

THE AMERICAN ARCHITECT AND BUILDING NEWS.

VOL. LXIV.

Copyright, 1899, by the AMERICAN ARCHITECT AND BUILDING NEWS COMPANY, Boston, Mass.

No. 1215.

Entered at the Post-Office at Boston as second-class matter.

APRIL 8, 1899.

CONTENTS.

SUMMARY:—

The Utilization of Waste Land for Forest Purposes.—A Good Foundation for a cheap House in New Orleans.—The City of Paterson enjoined from further Polluting the Passaic River.—The late Sir Douglas Galton.—Death of Birket Foster, Water-colorist.—An Admiralty Surveyor made Chief Architect to the London County Council.—The Continuing Interest in the Pennsylvania State-house.—The Arkansas, the Mississippi and other State-houses.—The Responsibility of a Bank in the Matter of Collateral.—The Island of Philæ and the Nile Dam.—The Height-limit near the Massachusetts State-house.	9
PUBLIC BATHS AND WASH-HOUSES.—II.	11
BUILDING LAW: INTERPRETATION OF CONTRACTS.	13
BOOKS AND PAPERS.	14
THE LIMITED RIGHTS OF THE REAL-ESTATE OWNER.	15
ILLUSTRATIONS:—	
The Congregational House, Beacon St., Boston, Mass.—Competitive Design for the Minnesota Capitol, St. Paul, Minn.: Two Plates.—Accessories of Landscape Architecture, No. LXVII: Garden of the Caryatides: Villa Farnese, Caprarola, Sicily.—Accessories of Landscape Architecture, No. LXVIII: Entrance to the Garden of the Caryatides: Villa Farnese: Caprarola, Sicily.	
English Street Fronts.	
Additional: Lower Stories of the Congregational House, Beacon St., Boston, Mass.—The Red Tower and St. Mary's Church, Halle, Prussia.—The "Goldwaage," or Custom-house, Groningen, Holland.—Corner of Albemarle and Grafton Streets, London, Eng.—Private Ball-room: The Hague, Holland.	16
NOTES AND CLIPPINGS.	16

GENERAL ANDREWS, the Fire Warden, and Deputy Forest Commissioner, of the State of Minnesota, read at the last annual meeting of the Minnesota Forestry Association a paper prepared for him by Dr. C. A. Schenck, the Superintendent of Mr. Vanderbilt's forests at Biltmore, on the "Utilization of Waste Lands for Forest Purposes," which is well worthy of the attention of State officials everywhere. There are now in Minnesota five million acres of public lands, two million acres of which are practically unavailable for agriculture, but are readily available for forestry. Supposing this land to be now bare, and to be planted by hand, cared for and guarded for eighty years, its value at the end of that period would be, under ordinary circumstances, nearly double the total cost, including taxes and compound interest at two per cent. If the land should already be partly wooded, so that it would seed itself, the original outlay would be much less, and if prices of lumber should be higher in eighty years than they are now, which is altogether probable, the profit would be proportionately greater; while Dr. Schenck allows nothing for profits from the sale of brush-wood, the lease of hunting and fishing privileges, and other incidental sources of income, which might, in the aggregate, form a considerable sum. Besides the direct profits, there would naturally be indirect gains through the conservation of streams and springs, all of which should count, and which would go far to make up for the charge for interest. Meanwhile, employment and comfortable homes would be provided for a large number of persons in and about the forests, and the cost of firewood and lumber would be lessened for all the inhabitants of the State, and the Commonwealth would possess, when its forests came to permanent productiveness, one of the best and safest investments known.

PROFESSOR WOODWARD, of Tulane University, Louisiana, has been giving some lectures in New Orleans on architecture and house-building, illustrated with designs for workmen's houses for the South, particularly for New Orleans. In that city cellars are not used, as the ground is saturated with water to within a few inches of the surface, and Professor Woodward's plans, which he is kind enough to send us, and which represent simply small, carefully arranged houses, with the characteristic Southern two-story veranda in front, have a certain interest as showing details of construction in New Orleans. The foundations, for example, which are of brick, have a course of slate laid through them just below the first floor, and another course of slate is laid under the sill, apparently to prevent the rotting of the latter. The first floor itself is laid, apparently, on sleepers, with a coat of tar concrete under and around them. Provision seems to be made for using rain-water, for both the plans sent us show a tall brick

cistern, extending from the ground to the eaves of the house. This must be an expensive part of the construction, if the brickwork is so constructed as to resist safely the hydrostatic pressure; while the cistern must be nearly full before any water-supply is available in the bath-room, and the water-pressure will, of course, vary according to the quantity of water in the cistern; but we suppose that this is the ordinary practice in New Orleans, and it certainly has some advantages over the alternative plan of putting a cistern in the roof.

THE disputes over the pollution of the Passaic River by sewage are becoming interesting, and have brought up several important legal questions. A few weeks ago, the Chancellor of New Jersey enjoined the city of Paterson from increasing the pollution of the river. The matter has been appealed, but, meanwhile, the injunction is interpreted to mean that new house-connections may be made to any extent with sewers which already empty into the Passaic, and that the city may build new sewers, and discharge surface-water through them into the river, but must not allow any house-connections with such new sewers. As a matter of fact, there is not much difference in foulness between surface-water from a busy street, and house sewage, so that this interpretation of the injunction is a very liberal one—too liberal, indeed, for the owners of riparian rights. One of these, who carries on the business of cutting ice from the river, and selling it, has already sued the city of Paterson for one hundred thousand dollars, as damages for the pollution of the river, which has prevented him from cutting any ice since 1897; and other suits of the same kind are likely to follow.

TWO recent deaths in England have interest for architects, who, as some Frenchman says, are artists lined with scientific men. To the scientific part of the profession, the name of Sir Douglas Galton was very familiar, and the older men, particularly, will remember well the energy, intelligence and common-sense with which he was accustomed to write and speak on matters of sanitation. From his youth he was a person of note, having, on his graduation at the Royal Military Academy, at Woolwich, taken the first prize in every subject, and it was fortunate for the cause of public health that his attention became directed to it. At first, the study of public hygiene was rather a relaxation for his mind than a serious employment. He was, soon after his graduation from Woolwich, made Inspector of Railroads for Great Britain, and was, later, Assistant Inspector of Fortifications, Under Assistant Secretary of State for War, and Director of Public Works and Buildings. He found time, however, many years ago, to study the problem of heating houses, and invented the "Galton stove," which has had very great popularity in England; and other problems of clean and wholesome living successively interested him. In 1875 he directed the construction of the famous Herbert Hospital, at Woolwich, still a model in its way. His forcible way of writing and speaking was not always quite to the taste of other sanitarians, but he had good reasons for his opinions, and was little inclined to extravagances, so that he was, on the whole, perhaps the most useful of all the leaders of the great movement which has gone far to transform Great Britain and the United States, morally as well as physically.

THE other Englishman whose death will be felt as a public loss is Birket Foster, the water-color painter. Although he was an old man, and his fame belongs to the past generation, rather than this, it will be many generations more before he is forgotten. In his own time his work was almost a revelation of the capabilities of water-color, under the manipulation of a true artist, and his pictures enjoyed astonishing popularity. At that day Gilbert, with his rich and attractive figure-compositions, Harding, with his unrivalled command of black-and-white, and Frère, the sweetest in sentiment of all water-colorists, were still alive, but Birket Foster was more popular than any of them, combining, as he did, drawing, sentiment and color, in a way the recollection of which makes us sigh as we gaze upon the astounding productions of the poster school of art. His works, which were in pure tint, with little of the sponging and scratching of the modern school, were easily reproduced, with tolerable fidelity, by chromolithography, and they found their way in this form into many thousands of

English and American houses, where, we hope, they still continue to exert their purifying and refining influence.

ANY one who knows even a little of British peculiarities, how in the matter of surnames they disdain to connect orthography with orthoepy, and how conservative they are in the matter of manners and customs, retaining on the civil list officials who long ago ceased to discharge any duties at all, and still calling by a former title a dignitary who now discharges alien functions, knows how dangerous it is to base a remark or criticism on a form of words or title understood as Americans would naturally understand them. But on the face of things it looks as if the limit of absurdity had been reached when there was appointed a few weeks ago as the successor of Mr. Blashill, Chief Architect to the London County Council, Mr. W. E. Riley, an Admiralty Surveyor! What the normal occupation of such a personage is, or until now has been, we do not know, but the appointment so obviously calls to mind a well-remembered song in *Pinafore* that we might be excused should we assume that it had something to do not with the polishing of the doorknocker but with the cleaning of the windows, so that he might make his surveys with all needful clearness. As the Admiralty Board does not, we believe, consist of admirals any more than the Trinity Brethren are mariners, it is very likely that an Admiralty Surveyor has nothing to do with ships and docks and the term may simply be British for a past-master in the art of building. The ostensible reason for this seemingly peculiar appointment lies in the fact that Mr. Riley "has been accustomed to the control of a large staff," and we are free to confess that this is a vastly more respectable reason for an appointment than any that are usually given for the appointment of such officials in this country.

THE matter of the Pennsylvania Capitol continues to be a rather absorbing topic in that State, in spite of all that the machine politicians can do to keep the newspapers quiet. At the moment it looks as if it would be impossible to secure at this legislative session the four-million-dollar appropriations that the Commission has had the audacity to ask for, as one of the leading Senators, Mr. Flinn, has vowed he would not consent to such an issue of the scheme when the State was already unable to raise the money needed by its institutions and other undertakings already in hand. Meanwhile the *Philadelphia Press* makes the extremely good point that, as the Capitol Commission, honest men, have reported that they have obeyed the act of the last legislature and delivered, on time and within the appropriation, a "completed building," as the law required, they have now nothing more to do and their discharge should be a matter of course. If these men can be got out of the way, and if the Quay machine can be broken down, as seems daily more likely to be the case, it may come about that the methods which Pennsylvania has for a generation been willing should be employed in the erection of public buildings may be driven finally into the limbo of uncivilized iniquities, and that hereafter architects and contractors may find themselves free from illegitimate taxation on their work at the hands of spoils-men, whether in office or out of it.

