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IT seems to be doubtful whether works of art are to be taxed under the new tariff, or not. The duty imposed by the House of Representatives was disagreed to by the Senate Finance Committee, and the Senate Bill was reported without it. Subsequently, the Finance Committee reconsidered its action, and decided to restore the House duty of twenty-five per cent; and it is said that this reconsideration has now been reconsidered, and that this paragraph of the Senate Bill will stand as originally reported. Meanwhile, as the matter must come up again in the Conference Committee, it is worth while to call attention to a curious oversight in the argument used in favor of the imposition of the duty. This argument was, in brief, that, under the present tariff, which does not impose a duty, a great deal of cheap foreign trash is imported, which would be kept out if the duty should be imposed, and our own productions substituted. Now, while we detest cheap foreign artistic trash as much as any one, and greatly prefer the more unassuming kinds of work produced in this country, it seems to us obvious that a duty of twenty-five per cent will do absolutely nothing to prevent the importation of trash, while it will shut out the great works of art which cannot yet be produced in this country, and which we need for the instruction of our own artists. It is said that costly pictures are the luxuries of the rich, and that they will buy them without caring whether the tariff adds a few thousand dollars to their cost or not. Every one who knows how pictures are bought must agree that this view is a most erroneous one. Nearly all fine and costly pictures are bought by rich men in a great measure for the public benefit. As we have before pointed out, almost every work of a great modern or ancient master which is bought by an American is sooner or later presented as a gift to the community. Even where the owner keeps such things during his lifetime, it is usual for him to show them freely to persons who wish to see them, to contribute them, often for months at a time, to loan exhibitions, and to send them, with conscientious anxiety to have them useful, to be hung in some public museum, in case of his own absence from home. It is, practically, solely by the generosity of rich men, who have plenty of demands on their purses, but who are willing to make sacrifices to give their poorer fellow-citizens pleasure and instruction which they could not otherwise enjoy, that all our great museums and galleries have been stocked with the priceless collections which they now show freely to the public. Some of these collections are already equal, in certain points, to those of European capitals, and every American must be proud to think that kindness of our private citizens has done

for the public, within the twenty or thirty years which have elapsed since Americans began to have leisure enough to study fine-art, a work which bears comparison with that which has been accomplished abroad, at the public expense, during three centuries of effort. If our people, or the law-makers who represent them, wish this accumulation of artistic treasures, made at private cost, for the public benefit, to go on, it is imperative that it should not be checked by tariff taxation. The man who is willing to pay ten or twenty thousand dollars for the sake of having a great thought of Lerolle, or Jules Bréton, or Millet, or Sir Joshua Reynolds, or an Italian cinque-centist, where he and his fellow-citizens can enjoy it, is just the man who counts with care every dollar that he spends, and who will give up the picture rather than pay for it a price which he considers temporarily and artificially enhanced. On the contrary, the people who, as the newspapers inform us, buy trashy foreign pictures because they are cheap, will certainly not be deterred by the addition of a few cents to their price. In such matters, it is absurd to suppose that purchasers haggle over cost, without regard to quality, and an American purchaser, least of all, would choose ugly faces and unpleasant color on his Easter cards, in preference to pretty ones, for the sake of saving a few cents a dozen. Our manufacturers and designers know well that the American public pays liberally for beautiful things, and the way to encourage the modest arts in this country is not to tax "trashy" things, so as to prevent us from buying them, but to let every one in the world who has something beautiful to sell bring it to us freely, so that we can choose the most beautiful, whether made by a fellow-citizen or a foreigner.

THE *Scientific American* describes some interesting tests of flooring materials, recently made by Messrs. William Gray & Sons, of Philadelphia, at the suggestion of Mr. Frank Furness, the well-known architect of that city. The investigators used an ordinary iron rubbing-wheel, such as is used by stone-workers for rubbing a smooth face on marble or sandstone. The samples to be tested were cemented to blocks of sandstone, and laid, face downward, on the rubbing-wheel, which revolved at the rate of seventy-five revolutions a minute and was kept supplied with sharp sand and water. The blocks to which the floorings were cemented were of equal weight, so that the rubbing was effected under nearly the same pressure in all cases. Curiously enough, the material which resisted best this severe test was india-rubber tiling, which, after an hour's rubbing, lost only one-sixty-fourth of an inch of its thickness. Next to this, English encaustic tile gave the best results, losing only one-eighth of an inch in an hour's treatment. The artificial stone known as "granolithic" was third, losing three-eighths of an inch; while North River blue-stone lost nine-sixteenths of an inch. All the marbles wore away rapidly. A piece of marble mosaic disappeared entirely in thirty-five minutes, while solid white Vermont marble lost three-quarters of an inch in an hour's rubbing. Most of the wood floorings, indeed, resisted abrasion better than the marble. White pine, for example, lost only seven-sixteenths of an inch, under treatment which removed nearly twice as much from solid marble. Yellow pine showed substantially the same resistance as white pine, while oak lost more than either of the pines. It would seem as if the treatment with water was hardly fair to the wooden floorings, which depend a good deal on their elasticity for resisting wear, but, even under such unfavorable circumstances, their superiority to stone is remarkable.

THE Administrative branch of our Government seems to be in earnest in its desire to preserve the public forests from destruction by reckless and irresponsible persons. A new set of regulations for their control has been prepared, and is now awaiting the approval of the Secretary of the Interior, under which the pasturage of sheep, the most destructive of all agencies, apparently, is prohibited in forest tracts in the regions of limited rainfall. Another grave peril is met by prescribing punishment, in the form of fine or imprisonment, for wilfully setting fire to any timber on the public domain, for suffering fires to burn unattended near any such timber, and for failing to extinguish camp-fires before leaving them. Mineral lands in the forest reservations are subject to location and entry, in the usual manner, but prospectors are forbidden to clear away timber except from their own claims. Under these restrictions,

actual settlers, and mining prospectors, are authorized to use, free of charge, such timber as they need for firewood, fencing, building and mining on their own claims. Although quite liberal enough, these regulations, if enforced, will do much to preserve the wooded tracts which still remain in the West, and which, according to the experts, form the only defence that the farming-lands of Arizona, New Mexico, Nebraska, Idaho and Western Kansas have against desolation. Whether Congress will provide means for their enforcement remains to be seen, but it is to be hoped that the settlers in the districts watered by the forest-fed rivers will have energy enough to insist on the preservation of the rights of which active and unscrupulous speculators are endeavoring to despoil them forever.

