in some examples partly filled by a series of lines representing the metal toe and heel caps or other structural markings of the sole. Some of the outlines have names or initials only as well as the date added, which in two cases is 1823, while the latest instance seems to be 1884. The custom of recording a visit to a place by means of a foot outline seems to be very widespread; similar foot outlines may be seen in Egypt. There are several drawn on the sandstone pavement surrounding the small Temple of Amenhotep III, at El Kab, near Edfu; two or three were uncovered on one of the stones at the northeast gate of the town wall by Mr. Quibell in 1897-'98. I have observed other foot outlines on the top of a small sandstone hill in the country between the Nile and the town of Kosser. The Egyptian examples seem to be comparatively recent; at any rate, there is no evidence that they are of great antiquity

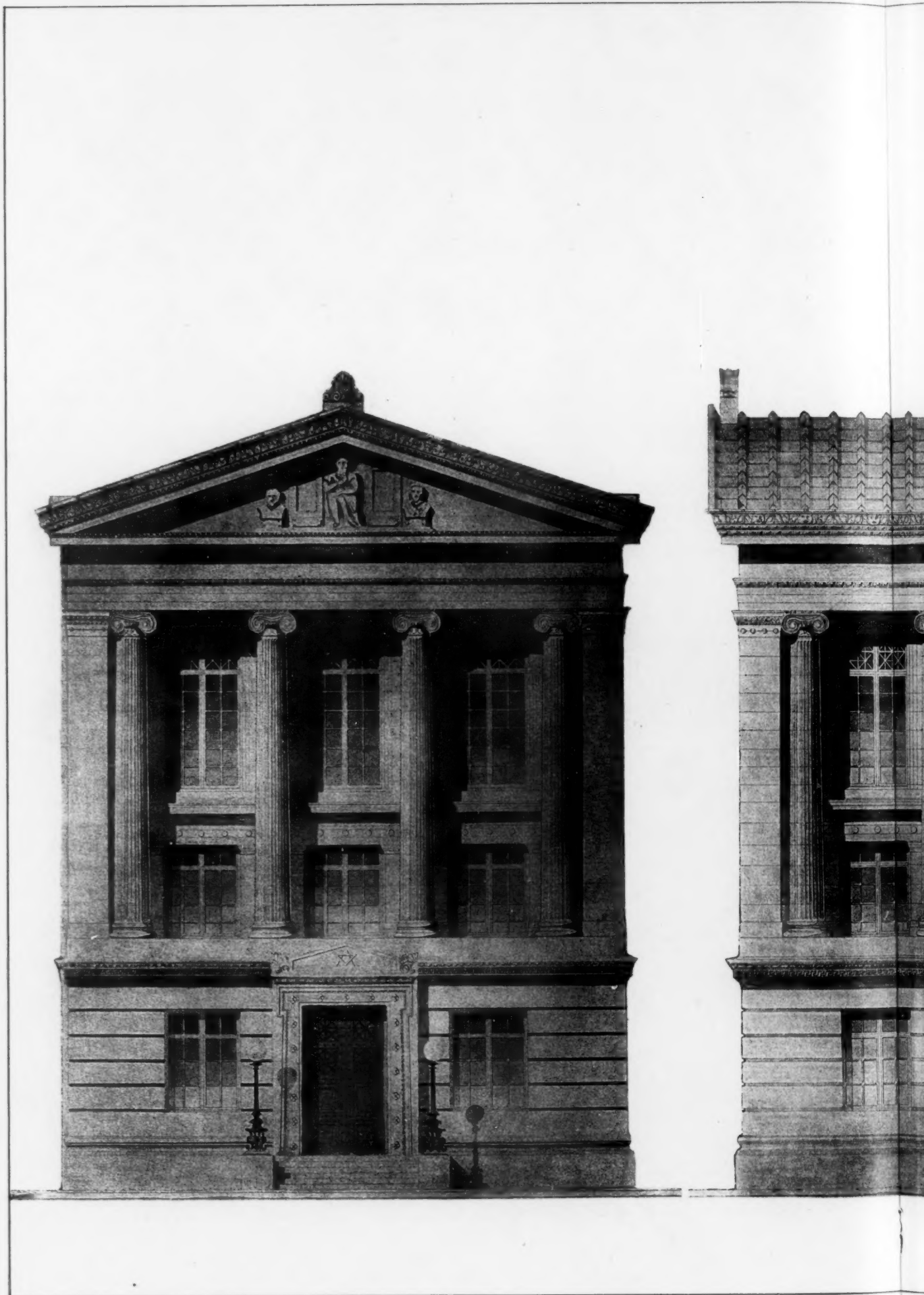
or belong to the ancient Egyptian period. The example at the northeast gate of El Kab affords no evidence as to its date. I forward these notes in the hope that other correspondents may be induced to give more information of a similar character, such as on the footprints of prophets and saints, and the legend that Mahomet's footprint may be seen on a stone in the mosque of Omar at Jerusalem, and that of his camel or donkey at Sinai. Notes on the models of footprints of Indian divinities in our museums would also be of interest. On the north side of the west door of Goudhurst Church are several deep scratches or cuts, as if tools had been sharpened upon the stones. Similar marks are found on all the ancient buildings in Egypt. They are attributed to the women, who consider that rubbing any building or object which is "kafry," or belonging to the "infidels," is a charm against sterility. Is the trace of any such idea to be found in our own folk-lore? — *Notes and Queries.*

THE ENGLISH COAL-SUPPLY.—A Board of Trade report, just issued in London, has once more caused an alarm to be sounded in certain quarters over the enormous and increasing amount of coal exported annually from the United Kingdom. The total exports amounted in 1899 to no less than 41,180,300 tons, or 6,121,870 more than in the previous year. The greatest amount goes to European ports, including those on the Mediterranean. Excluding the Channel Islands, Malta, and Cyprus, and certain points on the Asiatic and African shores, which absorb about a million tons, European countries take about thirty-six million tons, the export in 1899 exceeding that in the previous year by over five million five hundred and eighty-nine thousand tons. There is an increase in every direction but one, viz, Northern and Central America, where the falling off is about one hundred and fifty-seven thousand tons, the total quantity being less than a quarter of a million tons. Europe, in fact, accounts for nearly seven-eighths of the total exports, Brazil, Uruguay, and the Argentine States being the only other large customers, taking more than two and a quarter million tons. The question is how long the supply will meet the demand. Already in Lancashire, in more places than one, coal is worked at a depth of 2,700 feet, at a temperature over eighty degrees Fahr. The opinions of experts as to the quantity remaining vary tremendously. Some think there is enough for the next 1,200 years, others that it will be exhausted in three or four centuries. As the supply begins to shorten, prices, of course, will begin to rise, and expensive fuel means a great deal. But the experts may be mistaken or a substitute discovered. At all events there is no cause for present anxiety. — *N. Y. Evening Post.*

