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SUMMARY:—

The Publication of Part II of the "The Georgian Period."—	
Possibility of Expanding this Useful Work.—Fire in a Jute	
Storehouse and its curious Result.—Fire distributed by a	
Ventilating-fan.—The Convention of the American Association	
for the Advancement of Science.—Abandoned Memorial	
Undertakings: The Greeley Statue Case.—The	
Wool Growers' Association and Forest Destruction.	57
HARDWOOD FLOORS.	59
THE "NATIONS" OF ANTWERP.—II.	59
SELECTION OF ENGLISH GOVERNMENT ARCHITECTS.	62
A WINDOW PLUNGES NATIONS INTO WAR.	63

ILLUSTRATIONS:—

Club-house of the American Society of Civil Engineers, 57th	
St., New York, N. Y.—The Greenwich Savings-Bank, Sixth	
Ave. and 16th St., New York, N. Y.—Interior of the Same	
Bank.—House at St. Louis, Mo.—House at Danbury, Conn.	
Monument to Alphonse Gent, Avignon, France.—An Old	
Philadelphia Doorway.	
Additional: Dwelling-house, No. 13 Rauchstrasse, Berlin,	
Prussia.—Memorial Chapel in the Rue Jean Goujon, Paris,	
France.—Principal Entrance: Glasgow Art Gallery, Glas-	
gow, Scotland.—New Station of the Orleans Railroad, Quai	
d'Orsay, Paris, France.—The Entrance: Morley House,	
St. Margaret's Bay, Dover, Eng.	63

COMMUNICATION:—

A Question of Commission.	64
NOTES AND CLIPPINGS.	64

IN recent years we have met a steady demand for material illustrating Colonial architecture and the inquiry has naturally been in the direction of measured drawings rather than for photographic reproductions of exteriors and interiors. The consequence of this demand has been to exhaust the surplus stock of copies of this journal in which such material had been published, and, really, when we came to look into the matter, we were surprised to find how much of such matter, and how valuable, we had published in the last score of years. To provide for future demand of this nature we decided to reprint, in separate form, more or less of this already published matter and, as our subscribers know, issued on the first of the year Part I of "The Georgian Period," giving them the option of replacing their presumably worn and soiled prints by payment of the mere price of delivery by mail. This course naturally imposed on us a considerable immediate loss which we hoped to recoup later by the gradual sale of the publication at a fair price to non-subscribers to the *American Architect* and also by the subsequent sale of a second Part of the publication. This second Part is published to-day and is now ready for issue, and though we cannot place it in the hands of our subscribers at the same fictitious price charged for the first Part, we gladly recognize the obligations of comity and have arranged to furnish to our present subscribers this second instalment at a price which is practically a discount of thirty-three per cent on the retail price. The material contained in this second portfolio is, so far as this journal is concerned, new and unpublished matter, and, further, we are quite sure that the greater portion of it has never been published before anywhere or by anybody. We have no misgivings at all as to the intrinsic and absolute value of the two instalments thus far published, and we sincerely hope that our subscribers and others will be willing to accept this statement and order the work for their libraries at once. Colonial detail, so-called, is peculiarly adapted to the needs of the American practitioner and probably will always remain the standard type in this country, as it is sufficiently allied on the one hand to the Classic and Renaissance formulas to admit of any degree of refining study, while on the other it impinges enough on the style of the Louis, the Jacobean and Queen Anne to allow of expansion in the direction of any exuberance that may suit the whim of the designer or client.

BUT although these two portfolios contain a good deal of valuable matter, valuable both from the historical and the practical point-of-view, the publication is very incomplete even when compared with our own opportunities and still more so when compared with ultimate possibilities. Nothing would

please us more than to apply a cure to this defect, and if our readers feel that a more complete record would be of value to them, we beg that they will express themselves to us to such effect. What we would like to do is this: We would like, at the beginning of the year, to issue a third Part which should contain, in the main, more or less of the Colonial work already published in the *American Architect* but not included in Part I, adding to the republished plates enough new matter in the way of gelatine prints to give the instalment a salable value. At the same time work could be begun upon a final instalment, Part IV, which would contain not only none but unpublished matter but which would be much larger and more valuable than any of the other Parts of the series, since it would be our expectation that, if the undertaking is once entered on, correspondents throughout the New England, Middle and Southern States would at once notify us that there are in their immediate neighborhood Colonial buildings of too great architectural interest to be properly omitted from a publication of the nature of that we have in mind, and intimate a willingness to aid us in the procurement of the data necessary for the preparation of the drawings. There is an abundance of good material and there are enough capable draughtsmen interested in the kind of work who could, in these days of bicycles, without imposing on us the great cost of travelling-expenses, gather the material in the rough in a very short space of time. If the undertaking could be carried out on these lines, the result, we are confident, would be found to be very well worth while and subscribers would find they had added to their libraries, at a relatively small outlay, a publication as complete in itself and quite as practical and as "well worth while" as any publication that deals with a single style. We submit the suggestion to our readers and ask from them an expression of opinion.

THE monthly report of fires and losses issued by the Boston Manufacturers' Mutual Fire Insurance Company contains a record of a fire in a seven or eight story storehouse of the Chelsea Jute Mill at Brooklyn on July 20th. This recalls a very interesting account published in these valuable reports several years ago, which we neglected to comment on at the time of its occurrence. As we now remember the details of the earlier fire, which took place, we believe, in a Rhode Island town where the public fire-service was neither large nor very effective, the fire was discovered during the night in a one-story brick warehouse, perhaps fifty by two hundred feet, with brick walls sixteen or eighteen feet high, the walls containing no windows, light and air being admitted only through the large iron doors through which teams could drive when hauling bales to or from the stock awaiting manufacture. Owing to impending tariff changes the mill had just stocked-up with an unusual supply of jute in bales, and this storehouse was filled to its capacity, that is, the bales were piled in a close heap occupying the centre of the building for its full length, but the bales at no point touched the walls of the building: on the contrary, a clear passage all around was left to enable the circulation of the horse drays. Fire was caused by spontaneous combustion, but, owing to the close packing of the bales, nothing like an open fire occurred at any time. The watchman got the mill-pumps a-work, later summoning the public fire-department, and the entire fire-extinguishing force of the neighborhood operated on the fire for more than twenty-four hours before it was considered safe to try to remove any of the jute as yet unburned. When the doors and, later, portions of the walls were opened, it was found that the whole interior space was wedged full of the swollen and still expanding fibre, and it was apparent that unless immediate relief were given the walls of the warehouse would be overthrown by internal pressure, so all hands had to work as actively in dragging out the broken bales as they had been working while pouring water on the hidden fire. It proved that combustion had started in the very centre of the pile, at the bottom, and that the actual destruction by fire was very small; but as a large section of the area of Rhode Island had to be called into use to afford space for spreading and drying the soaked fibre the expense of the fire was burdensome to the mill. The only stocks, carried in quantities, that are liable to be destructive to the containing buildings through their expansion in case of wetting are, we believe, lime, textile fibres and grain, and the danger which this property may occasion to storehouses, grain-elevators, breweries and the like is well

understood and provided against by builders and occupiers of such buildings. But we fancy that no one would have predicted in this particular case that all proper allowance for accident had not been made, and the incident proves that precautions which seem excessive may prove to be inadequate.

THE same report contains the record of another fire which, too, being unusual, bears its moral, and naturally enough it happened on premises where textile fibre is manufactured and where the air is ordinarily more or less charged with "flyings." In such rooms, nowadays, care is taken to minimize danger by removing as rapidly as possible the flyings which are inevitably created during the manufacturing process, but in the case of the Northwestern Cordage Company the means employed for clearing the atmosphere of the building very nearly proved the cause of its destruction. Fire started from an overheated pulley-journal on the second floor and was carried by a belt to the floor below, there it was sucked-in by a Sturtevant heating-blower and by means of the ordinary hot-air pipes was actually blown into every room in the building. Fortunately, the mill had been thoroughly equipped with automatic sprinklers and ninety sprinkler-heads opened at once in the different rooms and the sudden burst of fire was extinguished without the use of any further fire-apparatus.

NEXT week in Boston will take place the annual meeting of the American Association for the Advancement of Science, and, as this body celebrates at this time the semi-centennial of the organization, in its present form, it is probable that an effort will be made to have the sessions more than ordinarily attractive, and so it will be well worth the while of those of our readers within easy reach of Boston to procure a programme of the various meetings so that they may not overlook the opportunity to hear at first hand about matters that especially interest them. As the members of this Association are in many cases also members of sundry other learned bodies, it has been arranged that the annual meetings of several associations should be held at or about the same time, so that individual expenses may be minimized and a larger general attendance secured. In this way meetings will be held by the American Forestry Association, the Geological Society of America, the American Chemical Society, the Society for the Promotion of Agricultural Science, the Association of Economic Entomologists, the Botanical Club of the Association, the American Mathematical Society, the Society for the Promotion of Engineering Education, the American Folk Lore Society, the Natural Geographic Society, the Botanical Society of America, the Conference of Astronomers and Physicists and others. These meetings will be held in the buildings of the Massachusetts Institute of Technology, or in others near by, and the earliest of the minor meetings took place on Thursday of this week, while the general meetings of the larger organization will fully occupy each day and evening of the coming week. Although younger than the British Association for the Advancement of Science, the American body ranks with it amongst the great societies of the world, and many of its members are also honored associates in foreign societies. The local secretary for the meeting is Professor H. W. Tyler, Massachusetts Institute of Technology.