WHILE the farmers of the West are fighting for their lives against the destroyers of the public forests, it seems as if something might be done to restore to the Eastern States the forests which were once their pride, and the principal source of their wealth. Not having any figures at hand, we should not dare to say what proportion of the land east of the Alleghanies is cultivated, or really used for pasturage, but it is a small part of the whole, and the remainder is, as a rule, simply abandoned, and left to grow ferns and junipers, scrub-oaks and birches, which are beautiful to the eye, but of no use except as firewood, and are swept away at short intervals by fires. It is evident enough that soil which will produce brushwood will produce trees, and if the scrub-oaks and junipers could be replaced by well-grown pines, the land which is now useless would be as valuable as the German forests, which are considered the most precious inheritances of the great aristocratic families. The Germans have found out, what we shall soon learn, that, next to a supply of food, a supply of good timber is the most pressing of the material necessities of mankind. They have been wise enough to realize the value of their forests, and to take measures for preserving and extending them, and they have now not only a great and unfailing market at home for their product, but they are beginning to sell oak and other timber at their own price to their less prudent neighbors.

WE are often told, in palliation of the reckless destruction of timber in this country, that when our oak and pine are gone, we can buy more in Germany and Norway; but the Norwegian forests are not what they once were, and fir timber, instead of being exported from Norway in the rough, is now, to a great extent, sent out finished, in the shape of doors, sashes, mouldings and boards, so that importation of foreign timber would practically involve the closing of most of the establishments in which our own material is converted into available form, and the necessity for such importation could only be looked upon as a national calamity. Nevertheless, it is certain that this can only be prevented by a radical and extensive reform in our methods of using waste land. It is undoubtedly true that the establishment of forests can, in this country, be less conveniently carried out than on the great German estates, for the reason that such plantations succeed best where they are laid out and managed on a large scale; but there is nothing to prevent towns or States, or, better, syndicates of private owners, from accepting concessions, for a long term of years, of tracts which could be advantageously combined, and planted and managed together. The owner of a thousand acres of New England land, valued by the assessors at twenty-five cents an acre, and unsalable at anything approaching that price, would, probably, in return for the payment of the taxes, be glad to lease his property for a fifty-years' term, with the option of renewal for fifty years more, at an additional yearly rent, for the second term, of five cents an acre. With reasonable provision for withdrawal of portions of the tract, in case of sales or special improvements, such an arrangement should be at once very favorable for owners, and very profitable to the private or public corporation making it; and as the owners of the land would, probably, themselves be, in most cases, of the stockholders of the corporation, all the profit would go to them. It is likely that the first steps in carrying out plans of the sort would, for the present, have to be encouraged by public action, as, for example, by the exemption of planted forest lands from local taxation for a term of years; but it is quite within the power of towns, under existing laws, to agree to such exemption, and the temporary loss in revenue from such lands would, in most cases, be amply made up

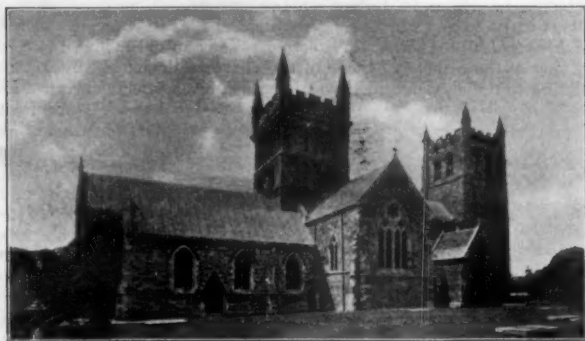
through the value added to other property by the active operations of the syndicate.

THE records of the Philadelphia Bureau of Building Inspection show that building is increasing in that city, more than four thousand permits having been issued since January 1, for work valued at nearly sixteen million dollars, while during the corresponding period of 1896, only about thirty-six hundred permits were issued for work to cost less than fifteen millions. An increase of a million dollars in six months would not count for much in New York, where almost all building operations are on a great scale, but it is quite significant for a city of small houses, like Philadelphia. In New York, although a great deal of important building work has been done and is still going on, the average of business is low, and the visitor notices more vacant stores than ever. This, in New York, does not always mean so much dull general business as a change of location for certain classes of business, but the shifting of retail trade from Broadway to Twenty-third Street and Sixth Avenue began long ago, and vacancies in Broadway stores can hardly mean anything except an unfavorable state of retail business as a whole.

PROF. ELIHU THOMSON writes to the Boston *Herald* a very interesting letter on the possible uses of liquefied air in industry, particularly in electrical work. It is well known that air, which was, until within a very few years, considered a "permanent gas," that is, a substance incapable of being condensed to a liquid form by any treatment, is now furnished in the liquid condition on a commercial scale, and at a low price, the processes of compression and condensation having been made comparatively simple. It does not seem as if there would be much demand, among ordinary people, for liquid air, but Professor Thomson points out this substance as one of the most perfect insulating materials known, while the intense cold produced by its evaporation, communicated to a metallic conductor, like copper, has the effect of reducing greatly its resistance to the passage of an electric current. Consequently, if a copper wire could be kept at a temperature of one hundred and sixty degrees below zero, or thereabouts, which would be quite possible if it were immersed in liquefied air, its resistance would be so diminished that it would carry a much larger quantity of electricity than it could carry at ordinary temperatures, while the excellent insulation afforded by the liquid air would prevent loss of current which might otherwise take place, and would enable currents of very high intensity to be transmitted safely. Evidently, there would be difficulties, with our present knowledge, in arranging to keep a long wire surrounded with a jacket of liquid air, but Professor Thomson points out that, so long as the air remains at the low temperature at which it is formed, its tendency to resume its gaseous form is not very violent, so that, if enclosed in a receptacle well insulated from heat, it may be kept unchanged for a long time. That it would be practicable to apply such insulation to a long line of wire he does not at present claim, but it might be, even now, quite possible to submerge transformers in a box of liquefied air, surrounded in its turn by a non-conducting packing, and their efficiency would be much increased by so doing. As a means of distributing power, also, Professor Thomson thinks that liquid air, ready, on the application of heat, to expand a thousand times or more in volume, might be available, but long experimenting will be necessary to determine how far it can safely be used in that way.