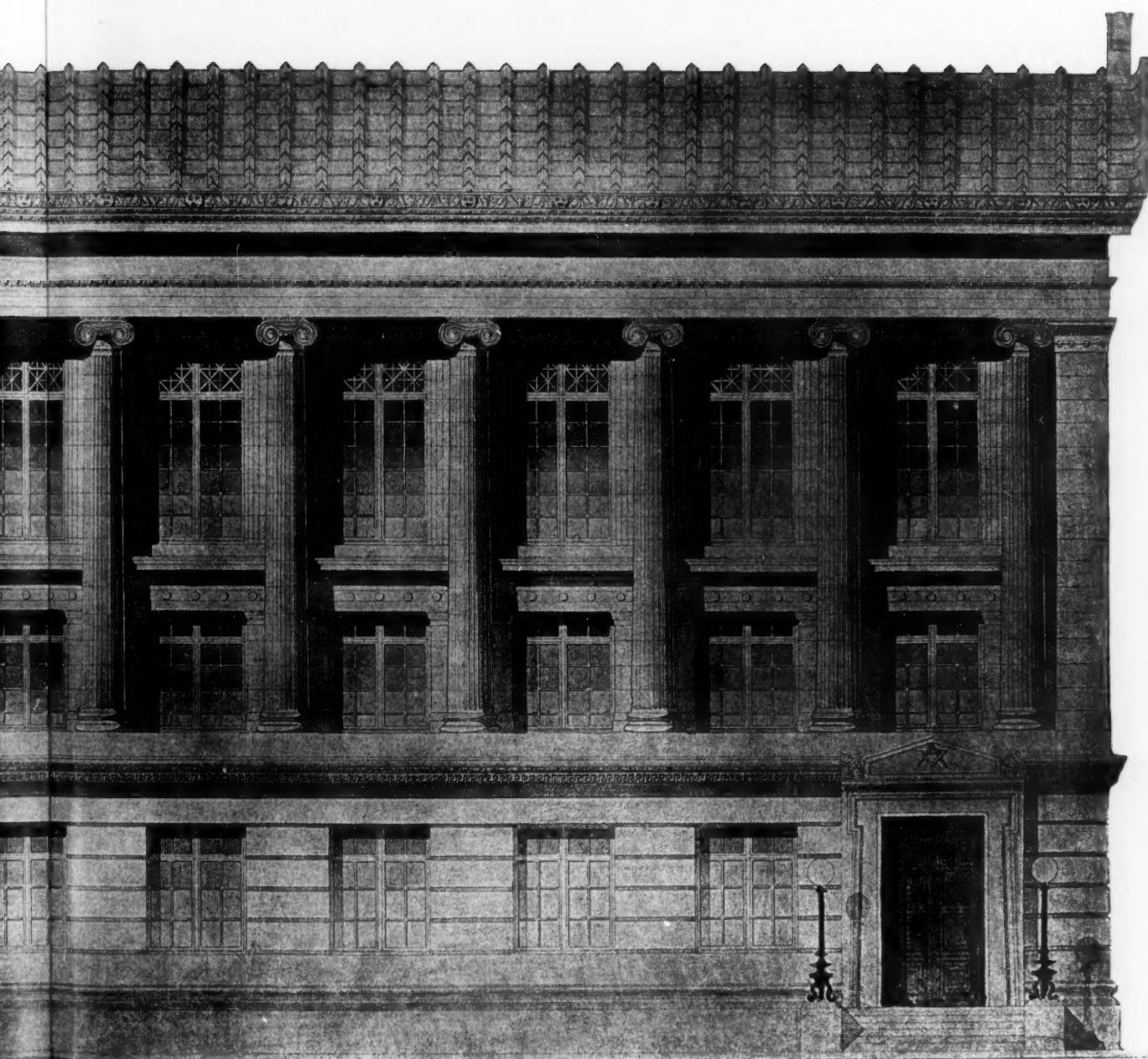
THE WALL OF PEKIN.—Writing on the city of Pekin, the London Engineer says the walls of the Tartar city are of an average height of 50 feet, but portions of the north wall reach the height of 61 feet. Their average width is about forty feet, but they have been built so irregularly that in places a width of 57 feet is found, in others a width of only 22 feet. The outer face of the wall is perpendicular, while its inner face slopes, in some places very considerably. Parapets are erected on both inner and outer faces of the wall, that on the latter being loopholed and crenellated. At intervals of about fifty or sixty yards are large buttresses, every sixth being of much larger size than the others; the smaller ones are about fifteen feet to twenty feet square. Part of the inner brick lining having fallen away from the north wall, an opportunity was afforded of observing its construction. Near the gates the walls are occasionally faced with stone, but in other parts by immense bricks which bear a strong resemblance to stone. The space between the facings is filled up, first by a solid foundation of concrete of some ten feet in depth, then by a layer of well-rammed earth; another layer of concrete and another of earth succeed, the latter being paved with large blocks of granite, which form the *terreplein*. The earth to fill in the wall was taken from the ditch which surrounds the city. The concrete resisted all the efforts of our sappers to form a trench on the *terreplein* during the last war. Each of the gates has a buttress on either side connected with a semi-circular wall, which thus forms an *enceinte*. That of the central south gate is larger than any of the others, and is the only one with three entrances—the central gate being for the use of the Emperor or his family alone. The arches of the gateways are well built.

AMERICAN ART-STUDENTS AS PARIS GUIDES.—Paris is full of American art-students, who are endeavoring to get an art education. Many of them find it a hard struggle to make both ends meet, and they intend using the opportunities the Exposition offers to add to their meagre bank-accounts. They are organized into a bureau of companion guides, and the enterprise is conducted in a businesslike, systematic manner. Miss Nina Estabrook, of Chicago, has the work in hand, and it is said that she has the support of the American Consul-General, Commissioner-General Peck, Mrs. Potter Palmer and many others. These young women, knowing Paris so thoroughly, are of great assistance to women visiting the Exposition. They are bright, companionable, full of knowledge as to the best places to dine or lunch, and the cheapest ways to get from point to point. They know the anecdotes, traditions, histories of all the important places in the city. They all speak English and French, and are naturally superior in many ways to the professional Parisian guides. — *Chicago Times-Herald.*

DANGER FROM THE INCANDESCENT-LAMP.—The record in the demonstration of what heat an incandescent-lamp is capable of throwing out is broken in a photograph, lately published, of a wooden partition through which a large hole had been burned simply by the pressure upon it laterally of an incandescent lamp. Some mechanics who were at work in the room wanted the light closer, and twisted the flexible cord around a nail in a freshly finished wooden partition. The lamp, with its bulb resting on the wall, was left burning when the workmen left at 5 P. M. When they came back to work at 7 o'clock next morning the lamp had burned a hole larger than itself through the wainscoting, and was hanging clear of contact with the charred wood, which had, fortunately, burned itself out. — *London Express.*

