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PARAGRAPHS are circulating through the newspapers in regard to the establishment of what is called a "National Gallery," according to a scheme which has been studied, we are told, by American artists abroad, including Messrs. Whistler, Sargent and others. Why Mr. Whistler, who has lived constantly in England for the last thirty years, or Mr. Sargent, who never saw this country until a few years ago, and, it is said, learned English to facilitate his visit, should know more of the needs of American art than the people who have always lived here is not very apparent; but it seems that these gentlemen, with some of their friends, are convinced that it is very necessary for the aesthetic development of the United States that a National Gallery should immediately be erected, in Washington or elsewhere, at a cost of about two and one-half million dollars, and endowed by Congress with an appropriation, the size of which is left for the present indeterminate. We are informed that, by providing such a structure, and persuading the Government and private individuals to endow and stock it, instead of giving money and pictures to local museums, "provincial prejudice will be done away with."

CONSIDERING that "provincial prejudice" is the very life of art, and that no community was ever eminent in such matters which was not divided into local schools, fiercely "prejudiced" against each other, in many cases, but each carrying out its own "provincial" set of ideas to the utmost perfection of which it was capable, the necessity for a "National Gallery," by means of which the tendencies of local schools could be harmonized into uniformity, will seem less apparent to the student of artistic history than to Messrs. Whistler and Sargent, or the laymen to whom they address themselves. They say, through their representative, that "every other nation has a National Gallery, while America has only local galleries," but they neglect to point out the connection between this fact, supposing it to be a fact, and any advantage to art or artists. As a matter of historical truth, Italy, the home of all that is great in art, has never had, and does not now possess, anything like a National Gallery, in the British, or Whistler, sense, but, on the contrary, has had just what America is beginning to acquire, a considerable number of local collections, public and private, each of which has been the germ, so to speak, of a great school of art, of which it, in its turn, has become the principal representative. In Venice, for instance, a demand arose, as the city grew prosperous by its commerce,

for painting, in the way of portraiture and decoration. Whether the proper course for the Venetians would have been to send to the National Gallery for the loan of samples of this sort of work is a question about which every one is entitled to his own opinion; but, not having any National Gallery to send to, even if they had wished to do so, they adopted the highly provincial course of employing their fellow-citizens to paint their portraits and decorate their walls and ceilings; and their fellow-citizens, instead of trying to imitate the Realists, or the Impressionists, or the Idealists, of whose existence, owing, probably, to their provincial prejudices, they were unaware, set themselves to making their portraits, by such means as they could invent, look as much as possible like their subjects; or if they had a ceiling or wall to paint, instead of designing it in correct Neo-Persian, or Romanesque-Picturesque taste, endeavored to make it look as pretty as possible, by combinations of lines, forms and pigments which, not having any National Gallery to refer to, they were obliged to evolve from their own minds, fed by the bright color and animated movement which they saw around them in their own city. Notwithstanding the painful "provincialism" of this course, the Venetian portrait-painters and decorators, stimulated by the rivalry between them, and studying each other's work in the buildings open to the public, formed a style in its way unequalled, and filled their city with pictures which, although nearly four hundred years have passed since most of them were painted, are still visited every year by crowds of people from all over the civilized world.

IN Florence, at about the same period, or a little earlier, a demand began also to be felt for pictures and sculpture, and here, again, the Florentines showed a provincialism quite as reprehensible as that of the Venetians, although of a different kind. While Venice was prosperous and peaceful, Florence had been devastated by wars, civil, religious and foreign, and the Florentine, dwelling in the midst of alarms, and having constantly before his eyes the sight of cruelty and undesired misery, had come to look to the next world, rather than this, for enduring happiness, and, instead of occupying his mind, like the Venetian, principally with mundane affairs, spent much time in meditating upon heaven, the angels who minister to the unhappy, and the sacred personages into whose presence he might at any time be called. The provincialism of the Florentines, therefore, while that of the Venetians was pleasing itself with long rows of family portraits, scenes of foreign conquest, and pictures of groups of handsome people under names borrowed impartially from the Scriptures and heathen mythology, preferred to be reminded of the blessedness of heaven, in the thought of which could be found consolation for the miseries of this world. The man, therefore, who could paint the sweetest angels, and represent most vividly eternal love and peace, was the one whose pictures were most sought after, and the emulation of the Florentine artists in meeting this demand, assisted by the process of selection which attracted to the artistic career young men who felt themselves capable of such work, enriched Tuscany with pictures and sculpture which to this day convey a stronger impression of heavenly bliss than any others that have ever been produced. All this was pure provincialism. The unhappy, but proud and intellectual, Florentines desired art of a certain kind, and got it, without the help of National Galleries or loan exhibitions; and the works of their school are still unrivalled in their way; the rich, easy-going and handsome Venetians preferred another sort, and got it from their own resources, and the works of their school are also unapproached; and, in the same way, every manifestation of art of any value, even to the pink ribbon and pearl-powder school of Boucher, Fragonard and Greuze, has been produced by the effort to meet a local demand by artists inspired by local models, without help from National Galleries of any kind. In modern times, England, with its enormous public collections, its system of loan exhibitions, and the facilities which its situation affords artists for seeing other European collections, has produced swarms of glib talkers and artistic mountebanks, but not a single great artist, those who might have become so, such as Millais, having been, apparently, paralyzed by the National-Gallery system. In France, while the National Gallery exists, it is, fortunately, little used by artists. French painters are often reproached for their ignorance of Classic art by people who do not realize that the

instinct which leads them to avoid too close study of other men's paintings, and to find their pleasure and instruction in nature is just what gives the artists of France their general superiority to those of other nations. At present, there is little in the shape of inspiration for artists anywhere in the world. Local patriotism is too feeble to take pride in decorating the rooms of municipal buildings with portraits of past officials, and the scene of the reception of a victorious admiral by Mr. Richard Croker, at New York, or the crowning of the Boston aldermen with roses by the Queen of the Sandwich Islands, would not, perhaps, if represented on the walls of such buildings, even by a Tintoretto, awaken the unmixed enthusiasm of the citizens; and, as for religion, while the moderns are undoubtedly sincere enough in the creeds that they profess, they do not take the pleasure in dreams of heaven that was felt five hundred years ago, and modern religious art is, generally, sentimental and artificial. The exception to this is found in Russia, where the higher criticism is unknown, and the mediæval belief in the nearness of the spiritual world still prevails. Here every house, as well as every church, possesses its "ikona," or sacred picture or statue. These pictures are often set in gold frames, ornamented with rubies and diamonds, and the people who are willing to do so much for their pictures of saints and angels naturally like to have the figures as beautiful as possible. Fortunately, the Russian artists have no National Gallery, and never heard of Botticelli, or the Blessed Damozel, or the Majesties of Mount Athos, so they simply try to paint the most heavenly figures and faces that they can, taking for models the people that they see about them, and supplying the expression from their own minds. This was exactly what the Florentine painters did, and the Russians are fast developing a school which may become as great as that of Florence. Whether any inspiration of this kind will ever come to call out the highest powers of American artists no one can say, but if, in the meantime, they will remember that talking about art is a very different thing from practising it, and will modestly try to find and represent the beauty in the people and things around them, they may be sure of their fame.

MR. FRANKLIN W. SMITH asks us for a correction of our reference to his plan for a new boulevard in Washington. He thinks, quite correctly, that we read the description of his first plan, which proposed a straight avenue, but neglected to follow the development and modification of his scheme to the winding driveway, bordered with trees and shrubbery, which he now contemplates; and he suggests, also correctly, that we probably confused his work with the scheme for a straight avenue from the Capitol to the Memorial Bridge, which was published in the newspapers some time ago. We need hardly say that we very gladly make the correction desired, and, in the light of further study of Mr. Smith's present plan, which proposes, instead of cutting up the Mall into building-lots, to remove from it and its neighborhood the objectionable structures which already exist there, we can sincerely endorse it as being, so far as we know, the best scheme for the improvement of Washington now before the public.

THIS matter is of peculiar importance now, as the opening of the session of Congress will undoubtedly witness the presentation of a multitude of plans for parks, avenues, new buildings and other improvements in Washington. It should not be forgotten that the Harrison plan for the enlargement of the White-House will be vigorously pressed in Congress, and backed, as it is, by the favorable recommendation of a Congressional Committee, and an appropriation already made for preliminary work, nothing but the most earnest and forcible representations in regard to its demerits will be sufficient to prevent its adoption. The plans for the Memorial Bridge will also come before Congress for discussion, and, in all probability, a decision will be made which will place on the most conspicuous site left in the city either a dull, uninteresting structure, or a work of art of which Americans will be proud. At this time, particularly, when vast sums of the citizens' money are to be appropriated for public buildings, it should be remembered that works of art, whether in the shape of pictures, statues or important buildings, are works, not for one administration, or even for a lifetime, or a century, but for a thousand years. The church of St. Mark, in Venice, was dedicated just one thousand years ago, and has charmed thirty generations, as, we trust, it may charm thirty generations more; the

lovely sculptures of the portals of Notre Dame have impressed the Parisians with their refining influence for nearly seven hundred years, and will, undoubtedly, continue to do so for seven hundred years more; the pictures of Titian, Raphael and the Florentines give pleasure to more people now than they did when they were painted, in the last period of the Middle Ages; and Greek statues, after two thousand years, are probably better appreciated now than ever before. We do not yet realize that the money spent on a good-sized post-office would more than pay the cost of some of the most beautiful and famous buildings in the world; and that the element which makes them famous and beautiful, the artistic power displayed in them, is that for which, to judge from the way in which our public work is managed, we care the least. That Americans really care less than the French or Germans or Italians for artistic impressions we do not believe, but they are modest about interfering with affairs committed to other people, and do not feel themselves quite competent to criticise in such matters, so they let them alone; and, in the meanwhile, Washington, the pearl of great cities, so far as its situation, topography and early architecture are concerned, is every year more choked and degraded by huge structures, built with the public money, for public purposes, without the slightest attempt to make them the representatives, as they should be, of the refinement and taste, as well as of the wealth, of the American people.

A CASE is still pending before the Massachusetts Supreme Court which has much practical interest. The plaintiff made a contract with the defendant to supply him with two hot-water heaters, which should be capable of heating two suites of rooms, and agreed to provide "flues of sufficient draught." The heaters did not do the work promised, and the plaintiff, being subjected to loss in consequence, sued to recover damages for breach of the contract. At the trial in the court below, the defendant wished to show that similar apparatus had given satisfaction in other apartments; but this evidence was excluded; and the judge also refused to rule that "flues of sufficient draught" meant flues of sufficient draught for complete combustion. Exceptions were taken to both these rulings, and the case comes before the Supreme Court on the exceptions. It will be observed that the contract between the parties has a familiar sound, and it was probably one of the printed forms used by heating contractors, so that its interpretation by the courts will be of great importance. If it is settled that "flues of sufficient draught" mean flues large enough for complete combustion, Massachusetts house-owners will have to be cautious in making such contracts, for very few buildings, not designed to accommodate power plants, possess flues large enough to secure the theoretically complete combustion of fuel in heating apparatus connected with them. If, on the contrary, "flues of sufficient draught" are held to be simply flues giving draught enough to secure the usual rate of combustion in domestic heating apparatus, the heating contractors will lose one of their main resources for evading what their customers suppose to be the intention of their agreements. As for the other contention of the defendants, that evidence of the satisfactory working of similar apparatus in other buildings ought to be admitted to persuade the jury, or the plaintiff, that the contract had really been fulfilled in the latter's building, we will not presume to anticipate the decision of the Court; but, if it should confirm the ruling in the court below, architects would be relieved of a good deal of the labor which they now have to undergo in arguing this very point with heating-contractors.

MR. W. J. STILLMAN comes, in the *Nation*, to the rescue of the fame of Vendrasco, as the restorer of the Ducal Palace in Venice. Almost every one supposes that the Commendatore Boni, now at Rome, was responsible for the very judicious work done on the Palace while he was employed in Venice; but Mr. Stillman points out that Boni was, at that time, only a pupil and assistant of Vendrasco. After Vendrasco's dismissal, the Palace was put in charge of the restorer of the Fondaco dei Turchi, which, as travellers know, was practically rebuilt under the name of restoration. Boni, however, who was a profound student of Venetian architecture and archaeology, was often called in, even after his transfer to Rome, to advise in relation to the important buildings of Venice; and architects generally agree that his suggestions have always been intelligent and wise.

NOTES ON SOME EUROPEAN SYSTEMS OF FOREST-ADMINISTRATION.¹—VIII.

PRESENT ACTUAL STATUS OF SWISS FORESTRY.



From *l'Architecture*.
Wine Pavilion at the Paris Exposition.

It must be premised that the data at the command of the compiler of these notes are quite insufficient to yield a satisfactory presentation of existing conditions in the forests of Switzerland. Some idea of the relation of gross to net yield and the significance of the same from the point of view of forest administration, of the quality and availability of products, and of the relation of production to consumption, may be gleaned, but an estimate of the actual values, present and future, of the value of the several by-products, the pasture, litter, etc., and the status of forest in mountain and valley in relation to area and climatic and agricultural conditions, are difficult to arrive at in detail. All these matters are to be determined only by personal inspection and by the trained observer in the forest itself. Some of these forests have been worked, with intervals of inaction, for centuries. Some have only in the last few decades begun to receive attention and care. In general it is safe to say that while the status of State, communal and corporation forests, in the valley and hill country as well as in the larger part of the Jura, is satisfactory, there remain spots in the foot-hills here and there where there is much yet to wish for in this direction, and in the high mountains a thoroughly successful system of management has hardly as yet been developed throughout. The improvement of the upper timber-belt presents difficulties which the knowledge and experience of the foresters—gained in the administration and study of more favorably situated forests—have not as yet been able to entirely solve. A great obstacle also is the ignorance of the mountain people on the subject of scientific forestry, and the need for its application among the heights whence the waters spring.

In the private forests there is carelessness of management. Wasteful use and neglect of preservative measures leave much yet to be done in this direction. The considerable private ownership of forest-lands stands much in the way of the desired extension of improved administration. Fortunately this is not—except in a few places—so much the case in the high mountain regions.

Professor Landolt, in the "*Bericht*," points with warning to the difference then existing between the forest-yield and the demands of the population for timber and firewood, and between the actual value of products and what were possible under better working. Basing his figures upon reports of Cantonal forest-officials he sets the yield in material from the Swiss forests at 2,788,669 cubic metres. Adding to this about 200,000 cubic metres annually from sources outside of the forests, he has for the entire wood-production, in round numbers, 3,000,000 cubic metres.

Including the common industries and the public buildings, but omitting manufactories and transportation plants, under which presumably he reckons railways, a large item, he puts the consumption of wood for timber and fuel at 6 cubic metres per household, which for 607,725 households—as given by the census of 1880—amounts to 3,646,350 cubic metres, or an excess of 646,350 cubic metres over the annual production of the forests. This is not covered by the small amount of fossil fuel found in Switzerland, turf, brown and stone coal, anthracite, etc., and the demand must be satisfied by importation, which means a loss of money from the country, while manufactories depend for fuel entirely on foreign sources.

Professor Landolt assumes that the production of the Swiss forests could be increased, under an improved system of management involving no great increase of cost, by 25%, or about 700,000 cubic metres, the discrepancy between supply and demand—except that of the manufactories—wiped out, and the money yield of the forests increased by more than eight million francs.

The Federal law of 1876 providing for Federal control of the forest-police was extended over the whole territory of Switzerland from August 1, 1898. From that date all clearing and cutting for sale in private forests without previous permission from the competent Cantonal authorities was forbidden.

At that time the number of foresters having scientific education was as follows:

1. Functionaries of the Federal Inspectorate, Professors of Silviculture at the Polytechnic School, and the force at the Central Station of Experimental Forestry.....	10
2. Cantonal Foresters	115
3. Agents of Communes and Corporations.....	32
	157

The Confederation granted subsidies for the year 1898 for the pay of Cantonal agents amounting to 82,875 francs, bringing the total under this head up to 292,752 francs.

