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MR. ROBERT S. PEABODY, President of the American Institute of Architects, to whom the profession is indebted for many quiet and sensible suggestions for improving its relations with the public, has been engaged, according to the newspapers, in advising with the Secretary of the Treasury in relation to the better administration of the Tarsney Bill. As is well known in the profession, so many misunderstandings have arisen in applying this bill that some of the most eminent architects in the country have already declined invitations to compete for Government work, and others have expressed a determination to do the same, on occasion. It is unnecessary to say that the refusal of the best architects to enter into Government competitions would be a public misfortune, and Mr. Peabody and Secretary Gage, who, apparently, agree in this view, have set about removing the conditions which might lead to further misunderstandings. Accordingly, it has been arranged, according to the newspapers, that hereafter the jury of award provided for in the Tarsney Act shall be appointed at the outset; that it shall visit the site of the proposed building, and examine and advise upon the programme of competition, besides having a voice in the selection of the competitors. For this service, the members of the jury are to be allowed a reasonable compensation, in addition to their travelling-expenses. Another suggestion, made by President Peabody, that the successful competitor should be allowed his actual travelling-expenses, while engaged in carrying out his design, just as the travelling-expenses of private architects are paid by their clients, has been rejected by Mr. Gage, who thinks that, in the case of such buildings, the regular compensation is so large that the architect can afford to pay his own travelling-expenses.

IT is not entirely improbable that the recent agitation in regard to tenement-houses for the very poor has resulted in leaving these persons worse off, in regard to dwellings, than they were before. A committee of the Boston Twentieth Century Club, appointed to inquire into the matter, found that, while the population of Boston is rapidly growing, the construction of tenements for the poorer classes has practically stopped, only two buildings of the sort being now in progress. The reason given for this is that, at the North End, where the poorest foreign population is collected, the value of land has risen so as to make it unprofitable to erect tenement-houses; while, in other parts of the city, the character of the population is changing so fast that it is imprudent to undertake new ventures. It is hardly necessary to observe that neither of these considerations would have much weight with people who really had in mind an investment of the sort. There is plenty

of land to be had at the North End, at prices at which an investment of the sort would be reasonably profitable; and no change in the character of the population can seriously affect the need of families for decent places to live in; and the real reason for the disinclination of people with money to invest in real-estate to use it for building tenements is, in all probability, the apprehension of sentimental legislation, or of competition from charitable enterprises, either of which might at any moment convert a reasonably satisfactory investment into a heavy loss.

UNDER ordinary circumstances, there is no way in which money can be invested with a surer prospect of a steady four or five per cent net return than in building tenements for the very poor. It pleases cheap socialists to represent the owner of a tenement-house as a sort of ogre, rolling in the wealth which he extorts from his victims, who linger in suffering a few months in his pestilential apartments, and are then borne to untimely graves; but, as a matter of fact, the vast majority of owners of cheap tenements are modest and decent people, who either live in a tenement themselves, or whose relatives do so; who look upon extortion with much more conscientious aversion than many rich people do, and make a sincere and efficient effort, as is shown by the fact that the death-rate in the tenement districts is exceptionally low, to keep the houses which they own as clean and wholesome as their tenants will let them. If such people were encouraged by occasional commendation of their work, by avoidance of inconsiderate legislation against them, and of still more inconsiderate schemes for robbing them of their tenants by foolish charities, and by an impartial enforcement of the building-laws, they would continue to build better and better houses, in order to keep the most desirable tenants, and the problem would, substantially, solve itself. Instead of this, owners of houses filled with Neapolitans and Russian Jews are held up to execration in the newspapers because they do not furnish baths for their tenants, not one of whom, probably, has ever knowingly permitted water to come in contact with his skin, and are threatened with the terrors of the law because they cannot always prevent their tenants from taking lodgers. We have no desire to defend overcrowding, or any other evil of tenement-house life, but, in most cases, these evils are brought about by the tenants themselves, against the wish of the owner, and the way to reform them is certainly not to drive people out of the legitimate and honorable business of building and owning tenements, by hysterical agitations, the result of which is simply to increase the very evils which they bewail.

OUR readers will remember the frequent controversies which have arisen between the United States Appraisers and the public in regard to what constituted a work of art. It is only a few months since Mr. Gould was permitted, after waiting two years, to remove from the public store-house a signed Limoges enamel, for which he is said to have paid sixteen thousand dollars, as a work of art, but which the appraisers insisted on rating as crockery; and the New York sculptors have spent a considerable amount of time in distinguishing, for the official benefit, between "commercial art" and the other kind. Lately, the old question came up again, in connection with some marble statues, which had been imported from Italy to be used in cemeteries. The Custom-house officials appraised these as "manufactures," and imposed a duty of fifty per cent. The importers claimed that they were "works of art," and, as such, liable to a duty of twenty per cent only. Several sculptors testified, as experts, that the figures were "in no sense works of art," but simply "commercial sculpture." It would puzzle an historian of art, remembering the Della Robbia factory of majolicas, and the methods employed by some of the greatest artists in disposing of their works, to point out the exact distinction between commercial and uncommercial art; but the phrase seems to have made a great impression on the officials, until, in the present case, the matter came before the United States District Court, which decided that "as the art quality of a work is determinable by no concrete standard, but is, at best, only a matter of individual opinion, the lot of marbles in question should be given the benefit of the doubt."

THIS decision is of more importance than might at first appear. If the works of foreign modellers, sculptors or painters are no longer to be virtually excluded from the United States simply because they were made for sale, instead of on orders, we are likely to see the importation of them increase greatly within the next few years. In Germany and France, for example, beautiful sculpture in wet plaster is executed, for interior decoration, by the most accomplished artists. We cannot say that our own sculptors would not be willing to do the same sort of work, and might do it better than the French and Germans; but it is, at least, unusual here, and would probably be expensive; so that the importation of foreign work of the kind would afford a resource in the architectural treatment of interiors which might be of great value. Under the "commercial art" theory, with a duty of fifty per cent, the cost of such decoration would be very great; but with twenty per cent duty, it might be possible to introduce, at reasonable expense, one of the most beautiful and promising fashions ever introduced into domestic architecture, which, as it spread, would, in all probability, afford, later, employment to great numbers of native sculptors.

THE bricklayers' strike in New York is enlivened by a novel feature, which is not without its importance. The contractor for a large apartment-house was imprudent enough to sign an agreement binding him not to employ non-union labor in laying the fireproof floors. When the time came to put the floors in, the manufacturers of the material sent men to lay it. These men not belonging to the union, a strike was ordered. The question was submitted to arbitrators, who decided that the agreement in regard to non-union labor ought not to have been violated; and the contractor consented to discharge the non-union men, and complete the work with union members. The union had agreed in writing to abide by the decision of the arbitrators, but the men refused to declare the strike off, on the ground that they should have been awarded the wages which they lost during the strike. The contractor offered to pay each union man two days' extra wages, but this offer was refused. The arbitrators, who were in part members of the union, met again, and decided that the men had lost no time worth speaking of, and that the contractor should not be required to pay them anything. The men persisted, and, other contractors coming to the rescue, a lock-out was ordered, which is likely to last until the question is settled whether a contractor whose men strike is to be obliged to pay them wages for striking, in addition to the wages of the men whom he employs to take their place.

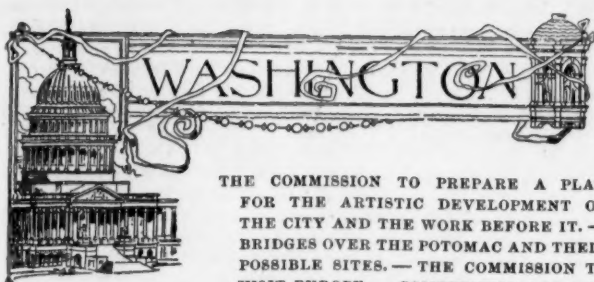
LA CONSTRUCTION MODERNE, which generally looks with benevolent eyes upon any reasonable scheme for beautifying Paris, protests earnestly against that now proposed for the Champ de Mars. For twelve years this space, originally the manœuvring-ground for the cadets of the Military School, has been disfigured by the operations incident to the construction of the buildings of the Exposition of 1900, or by the relics of the buildings of the previous Exposition, one of which, the Galerie des Machines, was preserved intact, and utilized a second time. Now, the Galerie des Machines is to be removed, together with all traces of the buildings of 1900, and the question of the future disposition of the land is actively discussed. The idea of the Government seems to be to lay it out as a vast garden, something like the Garden of the Tuileries, but about three times as large; but, according to the newspapers, it is proposed to diversify it by arranging in it a race-course for bicycles and automobiles. It is this latter idea which excites the unfavorable attention of M. Planat. He quite approves of the idea of a garden, but the idea of a garden naturally excludes that of vehicles. In the Parc Monceau, which he considers to be "the only real park, or garden, which we possess," vehicles are allowed to pass through the two driveways which intersect it "only at a slow walk," and, while it would be necessary to provide one or two driveways across the Champ de Mars, he thinks that the use of them should be similarly restricted, and that bicycles and automobiles, if not kept out altogether, should be admitted only under strict regulations. As he says, the smell of naphtha or petroleum is not one of the vernal perfumes which form the charm of parks; and automobiles already obstruct the streets and avenues of the city sufficiently, without inviting them to spoil the parks in addition.

THE reported fall of a column in Westminster Abbey turns out to have been a very trivial affair. According to the report of Mr. J. T. Micklethwaite, the Surveyor to the Abbey, a marble shaft, less than four inches in diameter, fell from its place in a window, through the corrosion of the iron pin which held it. Being a purely ornamental feature, its fall did not affect the stability of the building, but, as it happened, it fell upon a monument near it, doing some damage. Mr. Micklethwaite adds that the structural condition of the church gives no cause for anxiety, except from the surface decay of the stone in the London atmosphere, which he considers a very serious matter.

THE Vienna official building journal describes a method of approximate levelling with a bicycle, which may be of great service to engineers and others in tracing contour lines, and roughly laying-out railway and other routes. Nothing is needed in the way of instruments except the bicycle, a small spirit-level and a rule; but, before beginning operations, the exact distance between the centres of the wheels should be noted, as well as the exact radius of each wheel, and the level should be tied on the upper bar of the frame, wedging it up until the bubble is in the middle when the bicycle is standing on level ground. After beginning operations, distances from the starting-point may be read off from the cyclometer, while grades are determined, at any desired point, by placing the bicycle on some spot representing, as nearly as possible, the general slope of the ground, raising one wheel until the bubble of the level is brought to the middle, and measuring the vertical distance from the ground to the centre of the raised wheel. Noting this, and comparing it with the known horizontal distance between the centres of the two wheels, it is an easy matter to calculate the slope at that point, either in decimals or in angular measurement. In this way a rough profile of a road or field may be made, which although only approximately correct, will be far more accurate than anything which could be constructed from estimates made with the aid of the eye only.

A DECISION of some importance to architects has been given by the English Court of Appeal. An architect sued his client for his fees, and the client brought a counter-claim for damages, because, as he said, the architect was negligent in measuring up the work, and gave a certificate for an amount larger than it should have been. The first Court, while giving judgment for the architect on his claim, decided in favor of the client on the counter-claim. The next Court decided in favor of the architect on both claims, and the Court of Appeal, by a majority vote, confirmed this view, holding that, under the contract between the owner and the builder, the architect acted, in measuring the work in question, as an arbitrator, and his conduct in a judicial position of this kind could not be called in question except for fraud or dishonesty. The third judge thought that the architect, under such circumstances, was not an arbitrator, so far as his client was concerned, but an agent, and therefore liable in damages for negligence; but, of course, the majority opinion stands as that of the Court. On the whole, the majority opinion certainly agrees with the tendency of modern jurisprudence in regard to the employment of architects. No court in a civilized country would now hold, as was held in a Western State some years ago, that the architect's duty is "to see that the specifications are complied with"; and his legal position has become more and more, in regard to the fulfilment of the builder's contract, that of an expert referee, to whose decision both parties agree to submit.

THE Massachusetts Institute of Technology announces its Summer Courses for the present season, including three in Architecture, one in Surveying, five in Physics, five in Chemistry, and several in Mathematics, French, German and other branches. The courses in Architecture comprise one in Shades and Shadows, one in Elementary Design, and one in Stereotomy. The fees are trifling, varying from twenty to twenty-five dollars, and the courses offer to students and others an excellent opportunity for making up deficiencies in their professional training, or for fitting themselves for special work. The summer climate of Boston is very pleasant, and it is needless to say that no American city offers more attractions for the student of architecture and the fine-arts. Any further information desired may be obtained from the Secretary of the Massachusetts Institute of Technology, Boston.



THE COMMISSION TO PREPARE A PLAN FOR THE ARTISTIC DEVELOPMENT OF THE CITY AND THE WORK BEFORE IT. — BRIDGES OVER THE POTOMAC AND THEIR POSSIBLE SITES. — THE COMMISSION TO VISIT EUROPE. — COMPETITION FOR THE DEPARTMENT-OF-AGRICULTURE BUILDING.

FROM now on, the attention not only of citizens of this place, but of intelligent observers everywhere, and more especially of the great world of lovers of the arts, will be turned with interest upon what is going to be done with the great problem of the general adjustment and expansion of Washington's park-system and the location and grouping of public buildings and monuments.

As is generally known, the duty of studying these questions in their relation one to the other and to the future growth of the nation and the National Capital, and of reporting to and advising Congress upon them, has been given into eminently capable hands.

It is difficult to withhold one's enthusiasm in reflecting upon the probable results of the selection made. A plebiscite from the educated intelligence of the country could scarcely have resulted in a choice more fortunate for the cause in question, or have brought forward a group of artists more perfectly equipped for the task before them than is the Commission composed of Mr. Burnham, Mr. Olmsted, and Mr. McKim. Their association promises so much that we may already feel assured of a splendid success. A profound knowledge of the arts of architecture and landscape, refined and academic taste invigorated by creative talent of a high order, genius for the planning of great combinations and a rare gift of administrative ability in their carrying-out—these are some of the qualities this Commission stands for. Whatever may be the ultimate outcome of their labors, whether Congress will do its share when the time comes and support without reserve the plans these gentlemen submit, or, by temporizing and half-measures, lose to us, in part, the certain beauty of their project, the results of their collaboration are yet certain to be of great artistic interest and educational value. The thing to be done is gloriously broad in its scope. As these letters have said already more than once or twice, the opportunity is as superb a one as ever fell to the happy lot of artists: Le Notre's, chosen to create what Downing calls "the crowning glory of the geometric style," the gardens of Louis XIV at Versailles, was not more splendid. Two hundred acres for a royal garden, two hundred millions of francs to make it, and the bills, when it was done, tossed into the fire by the superb master of a gardener "scarcely less superb," as the story runs. This was rather fine—but ours is still a greater scheme. There is the setting of a city to design, direction to be given its development, its great avenue to be redeemed from present unloveliness and made into the stately triumphal way it was meant to be by Washington and l'Enfant, into a street of noble buildings where the affairs of a great nation at the zenith of its power will be housed, a street of national monuments and civic sculpture, where, in marble and bronze, the great ones of the race will be arrayed to review the passing march of their descendants through generations and centuries to come, let us hope.