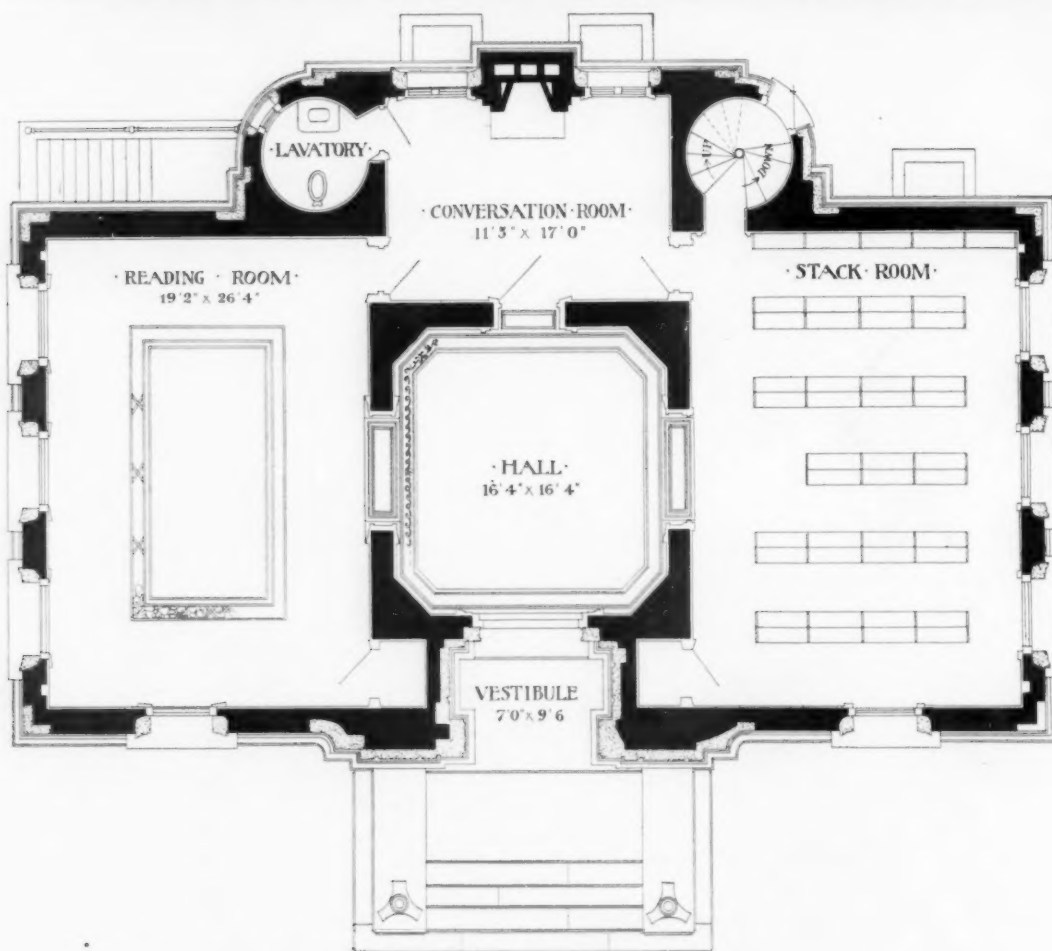


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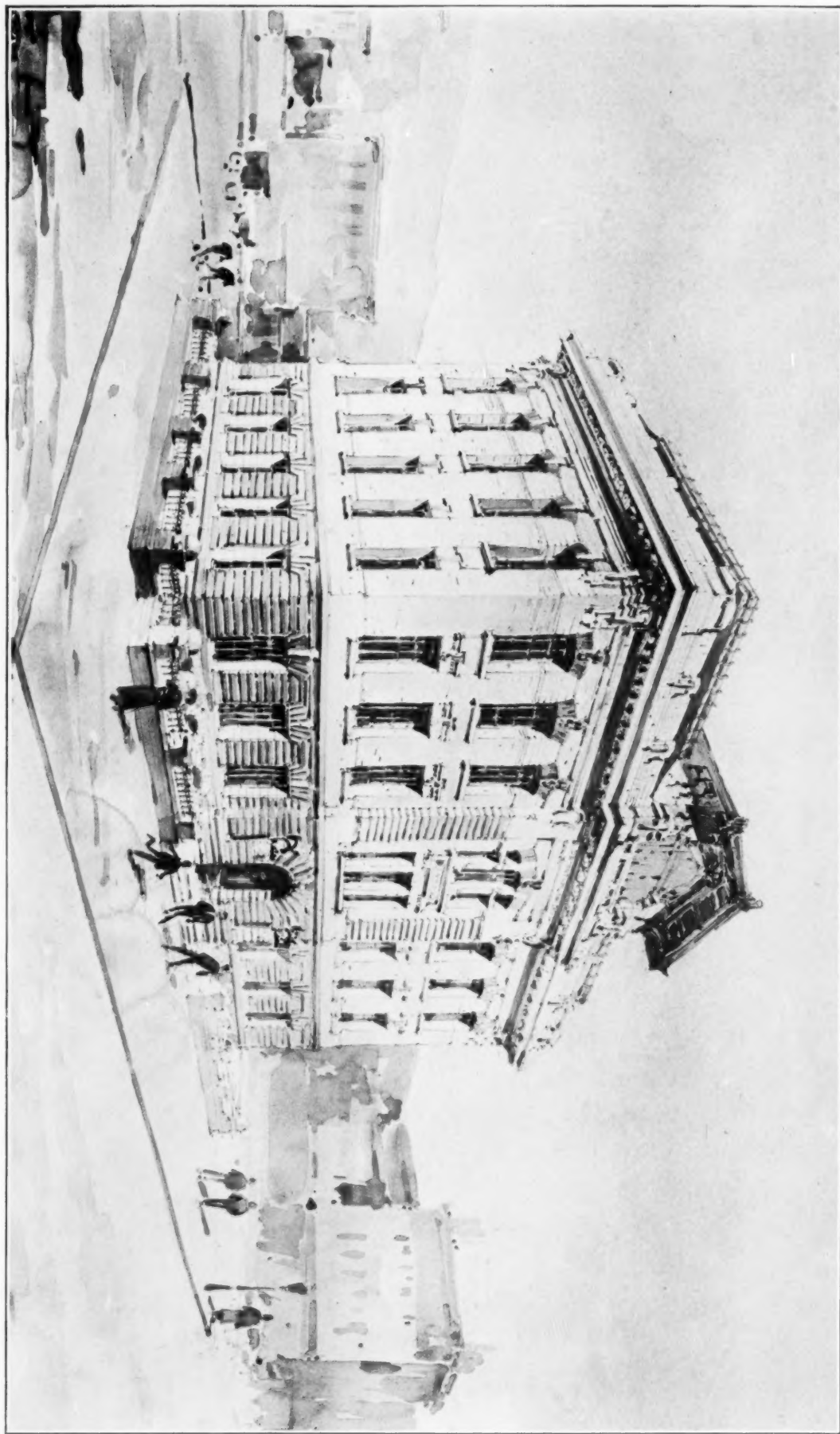
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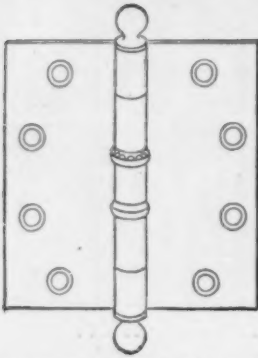


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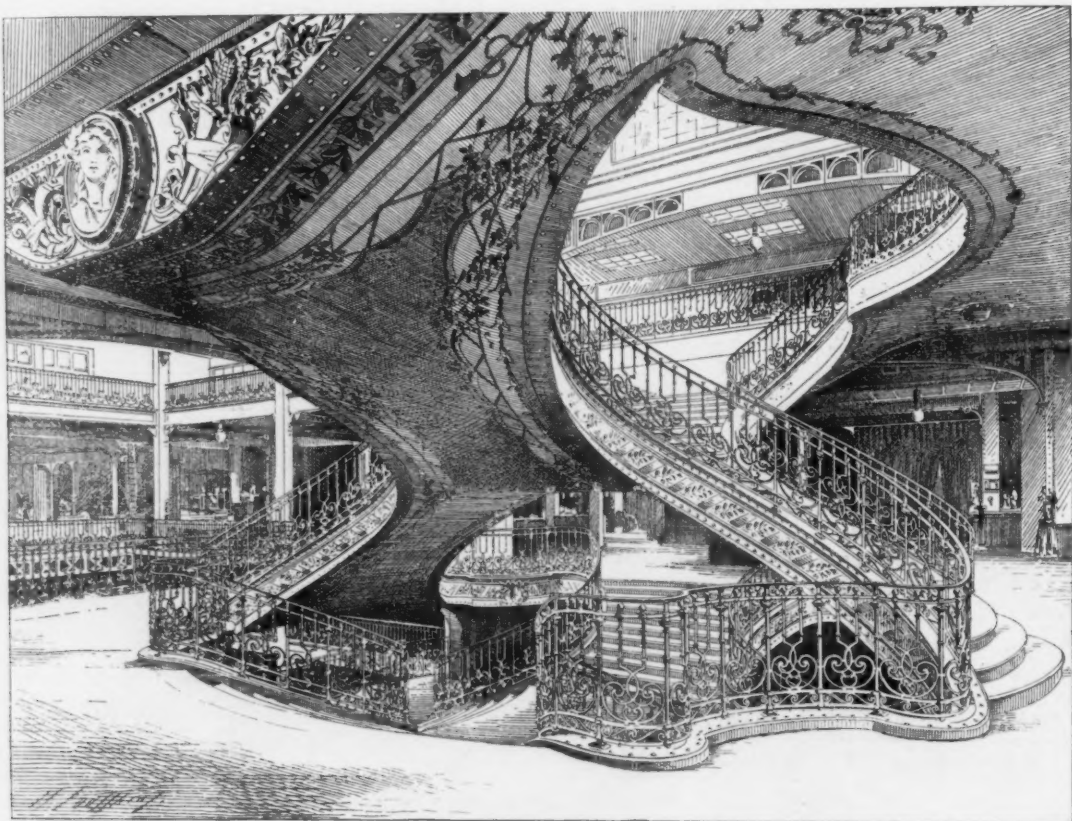
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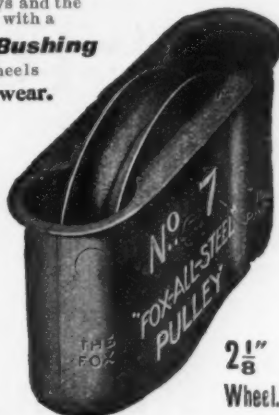
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“ 4. CAPITALS. (Renaissance II.)	-	[49 Examples.]
“ 5. IRONWORK. (Gates and Railings I.)		[26 Examples.]
“ 6. IRONWORK. (Gates and Railings II.)		[18 Examples.]
“ 7. CHIMNEYPICES. (Renaissance I.)		[37 Examples.]
“ 8. TOMBS, I.		[43 Examples.]
“ 9. DECORATION, I. (Arabesques.)		[60 Examples.]
“ 10. DECORATION, II. (Sgraffito.)		[17 Examples.]