THERE must be a vast number of abandoned undertakings in the way of projected monuments and statues with which it was intended to perpetuate the fame of great and good, or merely noted, men, women and things, and out of the larger number there must be many which, having generally been attended by the accumulation of spontaneous or extorted contributions, have a real interest for some one, either the depository which benefits by the unclaimed deposit, the treasurer who has gradually forgotten that he ever accepted such a trust, or the contributors who, most of them, are equally forgetful of their one-time enthusiasm or the easy facileness which led them to yield to the wiles of the canvasser. It might be worth some one's while to hunt up the records of these abandoned enterprises and discover what had become of the money and whether it cannot now be made productive. Some of it may have been consumed in paying useless salaries, as was the case with the earlier contributions to the Grant Monument; some of it may have been expended in partial execution of the original project, as was the case with the Washington Monument, and other portions may have been transferred later to a stronger organization and finally used for the original purpose, as was the case with

the Robert E. Lee Monument. But we cannot help the feeling that somewhere or another, in somebody's keeping, there is in the aggregate a considerable sum of money which will never be used for its intended purpose unless some one interests himself in the matter. We are reminded of this by a case that has been decided by the Appellate Division of the Supreme Court of New York. At the death of Horace Greeley, a popular subscription to provide a statue in his honor was started, but after some three thousand dollars had been collected interest in the matter waned and subscriptions ceased to come in. Finally, after the fund had accumulated interest for fifteen or twenty years, Mr. Whitelaw Reid, the treasurer of the fund, decided to use it for its original purpose, paying from his own purse the difference between it and the sum needed to pay the sculptor, Mr. J. Q. A. Ward, for his model. The work was carried out and the statue erected in Printing House Square. But about the same time another group of men thought it was time that Greeley had a statue and, knowing of the earlier fund, undertook to secure fresh subscriptions, assuming that in some way the original fund could also be availed of, and seemingly they conveyed this impression to their sculptor, Mr. Alexander Doyle, who undertook the work and finally set up the result, a second statue of Greeley, at Broadway and Thirty-third Street, New York. Before the second statue was finished the first one appeared in place, and it was at once plain that the second undertaking was not to benefit by the original subscription. Nevertheless, Mr. Doyle, when he found there was not money enough to pay his bill, brought suit against Mr. Reid, whom he sought to make pay not only for the Ward statue but also in part for his own. The court found the plea untenable and nonsuited the plaintiff.

THE papers last week told us that the sojourners at a number of summer-resorts in the mountains of the California Coast Range had had their outing cut short by the heat, smoke and imminent danger from advancing forest fires. It seemed early in the season for such reports, but doubtless the early drought had prepared the ground for the unseasonable appearance of this annual, this perennial, misfortune. It is strange that in such an intelligent community as ours really is nothing properly effective can be devised to check the destruction of our timber land by the inroads of the lumber-king and the fire-fiend. Let us say, rather, that it would be strange if we did not all know that selfishness is the one vice that is most difficult to overcome, and our forests are being destroyed absolutely in the selfish interest of the few. It is an old precept with the plainsman to fight fire with fire, and a *Bulletin* lately issued by the Agricultural Department contains a statement which seems to suggest the possibility of setting selfishness to fighting selfishness, in the hope that if we must humor it in one class of men they may be helpful in enabling us to negative the efforts of another set of selfish men. During the long-drawn-out discussion over the framing of the Wilson tariff, and again, when the McKinley tariff was framed, the country heard a great deal about and from the Wool Growers' Association, which has its headquarters in Ohio; and we know that free wool was abolished at its behest, the difference of a cent or two in the price of a pound of wool being, as alleged, a matter of life or death to the wool-growing industry. Now it appears that forest fires, besides being caused by lumbermen and careless campers, are also caused by sheepherders who deliberately set them for the sake of improving the pasturage for their flocks. But the Department of Agriculture now declares that wool clipped from sheep that are herded amid charred stumps and bushes "becomes blackened by the charcoal dust to such an extent as to decrease the value of the wool often one cent a pound"! Now can the Wool Growers' Association afford to lose that cent per pound? and will they not stop burning their ranges and set their "pull" a-pulling to prevent lumbermen burning off their stumpage? Moreover, it appears that after a single fire in the black pine belt so thick a growth of saplings springs up amongst the fallen logs that sheep cannot be driven through it; and, again, "a fire is often followed by a dense growth of underbrush, which in itself prevents a growth of forage." Clearly the lumber supply, the rainfall, the climatic condition itself lies in the hands of the Wool Growers' Association, which, as we know, has limitless influence with the President of the United States now in office, and if they are still true to their doctrine of selfishness they may incidentally accomplish a great good, unsuspected by themselves.

HARDWOOD FLOORS.



HE selection of flooring requires intimate knowledge of the fibres, grains and colors of the various woods; even the different characteristics assumed at the various times and conditions of growth: the colors, as new lumber, sun and kiln dried, and in wearing old age; the usage to which it is to be put must be a prime factor; its price and the ease of obtaining it must not be ignored.

About a dozen families of trees give nearly all the flooring. The two hard pines (*pinus rigida* and *pinus resinosa*) known in lumber-yards as Georgia, Carolina, or Southern are more trod upon in America than any other wood. From them come the oil of turpentine and resin of commerce, by "boxing" the trees, blazing with a cup-shaped hollow at the bottom of the blaze in which the crude resin accumulates. From this the oil is distilled and the residue refined into the clear amber resin. Contrary to general belief, boxing adds to rather than detracts from the value of the wood. By extracting the sap year after year the growth is retarded, and the grain made more compact, finer and harder. Consumptives seek the piney woods to gain the delicious aroma arising partly from the increased ozone, as well as delight in the dry pine straw upon which to ramble and to loiter — the laziest, most delightful of occupations.

Boards for flooring should be selected entirely from the hearts of old trees. This will cost when laid about five cents to the square foot; it is of a light straw-color and takes on an excellent polish, is hard, but elastic, and makes a good floor for dancing; its unfortunate feature is its proneness to sliver; this can largely be obviated by the way in which it is laid.

White-wood or bass (*tilia glabra* of Europe and *tilia Americana* of this country) and ash (*fraxinus excelsior* of Europe and *fraxinus Americana*) cost about the same as the above, but neither is worth considering. The wood is soft, is not pretty, slivers readily, and does not keep its shape under atmospheric changes.

Oak (*quercus alba*, *q. rubra* and *q. vivens*) markets at about the same figure, and either one of the three mentioned varieties makes an excellent floor. The red oaks, unfortunately, are the ones generally selected. The wood from them makes the homeliest and roughest of the oak floors; the grain is the coarsest, and they stand moisture least well. However, remember that we are comparing oak with oak, and no oak floor is to be lightly condemned. The so-called Spanish oak is the best of the red oaks. It grows in all the lower Allegheny regions. The live-oaks and post-oaks make light-colored, hard, easily-polished timber. But the white oak stands head and shoulders above all the others. It is the lightest in color, hardest, grained closest, and is susceptible of the highest polish; from this comes the finest of the old English black-oak furniture: it withstands alike all climates.

Birch (*betula alba* and *b. papyracea*) makes an entirely satisfactory floor for dancing, as well as for kindred uses. It is easily brought to a smooth surface and a fine polish, is of a rich amber color of an even shade, and, in addition, has that rare elasticity and resiliency that make it alike delightful for walking and dancing. It costs about ten cents laid, and is in no way a disappointment to those using it.

What is said of birch applies equally well to hard maple (*acer rubrum* and *a. dasycarpum*), both the white and red varieties, the white being that chosen for floors, it being the lightest colored of the wood so used. It is very hard, takes readily a fine polish; the boards are not liable to warp, but, unfortunately, require the very closest care in the drying to prevent shrinkage when laid. It is lasting, and is but little affected by water. Only beech, hickory and white oak approach it in lightness of color.

Hickory (*carya alba c. glabra* and *c. amara*) has too sterling qualities, generally appreciated, to need detailed discussion of its intrinsic worth, yet it is sadly neglected when the question of flooring is under consideration; perhaps that is due to the difficulty with which it is laid. It is an open-grain wood, but takes polish with ease. From the various trees of the *carya alba* is obtained the hickory nuts of commerce; while the *carya glabra* yield the so-called pig nuts, and the *carya amara* gives only a small bitter nut that is all but worthless.

Beech (*fagus sylvatica* of Europe and *f. ferruginea* of America) makes almost an ideal floor, light-colored and hard, and has the rare quality of wearing smoother with age; at times it is found beautifully bird's-eyed. In the Southern States it grows in the greatest profusion in the swamps and lower woods, but is unappreciated, only enough being preserved for use in making plane-stocks and other tools requiring a hard, durable wood that does not shrink, warp or split. It could be laid for ten cents. And along with it goes apple (*pyrus malus*), which polishes to a rich, delicate amber color; the cost is about the same as beech, but the apple-wood has the tremendous disadvantage of not being obtainable in large boards.

The cherry-woods, especially the *prunus Pennsylvanica* (red) and the *p. serotina* (black), are esteemed highly in cabinet-making, and are equally beautiful and desirable for flooring. The garden cherry, *p. cerasus*, is often used as a cheaper substitute, but can be readily detected by the odor and taste as well as by the general appearance. This is not an ideal wood for dancing floors, but for dining-rooms it

cannot be excelled. Both the red and black varieties are beautifully grained, and often can be found curled, and even bird's-eyed; neither of these could be laid for less than fifteen to eighteen cents a foot. To properly select the boards, and lay the body of the straight-grained and the border of the curled, nothing could make a prettier floor.

The walnuts are about the same price and wearing value. The black walnuts (*juglans nigra* of America and *j. regia* of Europe) are the ones best known to cabinet-makers, they being also the hardest and most durable of them, as well as of the richest and darkest colors, that being too well known to require comment. The lighter walnuts, among them the butternuts, have many admirable qualities, and by some persons are chosen for that reason. But of course the general appearance and desirability of the real black walnut cannot be imitated, certainly not excelled, by any wood except mahogany (*swietenia mahogani*), which, being about one dollar a foot, is excluded from the consideration of most persons, and so comment would be needless — except to say that it lacks that elasticity and resiliency so desirable in a floor for dancing.