Lying to one side of this avenue is a region densely built over, squalid, hideous. This is to be razed, and in its stead are to be garden-places, with something of architectural formalism close by the avenue and around the great national buildings and monuments, but emerging southward into open parks stretching away to the river, with turfy spaces, tree-dotted, with glade and copse between the winding roads, and nature only lightly guided by the hand of art. There is a broad river to bound and make beautiful, to confine within its proper channel and make healthful. A great bridge is to span it how and where it may lend most beauty to the scene and best serve as a fitting memorial to the soldier dead, to whose countless ranks lying over there upon the slopes of Arlington it will lead. Miles of connecting parks and driveways will encircle the city, and what a bountiful nature has done for this great pleasure-ground, the charming varieties of surface, the hidden beauties of brooks and sheets of water, the bosky richness of the vegetation, will be studied and disclosed and enhanced. And all of this—after all but a development along the lines of Washington's plan for the city, and as such the best monument to his greatness we could conceive—all this realization of present graces and creation of new beauties, this planning of something which is to stand for the length of our nation's life and to speak for our civilization in its entirety as the uncovered fragments of ruined and buried Rome tell of the splendor of her ancient might—all this is what these three gentlemen are setting about to achieve. Their attitude before the task is, I am told, one of reverential comprehension and of self-forgetfulness. They are setting about it with the respect and confidence of the whole country, as well as of the professional bodies of which they are the eminent representatives, and they may count upon the generous and unselfish aid of us all in our way, be it great or small. We must appreciate their desire to carry out this national under-

taking to a realization of the intentions of the Founder, their intention to marshal before them all the facts and conditions, to consider all reasonable views and projects as to the proper consummation of this monument and bequest to posterity of the nation now coming into the fulness of its majesty, to reach a solution of the problem which will satisfy the ambition of the people and give to the onlooking nations a splendid refutation of the oft-heard charge of our thralldom to the merely commercial spirit, another proof that though we may seem given over to money-getting we have not forgotten how to spend wisely for noble aims.

The position of the proposed Memorial Bridge will be most important to the effect of the general arrangement, and will receive careful consideration. There are diverse opinions upon the desirability of bridging the Potomac from the end of New York Avenue, or from the old Observatory grounds, to Arlington. The Washington end would start at an elevation of not over 40 feet above low water; the openwork of the bridge would be about 4,000 feet long, with about 1,000 feet of solid embankment at the approaches. The attainable height in relation to the length would be not enough to give beauty of effect, it is urged, while enough to impair the dignity of the Arlington Hills as a background to the fine water-view given by the broad sweep of the river as seen from the city. The bridge at that point would cross for the greater part of its length over shoals, and would be likely to make unsightly mud-flats and to create ice-blockades which would threaten with overflow a large section of the city. It is held that the bridge should cross farther up the river, where the opposite hills approach, making the river-bed narrower and the channel deeper. This would also eliminate the much-vexed question of the draw, the absurdly unimportant "commerce" of Georgetown being yet not quite a negligible factor so far as the river is reckoned navigable, which is not the case above the Aqueduct Bridge.

The Commission may, in view of the need of adjusting their plan to meet future as well as present conditions, and taking into account the steady and rapid growth of the city westward, find good reasons for moving the site of the Memorial Bridge considerably farther upstream. The far greater beauty of the river above the Aqueduct Bridge will doubtless have some bearing upon the question. There is a fine hill-country closing in along that reach, with banks becoming bolder and wilder, until at about a mile above Georgetown and nearing the Palisades of the Potomac the scenery is cañon-like and impressive. A portion of this lovely hill-country rising from the north bank will, doubtless, be taken into and connected with the encircling park-areas, and it is felt that a bridge of stone thrown across the stream—say from a point not far below the 200-foot contour-line to a corresponding height on the Virginia bluffs, would give occasion for a design of grander impressiveness, and for a noble feat of engineering, while at the north approach to the bridge would be an opportunity for a great plaza, on a commanding eminence, with monumental features somewhat in relation to the bridge as the Place de la Concorde is to the Pont de la Concorde. Toward this place would tend avenues along the river's side, and from the ridge to the northward upon which the great Episcopal Cathedral will rise—where the prophets put the heart of residential Washington fifty years hence.

The views from this Place of the Bridge, high upon the river's bank, are rarely fine. Eastward and south the river bends away in a broad curve to the Aqueduct Bridge, below which it swings out again in the reverse curve, with picturesque old Georgetown terraced upon the north slope, while, on the other hand, the waters part around Anacostia Island. Beyond another bend of the shore lies the city on lower ground, the great river park stretched before it, the towering obelisk of the Washington Monument, the Mall, with its wall of buildings, and far away into the middle distance the Capitol, with its great dome swelling against the sky. Just beyond it and disturbing the unities of the picture, as severer critics maintain, glistens the golden crown of the new Library. At the back of all is an arm of the river cutting north under the misty hills of Anacostia, and southward the great body of the Potomac flows in a broad tide toward Alexandria. As one turns upstream, the palisades and cliffy, wooded hills close in upon the river, here flowing swiftly down from the rapids, just out of sight. The land to the northward is boldly undulating, full of admirable sites, bits of woodland, and pretty fields, rising gradually to the ridge about Tennallytown, from whose crest the Blue Ridge Mountains show in a faint line on the horizon to the north and west. The park-belt which is to connect the riverside parks with Rock Creek Park will pass through this region.

The bridge suggested, from the point above described, would have less than one-third the length required for the position below Georgetown, but would have impressive height and good proportion. Two comparatively short spans, covered by full semicircular arches, at the land ends, would leave about 880 feet of water to clear, with bed-rock bottom and practically unlimited abutment. If it were possible to sweep that span in a single great segment of steel-ribbed stonework with a good deep back and a strong curve to the parapet-line!

On the Virginia side a broad avenue would wind across the wooded hills through Fort Myer to Arlington, while a driveway down the riverside, but high above and curving around the heads of the picturesque little gorges, would return to the Aqueduct Bridge.

In the course of things, and for present needs, the latter bridge will demand improvement. The piers are substantial and have also been lately reinforced. It is likely that its upper works would bear reconstruction and transformation into some architectural beauty of

form. Its two-galleried form would lend itself to a graceful arcade treatment, with the lower gallery, perhaps, utilized for an electric-tramway. The bridge sadly lacks an adequate approach from Georgetown. One reaches it now with a sharp turn at right angles from a rather narrow street, but it is quite feasible to change all this into something practical as well as beautiful, neither of which qualities does the bridge-approach at present enjoy in the least. We are miserably poor in bridges here.

Another way, but a costly one, to gain a proper approach from Washington to the Aqueduct Bridge and incidentally a continuous drive by the riverside and the proposed upper bridge and generally over the lines of existing roads to the Rock Creek Park, would be by an avenue swinging over the knoll of the old Observatory, crossing the mouth of Rock Creek on that level and ascending on a viaduct along the waterside, and curving out to the Aqueduct Bridge and passing on by the road up the river. Within the arches of this viaduct would be room for warehouses, with a fair quay to the water's edge for the river-trade of old Georgetown, existent or to come. The Virginia shore of the Potomac below Georgetown will, sooner or later, be built out, the Little River, behind Anacostia Island, mere stagnant shallows, diverted into the main channel, the flats and marshes along, down to, and beyond the end of Long Bridge reclaimed and made into riverside parklands and experimental farms for the Agricultural Department and the Forestry Bureau, and a curve given to the river's south shore-line answering to that given by the great reclamation of the north shore, thus eliminating an ugly and malaria-breeding strip of swamp which is surely a serious menace to the city's health. And these river-building operations must extend to the reform of the bad state of things along the banks of the Anacostia River.

We may congratulate ourselves that at last the incredibly vile old Long Bridge, so long a weary eyesore, and a danger in its unsurpassed properties as a catcher of mud and ice, is to be replaced by the new bridge of the Pennsylvania Railway, crossing somewhat farther up-stream. Though the last Congress did not free the Mall of the railway, but, on the contrary, gave it another slice of our park-area, it did settle rather satisfactorily the question of grade-crossings, and required a handsome new station; wherefore a conservative view would seem to suggest our being content to make the best of things as they are, with the added advantage of a terminus as central as may be to the city's needs. The Commission, in advocating the acquirement by Government of the great triangle of property from the Mall north to the Pennsylvania Avenue and west to Fifteenth Street, will find opportunity to clear a proper approach to the new station. The half of the small irregular triangle between the front of the present station and Pennsylvania Avenue will be none too much ground for that purpose. This space could be treated in a way to make it architecturally beautiful and to give room for the traffic of the station, now badly congested in narrow streets.

The west half of this triangle would be an excellent site for the Flower Market, which is greatly needed here, and for which Mr. Stanford White, I think, once furnished a charming design, at the instance of many ladies of social and official distinction.

The City Market, which occupies a large square west of this triangle, is a good building for its purpose, and is likely not to be disturbed. Its exterior might easily be brought into architectural accord with the general scheme by means of incrustation with stucco and faience, a treatment which I have more than once suggested to mask the painfully glaring unloveliness of the National Museum Building near the south line of the Mall. The remaining blocks, between Ninth and Fifteenth Streets, the Mall and Pennsylvania Avenue, contain none too much ground to furnish worthy sites for Government buildings now greatly needed for the present and for the immediate future.

The magnitude and importance of the questions presented for the Commission's consideration have tempted me into saying much more than anything yet known of their intentions would warrant. In the nature of things, they have not had time as yet to more than orient themselves as to the bare outlines of the problem.

The Commission goes abroad, probably in June, and will visit Vienna, Buda-Pesth, Berlin, Paris and London, probably, and perhaps some of the lesser European cities, where park and street architecture, bridges, embankments and river-building are to be studied from famous examples.

Several conferences have been held, and preliminary surveys have been put in hand where topographical data were lacking. Meanwhile, and incidentally perhaps, they have made a little tour down the Potomac and up to the head of tide-water James, under the ciceronage of Parts V and VI of the "*Georgian Period*," and, happily, with that genial journalist Mr. W. E. Curtis as host.

Among those stately homes of the Harrisons, Pages, Byrds and Carters—manor-houses built closely after the fashions of the Mother-country of their day, if not, indeed, as was often the case, by English artisans and largely of English material—there yet breathes some flavor of an early Americanism, and a fine sentiment of dignity without ostentation, in which these houses were fashioned and in which their masters lived and died. Their architecture is of refined Classicism, very dear to the hearts of Americans who have known these or the many places like them which survive elsewhere in our country, and it has in it, though we may scarcely claim to have originated a feature of it, yet a quality which seems of the land and all our own. At any rate we should prize these houses of the "good old Colony times," as the old song runs, for what they are and have

lived through, for the memory of the men and women whom they sheltered in those grand old days when the nation was born in deeds nobler than we shall give again to the history of human struggle. A few of these old Virginian places are still held in the line of their founders, and the traditions of the old life still survive in them in some sort, though shorn of ancient state. May they not soon know a stranger ownership! Others have already passed into alien hands, and we may not expect them to long rest unchanged. Their historical and artistic interest is so great that one wishes they might be taken over by some historical society or by the State, and preserved in their integrity as monuments of an important stage in our development. The Commission will have found little of garden or landscape art left about these old places except at the Brandons, and in the old run-wild gardens of Westover, where there are traces of what were once arrangements of some pretension. The lawn at the latter place, running to the water's edge, has some great trees upon it, and, with a balustrade and steps to the river, must have been beautiful in the past.

As bearing directly and fatally upon the matter of Washington's becoming the City Beautiful, the proposition to encourage the establishment of manufactories here, lately advocated before our Board of Trade, seems particularly ill-advised and untimely. Factories would, in many ways, disturb the quiet and lessen the cleanliness which go far toward making Washington's greatest charm as a residential city. Smoke-stacks are also hopelessly unlovely, nor are factory buildings usually a pleasure to the eye. We are already enjoying a sufficient admixture of black smoke in our atmosphere, and we are trying to enforce smoke-nuisance laws, or, at least, as the laws exist, we should be enforcing them. So much for æsthetic and sanitary reasons; while from the money point-of-view one does not quite see how, as a manufacturing-centre, we could hope to adjust the matter of freights and compete with places having immensely more favorable conditions for manufacturing; with Newport News, for instance, let us say, a fine growing seaport and the terminus of a great coal-line. Were the electric-power of the Great Falls made available here we might do something in the small-manufacturing way, if the proposed factories could be confined to the right quarter of the city. But it is evident that this idea, if encouraged, may lead to the setting-up of "boom" plants, on ground now cheap but important in relation to our projected great improvements,—where they would be in the way of Governmental acquisition of the desired areas and prove costly obstacles to remove.

There were some lesser matters in my mind for discussion in this letter, but, for lack of space, they must await another occasion. I will, however, beg indulgence for one more paragraph on a matter of importance to the profession. Supervising-Architect John Knox Taylor is now framing the terms of a competition for the new Department of Agriculture Building, and has decided, with Secretary Gage, to invite Messrs. Gilbert, Marshall and Rankin to form the jury, to consult these gentlemen as to the terms of the competition, and, finally, to allow them to name the architects and firms of architects who will be invited to compete. There seems nothing needed to make this competition one of as nearly perfect conditions as may be attained under the existing law.

WASHINGTON VISTAS AND PERSPECTIVES.