THE question of providing for the public architecture of the United States is likely to find a tolerably satisfactory answer under the administration of the present Secretary of the Treasury, who has issued an order putting in force the provisions of the Tarsney bill. It is understood, too, that the new Supervising Architect is to be chosen by competitive examination, and that the American Institute of Architects will be represented in the examining board. The new Supervising Architect will hereafter, it is understood, devote himself mainly to the conduct of the business of the office, while the designing of new buildings for the Government will be, so far as existing laws permit, entrusted to private architects, selected by some form of competition. What that form will be, remains to be seen, but Secretary Gage apparently appreciates the value of good architecture, and understands professional ideas in regard to the methods of getting it.

WIMBORNE MINSTER.



Wimborne Minster.

WIMBORNE is the smallest of the three magnificent Norman churches, which form an elongated triangle (if such a term may be used) in the South of England between Poole Harbor and Southampton. It was a foundation of Edward the Confessor's upon the site of an ancient nunnery, destroyed by the Danes between 978 and 1015, and consisted of a deanery of secular canons.

The church is cruciform with two towers, the central one being the oldest part of the church. This lantern tower has four stories, three of which are open to the church. Formerly it was surmounted by a late thirteenth-century spire, which unfortunately fell in the year 1600. It is thought that the lower part of this tower formed part of the original building—its massive piers and arches, the plain capitals and bases of the shafts alike denoting the earliest style of Norman architecture. The eastern and western arches are wider than those on the north and south, possibly to allow of a better view of the altar, which is approached by a high flight of steps. Although there is so much difference in the width of these arches, the springings and apices of them all are so arranged that they begin and end exactly in the same place. This is done by making the wider ones depressed, and the narrower ones stilted, the chancel being about 18 inches narrower than the lantern. The walls on each side are brought forward, and take the place of the column which should have supported the outer order of the arches at the east side. Above the lower compartment of the tower are three other stories—the triforium, the clerestory, with two windows giving light to the lantern, and a belfry story shut off from the church. The triforium has two pointed arches on each side, enclosing four round ones with Purbeck marble shafts, and rude, but well-carved capitals. This is repeated on the exterior. The parapet and pinnacles of the tower were erected in the seventeenth century, after the fall of the spire.

In the nave may be traced work of three different styles—Norman, Decorated and Perpendicular. The columns are single shafts, massive and strong, supporting pointed arches decorated with a shallow chevron ornament: this combination of Norman ornament upon a pointed arch is exceedingly rare. Above the transition arches (four in number) are the round-headed clerestory windows of the original church. At the end of the Norman part of the nave was the original west wall; the piers at this spot illustrate the change—a Norman half-pier, a piece of wall, and then a half-pier of later work, bounding the two remaining arches, which are probably of the



Nave, looking East: Wimborne Minster.

Decorated period—the middle of the fourteenth century. The aisles of the nave belong to the Decorated period.

The roof is of pitch-pine, with hammer-beams.

The most beautiful part of the church is the Early English choir, probably, originally, the Lady Chapel, added on to the Norman church about the year 1220. The central light of the east window

contains some fine fifteenth-century stained-glass brought from a suppressed convent in Belgium in 1837. The mouldings of the arches are very rich, supported upon Purbeck marble shafts. In the side aisles of the chancel may be seen the bases of columns, showing that originally the Lady Chapel was on the same level as the aisles, with a passage behind the Norman high altar. This is now raised upon a broad flight of steps, and underneath is the crypt—an alteration dating from about the year 1300. Hutchins, rector of Wareham, and the author of the celebrated "*History of Dorset*," writing in 1774, calls the crypt "St. Mary's Chapel." The latter is vaulted, two sets of columns supporting the vault.

The sedilia and several piscinæ are noteworthy examples of the Decorated period.

It may interest architects to learn the exact distribution of the steps leading up to the altar, for this is a noteworthy feature of the church. At the entrance of the choir, five steps; leading to the presbytery, seven; another, half-way to the presbytery, and a fourteenth close to the altar—all within a space of about 60 feet. This arrangement will be seen to be very imposing, and would add much to a fine ceremonial, which, unfortunately, Wimborne Minster does not at present enjoy.

A very curious custom, nevertheless, prevails in this part of the church: the use of houseling or eucharistic cloths of white linen, covering three benches—the cloth being the remains of Catholic usage, the benches of Puritan times, when communicants were wont to sit around the table. The benches with their cloths are still used instead of altar-rails.

Under a pier arch in the south side of the presbytery is a very fine Purbeck marble altar-tomb, bearing the effigies of John de Beaufort, Duke of Somerset, grandson of old John of Gaunt, and his wife Margaret, daughter of Sir John Beauchamp. They were the parents of the Lady Margaret, Countess of Richmond, the mother of Henry VII. The figures are in alabaster: he is in full armor, clasping his wife's hand; she, in the picturesque costume of the period. At the



The Nave, looking West: Wimborne Minster.

upper end are two angels, supporting the pillows upon which their heads rest; at the other, a dog and an antelope support, respectively, their feet. Above, hangs a tourney helm of the fifteenth century, weighing fourteen and a half pounds.

Upon a Purbeck marble slab is a small brass representing the Anglo-Saxon king, St. Ethelred, son of Ethelwolf, elder brother of Alfred the Great, who is supposed to have been buried upon this spot; but the brass is not older than the fifteenth century. The inscription is as follows:

"In hoc loco quiescat corpus St. Ethelredi, regis west Saxonum martyris, qui anno dom, 873 23d die Aprilis, per manus davorum paganorum occubuit."

The Etricke tomb is a witness of the eccentricity of the first Recorder of Poole, who committed the Duke of Monmouth after the battle of Sedgemoor. He was offended, tradition said, with the Wimborne folks, and vowed that, out of revenge, he would neither be buried in their church nor in their churchyard; and so he obtained permission to cut a hole in the wall of the church, in which he placed his coffin, and dated his death 1691, in readiness; but he actually lived twelve years longer. The coffin tomb is brilliantly decorated with shields bearing the family arms, a sum of money representing 20s. a year having been left for the purpose of keeping it in order.

Another curious relic is a chest hewn out of a solid trunk of oak. Its length is 6½ feet long, but the cavity within is only 22 by 9 inches, and 6 inches deep. The lid has the remains of six locks, which were added to it when it was appropriated as a receptacle for deeds—possibly to insure safety, six persons having each a separate key, which obliged the whole party to be present at the opening. It was opened in 1737 when deeds were taken from it bearing as early a date as 1200; but its original use was probably for the preservation of relics, probably those of St. Cuthburga—or of valuable plate. It is thought to be at least a thousand years old. The parochial accounts, dating back to 1475, are contained in another old chest, but of a later pattern.