BUT Massachusetts has not the best of rights, perhaps, to point the finger of scorn at any state-house undertaking, for has not what was intended to be an office-building on the north side of Mt. Vernon Street become joined in an unexpected way to the Bulfinch State-house? The lessons taught by Massachusetts, New York and Pennsylvania ought to be well studied by the citizens of Mississippi and Arkansas before they advance beyond the safe limit of possible retreat in the matter of the state-houses which are to be built in those South-western States. The needs of Mississippi in this respect have long been known and the replacing of the Capitol at Jackson has for years been under discussion. The Arkansas problem is only recently made public in a message of Governor Jones's, who bases his recommendation on the advice given him by some architects, that the needed building can be built for six hundred thousand dollars. As this sum so closely approximates the sum which, at Governor Hastings's advice, the Pennsylvania Legislature appropriated two years ago for a complete Capitol at Harrisburg, it will be very interesting to compare the outcomes in the two States. Should Arkansas make the better showing, it will hardly be fair to argue that Arkansas holds in higher esteem the old-fashioned virtue of public probity than do the citizens of Pennsylvania, for although the former State has nearly thrice the area of the latter,

it has a population less by three-quarters and an assessed valuation less by three billions of dollars.

A CASE of some importance to builders who have to receive and pay out large sums of money is reported in the *Evening Post's* daily digest. Quigley & Tuttle were brokers, in New York. They wrote to the Clinton National Bank, asking for a loan of five thousand dollars, on collateral consisting of seven thousand dollars in bonds of the city of Davenport, Iowa, and asking that the Park Bank, which is the Clinton Bank's correspondent in New York, might be instructed to pay over the money, and to receive and hold the collateral, so that if Quigley & Tuttle should sell the bonds, they might pay off the loan, and take the bonds for immediate delivery. The Clinton Bank notified Quigley & Tuttle that their proposition was accepted, and that instructions had been sent to the Park Bank to take their note and collateral, and to hand over the Clinton Bank's check for five thousand dollars; and at the same time, the Clinton Bank wrote to the Park Bank to forward Quigley & Tuttle's note, but to hold the bonds for safe-keeping. At that time Quigley & Tuttle were in good standing as brokers, and the clerk at the Park Bank, when their note was presented, with the collateral, simply counted the bonds, noting the amounts endorsed on the backs, to see that the seven thousand dollars mentioned by the Clinton Bank was accounted for, and then, finding the amount correct, handed to the brokers the five-thousand-dollar check of the Clinton Bank. Quigley & Tuttle never repaid the loan, which was on demand; and, two years later, they went into insolvency. On looking into their affairs, it was found that they had been raising money on loans, using as collateral forged and spurious bonds. On learning this, the President and cashier of the Clinton Bank visited the Park Bank, and examined the alleged Davenport bonds, which were discovered, on opening them, to be evidently spurious and worthless. The Clinton Bank then sued the Park Bank to recover its five thousand dollars, alleging that it had suffered this loss through the negligence of the clerk in receiving, as collateral for its loan, forged and worthless papers. The testimony showed that loans on collateral were made by banks only to persons whom they knew, and in whom they had confidence, and that the number of such transactions in New York was so great that bank officers had only time to count papers, and verify the amounts of collateral, without inquiring into possible forgery; and the New York Supreme Court held that the introduction given to Quigley & Tuttle by the Clinton Bank was such as to justify the Park Bank in giving to the papers presented by them only such examination as they would give to collateral offered by their own customers.

ALTHOUGH the matter has been kept quiet since the outcry raised throughout the civilized world at the scheme for submerging the ruins of Philæ by means of a dam across the Nile at Assouan, the dam is to be built, nevertheless, and the Duke of Connaught, a few days ago, assisted in laying the corner-stone of the structure. When complete, the dam will be three hundred feet high, and a mile and a quarter long, and will flood an area half as large as the State of Connecticut, somewhere in the middle of which is the consecrated island of Philæ, with the beautiful Temple of Isis, in almost perfect preservation, and various other interesting ruins. These will be submerged, to the regret, apparently, of the English engineers, who, however, do not suggest any way of avoiding the mischief. It has been proposed to remove the ruins, and set them up elsewhere, and, as they contain a great deal of historical and archaeological interest, this would be better than nothing; but no one seems to be able to suggest a new site, or, indeed, to devote any serious thought to the subject. Meanwhile, five thousand workmen are busy on the dam, and it will not be long before the temples are engulfed and forgotten.

WE ask particular attention to Mr. Edward Atkinson's brief enunciation of the logical and equitable limitations of the rights of real-estate owners, which may be found in another column. As to the particular matter which has occasioned this admirable expression of opinion — the height-limit within one thousand feet of the Massachusetts State-house — it seems to us easily reducible to the determination as to whether it is of greatest consequence that the right of a sovereign State to protect its own dignity and vested interests — interests which are fixed, and not merchantable quantities — shall prevail, or whether the assumed rights of a few citizens are beyond limitation at the hands of the law-making power,

PUBLIC BATHS AND WASH-HOUSES.¹—II.

SWIMMING-BATHS (Continued).

DOUCHE or Cleansing Room.—As you know, this room and its special appliances do not exist in the swimming-baths of this country. We have usually, it is true, a cold-shower apparatus or two placed among our dressing-boxes, but this is very poor comfort as compared with the agreeably warmed apartment which should be provided at one end of the swimming-bath, with proper warm and cold douches. I have already mentioned that this is a universal provision of the German baths, as you will see by examining such of the plans of their buildings as I have here. In all these you will observe that this cleansing douche-room is treated as a most important auxiliary to the swimming-pond. The reason for this prominence is, of course, the necessity for all bathers using its appliances before entering the pond. Every bather in Germany and Austria certainly observes this rule as a matter of most ordinary necessary routine. The argument used for the universal adoption of this practice is that the bather, without any reference to his position in life or his habits, before entering the swimming-pond should, out of consideration for his fellow-bathers, undergo a thorough cleansing process. I think that, both for sanitary and economical reasons, it is greatly to be desired that this salutary practice should be adopted in our bathing institutions.

I think there can be very little doubt that the enforced combination of a thorough ablution with the swimming-bath would greatly increase the benefit and pleasure derivable from both baths. I regard, therefore, the swimming-bath itself, apart from its recreative value, as one of the best means of encouraging the bathing habit

vide them, out of regard for a supposed sense of decency; but I think those concerned in the management are disposed to doubt their necessity, now they have been in use for a season.

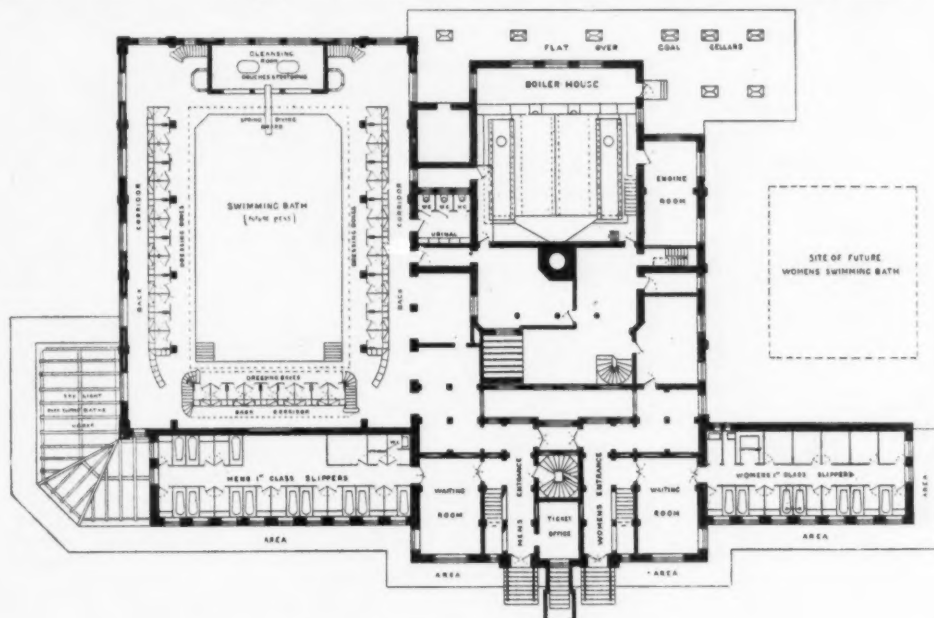
It is not usual to provide a gallery, club or dressing rooms to this bath; but otherwise the appointments are all very much the same as in the first-class bath, less decorative of course, and, if possible, more durable in character.

Ladies' First-class Swimming-bath.—It is desirable here to have dressing-boxes of good size, not less than 4' x 4'; and they might very well be provided in a large room separate from the bath. It is desirable to have one or two small rooms adjoining the bath, which may be used either as club or hair-dressing rooms. A gallery at one end of the bath is desirable for spectators to watch their children or friends bathing, as it is never desirable to have non-bathing visitors upon the gangways.

Women's Second-class Bath.—The ordinary dressing-box arrangement is here perhaps the best, and, with the exception that the club or dressing rooms may be omitted, the arrangements and appointments call for no further description.

It may be said here that it is very unusual to have two separate baths for the female sex, and, so far, it has been so. There are signs everywhere that the proportion of women and girls using the swimming-pond is daily increasing—partly no doubt due to the encouragement of swimming at the Board Schools. The old practice, therefore, of making the two classes of this sex use the same bath is found so extremely inconvenient that I have had recently to provide the additional swimming-bath in several of my establishments.

With the special interest now taken by the School Boards of London and the provinces in the teaching and practice of their scholars



Ground Floor: City Public Baths, Hamburg, Germany.

amongst the very poor. I attach so much importance to the introduction of this feature that I am providing this room for several new establishments upon the plans of which I am now engaged.

The general fittings of this room should consist of some six to ten warm, and two to four cold douches; together with a series of four to six porcelain foot-baths. The club and dressing rooms should adjoin the deep end of the pond, with a wide lounging corridor between them and the bath. The latrines, I need hardly say, should be cut off from the bath as much as possible, and be separately warmed and ventilated.

Should this bath be let for entertainment, it would be necessary to floor over the pond level with the gangways. The only point necessary to remember here is so to construct the trusses supporting this floor, and the flooring itself, as to be readily portable and capable of easy erection and taking down. The framing, etc., to this floor will also require a large amount of dry storing-space.

Second-class Swimming-bath.—The difference in the character and class of bathers in this department from those using the first-class bath calls for certain changes in its fittings. The chief point is that it is very necessary to do away with the wood dressing-boxes. In my own practice I substitute for them open boxes, with divisions and backs of slate or glazed bricks, wood only being used in the footboard, seat, and the latticed framed hopper for clothes, all of which should be readily removable. So arranged it is quite practicable to remove temporarily the wood fittings, and clean out with hose and water the whole of the dressing-places. Objection is sometimes taken to the absence of doors to these dressing-places, and at one of my recently enlarged establishments I was required to pro-

vide them, out of regard for a supposed sense of decency; but I think those concerned in the management are disposed to doubt their necessity, now they have been in use for a season. While no one can welcome more than I do the impetus thus given to the cultivation of the bathing habit, I confess I think that some of the necessary swimming accommodation for this purpose should be provided in some of the school buildings; and I am glad to say that the London and some few of the most important provincial School Boards are providing these baths in some of their schools. Those, however, so far erected that I have seen are in very many of their arrangements and fittings very defective. The warm douche-bath preliminary to the use of the pond, advocated in the *Journal of the Royal Institute of British Architects*, is perhaps even more desirable in schools than anywhere else.