Now it is clear from the above that the uses, the furnishing and the window-space of a room should determine the kind of wood to be used.

The laying requires not only a good carpenter but an expert judge of woods, and of the individual boards, because only by carefully selecting and placing like planks can we get a permanently even surface. Suppose a plank of heart and one of sap should be placed side by side: no matter what the wood, when a rainy season may come the sap will swell more and rise above the heart. Even when they come from like relative positions in two like trees their texture may differ so widely as to make them undesirable companions.

In spite of the nicest workmanship and the best judgment in selecting, some inequalities of surface will be present till removed by the most thorough sand-papering. This should be done with enough care to avoid scratching; then comes the polishing.

It must be remembered that not a drop of water has touched the wood since it left the saw-mill, and none must touch it until demanded by soiling incidental to daily use; or, more strictly speaking, none should ever get nearer the wood than the polishing covering it. After the floor is perfectly smooth and free from all stains or dust spots the following mixture should be applied hot: four ounces of English resin, twelve ounces paraffine, one gallon turpentine. This mixture will make a solution only under heat, and should be applied to the floor as hot as possible with a cloth or brush, or, better still, a felt applicator. After standing a few hours, it should be briskly rubbed with a felt or woollen rubber, and is then ready for use. This protects the wood from water, or whatever else may fall upon it, and also fills-in the pores, thus preventing shrinking, which is a very important factor in keeping a smooth floor.

When the floor becomes soiled a warm soapsuds should be the only agent used in cleansing it, then, after allowing it to air well, re-apply the above polish. Ordinarily it should be cleaned of dust each day by dry, soft cloths, and gone over with a rubber once a week.

No oil or other grease should, under any circumstances, be put on a floor, no matter what the wood, or what the conditions.

EDGAR J. SPRATLING, B. Sc., M. D.

THE "NATIONS" OF ANTWERP.¹ — II.

NAPOLEON, appreciating the wisdom of the early traders who used Antwerp as a port of entry, and realizing its importance in time of war, determined to increase its usefulness by improving the docks and deepening the river. He began this great work and saw the verification of his anticipations, while subsequent generations have shown their approval by continuing the work as begun without materially modifying his plans.

The general scheme provides for a continuous dock along the entire city front. It is substantially built of stone and covered with fireproof sheds. But even these facilities are limited, so they have been supplemented by the construction of a large number of basins. These are connected with the river by means of canals through which the smaller craft are taken at a suitable tide and then locked in. The basins are specially designed for certain lines of merchandise and are consequently provided with all the appliances needed for handling such cargoes.

Along the dock extends a series of parallel railroad tracks, intersected occasionally by transverse tracks with a turn-table at each crossing, making it possible, however crowded the tracks may be, to bring a car to the side of a vessel at whatever place at the dock she may lie. Between the rails of the track nearest the face of the dock there runs a water-main, kept continually charged with water at high pressure, and every few yards a water-plug is provided. Hydraulic cranes and hoisting-engines are mounted on movable cars, and whenever it is desired to unload a vessel one of these hoisting devices is rolled into a convenient position by her side, an attachment made to the nearest water-plug, and any one knowing how to open and shut the appropriate valves can lower the heavy cable into the ship's hold and at a given signal lift a weight of tons, if need be, swing it clear of her side, and deposit the load on the dock or on a car standing conveniently near. Capstans at frequent intervals,

¹ A paper by J. Howard Gore, PH. D., Columbian University, published in the Bulletin of the United States Department of Labor. Continued from No. 1181, page 55.

driven by turbine-wheels fed from these same pipes, serve as an excellent and ever-ready motive-power. If it is desired to bring a vessel up to the dock or to draw a car along the track, it is only necessary to take the free end of the attached rope, make a few turns around the head of the capstan, and press the lever at the side; the capstan revolves, winds up the rope as slowly or as rapidly as may be wished, and the great vessel swings into place or the train of cars is set in motion. The great facilities here suggested for handling freight and shipping are augmented by natural advantages and felicity of position. Situated somewhat near the centre-of-gravity of the great Continent of Europe, lying upon a river whose channel is readily kept deep and clear, and having a tide sufficient to prevent ice from forming or to carry it out to sea if formed, and in close connection with the capitals, commercial marts and manufacturing cities of Europe, it has not been difficult for Antwerp to retain and even increase its importance as a port of entry.

In addition to these advantages, Belgian laws are favorable to the importer who expects to find sale for his goods in neighboring countries, especially in the length of time dutiable articles are permitted to remain in bonded warehouses, and the ease with which they can be removed for transportation across the boundary for delivery to foreign purchasers without the payment of duty to Belgium.

The large amount of shipping thus enticed to Antwerp would prove a source of embarrassment if vessels were granted unlimited time in which to discharge; therefore hard and fast rules are in force plainly stating to the hour the length of time a ship may remain at the dock or in a basin, and for each hour in excess of the time permitted a double charge is made. To insure the unloading of a vessel within the allotted time it is necessary that all should be in readiness by the time of arrival, that a sufficient number of men be available, and that they possess the requisite skill for handling the cargo in question. We have seen that the nations are skilful and that they acknowledge their liability to faithfully perform every contract entered upon. One of the most important items in the contract for unloading or loading is that it be done on time. This is the celerity referred to.

When a vessel passes Flushing, going in, its coming is telegraphed to the consignee in Antwerp. He at once secures from the captain of the port a place at the dock, or in the basin, and then calls upon the appropriate nation, telling its dean the size of the ship and the disposition to be made of the cargo. If the conditions are normal the employer knows from the tariff of prices what the charges will be, and consequently wastes no time in useless bartering. The time at which the ship will reach the dock is easily determined from the conditions of tide and weather, and the consignee rests satisfied that at the earliest possible moment the work of unloading will begin and will continue with the minimum of interruption until the task is done.

It is interesting to watch, for example, a Russian steamer laden with grain come into Antwerp. Even before the last line has been made fast members of the Valkeniers nation are on board, and if the cargo in part or in whole is destined for the interior, as many canal boats as can touch the steamer will be at once tied to her and the work of unloading will begin. It looks as though boats manned by pirates had risen from the sea and the steamer's crew had delivered up the cargo without a protest. Vessels of 10,000 tons can be unloaded in seventy-two hours, and as the members frequently work eighteen hours a day this means only four days. To one acquainted with the dilatoriness of Belgian workmen this will appear as a marvel of celerity.

It will readily be seen that this amount of work could not be done in the given time by the largest nation, even if it put its entire membership upon the job. The nations, therefore, are compelled to call in extra workmen. More than thirty years ago they realized that if in a busy season they should increase their membership sufficiently to enable each to do all the work that legitimately fell to them, there would be during the dull season too many among whom the meagre earnings would have to be divided. To keep this unfortunate condition from arising, they concluded to supplement their working force by hiring laborers, instead of adding to their membership, whenever the demands were so great as to require an extra force. They thus became employers, or, rather, contractors, and each member is now a foreman or overseer whenever there is a rush of work.

We now find the nations, as a rule, a body of contractors, but each member spends his time as profitably as a foreman as he could formerly as an active workman. The relation between supply and demand can be better adjusted now, because a nation can increase or diminish its force of laborers to meet the exigencies of each day. The laborers must take their chances in finding employment, and are in the main obliged to look to the nations for work. Inasmuch as the nations employ only when the amount of work is more than they can handle, the workmen are simply a sort of reserve force. They can never become members of a nation because of a lack of capital, and if a man becomes an habitual employé of one nation he will be valuable to that nation, but hardly so much so to another; so that while he specializes himself he narrows his opportunities for securing employment. Then, again, the thirty or forty members of a nation, with their individual preferences and prejudices, may drop their workmen at any time and take others into their service. It is, therefore, questionable if the nations benefit the laborer as much as they benefit the shipper. The latter can always be sure of finding a contractor to load or unload his vessel, and that the price will be just, but no laborer can be sure of being called upon to assist in the work.

When, however, a man is employed he receives good wages. A freighter receives from 70 to 80 cents per day, and 10 cents an hour for extra work; those who work on the docks receive from 55 to 70 cents per day, while the stowers receive \$1.60 per day. But the work is hard and the taskmaster is one of a joint-stock company, whose profits will depend in part upon the amount of work which he can get out of the men under him.

Perhaps the best effect of this system is the practical immunity which it insures against strikes—and strikes among longshoremen are always exceedingly demoralizing, since they bring about a congested condition of the shipping which started before the strike began and can not be deflected *en route*. The way in which this result is achieved is practically as follows: The members of the nations having capital as well as time invested cannot afford to endure enforced idleness, so, even if they offered lower wages than the workmen could take, they themselves must work all the harder to keep their contract as well as to secure dividends as members. Then, again, if a nation should refuse to take a job that legitimately fell to it, other workmen would organize a nation and go into business with the assurance of receiving in perpetuity the work of the shipper in question. There is a due appreciation, or perhaps even an exaggerated appreciation, in the minds of the people of Antwerp as to the earnings of the nations, and the only deterrent to the enlargement of the number is the fact that the present number covers all the lines of merchandise that come into this port. As said before, it is the character of the cargos that fixes the number of nations, and not the amount of the shipping. Consequently if a nation should refuse to undertake a certain piece of work it would by so doing serve notice that it would no longer work in that line. The gap thus made would be promptly filled by the organization of a new nation. As the number of nations has remained approximately the same for half a century, it can be seen that the inclination to strike has not been very strong among the dock laborers. In avoiding strikes the nations are more efficient than individual employers could be, for each employer of this class would have under him foremen who might be benefited by an increase of wages, even if they held out for some days. They would lose nothing more than their time, and, not being specially interested in the welfare of their employer, they would not always strive to make the workmen so satisfied with their work and wages that a demand for improved conditions would not suggest itself. As already stated, the foremen in the nations are the members, so that the interest of the employer is their interest, and, coming close to the workmen, they can avoid in time dangers which might otherwise culminate in a strike.