The Polytechnic School issued five diplomas, and seven candidates were otherwise qualified for the higher Cantonal forestry offices. The courses for under-foresters were held in several places during the year and were well attended and successful, a number of candidates being passed as qualified.

The Confederation paid to instructors for these courses about 5,000 francs.

These facts and figures are from the report of the Federal Interior Department for 1898. The same document gives the area of the Swiss forests as follows:

State Forests.....	37,504 hectares.
Communal and Corporation Forests.....	565,086 "
Private Forests.....	245,215 "
Total.....	847,805 "

These figures show an increase since 1883 in each of the three classes of forest: about 5,000 hectares of State, about 45,000 hectares of communal and 15,000 hectares of private forests; making a considerable increase in the percentage of forest to total area.

In the tables of 1883 the whole area is put down at 4,052,709 hectares, of which the whole forest-area covers 19.30 per cent, or deducting 1,175,230 hectares of unproductive (mountain summits, lakes, etc.), we find that the Swiss forests then occupied 27.21 per cent of the total productive surface of the country. Of the whole forest-area the State forests covered 4.19 per cent, the communal forests 66.45 per cent, and the private forests 29.36 per cent. The production of the entire forest-area for 1883 is reported at 2,788,669 cubic metres, or an average of 3.57 cubic metres per hectare. Of this, 40 per cent was classed as timber and 60 per cent as firewood. The price of the former was 15.92 francs, of the latter 9.24 francs, giving an average value of 11.92 francs per cubic metre of wood, at which rate the whole yield foots up 33,178,758 francs (\$6,635,751), or 42.43 francs (\$8.48) the hectare.

The hectare is exactly 2.471 acres, or, roughly speaking, about 2½ acres, which brings the money yield of Swiss forests for 1883 to \$3.43 per acre per annum. This is gross, and unfortunately the expense account is not at hand for the whole administration of forestry throughout the Confederation. The reader must take into consideration also that these are the results of a management which further secures to Switzerland the incalculable benefits of a permanent future supply of wood, the continually improving protection of the forests and lands against the ravages of the avalanche and the torrent, the assurance of a regular water-supply by protection of the sources, and the continuance and betterment of normal climatic conditions beneficial to agriculture by preserving and extending a distribution of forest-masses most favorable to that end. It is interesting to note the improvement effected by State management as instanced in the figures giving the average annual yield of wood of all the Cantons; 4.75 cubic metres per hectare from State forests, 3.57 from communal and corporation forests, and 3.37 from private forests, the significance of which results is further enhanced by consideration of the permanent status of the several classes.

The far more brilliant results in certain individual cases, the outcome of a systematic and highly scientific forestry of long standing, the history of which has already been given in precedent pages of these notes, claim our attention here as indicating the high standard of efficiency attainable under a stable and uniform working of the forests—the ideal of the adherents of the movement for the extension of State control.

For instance, the yield per hectare in the State forests of Canton Zürich is put down at 5.5 cubic metres, in the State forests of Frauenfeld at 8.7 cubic metres. In the former the condition of the forest as to ages is given as follows:—

1 to 20 years.....	202.28 hectares.
21 " 40 "	196.14 "
41 " 60 "	252.39 "
61 " 80 "	207.71 "
Over 80 "	178.06 "

The annual yield given represents the prime material only.

A more comprehensive view of results is given in the following tabulation, covering ten years:—

CANTON ZÜRICH STATE FORESTS.—AVERAGE, 1870-1880.

Forest Area. Hectares.	Production.		Per Hectare. Cu. m.	Receipts. Francs.	Expense. Francs.	Net. Francs.	Per Hectare. Francs.
	Prime. Cu. m.	By- Cu. m.					
1,946.55	8,642	3,244	6.11	217,030	58,141	158,889	81.63

¹ Continued from No. 1296, page 28.

Canton Aargau, with a forest-area of 2,909.96 hectares, shows an average yield for the same ten years of 6,551 cubic metres of timber and 13,859 cubic metres of firewood, or 7.02 cubic metres per hectare, and a net profit of 260,217 francs, or 89.46 francs per hectare.

The town-forest of Zürich, the Sihlwald, under an organization dating practically from the beginning of the fifteenth century, based upon a system of ninety years' rotation, the annual yield taken limited to the annual increase of the forest, gave for the four years ending in 1880, from a forest-area of 1,036.57 hectares, a net money-profit of 93.22 francs. In 1889, on the excellent authority of Pinchot's "Government Forestry Abroad," "Sihlwald's 2,400 acres gave \$8 an acre." Up to the close of the year 1898 the Confederation had, since the Federal Law of 1876 became operative, effected the extinction by purchase, at a cost in all of about 1,100,000 francs, of upwards of 2,600 servitudes burdening the protective forests, and the report of that year announces that in six of the Cantons all vexatious rights have been abolished. During the year twenty working-plans, covering about 8,000 hectares in all, were approved by the administration. The Canton of Tessin—Italian, Ticino—extending southward roughly from the crest of the Valaisian Alps to the "Italian Lakes," is reported as concerning itself neither with extension of surveys nor with development of working-plans, and as even still behindhand in the delimitation of the forests. The Canton has, therefore, been called upon to take the necessary steps to control the usufruct of the protected forests, so that, on the expiration of the term of suspension and their reversion to the communes, they may not be redivided for exploitation. As to the manner in which the Cantons have carried out the Federal regulations for the cutting, conversion, and transport of wood, the report shows in some cases a rigorous, in others an unsatisfactory, execution of this measure.

The nurseries (*pépinières*) covered about 250 acres at the end of 1898. Certain Cantons which had failed to raise the requisite number of young trees for replanting, and which were obliged to draw upon neighboring Cantons or foreign countries for the same, were called upon to repair this omission.

The replantings for the year aggregated 8,872,238 young plants set out, of which seven-eighths were coniferous. Subsidies paid out for reforestation and correction of torrents and avalanches amounted in 1898 to 181,716 francs. From 16 Cantons came demands for subsidies to 79 projects of reforestation and defensive works, involving an estimated cost of 436,812 francs.

Disquieting reports were received in July, anew, concerning the sliding of the slope of the Sasso Rosso above Airolo, which resulted in the catastrophe of December 27 and 28, 1898, when a great landslide destroyed many buildings and several lives, sweeping away considerable replantings attempted in correction. The plantations projected for the moving slope over Campo were not carried out, owing to the unwillingness of the commune to undertake its share. The report announces the completion and approaching publication of a map of the avalanches of Switzerland, and refers to observations of the glaciers, by forest officials, published in the *Annals of the Club Alpin Suisse*, 34th year. The third installment of the work entitled "*Les arbres de la Suisse*" was also announced.

A subsidy of 1,500 francs was allotted to the Société suisse des Forestiers, and one of 500 francs to the Committee of the Alpine garden at Bourg-St-Pierre in Valais.

Summing up.—"The need of a forestry adapted to local conditions," writes Professor Landolt, "becomes more clearly apparent when one considers the great influence of the forests upon weather and climate, upon the maintenance of the soil on steep mountain-slopes, upon the stand of water in the streams and rivers, upon the fruitfulness, habitability, and beauty of the country, and upon the physical and moral status of the population. The forest can discharge these many-sided functions, upon whose performance the welfare of the people is largely dependent, only when it exists in adequate masses properly distributed over the land-area, and is maintained in good condition."

The task of forestry is therefore a double one. It does not suffice to do everything necessary to establish a satisfactory status of the forests in *case*. On the contrary, an adequate forestry must see to the planting of those barren places which endanger the common stability; and on the other hand it must see that forests occupying soil capable of giving higher returns under other cultures, which neither on its own account nor for the protection of its neighborhood requires the shelter of the forest, shall make way for the more economically important culture. The Professor further remarks that an examination of the present status of the Swiss forests shows that Swiss forestry has still many great problems to solve and rich additions to make to agricultural wealth. The solution is provided for in the Federal Forestry Law under which no Canton is allowed to remain far behind the others in the carrying out of improvements, nor to maintain conditions which work damage far beyond its own borders. The forest organization, while not entirely uniform, is competent to effect all desired improvements in management.

It needs only goodwill on the part of forest-owners, in acceptance of unavoidable rules and regulations, to ensure very visible progress toward better conditions even in the higher timber-belts. The people must be convinced of the importance of these measures. Theirs is the last word in a popular form of government. Only by their consent and support can the laws be effectively executed.

The meaning and aim of enactments in behalf of a better forestry

must be made plain to them by the forest officials, and by all, indeed, who feel called upon to work for the people's good. Practical forestry affords many occasions for such teaching. The inspection-tours of the forest officers with the owners and their agents offer an occasion to begin instructions. Forest excursions for men who have seldom to do with the foresters, but who are naturally interested in the forest and its care, are very productive of good. A walk through a model forest under guidance of a specialist is certain to awaken a deeper and more lasting interest in the subject than any amount of haranguing, or the best written of printed articles.

Education reaches slowly, but surely, to the goal. What the forest-owner does in the conviction that it is right and good will be well done; what he does under compulsion will be poorly done and uncared for.

We cannot, however, accept the principle that enforcement of the law and attendant regulations shall await the acquiescence of forest-owners. To those of them whom instruction fails to enlighten, pressure must be applied without much hesitation.

For under-foresters, practical training in the forest itself is in the highest degree indispensable. At the same time the higher education of upper-foresters must be encouraged. They should be supplied with forestry journals and other literature of the science, and enabled to make excursions into forest regions outside of their own districts.

The press must be influenced to lend its power to the cause. Addresses on the subject of forestry before agricultural and other societies will usually be heard with interest. If it must be admitted that a relentless enforcement of unpopular laws works harm to the general status of forestry, it follows that complaints against single clauses must be examined carefully and satisfied if just. There are different ways to the end. Striving for the best sometimes hinders attainment of the good. One must take care not to set the form above the substance.

One must regard old customs; they may be changed, but slowly. For the greater part of the forests of the hill country, of the Jura, and to some extent of the spurs—*Vorgebirge*—it is enough to hope that they will go forward on the present line. For the mountain forests the question of moment is to determine what operations first demand attention.

In the place of first importance comes the laying out and marking off of the forest-area. The boundaries should be defined most unmistakably. This work should be pushed forward to completion. Incidental thereto is the partition of pasture from forest-soil. This somewhat involved procedure is to be effected with due regard in all cases to local conditions, however varying. This division should be based upon the principle of guarding actual forest-soil for forest culture, and of a good districting of the forest-area. Especial importance attaches to filling up gaps in the young growth by seeding and transplanting, and also to the timely thinning of the stand which is about ready for cutting. These two matters bear strongly on the question of bettering the condition of the forest and increasing its productivity. The regulation of the by-products is a difficult function, owing to the fact that forest-pasture and forest-litter are reckoned entirely indispensable. To solve the difficulties which are presented in this question, without working hardship to the poor or loss to owners, is a difficult problem.

Provisional working-plans, determining the amount of products to be utilized and the fundamental regulation of the cutting, thinning and care of the forests, should be prepared, to cover not too long a period, and in the simplest and most practical forms, at least for those forests which are being worked without plan and doubtless over-used. On completion of the triangulation of the Federal Forest-zone and the delimitation of the forests, there will be no hindrance to the survey and detail of the forests and the adoption of definite working-plans, and this work should be begun and carried forward without delay.

In connection with this point of Professor Landolt's it may be noted from the report of 1898, above-quoted, that the total area of forest surveyed since 1876 was 108,562 hectares, or only 23 per cent of the forest-zone.

The regulation of private forestry is a heavy task. While the law clothes the foresters with ample authority in relation to the exploitation and management of the protective forests, they meet, in the discharge of their duty, with many objections from forest-owners which may not be lightly ignored. The immediate need is to prevent clearings which endanger the general good, to enforce the planting up of gaps in the young growth and the immediate afforestations of all denuded places, and at the same time to exact satisfactory culture of the young plantations.

There are certain requirements, altogether in the interest of the private forest-owners, which give no good ground for complaint, but which are opposed by these owners in a management of their properties which actually threatens their economic existence. With certain exceptions, however, it may be said that those demands, which in behalf of a proper police and of general agricultural interests must be made of private forest-owners, may be satisfied by a proper policy, by reason of the fact that the beneficial influence of the forest upon the maintenance of soil, the permanence of water-supply, etc., depends less upon the age than upon the completion of the stand.

Finally, urges Professor Landolt, while the carrying out of the foregoing propositions will not fully satisfy the laws and ordinances,

it is yet to be hoped that they would effect the extinction of the worst abuses, and make a good beginning toward the solid improvement of the forest status in the high mountains.

The Professor points to the fact that even with present lowered prices — which have deferred the fulfilment of a well-grounded hope entertained at the time of the installation of the Federal law of 1876, that the money returns from the forests would steadily increase — the forests give a good net profit in money, and he adds that the significance of the forests in the economy of nature remains the same whether prices be high or low.

And he hopes that every one who feels it his mission to aid the good work of forest improvement will push forward with all his energy, undisturbed by possible fluctuations in the money results of the undertaking, on the path marked out, and that forest-owners and the whole people will ever more and more realize that the forest would still be indispensable to the welfare of the country even were the use of wood entirely abandoned, were such a contingency possible.

A. B. BIBB.

THE LATE PARIS EXHIBITION.—I.

RETROSPECTIVE NOTES FROM A NOTE-BOOK.

IN a few weeks little will remain of the great Exhibition City on the banks of the Seine. Is it to be regretted, or will all friends of beautiful Paris rejoice inwardly, if not openly? Much that is most interesting will, of course, go; but a great deal that is hideous will also be demolished — that much-lauded "Porte Monumentale," for instance. The dome when lighted up, and the curve and proportions of the arch, may, possibly, be a success; but electricity, from the architectural point-of-view, is so essentially a scientific infant, that we may be permitted to say that the hybrid obelisks on each side, and the statues of "Electricity" within the vestibule, are as ugly as anything man could well have devised. And what of the lady who dominates the Place de la Concorde, standing on the old city's emblem, the prow of a vessel, with Gallic cocks on each side of her? Could a distinguished sculptor have put his name to anything more vulgar, more degrading to art, than that incarnation of impudence, the "Parisienne mondaine"? Even in the *cafés chantants* you would not find worse specimens of *Parisiennes*; and are all Parisian women to be classed with this one, and remembered as a type by this example? And what say its defenders? "It is modern!" That is its charm. "The Dirty Boy" and the "Children under an Umbrella" disgraced Italian art in 1878; but both those groups are distanced widely by the "Parisienne" in long skirts, high collar and feathered hat. And yet, mark you, M. Paul Moreau-Gauthier, is the author of many charming works, and has in this exhibition a most refined "Bretonne."

Let us turn and admire those two grand buildings which bound the road over the new Alexandre III bridge, the Petit and the Grand Palais. These, with their colonnades, grand portals and, in the case of the former, the domical roof, will remain an ornament to Paris for many years, and when the Place des Invalides is denuded of its somewhat wedding-cake-like exhibition buildings, will form a splendid vista, beginning with the Gardens of the Champs Elysées, and ending with the Hospital of the Invalides. Why is it, apparently, only in Paris that these fine vistas can be obtained when demolitions and rebuilding are taken in hand? Whether the two palaces can be made light enough for the proper exhibition of pictures and other art-treasures remains to be seen. During the last few months a dark day made the study of the wonderful Retrospective Collection almost an impossibility, and the picture-galleries are equally sombre. But how beautiful is the inner colonnade of the Petit Palais! how exquisite the workmanship, and especially the carving of M. Girault's dainty building! And the contents! the large collection of Rouen ware, the old Sèvres, and the bronzes and enamels from the various treasuries throughout France! The "Sainte Foy" (tenth century), with many other valuables, hails from Conques — this statue (some eighteen inches high) being of gold, laden with jewels. The workmanship is rude, which cannot be said of the beautiful "Chalice of Saint Rémy" from Rheims (twelfth century). The latter is of the old deep-saucered form of bowl, a mass of filigree and enamel ornament, enriched with precious stones. Neither of these exquisite examples of the goldsmith's work were in the 1899 Retrospective Exhibition, which, nevertheless, included many of the reliquaries exhibited this year. One cannot help reflecting upon the possible results of this exhibition of reliquaries for merely artistic purposes. Will the Church-people continue to reverence them to the same extent as of yore? Is there not something incongruous in the public gazing at and discussing a reliquary containing some cherished remains of a saint or martyr, which usually is only exposed on, or near, an altar, with surroundings of lights and incense, and faithful believers, who give it every act of reverence with bended knee?