SLIPPER AND RAIN DOUCHE BATHS.

These represent the warm and cold water baths of the establishment, and may be accommodated on either ground and first floor or basement.

The **first-class slipper** should consist of two compartments, the inner one containing a glazed fire-clay bath, white inside and outside, the fittings being footboard, towel-rail, electric bell and soap-dish. The other compartment serves as a small dressing-room, and should contain a dressing-table and glass, chair, rug, and hat-and-coat pegs. Each of these baths should have over it a warm and cold douche-apparatus. These two-compartment baths are provided in some of the Birmingham establishments, and are very popular.

The **second-class baths** would be fully equal in price and fitting to our present first-class slippers. These consist of a single compartment, the smallest size of which should be 6' 3" x 6' in the clear. It should contain a glazed fire-clay-bath as before, but glazed inside and

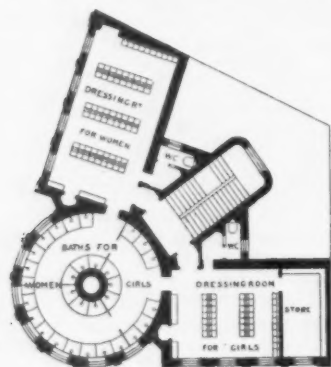
¹ Portions of a paper read by A. Hossell Tiltman [F.] before the Royal Institute of British Architects, Monday, February 6, 1899, and published in the *Journal of the Royal Institute of British Architects*. Continued from No. 1214, page 7.

over the roll rim only, the remainder being painted. The additional fittings would be footboard, seat, towel-rail, clothes-pegs, electric bell, soap-dish, combined mirror-and-brush shelf, and a thermometer.

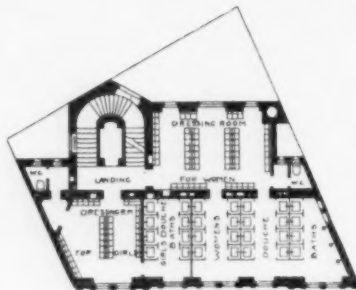
In both classes the bath should stand free of the wall and floor, to permit of ready flushing with water. The divisions may be of enamelled slate, light-colored marbles, or, preferably, of white glazed

The valves to the hot and cold supplies to these baths should be non-concussive, and should be capable of being regulated by the attendant either from the inside or outside of the compartment. The waste should be of such capacity as to permit of the emptying of the bath in two minutes.

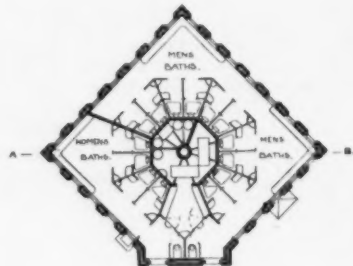
Third-class Baths. — To cope properly with the duty of providing



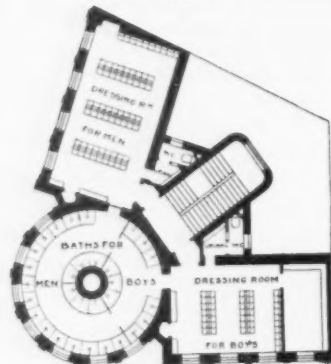
Second Floor.



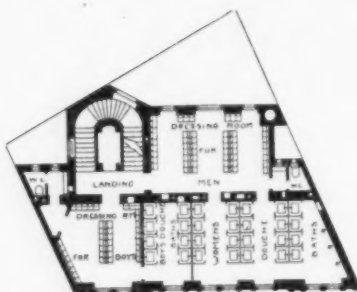
Second Floor.



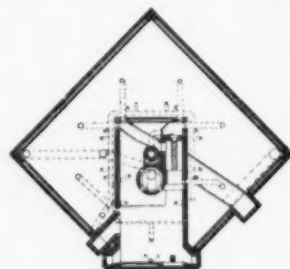
Ground Floor.



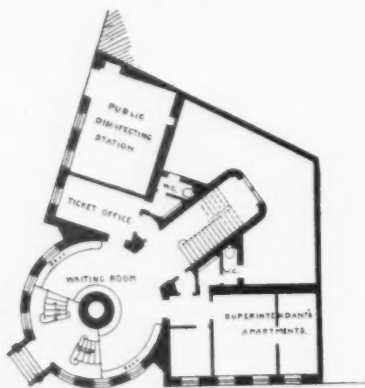
First Floor.



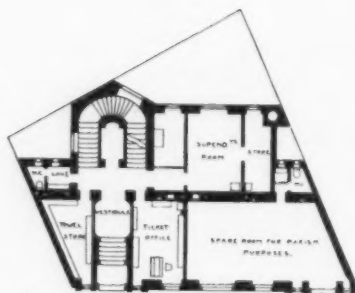
First Floor.



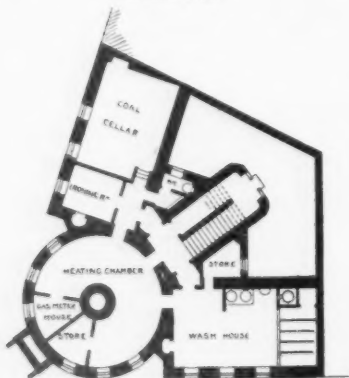
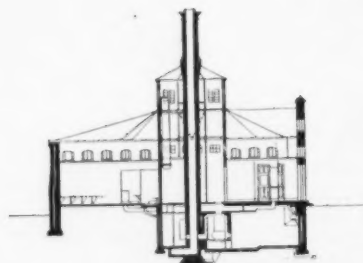
Basement.



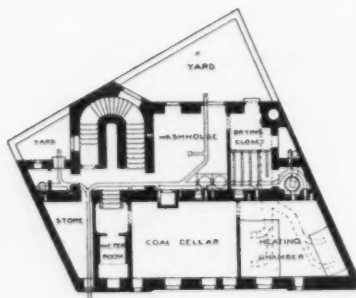
Ground Floor.



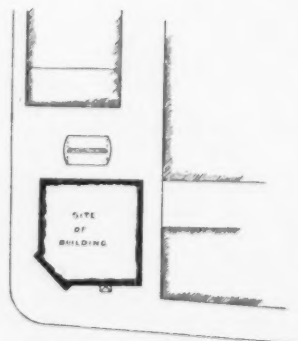
Ground Floor.



Basement.



Basement.



People's Baths, St. Paul's, Hamburg, Ger.

bricks. The height of these divisions should be 6' 6", and they should stand some few inches above the floor.

For a small number of baths, the central passage with a row of compartments on each side is best; but where there is a large number it is more economical and better for supervision to arrange them in bays.

the cheapest possible cleansing facilities for the very poor there is but one way, and that is by the adoption of a warm bath, for which, including soap and the use of towel, a charge of only one penny will be made. I have elsewhere stated that the "rain douche-bath," to my mind, presents the simplest, cheapest, and, so far as space, water, and time are concerned, the most economical means of effecting this

duty. The baths under this class may be entirely douche-baths of the type which I have already described.

HOT-AIR BATHS.

These should be provided, in my opinion, in two classes, the second being, if possible, interchangeable on certain evenings for the use of both men and women.

First-class Bath.—This should be practically, both in arrangement and practice, upon the lines of the improved form of the Turkish-bath now practised in this country. Mr. Metcalfe, a well-known exponent of the Anglicised Turkish-bath, speaks of it as "one of pure air, properly heated, having its due proportion of oxygen, making respiration pleasant, oxidation of the blood perfect, evaporation and depuration complete, and exalting the tonic influence of the subsequent cold appliances." There should be three hot rooms, viz, the Tepidarium, temperature 140 degrees Fahr.; the Calidarium, 180 degrees; and the Laconicum, 250 degrees, together with a combined cooling and dressing room, and a shampooing and douche room. In Continental examples, in lieu of the third hot room, it is the common practice to have a Russian-bath or vapor-room. This bath is not popular in England. It is worked in common with the hot-air rooms from the same cooling, dressing, and shampooing rooms. The combined cooling and dressing room should be a large, light, and airy room divided into bays or divisions 12' x 12', containing space for four couches. In the Bremen Public Baths there are two sets or classes of cooling and dressing rooms to one set of hot rooms. With the improvement of one of these being divided into compartments, and the other free from them, the arrangement appears worthy of adoption here. The shampooing and douche room has the usual benches, wall-basins, douches, sitz-bath, etc., and the plunge-bath (about 20' x 7', 3' 6" to 4' 6" depth) is usually adjacent to it, and en route to the cooling-room.

Second-class Hot-air Baths.—For these I recommend a system of public baths suggested by Metcalfe in his book, "*Sanitas Sanitatum et Omnia Sanitas*," which consists of a combination of hot-air rooms of the Turkish-bath, with a system of warmed lavatories in lieu of the shampooing process and plunge-bath. It is suggested that, although the shampooing process is an operation of great sanitary value, the ordinary member of our working classes, who does not suffer usually from too little work and too much food, does not require this corrective; and that this modification of the Turkish-bath, therefore, for all ordinary purposes of ablution would be perfectly effective, less provocative of colds, and more economical than the ordinary warm slipper-bath. Although this form of bath has not been tried at all, I think it is a form of hot-air bath extremely suitable for the second-class division of the hot-air baths of the central establishments, and for this reason I recommend some of the promoters of our future establishments to give it fair trial. In Vienna, it should be mentioned, no shampooing is given in the hot-air baths unless specially asked and paid for.

The hot rooms should be so arranged and constructed that their walls may be exposed as little as possible to any cooling influences. For this reason their internal walls, floors, and ceilings should be separated by a cavity, and finished internally with such materials as will not be affected by high temperature (and in the Russian bath by steam); and, moreover, should be capable of being constantly cleaned down with water.

The walls and ceilings are best lined with glazed bricks, the ceiling being arched or vaulted. The floors should be of York stone, or mosaic as described, to the gangways of the swimming-baths. If these rooms are under any other rooms the floor above should be fire-resisting and heat-proof. It is a moot question abroad whether there should be fixed benches, or suitable chairs, movable benches and tables. In most of the Continental establishments, where fixed benches are used their tops are generally of white marble 2' wide, with the risers of glazed bricks.

The heating of this bath may be effected by steam, as in many of the Continental examples, or, what is more common with us, by its own independent furnace.