IN PREPARATION

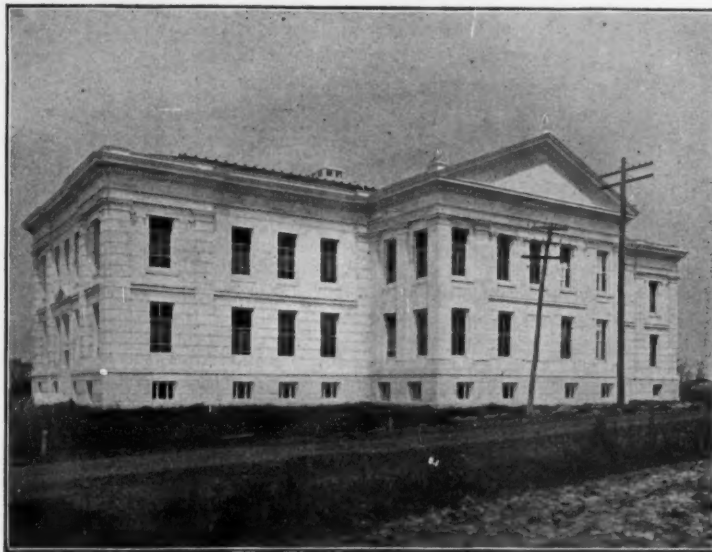
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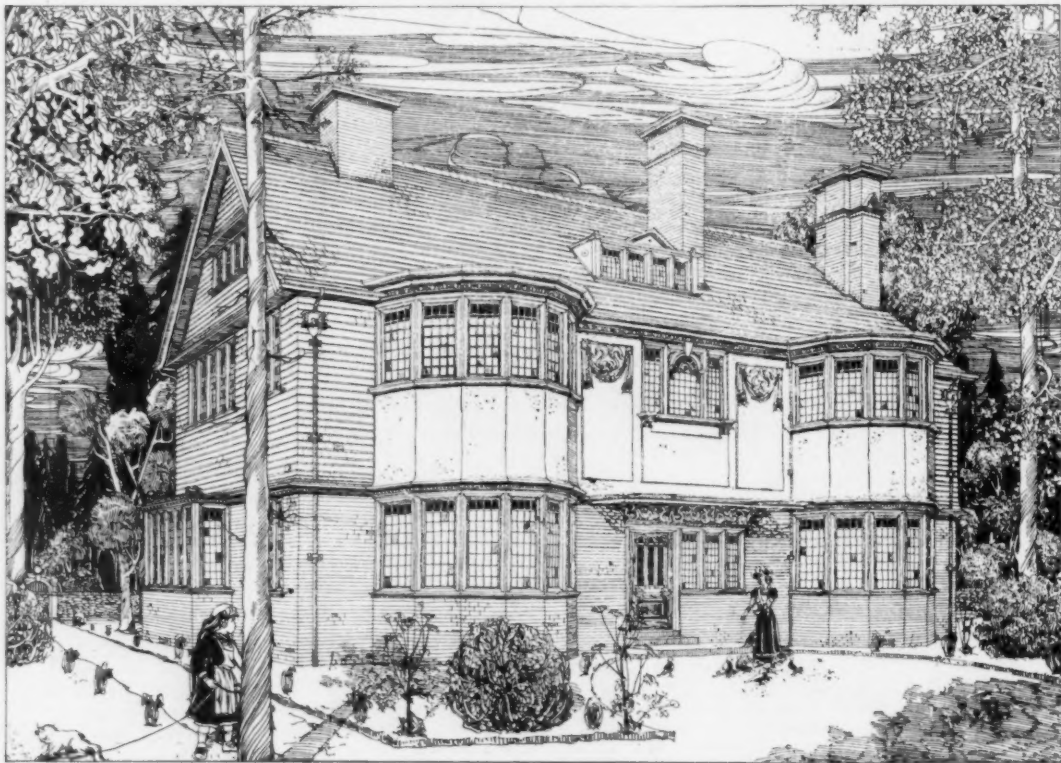
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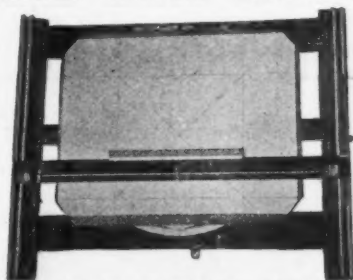
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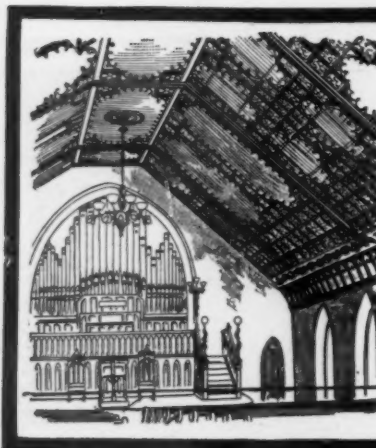


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BUILDING INTELLIGENCE.

(Reported for The American Architect and Building News.)

[Although a large portion of the building intelligence is provided by their regular correspondents, the editors greatly desire to receive voluntary information, especially from the smaller and outlying towns.]

ADVANCE RUMORS.

Allston, Mass.—Dr. Edward A. Packard will erect a block of four-story brick apartment-houses on Commonwealth Ave. and Harvard St., at an estimated cost of \$100,000.

Anderson, Ill.—The American Fuel & Supply Co., Geo. Lilly, pres., will build a pumping-station, to cost about \$50,000.

Atlanta, Ga.—The Atlantic Masonic Temple Co., N. F. Parkhurst, Sec., will build a Masonic Temple, 85' x 121', on Auburn Ave. and N. Pryor St.; cost, \$60,000.

Bristol, R. I.—The plans of William R. Walker & Sons, Providence, have been selected by the School Board for the new six-room school-building to be

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

erected on State St. It will be a two-story and basement brick structure, 76' x 84', costing \$25,000.

Charlotte, N. C.—Hook & Sawyer have furnished plans for a college building for Red Springs Seminary. The structure will be 60' x 300', and cost \$35,000.

Chelsea, Mass.—Atwood & McManus have had plans prepared for a stable building to be erected on 4th St. It will be a frame structure, 36' x 80'.

Rand & Skinner, Boston, have completed plans for an addition to the Central Congregational Church to be used as an industrial school. It will be two stories high, 36' x 55', and will be constructed of brick and stone; cost, \$10,000.

Cincinnati, O.—The Lankenheimer Co. will erect a two-story brick and stone machine-shop, 52' x 171', on Lawn Way, between Tremont St. and Waverly Ave.; cost, \$20,000.

Columbus, O.—Yost, Packard and H. Spielman have prepared plans for a passenger station to be erected here by the Hocking Valley Railroad Co.; cost, \$10,000.

Des Moines, Ia.—A. E. Clark has had plans prepared by C. E. Eastman for a flat-building to be



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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

built at 1008 W. 8th St. It will be a brick structure, three stories in height; cost, \$10,000.

Dickson, Tenn.—The Presbyterian Society, Rev. H. P. Griffin, pastor, will erect a brick church, to cost about \$20,000.

Fayetteville, Tenn.—Thompson, Gibel & Asmus, Nashville, have prepared plans for a three-story brick theatre building to be erected by the Nashville Opera-house Co.; cost, \$15,000.