REFERRING to a remark in a recent editorial of the *Star* regarding the importance attached by L'Enfant to the vistas and perspectives furnished by his plan of the capital's streets and avenues, permit me to suggest that in the vista and perspective the object which the vision strikes at last is of as much importance, at least, as the lines which guide the vision to it, and therefore that the principle of having only unobstructed vistas is an erroneous one. In one of the addresses at the recent meeting, held here, of the Institute of American Architects the error was clearly pointed out of putting important monuments or imposing architecture along the sides of uniform streets where the vision passed them by, instead of putting them directly in the way of vision, in the centre of large spaces or even, when of sufficient importance, completely closing the thoroughfare. Nothing is more disappointing in city views than long uniform avenues, which lead the eye to nothing. It does not matter much how fine the buildings may be on either side, for these are seen only when the visitor is immediately before them and then with only the insufficient perspective of the street's breadth.

But with the principle of interrupted vistas must go that of having the obstruction one whose importance is in accord with the degree of conspicuousness given it. In Washington we have at present examples of these empty vistas, of those unwisely and those wisely obstructed or broken. An example that will serve the purpose of double illustration is that fine perspective from the White House looking north up Sixteenth Street. Some ten years ago the present writer protested against having this magnificent perspective lead the vision only to a hideous water-tank that then towered up on the imposing height; and he urged, among other plans then being discussed for a worthy memorial of the quadricentennial of Columbus, that the nation erect there an imposing triumphal arch, to be called the "Columbus Gate," after the fashion of the ancient "*portas*" of Rome. The offensive obstruction has since been removed; the vacant height remains an empty and disappointing vista. May it not be providentially awaiting the decision of the present Government Commission to place there a fine "Grant Arch" or "Grant Gate,"

or possibly a combination of a triumphal arch, with the grouped monuments of Grant, Sheridan and McClellan?

Examples of great vistas leading to unworthy objects are those, looking from the Capitol up East, North and South Capitol Streets, which apparently end in nothing, and also Pennsylvania Avenue, looking east as far as the "Peace Monument" is in view as its terminal object. This monument is so inadequate in dimensions and so depressing in lines and motive as to produce only disappointment and to seem almost ludicrously in contrast with the vast prominence of the Capitol. The only appropriate use of this monument would seem to be to make it an accessory to a lofty peristyle or colonnade extending across the front of the Capitol grounds, taking in the Peace and the Garfield monuments, and broken by a fine arch or gateway opposite the entrance to the Botanical Garden. This could also be made a hall of memorial statues, and while it could not obstruct the view of the Capitol from a distance, would give a dignity to the immediate approaches to it which is now lacking.

An instance of fine architecture lost to view by being placed along the line of vision instead of intercepting it is the former United States Post-office Building — one of the finest examples of the Corinthian order anywhere to be seen, and yet hardly striking the notice of any one. By what strange irony of fate is this beautiful marble building practically rendered of no account as a feature of the adornment of Washington while the successor to its name towers up in cold, severe ugliness, to be seen from every point and to be a lasting disturbance to any harmonious architectural treatment of the avenue? Examples of vistas pleasantly interrupted are all of our avenues crossing, the circles adorned with equestrian statues; but it is to be regretted that these statues are so numerous as to have lost already the quality of distinction, and it is also to be regretted that in place of the single-figure monuments at these conspicuous spaces where they are sure to have a diminutive look, there could not have been placed ornamental fountains with high-playing jets — a style of ornament conspicuously wanting in a city so beautifully adapted to it as this city is. The mistake of putting a fine ornament out of the line of vision rather than in it is the Bartholdi fountain, now lost to view in the Botanical Garden. How much more effective as an ornament to the city would this be if placed on one of the triangles at Pennsylvania Avenue and Thirteenth Street, especially if a companion fountain could be placed on the other space.

One of the finest instances of interrupted vista in Washington, or anywhere else within the writer's observation, is that looking west from the junction of Louisiana Avenue and Fifth Street northwest, commanding, as it does, the Hancock monument, a picturesque square and opening of streets, the Washington monument and the fine sky-line of the Virginia hills in the background. Instances of architecture pleasingly interrupting the vista are those of the beautiful view of the south portico of the Treasury from the avenue, the Treasury colonnade as seen from F Street, and, above all, that of the noble Doric portico of the Patent Office as it stands boldly out into F Street, a view sure to impress with delight every visitor to Washington, however insensible to its singular beauty we residents may have become through familiarity. Finally, there are those examples of nobly terminated vistas, which I believe are nowhere in the world excelled, if equalled — the views of the Capitol when approached at a distance from Maryland Avenue northeast and from New Jersey Avenue northwest. It is a great advantage to have at the start such a superb centrepiece as this for any general plan of Washington's adornment.

It is to be hoped that the Carnegie Library Building will present a pleasing interruption to the view on Massachusetts Avenue; that some day we shall see monumental groups of civilians and playing fountains at least alternating with the generals on horseback, who now own the city; and that, speaking of general adornment, we may see that most conspicuous and imposing site still remaining available — the one, namely, occupying the block between E Street and Pennsylvania Avenue on Thirteenth Street northwest, and now devoted to conspicuous advertisements — utilized for some national assembly-hall or music or art gallery of an architectural beauty worthy of the site, and more suited to be so conspicuous an object in the capital city of America than announcements of the virtues of advertised articles. — *Frank Sewall in the Washington Star.*

A REVIEW OF CONCRETE-METAL CONSTRUCTION.¹—I.

As indicated by the title, the nature of this paper is that of a review of progress along this line, as found in the various articles that have from time to time appeared in the engineering publications.

This paper might also be considered supplementary to the paper found in the transactions of this Society, written by our esteemed late President, Mr. G. W. Percy, which paper was read before this Society January 6, 1888, and entitled "Practical Applications of Iron and Concrete to resist Transverse Strains."

In this paper Mr. Percy reviewed the applications of iron to concrete beams as invented by Thaddeus Hyatt and by E. L. Ransome. Stated briefly, Mr. Hyatt's method consisted in imbedding a skeleton of iron in the shape of a gridiron near the bottom of the concrete beam or slab, the principle of the construction being that the iron, used in the lower flanges of the beams, would serve only as the tie or

tensile member, while the concrete formed the compression member and connecting web. His tests demonstrated that iron could be perfectly united with concrete so as to work in unison with it and form a compound beam or girder.

Mr. Ransome's method consisted in the substitution of square bars of iron or steel, twisted cold, instead of the iron frame of Mr. Hyatt's invention, to be imbedded near the bottom of concrete girders or flat slabs. This application of iron to concrete, though modified slightly in arching the beams transversely between the rods, has been used extensively and successfully in sidewalks and roofs.

Before describing the different systems, a few remarks will be made on the elasticity of concrete, the adhesion between concrete and iron, and the behavior of concrete as the preservative of iron.

Elasticity. — As will be mentioned later, the elasticity of concrete has been practically demonstrated by the tests of the Austrian Society of Engineers and Architects,² and by numerous other tests; consequently, in combination of concrete and metal, both materials deform equally when subjected to a stress, and therefore their stresses are as their relative moduli of elasticity. Mr. Thacher, in his formulas, puts the value of the modulus of elasticity of concrete at 1,400,000 pounds and that of steel at 28,000,000 pounds. The Austrian Society determined the value of the moduli of the elasticity of steel, concrete and mortar as follows:—

For steel, 29,700,000 to 31,400,000 pounds.
For concrete, 1,400,000 to 4,000,000 pounds.
For 1.3 mortar, 5,000,000 to 6,000,000 pounds.

Expansion. — M. Benniceau, a French author, gives the thermic expansion of Portland-cement as .0000143 Celsius, while iron has .0000145.

Adhesion. — It has been well demonstrated that there is a strong adhesion between concrete and iron. This great adhesion is attributed to a chemical connection between the silicates of cement and steel. Professor Bauschinger found the adhesion between mortar and iron to be between 570 and 640 pounds per square inch.

To determine values of the adhesion between iron and cement-mortar, Mr. W. A. Hoyt, a student at the University of Wisconsin, last year conducted a series of experiments to determine the stress per square inch of metal surface required to pull imbedded bolts from the mortar. He experimented with polished bolts, rusty bolts, bolts with normal surface and bolts that had been coated with a neat cement-mortar before being imbedded in the concrete. While his experiments were not entirely satisfactory, on account of a lack of uniformity in the sand used (which, however, is something liable to happen in practice), the average results of his test are as follows:—

Age of concrete, ten weeks.
Adhesion of polished bolts, 440 pounds per square inch.
Adhesion of rusty bolts, 520 pounds per square inch.
Adhesion of bolts with normal surface, 570 pounds per square inch.
Adhesion of bolts coated with neat cement, 820 pounds per square inch.
Adhesion (average), 588 pounds per square inch.

Concrete as a Preservative of Iron. — It has been well proved that cement acts as a preservative of iron and steel, and many instances

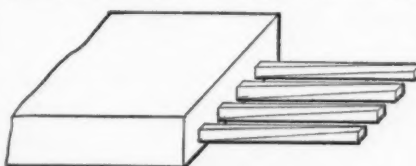


Fig. 1. Ransome.

could be cited showing that iron or steel will not rust when imbedded in concrete, even if the concrete itself be immersed.

The common principle of all concrete-metal construction is

that the imbedded metal supplies the quality of tension, a quality which is lacking in the concrete itself, and in return the concrete stiffens the metal.

Other systems besides the Ransome system of concrete-metal construction, which are specially favored in practice to-day, are the Monier, the Wunsch, the Melan, the Thacher, the Hennebique and the "expanded metal" systems. Each of these systems is individually a proper subject for a paper, so the discussion of the several systems will be made as brief as is consistent with a review of this kind.

The most important and popular practice in concrete-metal construction to-day is the reinforcing of the arch ring of a concrete arch by the imbedding of iron or steel in various forms. An arch fails usually by tearing apart near the centre at the intrados, and at the haunches at the extrados, the material, at these places in the arch, being unable to withstand the tension to which they are subjected when too heavily loaded.

The most frequent employment of the Melan, Wunsch and Thacher systems is found in the concrete-metal arch. The Monier is the most flexible system, and consequently possesses the greatest variety of applications. The Melan, Wunsch and Hennebique systems are extensively used for floors in Europe, while American practice seems to favor the Monier and modifications of the Monier system and the expanded-metal system.

THE RANSOME SYSTEM.

It is a matter of special interest that the first concrete-steel arch built in the United States was constructed on the Ransome system.

¹ A paper by Chas. M. Kurtz, Member Technical Society of the Pacific Coast, read at the meeting of the Society, held March 1, 1901, and published in the *Journal of the Association of Engineering Societies.*

² *Oesterreichischer Ingenieur- und Architekten-Verein.*

This arch is in Golden Gate Park, San Francisco, Cal., and was erected in 1889. A second of similar design was erected in 1891. In this system the twisted steel bars are imbedded in the concrete arch ring in pairs, about 1 foot on centres, one bar of each pair being near and parallel to the intrados and the other near and parallel to the extrados. The merits of this system are so generally known and recognized, and, no doubt, especially so by members of this Society, that further comment on it seems unnecessary.

THE MONIER SYSTEM.

The Monier system, until within the last two years, was practically unknown in this country, but since 1880 it has been applied in a great variety of constructions in Europe. Among these applications may be mentioned gas and water reservoirs, grain-elevators, sewer-pipe, flumes and culverts, fireproof-floors and arch-bridges.

In this system the metal consists of a netting of two series of parallel steel or iron rods, $\frac{1}{2}$ to $\frac{3}{4}$ inch in diameter, which intersect at right angles and are generally spaced from 2 to 4 inches. At the intersections the rods are bound together with wire $\frac{3}{16}$ to $\frac{1}{2}$ inch in diameter. In arches of this system a netting is imbedded near the intrados and sometimes a second one near the extrados. In the tanks, pipes, etc., the netting is imbedded near the centre of the shell.

No attempt to construct an arch of a long span in this system was made until it had been well tested as to its merits by the Austrian Society, and then one of striking dimensions was built at Wildegg, Switzerland, in the autumn of 1890. It crosses an industrial canal at an angle of 45 degrees, and has a total span of 122.1 feet, with a rise of only 11.5 feet, — less than a tenth of the span. The bridge is 12.8 feet broad. The Monier arch proper is 7.9 inches thick at the centre, and 25.6 inches at the abutments. The spandrel-walls were likewise constructed on the Monier principle, and are connected at each end by two ties. The abutments are of concrete, and a backing of this material is run up on the arch for some distance, as shown in the cuts. The bridge was required to support a uniform load of 84 pounds per square foot, but on completion it was put to the test for the maximum load it would ever carry as a highway bridge. The tests were very satisfactory. For further description of this bridge see *Engineering News* for May 23, 1891.

As pointed out by Mr. Edwin Thacher, Member of the American Society of Civil Engineers, in his paper on concrete-steel bridge construction in *Engineering News*, September 21, 1899, this system has some practical disadvantages. Quoting from his paper: "The wire nets are so flexible and unruly that it has been found impracticable to imbed them in concrete containing coarse aggregates like gravel and broken stone, consequently all the strictly Monier arches that have been built up to this time have been built with 1 to 3 mortar, which, as compared with 1:2½:5 concrete, is weaker and costs considerably more."

The theoretical discussion of a Monier arch or any other concrete-metal arch is a difficult task, on account of the different materials combined, and it is not the purpose of this paper to take up the subject in that manner. Discussions may be found in the *Minutes of the Proceedings of the Institution of Civil Engineers*, Vol. CXXXIII, page 376, and in the *Zeitschrift des Oesterreichischen Ingenieur- und Architekten-Vereines*, for September 23, 1898.

An excellent descriptive article by Mr. E. L. Heidenreich on Monier construction is found in the *Journal of the Western Society of Engineers* for June, 1900. Mr. Heidenreich enumerates some of the wonderfully diversified applications of the construction, among which are reservoirs for storage of water, wine, oil, pulp, grain, cement, etc., bridges and preservation of steel in bridges and viaducts, buildings, floors and partitions, culverts and flumes, fortifications, etc.