In concluding my remarks upon this department I would like to draw your attention to the hot-air and vapor baths shown upon the plans of the baths at Frankfort, Stuttgart, the Admiralgarten Baths at Berlin, and others.

THE ESTABLISHMENT WORKING-DEPARTMENT.

The most convenient position for this is on the ground-floor, but, failing this, it may be located in the basement of the establishment; but care should be taken in that case that good lighting and ventilation are secured for it. In the frequently very costly and restricted sites available in London for these large establishments this is a matter of extreme difficulty.

The following are the various rooms, etc., required:—

Boiler-house with coal-storage, engine-room, accumulator-room, receiving-room, wash-house, drying-room, folding and distributing store-rooms, mess-room, engineers' workshop.

Boiler-house.—The usual and probably the best means of heating the water in the ponds is by the injection of steam combined with circulation. To carry out this system properly, and for the production of steam and hot water for the requirements of the establishment generally, the services of three large steel boilers of the Lancashire type, adapted to a working pressure of at least 100 pounds per

square inch, will probably be required. It is usual to make each of these boilers interchangeable for either steam or hot water.

In comparison with the foreign boiler-houses, our own present, frequently, a very rough and untidy appearance. The boiler-house should be well planned, with good lighting and ventilation, and care should be taken to avoid such an involved system of pipes and fittings as we so often see. The openings to the coal-bunkers (which preferably should be in front of the boilers) should have some convenient form of iron sliding-doors, so as to keep the house free from dust when coal is being delivered.

Engine-room.—This should have a horizontal engine of sufficient power to drive the laundry and other machines. In the same room, or preferably one closely adjoining, it will be convenient to place the high-speed steam-engine and dynamo for the generation of the current for the lighting of the building, together with the main switch-board. Should there be an artesian well, then a room should be provided for the pumps, etc.

Accumulator-room.—This may conveniently adjoin the electrical engine-room; its arrangement and size depend upon the form of the batteries and their capacity.

Receiving-room.—This is the room to which all the dirty linen of this and the other establishments of the district would be conveyed. It should be conveniently arranged so as to be easy of access from the court-yard, and, if in the basement, the dirty linen should be passed down a shoot arranged for the purpose.

Wash-house.—This would be arranged to take the necessary washing-machines, rinsing and boiling tanks, and hydro-extractors, driven where necessary by overhead shafting and belting. All these appliances would require to be adapted in capacity and number, according to the amount of work required to be done. Care should be taken to arrange the various machines, etc., in the ordinary sequence of the washing process, by which means time and labor are saved.

Drying-room.—The ordinary system of steam-heated drying-closet combined with blast apparatus is perhaps as good for this purpose as any other. The horses may be of the usual draw-out character, and should be from thirty to fifty in number. In the foreign examples these drying-horses are constructed entirely of hard wood, and are of course much more easily moved, and they appear to be perfectly durable.

In some of the Metropolitan establishments this operation of drying is very effectively and quickly done by the towels, etc., being passed through a steam-ironer.

Folding and Distributing Store-room.—The towels, etc., are brought to this room after leaving the drying-closet, mangled in the box-mangles, or passed through a steam-ironer, folded, and deposited in the adjoining distributing linen-store, from which they are given out to this or the branch establishments.

Mess-room.—This should be a comfortable room for the use of the men working in the basements. It should have a small cooking-stove, and a supply of lockers to take food, etc.

Engineers' Workshop.—This requires to be a well-lighted room with a steam-driven screw-cutting lathe, a steam drilling-machine, a carpenter's bench, a smith's forge, anvil, and a grindstone. A store should adjoin it for material, tools, etc.

Ventilation.—I have said nothing hitherto about the general warming and ventilation. These questions, together with that of the engineering generally, would take a whole evening alone to discuss. I will only remark that they deserve much greater attention than they generally obtain with us. With reference to ventilation, it is not enough to rely entirely on natural means; these bathing establishments require the very best mechanical means of frequently changing the air in a regular manner, applied to nearly every part of the buildings. Upon the Continent a well-devised scheme of ventilation combined with warming is arranged with the initial planning of the building.

Administrative Department.—The following offices will be required for the transaction of the business of this and the various branch establishments: Committee-room, with cloak-room, lavatory, etc.; clerks' office; superintendent's office, ground-floor; suitable apartments respectively for the superintendent and the engineer, with separate entrances to them.

I have, I regret to say, been prevented by pressure of work from preparing plans of this typical central establishment.

[To be continued.]



INTERPRETATION OF CONTRACTS.

ACTION to recover on a Building-contract.—The Supreme Court of Michigan holds that, in an action to recover the contract-price of a building, on the theory of a substantial performance, where there is no evidence of an acceptance of the building by the owner, evidence of its value cannot be admitted.

And where the contract for the construction of a building is not ambiguous, letters between the parties written prior to the execution of the contract are not admissible to show that it was the intention of the parties that the building should be cheaply constructed.

Where such contract in express terms calls for doors of a certain thickness, evidence of a custom among carpenters to use doors of one-eighth of an inch less in thickness when doors of such thickness was called for, due to the fact that the lumber from which the doors were made lost that much when dressed, cannot be admitted to vary the contract, there being no evidence that the custom was general in its application, or that the owner of the building had knowledge of it.

The fact that an owner on inspecting a building pointed out certain defects, and did not specify others, which were afterwards set out in a defence to a suit, does not constitute a waiver as to the ones he did not refer to at the time of inspection.

[Eaton vs. Gladwell, 66 N. W. Reporter, 598.]

Interpretation of Building-contract. — After the construction of a building had been abandoned the owner made a contract for its completion by another contractor according to the specifications, a clause of which required the contractor, as the building progressed, to protect the finished work from injury. The Supreme Court of New York, 4th Department, held that the latter contractor was not required to protect the work done by his predecessor from injury from frost between the time the contract was made and when the architect permitted him to commence work, where he offered to commence work when the contract was made.

[Preston vs. City of Syracuse, 36 N. Y. S. Reporter, 716.]

Construction of a Builder's Contract. — By agreement between a contractor and one for whom, and on whose land, he was to erect buildings, \$5,000 was deposited in a bank in escrow, to be held until the time for filing liens by subcontractors should expire, when the money was to be paid to the contractor, unless there should then be pending any unsettled mechanics' liens against the buildings, in which case the bank should retain the amount of such liens from the fund, and pay over the balance to the contractor as the liens should be discharged. The Court of Appeals of Colorado held that lien claimants could not reach such fund, their sole remedy being against the property.

[Sayre-Newton Lumber Co. vs. Union Bank, 41 Pacific Rep. 844.]

Application of Payment. — A contractor received money from one W, for whom he was building a house, and paid it to a material-man, who had filed a lien against the house, and to whom the contractor was indebted on several accounts. At the time of making the payment the contractor stated that he received the money from W, and that "I give it to you on account." The material-man applied it to an account other than that for materials furnished for W's house. It was held that a claimant who had filed a subsequent lien against such house was not entitled to have the payment applied to the account for the materials furnished for W's house merely because the money came from the owner.

[Orr vs. Nagle (Supreme Court, General Term, Second Department), 33 N. Y. Sup. Rep. 879.]

Builder is entitled to Payment though Work is not according to Contract. — Where a builder alleged that he constructed a house for another, and that the latter accepted it, he is entitled to payment according to the value of the work done, although he may not prove the contract as he claimed it to have been, as his right to a *quantum meruit* inquiry does not depend solely upon the contract, but upon the ground that he rendered service, in work and labor performed, the fruits of which were received by the owner of the building, and the quality of the material and work and the value of same may be ascertained.

[Moffitt vs. Glass (Supreme Ct. N. C.), 23 S. E. Reporter, 104.]

Execution of Contracts. — A written agreement of which there are two copies, one signed by each of the two contracting parties, is binding upon both to the same extent as if there had been only one copy of the agreement and both had signed it.

[Morris vs. McKee (Supreme Ct. Ga.), 24 S. E. Reporter, 144.]

Contractor can recover though Building destroyed by Fire. — A contractor for the carpenter-work in a building in the course of erection is entitled to recover from the owner the value of the materials used and the work done by him, where the building was destroyed by fire before the contract was completed; but he is not entitled to recover for the value of materials which he had procured to use in the house but which had not actually been used at the time of the fire.

[Hayes vs. Gross (Sup. Ct. App. Div.), 40 N. Y. Supp. Rep. 1098.]

Waiver of Conditions of Building-contract. — A building-contract provided that the value of all changes in the work should be determined by the architect, and that if any dispute arose as to his determination it should be submitted to arbitration. The contractor in August presented a bill to the architect for extra work, who retained it without objection to some time in December, when an action for the extra work was brought. The court held that the owner will be presumed to have waived the condition as to arbitration,

where the owner did not specifically urge that as a ground of dismissal of the suit.

[Preston vs. City of Syracuse (Supreme Ct. 4th Department), 36 N. Y. S. Reporter, 717.]

Set-off for Breach of Contract. — Where, upon default of the contractor, the architect, acting for the owner, let to the lowest bidder the contract for the completion of a building, the owner was entitled to set off against the original contractor or any subcontractor the actual amount paid for the completion of the work.

[Yeomans vs. Parker (Supreme Court of Michigan), 63 N. W. Rep. 316.]

Contract-price is binding. — Where a complaint in an action to recover for work and materials alleges that they were furnished under a contract, which fact is not denied, the only issue being made in the pleadings being the contract-price, evidence of the reasonable value cannot be introduced.

[Fladung vs. Dawson (Supreme Ct. Cal.), 43 Pacific Reporter, 1107.]

Misunderstanding as to Part of Contract. — A party to a contract misunderstanding part of it is not entitled to be released from the remainder of it, as he would be in case there had been a fraudulent misrepresentation relating only to a part of the agreement.

[Butler vs. Prentiss (Supreme Ct. 1st Dept.), 36 N. Y. S. Rep. 301.]

When Contractor cannot recover. — When there has not been a substantial compliance on the part of the contractor with the building-contract, nor an acceptance of the building, the contractor cannot recover in an action on the specific contract the contract-price, less allowances for defects.

[Hulst vs. Benevolent Hall Ass'n (Supreme Ct. S. D.), 68 Northwestern Reporter, 200.]

BOOKS AND PAPERS

WE imagine that a good many architects and other tourists in England have felt the need of a condensed guide-book¹ to the cathedrals which would say enough about their origin to enable the visitor to give them their proper historical place, and would give an intelligent account of their architectural development, adapted for use on the spot. Such works as Murray's Cathedral Handbooks, while they exhaust the subject, have a tendency to exhaust the reader also, and the smaller works, although sufficiently numerous, generally give very little matter that is of interest to a professional man, while they are stuffed with rhapsodies, artistic, genealogical or ecclesiastical, of no discernible value to any one.