A very handsome Renaissance monument is the work of an Italian

sculptor. It was erected to the memory of Sir Edmund Uvedale, Knight, who died in 1606, by his widow, "in dolefull duety," as the inscription has it. It consists of a solid base rising about 4 feet from the ground, having at each end a Corinthian column of dark marble, supporting a moulded cornice and entablature. The old warrior reclines on his right side, arrayed in full armor and holding his gauntlet in his left hand. His head rests upon his right hand,



Choir and Presbytery: Wimborne Minster.

the face wearing a beautiful expression. Above hangs a valuable specimen of a knight's helmet, possibly Sir Edmund's own. The monument is ornamented throughout with festoons of flowers, fruit, and agricultural implements, most exquisitely modelled and colored, as is the whole work.

Near by were buried two daughters of Daniel Defoe, but the memorial slab has perished.

A few fragments of fresco-paintings were brought to light when the church was restored.

The south transept was restored at the expense of some members of the congregation, and an exquisite stained-glass window by Messrs. J. Powell & Sons of Whitefriars Glassworks, inserted to the memory of one of the family. This is quite one of the best specimens of modern stained-glass, being on the lines of thirteenth-century work, (as seen at Chartres in such profusion); absolutely sparkling with transparent colors like rich jewelry. There is a similar window by the same artists at Romsey.

Attached to the church is a curious library of theological and classical books chained to their shelves as a precaution, in this earliest of free libraries, against theft. It was founded in 1686 for the use of the inhabitants by one of the three priests attached to the Minster. Formerly, two or three of the Bibles were chained to a desk in the church, as may be seen also at Great Yarmouth and other churches.

One of the curiosities of the collection is a black-letter "Bishop's Bible" of 1595, printed by Christopher Barker and known as a "Breeches" Bible, from the passage in Genesis iii: 7, reading: "They sewed figge-tree leaves together and made themselves breeches." The oldest work is a manuscript, dated 1343, on vellum, with some illuminated initial letters. Sir Walter Raleigh's "History of the World," 1614, has had a hole burned through 104 of its leaves, an

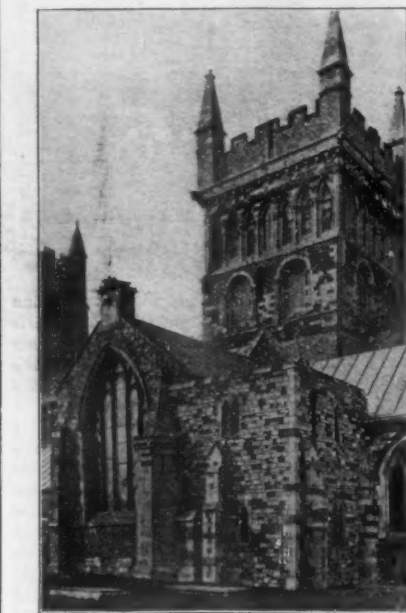


Entrance to Choir and Crypt: Wimborne Minster. Showing the original level of the columns compared with the other side.

accident due, it is said, to the carelessness of no less a personage than Matthew Prior, who was a native of the town and who, falling asleep over the book, let fall the candle. But there is not the slightest evidence as to the perpetrator of the deed, or to the name of the very careful mender of the mischief, who placed a piece of paper over each hole, and restored the text so accurately that few persons would note the damage.

In a glass case there is a copy of Anselm's works printed as early as 1485, an old black-lettered volume with a fine margin. A fine copper-plate title-page to Burton's "Anatomy of Melancholy," 1638, is noteworthy and also a print representing the Black Prince, in Barnes's "Edward III." Another interesting relic is an old copper-plate engraving of the Minster. Some of the charters, deeds and documents relating to the church and Royal Peculiar, bear date as early as Edward I. (A "Peculiar," in Canon law, signifies a particular parish or church that has jurisdiction within itself for granting probates of wills exempt from the ordinary and Bishop's Court. Royal Peculiars are exempt from all spiritual jurisdiction.) In one of the church books there is a curious entry: "Paid for fetching a glazier, 4d. Expenses of the glazier and his horse for five days, while he was glazing the new window at the west end of the church, 4s."

The Minster has a second tower at the west end, built between 1448-70, to contain the bells. Although very solidly constructed, the walls being nearly 6 feet deep, it early gave signs of weakness, and in 1568 the western door was bricked up. Here is a curious entry in 1664: "Paid in beere to the ringers for a peale to try if the tower shooke, 1s." But more curious still is the account of the proceedings of some eighteenth-century church wardens. These gentlemen bricked up some windows and pierced others; brought the ringers down a story, and finally arranged the basement of the tower as a receptacle for the parish fire-engine, which had to be trundled through the church when required for use. The fire-engine has now given place to the font and a curious orrery. The former is of Purbeck marble (late Norman)—an octagonal basin standing upon eight small marble shafts.



Lantern Tower: Wimborne Minster.

The orrery is the work of Peter Lightfoot, the ingenious Glastonbury monk, who constructed the great clock of the same character in Wells Cathedral. It was made in 1320, and represents the Ptolemaic system of the sun revolving round the earth, which is the centre of the universe. The motive power is the clock above. Outside, and in connection with the clock, is a military figure standing on a little platform on the tower, called the "Jack-man" or "Quarter-jack" erected in 1600; he is clad in military costume and holds a hammer in each hand, with which he strikes the bells on either side every quarter of an hour. The oldest of the bells is the tenor, weighing 36cwt., and bearing an inscription: "Mr. Wilhelmus Loringe me primo fecit in honorem S^{te} Cutbergæ renovarbar sumptu parochiali per ab Anno Domini 1629." Loringe is said to have been a canon of Wimborne in 1384, but no date is attached to the bell. The seventh bell is dated 1798; the sixth, 1600, and is inscribed: "Sound out the bells, in God rejoice"; the fifth is dated 1598—the motto "Praise thou the Lord"; the fourth, 1686,— "Pulsata rosamund

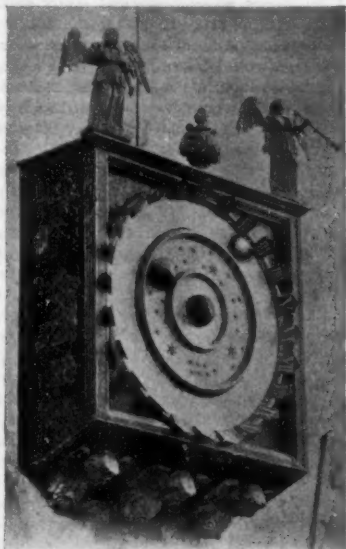


Somerset Tomb: Wimborne Minster.

accident due, it is said, to the carelessness of no less a personage than Matthew Prior, who was a native of the town and who, falling asleep over the book, let fall the candle. But there is not the slightest evidence as to the perpetrator of the deed, or to the name of the very careful mender of the mischief, who placed a piece of paper over each hole, and restored the text so accurately that few persons would note the damage.

maria vocata — S. M. V.”; the third, which was the treble of the old peal of six, was added to the five in 1685, by Samuel Knight: “*Sum minima hic campana, at inest, sua gratia parvis.*” The two remaining bells are modern. The brass eagle is handsome — 1623 — and worthy of study.