One of the most recent applications of the Monier construction is the use of specially constructed pipes for pile covering, to protect the pile against the attacks of the *teredo navalis*, or *cobra*. This method of protecting piles was used in constructing five timber piers for a traffic-bridge near Sydney, New South Wales, (each pier consisting of a bent of three piles), and is described by Mr. E. M. De Burgh, member of the Institution of Civil Engineers, in a paper in the "*Proceedings of the Institution of Civil Engineers*." An extract from the paper appears in *Engineering News*, February 7, 1901. Briefly described, the method was this:—

After a pile, having been previously coated with Stockholm-tar, had been driven, sufficient length of the pipe to reach from below

the silt and into the clay, to above high-water, was slipped over the top of the pile and sunk to a proper depth by means of a water-jet being worked around the bottom, and pressure being applied at the top by means of screw-jacks. Mr. De Burgh is satisfied that it will prove of great durability, and outlast the pile, which, being iron-bark, may be counted on for a life of thirty years when protected from the *teredo*. The cost is estimated between 50 and 100 per cent greater than that of coppering. The same paper also gives an account and description of Monier cylinders being used for foundations as a substitute for the cast-iron cylinders used largely in New South Wales. That concrete-metal in sea-water is a complete success is questionable. Experiments on the action of sea-water upon concrete-steel show that electrolytic actions take place which cause deterioration of the steel or iron. See *Ann. des Ponts et Chaussées*, Fourth Quarter, 1899.

[To be continued.]

NEW ART-GALLERY, WHITECHAPEL.

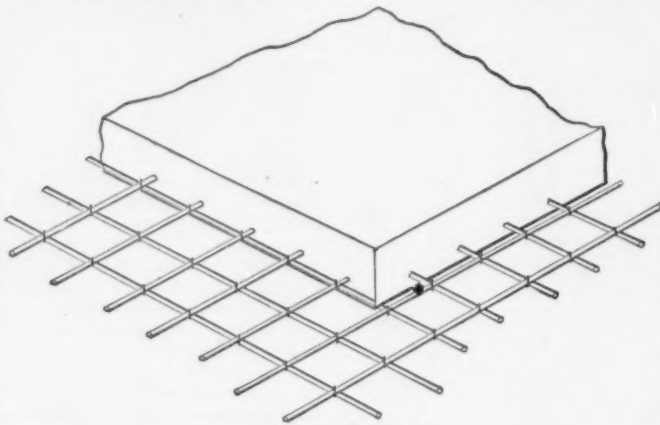


Fig. 2. Monier.

said to be, one knows not how truly — "the home of the London mob."

By almost superhuman efforts, valuable paintings were obtained on loan, from our most distinguished artists, and in order to make them, as far as might be, "understanded by the people" an excellent explanatory catalogue was sold for one penny, while volunteers escorted small batches of visitors and pointed out the beauties to them. When all was said and done, the "galleries" were but a makeshift, and Canon and Mrs. Barnett have striven unceasingly to obtain a permanent art-gallery; and few people can know how hard they and a band of devoted co-workers have labored to obtain this end. At last, the dream of twenty years has been realized, and this year's Easter exhibition has been opened in a spacious and well-lighted gallery capable of accommodating 500 pictures.

A convenient site close to Toynbee Hall being fortunately available, £6,000 — the price of it — was raised in a fortnight; about £8,000 had to be spent on the building, towards which Mr. Passmore Edwards contributed £5,000, while the Parochial Charity Foundation has voted £500 a year, which it is hoped will prove sufficient for its maintenance.

The architect is Mr. Harrison Townsend, F. R. I. B. A., whose plans were seen and approved by the late Sir E. Burne-Jones.

As an architectural composition the front lacks dignity; there is no sense of proportion about it, and its component parts are all out of scale the one with the other. The high doorway — sketched, by

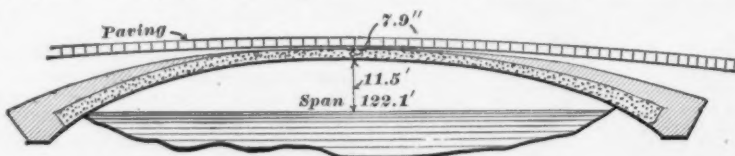


Fig. 3. Monier Arch at Wildegg, Switzerland.

the way, in Besant's article in the *Century* for February — is placed on one side instead of in the middle, as a monumental building like this seems to demand. The carving on the little quasi-towers is quite out of place, while the row of little pigeon-holes of windows,

above the doorway, supposed to light the committee-room, is ridiculous. "Being an advocate of the wider use of color in London-street frontages" the architect has made "a prominent feature of a large mosaic panel, 25 feet long by 13 feet high, to be recessed between the two turrets, so as to allow of a pent-roof as a protection from the weather." The subject of the design, by Mr. Walter Crane, is "The Sphere and Message of Art"; but it is wanting in breadth of effect, and when it is in place, the figures will look like dolls, and one year's dirt and fog will greatly dim their brightness.

Whatever "message" may be conveyed to the benighted inhabitants by the art within the building, how not to do it seems to be taught by that without it.

The interior contains two galleries and a small annex. On the ground-floor is a hall with nave and aisles, the latter roofed with glass; it is 17 feet high, 100 feet long and 48 feet wide. The upper gallery is 18 feet high, 100 feet long and 26 feet wide; it is top-lighted. It is reached by a wide and light staircase, another one being provided for exit. The lighting throughout is excellent, but one cannot say as much for the ventilation. This has been found so

defective that steps will be taken to improve it as soon as the present exhibition is closed. The cloud of dust with which the upper hall was nearly filled on a recent visit was most unpleasant, and is highly detrimental to the pictures. This difficulty has been accentuated by the immense throng of visitors, admission being free. On the first public day, between 13,000 and 14,000 persons passed the turnstile, and over 87,000 during the first seven days.

To account for the presence of such abnormal crowds, it must be remembered that Whitechapel lies a little east of the original Ghetto, separated from the City of London by the fens, on which Fenchurch Street and Moorefields now stand, and by the "dogges ditch," now the busy thoroughfare of Houndsditch. When large railway-stations were built in that part of London some sixty years ago, the denizens of the Jewish quarter, mostly foreigners, flocked into Whitechapel, where now they literally swarm. Early this year there was a large addition to the foreign element, by the influx of hundreds of persecuted Jews from Roumania.

The exhibition was formally opened in March by the Earl of Rosebery, in the presence of a large and distinguished audience, but universal regret was expressed at the absence of Canon and Mrs. Barnett. The death of their adopted daughter kept them from being present at what would otherwise have been one of the crowning realizations of their London work.

A touching letter from them was read by the Chairman, in which they expressed the hope that "the living voice of those whose eyes have been opened will be used to introduce the weary, the worn and the ignorant, who vainly strive to 'live on bread alone,' to the deathless messages of some of God's dumb preachers."

The catalogue of the exhibition contains some 367 items, principally modern works, though the exceptions bear noted names. A half-length portrait of "Elizabeth of Valois," third wife of Philip II of Spain, by Sir Antonio Moro, is splendid in color and rich in minute detail; one by Vandyck of "Sir Edmund Verney," in armor, is a fine example. Sir Edmund accompanied Buckingham and Prince Charles on their mad expedition to seek a Spanish wife for the latter: he died fighting for King Charles at Edgehill. His portrait would pass splendidly for one of Don Quixote. "Ralph Verney," by Sir Peter Lely, belongs to the less refined period of the second Charles.

Mr. Pierpont Morgan lends several pictures, viz, an admirable and characteristic example of Romney, the delicate portrait of "Mrs. Glynn"; "Miss Croker," by Lawrence, the smiling face and dark curls combining to form a delightfully natural composition; "Pick-a-back," Mrs. Payne Galway and her infant son, painted by Sir Joshua Reynolds in 1778, the child specially charming. "The Lady's Last Stake," by Hogarth, is one of his most important works outside the public galleries, while the lady is, perhaps, the handsomest he ever painted. She has gambled all night and lost all; now, in the early morning light, she is the man's debtor and must marry him or have her ruin proclaimed. His hat is seen filled with golden guineas, and packs of cards are scattered on the hearth. Other works lent by Mr. Morgan are Constable's famous "White Horse," first known as "A Scene on the River Stour," exhibited in the Academy in 1819. It belongs to Constable's best period, and was his first large picture; he himself wrote of it: "One of my happiest efforts on a large scale, being a placid representation of a serene gray morning in summer." To these we may add Turner's superb "Bellini's Pictures being carried in State to the Redentore," a picture brimful of light, air and wealthy color.

There are three fine Morlands, notably "The Post-boy's Return," sold a few years ago for £1,250, with its wonderful rendering of interior light and shade; Gainsborough's "Shepherd Boy," a fine sea-piece by Hoppner, the only one he ever painted, and a landscape by Rubens.

The gallery contains three fine examples of the "Norwich School," "Whittingham, near Norwich," by Old Crome, a characteristic work by the father of the school; "The Edge of a Wood," by J. Stark, depicting the fringe of a wood, with a pleasing glimpse of a village and sunny fields on the left; "Yarmouth: Squall Coming On," by J. Sell Cotman. Great space is suggested over land and sea in this fresh and breezy picture. "Ivybridge," painted by Turner, was a favorite subject of his. By Canaletto and Davies are several views in and near the London of a century and a half ago. Hogarth's beautiful portrait of "Peg Woffington" represents the great comedy actress at about the age of thirty.

Turning now to the more modern works, preëminence must be given to Angeli's fine life-size three-quarter-length portrait of "Her Late Majesty, Queen Victoria," lent by the King, which holds the place of honor in the lower hall. On the walls around it hang portraits by Frank Holl, Herkomer, Sir P. Burne-Jones, etc. Mr. G. F. Watts is represented by his earliest portrait, that of "Lady Dorothy Nevill," painted in Florence in 1854 — and, in the latter days of his art, by a splendid one of Earl Roberts, and of Canon Barnett. An excellent likeness of Mr. Gladstone by Goodall is well placed.

Sir E. J. Poynter, P. R. A., lends his "Horræ Serenæ," a graceful decorative work, depicting some Greek girls dancing in a sunny garden, to music played by slaves under a vine-trellised arbor, near which one sees Juno's peacock and Venus's doves. From the arbor-roof an *oscillum*, or little face, swaying in the wind, sends the blessing of the god it represents on land and people all around.

Mr. Logsdail, leaving his favorite Venice, has painted a restful London picture, "Sunday Morning in the City" — a corner of St.

Paul's Cathedral, and the street near, with the pigeons that frequent many of our public buildings. From Miss Clara Montalba comes also a London scene, a "Thames Barge," quite Venetian in tone. "Through the Morning Mist," by Adrian Stokes, well conveys the impression of a Cornish landscape seen through atmosphere laden with damp mist; Mr. David Murray's "Sweet Evening's Tranquil Hour," a glowing picture of luxurious verdure, with Leader's "Summer in North Wales" are well calculated to lull the overwrought workers of East London into a dream of rural peace and happiness. It is indeed gratifying to remark the large number of canvases of this restful type in such an exhibition. Sir Alma Tadema's two paintings, with all the calmness of the sunny South, form a decided contrast to Peter Graham's "Roaring Waters" and "Highland Cattle," in which one seems to hear the roar of the spate rushing along its narrow rock-strewn paths, brown with peat.

Messrs. Agnew send a huge canvas, "The King's Libation," by Briton Riviere, in which an Assyrian king is seen pouring out blood over the heads of some lions — very well arranged — killed by him in the chase, probably as a thank-offering to the gods Nin and Nergal. Not a picture to live with.

Mr. Logsdail has a fine architectural painting, "The Good Monk (Venice)," and there are some interesting water-colors. To art-students the exquisite studies by Burne-Jones, and the vigorous sketches of Ford Madox Brown for his large historical paintings for the Manchester Town-hall should be highly instructive.

One is reminded of Millet's "Angelus" by Mr. J. Price's "Viaticum," peasants bowing as they hear the little bell rung by an acolyte attending a priest with the Host.

Millais's "Carpenter's Shop" carries the spectator back to the early days of the Pre-Raphaelite brotherhood. Two good works by Rossetti are "The Salutation," an agreeable painting of "Beatrice"; and "La Pia."

Two works of interest to the Jews are "Jews reciting the Psalms at Jerusalem," on Friday afternoon by the Western Wall — the only part of the Temple which escaped destruction; and "David describing to Solomon the Plan of the Temple," a cartoon for stained-glass in a church at Boston, Mass., by Sir E. Burne-Jones.

The quiet demeanor of the crowds and the evident pleasure with which they linger before what takes their fancy tend to make those who have been enabled to turn their dreams into reality to disregard the sneers of certain newspaper articles, at their setting out to reform the London rough by the teachings of Art.

"Don't go too near," a rough fellow was heard to say to another as he pointed up to Mr. MacGregor's "Crab-fishers." "It's a bit blurred if you do; but stand by this pillar and you might be in that water," — and many a criticism equally direct and appreciative might be heard.

In consequence of the throngs still pressing in to see the pictures, the exhibition has been kept open a week longer than was intended. It closes on Sunday, April 21, by which date the attendance will most likely have been two hundred thousand or more, and chiefly of the inhabitants of the district.

The Gallery will become a centre of art of all kinds, including exhibitions of modern pictures, articles lent from the national museums, and of work done by the children of the people.



DETROIT ARCHITECTURAL CLUB.

MR. CHERI MANDELBAUM, who had been elected as official delegate to represent the Club at the Convention of the Architectural League of America, to be held at Philadelphia, May 23, 24 and 25, will not be in a position to leave the city at such a time. Mr. Francis S. Swales has therefore been elected to represent the Club at the Convention.

A list of the officers and committees according to the last election is here given: —

Officers. — Francis S. Swales, *President*; C. F. J. Barnes, *Vice-President*; Dalton R. Wells, *Secretary*; John Fraunfelder, *Treasurer*; C. R. Green, *Librarian*.

Directors. — George H. Ropes, Cheri Mandelbaum and Adolph Eisen.

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Exhibition Committee. — F. S. Swales, *Chairman*; J. A. Gillard and George Ropes.

Class Committee. — Cheri Mandelbaum, *Chairman*; G. H. Ropes and C. F. Barnes.

Publicity Committee. — A. Eisen, *Chairman*; J. A. Gillard and W. F. Scott.

DALTON R. WELLS, *Secretary*.

THE CHICAGO ARCHITECTURAL CLUB.

THE following-named officers were elected at the annual meeting of the Chicago Architectural Club, to serve for one year from May 6, 1901: —

President, Robert C. Spencer, Jr.; First Vice-President, Emil Lorch; Second Vice-President, E. Charles Hemmings; Secretary, J. H. Phillips; Treasurer, Adolph F. Bernhard; Members of Executive Committee, Robert E. Bourke and Thomas E. Tallmadge.
J. H. PHILLIPS, Secretary.