Greenfield, Mass.—F. A. Pond will erect a three-story brick business building on Main St.

Harrisville, R. I.—The trustees of the library have plans for a new memorial library building to cost about \$12,000. It will be a three-story brick structure.

Highpoint, N. C.—An auditorium to cost \$10,000 is to be built here after plans being prepared by Hayden, Wheeler & Schwend, Charlotte.

Jeffersonville, O.—C. F. Parker, Washington Court-house, has prepared plans for a new town-hall to be erected here. It will be built of brick, stone and terra-cotta, and will have slate roof and furnace heat; cost, \$10,000.

Kansas City, Mo.—The Second Presbyterian Society will replace its church which was recently destroyed by fire, with a new edifice to cost about \$75,000. W. H. Seeger et al., Board of Trustees.

La Crosse, Wis.—Andrew Roth is drawing plans for a new church for St. James's congregation, Rev. A. Murphy, pastor. It will be 62' x 134', and will be constructed of brick and Bedford stone; cost, \$15,000.

Lawrenceville, Pa.—St. Stanislaus Parish, Rev. P. C. Towarsenewski, pastor, will erect a \$40,000 brick school-building, from plans furnished by Architect Sidney F. Hooker.

Louisville, Ky.—Architect Chas. Curtin has made plans for a college preparatory department to be erected on Broadway, near 2d St., by the St. Xavier Brotherhood; cost, about \$30,000.

Manitowoc, Wis.—A new school-building to cost \$20,000 is to be erected in district No. 7. A city-hall to cost about \$25,000, is to be erected here. Aldermen Biesch, Biegel and Pohl are the Building Committee.

Marquette, Mich.—Charlton, Gilbert & Demar, Milwaukee, Wis., are preparing plans for a manual training school to be erected here.

Meridian, Miss.—W. Chamberlain & Co. are drawing plans for a large office-building to be erected by A. L. Rosenbaum; cost, \$36,750.

Milwaukee, Wis.—The Lindeman-Hoverson Co. will build soon a new manufacturing plant of iron construction; cost, \$25,000.

Minneapolis, Minn.—Geo. E. Wheeler will erect a flat-building on 4th Ave. and 16th St., after plans furnished by F. D. Orr. It will be three stories, pressed brick front and cut-stone, costing \$12,000.

Moundville, W. Va.—The Fastoria Glass Co. will erect a one-story frame factory to replace the one recently destroyed by fire; cost, \$20,000.

Norway, Me.—The H. L. Webb Co., whose corn-factory was burned recently, have decided to rebuild at once.

New Haven, Conn.—Norcross Bros., of Worcester, Mass., have been awarded the contract at \$300,000 for erecting the new dining-hall at Yale.

L. W. Robinson has prepared plans for a three-story frame dwelling to be built by Albert Tilton at Whitney Ave. and Lawrence St.; cost, \$18,000.

Ontonagon, Mich.—Plans for a new poor-house to cost \$15,000 are being prepared by Architects Charlton, Gilbert & Demar, Milwaukee, Wis.

Philadelphia, Pa.—Architect E. F. Durang has completed plans for extensive interior alterations to St. Peter's Catholic Church, 6th St. and Girard Ave.

Architects Edgar V. Seeler and Frank C. Roberts & Co. have completed plans for the office-building to be erected on Liberty St., above 4th St., for the American Bank Note Co. The structure will have a granite base with the first story constructed of Indiana limestone and the remaining stories constructed of red brick and terra-cotta. It will be 85' x 120', and eleven stories in height; cost, \$450,000.

Pueblo, Col.—The Unitarian Society, Rev. Mr. Haskins, pastor, contemplate build a \$10,000 church.

Rock Island, Ill.—Sacred Heart Catholic Society has adopted plans by Geo. P. Stauduhar, architects, of this city, for a church. It will be 60' x 132', of pressed brick and stone; cost, \$30,000.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Sauk Center, Minn.—H. E. Brooks is interested in a project to erect a \$30,000 hotel here.

Savannah, Ga.—The Union Station Co., which was recently organized with a capital of \$300,000 will erect a brick and granite station to be used by the Seaboard, Southern and Plant Railway systems.

Seavierville, Tenn.—Seavierville Bank, John McMahon president, will erect a new bank building, to cost about \$20,000.

Sharon, Mass.—Architect A. H. Gould, Boston, has completed plans for a two and one-half story frame residence for Rev. John C. Kimball; cost, \$6,000.

South Lee, Mass.—Ralph L. Emerson, of Boston, has prepared plans for a stone church to be built by the Episcopal Society.

St. Louis, Mo.—The Ferguson McKinney Dry Goods Co. will erect a seven-story and basement building on Lucas Ave. to cost \$65,000, after plans by Architects H. E. Roach & Sons.

St. Paul, Minn.—Herman Kretz & Co., architects, are preparing plans for an armory building to be erected on 6th between Exchange and Fort Sts. It will be 90' x 150', three stories and basement, pressed brick, cut stone; cost, \$50,000.

Tonawanda, N. Y.—The plans of Architects Orchard & Jorlemon, of Niagara Falls, for the proposed new school to cost \$85,000, have been accepted by the School Board.

Torontum, Pa.—Hall & Kimball, Boston, Mass., have drawn plans for a three-story brick and terra-cotta building to be erected for the Y. M. C. A.

Waltham, Mass.—At a special meeting of the Board of Aldermen held recently, \$30,000 was appropriated for a new school-building to be erected on Chestnut St.

West Seneca, N. Y.—Thomas W. Harris has completed plans for a six-room school-house and a two-room school-house, to cost \$12,000.

ALTERATIONS AND ADDITIONS.

New York, N. Y.—Lexington Ave., cor. 77th St., fireproof mansard & partition; \$30,000; o., German Hospital and Dispensary, on premises; a., Schickel & Dittmar, 111 Fifth Ave.

One Hundred and Sixteenth St., One Hundred and Twentieth St., Boulevard, Amsterdam Ave., Columbia University, raise building, University Hall, one-story; \$100,000; o., Columbia University; a., McKim, Mead & White, 160 Fifth Ave.; b., Norcross Bros., 160 Fifth Ave.

Philadelphia, Pa.—Broad and Chestnut Sts., interior alterations & improvements; \$7,500; o., Ida Silberman; b., J. Franklin Stuckert & Son.

Norwood and Chestnut Hill Aves., interior alterations & two-story st. & bk. addition to dwell., 28' x 36'; \$12,000; o., William Diston; b., Sherman, Orem & Co.; a., Keen & Mead.

Walnut St., No. 1722, interior changes & improvements & three-story bk. addition, 16' x 27'; \$6,000; o., Rodman L. Wanamaker; b., Doyle & Doak.

APARTMENT-HOUSES.

Brooklyn, N. Y.—Pierrepont St., cor. Hicks St., six-story bk. apart., 49' 8" x 133' 6", gravel roof, steam; \$150,000; o., Louis Horowitz, 116 Clinton Ave.; a., F. S. Lowe, 186 Remsen St.

Chicago, Ill.—Douglas Boulevard and Central Park Ave., two-story & base, flat building, 26' x 65', comp. roof, furnace; \$5,500; a., William G. Krieg.

Douglas Boulevard and Sawyer St., two-story & base, bk. & st. flat building, 25' x 70', comp. roof, hot water; \$10,000; o., Mrs. Rose Berwin; a., Wm. G. Krieg.

Kansas City, Mo.—Three-story bk. aparts., 46' x 106', tile roof, steam; \$45,000; o., Jas. H. Cravens; a., S. R. Frink.

Milwaukee, Wis.—Vliet St., two-story fr. flat building, 24' x 60', shingle roof, furnace; \$8,000; a., Fred Graf.

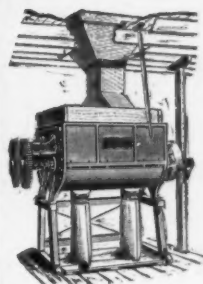
New York, N. Y.—Second Ave., No. 139, six-story bk. flat & store, 23' x 119'; \$26,500; o., Chas. Weinstein, 302 Broadway; a., Schneider & Herter, 46 Bible House.