Wimbourne was a Roman camp, called by them “*Vindogladia*.” Camden says it probably received that name from being situated between two rivers, “for *Windugledy* in the British tongue signified ‘between two swords’; and rivers, by a peculiar phrase of their own they termed ‘swords,’ as appears by *Aberdugledian*, the British name for Milford Haven.” The Saxons retained the first part of the old name, *Win*, and added to it *bourne*, “a river.” There are Roman remains all about the country, roads, barrows and camps, and the place seems to have been one of importance. But its rise to fame took place in or about 700, when St. Cuthburga, sister of Ina, the West-Saxon king and founder of so many religious houses, set up a nunnery upon the peninsula formed by the two rivers, being exactly the kind of situation beloved of our monastic forefathers. Cuthburga had been married to the king, variously named, of Northumbria, “but upon discontent, was divorced from him,” and retired to the monastery of Barking, near London, for a period; after which she founded the nunnery at “Winburn.” Here she “macerated her body with continual watchings and fastings. She was humble both to God and man, and mild to all.” That she ruled wisely and well is shown by the choice of one of her community, St. Lioba, as head of a monastery of Virgins at Bischoffsheim, founded by St. Boniface. The convent flourished during the reigns of the Saxon kings, but was totally destroyed by the Danes, when they overran this part of the country, between 978 and 1015. When Edward the Confessor came to the throne, he endeavored to restore the wrecked churches and religious houses, and Wimborne he rebuilt as a college of secular canons, consisting of a dean, four prebends, four vicars, four deacons and



Astronomical Clock: Wimborne Minster.

five wax candles to be burned about the bier (why five?), and two on the altar, for bell-ropes, 16*d.*; and to the ringers of the bells, 8*d.* The residue to be distributed to the poor — some to receive 1*d.*, some 2*d.* The Lady Margaret also founded a school in connection with her chantry, and at the suppression of the college, the former was retained. In Queen Elizabeth's reign it was remodelled, and turned into a free grammar school.

The church formerly possessed ten altars with many costly images of silver and alabaster, and vessels ornamented with precious stones — all, alas! destroyed. Relics, too, abounded — some of the usual sort, as a piece of the true cross; but others less common — a large stone from the sepulchre, a piece of the altar of the temple, at which Our Lord was presented, part of His clothes, hairs of His beard, a portion of the pillar to which He was bound, some of the ground from the manger, part of the alabaster box. And then comes a curious list: one of St. William's shoes, and part of one of St. Agatha's thigh bones, one of St. Philip's teeth and a portion of St. Thomas à Becket's blood. The stones which martyred St. Stephen were everywhere — there were doubtless many of them; but how should the hair shirt of St. Francis have found its way to Wimborne? The last item is part of the cord which bound the thighs of St. Anthony. Relic-keeping may lead to superstition, and superstition is undoubtedly bad; but with all our vaunted progress and enlightenment, we cannot help feeling a regret that the faith which encased these frequently fraudulent relics, in their rich shrines and reliquaries, is no longer with us; for faith stimulated art and fostered it; and now the jeweller and the goldsmith have no encouragement for work other than that which will deck out a woman of the world and make her sparkle in the eyes of Mammon. Religious art is dead, miserably sacrificed upon the altar of Puritanism, and it will take many a generation to revive it to its pristine beauty.

The church fabric has these dimensions: — Interior length, 186 feet; width across transepts, 102 feet; central tower, 31 feet square, 84 feet high; nave, 67 feet long, 53½ feet wide (with aisles); choir, 30 feet long, 21 feet wide (without aisles); north transept, 42 feet long, 18½ feet broad; south transept, 33 feet long, 18 feet broad; west tower, 31 feet square, 95 feet high. S. BEALE.

THE ARCHITECTURAL SCHOOL OF THE BERLIN TECHNICAL COLLEGE.¹

WHEN I handed in the title of this paper, I was under the impression that the time available for reading it would have been the conventional “one hour” generally given to a lecture, and I had intended making an attempt to describe the chief feature of a well-known German technical college in all its departments. As it has been found necessary, however, to reduce the time available for each paper to twenty minutes, I am afraid that I shall have to confine my remarks to one of the sections of the institution with which I am to deal.

This institution is the Royal Technical College at Berlin, which, to my mind, is the leading establishment of its kind to be found in the German Empire, or, for the matter of that, in German-speaking countries, Austria included; and the section to which I shall devote my remarks more especially will be the architectural school or division of that institution. As an architect who has studied there, and has enjoyed the facilities of this special division, it will be easily understood that I should give preference to the department of which I have had considerable personal experience.

In the first place, I would give a brief outline of the origin of this institution. The Berlin Technical College, as it now stands, has been in existence for only thirteen years, for it is since 1884 that it has occupied the premises it now holds. The scheme of organization on which the establishment was based dates, however, from 1879, the intervening period being utilized chiefly for the preparation of the necessary buildings, which were designed and executed on a lavish scale. The present nature of the institution has grown out of an amalgamation of the old Architectural Academy at Berlin with the Engineering Academy of the same city, which previously had separate existences. Both had passed through similar phases of development, both having been started in a very modest way during the early years of the present century. These establishments were organized under the Prussian Government, and both were owned and practically managed as the property of the Prussian people. The new institution is also essentially a Prussian one, on which the Government of that country spends annually a considerable sum of money, and this point as to ownership of the original and, subsequently, of the new establishments, is an important feature to be remembered.