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

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MORE TROUBLE FROM CHICAGO SEWAGE.—After having expended \$33,000,000 to dig its great drainage-canal, Chicago learns now from the expert engineers that a further estimated amount of \$20,000,000 will be needed to clean the river-channel, in order to allow of a sufficient flow of water through the drainage-canal. But even with this expenditure the Calumet River still will be uncared for. Its flow of sewage into the lake to pollute the drinking-supply, the purification of which is the end sought, will not be lessened, while with the steady growth of population along the Calumet this source of pollution will be constantly increasing. It is on that account that it is thought certain that the Commission selected to take up plans for the improvement of the Chicago River will recommend that legislation be asked to the end that the region lying between the drainage-district and the Indiana State-line be annexed. It is held by all the members—and in this the Sanitary Trustees are agreed—that the entire proposition of disposing of the city's sewage, whether in the Chicago River or the Calumet, must be solved as a whole. — *N. Y. Evening Post*.

THE UNKNOWN COLLECTIONS OF THE COMTESSE DE CASTIGLIONE.—Some of the eccentricities of the late Comtesse de Castiglione have come out. At the time of her death she had no fewer than five flats in different parts of Paris, four of which were chiefly used for storing rare furniture and other objects. She lived in the fifth, in the street bearing her name. It contained many roughly-made deal-boxes and basket-trunks packed with rich laces, furs, fans, scent-bottles and jewelled knick-knacks. There were fifty fans of the greatest beauty. A summary history of each, and on what occasions it was used, was written on a docket. A great quantity of plate was found in a box in another of the flats, with a tea-service in massive carved silver of great value. Her collection of Venetian rose and other Italian guipures is said to be of priceless worth. The parasols and canes are not less remarkable. Canes came into fashion for ladies just before she retired from the world to bury herself alive as a recluse in the very heart of Paris. These articles are in themselves almost a fortune. The cambric body-linen is of unbelievable fineness. There are also trunks filled with souvenirs of the Tuileries, which the Countess gathered in the ruins of that palace. Pawn tickets have been found for sums amounting to 180,000 francs (\$36,000). One of them covers a famous necklace of

pearls that was missed, though she mentioned it in her will. It is worth £12,000 (\$60,000). She pawned it for a trifle compared to its real value. The heir of the late Countess is a distant cousin, who lives in Genoa. — *Boston Transcript*.

VARIO'S GREAT PAINTING AT CHRIST'S HOSPITAL, LONDON.—The huge picture, 87 feet long and 16 feet high, that has for so many years hung on the wall of the Great Hall of Christ's Hospital, was removed recently. It was painted by Antonio Vario, between 1684 and 1690, "to commemorate the foundation and endowment within the hospital of the Royal Mathematical Scholarship by His Majesty King Charles II in 1673 and 1675." It has, therefore, been part of the famous school for over two hundred years, and it has not been removed for over seventy-five years. Charles Lamb and Coleridge must both have gazed with awe at its immense size and strange drawing, for Vario, like many another Court painter, was a mighty poor artist. Christ's Hospital is doomed, however, and the great picture is to go to Horsham with the Bluecoat boys. So one morning, under the careful supervision of Mr. C. W. Carey, the keeper of the picture-gallery at the Royal Holloway College, it was lowered from the wall with pulleys and carefully and gently laid on the ground. Its weight is two and a half tons, and Mr. Carey proudly says, "it is the largest and heaviest picture in the world." The canvas is to be taken out of the frame and cleaned before being rehung. — *London Mail*.

A NATURAL RAILROAD-TUNNEL.—It is not usual for the railroad-constructor to find tunnels already built for him, but an interesting exception was experienced in the location of the Virginia and South-western Railway. According to the *Railway and Engineering Review*, at a point thirty-two miles south of Big Stone Gap, Va., on the line between that point and Bristol, Tenn., the road runs for a distance of 815 feet through a natural cave, in which it was necessary to blast for a distance of only 60 feet in order to secure a desirable alignment for the track. The engineers declare that the route was a matter of "natural selection," the tunnel being directly in the line of the projected railroad, and was not sought as a curiosity. The east portal of the natural tunnel is in a perpendicular wall of rock 400 feet high, and is 200 feet wide and 150 feet high from the bed of the stream to the crown of the natural arch. The track through the cave is on a reverse curve, and the blasting done within the cave was required to cut through the corner of a sharp bend. The west portal is 175 feet wide. The entire distance from end to end of the tunnel is 1,000 feet. The under structure of the country is of limestone formation, and the cliffs at each end are fully 400 feet in height.

THE MOND FUEL-GAS.—The Mond Gas Bill, a measure promoted by the Mond Gas Company to supply a large area with what is known as the Mond gas, came before a Select Committee of the House of Commons. Mr. Balfour Browne, K. C., stated the case for the promoters, and described the objects of the Company, which were to provide gas which would practically revolutionize the supply of power for heating and manufacturing purposes. The new gas was the invention of Ludwig Mond, and was now being manufactured by Messrs. Brunner, Mond & Co., and it was proposed that the new company should be established with a capital of £1,000,000. It was not proposed that they should go in for lighting. The gas could be profitably supplied at 2d. per thousand feet. Under the most improved conditions the cost to produce was 8d. per horse-power, or £29 per annum. Electricity supplied at 1d. per unit, which was a very low price, worked out at £27 4s. per annum, while the Mond gas at 2d. per thousand feet produced the same power at £8 10s. per annum, working with a continuous and unvariable load. The price of the Mond gas per indicated horse-power would be about £4 4s. 7d. The only objection to the use of the gas would be owing to the production of carbonic-oxide, but as the Home Office Departmental Committee fixed 20 per cent as the dangerous limit and as the Mond gas did not exceed 14 per cent, the objection was completely done away with. Sir Frederick Bramwell, in giving evidence, said that 84,000,000 cubic feet could be manufactured in a day, and that it would require 600 tons of coal. There would be no competition to speak of in the sale of the residuals. Questioned as to the mode of manufacture, Sir Frederick said the gas went straight into the mains, but there was nothing in the nature of the gas which forbade storage; it was to be "always on tap" by large manufacturers, but not by private people. — *Pall Mall Gazette*.

THE BRIGHTEST COLOR IN NATURE.—Mr. Eden Eddis, a famous English portrait-painter in his day, who was once nearly elected a R. A., has just died within a few days of his eighty-ninth birthday. He once was discussing with Mr. Gladstone what was the brightest color in nature. The statesman claimed that red was; the artist said that even in the dark you could see the blue flowers in a garden. Mr. Eddis showed Mr. Gladstone a photograph where the red flowers remained dead, undetached from the leaves, but the blue flowers were light and visible in all their forms. Then the controversy terminated abruptly with "Good-night, Mr. Eddis!" — *N. Y. Evening Post*.

"EGREMONT'S FOLLY," NEAR EXETER, ENG.—One of the most remarkable houses in England is about to be broken up and sold as building-material. This is "Egremont's Folly," the mansion erected at Silverton, near Exeter, some half a century ago by the then Earl of Egremont, from designs prepared by himself. Conceived in the spirit of Tennyson's "Palace of Art," the building cost, so far as it was proceeded with, some \$1,250,000. It contains, among other remarkable features, upwards of two hundred marble mantelpieces, each cut out of a solid block of marble, while all the principal doors in this many-roomed mansion were fitted with knobs of beautiful amber. All else was planned on the same lavish scale. — *Boston Transcript*.

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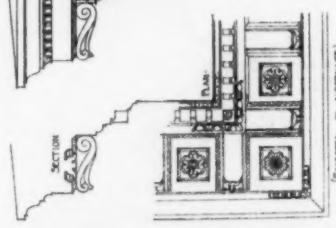
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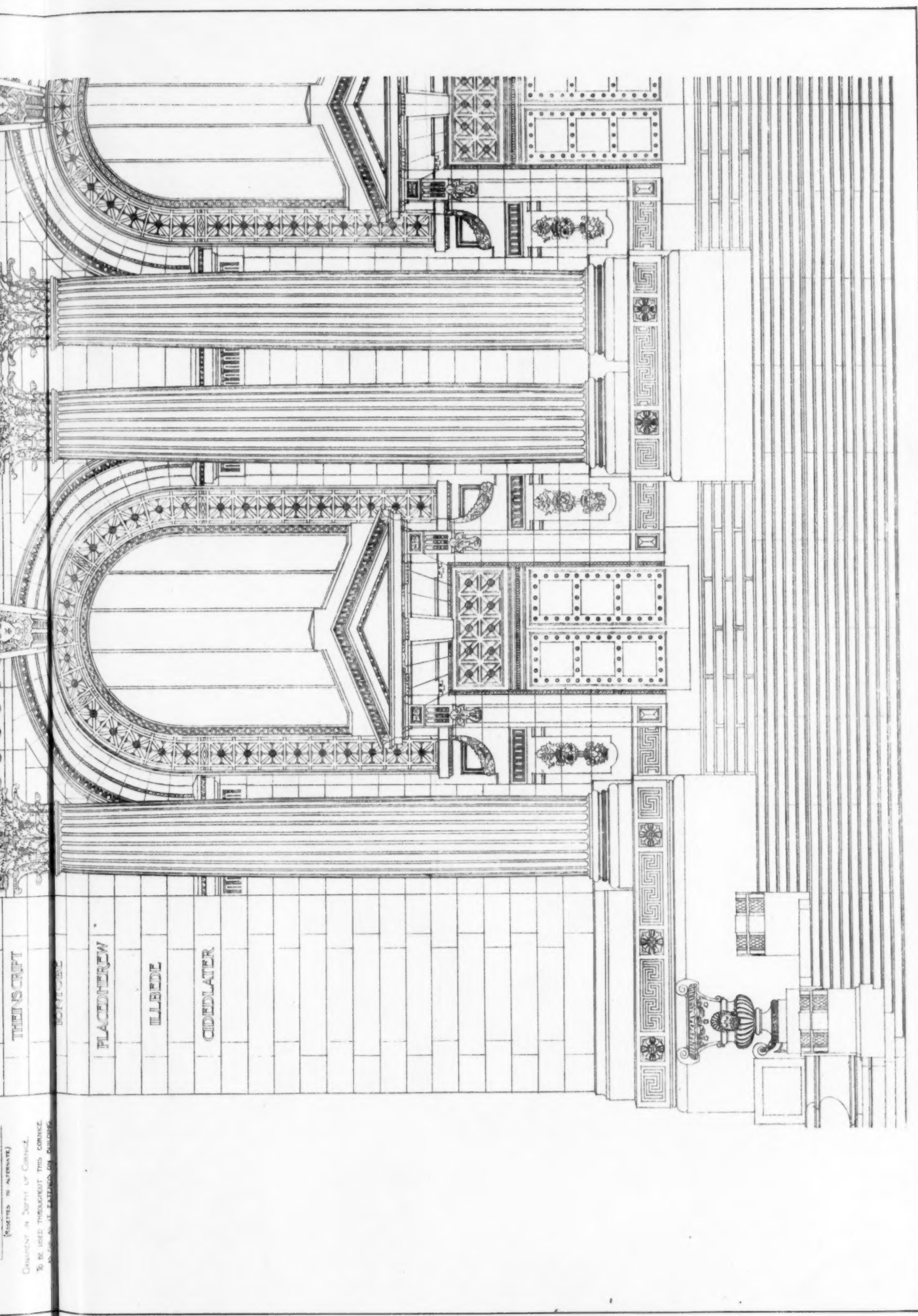
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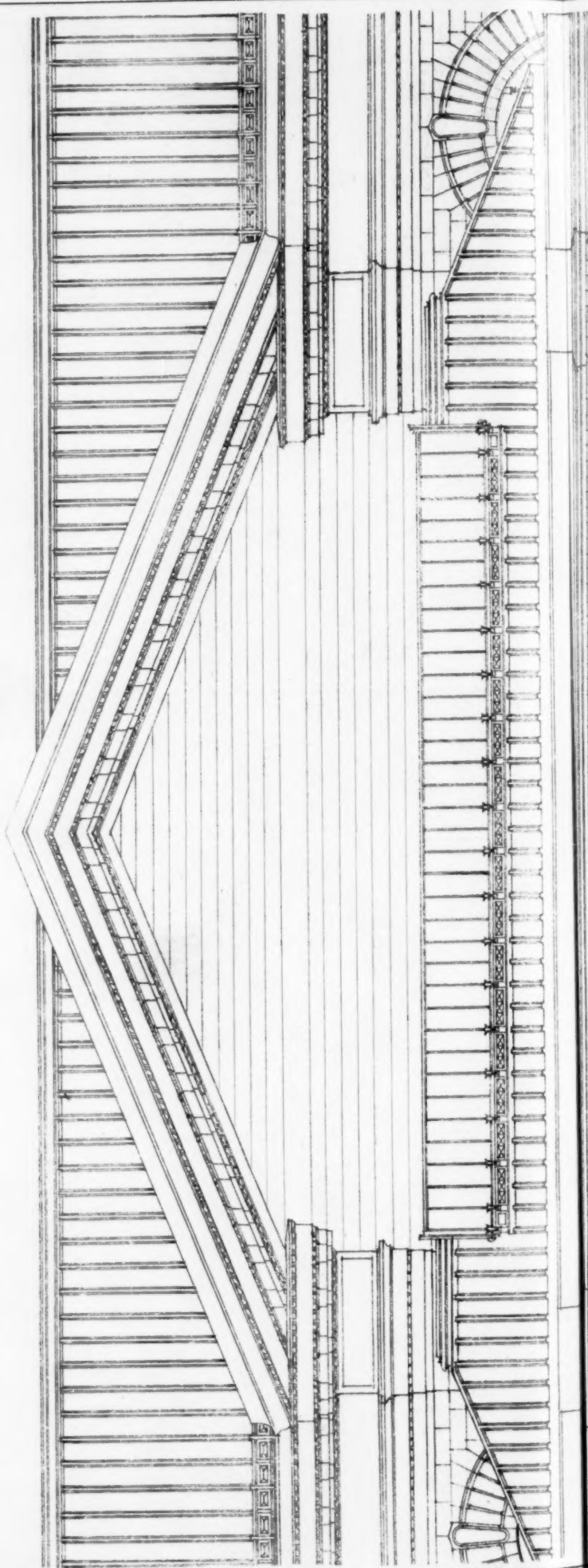