E. Seventy-first St., Nos. 114-116, seven-story bk. flat, 50' x 90' 5"; \$102,000; o., a., Frank W. Herter, 503 Amsterdam Ave.

E. Fortieth St., Nos. 303-305, six-story bk. flat, 50' x 102' & 119' 8"; \$50,000; o., Jas. Everard, 12 E. 133d St.; a., Jas. W. Cole, 403 W. 51st St.

Philadelphia, Pa.—Seventeenth and Chestnut Sts., five-story bk. st. & Indiana trimmed limestone aparts., 41' x 91'; \$45,000; o., John W. Hallahan; b., John R. Wiggins; a., Frank R. Watson.

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BUILDING INTELLIGENCE.

CHURCHES.

Hanover, Pa.—Bk. & st. church, 68' x 96', slate roof, steam; \$40,000; o., Emmanuel Reformed Congregation; a., J. A. Dempwolf.

Philadelphia, Pa.—Margaretta St., cor. Lackawanna St., Frankford, one-story & base, church, 35' x 59'; \$6,500; o., Laws M. E. Society; b., Charles P. Nesbitt.

Rock Island, Ill.—Fifth Ave. and Twenty-eighth St., bk. & st. church, 60' x 132', slate roof, steam; \$30,000; o., Sacred Heart Catholic Society; a., Geo. P. Stauduhar.

CLUB-HOUSES.

New York, N. Y.—W. Forty-fourth St., Nos. 30-32, eleven-story bk. & st. club-house, 50' x 81' 10", tile roof, \$250,000; o., Yale Bldg. Co., 37 Wall St.; a., Tracy & Swartout, 156 Fifth Ave.

One Hundred and Fifteenth St., nr. Broadway, four & five-story bk. club-house, 25' x 79' 11", copper, tar & gravel roof; \$40,000; o., Lambda Assoc., 27 Pine St.; a., Little & O'Connor, 20 W. 34th St.

EDUCATIONAL.

Brooklyn, N. Y.—Eighteenth Ave., nr. Ocean Parkway, three-story & base, bk. public school, 60' 6" x 172', gravel or slate roof, steam; \$120,000; o., City of New York; a., C. B. J. Snyder, 520 St. & Park Ave., Manhattan.

Cedar Springs, S. C.—Three-story bk. dormitory for deaf, blind & dumb, 45' x 70', slate roof, steam; \$12,000; o., State; a., Frank P. Milburn, Charlotte, N. C.

Havana, Ill.—Two-story & base, fr. & bk. school, 72' x 78', slate roof, steam; \$18,000; o., Board of Education; a., Jacob A. Harman.

Marquette, Mich.—Two-story bk. & st. school, 60' x 130', comp. roof, steam; o., Board of Education; a., Charlton, Gilbert & Demar, Milwaukee, Wis.

FACTORIES.

Brooklyn, N. Y.—Wythe Ave., cor. N. 11th St., five-story bk. factory, 80' x 100', felt & gravel roof, steam; \$25,000; o., Weidman Cooperage Co., 146 Rodney St.; a., Th. Engelhardt, 905 Broadway.

New York, N. Y.—E. Ninth St., Nos. 735-739, six-story bk. factory, 56' 9" x 75' & 60' 9", felt, asphalt & gravel roof; \$25,000; o., Wm. P. Youngs & Bro., 432 E. 10th St.; a., Frank Miller, Highland Ave., L. I. City.

HOSPITALS.

Decatur, Ind.—Two-story bk. poor asylum, 108' x 163', slate roof, steam; \$24,000; o., Adams County; a., Cuno Kibele, Bluffton.

Newport News, Va.—Three-story bk. hospital, 80' x 113', gravel roof, steam; \$25,000; o., City; a., P. Thornton Marye.

New York, N. Y.—Cannon St., No. 89, five-story bk. nursery, 25' x 80', bk. roof; \$35,000; o., Brightside

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(Hospitals Continued.)

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Buchman & Fox, 11 E. 59th St.
Lexington Ave., cor. 77th St., five-st'y & base. bk.
hospital, 45' x 81', fireproof blocks & tin roof; \$120-
000; o., German Hospital; a., Schickel & Ditmars,
111 Fifth Ave.

Ontonagon, Mich. — Two-st'y bk. poor-house, 50' x
65', comp. roof, steam; \$15,000; o., City; a., Charlton,
Gilbert & Demar, Milwaukee, Wis.

Philadelphia, Pa. — Ridge Ave. and Rector St.,
Roxborough, three-st'y bk., st. & steel fireproof
hospital building, 49' x 112'; three-st'y bk. addition
to laundry, 27' x 41'; \$70,000; o., St. Timothy's Hos-
pital; b., John W. Fitzringer; a., G. W. & W. D.
Hewitt.

HOTELS.

Bloomington, Ill. — N. Main St., four-st'y & base.
hotel, 20' x 100', tin roof, steam; \$15,000; o., Meyer
& Wallmer; a., Geo. H. Miller.

Laverne, Minn. — Three-st'y st. & bk. hotel, metal
roof, steam; \$20,000; o., Laverne Hotel Co.; a., W.
E. E. Greene.

New York, N. Y. — E. Thirty-ninth St., Nos. 9-11,
twelve-st'y bk. hotel, 50' x 88' 3", tile roof; \$300,000;
o., Walter Stabler, 674 Columbus Ave.; a., C. I.
Berg, 10 W. 23d St.

Reading, Pa. — Mt. Penn, three-st'y & base. st. &
terra-cotta hotel & sanitarium, 60' x 105', slate
roof, hot water; \$25,000; o., William A. Whitman,
mgr.; a., William A. Frink.

BUILDING INTELLIGENCE.

HOUSES.

Boston, Mass. — Cooper St., Nos. 23-25, three-st'y
bk. dwell. & store, 27' x 28', flat roof, stoves;
\$8,000; o., Barnard Bennett; a., W. E. Clark.

Stonchurst St., cor. Hamilton St., 24-st'y fr. dwell.,
27' x 58', pitch roof, furnace; \$5,500; o., Thos. J.
Barry; a. & b., William Peard.

Maple Ave., nr. Murdock St., 24-st'y fr. dwell., 20'
x 43', pitch roof, furnace; \$5,000; o., a. & b., James
Muldoon.

Buckman St., nr. Fisher Ave., 2 three-st'y fr.
dwells., 25' x 52', flat roofs, stoves; \$10,000; o., a. &
b., Michael McPherson.

Washington St., cor. Dakota St., 24-st'y fr. par-
sonage, 25' x 36', pitch roof, furnace; \$5,000; o.,
Highland Church; a. & b., John H. Keller.

Harold St., cor. Harsishof St., three-st'y fr. dwell.,
25' x 57', flat roof, furnace; \$6,000; o. & b., Boyd &
King; a., L. S. Gillis.

Webster St., No. 118, three-st'y fr. dwell., 27' x 75',
flat roof, stoves; \$5,000; o., Agnes Finkelstein; b.,
A. Finkelstein; a., J. S. Eastman.

Bowdoin St., cor. Greenbriar St., 2 three-st'y bk.
dwells., 25' x 65', flat roofs, steam; \$16,000; o. & b.,
J. F. Haddock; a., C. A. Russell.

Seaborn St., No. 6, 24-st'y fr. dwell., 50' x 50',
pitch roof, furnace; \$6,500; o., Annie S. B. Dunham;
b., Howard Bros.; a., W. H. Brainerd.

Savin Hill Ave., cor. Woodlawn St., 24-st'y fr.
dwell., 28' x 45', pitch roof, furnace; \$5,000; o., L.
S. Phelps; b., Philip Le Blanc; a., W. E. C. Nazro.

Trenton St., No. 153, three-st'y fr. dwell., 21' x 46',
flat roof, hot water; \$5,000; o., Louis Barnham; b.,
Wilber Goodwin; a., J. S. Eastman.