Mr. Bond has endeavored, very successfully, to avoid both these faults. In clearness of arrangement and condensation of matter he seems to have taken Baedeker's Guides as a model, and he could not have had a better one; while, in treating of the architectural portion of his subject, he has traced the causal relation of the development of each building to its history in a way which is rather new in such books, and is to be very highly commended. We once knew a brilliant professor, who used to begin the training of his pupils in English history by making sure that they knew the names of the kings in their order, whom each married, and of what he died. After thus laying the foundation, it was easy to complete the superstructure; and Mr. Bond, by telling his readers how Bishop Swinfield, of Hereford, "by the expenditure of vast sums of money," procured the canonization of his predecessor, St. Thomas Cantilupe, and how his "foresight was justified by the huge sums which poured into the cathedral treasury" from the pilgrims attracted to the shrine of the new saint, gives a curious, but very necessary, explanation of the transformations which the English cathedrals continually went through, as a result of ecclesiastical speculations of this kind. That they were mainly speculations, devised and carried out with a certain degree of pious enthusiasm, probably, but also with a far-seeing eye to the main chance which would do credit to a modern banker, there can be no doubt, for the different cathedrals competed with each other openly in their attempts to draw pilgrims. Not long after Swinfield's successful operation had diverted to Hereford the stream of pilgrims in need of miraculous intercession an opportunity came to the canons of the neighboring cathedral of Gloucester. King Edward II was murdered at Berkeley Castle. Three monasteries were appealed to by his friends to receive his body, but refused, fearing the anger of the dominant party. The abbot of Gloucester, more loyal, probably, as well as keener in business matters, was courageous enough to order his carriage and train, and go in state to Berkeley for the body, which he had solemnly buried in the presbytery. Very soon a political reaction set in; people came to visit the grave of the murdered king, and were astonished to find that miracles were wrought upon them. The fame of this brought people in need of miracles, as well as the partisans of the king, and the stream of pilgrims and money was soon diverted from St. Thomas of Hereford to his neighbor, King Edward II, at Gloucester, where offerings accumulated to an enormous extent.

¹"English Cathedrals Illustrated." By Francis Bond, M. A., F. G. S., Hon. A. R. I. B. A. With 180 illustrations from photographs. London: George Newnes, Limited. Philadelphia: J. B. Lippincott Co. 1899.

With the money brought to these and other shrines, it was necessary to provide room in the cathedrals for the pilgrims who brought it, and the first work was generally to enlarge the choir, which, in the original Norman buildings, was far too small to accommodate the crowds of new-comers. Then, as one church after another lost its roof by fire, or was ruined by the falling of its towers, different portions were rebuilt; the windows were enlarged to give more light, or to make room for colored glass; and, early in the thirteenth century, a change in the sentiment, and, perhaps, in the ritual, of the English Church led to the general addition of Lady-chapels to the cathedrals. All these alterations were made in the style prevailing at the time when they were made, and to this circumstance, influencing the execution of the continual improvements carried on by the cathedral chapters, is due much of the interest of their buildings.

After thus indicating the general conditions under which the great English cathedrals were developed, Mr. Bond takes them up in alphabetical order, pointing out where, when and why alterations and improvements were made, and calling attention to peculiarities of style, such as might be explained by the taste or training of the individual architects, or the preferences or parsimony of their patrons. It is hardly necessary to say that, like all professional or semi-professional men, he does not believe in the theory that the English cathedrals were the production of "a crowd of inspired clerks-of-the-works," but considers that they, like all other great buildings that have been erected before or since, were the work of subordinates, carrying out the conception of a single mind. Of course, in buildings which were, for the most part, in process of continual remodelling for four hundred years, many artists were successively concerned; but each of these formed his own idea of the portion of the building in his charge, exactly as a modern architect would do. An interesting illustration of the ability of some of these men, and, we may say, of the impossibility of admitting the theory of what we may call "multitudinous design," is to be found in the fact that the south transept of Gloucester, which is in a well-marked Perpendicular style, antedates, according to almost contemporary authority, any other known specimen of English Perpendicular by about twenty years; so that the architect of this transept must have evolved the style out of his own mind, while all the other architects in England were still working in the totally different manner which our author calls the "Curvilinear." That there was a constructional reason for the new invention Mr. Bond shows, by pointing out that the cathedral authorities required windows of such enormous size that horizontal transoms were necessary for support; but this does not diminish the credit of the great artist who could meet the new requirements so successfully, and who, it is quite probable, was also the designer of the famous lierne vaulting of the transept.

It will be seen that Mr. Bond understands well the architectural side of his subject, and can discuss the architectural problems in the way that architects like to have them discussed; and we know of no book which approaches this in value as a handbook for professional and student tourists in England. The illustrations, which are half-tone cuts, are pretty, but, naturally, too small to be of much use, and we look in vain among them for explanations of much of the text that we would like to have made clear in that way; but, for a work to be used on the spot, this is not a serious matter, and those who take it up for home-study can generally find drawings or photographs of adequate size to use in connection with it, such, for example, as the *Builder's* "Cathedral Series" of plates.

THE LIMITED RIGHTS OF THE REAL-ESTATE OWNER.

IT seems to us that the enunciation of fundamental principles limiting the right of the owners of real-estate contained in the following communication of Mr. Edward Atkinson to the Boston Transcript deserve the careful consideration of readers in every part of the country:—

"I have been requested by the opponents of high buildings to give the reasons which I lately submitted to the Committee on Cities why a general law should be passed limiting the height of buildings in Boston (why not throughout the State?) to such number of feet as may be deemed safe and also just to all.

"Exceptions may be taken to special acts, especially when based mainly on sentimental grounds. I put the case on grounds which seem to me to be consistent with justice, equal rights and safety alike.

"No person holds complete ownership or absolute title to any land. The absolute title vests in the sovereign. Possession is given, by the Commonwealth, of an estate in land subject to various conditions, reservations and duties.

"All or any part of the land can be taken for various purposes with due compensation.

"The State grants the power to cities and towns to impose conditions upon the use of land and to put restrictions upon it; sometimes with, oftener without, compensation, even if the possessors are put to heavy expense in meeting them.

"All building-laws and sanitary ordinances are of the latter kind.

"Occupancy is subject to restrictions of many kinds: in respect to the abatement of nuisances; the sale of liquor; use for immoral purposes; even to the destruction of buildings yielding high rents when unfit for human habitation.

"The right to hold an estate in land is therefore qualified in various ways and is subject to duties which cannot be evaded. All these rights and duties may be readjusted at any time by legislation to any and all changes in conditions.

"The fundamental right of each holder of an estate in land is that he shall not be subjected to damage by the misuse of the land of his neighbor. Among these common rights is the right to uniform rules in respect to light and air—none more guarded under the English common law; none so little regarded in the present practice in American cities. A uniform law regulating the height of buildings is therefore demanded, in order that equal rights may be maintained and that no one shall be oppressed by the misuse of the land of his neighbor. What greater abuse of neighbors can there be than the erection of a ten or fifteen story building upon a narrow street? The holder of an estate may ask, 'Have I not a right to do what I will with my own land?' To this the complete answer is, 'The land is not your own; your only title is to possession under conditions. You have no right to misuse the land to the injury of your neighbor. Your limited possession carries duties with it as well as rights.'

"These fundamental principles do not yet seem to have received much consideration. It, therefore, seems to me fit to appear before the committee in support of legislation to establish a reasonable limit to the height of buildings wherever constructed, without regard to district and whether for use as dwelling-houses or for business purposes.

"It is said that if the height of buildings is restricted the rent which can be derived from the occupancy of land in the heart of the city will be diminished and the price therefore depressed. It is also urged that such is the cost of administering a building, running elevators, etc., as to make it necessary to put as many stories upon the ground as occupants are willing to pay for.

"These arguments seem to me to refute themselves. If undue congestion, very high valuations and excessive rental values can be rightly stopped by any legislation, then such acts become the more expedient and necessary. If the price of land is depressed by a limit of height, then the capitalist can buy a bigger lot, put up a wider and lower building, and thus reduce the cost of administration.

"If the quantity of business that can be done in the congested centre is reduced by a limit of height, then the broader the extent and the more complete the occupation of the suburbs. What more hazardous and unwholesome than the present congestion in a little patch of land in the heart of Boston, comprising about a hundred acres of which Summer Street is about the central meridian?

"What crowds the subway except this unsafe congestion? What greater general benefit than for new centres of trade to become established away from this dangerous point? What more desirable than for a safer and more commodious building to become a centre of miscellaneous traffic than any now existing in the congested centre, say in Park Square, or far out on one of the avenues? There are signs of such a tendency among hotels; why not in department-stores? Such a tendency may well be promoted, and if a limit of height will promote it then the more reason for legislation, not the less.

"Again, little attention has yet been given to the fire hazard of very high buildings constructed of steel. Underwriters have lately been learning to their cost that in steel-framed buildings, as now badly and unsafely planned, the complete combustion of the contents is absolutely assured if a fire once gets under way. The more incombustible the building the greater the hazard to contents. One observation may indicate the great danger to occupants as well as contents.

"The space permitted in a letter forbids any full treatment of the subject. Suffice it that, to the eye of any factory engineer or underwriter, the faults in the present methods of planning so-called fireproof hotels and department-stores are very plain. They assure the complete combustion of the contents. They also expose the inmates to great and wholly avoidable danger.

"In the recent fire in the Home Life Insurance Building in New York the heat generated by the combustion of the contents was so great as to create a draught up the stairway and elevator-wells which carried several bushels of small fragments of glass broken from doorways, interior windows, etc., to the roof, where it was found and gathered up. Occupants in upper stories might find it unpleasant to meet an upward current of smoke, heat, sparks and broken glass generated in the lower stories of any high building, especially if waked up at night in a ten or fifteen story hotel building.

"What, then, is the right and safe limit? My own judgment would be: not exceeding eight stories of customary height above the street-level. That would substantially correspond to the eighty-foot limit of height now established in London. Even then the present plans of such buildings should be revised with a view to the fire-hazard. Every floor should be cut off from every other floor by closed ways. Stairways should be in towers or should be cut off at each floor when within the walls. Elevator-wells should be enclosed in wired-glass rather than in iron open-work. Separate flues should be provided to carry smoke and flame away from each floor in place of those now planned, as if the purpose were to carry smoke and flame from any one floor to every other.

"Boston has not yet been committed to any very excessive skyscraper folly; is there not now a good opportunity to stop the evil where it is?"

EDWARD ATKINSON.



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

THE CONGREGATIONAL HOUSE, BEACON STREET, BOSTON, MASS.
MESSRS. SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS, BOSTON, MASS.