The nations work at least one injury upon the workmen in their employ. A large proportion of the wives of the members of the nations keep small restaurants, and the workmen feel it incumbent upon themselves to patronize the wives of their employers. In their ready yielding to this conviction they doubtless spend more of their wages in drink than they otherwise would do. From the relations here described as existing between the laborer and the nation it will be seen that many of the problems as to the relations between employer and employé are present, the only difference being that they are forced down upon a somewhat lower plane, for the nation's laborer occupies about the same relative position to the nation that the nations bear to the employer who gives them a contract. There are here, one may say, three classes, with the day-laborer occupying the lowest and the nations coming in an intermediate position between him and the real employer, so that the questions which the employer would ordinarily have to settle with the workmen here fall to the nation. If the employer has not been elevated by this intersection of the nations the laborers must be depressed.

The benefits of union were so apparent in the organization of the nations that a little more than thirty years ago a Bond of Nations was suggested in order to resist the encroachment of the Compagnie des Docks, Entrepôts et Magasins généraux d'Anvers. The union thus formed was only temporary and included only nineteen nations, but, judging from the rules to which they subscribed, they were intensely in earnest in their determination to protect themselves. It appears that the company referred to sought to obtain control over all the docks and basins of Antwerp, to load and unload vessels, and to store goods that were in transit. It proposed to treat directly with the shipper or merchant, but graciously agreed to employ the nations as far as might lie in its power. As this company would possess certain advantages in being amenable to the laws of the land at least, it looked as though it might take the place of the nations in the making of contracts with the shippers. It did not suit the nations to be mere employés or go-betweens, so they signed a compact to the effect that they would do no work for this company, haul goods consigned to it either to or from the docks, nor hire their horses and wagons to any party who would in any way work for it. To show that they meant what they said, the second article of their compact was: "Any of the undersigned nations that may violate the agreement here reached shall for each offence pay the sum of \$3,000, which sum shall be divided among the other parties to this contract." It was also specified that no nation could dodge the penalty by changing its functions or constitution in such a way as to permit any of its members to aid the company against which they were making war. The contract was very explicit in stating what would constitute an offence, as well as specifying the way in which it might be annulled. The outcome of this temporary union was the death of the company in so far as concerned its encroachment upon the

functions of the nations. By this struggle all the nations were benefited—those without the bond as well as those within.

The Franco-Prussian war caused an increased activity in the Antwerp shipping, and also brought about no little irregularity in the movement of freight-cars, so that it was necessary when a vessel was discharged to have some responsible party to look after the goods, if they were destined for the interior, until cars should be forthcoming. The demands upon the nations increased so rapidly that the usual observance of lines of merchandise was in danger of being disregarded, with the consequent confusion and abuse as to charges, and the organization of new nations was imminent. The members of the loose bond referred to, remembering the advantages that came to them from their union, began to agitate the advisability of its renewal. The assigned reasons for the new bond were: To agree upon a general tariff of charges; to support one another in the abolition of the dram-giving to the workmen with a substituting of increased wages therefor; and to prepare for the nations' participation in the royal festival of 1873.

During the war referred to, in the haste to secure transportation into the interior, it was by no means unusual to offer a gratuity to the railroad official who would place a car at the disposal of the shipper. This habit grew until it became a fixed charge of \$1 for each car supplied. The refusal to pay this sum suggested all sorts of excuses for delays in furnishing cars, so that the impatient shipper paid this levy rather than be subjected to costly delays. The bond at once determined to have this species of blackmail suppressed. It was a large and dangerous undertaking. So many of the railroad

work and a just appreciation of their importance. This was rightly construed as a sufficient hint to all subordinates to facilitate rather than impede the work they had in hand.

Although at this time only eighteen nations were in the bond, all enjoyed the benefits which resulted from the vigorous stand that it took. This is also true of subsequent reforms which it brought about, and in no case has it sought to secure special privileges or to coerce other nations to join. The union during the first few years of its existence was somewhat informal, having for its chief purpose the elimination of certain abuses, but when the results gave such convincing evidence of the benefits to be derived from concerted action it drew up in 1877 a set of rules which, with a few minor changes, is still in force. The rules provide that no nation can accept a person as client who had formerly employed another nation unless the latter had been dropped for good reasons, and then the charges must be no lower than the rates demanded by the nation dropped; that no commission exceeding five per cent shall be paid for securing contracts; that each nation shall file with the officers of the bond a list of its clients and keep the list corrected to date; that a nation may regard as a client any one for whom it has worked for three months, and if two or more nations work for the same house but along different lines each may regard this house as a client, but neither can enter into competition with another; that members of the bond may compete with nations that are not members; that when a merchant leaves a nation belonging to the bond and engages an outside nation, after one month the merchant may be regarded as "in competition," and may be taken by any nation that can secure his trade; that all



The Plaza, Cholula, Mexico.

officials were known to be sharers in this bounty that any attempt to remove it would arouse their ill-will, and to have the ill-will of these officials would seriously embarrass the nations in their work of loading goods upon the cars and thus detract from their profits. Then, too, these officials, belonging to the government, had the sympathy of the custom-house officers, who at once took up the fight and strove to injure the nations by opening the custom-house as late as possible in the morning and closing at the earliest minute allowed, thereby shortening the day for the nations and frequently causing them to return to finish some task that could have been done the evening before if a few minutes more had been allowed. The bond appealed for relief to the local chamber of commerce, but without effect. It then presented a memorial to the minister of railroads, fortified it with specific charges of abuse, and showed the importance of correcting these evils by citing the opinion that the chamber of commerce had expressed as to the value of the nations in contributing to the commercial prosperity of Antwerp. Fortunately the parade of the nations on the occasion of the royal festival mentioned was so imposing, with its score upon score of great freight-wagons drawn by hundreds of magnificent horses and manned by the entire membership of the nations, that the minister at once looked into the merits of their case, with the result that a number of guilty officials were removed and all abettors were transferred to other posts. While the ministry issued no special instructions favorable to the nations, it, by the act just mentioned, showed a most hearty interest in their

disputes between members of the bond shall be settled by arbitration, and in reaching a decision the arbitrators may call for the books and accounts of the contending nations if they be needed; and that each nation shall pay a monthly assessment of \$5. The constitution here outlined was regarded as so just and its provisions so reasonable that no fear was felt that it would be violated. It was not engrossed, but written on a single sheet, and signed by Wyngaardnatie, Noordnatie, Werf-en Vlasnatie, Valkeniersnatie, Guldenhoeknatie, Werknatie, Hesseennatie, Molenbergnatie, Groen-Roknatie, Vlayenatie, Katoennatie, Scheldenatie, Romeinnatie, Tabaknatie, Kraannatie, Zilver-smidsnatie, Ruysnatie, and Rijnnatie.

The bond, duly impressed with the spirit of the "golden rule," did not find it necessary to meet frequently in order to see that each member was keeping his pledge, or if it did meet no action was taken worthy of notice, for the record-book contains but little beyond the simple entries of receipts and expenditures. Usually these expenditures were for charity or contributions to some public cause, as when it gave \$70 toward the Rubens celebration, \$100 to the relief of the victims of the Corvilain explosion, \$100 to the laborers' fund of Hamburg during its cholera epidemic, and frequent contributions to the Sunday rest fund. However, a few years later, when the impulse given to the commerce of Antwerp by the Franco-Prussian war had expended itself, the city found itself with too many nations. In order to find work those outside of the bond resorted to suicidal reductions in the schedule of charges, and the members of the bond

became so apprehensive as to their safety that they decided to make the bond more compact, and to that end resolved to hold monthly meetings. Each member then paid 10 cents as monthly dues, and was fined 40 cents each time he was absent and 10 cents if late. In the new rules nothing was said as to the purpose of these monthly meetings, and it is only by reading the minutes that one can find out just what occupied their time. Here we see a resolution requesting the chief of the custom-house to let the summer hours of opening and closing the warehouses begin on March 15th instead of April 1st; also a copy of a letter addressed to the inspector of the railroad-station concerning improvements in the loading of cars, and later another letter to the same person about the condition of the roadways in the freight-sheds. Now that the bond found that its voice was listened to, it began to look about to see what improvements it might with reason demand. Without going into details, they may be included under the following heads: New regulations regarding the storing of goods in transit; better conditions for the customs employees; a lengthening of the working hours; betterment of the streets and bridges; permission to work at night; lighting of the docks at night; a revision of the method of inspecting goods on the frontier, and an enlargement of the police force on the docks.

A mere glance at the results named above will show that not only the nations in the bond, but the other nations as well, and laborers at large, were benefited by the bond's achievements. It is a justifiable boast of the bond that it has labored as hard for the general welfare as for its own profit.

During the year 1883 the bond came into open conflict with the city council in a cause that seemed to show that it did not wish organized labor or improved machinery to compete with the existing nations. A company had applied for a concession to erect and maintain grain-elevators upon the docks. Such a concession, if granted, would have thrown several nations completely out of work. They therefore protested, and, knowing that several members of the city council were favorable to this concession, they made their fears publicly known, and in a short time a petition, bearing 25,000 signatures, was presented to the council asking that the privilege demanded be not granted. This circumstance, together with the fact that the privilege was not accorded, is mentioned merely to show what a strong hold the nations have upon the people of Antwerp and how the latter are ever ready to protect the interests and guard the welfare of the former.