BUILDING INTELLIGENCE.

(Houses Continued.)

Bowdoin St., cor. Greenbriar St., three-st'y bk.
dwell. & stores, 10' x 30' x 65', flat roof, steam;
\$10,000; o. & b., J. F. Haddock; a., C. A. Russell.
Walnut St., No. 31, 24-st'y fr. dwell., 28' x 54',
pitch roof, furnace; \$6,500; o., Rosa Dahl; a. & b.,
Gottlieb Mers.

Brooklyn, N. Y. — Sterling Pl., nr. Underhill Ave.,
4 three-st'y & base. bk. dwells., 18' 9" x 45'; \$28,000;
o., W. H. Reynolds, 49th St. & New Utrecht Ave.;
a., B. Driesler, 1432 Flatbush Ave.

W. Prospect Park, nr. 2d St., three-st'y & attic
bk. dwell., 30' x 50', slate roof, steam; \$25,000; o.,
W. H. Childs, 880 Carroll St.; a., W. B. Tubby &
Bro., 81 Fulton St., N. Y.

St. Mark's Ave., nr. Nostrand Ave., 6 three-st'y &
base. bk. dwells., 17' x 48'; \$48,000; o., W. R. Pearce,
Grant Ave., Richmond Hill; a., C. H. Roberts, 881
Sterling Pl.

Avenue C, cor. E. 19th St., two-st'y & attic fr.
dwell., 40' x 42' 4", shingle roof, steam; \$7,000; o.,
Wm. J. Kaiser, Ocean Ave., nr. Avenue D; a., B.
Driesler, 1432 Flatbush Ave.

Denison, Ia. — 24-st'y bk. & st. dwell., 36' x 50',
shingle roof, furnace; \$10,000; o., Ernest Riepen;
a., Fred Ahlschlager.

Malden, Mass. — Oak Terrace, 24-st'y dwell., 29' x
35', pitch roof, steam; \$6,500; o. & b., Willard I.
Peterson; a., A. B. Fisher.

Newton, Mass. — Fairview St., two-st'y dwell., 42' x
47', pitch roof, furnace; \$9,000; o., W. O. Evans;
b., H. E. Hutchins; a., Gay & Potter.

New York, N. Y. — E. Sixty-fifth St., Nos. 6-8, 2
six-st'y & base. bk. dwells., 25' x 43' x 48' & 53',
tile & tin roof; \$250,000; o., W. H. Bliss, 111 Fifth
Ave.; a., Bliss & Weeks, 111 Fifth Ave.

Macy Pl., nr. Prospect Ave., 8 two-st'y bk.
dwells., 20' x 52'; \$48,000; o., Theo M. Macy, Macy
Pl. & Prospect Ave.; a., W. C. Dickerson, 149th St.
& 3d Ave.

One Hundred and Eighty-seventh St., nr. Arthur
Ave., three-st'y bk. dwell., 25' x 56' 10"; \$6,000; o.,
Ignazio Calenterra, 2352 St. John's Ave.; a., Hy.
A. Knapp, 957 Cauldwell Ave.

Eighty-second St., nr. Madison Ave., 3 four-st'y
bk. & st. dwells., 26' x 30' x 62' 8", 64' & 65';
\$210,000; o., McCafferty & Buckley, 384 Park Ave.;
a., R. W. Buckley, 384 Park Ave.

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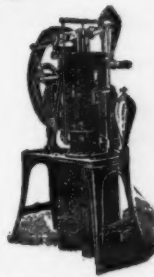
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Somerville, Mass.—Highland Ave., nr. Benton Road, two-st'y dwell., 38' x 48', pitch roof, furnace; \$5,500; o., a. & b., Oscar H. Belding.

Springfield, Ill.—Seventh and Jackson Sts., two-st'y & base. fr. dwell., 34' x 50', shingle roof, furnace; \$5,000; o., Mrs. Richard Cook; a., Geo. H. Helmle.

St. Paul, Minn.—Two-st'y st. & fr. dwell., 40' x 60', tile roof, hot water; \$20,000; o., D. Tomlinson; a., W. T. Towner.

LIBRARIES.

Amesbury, Mass.—1½-st'y bk. & st. library building, slate roof, steam; \$25,000; o., Town of Amesbury; b., T. G. Coburn & Co., Boston; a., Penn Varney, Lynn.

PUBLIC BUILDINGS.

Marshfield, Wis.—Two-st'y bk. city hall, shingle roof, steam; \$20,000; o., City; a., Van Ryn & De Gelleke, Milwaukee.

Plainfield, Ind.—Four-st'y fr. & bk. city hall & K. of P. building, 40' x 110', tin shingle roof; \$10,000; o., Knights of Pythias; a., T. A. Winterrowd, Indianapolis.

STABLES.

Andover, Mass.—Fr. stable, 40' x 116', & 2 wings, 36' x 50', shingle roof; o., W. F. D. Arcey, Boston; a., Penn Varney.

New York, N. Y.—E. Thirty-ninth St., No. 148, three-st'y bk. stable & dwell., 25' x 88' 6" & 92' 2"; \$15,000; o., Jos. Milbank, Greenwich, Conn.; a., C. A. Rich, 35 Nassau St.

One Hundred and Twenty-seventh St., s. s. 230' w 2d Ave., five-st'y bk. stable, 25' x 95', gravel roof; \$14,000; o., E. A. Brennan, 147 E. 127th St.; a., J. P. Walther, 147 E. 125th St.

Thirty-eighth St., nr. 3d Ave., three-st'y bk. & st. private stable, 25' x 95'; \$50,000; o., Jos. Milbank, 11 Pine St.; a., Charles A. Rich, 35 Nassau St.

Philadelphia, Pa.—Silver and Coral Sts., improvements & two-st'y bk. & yellow pine stable, 22' 2" x 30' 2"; \$7,000; o., Philadelphia & Reading Railway; b., Armstrong & Printzenhoff.

STORES.

Bloomington, Ill.—N. Main St., four-st'y & base. bk. & terra-cotta furniture store building, 24' x 98', gravel roof, steam; \$15,000; o., George Brand; a., George H. Miller.

TENEMENT-HOUSES.

Brooklyn, N. Y.—President St., nr. W. Prospect Park, 5 four-st'y bk. tenements, 21' 10" x 77', steam; \$75,000; o., Louis Bonert, 487 Fourth St.; a., Thos. Bennett, 198 Fifty-third St.

Rogers Ave., nr. St. John's Pl., four-st'y bk. flat, 26' x 102' 6"; steam; \$20,000; o., Kate C. Roberts, 881 Sterling Pl.

New York, N. Y.—Sixty-third St., nr. 2d Ave., 5 five-st'y tenements, 25' x 87'; \$125,000; o., Morris Jacobson; a., G. F. Pelham, 503 Fifth Ave.

Essex St., Nos. 104-106, six-st'y bk. tenement & store, 42' 2" x 91' 3"; \$45,000; o., Kidansky & Fine, 242 Henry St.; a., Horenburger & Straub, 122 Bowery.

One Hundred and Thirty-second St., nr. Amsterdam Ave., 4 five-st'y bk. & st. tenements, 25' x 95'; \$100,000; o., John Boardman, Jr., 189 Broadway; a., Neville & Bagge, 217 W. 125th St.

BUILDING INTELLIGENCE.

(Tenement-Houses Continued.)

Sixty-third St., nr. 2d Ave., 2 seven-st'y & base. bk. & st. tenements & stores, 25' x 87' 3"; \$48,000; o., Morris Jacobson, 402 E. 58th St.; a., G. F. Pelham, 503 Fifth Ave.

Hughes Ave., nr. Polham Ave., three-st'y fr. tenement, 25' x 65'; \$6,500; o., Carucci & Criscuolo, 914 E. 187th St.; a., C. S. Clark, 719 E. 177th St.

Sixty-fourth St., nr. 2d Ave., 3 six-st'y & base. bk. & st. tenements & stores, 25' x 87' 3"; \$84,000; o., Morris Jacobson, 402 E. 58th St.; a., G. F. Pelham, 503 Fifth Ave.