The old Architectural Academy to which I have just referred, though only in working in the opening days of the present century, officially dates from April 8, 1799, when a charter for a new “*Bauschule*,” literally “building-school,” or better, “school of building construction,” was signed by the then reigning king, Frederick William III. Its organization was primarily intended for the education of architects and surveyors who proposed entering Government service. The first curriculum of this early period included no less than twenty-three subjects, and though the qualifications for entry to the classes almost solely consisted in the possession of a good character and elementary education, the scope of the instruction was by no means limited. I should, perhaps, add that this institution was one of the first of its kind on the Continent. The old “building-school” very soon became popular, and consequently its development was rapid; so much so, indeed, that greater restrictions had to be placed on those wishing to become students. A few years later we hear that one year's practical experience in an architect's or surveyor's office was a primary condition for attendance at these classes. In 1801 no less than fifty pupils attended the schools and in 1805 the number had risen to seventy. Here I would particularly emphasize the fact that the establishment embodied only the requirements indicated by its title; it was a building-school, pure and simple, not an architectural school in the modern sense. The classes were essentially of a practical nature. Architecture as an art, and design from an artist's point-of-view, were subjects dealt with by the Prussian Royal Academy of Art, which had then, as it has now, its architectural studio, and to which members of the “*Bauschule*” might belong. It was not until the year 1828, when Professor Stier was one of the leading masters of the old establishment, that the art side of an architectural education received the attention that it had long merited from the executive, and soon after, in 1835, more suitable accommodation for the development of this side was found in an extensive block, especially erected by Schinkel. In 1849 the building-school underwent reorganization and became a *bona-fide* architectural academy, managed on university lines, and with all the freedom traditionally associated with German university life; and this not only refers to the organization of the establishment as such, but also, on the one hand, to the spirit with which the masters treated students, and on the other, to the manner in which the students applied themselves to their studies. The organization of 1849 practically remained unchanged until the great amalgamation of 1879 already alluded to. Throughout this period the courses were followed by an examination, which entitled

¹ A paper read by Mr. Edwin O. Sachs, at the Congress of Technical Education.

the successful candidate to certain claims for Government employment, and gave him the title of a Government architect, even if he did not choose to avail himself of a public office, but to practise privately as an architect or surveyor.

It would lead me too far were I to touch in a similar manner on the interesting development of the Engineering Academy, and hence I shall only note that in 1821 it was first known under the title of the Berlin Technical School. Its development was, as I have said, not unlike that of the Architectural Academy, both as regards classes, conditions of entry, and so on, while in 1850 it was similarly reorganized on university lines, and from that date became an engineering academy proper. Mechanical and mining engineering, naval architecture and chemistry were comprised in its programme, and each of these sections was, to a certain extent, regarded as a separate department of the establishment.

The amalgamation of these two academies took place, as stated, in 1879, and resulted in the establishment of the Royal Technical College, which in every way possesses a university status, and is in no way to be compared to what we term a "technical college" in this country. In order that the College may offer the best opportunities for the most efficient education, the executive retains the leading men of the time for its professorial chairs. The social and educational status of the student is high, for every candidate is expected to have enjoyed a superior education at a first-class school. From a German point-of-view, the expense of sending a youth to this college is by no means a small matter, though it may seem slight in comparison with English university fees. The whole time of the student has to be given up to his college work, a full course of instruction occupying four years or perhaps longer. The Royal Technical College has its five distinct branches, or, if I may apply the academic term, faculties, i.e., (1) architecture; (2) civil engineering; (3) mechanical engineering; (4) mining engineering, chemistry and mineralogy; (5) general technical science. Each division has its distinct head, who is generally a *savant* of considerable experience elected from the body of professors of the section in question, and the chancellor, vice-chancellor and general council of the establishment are elected on similar lines, subject to the approval of the Government and the sanction of the sovereign. The professorships are in the gift of the King; the tutorships are granted by the executive. The students rank with university students, and their characteristics and pastimes are almost identical. The Royal Technical College is housed in what is doubtless the finest building ever devoted to an educational establishment of this description; in fact, it is quite a palace, having considerable architectural pretensions. It cannot be too much impressed on those who have witnessed technical classes carried on in almost squalid surroundings, how important it is that we should give to technical students a home which in every way embodies the achievements of this age of progress in technical science, and does credit to the period of architecture to which it belongs. I should much like to have described the beautiful building, and its practical equipment, which might well serve as a model to the world, though its conception is perhaps almost too elaborate and too costly from an economic point-of-view. I must, however, content myself with saying that its dimensions are approximately 700 feet by 300; that it has five courts, of which the central one is covered-in, and that it has four stories, all of considerable height. Its lecture-rooms are spacious and numerous, and its classrooms and studios thoroughly serviceable and well lighted. The number of students for which it was intended was 2,000, and to-day, although there are 2,913 on the books, it still admirably fulfils its purpose, though the popularity which its educational facilities have won for it will, no doubt, soon compel a considerable extension being made. Of these 2,913 students, I should here, perhaps, at once add that there are only 366 architectural students fully matriculated, with 221 non-matriculated, making in all 587; whilst the mechanical engineers number together nearly 1,300. I should also, perhaps, add that there are a considerable number of foreigners among the students, Russia, for instance, regularly sending a large contingent.

But, turning now to the courses available for students of the architectural section, I ought first to say that besides the subjects taught in the architectural division proper, much that is valuable is to be learned from the civil engineers' department, in general technical classes, etc., and special facilities are afforded to the architectural student for attending suitable lectures in other sections. The architectural division has eight ordinary and twelve extraordinary professors, and fifteen tutors headed, as I have said before, by a divisional chief elected from among the professors. The courses available include a large number of different lectures on various periods of architectural and art history. Further, elementary and advanced drawing, freehand, perspective, geometrical and architectural draughtsmanship, water-color work and modelling. Then, again, there are classes for the general planning of private dwellings and public buildings of all descriptions, for design in various specific styles and for divers purposes, the designing of ornaments, of furniture, of lead-glazing, metal-work, etc. In addition to these, there are exhaustive lectures on the evolution of particular features in design, such as that of ornament; while among the more practical subjects every form of construction is taught, from the simplest brickwork to the most complicated iron roofing. The characteristics of different materials are also important subjects dealt with, as are heating and ventilation. Special forms of building are also treated as separate subjects, as well as the various equipments. For in-