The nations are looked upon as constituting one of the unique features of Antwerp, and no great festival is complete without their assistance. There, as in this country, a parade is an essential feature, and the parade of the nations is characteristic and businesslike, for they have in line, besides the sprinkling of brass bands, their huge freight-wagons, drawn by their finest horses. Each nation has one wagon for each line of merchandise which it handles, and the wagon is loaded with the same. In the parade that the writer witnessed the Ruysnatie headed the procession with one wagon laden with flour from England, one with Belgian biscuits, one with beef-extract, and another with empty jars from England. The Katoenatie followed with wagons bearing wool from Buenos Ayres, rice hulled in Antwerp, refined sugar from Belgium, and Manila tobacco. Noticeable in the line was tea from China, fibre from the Dutch Indies, turpentine from America, palm-trees from the Congo, oats from Russia, oil from Germany, guano from Peru, nitrates from Chile, elephant tusks from Africa, canned meat from Chicago, dried skins from Brazil, and in fact nearly every conceivable article of export from the countries of the world. Seventy wagons were in the procession, and the combined value of the loads they carried was estimated to be \$100,000. These goods were cheerfully loaned by the consignees, who knew that each article would be returned in the same condition in which it was taken. They also introduced a number of floats, carrying either the implements of work or an object-lesson of the way in which their work is accomplished; for instance, the Buildragersnatie, which is the recognized official weighing and measuring corps of Antwerp, had a large platform, built upon and over a wagon, on which men were industriously measuring and weighing grain. All the men were dressed in their workaday clothes, with perhaps a new blouse for the occasion. It was interesting to note that nothing incongruous or useless was included just to swell the column, nor did great gaps exist in the ranks to lengthen out the time of passing. The whole parade was conducted on purely practical lines and no theatrical effects were attempted. This procession would impress upon one, more than figures or visiting docks, the importance of Antwerp's shipping and the carrying function of Belgium.

From the most reliable statistics obtainable at the time of the inquiry it was learned that the total membership of the nations was 1,943 and the combined capital \$2,934,000.

It is not the purpose of this paper to plead for the establishment in this country of organizations similar to the nations. The arguments for or against such a step must be found in the description given of the nations, their historic development, the circumstances which surrounded their origin and growth, and the influence they have exerted upon the commercial life and activities around them. On the one hand, it will be noticed that they play a most important part in preserving for Antwerp its commercial prosperity; that they have a firm hold upon the affection and esteem of their employers, and that they contribute largely toward eliminating dangerous and annoying labor troubles; but, on the other hand, it will be observed that, although

starting with the idea of cooperation in work and sharing of profits, they passed into organizations of employers, and now have formed a union for the protection and furtherance of self-interests. This union of nations has continued practically unchanged for twenty-five years, and as it has at no time come into conflict with its employers, it may be assumed that it is now working in perfect harmony with the interests of all concerned.

The accumulation of the facts above given has been a labor of considerable moment. The nations being secret organizations, few people know much about their rules or methods, and not one in a hundred, when they see the shining brass initials on the harnesses of the great draught-horses, know that they belong to a nation, or if that much is known they could not give the nation's name. In the present investigation the writer consulted shippers and shipowners, officers of the city and of the docks, and laborers and students of labor questions.

SELECTION OF ENGLISH GOVERNMENT ARCHITECTS.



WE are glad to learn that the Government has taken an important decision with regard to the new public offices. For years past, as the public knows too well, two of the most costly sites in London have been lying wholly or partially vacant and idle, waiting till a Chancellor of the Exchequer should be found courageous enough to grapple

with the crying needs of the situation. We are not here concerned with the heavy pecuniary loss that has fallen upon the country through this delay; it is enough that Sir Michael Hicks-Beach this year proposed and easily obtained the necessary vote for the buildings. It remained to consider how the architects should be selected. There were three available modes—open competition, limited competition, and direct selection by the Government. Of the first we had a sufficiently unsatisfactory instance in the case of the new Admiralty; the second was tried, with a result that was only moderately successful, in regard to the completion of the South Kensington Museum; and with these two recent precedents before it, the Government is not to be blamed if it decided to take the matter boldly into its own hands and to face the responsibility of choosing its own architects. It wisely determined, however, to obtain the best professional advice, and accordingly a letter was written to the Royal Institute of British Architects asking for the help of that body. The Council was asked to furnish a list of gentlemen, freely chosen from the whole of the United Kingdom, who in their opinion would be the most competent to erect important public buildings, Classical in character and design, the material to be used being exclusively Portland stone. The Council of the Institute readily fell in with the wishes of the Government, and after due deliberation sent in a list of eight names of architects, all of whom had given evidence of ability in this particular line. Then the matter was considered somewhat closely by a committee of the Cabinet, and the choice has finally fallen upon Mr. Young, a Scottish architect, for the new War Office to be built on the Carrington House site in Whitehall, and upon Mr. J. M. Brydon for the combined offices to be built on the Parliament Street site.

These are interesting appointments, which lead us to hope that within a few years London will be enriched by two really good public buildings. The two architects are, indeed, not well known to the London public, but we are not sure that that is any disadvantage to them. Mr. Young is greatly admired for what he has done at Glasgow and elsewhere, and especially for the way in which he completed Lord Wemyss's beautiful house at Gosford, near Edinburgh, the original designs for which were drawn, if we recollect aright, by the brothers Adam a century ago. It will be generally agreed that if Mr. Young can build us a War Office as the brothers Adam would have built it he will deserve a large measure of our gratitude. Mr. Brydon, two drawings by whom are in the present Academy Exhibition, has done important work at Bath and elsewhere, and his reputation both for originality and knowledge stands high, especially with the younger men of his profession. The two architects have now a magnificent opportunity. Let us hope that they will not throw it away, and that they will show that the improvement in English architecture which, as everybody admits, has taken place during the last thirty years, is not confined to the domestic branch.

In one respect, it should be remarked, the Government has limited their freedom. We are not likely to have a repetition of the blunder of the Foreign Office and the Law Courts, the internal planning of which was the work of men who had no practical experience of the day-by-day requirements of such buildings. It is a stipulation that the internal planning of the buildings, in such matters as the grouping of rooms, their height, dimensions, etc., shall be arranged in conjunction with the Office of Works. For this purpose the First Commissioner has been able to retain the services of Sir John Taylor, whose experience in these matters is unrivalled. He has reached the ordinary age limit, and would naturally have retired about this time, but we understand that the Treasury has exercised the power which it holds in reserve in the case of specially useful public servants, and has induced him to remain as adviser to the First Commissioner for this one purpose. On the whole, this is a wise decision. Usually it is doubtless a good rule to give your architect a free hand, but an architect, if he is a man of sense, ought to have no difficulty in working with a man who has an exact knowledge of what is practically required in a building of great complexity such as these new

offices must necessarily be. It remains to express the hope that the matter will now proceed without further delay. The ground ought to be completely cleared by the end of the year, and by that time, or very soon afterwards, the architects should be ready to begin. — *London Times*.

A WINDOW PLUNGES NATIONS INTO WAR.

WE find this gossip anecdote, which with its *verbatim* conversations is quite worthy of modern journalism, in the *Illustrated Carpenter and Builder*, a journal not given to crediting to original sources the matter it publishes, consequently, we cannot say whence the tale is drawn.

"The war of 1688, so fatal to France, was occasioned (says M. le Duc de St. Simon) by a paltry dispute, about a window, between Louis XIV and Louvois, his Minister of War, which showed the character of the monarch and the minister so clearly that he felt it to be his duty to give a correct account of so strange a cause for war. Louvois, on the death of Colbert, was appointed Superintendent of Public Buildings. The small Trianon de Porcelaine, built originally for Madame De Montespan, displeased the King, who rejoiced in nothing but palaces, and amused himself in building them. He possessed a very correct eye for proportion, regularity, and symmetry, but for pure taste he possessed none. In rebuilding this palace, when it had scarcely risen above the level of the ground, the King espied a defect in the arrangement of one of the windows of the ground-floor story. Louvois, who was by nature surly and so spoiled as scarcely to receive any rebuke, even from his royal master, disputed the point forcibly, and maintained that the proportions of the window were correct. The King turned upon his heel and walked away to another part of the building. The next day he met Le Notre, the architect, whose taste in ornamental gardening had embellished Versailles, St. Cloud, Chantilly, the Tuileries, Greenwich, Windsor, St. James's, etc., and who had been rewarded by his sovereign with riches, knighthood, and nobility, and by the verse of the poet of gardens, Delille. The modern Alexander demanded of the Gallic Dinocrates whether he had been at Trianon. The architect replied that he had not. The King explained how he had been offended, and desired him to see the peccant window. The next day the same question and the same answer, and the following day similar repetitions. The King plainly saw that Le Notre was equally afraid to discover wrong in royalty as to blame the powerful minister; Louis became angry, ordered the hesitating architect to be at Trianon on the morrow to attend him and Louvois. Le Notre could no longer parry the royal thrust; the King met them both, as appointed, at the new building, and his first inquiry was concerning the window. The architect said nothing, the King commanded him to measure and try it by line and square, and say how he found it. While he was thus occupied, Louvois, incensed at the anticipated verification of the King's correctness, grumbled aloud and angrily maintained that the window corresponded in every respect with the others. When the examination was finished he asked Le Notre how it was, who hesitated. The King flew into a passion, and commanded the stammering architect to speak plainly, which he did, by avowing the King to be right and the window defective. He had scarcely finished when the King turned to Louvois, told him to give up his obstinacy; that the window was all awry and must be rebuilt — when at this time the building should have been finished — and rebuked him sharply. Louvois, incensed at this sally in the presence of courtiers, workmen, and servants, went home in a furious rage. There he found St. Fouange, Villeneuf, the Chevalier de Nogent, the two Tilladets, and other intimate friends, who were alarmed at seeing the Minister in such a state. "It is done!" he exclaimed; "I have lost the King's favor for a paltry window. I have no other remedy than a war that will draw him away from his buildings and render me necessary; and, faith, he shall have it." In a few months this vile threat was accomplished, and, in spite of the King and other Powers, he involved his country in a general war, fatal and disgraceful to France at the end, although distinguished by many successful and gallant actions in its course, and which, perhaps, conducted to the success of the Prince of Orange in accomplishing the glorious revolution of 1688, and all through a quarrel about a French window."