THEATRES AND HALLS.

Madisonville, Ky.—Two-st'y bk. & terra-cotta theatre, 60' x 125', metal roof, steam; \$12,000; o., The New Century Theatre Co.; a., W. C. Morton.

Richmond, Mo.—Main St., two-st'y bk. opera-house & convention hall, 60' x 100', gravel roof, steam; \$12,000; o., Samuel Dougherty; a., Sheppard & Farrar, Kansas City.

WAREHOUSES.

New York, N. Y.—William St., No. 120, eight-st'y bk. warehouse & store, 24' 5" x 155' & 126' 7", concrete roof; \$150,000; o., Albert and Jos. Plaut, 128 William St.; a., Rob't Mayneke, 725 Broadway.

COMPETITIONS.

CLUB-HOUSE.

[At Shreveport, La.]

Plans will be received until August 15th by the Shreveport Athletic Association for a club-house. R. G. PLEASANT, pres. 1285

HIGH SCHOOL.

[At Santa Barbara, Cal.]

Plans and specifications will be received until August 7 for a high school. ALFRED DAVIS, city clk. 1283

LIBRARY.

[At Columbus, O.]

Plans will be received until August 7th for a law library at the Ohio State University. BOARD TRUSTEES. 1283

AUDITORIUM.

[At Knoxville, Tenn.]

Plans and specifications are invited for a large auditorium. W. H. CARSON, Box 375. 1284

SCHOOL-HOUSE.

[At Key West, Fla.]

Plans and specifications are wanted September 6 for a brick school. GEO. W. REYNOLDS, county clerk. 1283

ARMORY.

[At Key West, Fla.]

Plans and specifications will be received until September 6th, for a brick armory building. GEO. W. REYNOLDS, county clerk. 1283

COURT-HOUSE.

[At Waco, Tex.]

Plans will be received by the Commissioner's Court of McLennan County until August 11th, for a court-house. J. N. GALLAGHER, county judge. 1284

HOTEL.

[At Greenville, Minn.]

Plans are invited until August 5th for a hotel. JAMES ROBERTSHAW. 1284

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PROPOSALS.

ASYLUM.

[At Decatur, Ill.]

Sealed bids are wanted until August 9th for the erection of an asylum building for Adams County. CUNO KIBELE. 1284

LODGE-BUILDING.

[At El Paso, Tex.]

Bids will be received by El Paso Lodge No. 130 A. F. and A. M. until August 1st for the erection of a lodge building. G. W. NEWELL. 1283

SCHOOL-HOUSE.

[At Athens, Wis.]

Sealed proposals will be received until August 10th, for the erection of a school-house. JOHN H. CHESAK, clerk. 1284

Treasury Department, Office Supervising Architect, Washington, D. C., July 23, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 13th day of August, 1900, and then opened, for furnishing the Post-office Lock Boxes, etc., for U. S. Public Buildings during the fiscal year ending June 30th, 1901, in accordance with drawing and specification, copies of which may be had at the discretion of the Supervising Architect, by applying to this office. JAMES KNOX TAYLOR, Supervising Architect. 1284

Treasury Department, Office Supervising Architect, Washington, D. C., July 19, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 21st day of August, 1900, and then opened, for the construction (except heating apparatus and electric conduits and wiring) of the U. S. Post-office at St. Cloud, Minn., in accordance with drawings and specification, copies of which may be had at the discretion of the Supervising Architect by applying to this office or to the Postmaster at St. Cloud, Minn. JAMES KNOX TAYLOR, Supervising Architect. 1284

Treasury Department, Office Supervising Architect, Washington, D. C., July 17th, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 20th day of August, 1900, and then opened, for the construction (except heating, electric wiring and conduits) of the U. S. Post-office building at Elgin, Illinois, in accordance with the drawings and specification, copies of which may be had at this office or at the office of the Postmaster at Elgin, Ill., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1284

Treasury Department, Office of the Supervising Architect, Washington, D. C., July 11, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 25th day of July, 1900, and then opened, for furnishing and delivering the drafting materials required in accordance with the specification and schedule, copies of which may be had at this office. JAMES KNOX TAYLOR, Supervising Architect. 1283

COURT-HOUSE.

[At Blue Ridge, Ga.]

Sealed bids will be received until August 21st, for the erection of a court-house for Fannin County. THOS. J. WILSON, ordinary. 1284

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[At Philadelphia, Pa.]

Sealed proposals, in triplicate, will be received until August 4th, for roofing over and putting floors in the courtyard of the fireproof building at Schuylkill Arsenal, also for rearrangement of Inspecting and Issuing Department at Schuylkill Arsenal. L. T. COL. JOHN V. FUREY, Deputy Quartermaster, General U. S. Army. 1283

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[At Columbus, S. C.]

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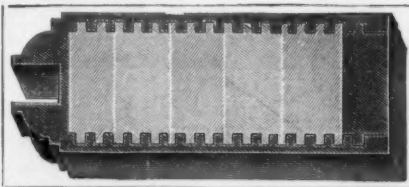
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SECTION 1. No Member should enter into
partnership, in any form or degree, with any
builder, contractor, or manufacturer.

SECTION 2. A Member having any ownership
in any building material, device or invention,
proposed to be used on work for which he is
architect, should inform his employer of the
fact of such ownership.

SECTION 3. No Member should be a party to
a building contract except as "owner."

SECTION 4. No Member should guarantee an
estimate or contract by personal bond.

SECTION 5. It is unprofessional to offer draw-
ings or other services "on approval" and
without adequate pecuniary compensation

SECTION 6. It is unprofessional to advertise in
any other way than by a notice giving name,
address, profession, and office hours, and
special branch (if such) of practice.

SECTION 7. It is unprofessional to make altera-
tions of a building designed by another archi-
tect, within ten years of its completion,
without ascertaining that the owner refuses
to employ the original designer, or, in event
of the property having changed hands, with-
out due notice to the said designer.

SECTION 8. It is unprofessional to attempt
to supplant an architect after definite steps
have been taken toward his employment.

SECTION 9. It is unprofessional for a Member
to criticise in the public prints the professional
conduct or work of another architect except
over his own name or under the authority of
a professional journal.

SECTION 10. It is unprofessional to furnish de-
signs in competition for private work or for
public work, unless for proper compensation,
and unless a competent professional adviser
is employed to draw up the "conditions" and
assist in the award.

SECTION 11. No Member should submit draw-
ings except as an original contributor in any
duly instituted competition, or attempt to
secure any work for which such a competition
remains undecided.

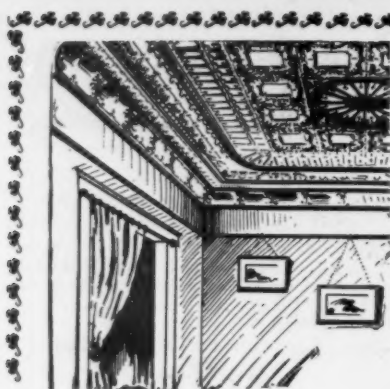
SECTION 12. The American Institute of Archi-
tects' "schedule of charges" represents mini-
mum rates for full, faithful and competent
service. It is the duty of every architect to
charge higher rates whenever the demand for
his services will justify the increase, rather
than to accept work to which he cannot give
proper personal attention.

SECTION 13. No Member shall compete in
amount of commission, or offer to work for
less than another, in order to secure the work.

SECTION 14. It is unprofessional to enter into
competition with or to consult with an archi-
tect who has been dishonorably expelled from
the "Institute" or "Society."

SECTION 15. The assumption of the title of
"Architect" should be held to mean that the
bearer has the professional knowledge and
natural ability needed for the proper invention,
illustration and supervision of all building
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SECTION 16. A Member should so conduct his
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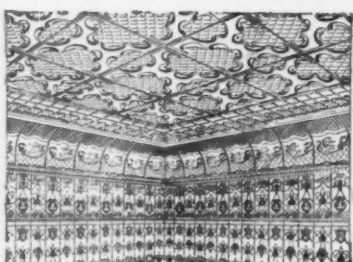
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