Most people have said the plan of the exhibition is not equal to those of its forerunners, and certainly the idea of placing a retrospective in every department and in every country is bewildering. Nevertheless it is interesting. For instance, one wandered into the Ville de Paris pavilion, and there, side by side with all sorts of modern improvements, with the last specimens of work done by infants in the *écoles communales* was the reproduction of a fourpost bedstead of the eighteenth-century Hôtel Dieu, containing a woman

and two men patients, the nursing-sister sitting watching them surrounded by all the ancient hospital requisites. Then there was the handsome and dainty carriage in miniature, and a beautifully decorated cradle (ormolu and mother-of-pearl) which was given by the "Ville" to the poor little King of Rome, — Sara Bernhardt's "Aiglon." Farther on, doors with wondrous locks from the great prisons of old, and a most fascinating collection of views of ancient and demolished Paris.

Cross the river and what did you find? In Spain, the helmets used by Charles V, exquisite works by German and Italian armorers — one the mask of a strange beast, something between a tiger and a griffin. The most superb tapestry decorates the walls of this dignified, columned palace, and in a case is the tunic, embroidered in silver upon red velvet, of the last Moorish King, Boabdil, and his jewelled sword and scabbard — those he used at Grenada.

Nearby, Hungary showed us reproductions of rooms in Castle Fraknó, the ancient dwelling of the Eszterházy family, and other old buildings in Budapest, Lőse, Eperjes and Bártfa. In the cases were beautiful specimens of arms used by the kings and nobles, from the earliest times, jewelled like the harness of the war-horses. Across the room one saw a reproduction of the sarcophagus of S. Simeon, from Zara, a gable-topped, silver-gilt reliquary, with a life-size figure of the Saint reposing on one side of the slanting cover, and hard by was the tomb (ninth century) of a Pagan Magyar found at Törtel, who was buried with his war-horse, a common practice among savage tribes.

It is curious to note that Hungarian chalices of the twelfth to fifteenth centuries are all tall, like the Spanish and Portuguese, with small, shallow bowls, totally different from those in use in Western Europe before the sixteenth century.

Sculptures from the ruins of Kirkabö, in the Faröe Islands, and the door of a church in Iceland, from the National Museum, have all the characteristics of Romanesque ornament, including the intertwining knot. To the architect, the model of the ruins of Timgad, the ancient Thaumgardi, are a revelation. They appear to be as extensive, or more so, than those of Pompeii; and the fragments of Greek sculpture are very beautiful.

In this connection, I should like to impress upon all intending tourists to Paris that they should not miss visiting the rooms in the Louvre filled with fragments from, and a model of, the throne of Artaxerxes Mnemon, at Susa, especially noting the stone bust of a woman with conical cap and large wheel-like ornaments over her ears, recalling the curious head-gear of the modern inhabitants of one of the provinces of Holland. This was found at Elehé (Ilici) in 1897 by the Dieulafoy Mission, and is Greco-Phoenician. On the walls of this Salle du Trône are reproductions of the friezes in colored brick from the palace of Darius.

S. BEALE.

[To be continued.]

ROMAN MORTAR.

IN connection with some excavations for a drain in the Old Bailey, Mr. J. Terry, clerk of the works to the Corporation of London, discovered a portion of the Roman wall. Some specimens of the mortar were supplied to the editor of *The Builder*, and the following account of the analysis of the mortar is taken from that journal:—

Two samples of the mortar were taken from the interior of the old wall in Old Bailey, and may reasonably be regarded as genuine specimens of Roman work. One sample was a piece weighing rather more than one pound, the other a piece weighing rather more than half a pound. Both samples contained a number of water-worn pebbles, varying in size up to a maximum of about two inches by one-and-a-half-inches. For analysis the whole of each sample, including pebbles, was crushed to powder, except one small piece, which was treated with dilute acid, in order that the uncrushed sample might be examined after the removal of the lime. From the appearance of the sand and pebbles thus separated, it was concluded that *unscreened river-sand* was the description of sand employed. The lime and sand had been well mixed, for the mortar was almost entirely free from those small isolated lumps of lime or lime-carbonate which are an indication of faulty mixing. Both samples were in excellent condition, and of great strength.

The following results were obtained by analysis, and it will be seen that the two samples were practically identical in composition:—

	No. 1. Per cent.	No. 2. Per cent.
Water (lost at 212 degrees F.).....	1.65	1.84
Combined water and organic matter.....	2.51	3.03
Earthy matter, after ignition (Dibdin and Grimwood test).....	4.87	4.11
Sand, including pebbles.....	64.75	66.46
Silica, soluble in 10 per cent HCl.....	1.00	1.57
Oxide-of-iron ".....	0.66	0.66
Alumina ".....	0.44	0.14
Lime ".....	15.15	13.80
Magnesia ".....	0.94	0.94
Carbon-dioxide.....	8.46	7.95
Sulphur trioxide.....	0.15	0.18
Other matter and loss.....	9.32	0.22
	100.00	100.00
Silica soluble in 10-per-cent soda (Hughes Test).....	8.95	10.85
Caustic or slaked lime uncombined.....	None.	None.

The "earthy matter" and "sand" in the above analyses were

THE Dean of Gloucester seems to be hopeful and sanguine about "restorations," past and future, of the great cathedrals by the "distinguished men whose careful work has for the most part been confined mainly to a strictly conservative restoration of what they found." The italics are ours, and we may be allowed to rebel at the good Dean's charitable words when we contemplate the rearrangements at Salisbury by Wyatt, and the rebuilding of S. Alban's by Lord Grimthorpe. These are acute cases, it is true; but there is scarcely an old church in Europe which has not been tampered with unnecessarily — even Viollet-le-Duc was not immaculate.

Dean Spence's volume¹ treats of the cathedral architecturally and ecclesiologically, but in a popular manner. The title is taken from the expression of Raoul Glaber, who speaks of the immense activity of the eleventh-century builders as a desire to clothe the world in a "white robe of churches."

THE extraordinary number of lives of artists now being published in London at moderate prices is, let us hope, a sign of an awakening of interest in art. The same painters appear in at least three series — those published by Messrs. Bell & Sons, in large form, and in an abridged 5s. edition; a translated edition from Professor Knackfuss's German series, published by Messrs. Grevel & Co., at 4s., and Mr. Methuen's, of which "Goya" forms a volume, at 2s. 6d. They are all well got up and illustrated, and not being too diffuse are worthy careful study by the art students and art amateurs who have neither time nor inclination to aim higher than to acquire a true, if somewhat superficial, insight into the diverse and distinctive qualities of the various great masters. Such people cannot do better than indulge their love of art, or their desire for knowledge in ways artistic, by buying some of these handbooks.

It is with a very real feeling of surprise and disappointment that we discover what lies between the covers of the latest work which deals with the Ornamental Details of the Italian Renaissance,² a book to which, noting first the names of the publishers, we turned with much interest, feeling sure that from so rich a field it would be impossible to cull a harvest that would not be gratefully refreshing and sustaining.

Instead of finding what our fancy pictured, we find the fifty quarto plates filled with reproductions of "sketches made," as the authors confess, "with extreme rapidity in pencil, many of them being drawn to scale on the spot on a half-imperial drawing-block, while in other cases odd scraps of paper had to be used and the rough notes afterwards pieced together." When such crude material is reproduced full-size by photo-lithography, with a carelessness that has in no degree mitigated the asperities of the originals, the results from the book-making point-of-view are not agreeable, and one seeks in vain to know why, when the authors went about their work with such leisureliness that "each in turn visited Italy" in order to procure material for their intended publication, it was necessary to make use of the sketches that were executed with such "extreme rapidity," and why, instead of spending time in piecing together "rough notes made on odd scraps of paper," they did not spend a few shillings' worth of their time in redrawing their subjects for publication.

In the early days when the Spring Garden and the Architectural Association "Sketch-books" were in their infancy fifty such plates as these, showing Italian Renaissance work, would have been regarded by the Gothicists of the day with awe and wonderment, wonderment that any one could devote time to such frivolous work and awe at the far-sighted enterprise of the authors who ventured so far afield for their material. But at no time, we fancy, could any one have been found who would give special commendation to the selection of the subjects or the skill of draughtsmanship displayed in preparing the plates for publication. The crudeness of line and lack of precision and elegance might be forgiven in hasty notes entered in pocket sketch-books or in still more hasty "thumb-nail sketches," scribbled on odd scraps and corners of envelopes and letters for merely personal and private use, but when displayed with all their imperfections on so large a scale as this, the barrenness of architectural and artistic effect is nearly unforgivable.

A VERY excellent piece of bookmaking, on a small scale, is the illustrated catalogue of the exhibits of American artists at the Paris Exposition prepared by Mr. H. Hobart Nichols, and issued, we suppose, — since the little book has but recently reached our table — as a kind of *ex-post-facto* document, and intended more for a permanent record than for temporary use by those who chanced to visit the fair. In any case it has a considerable permanent value as a book of reference, since of its one hundred and fifty pages about a third are devoted to brief biographical notes of the painters, sculptors, black-and-white draughtsmen and miniaturists who, to the number of two hundred and seventy-eight, were allowed to have their handiwork exhibited.

These notices begin with the name and date of birth of the artist — whenever obtainable — and end with his present address, while in

between is given a record of the artist's professional standing and success in the way of membership in one artistic body or another, and the date and number of awards bestowed upon his exhibited work. All this is information of a very desirable kind to have, and it is rather an advantage than the reverse that space has not been used up in printing a list of the artist's works, even in those cases where the works are really well-known and praiseworthy, and likely to remain so.

Architects, although they honestly believe and can unquestionably prove that theirs is the "Mother of the Arts" are so used to being snubbed in this matter of exhibitions and exhibition-catalogues that they will only be amused and not surprised to learn that, though this purports to be the "official" catalogue³, not one of the thirty-two exhibiting architects was found by the editor worthy of even the briefest of biographical notes, no architect's name appearing in the forty odd pages devoted to this topic, although their exhibited drawings are properly catalogued. So we do not have the modest satisfaction of knowing that the architects, say, of the Boston, New York and Milwaukee libraries were on some evil day born into a world which, though beginning to esteem their works, prefers to hold the workers nameless and unhonored.



CINCINNATI CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

THE Cincinnati Chapter of the American Institute of Architects held its regular monthly meeting, Tuesday, November 20, 1900.

The following officers were installed for the ensuing year:—

President, G. W. Rapp; Vice-President, A. W. Hayward; Secretary, Geo. M. Anderson; Treasurer, Geo. W. Rapp.

A programme of the papers to be read during the winter was distributed; and a report made that ten exhibits had been sent to the Circuit Exhibition of the Architectural League of America.

Messrs. Rapp, Drach and McLaughlin were appointed delegates to the Convention of the American Institute, to be held in Washington in December.

Mr. Samuel Hannaford read a most interesting and instructive paper on "Contracts," which was followed by general discussion.

GEORGE M. ANDERSON, Secretary.



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

A COMPETITIVE DESIGN FOR THE UNITED STATES CUSTOM-HOUSE, NEW YORK, N. Y. MESSRS. SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS, BOSTON, MASS.

ELEVATIONS AND SECTION OF THE SAME.

ACCEPTED DESIGN FOR THE METHODIST EPISCOPAL CHURCH, WEST ROXBURY, MASS. MESSRS. THAYER & BOWSER, ARCHITECTS, BOSTON, MASS.

UNION TRUST & STORAGE COMPANY'S BUILDING, WASHINGTON, D. C. MESSRS. MARSH & PETER, ARCHITECTS, WASHINGTON, D. C.

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

THE PARIS EXPOSITION OF 1900: LE MAS PROVENÇAL. M. BRUNO PELLISIER, ARCHITECT.

THIS plate is copied from *La Construction Moderne*.

[Additional Illustrations in the International Edition.]

HOUSE AT COLD HARBOR, LONG ISLAND, N. Y. MESSRS. CARRÈRE & HASTINGS, ARCHITECTS, NEW YORK, N. Y.

HOUSE OF HERR FRANZ STUCK, ARCHITECT, MUNICH, BAVARIA.

UNITED STATES POST-OFFICE, ELGIN, ILL. MR. JAMES KNOX TAYLOR, SUPERVISING ARCHITECT.

³Official Illustrated Catalogue, Fine-Arts Exhibit. United States of America, Paris Exposition of 1900. Boston: Noyes, Platt & Co.

¹"The White Robe of Churches of the Eleventh Century: *Images from the Story of Gloucester Cathedral*." By the Very Rev. H. D. M. Spence. London: Dent & Co.

²"Ornamental Details of the Italian Renaissance." Measured and Drawn by G. A. T. Middleton, Assoc. R. I. B. A., and R. W. Carden, Assoc. R. I. B. A. London: B. T. Batsford. 1900. Imported by Charles Scribner's Sons. Price, \$10.

UNITED STATES POST-OFFICE, SALEM, ORE. MR. JAMES KNOX TAYLOR, SUPERVISING ARCHITECT.

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

THEODORE ROBINSON'S "THE CANAL."

November 19, 1900.

SOCIETY OF AMERICAN ARTISTS, NEW YORK, N. Y.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Your attention is called to the following documents relating to the painting by the late Theodore Robinson once offered as a gift to the Metropolitan Museum by the Society of American Artists and others, in January, 1899, and rejected by the Executive Committee of the Museum:—

Resolved, That, at the suggestion of Mr. Harrison Morris, Managing Director of the Pennsylvania Academy of the Fine-Arts, the picture by the late Theodore Robinson purchased for presentation to the Metropolitan Museum and now in the hands of the Board of Control of the Society of American Artists be formally offered to the Pennsylvania Academy of the Fine-Arts for its permanent collection. Adopted, October 23, 1900.

THE PENNSYLVANIA ACADEMY OF FINE-ARTS,
PHILADELPHIA, PA., November 14, 1900.

BRUCE CRANE, Esq., Secretary,
Society American Artists, New York, N. Y.:—

My Dear Sir,—On behalf of the Pennsylvania Academy of the Fine-Arts, I have the honor, formally, to accept the presentation by your Society of the painting entitled "The Canal" by the late Theodore Robinson.

In so doing I beg leave to convey in return our cordial thanks for the addition to the Academy's Contemporary Collection, of this work of a gifted and lamented American, and to express warm appreciation of the generous service given to the art of the nation by the Society of American Artists.

Faithfully yours,
(Signed) EDWARD HOMER COATES, President.

BRUCE CRANE, Secretary, S. A. A.

By order of the Board of Control.



HISTORY OF TENEMENT-HOUSE LEGISLATION.—The Tenement-house Commission has issued a report, prepared by the Secretary, Lawrence Veiller, giving a history of tenement-house legislation in New York State since the earliest days. Upon the perusal of this report, it appears that many excellent laws were enacted twenty or thirty years ago; that the present laws are less rigid in some cases. For instance, in 1867 the law required that, in all tenement-houses to be occupied by four families or more, the stairs and halls should be constructed entirely fireproof of stone or iron, and that the floor-beams of the halls were to be of iron, with brick arches. This is much more stringent than the present law, which does not require stairs to be absolutely fireproof, except when the buildings are more than five stories high, and are also arranged for four families on every floor. As early as 1867 the law required all wood-bins and coal-bins in the cellars of tenement-houses to be constructed of fireproof material. Had this law not been repealed in 1871, it is said, a great number of serious tenement-house fires would never have occurred. This history of tenement-house legislation is the first that has appeared. — *N. Y. Evening Post*.