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

COMPETITIVE DESIGN FOR THE MINNESOTA CAPITOL, ST. PAUL, MINN.: TWO PLATES. MR. J. L. WEES, ARCHITECT, ST. LOUIS, MO.

ACCESSORIES OF LANDSCAPE ARCHITECTURE, NO. LXVII: GARDEN OF THE CARYATIDES: VILLA FARNESE, CAPRAROLA, SICILY.

ACCESSORIES OF LANDSCAPE ARCHITECTURE, NO. LXVIII: ENTRANCE TO THE GARDEN OF THE CARYATIDES: VILLA FARNESE, CAPRAROLA, SICILY.

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

ENGLISH STREET FRONTS.

This plate is copied from the *British Architect*.

[Additional Illustrations in the International Edition.]

LOWER STORIES OF THE CONGREGATIONAL HOUSE, BEACON ST., BOSTON, MASS. MESSRS. SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS, BOSTON, MASS.

[Gelatine Print.]

THE RED TOWER AND ST. MARY'S CHURCH, HALLE, PRUSSIA.

[Gelatine Print.]

THE Market-place at Halle receives its unique impress from a number of quaint old structures dating their origin back to the fifteenth and sixteenth centuries. They are: the Red Tower, the Town-hall, with the adjacent Public Scales Building, and St. Mary's Church (1529-54). The Red Tower, shown in our plate, was erected between 1418 and 1506. Nobody seems to know how its name originated—certainly not from the color of its material. This tower, standing detached, once formed the belfry of St. Gertrude's Church, which was torn down by order of Cardinal Albrecht, Archbishop of Magdeburg, who besieged and conquered the old Hanseatic town in 1478. The tower was doubtless intended, in the first place, as a landmark by the proud and independent burghers who owed their wealth mainly to the famous brine-springs, which have been worked from before the seventh century, and still yield about six thousand tons of salt annually. In the second place, the Red Tower was to serve as a place of safety and refuge for persons and treasure in those warlike times, as is proved by the fact that the only entrance-door to the interior of the tower was located about ten feet above the ground, and was accessible only by a flight of wooden steps. The structure covers an area of 33' x 50', probably because the oblong shape was thought to give it greater resistance against the oscillations caused by swinging the large bells. The brick annex shown in our plate, surrounding the base, does not form a part of the original design. It was erected in 1825, to replace an older framed structure of similar dimensions, put up in 1532. The municipal authorities of Halle, having come to the conclusion that this annex is out of keeping with, and unworthy of, the fine tower, contemplate tearing down the former, and propose to secure a suitable design by means of an open competition.

The tower is built of massive sandstone, the walls being 11 feet 6 inches thick at the base. It reaches a total height of 276 feet. The exceedingly picturesque roof is covered throughout with sheet-copper. The four little corner-turrets are believed to have been added in the sixteenth century. The excellent effect of the tower as a whole is due to its ponderous simplicity, free from petty details in which other structures in the late Gothic generally abound, to the ample wall-spaces, and, finally, to the observation of the principle of lightening the upper masses, without weakening the effect of unity of the whole.

The Roland statue placed at the corner of the annex, like so many others of its kind to be found in old German towns, is supposed to be a symbol expressive of certain civic liberties and privileges enjoyed by the town. The fine Gothic fountain, not far from the Red Tower, visible in our plate, was erected a few years ago, from designs of Prof. Hubert Stier, the well-known architect of Hanover. It is surmounted by the statue of a German student clad in the garb of the Early Renaissance, sword in one hand, the colors in the other.

Opposite the fountain, on the other side of the roadway, stands the bronze statue of Halle's great son, George Frederick Händel, the composer of the "Messiah," of undying fame.

THE "GOLDWAAGE," OR CUSTOM-HOUSE, GRONINGEN,¹ HOLLAND.
JOHAN ISEBRANTS, ARCHITECT.

[Gelatine Print.]

The interesting building shown in our plate, in the Flemish Renaissance style, situated back of the Town hall, was erected in 1661. It serves now as a Custom-house for the municipality. Its designer was in all probability Johan Isebrants, who filled the position of municipal architect from 1629 to 1648, and who left a number of important structures (including the "Orphans' Portal") showing great similarity of style with this building.

The three-storied structure is distinguished for its excellent general proportions, and the color-effect of its materials (brick and stone), also for the graceful detail-work of the wrought-iron anchors and the shell ornament over the windows of the façades. The Gothic wooden sashes are a modern addition. The heavy sculptured work over the little front door occupied a different place in the original design; it formed the crowning of the front porch, which was, for some reason, torn down in 1844.

CORNER OF ALBEMARLE AND GRAFTON STREETS, LONDON, ENG.
MR. R. J. WORLEY, ARCHITECT.

PRIVATE BALL-ROOM: THE HAGUE, HOLLAND.



MEASURING REFLECTED LIGHT.—The following table shows the amount of light reflected from the various substances as compared with that which falls upon their surfaces, and has been compiled by Dr. Sumpner:—

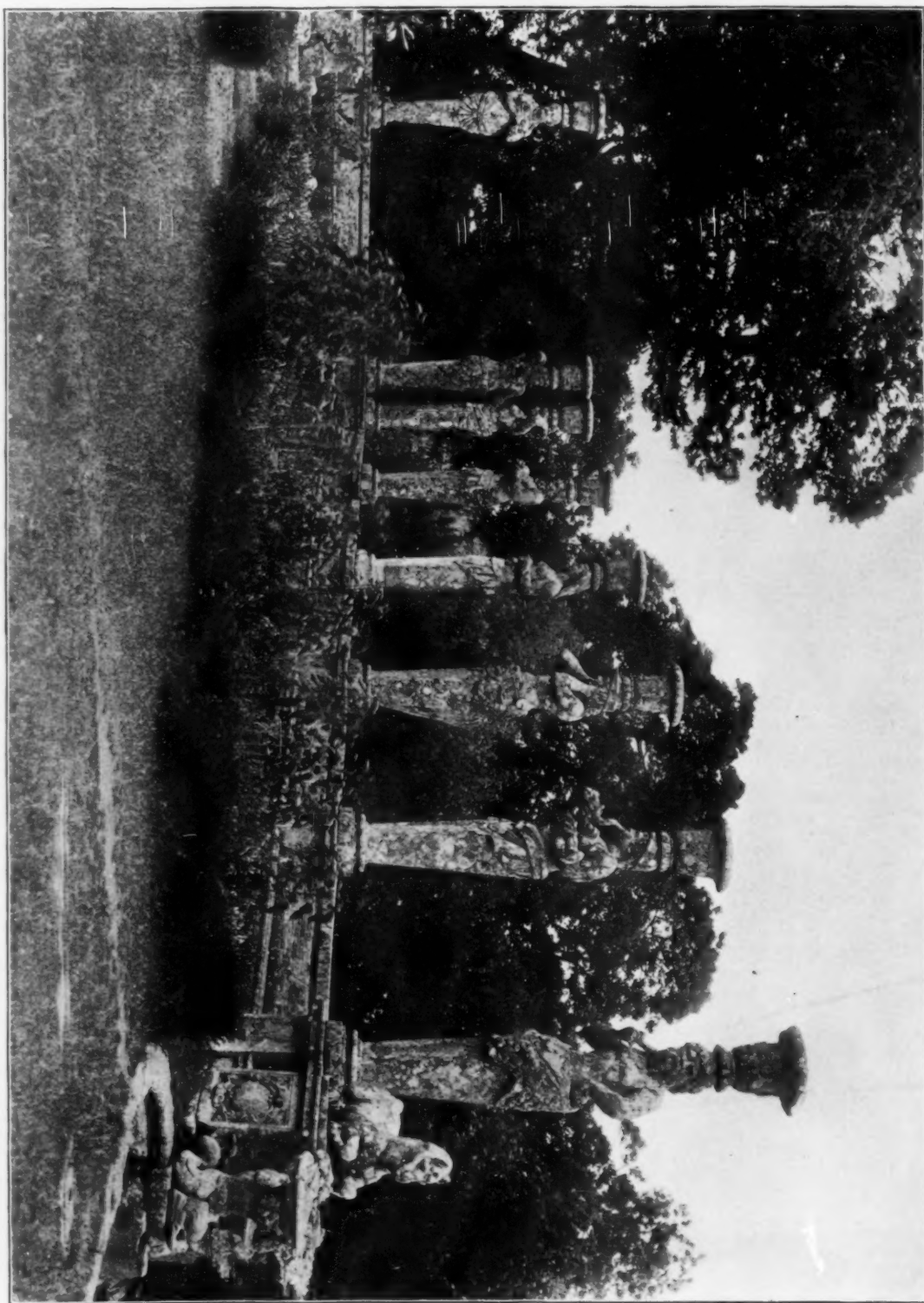
White blotting-paper	82 per cent.
White cartridge-paper	80 "
White tracing-cloth	35 "
White tracing-paper	22 "
Ordinary foolscap	70 "
Newspapers	50 to 70 "
Yellow wall-paper	40 "
Blue paper	25 "
Dark-brown paper	13 "
Dark-chocolate paper	4 "
Planned deal, clean	40 to 50 "
Planned deal, dirty	20 "
Yellow painted wall, dirty	20 "

— Boston Transcript.

SCULPTURE FOR THE INDIANAPOLIS SOLDIERS' MONUMENT.—The "Peace" group on the west side of the soldiers' monument is nearly completed. Like the "War" group, on the opposite side of the monument, the "Peace" figures are carved out of glacial limestone from Indiana quarries. There are about a dozen of the figures, all of heroic size. The central one is that of Columbia, 24 feet high. In the hand of the figure is the American flag in stone, on top of the staff of which is perched an eagle with outspread wings. At her feet is a negro, with a broken chain in his uplifted hand, typifying the end of slavery. Near the negro is a figure of a man with a broad stone apron spread over his knees, signifying Industry. Back of him stands an American soldier, swinging his army hat as if cheering for the end of a war. On the right of the central figure stand representatives of American womanhood and childhood. Above and to the rear of the group is an allegorical figure of Peace flying through the air, with a long palm in one hand and an olive-branch in the other. Rudolf Schwarz, who has carried out the design of Bruno Schmidt in the group, says that some of the figures in it are the largest that have ever been carved out of stone since the early days of Egypt, when some figures of kings were made which equal in size those on the monument. He says Europe offers nothing which will compare in size with the stone figures on the monument. — Indianapolis News.