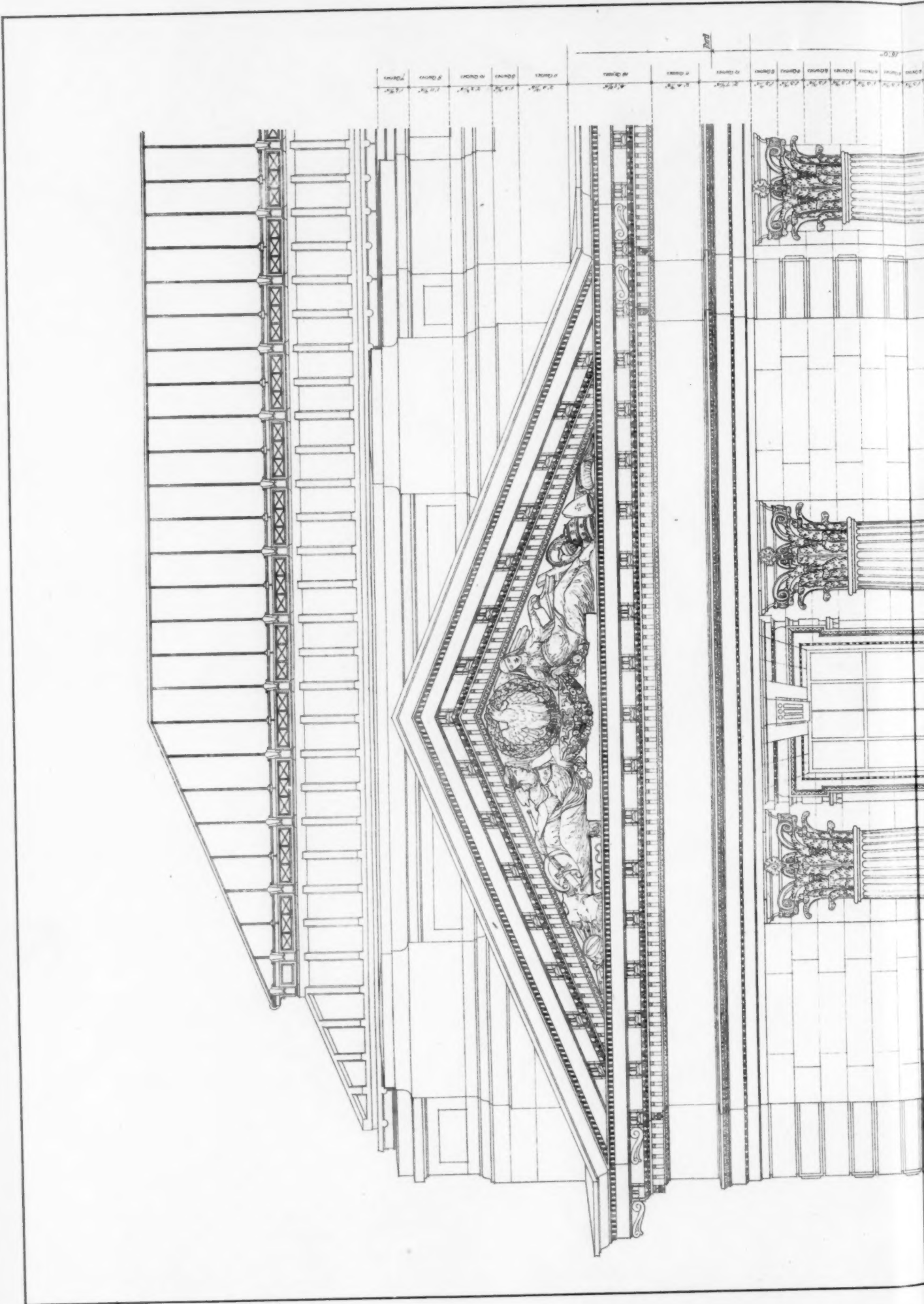
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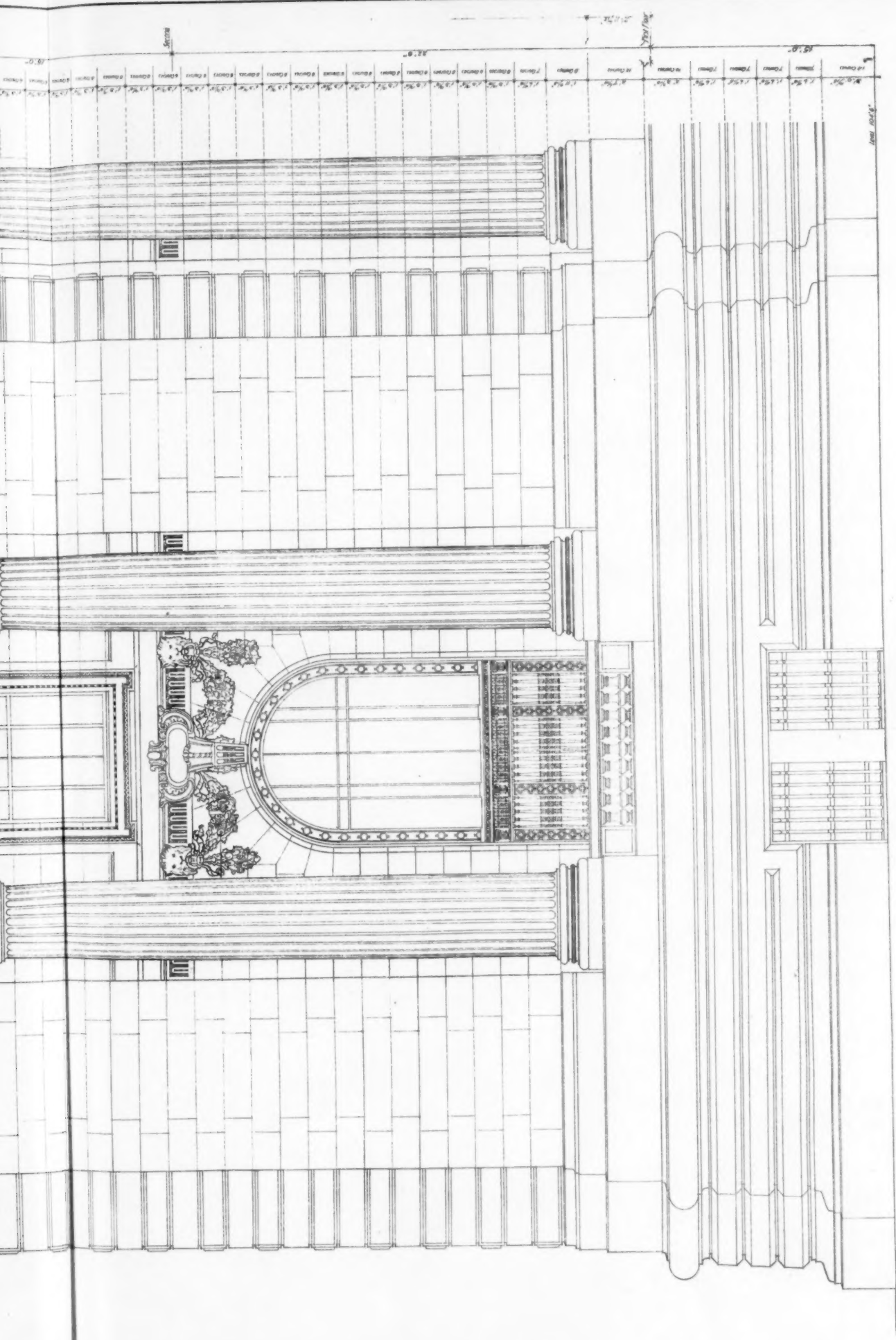
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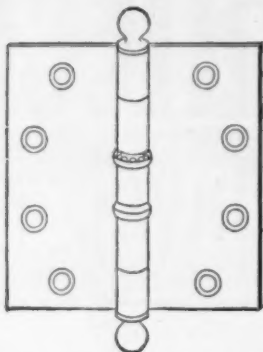
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Harrison Brothers & Co.....[Protective Paints.
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Sprinklers.
Loomis Filters Improved System.....[Filters.
Merchant & Co.....[Tin Roofing.
Morse, Williams & Co.....[Elevators.
Taylor Co., N. & G.....[Tin.
Thorn, J. & Co.....[Sheet Metal.
University of Pennsylvania.....[School.

Pittsburgh.
Seale, Wm. B. & Sons.....[Filters.
Wisconsin Graphite Paint.....[Graphite Paints.

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The matter already illustrated may in small part be classified thus:

PUBLIC BUILDINGS

City Hall, New York, N. Y.		Date 1803-12
Old State House, Boston, Mass.		" 1748
Pennsylvania Hospital, Philadelphia, Pa.		" 1755
Carpenters' Hall, Philadelphia, Pa.		" 1770
Independence Hall, Philadelphia, Pa.		" 1729
Faneuil Hall, Boston, Mass.		" 1741
and others.		

CHURCHES

King's Chapel, Boston, Mass.		Date 1749
Seventh-day Baptist Church, Newport, R. I.		" 1729
Christ Church, Alexandria, Va.		" 1767
Christ Church, Philadelphia, Pa.		" 1727
St. Paul's Chapel, New York, N. Y.		" 1764
Old South Church, Boston, Mass.		" 1729
First Church, Hingham, Mass.		" 1681
St. John's Chapel, New York, N. Y.		" 1803
First Congregational Church, Canandaigua, N. Y.		" 1812
St. Peter's P. E. Church, Philadelphia, Pa.		" 1758
Gloria Dei Church, Philadelphia, Pa.		" 1700
and others.		

IMPORTANT HOUSES

Fairbanks House, Dedham, Mass.		Date 1636
Royall Mansion, Dedham, Mass.		" 1737
Philipse Manor House, Yonkers, N. Y.		" 1745
Tudor Place, Georgetown, D. C.		" 179-
Mappa House, Trenton, N. Y.		" 1809
Woodlawn, Va.		" 1799
Mount Vernon, Va.		" 1743
and others.		

Incidentally there are shown special measured drawings or large views of the following features and details:

Porches and Doorways		67 Subjects
Staircases		21 "
Mantelpieces		81 "
Pulpits		6 "
Fanlights		60 "

In addition to the subjects enumerated above there is a large quantity of measured and detailed drawings of Cornices, Ironwork, Gateposts, Windows, Interior Finish, Ceiling Decoration, Capitals, etc., together with elevational and sectional views of entire buildings.



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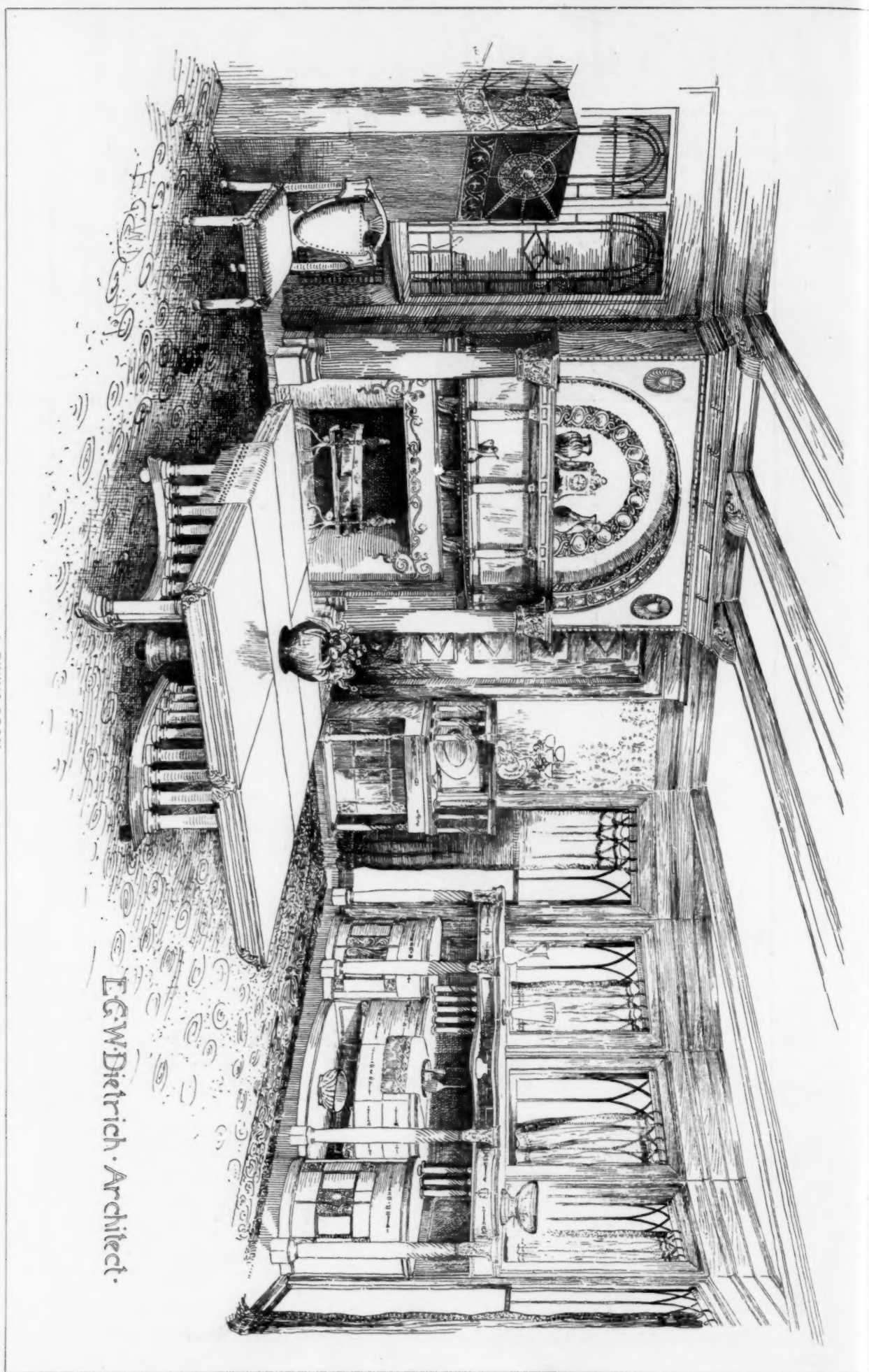
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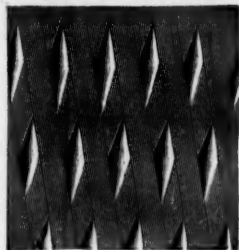
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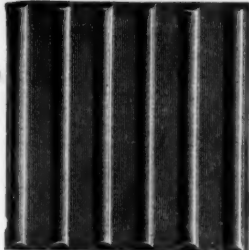
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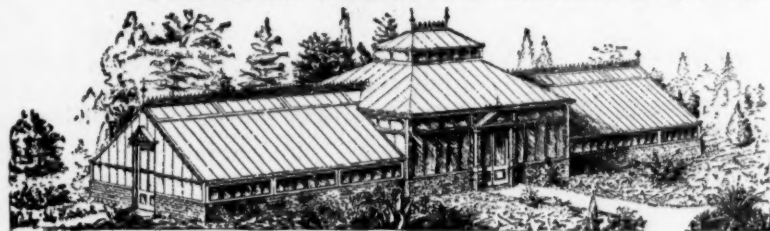
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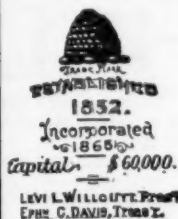
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(Advance Rumors Continued.)