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

CLUB-HOUSE OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS, 57TH ST., NEW YORK, N. Y. MR. C. L. W. EIDLITZ, ARCHITECT, NEW YORK, N. Y.

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

THE GREENWICH SAVINGS-BANK, SIXTH AVE. AND 16TH ST., NEW YORK, N. Y. MR. R. W. GIBSON, ARCHITECT, NEW YORK, N. Y.

The building shown at the rear of the bank is the Church of St. François Xavier.

INTERIOR OF THE SAME BANK.

HOUSE OF JOHN B. SHAPLEIGH, ESQ., ST. LOUIS, MO. MR. E. A. MANNY, ARCHITECT, ST. LOUIS, MO.

HOUSE OF E. STARR SANFORD, ESQ., DANBURY, CONN. MR. E. G. W. DIETRICH, ARCHITECT, NEW YORK, N. Y.

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

MONUMENT TO ALPHONSE GENT, AVIGNON, FRANCE. M. GUIMINEL, ARCHITECT.

This plate is copied from *La Construction Moderne*.

AN OLD PHILADELPHIA DOORWAY. SKETCHED BY MR. J. D. FROMM, ARCHITECTURAL DEPARTMENT, UNIVERSITY OF PENNSYLVANIA.

[Additional Illustrations in the International Edition.]

DWELLING-HOUSE, NO. 13 RAUCHSTRASSE, BERLIN, PRUSSIA. HERR BODO EBHARD, ARCHITECT.

[Gelatin Print.]

MEMORIAL CHAPEL IN THE RUE JEAN GOUJON, PARIS, FRANCE. M. A. GUILBERT, ARCHITECT.

A CHAPEL is to be erected on the site of the Charity Bazaar, in the Rue Jean Goujon, Paris, that was burned in May, 1897, with disastrous loss of life among fashionable people, while the bazaar was in progress. The new chapel is intended as a memorial to the victims of the fire.

The object of the monument being the glorification of the martyrs to the cause of charity, says *The Builder*, of London, from which this plate is copied, the desire of the architect was to set aside all expression of grief in the design or appearance of the building, and above all to produce a monument of hope and consolation for the bereaved families, and to symbolize, by the style of architecture adopted, the beauty and charm of the errand of mercy which was being accomplished by the women of the French nobility when overtaken by the fatal catastrophe. Continuing his idea of glorification and consolation, the architect has designed the crypt and the lower portion of the chapel in a somewhat funereal style, the tone of the black marble relieved here and there with white, which decorates the lower portion of the chapel, being in keeping with the spirit of this idea of grief mingled with consolation, the consolation and glorification becoming expressed as the decoration becomes more and more rich and brilliant as it rises, until it terminates in a lofty dome full of light and painted in brilliant colors.

The whole of the building is constructed of Larrys-stone, coming from the Yonne Department, the same stone with which the Galliera Museum is built, whose fine and hard texture allows a beautiful finish. The large columns on the exterior and in the interior will be formed of Sipolin marble, a broadly veined white marble coming from the Swiss quarries. The small columns of the interior will be formed of a costly black marble coming from the Pyrenees.

The whole of the interior will be finely decorated with sculpture and mosaic-work, but the various artists for this work have not yet been decided upon. Behind the altarpiece, which will be of clever and artistic design, will stand a figure of the Virgin Mary in bronze and over sixteen feet high. The Stations of the Cross will be tastefully decorated, but the greater portion of the decoration will be of staff, for it is feared that the estimated amount of 800,000 francs set aside for the monument will not allow for stone or marble decoration. The various portions of the interior decoration of black marble will be relieved here and there with rich ornaments of bronze.

The architect is M. A. Guilbert, Architect to the Government and Inspector of Historical Monuments. The monument will take about two years to complete.

PRINCIPAL ENTRANCE: GLASGOW ART GALLERY, GLASGOW, SCOTLAND. MESSRS J. W. SIMPSON & E. J. M. ALLEN, ARCHITECTS.

This plate is copied from the *Building News*.

NEW STATION OF THE ORLÉANS RAILROAD, QUAI D'ORSAY, PARIS, FRANCE. M. LALOUX, ARCHITECT.

This plate is copied from *L'Architecture*.

THE ENTRANCE: MORLEY HOUSE, ST. MARGARET'S BAY, DOVER, ENG. MR. G. D. STEVENSON, ARCHITECT.

COMMUNICATIONS

[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.]

A QUESTION OF COMMISSION.

August 12, 1898.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Would you please define for me the rights of an architect regarding commission on a building in which his appointment was simply a formal notice that he was appointed architect (after a competition)?

Is he entitled to a commission on pews, gas-fixtures, steam-heating plant, memorial windows and other fixtures on which owner may have given order without consulting him?

Respectfully yours, SUBSCRIBER.

[Yes. "The architect bases his professional charge upon the entire cost to the owner of the building, when completed."—EDS. AMERICAN ARCHITECT.]

NOTES AND CLIPPINGS

CHURCH BELLRINGERS.—There are 2,300 church bellringers in the diocese of Oxford. This is the largest number in any English diocese. Exeter comes second, and Devon third. — *N. Y. Evening Post*.

THE SIDEWALK-CLEANING ORDINANCE UNCONSTITUTIONAL.—At an adjourned law term of the full bench of the Supreme Court of New Hampshire, held in Concord, an opinion was rendered to the effect that the ordinances compelling citizens to keep sidewalks in front of their residences clear from snow in winter is unconstitutional, and that the legislature has no right to authorize the imposition of such a burden upon the people, which is, in effect, double taxation. It was held that this ordinance is in direct violation of the Constitution of the United States. — *Boston Transcript*.

PORTRAIT OF PERE JOSEPH.—Some time ago M. Rossignaux, formerly architect to Prince Jerome, offered the portrait of Pere Joseph, the confidential agent of Cardinal Richelieu, to the French National Museum. After inspecting the portrait, the authorities refused it on the ground that its merit as a work of art was mediocre. This action has been much criticised, as it is held that the portrait should have been regarded and valued chiefly as an historic document. M. Hanotaux, the historiographer of Richelieu, has now taken up the matter, and will see to it that a place is found for the portrait in one of the national collections. — *N. Y. Evening Post*.

THE NEW PARIS PRISON.—We mentioned the other day the opening of the great new prison at Fresnes, a few miles out of Paris, which is to supersede the old prisons of Roquette, Mazas, and Ste. Pelagie. This vast establishment presents an aspect of gayety and comfort which the inmates of many asylums or retreats for those who are not criminals might well envy. The buildings occupy an area of about 24,000 square metres, and have accommodation for about 2,000 prisoners. The régime cellulaire prescribed by the French law of June 5, 1875, has certainly been provided for with every consideration for attenuating its drawbacks from the prisoner's point-of-view. The cells are large, well-ventilated, lighted by electricity, and better furnished than many an artisan's room. The large open exercise-yards are made gay with grass lawns. Everything seems to be for the best from the humanitarian point-of-view; and, to crown all, official decorations have been lavishly bestowed upon the architect (M. Poussin) and others connected with the carrying out of the work; in fact, the opening of the new prison seems to have been quite a little holiday for all concerned, and promises to be almost as much so for the prisoners who are to have the privilege of occupying the building. — *The Builder*.

THE NEW HARBOR AT COLOGNE.—Attention has several times, in the columns of *Engineering*, been drawn to the rapid and continuous development of the river and canal traffic in Germany. Another important addition has quite recently been made to the numerous works undertaken for the advancement of the German water traffic by the opening of the large new harbor at Cologne. The ancient fortifications proved for a long time a serious obstacle to any material extension of the harbor accommodation, and it was not till the former had vanished, that the contemplated extension could be taken in hand in earnest. The bank of the Rhine has been regulated and turned to account for a distance of over seven miles. The crane installation is very comprehensive, there being altogether fifty-one cranes. The various buildings are very handsome, and the total expenditure amounts to some 1,500,000*l*. These installations are all on the left side of the Rhine, and are intended for various kinds of merchandise; while the more bulky commodities, such as timber and coal, will be provided for on the opposite side, where also petroleum tanks will be constructed. The new harbor and quay arrangements at Cologne are the best on the Rhine, and will, no doubt, tend to give a great impetus to the trade and industry of this ancient city. — *Engineering*.