OLD WALL-PAINTINGS DISCOVERED AT HAMPTON COURT.—Hampton Court Palace is continually yielding up hidden treasures of artistic and antiquarian interest, and, considering the wonderful intricacies of Wolsey's huge chateau, it is not surprising that every now and again "finds" of great historical value are brought to light. Some time ago the great Cardinal's private room was disclosed to public view, and now comes the announcement of an extraordinary discovery of what may prove to be an artistic treasure. A large number of the pictures there are in course of removal, in order to adorn the walls of Kensington Palace, which is to be opened to the public about May. Underneath the canvas and paper with which the walls were covered was what appeared to be painting. Subsequent careful examination showed that three sides of a room, which measures 41' x 34', were adorned with very fine paintings, in a very fair state of preservation, but disfigured by hundreds of holes caused by the nails which had been driven into the walls to hang the pictures. The ceiling of this apartment is painted by Verrio, and represents Queen Anne in the character of Justice. Whether the paintings on the walls are by the same artist has not transpired, but it is probable that they are. It has been decided to fill up the holes with suitable material and to engage the services of a well-known artist to repair the paintings and as far as possible to restore them to their original condition. This work will not be completed for many months, and in the meantime the public will be excluded from this apartment. — London Daily News.

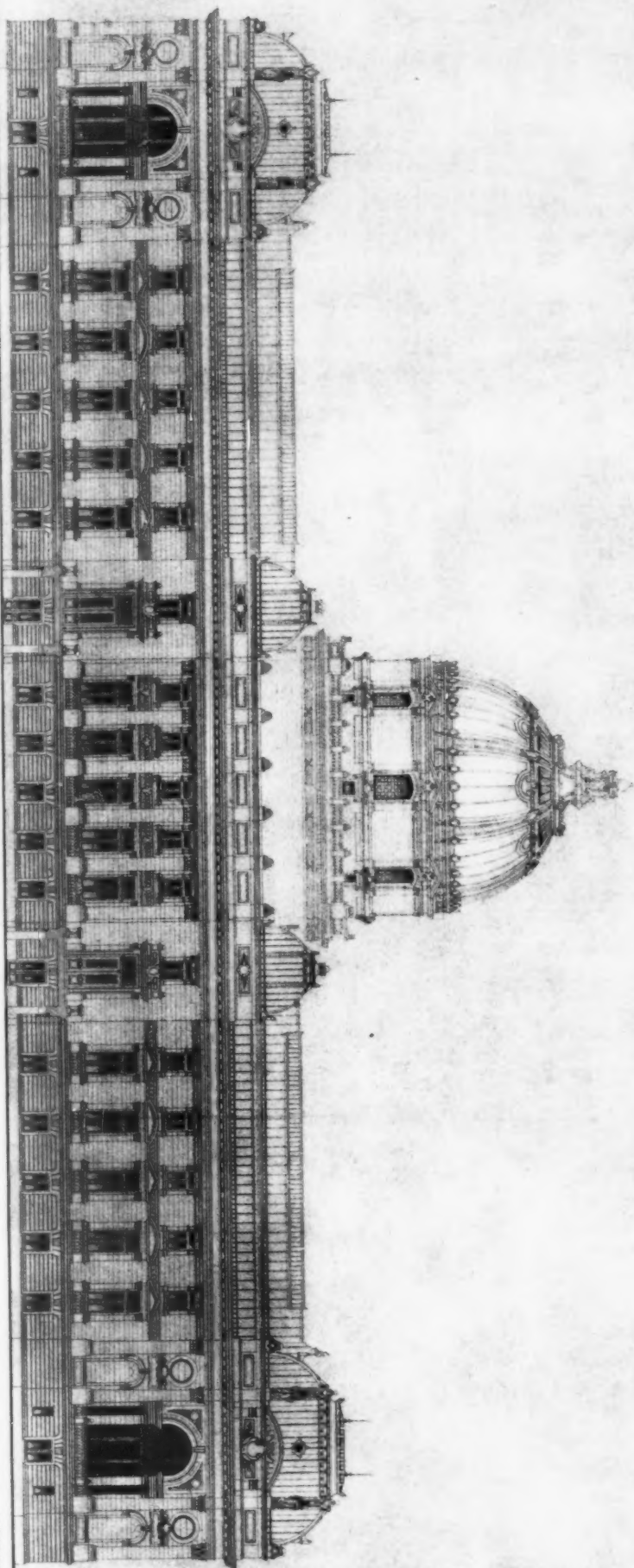
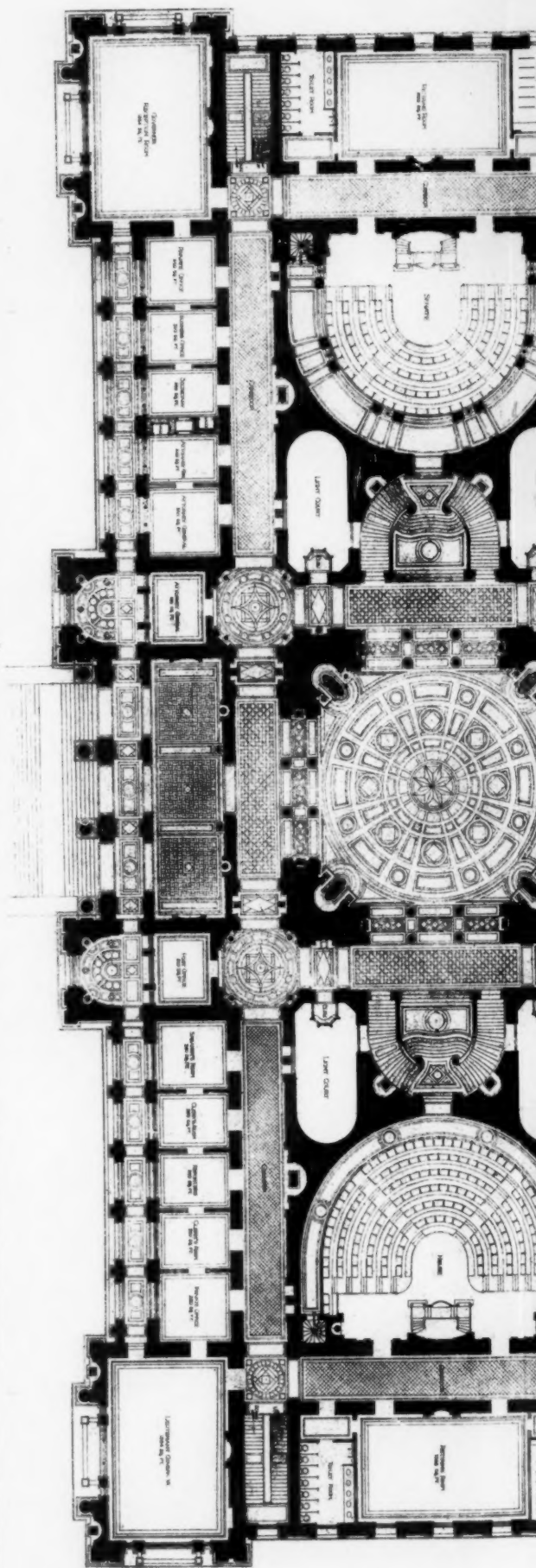
¹Groningen, a thriving manufacturing and commercial city, in the northernmost part of Holland, with a population of 65,000, was in the Middle Ages a free imperial city and belonged afterwards to the Hanseatic League, flourishing most about the end of the fifteenth century.



ACCESSORIES OF LANDSCAPE ARCHITECTURE LXVII:
GARDEN OF THE CARYATIDES: VILLA FARNESE, CAPRAROLA, SICILY.



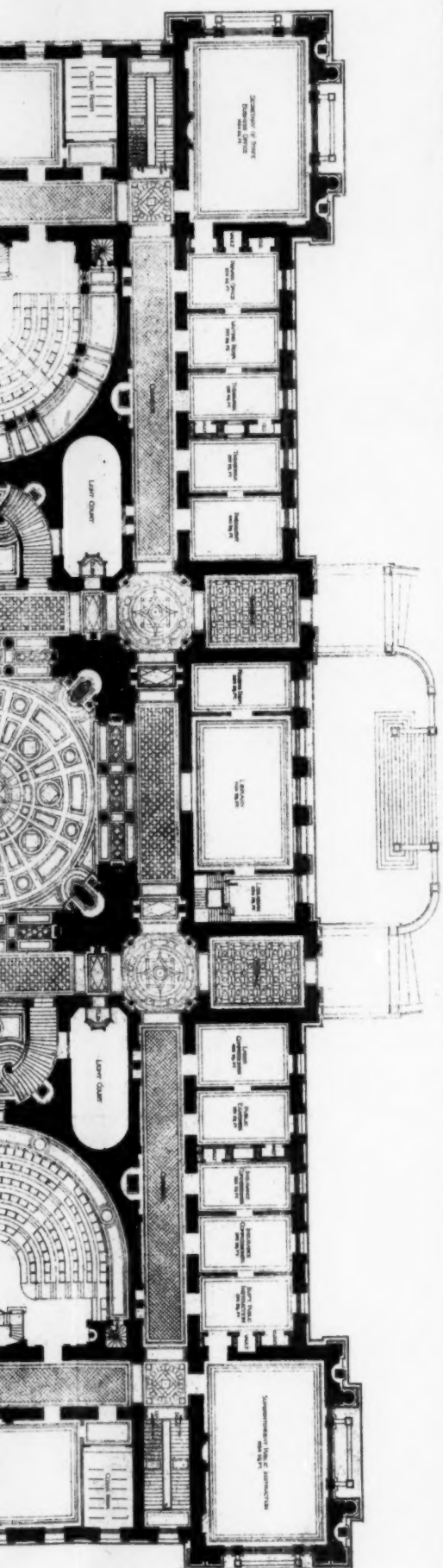
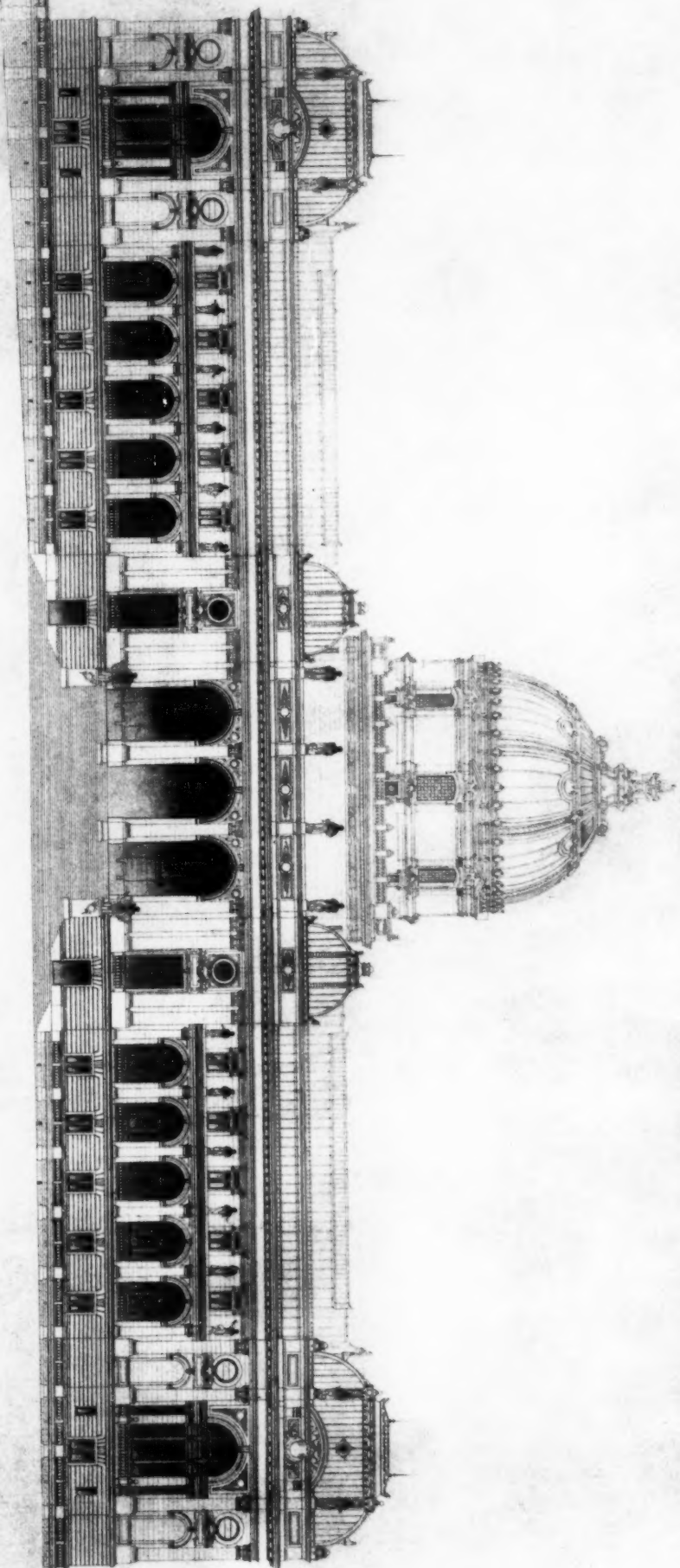
ACCESSORIES OF LANDSCAPE ARCHITECTURE LXVIII:
ENTRANCE TO THE GARDEN OF THE CARYATIDES: VILLA FARNESE, CAPRAROLA, SICILY.