Le Mars, Ia.—St. Joseph's Church will erect a three-story parochial school to cost about \$25,000.

Memphis, Tenn.—Hennessy Bros. & Evans have the contract for the Medical College; cost, \$75,000.

Montgomery, Ala.—A company is to organize here to build a \$300,000 hotel.

Moscow, Idaho.—The University of Idaho is to erect a \$50,000 dormitory after plans by W. A. Ritchie, of Spokane, Wash.

Moultrie, Ga.—A stock company has been formed for the erection of a hotel to cost \$20,000.

New Haven, Conn.—It is announced that a gift of a large sum of money has been made to Yale for the erection of another memorial building, which will be for the work of the Young Men's Christian Association of the Sheffield Scientific School.

Yale University is to have a new Medical School building, to be erected on Congress Ave. after plans by L. W. Robinson; cost, \$75,000.

Newport, R. I.—Report reaches us that Mrs. Natalie Bayard Brown, a daughter of Col. George W. Dresser, U. S. N., and a sister of Mrs. Geo. Vanderbilt, is to erect in memory of her husband, a picturesque chapel on the site of the present Emanuel Church on Spring St. It will be of early English design, costing in the neighborhood of \$100,000.

New York, N. Y.—The new Mt. Sinai Hospital, the cornerstone of which was laid a few days ago, will consist of nine separate buildings, which will cover the block bounded by 5th and Madison Aves. and 100th and 101st Sts. One of these will be devoted to a free dispensary and another to private patients. It is expected that all will be ready for occupancy by October, 1902, at a cost of \$2,000,000.

Report states that another big building, eleven stories in height, to be occupied by a general clothing and furnishing house, is to be put up in Broadway, directly opposite the site on which will be the new store of R. H. Macy & Co., on the west side of Broadway, between 34th and 35th Sts. It will be built by a syndicate and the deal, together with the proposed building, represents an outlay of more than \$2,000,000.

It is stated that negotiations for the purchase of a site for the new Experimental School are under way and competitive plans for the new building have been received. The selection of an architect will be made at once.

Olneyville, R. I.—The new Ralph St. Primary School will cost \$40,000. Work upon it will begin the last of June.

Oskaloosa, Ia.—Penn College has received the donation of a tract of land as a site for a new building, conditional on the sum of \$50,000 being raised. The amount is pledged and the new building will be erected this summer.

Philadelphia, Pa.—Horace W. Sellers, Stephen Girard Building, has completed plans for a three-story and basement stone and brick residence for George Burnham, at 41st and Locust Sts., and is requesting estimates from local builders. The house will cost \$20,000.

There is a movement on foot to erect a modern apartment-house at 36th and Walnut Sts. to cost in the neighborhood of \$150,000. Architects Schermerhorn & Reinhold, 431 Walnut St., have completed plans for the proposed structure, which have been turned over to A. R. Goret, who is the promoter of the project.

Pittsburgh, Pa.—Hamilton & Owens will erect an eighteen-story steel building at 4th Ave. and Cherry St., costing \$500,000. Architects, Hass & Laninger.

The new home of the Good Shepherd, to be put up on Lemington Ave., will accommodate 1,000 children; cost, \$500,000. S. F. Heckert is the architect.

Pittsfield, Mass.—Mr. A. A. Mills is to erect a \$40,000 brick block on North St.

Princeton, N. J.—Prof. Wm. Libbey announces that contributions amounting to \$100,000 have been received for the new university gymnasium, which will be erected very soon at a cost of \$250,000.

Providence, R. I.—La Salle Academy is to be remodelled. A three-story addition will be made, the contract for which has been awarded to David J. Barry.

Richmond, Va.—The Young Men's Business Association will erect a \$50,000 hotel here.

Rock Island, Ill.—At the corner of 5th Ave. and 18th St. is to be erected a 50-room hotel.

Seattle, Wash.—Plans have been drawn by McMann & Walker for an 83-room hotel to be erected on 3d Ave., between Spring and Seneca Sts., by Senator C. F. Clapp, of Port Townsend; cost, \$40,000.

The same architects have plans for a four-story hotel to be erected on 3d Ave., near Union, by M. F. Backus; cost, \$40,000.

The Moore Investment Co. will erect an eight-story steel constructed office-building at 2d Ave. and Seneca St.; cost, \$300,000.

Shepherdstown, W. Va.—The plans of H. D. Albright, of Charleston, have been accepted for the Normal School to be erected here; cost, \$25,000.

Spokane, Wash.—The Central Christian Society will start work on its new building at once; cost, \$25,000.

St. Joseph, Mo.—The Cathedral parochial school building to be erected at the corner of 11th and Isadore Sts. will be three stories high, and will cost \$60,000.

Tallahassee, Fla.—\$175,000 will be spent on additions and improvements to the capitol building.

Waco, Tex.—A new \$60,000 building will be erected for Baylor Institute.

Washington, D. C.—The Board of Trustees of the American University has decided, in view of the recent large contributions and the encouraging outlook, that the foundations for two new buildings, the Ohio College of Government and the Pennsylvania Hall of Administration, should be begun at once. It is hoped to lay the cornerstones of these structures in the fall.

Westfield, Mass.—The contract has been awarded to R. L. Fosburgh & Co., of Pittsfield, to build the \$20,000 addition to the plant of the American Bicycle Co.

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La Grange, Ill.—Three-sty' bk. & st. school, 75' x 110'; \$35,000; o., Convent of Holy Nazareth; a., Egan & Prindiville, 35 Dearborn St., Chicago.

HOUSES.

Boston, Mass.—Nashua St., cor. Minot St., Ward 8, three-sty' bk. dwell., 20' x 43', flat roof, stoves; \$7,000; o., Chas. S. Cantwell; a., C. A. Halstrom, 43 M St., S. Boston.

Sherman St., No. 48, Ward 21, two-sty' fr. dwell., 25' x 51', pitch roof, furnaces; \$6,500; o., A. L. Curtis, Evergreen St., Roxbury; a., S. Rantin & Son, 1117 Columbus Ave.

Devon St., No. 117, Ward 20, two-sty' fr. dwell., 26' x 54', pitch roof, furnaces; \$5,000; o., Mrs. John B. Black, 13 Dacia St., Roxbury; a., F. A. Norcross, 110 Tremont St.

Alpine St., nr. Circuit St., Ward 21, three-sty' fr. dwell., 25' x 52', pitch roof, furnaces; \$5,500; o., Cath. Higgins; a. & b., M. J. O'Brien, 305 Parker St.

Bay State Road, nr. Ashby St., Ward 11, four-sty' bk. dwell., 24' x 65', flat roof, furnace; \$20,000; o., Mrs. Geo. H. Mackey; b., J. H. Mullin, 32 Sweet St.

Oak View Terrace, nr. Boylston St., Ward 22, two-sty' fr. dwell., 25' x 48', pitch roof, hot water; \$7,000; o., J. F. Donlan; a., E. J. Lewis, Jr., 9 Park St.

Geneva Ave., nr. Westville St., Ward 20, three-sty' fr. dwell., 48' x 50', flat roof, furnace; \$6,000; o., Frank Ryder; a., S. J. Rantin, 1117 Columbus Ave.

Woodlawn St., No. 167, Ward 23, two-sty' fr. dwell., 32' x 40', pitch roof, furnace; \$5,000; o. & b., J. A. Marshbank, 19 Forbes St., Jamaica Plain.

Virginia St., nr. Dudley St., Ward 16, two-sty' fr. dwell., 26' x 58', pitch roof, furnace; \$6,000; o., Frank A. Wheelock; b., F. A. Scofield, 42 Gramplan Way, Dorchester.

Commonwealth Ave., Nos. 613-17, Ward 11, 3 four-sty' bk. dwells., 24' x 60', flat roofs, furnaces; \$75,000; o., L. M. Shapleigh; a., S. D. Kelley, 209 Washington St.

Minot St., nr. Lowell St., Ward 8, 3 three-sty' bk. dwells., 17' x 22' x 26', flat roofs, stoves; \$15,000; o., Chas. R. Cantwell; b., Max Hurwitz, 87 Lowell St.

Centre St., nr. Aldworth St., Ward 23, two-sty' fr. dwell., 30' x 48', pitch roof, furnace; \$5,000; o., W. J. Miller; b., J. J. Flynn, 95 Milk St.

Waukebec St., No. 67, Ward 17, two-sty' fr. dwell., 30' x 48', pitch roof, hot water; \$6,000; o., a. & b., F. N. Russell, 54 Warren St., Roxbury.

Brooklyn, N. Y.—Ridgewood Ave., cor. Ashford St., two-sty' & attic fr. dwell., 27' x 44', shingle roof; \$7,000; o., J. P. Ruyt, 79 Ashford St.; a., J. J. Petit, 186 Remsen St.

Ocean Ave., nr. Caton Ave., one-sty' & attic fr. dwell., 18' x 60', shingle roof; \$7,000; o., W. F. Spencer, 82 E. 18th St.; a., Wilson & Visscher, 156 Broadway, N. Y.

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Beverly Road, nr. E. 11th St., two-sty' & attic fr. dwell., 37' x 40', shingle roof, steam; \$9,000; o., H. W. Bruns, 710 Lexington Ave., N. Y.; a., J. S. Kennedy, Temple Bar.

E. Seventeenth St., nr. Church Ave., two-sty' & attic fr. dwells., 27' x 39', shingle roof; \$10,000; o., J. C. Sawkins, 81 Church Ave.; a., A. D. Isham, 220 Broadway.

Seventh St., nr. 9th Ave., four-sty' bk. dwell., 27' x 56', gravel roof, hot water; \$20,000; o., J. B. Hecker, Jr., 367 First St.; a., C. Werner, 26 Court St.; b., H. Kireher, 51 Butler St.

E. Eighth St., nr. Avenue L, two-sty' & attic fr. dwells., 18' x 30', shingle roof; \$5,000; o., S. Glitz, Avenue L, nr. E. 18th St.; a., J. C. Walsh, 137 Glen St.

E. Twenty-second St., nr. Foster Ave., two-sty' & attic fr. dwell., 19' x 39', shingle roof, steam; \$6,000; o., A. E. Hunt, 244 Clinton St.; a., A. W. Pierce, 1127 Flatbush Ave.

Avenue L, nr. E. 35th St., 3 two-sty' & attic fr. dwells., shingle roofs; \$15,000; o., C. E. Donnellon, 849 Carroll St.; a., B. Driesler, 1432 Flatbush Ave.

Ocean Ave., cor. St. Paul's Ct., two-sty' & attic fr. dwell., 40' x 54', shingle roof, steam; \$18,000; o., G. Boardman, 666 Ocean Ave.; a., J. J. Petit, 186 Remsen St.

E. Fourteenth St., nr. Avenue C, 3 two-sty' & attic fr. dwells., 18' x 42', shingle roof, steam; \$12,000; o., W. S. Cohen, 454 E. 25th St.; a., A. W. Pierce, 1127 Flatbush Ave.

Cambridge, Mass.—Portland St., three-sty' bk. & fr. dwell., 47' x 100', stoves; \$20,000; o., Henry Green; a., H. D. Joll.

Sparks St., 2 1/2-sty' fr. dwell., 37' x 43'; \$8,000; o., F. W. Tilton, 74 Backingham St.; a., C. H. Bartlett.

Vincent St., 2 1/2-sty' fr. dwell., 29' x 55', furnaces; \$7,000; o., E. C. Stevens, Lexington; b., E. N. Huthins, Somerville.

Dedham, Mass.—2 1/2-sty' fr. dwell., 25' x 40', shingle

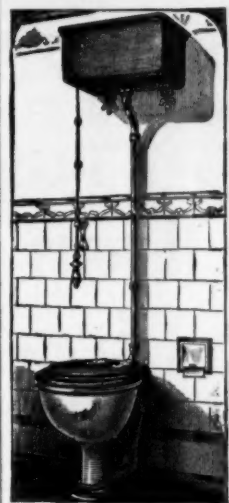
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roof, steam; \$5,000; o., G. F. Greenlaw; a., F. W. Tucker, 10 Harvard St.

Newton, Mass.—Plainfield St., Ward 4, two-sty' fr. dwell., 30' x 65', steam; \$15,000; o., Ellen B. Oakes; a., Shepley, Rutan & Coolidge.

New York, N. Y.—Union Ave., nr. 168th St., 5 two-sty' limest. & bk. dwells.; \$40,000; o., Harry White; a., Paul C. Hunter, 1148 Stebbins Ave.

Bainbridge Ave., nr. 200th St., two-sty' fr. dwell., 25' x 50'; \$8,000; o., Geo. Cohen, Briggs Ave. & Southern Boulevard; a., G. Johnson, 406 E. 164th St.

Roxbury, Mass.—Virginia St., nr. Dudley St., two-sty' fr. dwell., 26' x 58', furnace; \$6,000; o., Frank A. Wheelock; a., J. H. Besarick, 145 Summer St.

Somerville, Mass.—Hall St., cor. College Ave., two-sty' fr. dwell., 24' x 36', pitch roof, furnace; \$5,000; o., a. & b., D. J. Skelton, 10 Burnside Ave.

St. Paul, Minn.—E. Western Ave., 2 two-sty' fr. dwells., 38' x 49', furnaces; \$10,000; o., P. Flaming; a., A. F. Gauger.

OFFICE BUILDINGS.

Boston, Mass.—Endicott St., cor. Cross St., Ward 6, five-sty' bk. office-building, 50' x 58' x 84', flat roof, steam; \$40,000; o., Max I. Cohen; a., J. A. Hasty, 68 Devonshire St.