stance, we find lectures on the necessary appliances for hospitals, prisons and libraries. Building legislation is, moreover, not overlooked. Turning to the lectures which are given in other sections, we find those on mathematics, physics, statics, geology, chemistry, book-keeping and general elementary law included in the curriculum of the general science division, and in another department the housing of the working-classes—in fact, there are few German requirements which are not fully attended to at this college. I use the expression "German requirements" advisedly, for sanitation, which really occupies a very secondary position in a German architectural practice, receives similar treatment at this institution. And again, the measuring-up and sketching on the spot, which we consider so important, the German architect does not appear to appreciate, and as a subject of study is almost overlooked in the Berlin curriculum. Of course, the student has to select his own subjects, and to distribute them over the four years which he spends at the technical college, and if we turn at random to the list of subjects taken up by a first-year man on, say, a Tuesday, we may probably find that in the forenoon he attends lectures of an hour each in mathematics, elementary construction and a class of elementary drawing, and in the afternoon, perhaps, a lecture of one hour on geology or materials, followed by a class of elementary draughtsmanship of from two to three hours' duration, and including, say, instruction in the Classic orders. If we were then to take a fourth year's student list for the same day we might, on the other hand, find a two hours' lecture on the history of architecture and a two hours' class on design in the Renaissance style; then, in the afternoon, he may give a couple of hours to practical design, such as the planning of public buildings, and attend an hour's lecture on heating and ventilation. From these examples it will be seen that in the earlier stages of the Berlin student's work, he seeks to obtain a foundation in draughtsmanship and science, while at the latter end of his course he devotes most of his time to the designing of buildings, some historical study and to gaining a knowledge of special equipment. It would no doubt be interesting to follow the architectural student's career from year to year or from term to term, but this would take too long, and I therefore only quote a couple of examples from a student's time-table.

But now, after these historical and descriptive notes on the Royal Technical College at Berlin, I would ask if there are any disadvantages in the system of architectural education adopted by the Prussian Government? To my mind, though the opportunities for study are delightful, there is obviously something wanting in the whole system. Every preparation is made for the student to obtain knowledge, yet the result is by no means as satisfactory as might be expected. Does not this arise primarily from the student starting fresh from school without any previous elementary practical knowledge of construction? He has never been on a building in the course of erection, and does not know the difference between a piece of oak and a piece of deal. Neither, owing to his not having seen an actual moulding cut, has he any idea of the method of its production. For four long years he spends nearly his whole time in theoretical study, and as far as my own experience goes, there are but few men who utilize even the smallest part of their leisure in getting some idea of the nature of practical work. Does not a school where merely the theory of architecture is taught have a tendency to produce an architect of an academic character, though of course there may be the usual exceptions of brilliant and talented men, or those who are ambitious and energetic, and who do not follow the lines laid down for them? Do not many of the masters, too, in such a school soon lose all touch with practical work, and though brilliant scientists or historians, on receiving their professorship do not they lose all sympathy with the movement of the time, and even, by going through the same course regularly year by year, become mechanical and uninteresting in their methods, inspiring no enthusiasm in their pupils whatever? I think there can be little doubt that, just as it is at Berlin, for instance, the best and most popular masters are those few who keep in constant touch with current thought and practice.

As to the remedy for any unsatisfactory results, would it not be advisable that a boy should have a whole year's practical work in an office, with the run of some works for at least six months, before he starts his elementary studies at the college, and should not every six months of theoretical study be interspersed with three months of practical work? Should not lessons in design be accompanied by lessons in the measurement of existing buildings, to enable the student to grasp the appearance of what he is putting on paper? Would it not be well, too, that the instructors in design, construction and in special equipment should, one and all, be men actually in extensive practice, and that such subjects as history, the elementary sciences and freehand drawing should be left to men whose vocation is chiefly to impart knowledge, yet who should be compelled to keep themselves abreast of modern progress?

We have had under consideration an establishment organized on the most elaborate lines, in which there is but little left to improve, as far as the syllabus of the classes is concerned. The Berlin Technical College has been on its trial for over twelve years, and the results, to my mind, are not all proportionate to the amount of time and money expended by the architectural student and the Prussian Government. Indeed, as the Berlin Technical College is in many respects a model to those advocating architectural education, so it must also serve as a warning to those extremists who would advocate merely theoretic study as the primary basis of a training in architecture and its actual practice. Much as we can learn from leading

men in special technical subjects, the Berlin College only too plainly shows what harm can be done by taking an able man entirely away from his profession, and thus preventing him from keeping in touch with that practical work which brought him into prominence.

I would conclude by saying that the architectural school at the Royal Technical College of Berlin is an institution well worthy of our attention and in many respects of our imitation, but at the same time we must observe the disadvantages of too theoretical an education and their evil effect upon a student destined for actual practice. What I have said in regard to the architectural school I believe holds good in many respects for the several engineering divisions of the same college.



SATISFACTORY PERFORMANCE.

PROOF of Performance by Architect.—To entitle an architect, says the Court of Common Pleas of New York City, to recover for plans which he is employed to make, he must show their delivery, or a tender of them.

[Wandelt vs. Cohen (Ct. Com. Pl. N. Y. City), 36 N. Y. S. Rep. 811.]

Architect's Certificate of Performance.—Where the architect refuses a material-man a certificate that he has performed his contract with the contractor for the material, on the ground that it was unnecessary, he having certified to the owner that the contractor had performed his contract, such refusal is unreasonable, and dispenses with its necessity on the part of the material-man to secure such certificate, as required by his contract to enable him to recover from the contractor.

[Murdock vs. Jones (Sup. Ct. App. Div.), 38 N. Y. S. Rep. 461.]

Performance of Contract "to his Satisfaction."—In an action to recover for erecting on a party's premises a ventilating-machine guaranteed to operate "to his satisfaction," the contractor need only show that the work was done in a proper manner, and in a way that should have satisfied the owner of the premises, as no question of personal taste or individual preference is involved. Such satisfaction is not an arbitrary or capricious one. It has its measure by which it can be filled. That which the law shall say a contracting party ought in reason to be satisfied with. The right to reject must depend upon some objection founded in reason, which involves a question peculiar to the province of a jury, and should be left to their consideration and determination.

[Hummel vs. Stern (Superior Ct. N. Y. City), 36 N. Y. S. Rep. 443.]

Dissatisfied in "Good Faith."—Where a building contract provides that the work shall be done to the satisfaction of the owner or a third person, the contractor cannot recover, if the owner or the third person is in good faith dissatisfied with the work.

[Marshall vs. Ames, 11 Ohio Cir. Ct. Rep. 363.]