MURAL-DECORATIONS AT THE SORBONNE.—It needs courage in an architect to arrange a plan of wall-decoration in which views of buildings will be the main elements. M. Nénot, the architect of the Sorbonne, has decided to have the two vestibules of the Faculties of Science and Letters in the new building adorned in that manner. He has given the commission to M. Théophile Poilpot. There will be ten views representing the history of architecture; the Temple of Philæ will be the type of Egyptian art, the Acropolis of Athens will stand for Greece. The fortifications of Carcassonne will be suggestive of Gallic Romanesque, Sta. Sophia will represent the Byzantine period, the Alhambra the Moorish period, Notre Dame de Paris will appear for Gothic, some of the Venetian buildings will typify Italian Renaissance. The Château de Chénouen will suggest the picturesqueness of French Renaissance, and the Place Royale in Paris will close the series as a work of the time of Louis XIII. It is expected the new wall-paintings will be completed before the close of the coming year. — *The Architect*.

THE TIMBER-SUPPLY OF THE UNITED STATES.—The enormous inroads being made into the timber-reserves of the United States are now raising serious apprehensions in many quarters, though for long it was impossible for the prophets of lean years to gain the ears of any of the great consumers or purveyors of timber. The opening up and development of the United States was immensely accelerated by the superabundant supplies of excellent timber so long available. It was this that made it possible to carry railroads across valleys on timber trestles, in place of on heavy embankments, at a large saving in cost, and, above all, in time. The fact that the trestle was more costly to maintain, and liable to complete destruction by fire, was a matter of minor importance in the case of pioneer lines. Sleepers were so cheap that creosoting or other methods of preservation were unnecessary, and as many as 18 were placed under a 30-foot rail, thus enabling it to do the duty of a heavier section less efficiently supported. Great rivers were cheaply spanned by Howe trusses of timber; and for many years the subaqueous portions of the piers, even of steel bridges, were invariably of wood. The methods of lumbermen were governed by the apparent inexhaustibility of the supply. Every attention was paid to the rapid cutting and handling of the timber, and little to economizing it. While in England it has ever been the practice to cut trees off at ground-level, thus getting the maximum amount of marketable wood from a particular tree, this plan met with no favor with American lumbermen, since by making the cut higher up the time saved was more than equivalent to the value of the wood wasted. For converting into planks, circular saws of unprecedented dimensions were constructed, the output of which was enormous, but was accompanied by a large waste of excellent wood owing to the great width of the kerf. These halcyon days have now departed, and all the principal timber consumers in the States are turning anxious attention to a possible, indeed, probable, limitation of the supply. Some of the principal paper-makers are now employing skilled foresters to control their timber-lands, and to prevent the reckless waste hitherto general. The railway companies are, one by one, following European practice in the matter of prolonging the lives of their sleepers by creosoting or other treatment. The American railway demand is enormous, about 90,000,000 sleepers being laid annually, and to this must be added that for other departments and other markets. According to the census of 1900, the total consumption of the American market was then just under 2,000,000,000 cubic feet per annum, and practically no steps had at that date been taken for the restocking of the forest-areas. If matters continue as in the past, the States will soon have to depend on Canada for a very large proportion of their timber-supplies. Such a condition may result in a tariff war, since the Americans, anxious to keep the profitable conversion industry on their side of the border, have placed heavy taxes on importers of converted timber; while, on the other hand, Canada, restive under this restriction on the establishment of saw-mills within her territory, has now secured the power to establish, by proclamation, an export-tax on saw-logs, whenever circumstances make such a course advisable. There is no export-tax on converted timber, but the American Customs regulations impose a special tax on such timber, if an export-tax is levied on saw-logs by the exporting country. — *Engineering*.

TINTERN ABBEY'S HISTORY.—Among the many beautiful ecclesiastical relics which our country boasts none are more picturesque or famous than the ruins of Tintern Abbey, which have just been acquired by the nation by purchase from the Duke of Beaufort. Not only do these beautiful remains possess unique historic value, but they are endeared to us as being the scenes whence some of our sweetest singers drew inspiration. In this connection one instinctively recalls Wordsworth's fine lines:—

Though absent long,
These forms of beauty have not been to me
As is a landscape to a blind man's eye;
But oft, in lonely rooms and 'mid the din
Of towns and cities, I have owed to them,
In hours of weariness, sensations sweet,
Felt in the blood, and felt along the heart,
And passing even into my purer mind
With tranquil restoration—feelings, too,
Of unremembered pleasure; such, perhaps,
As may have had no trivial influence
On that best portion of a good man's life,
His little, nameless, unremembered acts
Of kindness and of love.

The remains of Tintern Abbey are situated on the right bank of the Wye, about nine miles below Monmouth, on the spot where Theodorick, King of Glamorgan, was killed thirteen hundred years ago while fighting under the banner of the cross against the pagan Saxons. The founder of the abbey was one Walter de Clare. It was built for Cistercian monks in 1131, five hundred and thirty-one years after the death of the brave Theodorick, but the first mass was not celebrated by the Abbot and monks in it until 1288. Earl Marshal Roger de Bigod, Earl of Norfolk, was the patron who commenced the building, bestowing great wealth on its foundation. The site was granted to the second Earl of Worcester in the twenty-eighth year of the reign of Henry VIII. Apart from the fallen roof and tower, the greater part of the rest of the abbey as it stands to-day is in tolerable preservation. Both in beauty of composition and delicacy of execution it is second to none of the Early English and Decorated. That the monks in the days of old were merry as those of tradition may be gathered from the fact that, when making an excavation in an orchard adjoining the abbey in 1847, the remains of the hospitium, or smaller convent, in which the brethren were wont to entertain strangers and travellers of their order who, passing thence through the cloisters, entered on the more solemn duties of the abbey, were discovered, and from its extent it is plain that hospitality was dispensed in a most liberal manner at this once splendid monastic pile. The abbey stands in the middle of nearly 6,000 acres of woodland and pasturage. The Crown has also bought the farms from the Duke of Beaufort which surround Raglan Castle. These are 3,000 acres in extent, and are most picturesquely situated. Indeed, the landscape round about is remarkably beautiful, and many a pleasant day can be spent in the neighborhood. — *London Express*.

THE AMERICAN ARCHITECT AND BUILDING NEWS

ADVERTISERS' TRADE SUPPLEMENT.

No. 223.

SATURDAY, DECEMBER 1, 1900.

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SCHROEDER'S PATENT FASTENER.

It has been our lot during all the years of married and householding life to spend the hours of each Thanksgiving morning in hanging storm-windows, but this year the season

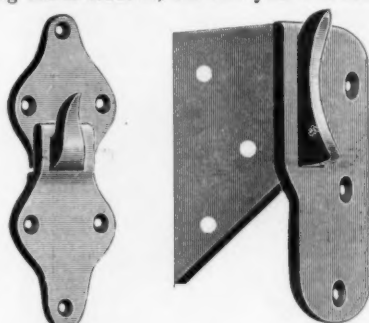


Fig. 1.

Fig. 2.



Fig. 3.

allows us to be a week or two later than usual. It has been no easy task to pass a four-foot-wide storm-window from the inside, out over the lowered upper sash, pinching fingers in the effort to avoid marring wood-work, and then by strength of finger-tips catch it just as it was about to fall to the ground and swing it to a resting-place on the sill. Unfortunately it was not our lot to build after the invention of Schroeder's "visible" and "invisible" hangers, which are manufactured by the Stanley Works, of New Britain, Conn., and whose adjustment and operation are explained by the annexed cuts.

Figure 1 shows very plainly how the improved "Visible" Hanger should be fastened upon the outside of the top window-casing and upon the outside of the top-rail of the sash. In fitting the hangers, the sash should be wedged up off the sill and close against the top of the window-casing, so that when it is hung, it will swing free of the sill and fit closely at the top.

Figure 2 illustrates the position of the improved "Invisible" Hanger applied upon the inside of each upper corner of the window-casing and upon the outside of each upper corner of the sash. In fitting these hangers, the sash should be wedged up off the sill and close against the top of the window-casing, so that when it is hung, it will swing free of the sill and fit closely at the top.

Figure 4 shows how the improved fastener (Fig. 3) should be applied to the sash and window-frame, and how tightly it draws and holds the sash in. When closed, the

fastener hangs against the side of the window-frame with a pin projecting through the lower end of the slot to prevent swinging of the fastener. When it is desired to open the window the lower end of the fastener strip is pulled outward to release it from the pin, and the window is then pushed outward to open position in the manner shown. As the window is moved to open position the fastener turns upon its pivot, the fastener sliding on the screw, the head of which is larger than the slot to prevent detachment. The window is turned outward until the screw reaches the upturned end of the slot, allowing the fastener to drop to carry the screw into said upturned end, and this holds the fastener in extended position.

When it is desired to close the window, the

finger end of the fastener is lifted sufficiently to bring the screw down to the body of the slot, when the window will slide to closed position by its own weight and turn the hanger downward into the position shown in the cut. An enlargement is formed in the slot through which the head of the screw may be passed to allow the detachment of the fastener.

The hangers are made from steel, japanned, and are light and strong. The fasteners are made from steel, and are 10 inches long.

These patent goods are sold by all leading jobbers, dealers and sash-manufacturers.

The price is very moderate and within the reach of all — in fact, the very lowest for the very best device of its nature.

ZINC-WHITE.

It is hardly half a century since zinc-white was first introduced as a pigment in France. To-day in the United States alone the annual consumption is upwards of 40,000 tons. When one realizes how great a surface a ton of zinc-white in paint will cover, the figures seem almost incredible, and there must be good reasons

for this vast consumption. The reason is found in the fact that zinc-white is the only available white pigment that will not affect the color of any other pigment and is not itself susceptible to discoloration. Zinc-white is used by paint-manufacturers to increase the durability of their products, and by consumers on the score both of appearance and economy. Zinc-white in paint not only enhances its value as paint, but increases the ratio of volume to weight and consequently the covering capacity, and therefore the economy. This Company issues three practical treatises on the economics of painting, in which the relative values of the various pigments and vehicles are fully discussed. They are entitled "The Paint Question," "Paints in Architecture," and "House Paints: A Common-sense Talk About Them," and will be gladly mailed free to any address, on application.

THE NEW JERSEY ZINC CO.,
71 BROADWAY, NEW YORK, N. Y.

THE American Steel Hoop Company is going to put in steel bins at its Isabella Furnaces, Etna, Pa. This will require about 750 tons of steel, which will be furnished from one of the Pittsburgh plants of the American Bridge Company. The bins will be made in accordance with the design of Julian Kennedy, mechanical engineer.

PORTABLE SCHOOL-HOUSES.

WARMER, snugger places in all Boston it would be difficult to find than in the nine portable school-houses which, like a puzzle, can be taken to pieces, carried away, and put up in another place inside of ten days. If one did not know just how these houses were put together it would be excusable if he imagined that they might be as cold as the much-quoted barn. But no one believes this when it is understood that Architect Charles H. Brown put his best ideas into the subject, and that he wrought them all out in a manner as practical and scientific as though they were to be permanent instead of temporary structures, with a location dependent entirely upon those school-yards where there is the greatest crush in school.

These nine school-houses are made upon honor and they are warranted to keep out the cold in a manner altogether effectual. The upper floor is of hard-pine boards seven-eighths of an inch thick. Underneath this floor there is a sheathing quilt. This so-called quilt is of heavy paper padded, not with ordinary cotton, but with something infinitely better — sea-weed



Fig. 4. Hanger, Adjusted.

—for that has air-spaces, and so extra warmth is ensured.

Underneath this upper flooring and its quilt there is a floor of three-inch planking, and underneath that planking on the side next the ground there is another sheathing-quilt, and so it is plainly evident that no dampness or cold can come through. The sides are double-sheathed, and in between this sheathing there are two thicknesses of building-paper. The exterior is covered with matched seven-eighths-inch boards of North Carolina pine, and the roofs are covered with the same kind of boards, on which is laid an extra heavy quality of canvas-duck, painted with three coats of oil-paint.

Each portable is 25' x 35' in measurement. They meet the State requirements, which demand 30 cubic feet of fresh air for each occupant. The result is secured by a special type of furnace and galvanized-iron ventilating

Street, and No. 9 is in the yard of the Chestnut Avenue Primary School, Jamaica Plain. — *Boston Transcript*.

CRANE COMPANY AT THE PARIS EXPOSITION.

ONE of the exhibits at the Exposition Universelle, Paris, which attracted wide attention was that of Crane Co., the largest manufacturers of valves and fittings in the world, the head offices and factories of which are located in Chicago.

This exhibit occupied a desirable position in the Palace of Machinery & Electricity, Champ de Mars, and consisted of brass and iron valves and cocks for all pressures, brass and iron fittings, steam specialties, engineers' supplies, and steam and gas fitters' tools.

Crane Co. was the only exhibitor of this class of goods to receive a gold medal. The

Graphited Wood Grease for a trolley-road away out at the Island of Ceylon.

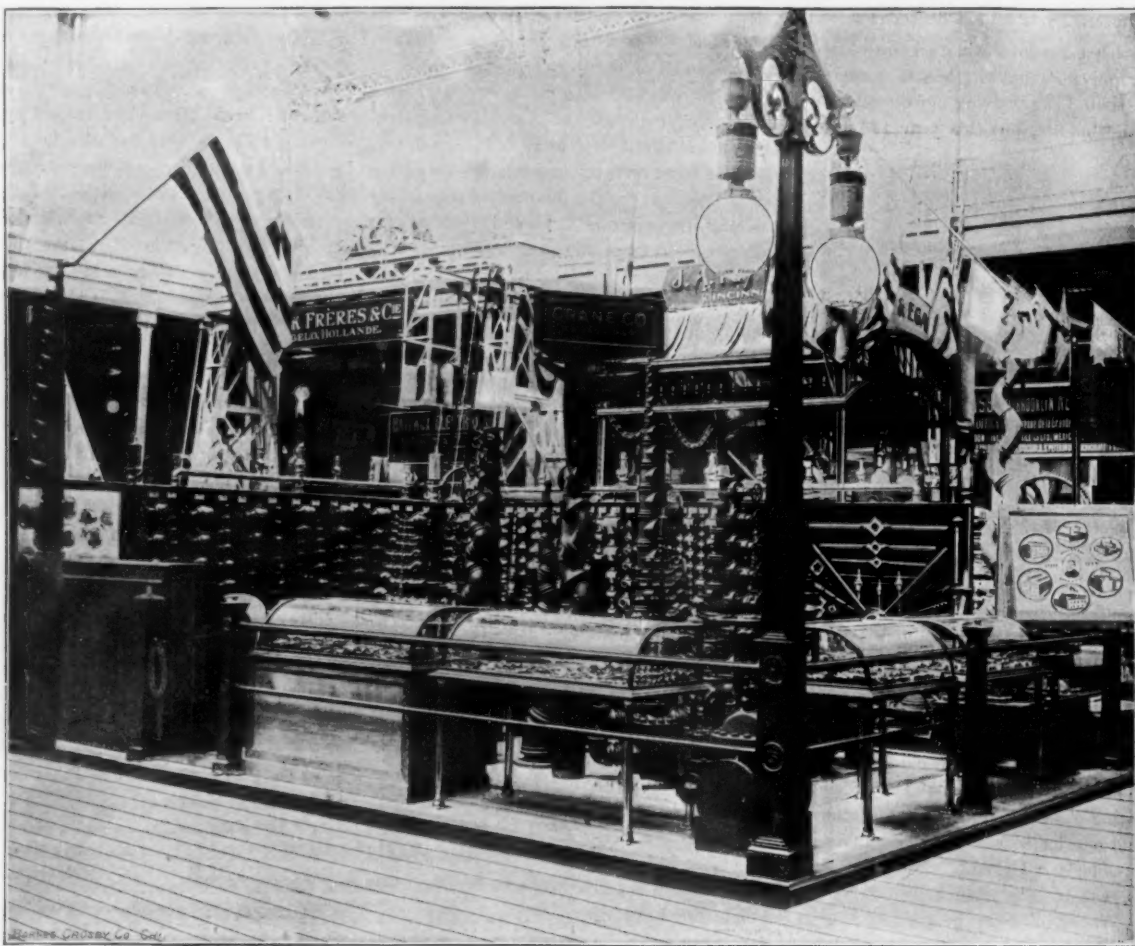
Nine-tenths of the world's supply of graphite comes from Ceylon! The graphite from which we make our Graphite Wood Gear Grease comes from the Dixon Company's mines at Ticonderoga, N. Y., so after all it is not to be wondered at that we are proud of this little side-show to our three-ringed business.