St. Paul, Minn.—Fourth St., bet. Minnesota & Cedar Sts., four-sty' bk. & st. building, 50' x 100', gravel roof, steam; \$50,000; o., G. E. Austin; a., Clarence H. Johnston.

STABLES.

New York, N. Y.—Fifty-first St., No. 129, three-sty' bk. stable, 20' x 65'; \$12,000; o., S. Barton French, 1 Nassau St.; a., John Sexton, 206 W. 43d St.

PROPOSALS.

Treasury Department, Office of the Supervising Architect, Washington, D. C., May 15, 1901. Sealed proposals will be received at this office until 2 o'clock P. M. on the 17th day of June, 1901, and then opened, for the installation of an electric conduit and wiring system, for the U. S. Post-office at New Brighton, Pa., in accordance with the drawings and specifications, copies of which may be obtained at this office at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1326

SUPPLIES.

[At Washington, D. C.] Office of the Commissioners, D. C., Washington, D. C. Sealed proposals will be received at this office until June 1st, 1901, for furnishing to the District of Columbia Portland cement, natural cement, red sewer bricks, vitrified paving blocks, sand and gravel, asphalt paving blocks and granite curbing. Specifications, blank form of proposal and all necessary information may be obtained at this office. H. B. F. MACFARLAND, JOHN W. ROSS, LANSING H. BEACH, commissioners, D. C. 1326

COURT-HOUSE.

[At Manistique, Mich.] Bids are wanted June 4 for erecting a court-house. EDW. ASHFORD, co. clk. F. W. Hollister, archt., Saginaw. 1326

SCHOOL.

[At York, O.] Bids are wanted June 1 for a brick school in York Center. F. M. HORNBECK, clk. bd. educ. 1326

COURT-HOUSE.

[At Rolling Fork, Miss.] Bids are wanted by the Supervisors June 3, for the erection of a court-house; estimated cost, \$25,000. Architects, F. B. & M. S. Hull, Jackson, Miss. 1326

REBUILDING.

[At Lincoln, Neb.] Bids are wanted June 6 for rebuilding the State penitentiary at Lincoln. GEO. D. FOLLMER, commr. pub. lands and bldgs., Lincoln. 1326

COURT-HOUSE AND JAIL.

[At Paw Paw, Mich.] Bids will be received by Claire Allen, archt., Jackson, until June 3 for a stone court-house and jail, to cost \$75,000. 1326

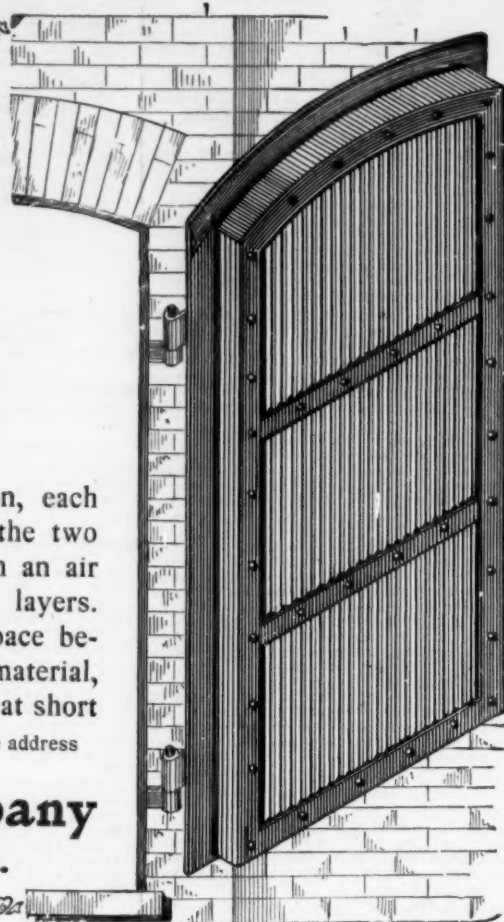
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PROPOSALS.

LIBRARY.

[At Davenport, Ia.]
Bids are wanted until June 4 for a library, to cost \$70,000. CALVIN KRESSTING, archt., 122 Ames Building, Boston, Mass. 1326

JAIL.

[At Lewiston, Mont.]
Bids are wanted June 8 for a two-story jail, to cost \$10,000. C. M. KELLY, co. clk. 1327

SCHOOL.

[At Waterloo, Ia.]
Bids are wanted June 11 for a high school; probable cost, \$25,000. IKA RODAMAR, sec'y school dist. 1327

WORK ON DORMITORY.

[At Fulton, Mo.]
Bids are wanted June 11 for erecting the 2d and 3d stories of the dormitory building at State Hospital for Insane No. 1. W. L. RAY, supt. State lunatic asylum. 1327

STABLE.

[At Cincinnati, O.]
Bids are wanted June 7 for a brick stable for the Water-works Department, including plumbing, gas-fitting and hot-water heating. GEO. F. HOLMES, clk. bd. pub. service. 1327

BUILDING.

[At Sullivan's Island, S. C.]
Office of Quartermaster, Sullivan's Island, S. C. Sealed proposals will be received here until June 7, 1901, for construction at Sullivan's Island, S. C., of one double barrack building, one hospital, eleven sets of officers' quarters, one quartermaster stable, one guard-house, one coal-shed, one oil-house, one quartermaster and commissary storehouse, one ordnance storehouse, one shop building, one hospital steward's quarters, six non-commissioned staff officers' quarters, according to plans and specifications to be seen at this office. DAVID PRICE, Q. M. 1327

CONSTRUCTION.

[At Fort Caswell, N. C.]
Fort Caswell, N. C. Sealed proposals will be received here until June 8, 1901, for constructing, plumbing and electric wiring, 2 captains' quarters, 1 double N. C. S. quarters, 1 Q. M. and subsistence storehouse, 1 lavatory, 1 ordnance storehouse, 1 quartermaster's stable and 1 coal-shed at this post. P. P. BISHOP, Q. M. 1327

PROPOSALS.

BUILDING.

[At League Island, Pa.]
Sealed proposals will be received at the Bureau of Yards and Docks, Navy Department, Washington, until June 15, 1901, for constructing a brick and steel building at the navy yard, League Island, Pa. For plans, specifications and forms of proposal address "Commandant, Navy Yard, League Island, Pa." MORDECAI T. ENDICOTT, chief of bureau. 1328

CONSTRUCTION, HEATING, ETC.

[At Fredonia, N. Y.]
Bids are wanted June 17 for the construction, structural steel, heating and ventilating, plumbing, electric wiring and fixtures, gas-piping, etc., for a State Normal School-building. 1328

STATE NORMAL SCHOOL.

[At Fredonia, N. Y.]
Sealed proposals for construction, structural steel, heating and ventilating, plumbing, electric wiring and fixtures, gas-piping and pipe-covering (from pipe covering manufacturers only) for a State Normal School-building at Fredonia, N. Y., may be sent by mail or delivered in person until the 17th day of June, 1901, to Charles E. Skinner, State Superintendent of Public Instruction, Capitol, Albany, N. Y., at which time and place the State Superintendent of Public Instruction will receive and open all proposals. Drawings and specifications may be consulted and blank forms of proposal obtained at the office of Dr. F. B. Palmer, Principal, Fredonia, N. Y., or at the office of G. L. Heins, State Architect, in the Capitol, Albany, N. Y. CHARLES E. C. SKINNER, State Superintendent of Public Instruction. 1328

BUILDINGS.

[At Riverside, Cal.]
Bids are wanted June 5 for 12 buildings; also water and sewer, electric-light and steam-heat systems at the Indian School, near Riverside. Address HARWOOD HALL, Supt. Indian School, Perris, Cal. 1326

BRIDGE.

[At Dubuque, Ia.]
Sealed proposals will be received by the Dubuque and Wisconsin Bridge Co. for the substructure, and timber trestle approach, of a highway bridge over the Mississippi, at Dubuque, until June 1st, 1901. Plans and specifications can be seen at the Company's office, Dubuque, Ia., or at the office of E. C. & R. M. Shankland, Rookery, Chicago. 1326

PROPOSALS.

MASONIC TEMPLE.

[At Mobile, Ala.]
Bids will be received by Stone Bros., Hennen Building, New Orleans, La., until June 1 for a five-story masonic temple, to cost \$45,000. 1326

BUILDING.

[At Fort Miley, Cal.]
San Francisco, Cal. Sealed proposals will be received here until June 5, 1901, for construction (including plumbing and electric wiring) at Fort Miley (Point Lobos, Cal.), of officers' quarters, barracks, non-commissioned officers' quarters, administration building, guard-house and other buildings. Information furnished on application to J. M. MARSHALL, assistant quartermaster general, chief quartermaster. 1326

OFFICERS' QUARTERS.

[At West Point, N. Y.]
West Point, N. Y. Sealed proposals will be received here until June 3, 1901, for construction of two double sets officers' quarters, as per plans in this office. Address Q. M., U. S. M. A. 1326

PLUMBING FIXTURES, ETC.

[At Washington, D. C.]
U. S. Engineer Office, 735 N. Capitol St., Washington, D. C. Sealed proposals will be received here until May 31, 1901, for furnishing plumbing fixtures, steam coils and radiators, for new building for Government Printing Office. JOHN STEPHEN SEWELL, capt., engr. 1326

COURT-HOUSE.

[At Miami, Fla.]
Sealed proposals will be received until June 1, 1901, for the erection of a two-story stone court-house to cost in the neighborhood of \$40,000. WILSON & EDWARDS, architects. 1326

BUILDING.

[At Norfolk, Va.]
Bids are wanted June 1 for a two-story brick and steel fireproof building, 65' x 180', at the Navy Yard, Norfolk. MORDECAI T. ENDICOTT, ch. bureau of yards and docks, Navy Dept., Washington, D. C. 1326

COURT-HOUSE.

[At Reidsville, Ga.]
Sealed proposals for the erection of a court-house are wanted until June 11, by B. F. ALEXANDER, ordinary. 1327

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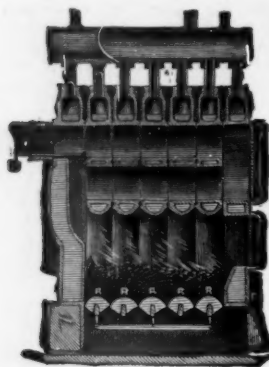
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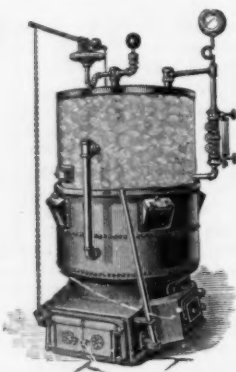
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Internat'l Sprinkler Co., Phila., Pa..

BLINDS (Venetian).

Burlington Venetian Blind Co., Bur-
lington, Vt.....

BLUE PRINTS

Moss, Chas. E., Boston.....
Spaulding Print Paper Co., Boston
.....(eow)

BOILERS (Side-Feed).

Gorton & Lidgerwood Co., New York.

BRASS WORK (Ornamental).

Inglis Wire and Iron Works, Wm.,
Detroit, Mich.....

BRICKS (Red Oxide).

Wisconsin Graphite Co., Pittsb'g, Pa.

CALIFORNIA REDWOOD.

Carlisle, Pope & Co., E. A., New York.

CAPITALS.

Lombard & Co., A. P., Boston

CAPITALS (Carved).

O. T. Nelson Co., The, Columbus, Ohio

CARVING.

Lombard & Co., A. P., Boston.....

CEMENT.

Alsen's Cement Works, N. Y.(eow)

Atlas Cement Co., New York.....

Lawrence Cement Co., The, New York

Thiele, E. New York.....

CEMENT PAVING.

Stamson & Blome, Chicago, Ill.....

CHLORIDE ACCUMULATOR.

Electric Storage Battery Co., Phila-
delphia, Pa.....

COMPOSITION ORNAMENT.

Lombard & Co., A. P., Boston.....

CONDUCTORS.

American Steel Roofing Co., The,
Cincinnati, Ohio.....

CONSERVATORIES.

Lord & Burnham Co., Irvington-on-
Hudson, N. Y.....

CONSULTING-ENGINEER.

Wm. Paul Gerhard, C. E., New York.

CONTRACTING.

Flynt Building & Construction Co.,
Palmer, Mass.....

Rutan, William L., Boston.....

CONTRACTING.

Southard, R. P.....

CONTRACTOR AND BUILDER.

Rutan, William L., Boston.....

CORDAGE.

Samson Cordage Works, Boston.(eow)

CREOSOTE STAINS.

S. Cabot, Boston.....

CUTLER PAT. MAILING SYSTEM.

Cutler Mfg. Co., Rochester, N. Y.....

DEAFENING QUILT.

Samuel Cabot, Boston, Mass.....

DECORATORS.

L. Haberstroh & Son, Boston.....

DOORS.

Kinnear Mfg. Co., The, Columbus, O.

DOORS (Interior Finish).

Carlisle, Pope & Co., E. A., New York.

DRAUGHTSMAN.

E. Eldon Deane, New York.....

ELEVATORS, ETC.

Morse, Williams & Co., Philadelphia.

Whittier Machine Co., Boston.....

ENGINES (Hot-Air).

Rider-Ericsson Engine Co., New York.

FAUCETS.

Union Brass Works, Boston, Mass...

FILING DEVICES.

Art Metal Construction Co., James-
town, N. Y.....

FILTER.

Loomis-Manning Filter Co., Phila., Pa.

Seale & Sons, Wm. B., Pittsb'g, Pa..

FIREPROOF DOORS.

Kinnear Mfg. Co., The, Columbus, O.

FIREPROOFING.

Johnson Co., E. V., Chicago, Ill.....

FIREPROOF LATHING.

Hayes, Geo., New York.....

FIREPROOF SHUTTERS.

Kinnear Mfg. Co., The, Columbus, O

FLOOR-PLATES.

Ogden & Wallace, New York.....

FLOOR POLISH.

Butcher Polish Co., Boston.....

FLUSH-VALVE.

Peck Brothers Co., Chicago, Ill.....

GALVANIZED IRON.

American Sheet Steel Co., New York.

GATES.

Wm. R. Pitt, New York(mon)

GRATES, ETC.

Wm. H. Jackson & Co., New York...

GREASE (Graphite).

Wisconsin Graphite Co., Pittsb'g, Pa.