INCOMBUSTIBLE WOOD.—In the *Times* for May 12th of last year an account was given of some satisfactory tests carried out on wood which, by a process of American origin, had been rendered incombustible, or at least incapable of sustaining and conveying flame. The first works in Europe for the application of this process, erected by the British Non-Flammable Wood Company, near the Middlesex end of Wandsworth Bridge, were formally opened recently when a number of visitors witnessed another practical demonstration of the enormous power to resist fire possessed by "non-flammable" wood in comparison with ordinary timber. The process may be said roughly to consist of removing the natural juices of the wood and replacing them with certain substances which not only make it fireproof, but also have antiseptic properties that prevent decay. The operation is effected in retorts or cylinders, the largest of which are 105 feet long by 7 feet in diameter. The wood having been run in on trolleys the air-tight door is closed and the contents subjected to heat and the action of a high vacuum. This treatment is continued till the volatile and fermentable constituents have been withdrawn, the time required to attain this result varying with the character of the wood. The next step is to fill the cylinder with the fireproofing solution, the exact composition of which is kept secret, and force it into the wood under hydraulic pressure, the amount of which again differs for different woods, but may reach 150 pounds to the square inch or more. When thoroughly impregnated with the salts the timber is taken out of the cylinders, restacked on the trolleys, and put into the drying-kiln—a room through which hot air is continually circulated by powerful fans, and which is fitted with apparatus to condense the vapors given off by the wood. Here it remains till it is thoroughly dried—in the case of a load of average thickness about a month. It is then ready for delivery and use. It may be mentioned that the British company claims, as the result of exhaustive experiment, to have improved materially on the original American process by getting rid of certain disadvantages connected with moisture and corrosion. — *The London Times*.

A BIG RAFT OF PILES.—The largest raft of piles ever seen in this port arrived August 2d in tow of the steamer "Mackinaw," from Astoria, Oregon, at the mouth of the Columbia River. The raft was of the cigar-shaped pattern, and the long tow was most successfully accomplished. In the big pile were 6,000,000 feet of lumber. The largest raft brought to San Francisco heretofore contained 5,000,000 feet of lumber. The "Mackinaw" dropped her tow at Arch Rock, and three tugboats took her place—one ahead of the raft and one on either side, while the tug "Monarch" brought up the rear in case of mishap. The raft and her escort attracted a great deal of attention as they proceeded up the bay toward Long Bridge. The big bundle of piles appeared to be in excellent condition, and hardly looked as if they had just arrived from a long ocean voyage. They were tied up at Long Bridge without mishap. Only one-half of the raft can be seen above water. The piles are bolted together by iron rods passing through them and cross-beams, and the ends are bulkheaded, so as to prevent any disturbance by the action of the sea. In addition to these securities, heavy lashings are tied about the raft at intervals of every ten feet. Some rough weather was encountered on the voyage, but the raft was not broken in the least. — *San Francisco Examiner*.

THE LAST OF THE QUINTAINS.—A curious clause, taking one right back to the Middle Ages, appears in the title-deeds of a house which is now to be sold in the village of Offham, in Kent. Scheduled as part of the "messuages, lands, hereditaments, and premises," is the village quintain, which still swings on its stout oaken post before the house, and the purchaser must covenant to keep the relic of a bygone pastime in good repair. One end of the swinging crossbar of this quintain (said to be the only surviving specimen in England) is shaped like a square target pierced with a number of holes into which the point of the player's lance would enter. When struck it would swing round, and unless the player were nimble the sand-bag hung on the other end of the crossbar would swing round and unseat him. Here is a chance seldom met with in these modern days of getting back into mediævalism. The owner has only to don the contemporary costume, tilt at the quintain, and imagine that the clock has been put back a few centuries. — *Westminster Gazette*, July 26.

ELECTRICITY AT THE VATICAN.—By the beginning of next year the whole of the Vatican will be lighted for the first time by electricity, which will have the effect of revealing numerous treasures of art and archaeology hitherto almost hidden from public view by deficiency of light. This innovation is due to the initiative of Leo XIII, the most progressive and up-to-date of all the pontiffs who have ever filled the chair of St. Peter. The Pope is taking a very active interest in the preparations which are being made in connection with the installation of the necessary plant, and it is at his suggestion that the beautiful Aquilone waterfall or cascade in the Vatican grounds is to be utilized for the purpose of providing motive-power to the dynamos. The water of this cascade is brought to the Vatican by means of an aqueduct, from the lake of Bracciano, situated at a distance of some twenty-five miles from Rome. It is proposed to eventually extend the electric light to the Basilica of St. Peter, both for interior and exterior illumination. — *Exchange*.

PARTIAL FAILURE OF A REFUSE CREMATORY.—The authorities of Reading are beset on all sides now, because of a singular miscalculation that has resulted in an overrun of garbage. Last spring they erected a crematory for the city's refuse that was supposed to burn seventy-five tons every twenty-four hours. The contractor who operates the works declares it will not consume more than twelve tons a day; and as the collections of the city are fifty tons per diem, the accumulations in the neighborhood of the plant are becoming formidable and odorous. It's a gathering trouble. — *Philadelphia Press*.



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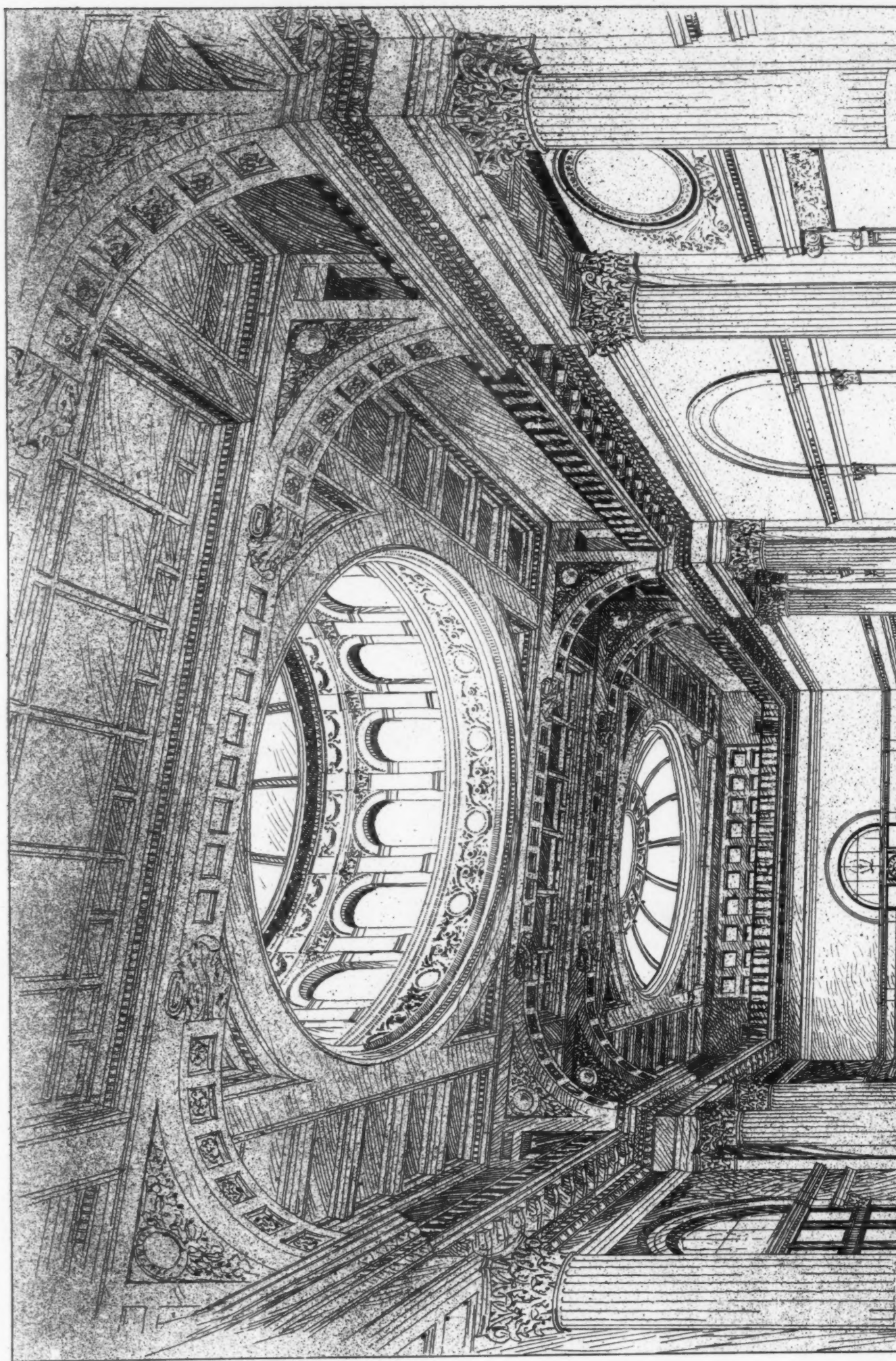
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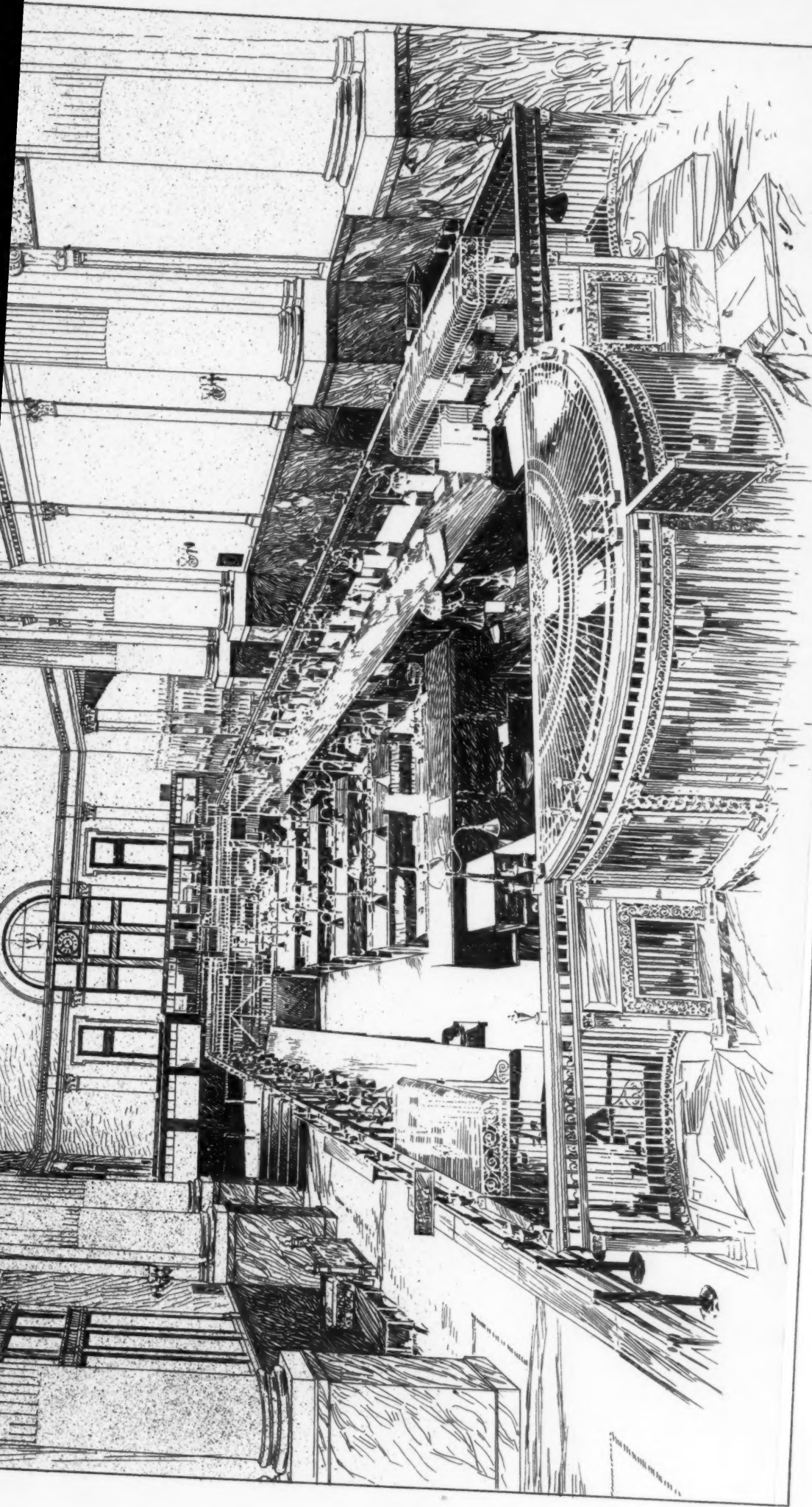