JOSEPH DIXON CRUCIBLE CO.,
JERSEY CITY, N. J.

THE contract for seven new bridges on the Allegheny Valley Railroad has been awarded to the American Bridge Company.

METAL-COVERED SASH-BARS.

ALL modern business places designed with a view of displaying merchandise desire the view of the show-windows obstructed as little



Crane Company Exhibit at the Paris Exposition.

ducts. The forcing out of the vitiated air is accomplished by the introduction into the vent-duct of the furnace smoke-pipe. The furnace is in the rear of the room and the pipe runs up through the roof.

These structures cost \$1,250 each, exclusive of the heating and ventilating apparatus, and this was installed in each one at an additional cost of \$150. The capacity of each portable school-house is 60. The location of these knowledge-boxes is as follows: No. 1 is in the yard of the Adams Primary, Adams Street-Dorchester; Nos. 2 and 3 are in the yard of the Henry L. Pierce Grammar School, Welles Avenue, Dorchester; Nos. 4 and 5 are in the yard of the Christopher Gibson Grammar School, Bowdoin Avenue, Dorchester; Nos. 6 and 7 are in the yard of the Hugh O'Brien Grammar School, corner of Langdon and Dudley Streets, Roxbury; No. 8 is in the yard of the Albert Palmer Primary School, Eustis

exhibit was tastefully arranged, as will be seen from the accompanying photograph, and gave an especially good opportunity to visitors to study approved modern methods of piping, flanged work, etc., for power-plants—a branch of the business of this Company which has become very important.

CRANE COMPANY,
CHICAGO, ILL.

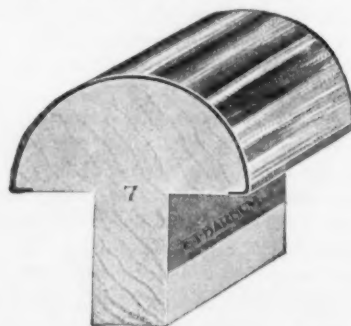
THE American Bridge Company has a contract for furnishing over 700 tons of structural steel to go to the New York Navy Yard, Naval Powder Depot, near Dover, N. H., and to the Naval Magazine at Iona Island, N. Y.

COALS TO NEWCASTLE.

SENDING coals to Newcastle is a happening quite out of the ordinary, but here our London agent sends us an order for 10 barrels of

as possible, and to meet this demand the all-metal sash-bars were placed before the public several years ago.

The latter, however, were not very success-



ful on account of difficulty in fitting them and their rusting propensities. They, however, possessed so many excellent features that a substitute has been devised, and its growing

Atlas PORTLAND CEMENT

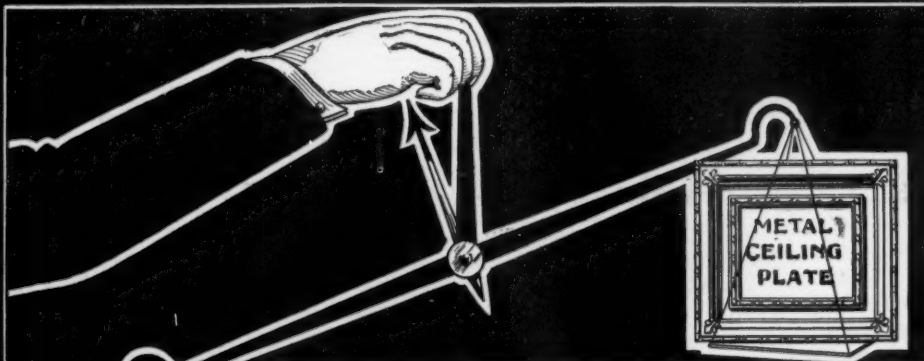
The
Standard
American Brand.

Used Exclusively in the Following New York Buildings:

HAVEMEYER STORES	SINGER BLDG.
ST. PAUL BLDG.	UNIVERSITY CLUB
AMERICAN SURETY BLDG.	N. Y. LIFE INS. BLDG.
BANK OF COMMERCE	STANDARD OIL BLDG.
JOHNSTON and PRESBYTERIAN BLDGS.	
AND MANY OTHERS.	

Atlas Portland Cement Company

143 LIBERTY STREET
NEW YORK



WHERE WEIGHT IS A DISADVANTAGE

Weigh a metal ceiling plate. Then weigh the plaster required for equal ceiling surface and you have one reason why plaster is poorest for the purpose. Plaster weighs most; hence has more weight to hold up and puts more strain on the trusses.

Metal Ceilings are firmly nailed on. Plaster (to use an expression which seems to fit the case) "hangs on by its teeth."

Metal Ceilings are non-absorbent. Plaster is both porous and absorbent. A leak fills the plaster with water, adds to its weight, and weakens it—you know the rest.

Jar, vibration, shrinking of timbers, and settling of building are some of the things that crack plaster. They don't crack ceiling plates of metal. Plaster lets go when least expected. Metal Ceiling stays on. Don't let any one convince you that plaster is anywhere near as good as metal for ceilings, it isn't so.

Berger's Classical Metal Ceilings are the ones to USE, to handle and to recommend.

Let us tell you why.

THE BERGER MFG. CO., Canton, Ohio

Eastern Branch: 210 E. 23rd St., New York, N. Y.
Western Branch: 1428 N. Broadway, St. Louis, Mo.

Specialties: CEILINGS, ROOFING, SIDING, EAVE TROUGH, CONDUCTOR, HANGERS, Etc., Etc.

popularity is a positive proof that the undesirable features of the all-metal bars have been eliminated.

The new metal-covered sash-bars are light, strong, handsome and will not rust. The core of these bars is of hardwood, over which is drawn a heavy sheet of copper, bronze, German-silver or brass, all of which are non-corrodible. The metal covering is drawn through dies, giving a perfectly even and smooth surface, and when bars are placed in position they appear as solid metal.

They give to the windows the appearance of a handsome show-case.

They are made in many sizes and shapes, one of which is displayed in this article.

Illustrated circulars describing sizes and prices may be obtained of E. T. Barnum Wire & Iron Works, Detroit, Mich., manufacturers of wire, iron, brass and steel goods of all kinds.

WARM-AIR REGISTERS AND VENTILATORS.

The Canton Steel Roofing Company, of

Canton, O., are manufacturing a line of warm-air registers and ventilators, both of which are made exclusively of smooth steel sheets, for which they claim superiority in construction, stability and durability.

In manufacturing these articles they use materials of sufficient weight and strength to fully meet the requirements. They make all sizes in even inches in length and width from 4" x 6" to 36" x 36"; also special sizes on which they will be glad to quote prices upon application.

Their registers are practically non-breakable, saving great annoyance from liability of breakage in shipping.

They claim that the air-capacity and strength are far greater than those made of cast-iron and at the same time they are about one-half lighter in weight.

The materials from which these registers are made having a very smooth surface permit of superior finish, especially in bronze, copper, brass, etc.

All parts are accurately stamped and formed, thus producing a register, well-made, close

fitting, strong and first-class in every particular, easy of operation and not liable to get out of order.

The manufacturers will be pleased to communicate with all architects interested in good steel registers and ventilators.

TIN-PLATES.

The old firm of N. & G. Taylor Co., manufacturers of tin-plates, Philadelphia, present in the present issue quite a unique advertisement. It is a sheet of their special brand, the "Taylor Old Style," the coating of which has been scraped off with a knife. It gives the user of this tin some idea of the heavy metal coating that is contained upon the sheets, but this, of itself, does not make its durability. N. & G. Taylor Co. pay particular attention to the method of its manufacture. Our readers are, no doubt, already aware of the way in which this fine old-fashioned plate is made, each sheet being dipped by hand in open pots of metal of different degrees of temperature. It is made entirely by the Palm Oil process, the sheets come in contact with no acid flux

ALSEN'S PORTLAND CEMENT

Highest Quality, Most Reliable, Best Color, Most Enduring Surface, Greatest Bulk to the Barrel.

NOTABLE INSTANCES WHERE ALSEN'S CEMENT HAS BEEN USED BECAUSE OF ITS SUPERIOR QUALITY.

CATHEDRAL OF ST. JOHN THE DIVINE, N.Y.
WASHINGTON LIFE INSURANCE CO.'S BUILDING, N.Y.
MANHATTAN LIFE INSURANCE CO.'S BUILDING, N.Y.
AMERICAN SURETY CO.'S BUILDING, N.Y.
THE U. S. NAVAL OBSERVATORY, WASHINGTON, D. C.

ELECTRIC R.R. SUBWAY, BOSTON.
METROPOLITAN SEWERAGE WORKS, BOSTON.
SEA WALL, LAKE FRONT, CHICAGO.
BRIDGES OVER HARLEM RIVER, N.Y.
WASHINGTON, D. C.

Alsen's Portland Cement Works, New York Office, 143 Liberty Street.

AGENTS AT BOSTON: WALDO BROS., 102 Milk Street.

or any foreign matter to injure the metal coating. No rolls are used to squeeze off the metal.

To those interested we would advise them to correspond with the Taylor Company, and secure samples, circulars, and also the booklet which they have recently issued, devoted especially to this one brand of roofing-tin, which is pronounced by all interested to be the highest grade of roofing-tin now made.

This firm has agencies in all the large cities of the United States, carrying stock in warehouses, so that shipments may be made promptly from any point.

METAL CEILINGS.

ELECTION is over. The outcome of a national election cannot of necessity please all, but, nevertheless, all turn with a sense of relief and confidence to certainties.

In order to do our part to promote the good cause, we offer, at attractive prices, the most attractive designs of metal ceilings and side-walls that are produced. From our great variety of designs in Classic styles, surely we are in a position to please all who may contemplate using such material.

The fact that we are well filled-up with orders indicates that the many advantages of metal ceilings are apparent.

We carry large stocks and our facilities are equal to increased demands; therefore, it would give us great pleasure to submit designs and quote prices, upon receipt of sketch and measurements of any work that you may have in view.

Our specialties are metal ceilings, cornices and finials, corrugated iron, eaves-trough and conductor pipes, doors and shutters, graduated tile roofing, Spanish-tile roofing, metal lath, steel roofing and siding, galvanized-iron, tin-plate, lanterns, lamps, torches, oil-cans, spray-pumps, well-pumps, etc.

THE BERGER MFG. CO.,
CANTON, O.

NOTES.

THE American Bridge Company have just closed a contract with the North German Lloyd Steamship Company, calling for the erection of two steel buildings on the banks of the River Weser, at Bremen, Germany. The machine-shop will be 100 feet in width, and 300 feet in length, two stories in height. The foundry building is 75 feet in width and about 600 feet in length. Both buildings are designed after the best American practice. The contract has been secured by the American Bridge Company in competition with the best German

bridge shops, and shows the extent to which this class of work can be carried. This is a great triumph for the American Bridge Company, and we hope it will lead to further contracts of the same kind.

Mr. Jos. H. WILLIAMSON, who for nearly eighteen years has been the Business Manager of the Manufacturers Advertising Agency, New York City, desires to announce that he has severed his relationship with that Company to connect himself with the old-established Viennet Advertising Agency, 524 Walnut Street, Philadelphia, as its Business Manager, in the place of Mr. Thompson, resigned. Mr. Williamson also desires to express his appreciation of the uniform courtesy extended to him by his many friends in the "trade paper" and general advertising field in the past, and will be glad to welcome them at any time at his new address, either at the office in Philadelphia, or at the New York Office of the Viennet Advertising Agency, 127 Duane Street, Graham Building.

THE American Bridge Company is furnishing from its Lafayette plant, five bridges for Montgomery County, Ind.

BUILDING INTELLIGENCE.

Reported for the American Architect & Building News.

ADVANCE RUMORS.

Indianapolis, Ind.—Architect John H. Stern is preparing plans for a steel and brick apartment-building, to cost about \$70,000.

Port Huron, Mich.—The City Electric Railway Co. will erect a \$12,000, 135' x 225', car-house and shops after plans by Architect George L. Harvey.

Shreveport, La.—The James Riely Gordon Co., North Worth, Tex., is preparing plans for the proposed jail to be built for Caddo parish. It will be a three-story and basement, 86' x 110', fireproof structure, costing \$65,000.

Starkville, Miss.—Architects Bryan & Weathers have had the plans prepared by them accepted for the court-house to be built for Oktibbeha County; cost, \$25,000.

Whitmore, S. C.—W. B. Smith and Whaley & Co., Columbia, are preparing plans for the Glenn Lowery Mfg. Co. for a four-story brick cotton-factory, to cost \$500,000.

Wichita, Kan.—Bids will soon be advertised for a new \$18,000 school-building, and for the addition of two rooms on each of three other school-buildings.

ALTERATIONS AND ADDITIONS.

Bernardsville, N. J.—Alteration & addition to 2½-st'y fr. dwell.; o., Mrs. Martha Turnbull; a., Wm. B. Post, 33 E. 17th St.

Brooklyn, N. Y.—Meserole St., cor. Waterbury St., two-st'y bk. extension to stable, 8' 10" x 70' 3"; \$10,000; o., Otto Huber Brewery; a., F. Wunder, 99 Broadway.

Liberty Ave., cor. Georgia Ave., four-st'y bk. extension, 50' 6" x 76'; \$40,000; o., Peil Bros; a., H. Drosser, 93 Nassau St., New York.

Chicago, Ill.—Ninety-fourth St., Nos. 318-350, one & two-st'y bk. addition, 75' x 158'; \$18,000; o., Morden Frog & Crossing Works; a., Nimmons & Fellows.

Wabash Ave., Nos. 182-186, one-st'y bk. addition, 68' x 167'; \$53,000; o., Martin A. Ryerson; a., S. H. Treat; b., W. T. & W. I. Clark, Chamber of Commerce Building.

W. Lake St., Nos. 778-784, 2½-st'y bk. addition, 40' x 66'; rear addition, 40' x 41'; \$14,000; o., Joseph D. Hubbard; a., H. H. Waterman; b., T. C. Wright, 529 Larchmont Ave.

BUILDING INTELLIGENCE.

(Alterations and Additions Continued.)

Philadelphia, Pa.—Walnut St., No. 226, interior alterations & first-st'y store front; \$9,500; o., C. Mathers; b., Sherman, Orem & Co.; a., Keen & Mead.

Tioga and Edgemount Sts., three-st'y bk. & iron morocco factory addition, 62' 8" x 129'; \$25,000; o., George H. McNeeley & Co.; a., Roydhouse, Arey & Co.

Hamilton St., nr. 24th St., fourth & fifth story addition, 40' x 108'; \$12,000; o., Frank H. Flee & Co., Inc.; b., Machin & Brown; a., Amos W. Barnes.

APARTMENT-HOUSES.

Brooklyn, N. Y.—Cook St., nr. Morrell St., five-st'y bk. flat, 25' x 87'; \$20,000; o., Benj. Nieberg, 72 McKibbin St.; a., M. Bernstein, 245 Broadway, N. Y.

S. Portland Ave., nr. Fulton St., 2 four-st'y bk. flats, 32' 8" x 86', steam heat; \$24,000; o., G. W. Smyth, 694 Fulton St.; a., Lawton & Fields, 824 Flatbush Ave.

Fulton St., cor. S. Portland Ave., 2 four-st'y bk. stores & aparts., 27' 8" x 40'; \$18,000; o., G. W. Smyth; a., Lawton & Fields.

Chicago, Ill.—Prairie Ave., No. 5932, three-st'y bk. flats, 25' x 76'; \$8,000; o., Geo. Lenz; a., Chas. W. Nothnagle; b., Fred Harder, 2842 Union Ave.

Vincennes Ave., No. 4941, three-st'y bk. flats, 24' x 64'; \$8,000; o., Thomas Moses; a., C. W. Van Keuren; b., Charles Schleyer, 6919 Elizabeth St.

W. Jackson Boulevard, No. 1410, two-st'y bk. flats, 22' x 66'; \$7,000; o., E. Carey; a., H. J. McMullen; b., Thomas Keating, 197 S. Center Ave.