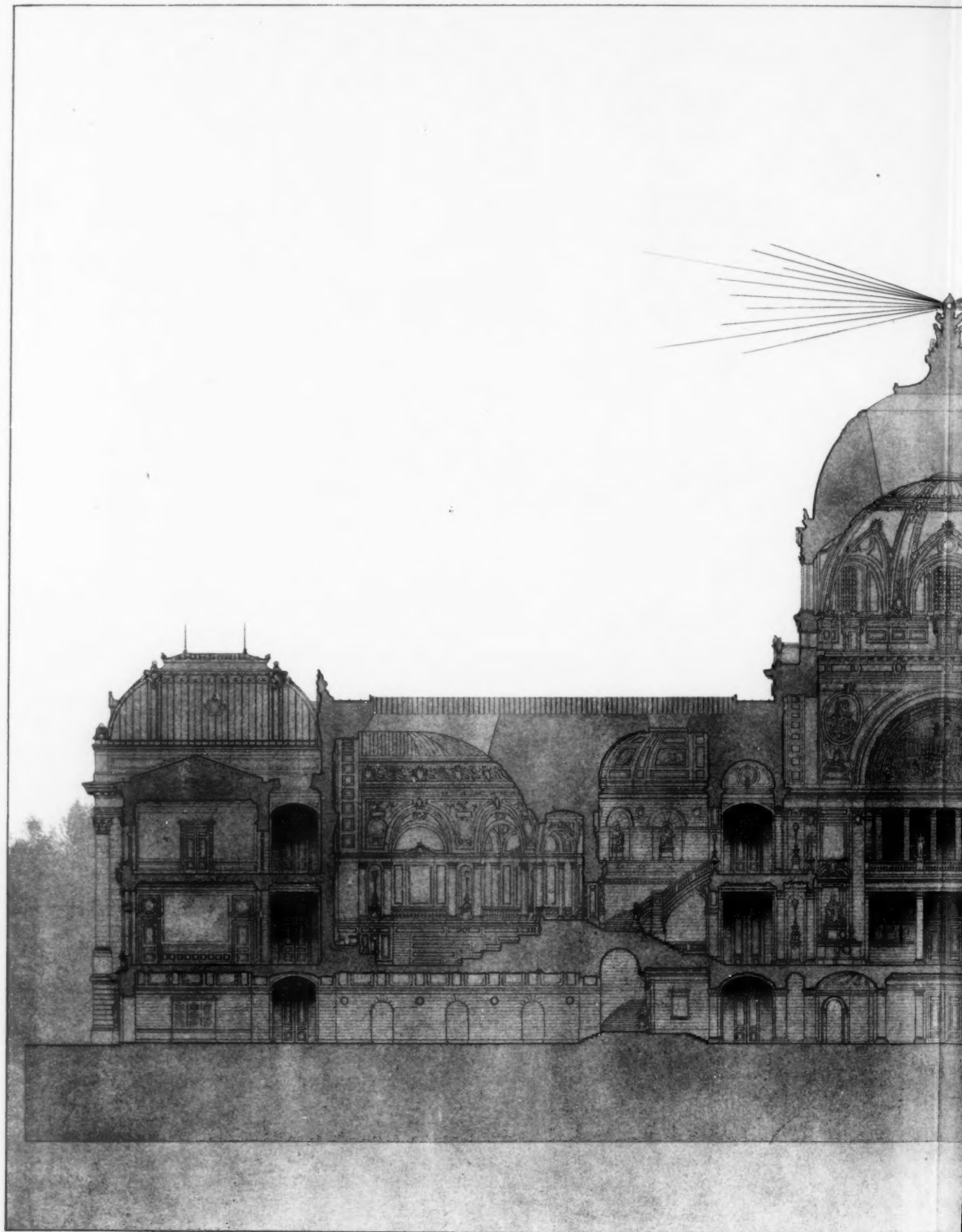


COMPETITIVE DESIGN FOR THE MINNESOTA CAPITOL, ST. PAUL, MINN.
J. L. WEES, ARCHITECT.

AMERICAN ARCHITECT AND BUILDING NEWS, APR 5 1899.

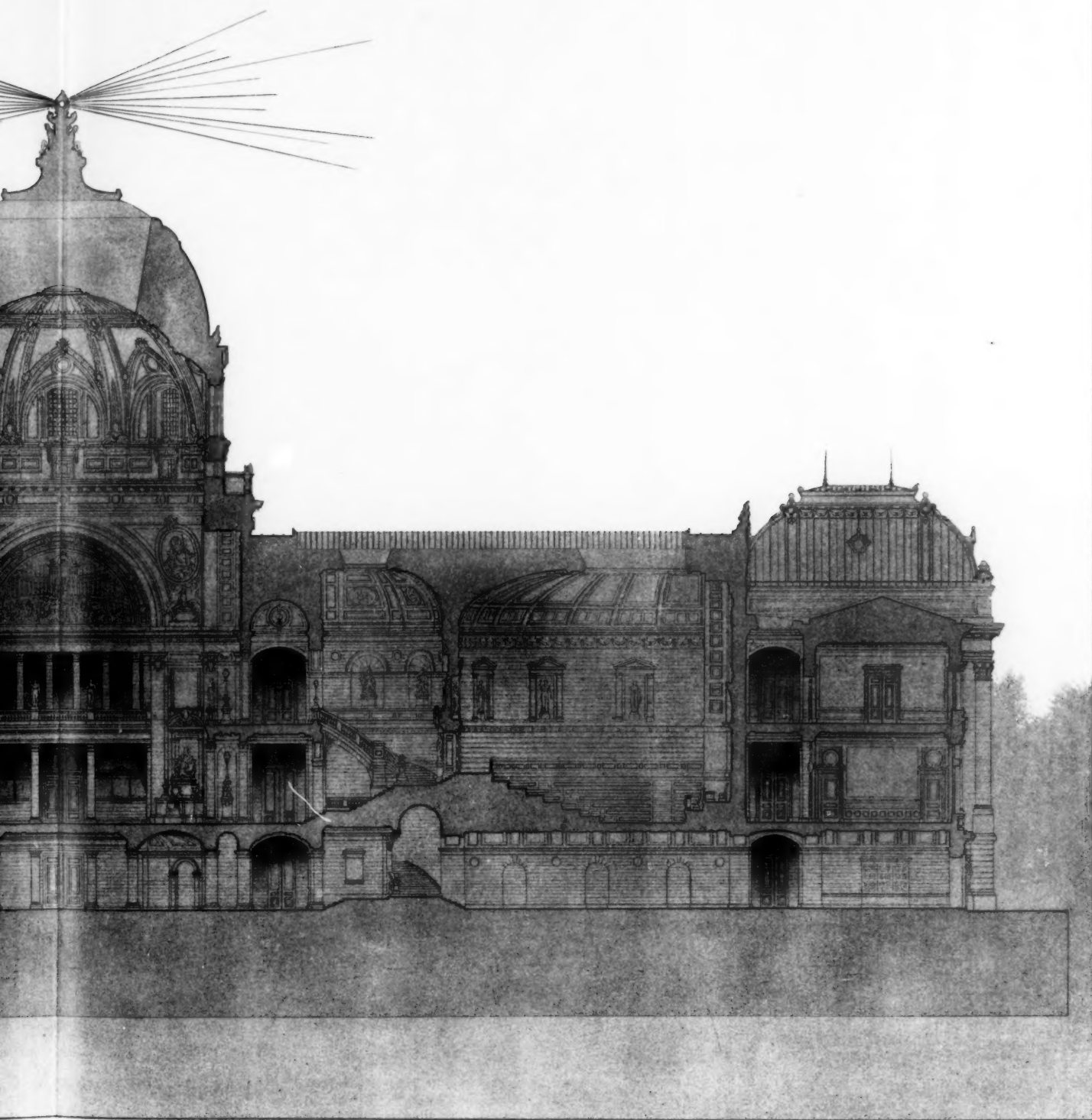
No. 1215.





COMPETITIVE DESIGN FOR THE MINN

J. L. WEES, AR



THE MINNESOTA CAPITOL, ST. PAUL, MINN.
L. WEES, ARCHITECT.

DESIGNED BY L. WEES, ST. PAUL, MINN.