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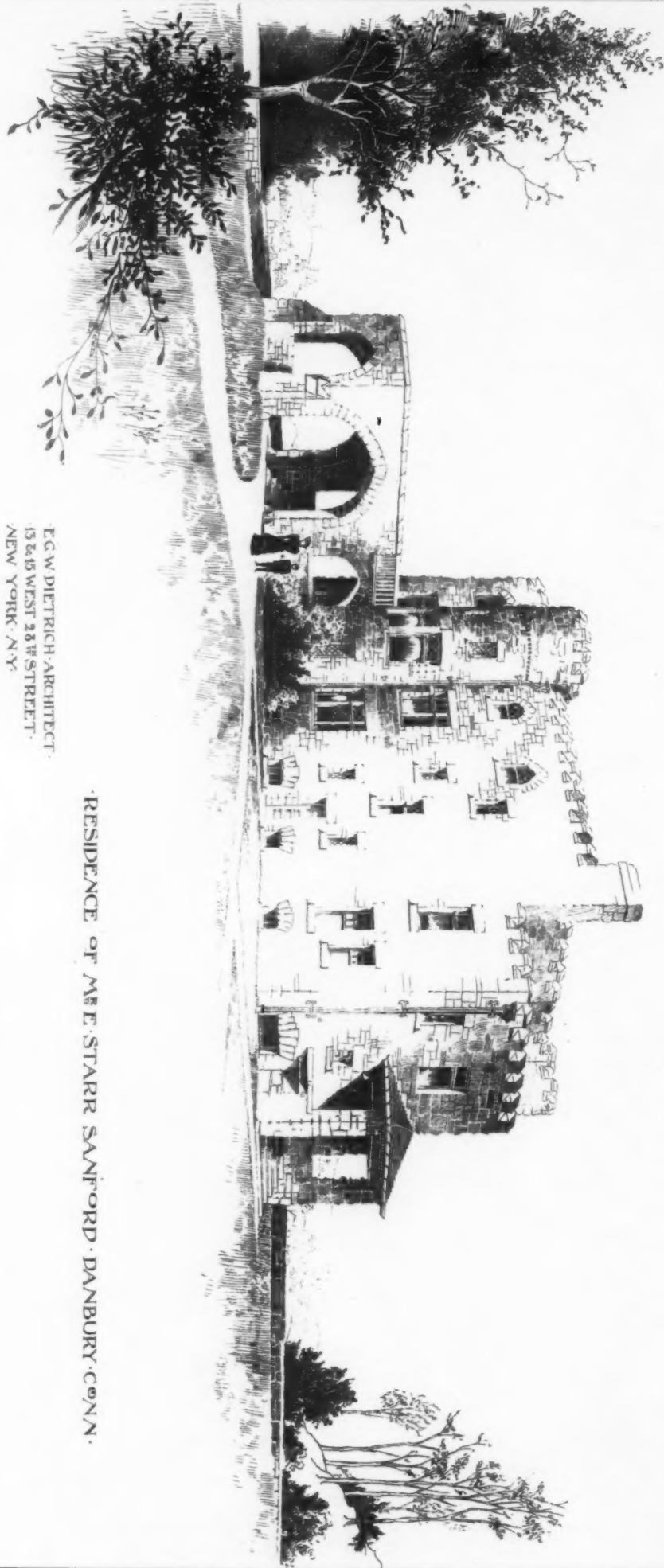




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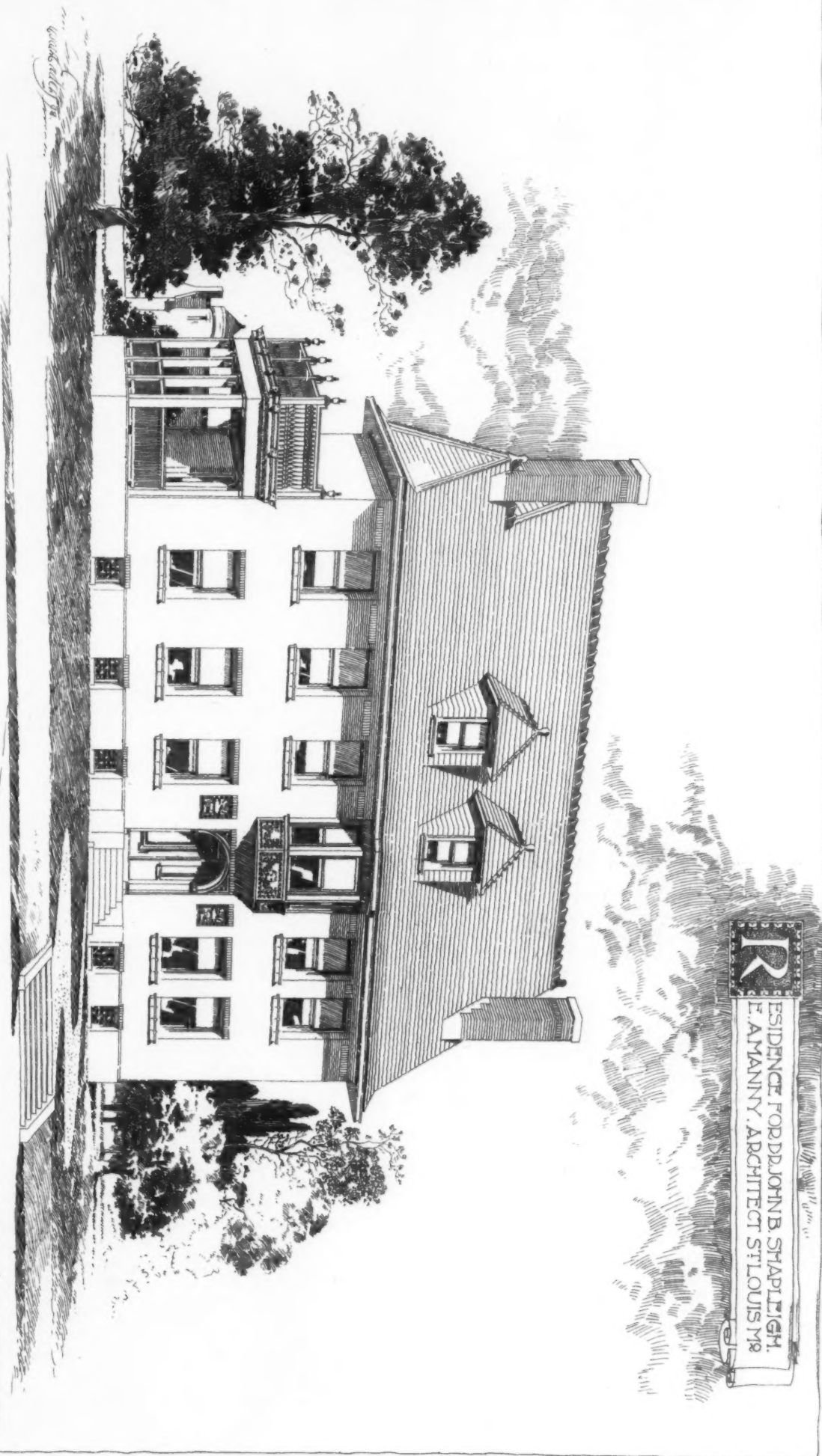
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