Drexel Ave., Nos. 4634-36, four-st'y bk. apart., 50' x 111'; \$50,000; o., Charles E. Bartley; a., Arthur Foster; b., J. W. Snyder, 3813 Langley Ave.

Aberdeen St., No. 5432, two-st'y bk. flats, 25' x 54'; \$5,000; o., J. J. Fear, Jr.; a., Charles W. Van Keuren; b., Innes & Steinacker, 3645 S. Hoyne Ave.

Grand Boulevard, Nos. 5069-13, four-st'y bk. apart., 66' x 141'; \$96,000; o., Frank P. Epps; a., H. L. Newhouse; b., Harper Bros.

Bryant Ave., Nos. 85-87, three-st'y bk. apart., 47' x 90'; \$35,000; o. & a., S. N. Crowen; b., Mueller & Walter.

Fisk St., No. 3, three-st'y bk. flats, 21' x 72'; \$5,000; o., A. Hill; a., John Klucina; b., Joseph Rus, 1150 S. Kedzie Ave.

Fifty-third St., No. 957, three-st'y bk. flats, 23' x 53'; \$5,000; o., N. Swanstorm; a., A. G. Lund; b., G. N. Johnson, 6003 S. Morgan St.

S. Ayers Ave., No. 598, two-st'y bk. flats, 22' x 58'; \$5,000; o., Timothy Cunningham; a., Lonek & Kallal; b., James Murray, 119 La Salle St.

S. Troy St., No. 444, three-st'y bk. apart., 24' x 55'; \$10,000; o., John Gullen; a., A. J. McMullen; b., James McClintock, 67 S. 44th Ave.

S. Park Ave., Nos. 5552-72, and Fifty-sixth St., Nos. 577-579, 3 three-st'y bk. aparts., 37' x 72', 37' x 82', 43' x 50'; \$62,000; o., E. Mendel; a., F. L. Newell, 343 Fifth Ave.; b., O. E. Anderson.

New York, N. Y.—Jackson Ave., cor. 156th St., 8 four-st'y bk. flats, 28' x 29' x 65' x 71' 11"; \$140,000; o., Max Weinstein, 887 Jackson Ave.; a., Moore & Landsiedel, 148th St. & 3d Ave.

One Hundred and Thirteenth St., nr. 5th Ave., 3 five-st'y bk. flats, 33' 4" x 85' 7"; \$105,000; o., Rachlin & Lewis, 400 Bank St., Newark, N. J.; a., M. Bernstein, 245 Broadway.

One Hundred and Fortieth St., nr. 7th Ave., 17 five-st'y bk. flats, 27' x 28' x 85' 6"; \$325,000; o., Seitz & Schreiner, 143 W. 125th St.; a., John Hauser, 1961 Seventh Ave.

E. Fourth St., No. 330, five-st'y & base. bk. flat, 23' x 82'; \$20,000; o., John Katzman, 177 Orchard St.; a., M. Bernstein, 245 Broadway.

Ninety-eighth St., nr. Park St., 2 five-st'y bk. & st. flats, 25' x 86' 6"; \$56,000; o., Edw. Muller and John Scheuring, 418 E. 91st St.; a., John Hauser, 1961 Seventh Ave.

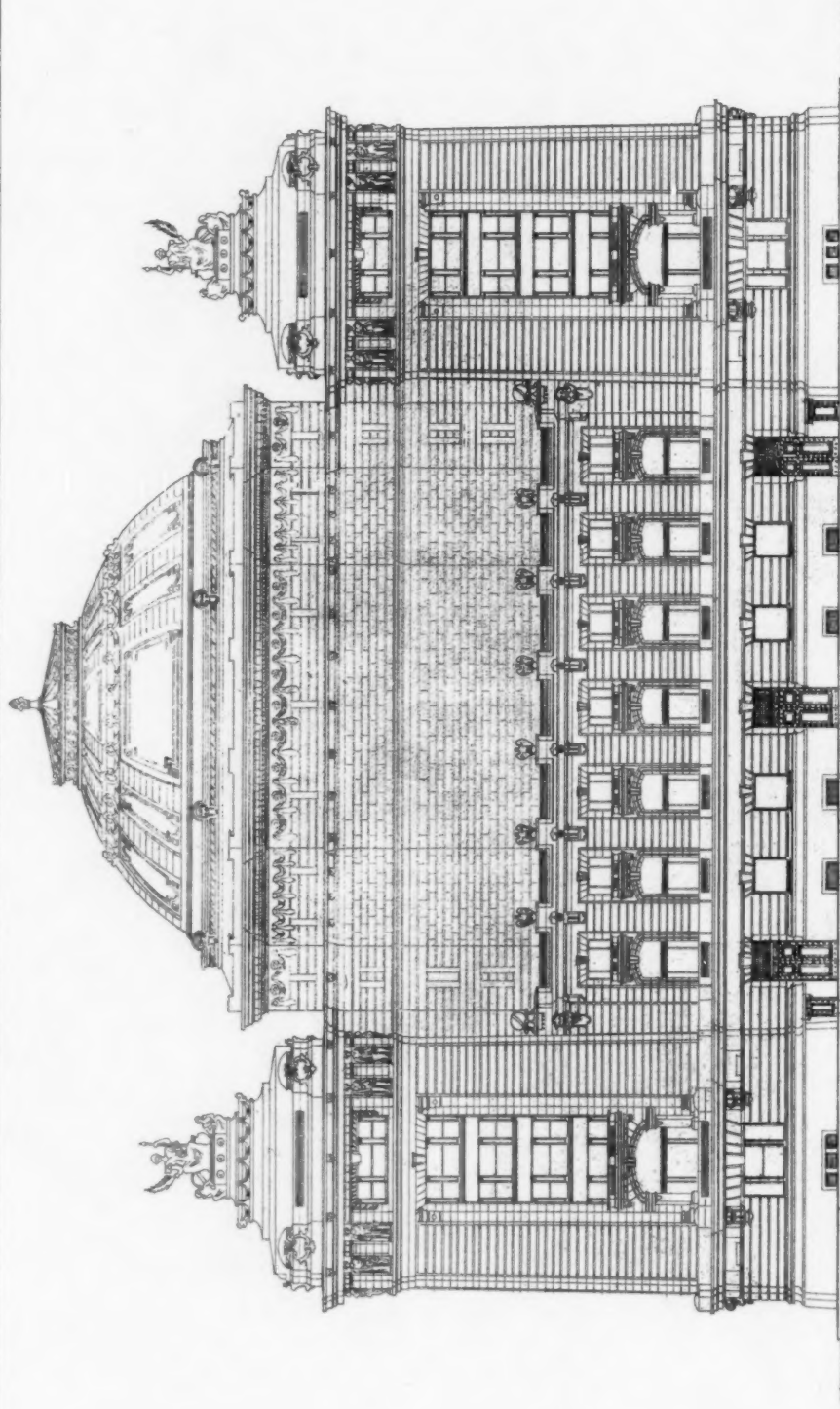
W. Twentieth St., No. 222, six-st'y & base. bk. flat, 25' x 73' 8"; \$28,000; o., Mrs. R. Shapiro, 10 Beekman Pl.; a., M. Bernstein, 245 Broadway.

Ninety-eighth St., nr. Park Ave., 2 five-st'y bk. & st. flats, 25' x 86' 6"; \$44,000; o., Muller & Schueuring, 418 E. 91st St.; a., John Hauser, 1961 Seventh Ave.

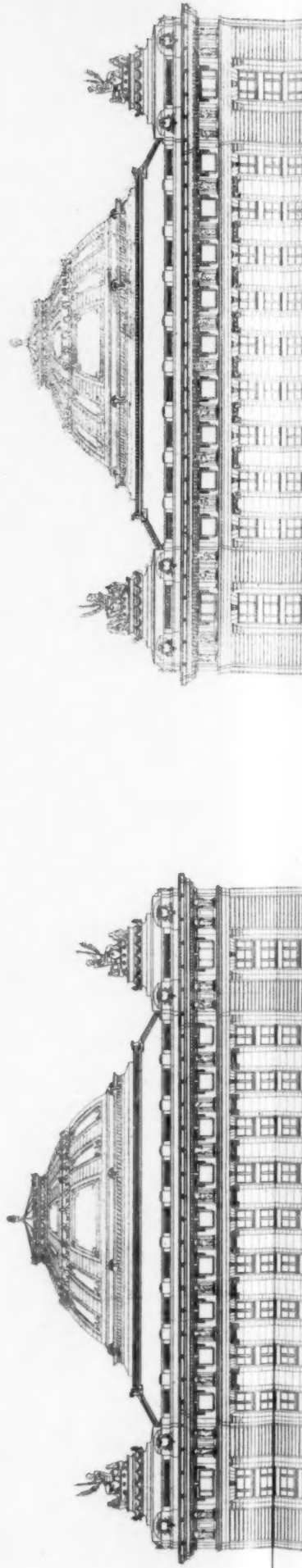
E. Seventh St., Nos. 111-115, 2 six-st'y bk. & st. aparts., 21' x 75' & 21' x 80'; \$42,000; o., S. E. Jacobus; a., G. Fred Pelham, 503 Fifth Ave.

FACTORIES.

New York, N. Y.—Prospect St., nr. 178th St., one-st'y & base. bk. factory, 156' x 179' 8"; plastic slate roof; \$34,000; o., Bronx Consumers Ice Co., 882 Courtlandt Ave.; a., Frai k Wennemer, 727 Trinity Ave.



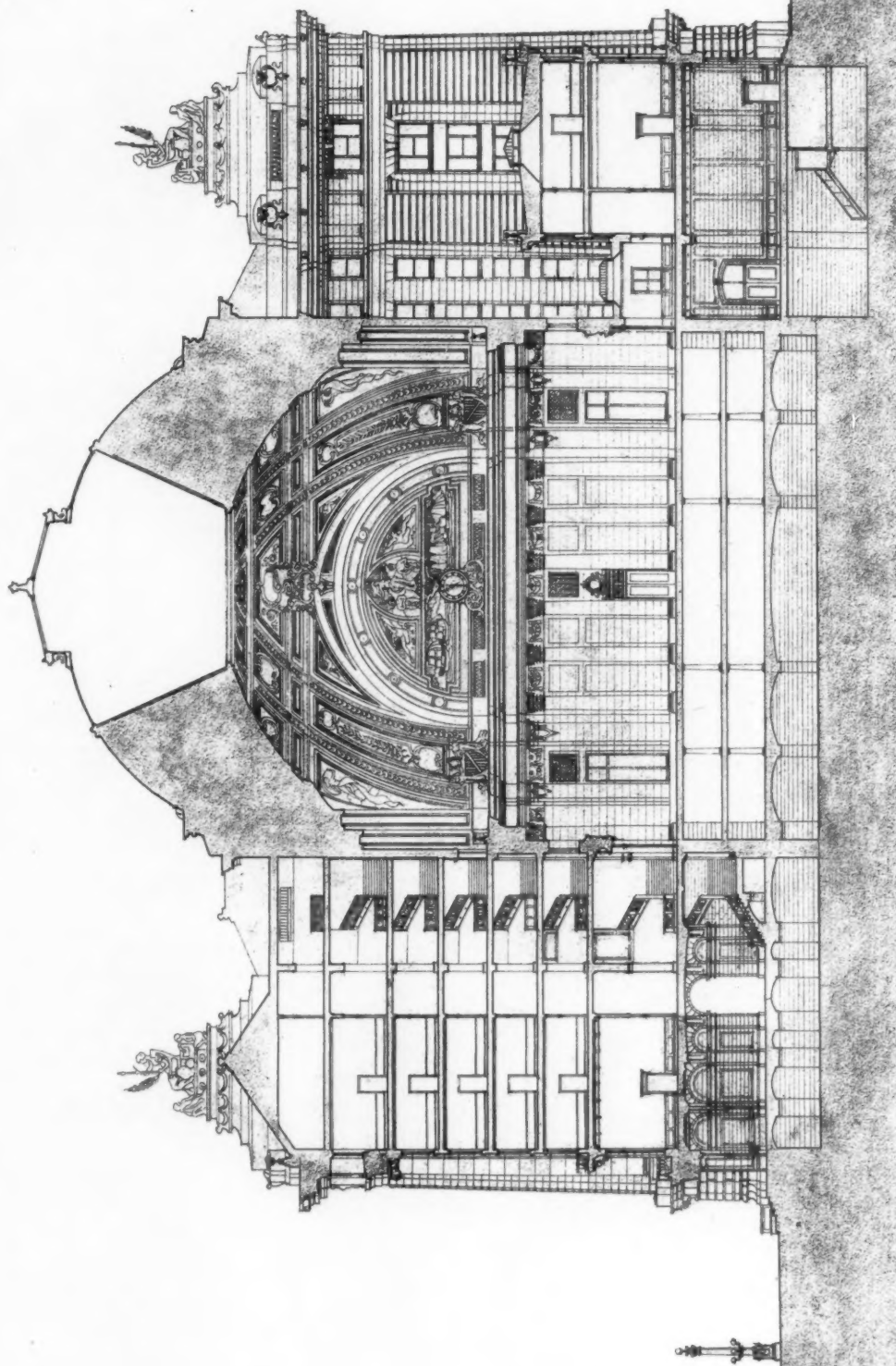
BRIDGE STREET ELEVATION.





WHITEHALL STREET ELEVATION.

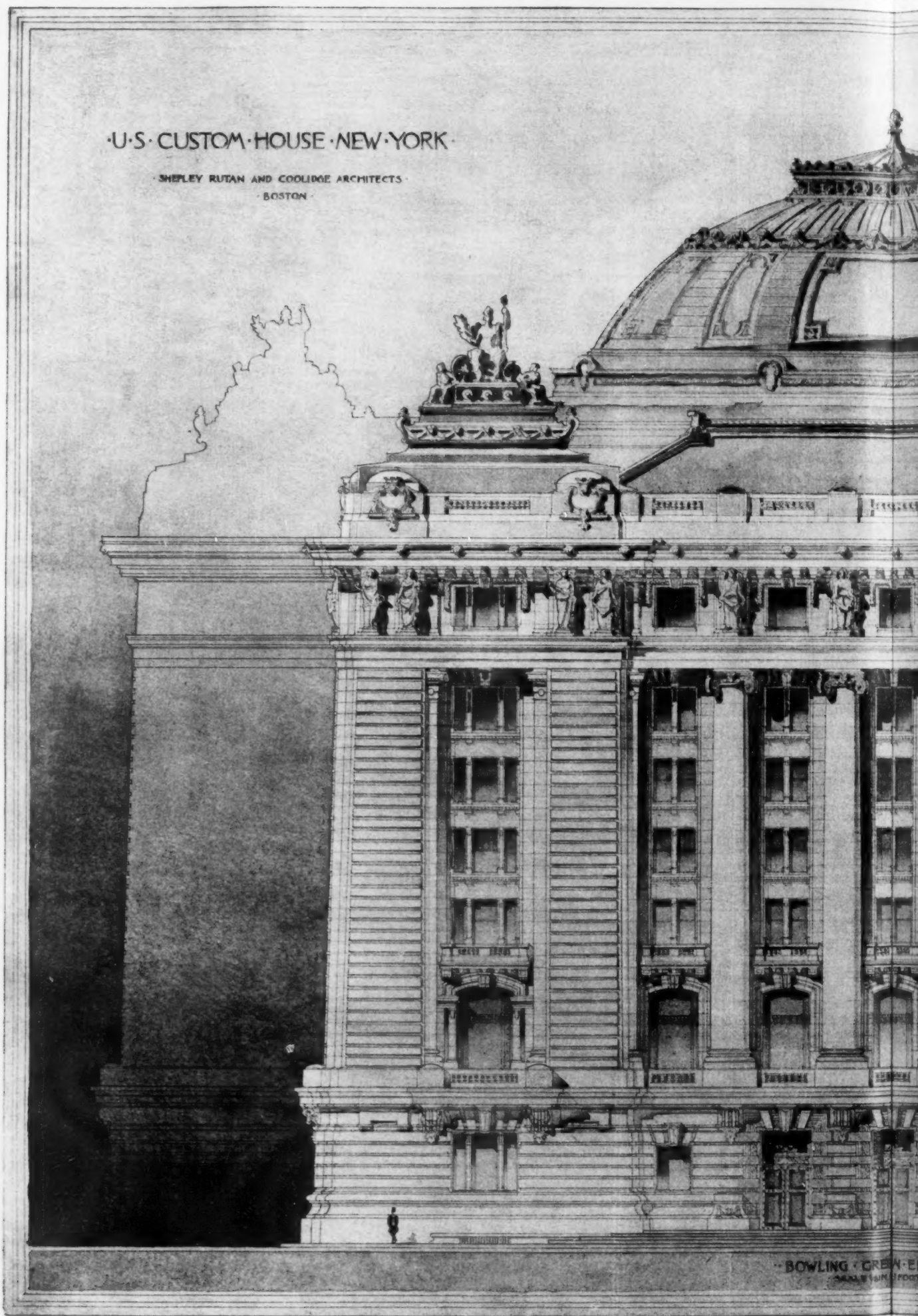
STATE STREET ELEVATION.



A COMPETITIVE DESIGN FOR THE UNITED STATES CUSTOM HOUSE, NEW YORK, N. Y.
SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS.

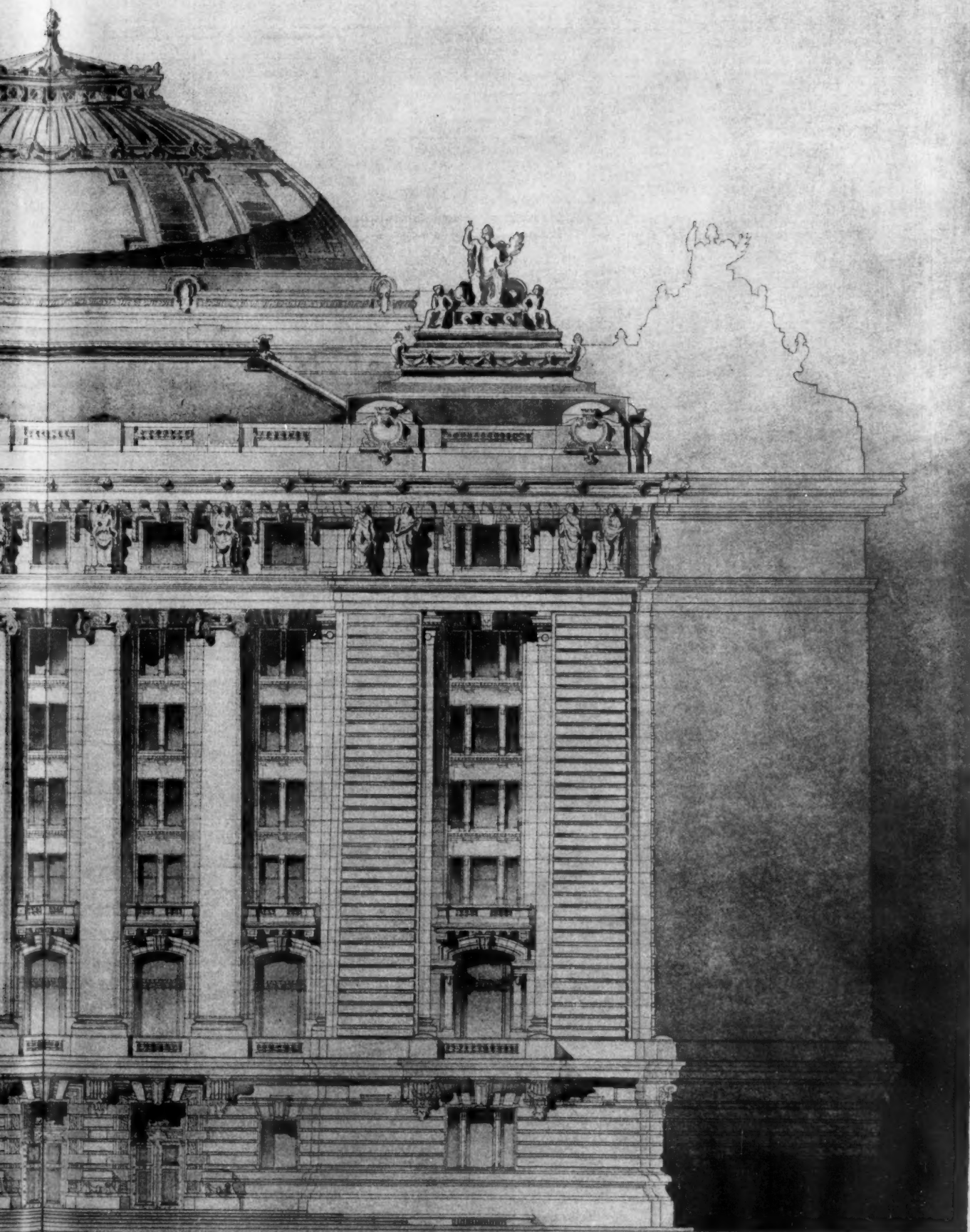
U.S. CUSTOM HOUSE NEW YORK

SHEPLEY RUTAN AND COOLIDGE ARCHITECTS
BOSTON



BOWLING GREEN E
SCALE 1/4" = 1' 0"

A COMPETITIVE DESIGN FOR THE UNITED STATES
SHEPLEY, RUTAN & COOLIDGE



GREEN ELEVATION

UNITED STATES CUSTOM HOUSE, NEW YORK, N. Y.
AN & COOLIDGE, ARCHITECTS.

MILITARY PRINTING CO., BOSTON

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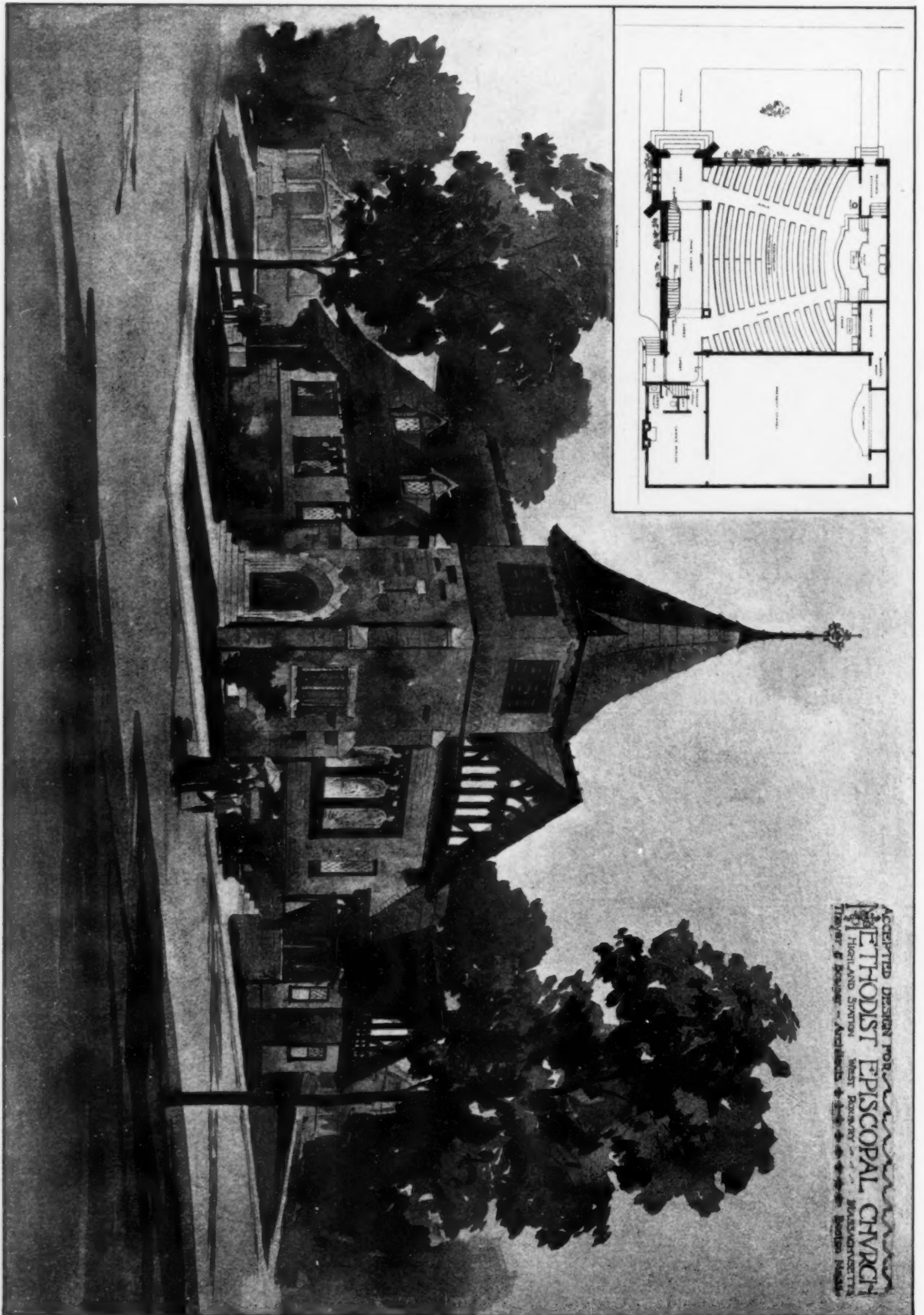




ILLUSTRATION BY THE AMERICAN ARCHITECT AND BUILDING NEWS CO., BOSTON

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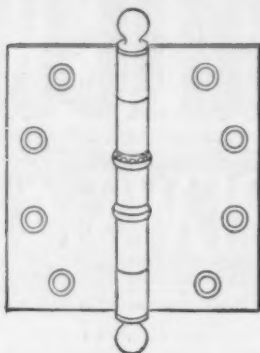
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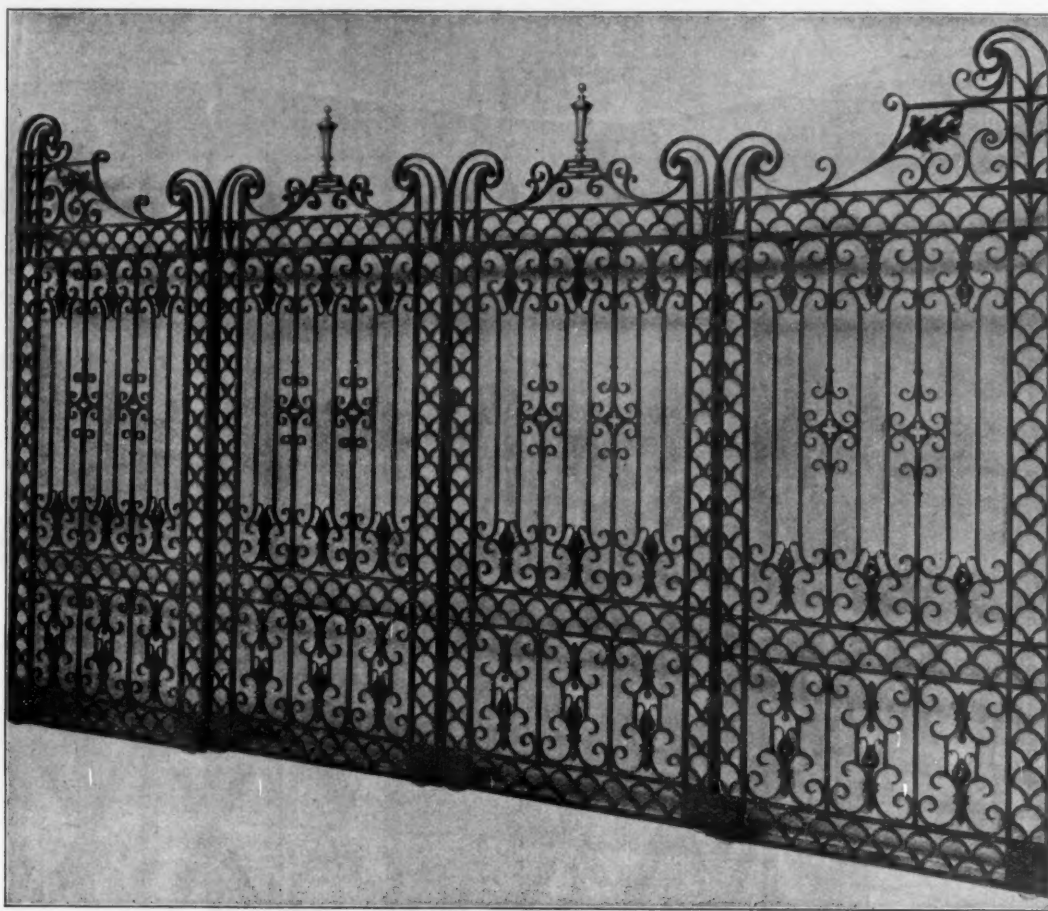
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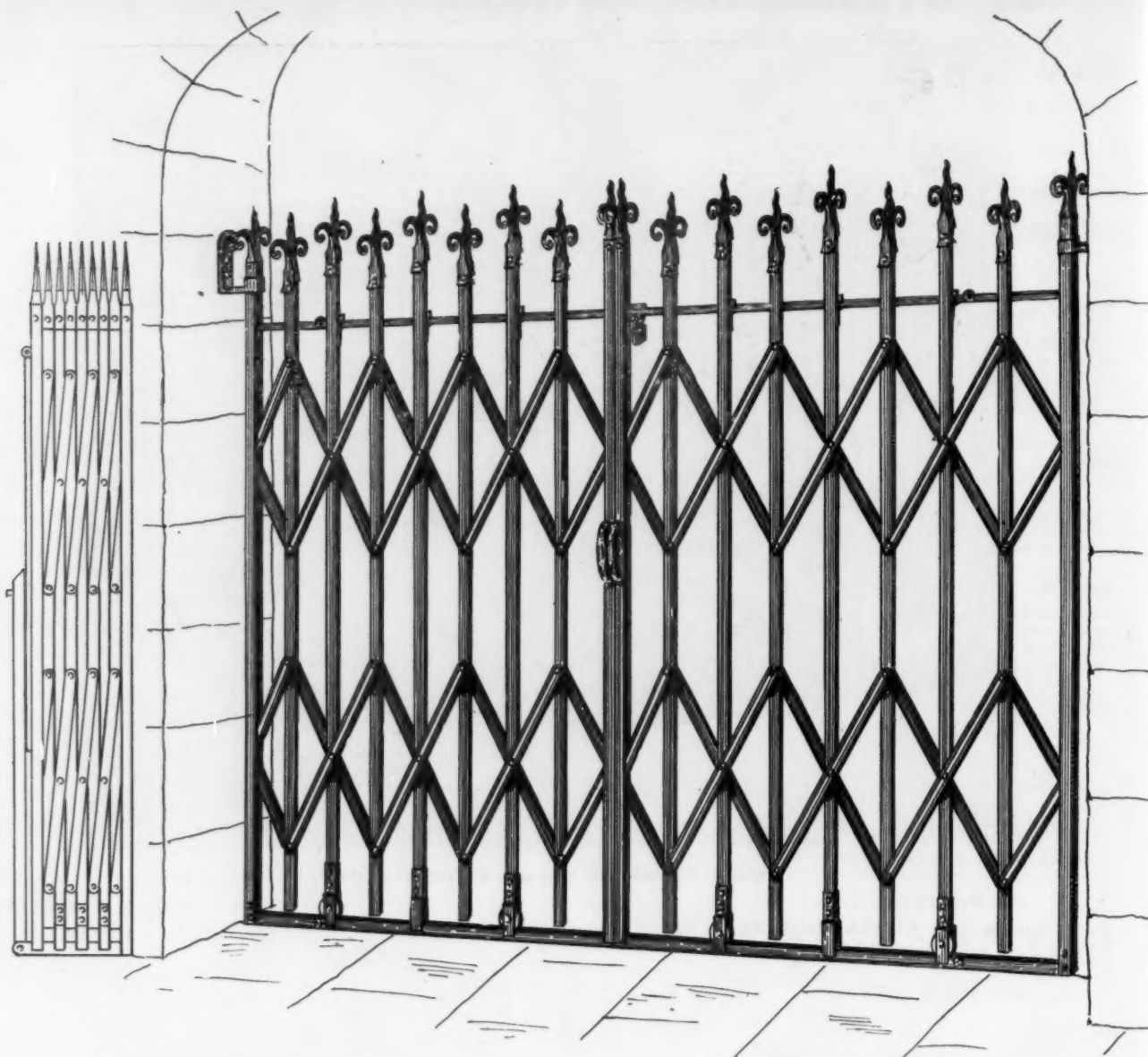
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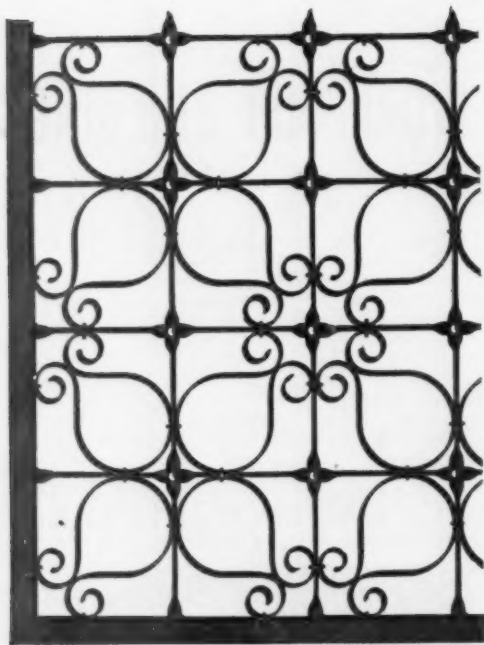
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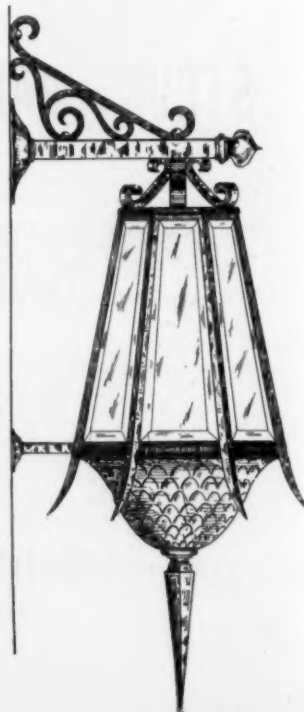


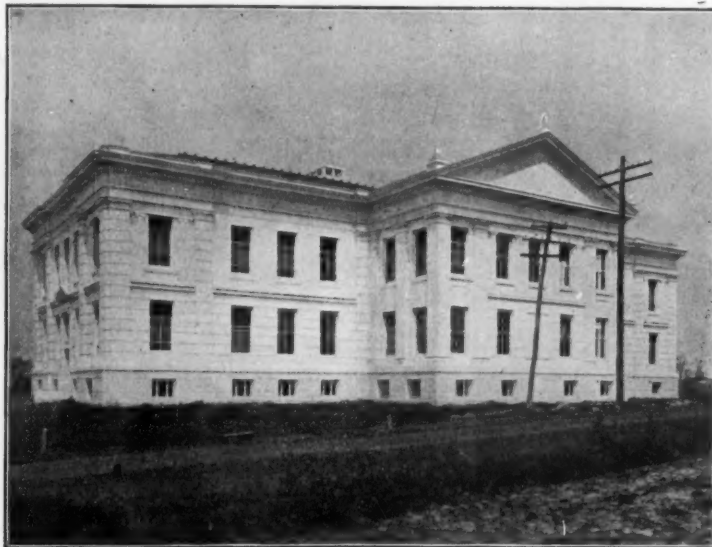
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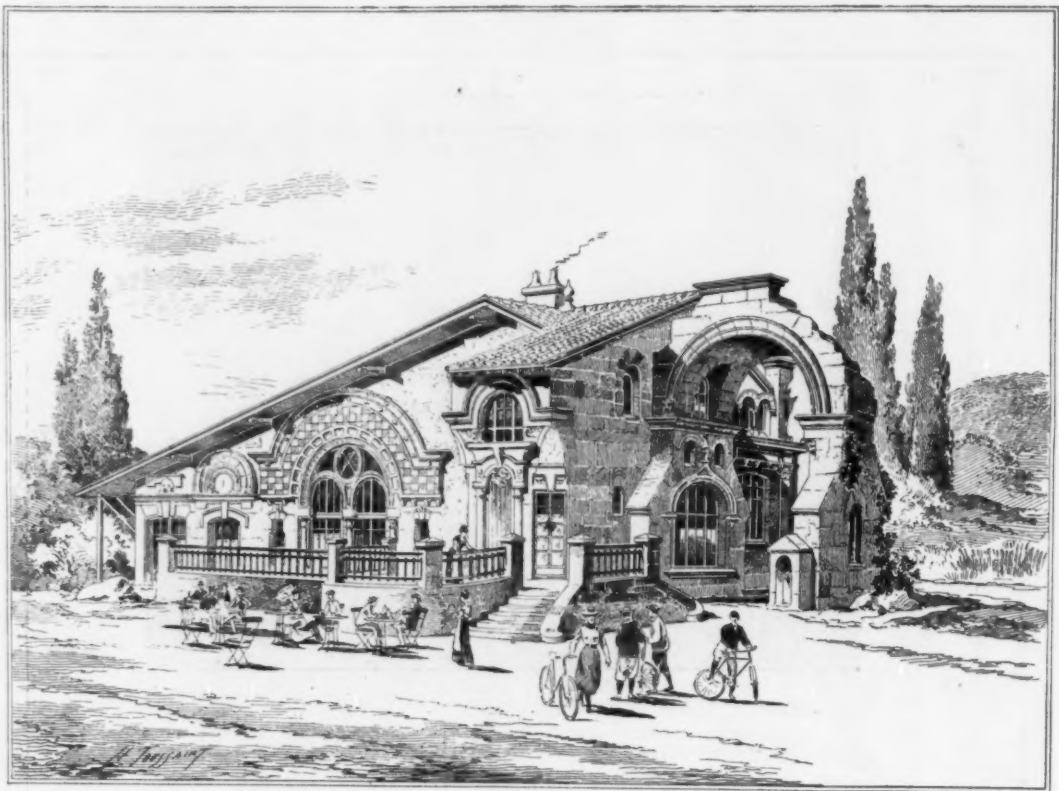
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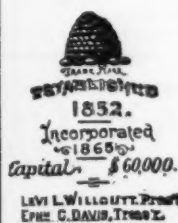
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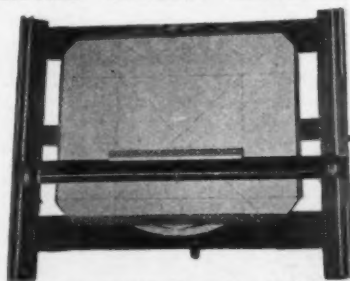
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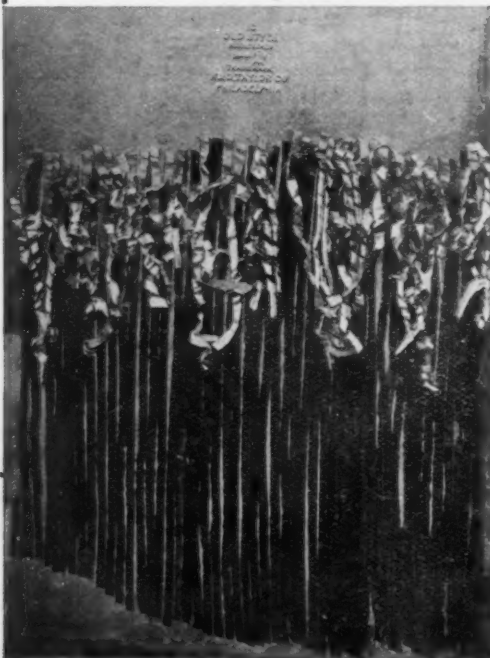
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1301

Treasury Department, Office Supervising Architect, Washington, D. C., November 14, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 5th day of December, 1900, and then opened, for the installation of a wiring system for the extension of the U. S. Custom-house and Post-office at Dubuque, Iowa, in accordance with the drawings and specification, copies of which may be obtained at this office, or at the office of the Superintendent of Construction at Dubuque, Iowa, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

1301

Treasury Department, Office of the Supervising Architect, Washington, D. C., November 13th, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 4th day of December, 1900, and then opened, for furnishing the heating apparatus complete in place, for the Isolation Ward and Mortuary, U. S. Marine Hospital, Cleveland, Ohio, in accordance with drawing and specification, copies of which may be had at this office, or at the office of the Superintendent at Cleveland, Ohio, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

1301

Treasury Department, Office Supervising Architect, Washington, D. C., November 16th, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 7th day of December, 1900, and then opened, for laundry machinery for the Hospital Outbuilding and Bath and Laundry Building at the U. S. Immigrant Station, Ellis Island, New York, in accordance with the drawing and specification, copies of which may be had at this office or the office of Boring & Tilton, 32 Broadway, New York City. JAMES KNOX TAYLOR, Supervising Architect.

1301

Treasury Department, Office Supervising Architect, Washington, D. C., November 16, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 7th day of December, 1900, and then opened, for refrigerators for the Hospital Outbuilding, and refrigerators and kitchen furniture for the Kitchen and Restaurant Building and Hospital Building, at the U. S. Immigrant Station, Ellis Island, New York, in accordance with the drawings and specifications, copies of which may be had at this office or the office of Messrs. Boring & Tilton, 32 Broadway, New York, City. JAMES KNOX TAYLOR, Supervising Architect.

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Treasury Department, Office Supervising Architect, Washington, D. C., November 21st, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 27th day of December, 1900, and then opened, for the construction (except heating apparatus and electric wiring) of the U. S. Post-office at Blair, Nebraska, in accordance with drawings and specification, copies of which may be had at the discretion of the Supervising Architect, by applying to this office or to the Postmaster at Blair, Nebraska. JAMES KNOX TAYLOR, Supervising Architect.

1302

Treasury Department, Office of the Supervising Architect, Washington, D. C., November 24th, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 17th day of December, 1900, and then opened, for the extension of vault (issue division) Office of the Comptroller of Currency, Treasury Department Building, Washington, D. C., in accordance with drawing and specifications, copies of which may be had at this office at the discretion of

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Treasury Department, Office Supervising Architect, Washington, D. C., November 24, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 3d day of January, 1901, and then opened, for the construction (except heating apparatus, electric wiring and conduits) of the U. S. Post-office at St. Cloud, Minn., in accordance with drawings and specification, copies of which may be had at the discretion of the Supervising Architect, by applying to this office or the office of the Postmaster at St. Cloud, Minnesota. JAMES KNOX TAYLOR, Supervising Architect.

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Treasury Department, Office Supervising Architect, Washington, D. C., November 26, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 8th day of December, 1900, and then opened, for the alterations and extension of the ventilating system of the U. S. Post-office and Sub-treasury Building at Boston, Mass., in accordance with

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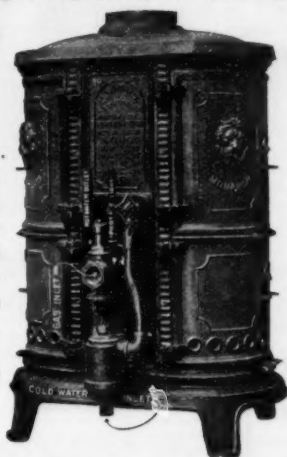
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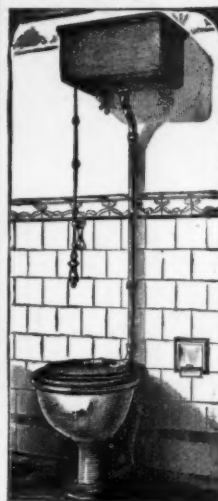
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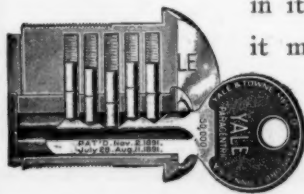
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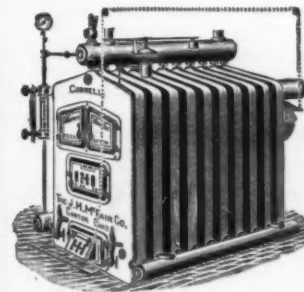
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Sealed proposals will be received at the Bureau of Yards and Docks, Navy Department, Washington, D. C., until December 8, 1900, for constructing a brick and steel building, 60 by about 16 feet, at the Navy Yard, League Island, Pa. MORDECAI T. ENICOTT, chief of bureau. 1301

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[At Atlanta, Ga.]
Sealed proposals will be received until December 5th for completing addition and alterations to the Fulton County Court-house. Forest Adair. G. M. WOOD, clk. com. of roads and revenues. 1301

PROPOSALS.

Treasury Department, Office of the Supervising Architect, Washington, D. C., November 16th, 1900. Sealed proposals will be received at this office until 2 o'clock P. M., on the 7th day of December, 1900, and then opened, for sterilizing and disinfecting apparatus for the Boiler-house and Hospital Outbuilding at the U. S. Immigrant Station, Ellis Island, New York, in accordance with the drawings and specification, copies of which may be had at this office or the office of Messrs. Boring & Tilton, 32 Broadway, New York City. JAMES KNOX TAYLOR, Supervising Architect. 1301

COURT-HOUSE.

[At Emporia, Kan.]
Sealed bids for erecting a court house will be received until December 18th by the Commissioners of Lyon County. 1302

PROPOSALS.

PUMPING-STATION.

[At Boston, Mass.]
Sealed bids will be received until January 13th, 1901, for a pumping plant for the Metropolitan Sewerage Commission. JAMES A. BAILEY, chairman. 1301

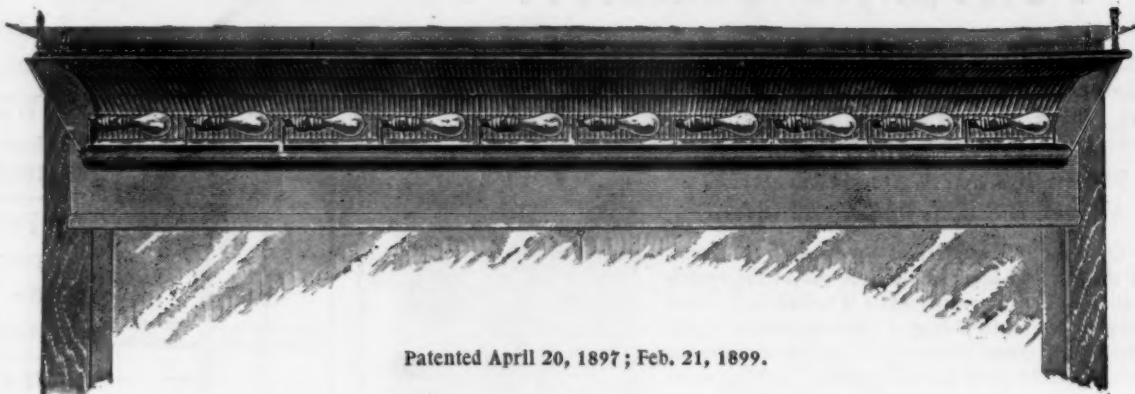
FACTORY.

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Sealed bids will be received until December 4th for the construction of a brick factory for the Gonzales cotton mills. J. F. RANDLE, pres. 1301

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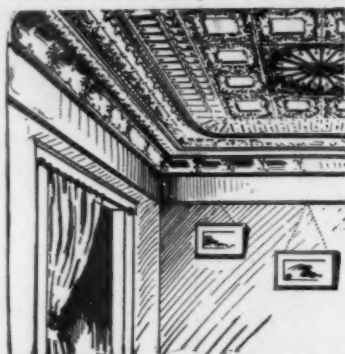
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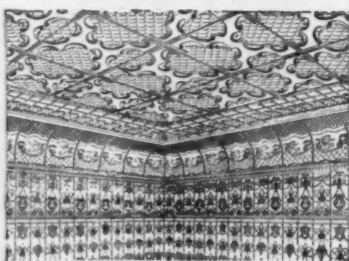
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