Contractor bound by Understanding of Owner.—Under the law of Iowa, providing that "when the terms of an agreement have been intended in a different sense by the parties to it, that sense is to prevail against either party in which he had reason to suppose the other party understood it," where a contract provided that the architect should decide whether alterations asked for by the owner were within its terms, and the contractor, knowing that the owner understood them to be so, made the alterations without securing the decision of the architect, he cannot recover for them.

[Evans vs. McConnell (Supreme Ct. Ia.), 68 N. W. Rep. 790.]



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

ANNEX TO THE IMPERIAL BANK OF GERMANY, BERLIN, PRUSSIA.

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

THIS building was erected between 1892 and 1894 after the designs of Mr. Max Hasak, an architect who has won for himself a considerable reputation by some ecclesiastical work in the German capital. The "Annex" was built to relieve the main building of the "Reichsbank," which was badly overcrowded. It serves mainly as a safe-deposit institution, containing all the offices necessary for this branch, as well as extensive safe-deposit vaults, while the third floor of the principal front contains the residence of the family of one of the officials. The ground-plan of the building is L shaped, the two short ends fronting on two of the principal thoroughfares, with a long wing connecting the same and receiving its light from both sides. There are large counting-rooms on the first and second floors of the front of the building, each containing 5,600 square feet of floor-space, and so arranged that the desks are placed by the windows lighting the room on both sides, leaving a wide mid-

dle corridor for the use of the public. The same arrangement is carried out through the long connecting wing, giving the clerks an abundant supply of side-light. This wing, covering a floor-space of 12,900 square feet, is provided with a semicircular, apse-like extension at the middle, and serves as the depositing-room. From it the office in the far end is reached, having an area of 4,200 square feet.

The building has a base of black syenite. The main façade, shown in our plate, consists of yellowish-gray sandstone from Silesia. The roof has a covering of sheet-copper. The interior, too, is finished throughout in a truly monumental style. The cost of the building, pure and simple, was about \$500,000, equivalent to .27 per cubic foot, taking height from cellar floor to top of cornice. The office-furniture, heating-apparatus and electric-light plant cost an additional sum of \$250,000.

NEW YORK AND NEW JERSEY TELEPHONE BUILDING, BROOKLYN, N. Y. MR. R. L. DAUS, ARCHITECT, BROOKLYN, N. Y.

THE new telephone building will occupy a plot of ground on the northeasterly corner of Willoughby and Lawrence Streets, with a frontage of 108 feet on Willoughby Street and 100 feet on Lawrence Street. It will consist of a basement and eight stories and be constructed in the most improved method of modern steel-frame construction. The foundations are formed of heavy masses of concrete, some 4 or 5 feet thick and covering 50 to 60 superficial feet. On these concrete blocks are systems of heavy iron beams forming a grillage for the foundation of steel posts, extending through the entire height of the building. The floor construction is partly formed by hollow fireproof flat arches and partly of the Columbian fireproof construction. Dark-blue Indiana limestone will form the lower two stories and pearl-gray brick and terra-cotta will be the principal material of the upper stories. The design is in the style of the Italian Renaissance and is one of great simplicity and dignity. The building will be equipped with the most approved system of plumbing. Careful provisions have been made to supply the building with its own fire-fighting system. Two hydrants in the building are so situated that they can be used by the fire-department to throw a stream 250 feet high, protecting both the building of the Telephone Company as well as adjoining buildings. Particular care has been bestowed upon the planning of the heating and ventilating of the building, one of the essential requirements of the operating-room being its perfect freedom from dust. It was found necessary to bring the air from a shaft 25 feet above the roof to the basement, where it is screened through many layers of bolter cloth. The air will be supplied with the necessary degree of moisture, and will be forced through the ducts by a system of fans, distributed throughout the building. Exhaust ducts and powerful fans will expel the vitiated air and discharge it above the roof. The building will cost in the neighborhood of \$300,000 and the Telephone Company paid about \$55,000 for the land.

LA SUPERGA, TURIN, ITALY. FILIPPO JUVARA, ARCHITECT.

THIS church, the royal burial place of the House of Savoy, was built between 1717 and 1730 for Victor Amadeus II as a votive church. The great range of convent buildings at the rear of the church are hardly shown in the view and only a small portion of it on the plan.

PLAN AND SECTION OF THE SAME.

CATHEDRAL OF STA. MARIA ASSUNTA, SPOLETO, ITALY.

THIS church, which contains the tomb of Filippo Lippi, and of which the choir is decorated with frescoes by him, is a modernized Lombard church, the interior showing work of the twelfth century, though it was rebuilt in the Renaissance style in 1644. The campanile was erected in 1461. The great mosaic in the gable head, the work of Salternus, dates from 1207, and is thought to be the earliest mosaic of the Italo-Byzantine revival. The portico was designed about 1491, by Pippo of Florence.

DETAIL OF THE PORTICO: CATHEDRAL OF STA. MARIA ASSUNTA, SPOLETO, ITALY.

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

BASILICA OF S. LORENZO EXTRA MUROS, ROME, ITALY.

SKETCHES IN EDINBURGH AND LONDON.

[Additional Illustrations in the International Edition.]

ENTRANCE TO THE IMPERIAL BANK ANNEX, BERLIN, PRUSSIA. HERR MAX. HASAK, ARCHITECT.

[Gelatine Print.]

THE MAIN STAIRCASE HALL OF THE NEW COURTS OF JUSTICE, MUNICH, BAVARIA. PROF. FRIEDRICH VON THIERSCH, ARCHITECT.

THIS plate is copied from the *Deutsche Bauzeitung*.

ST. GEORGE'S CHURCH, STOCKPORT, ENG. MESSRS. AUSTIN & PALEY, ARCHITECTS.

INTERIOR OF THE SAME CHURCH.

THIS and the preceding plate are copied from the *British Architect*.

THE COUNCIL-CHAMBER: WEST RIDING COUNTY OFFICES, WAKEFIELD, ENG. MESSRS. GIBSON & RUSSELL, ARCHITECTS.

THIS plate is copied from the *Builder*.

TEMPLE GARDENS, LONDON, ENG. MR. E. M. BARRY, ARCHITECT.

TWO ROOM DECORATIONS BY C. T. G. FORMILLI.



PRICES OF MODERN PICTURES.—The following table exhibits some of the ups and downs in the auction prices of pictures from the Pender collection:

			1897.
Millais.....	"Proscribed Royalist".....	1862	£551 £2,100
Elmore.....	"Lucretia Borgia".....	1868	693 40
Maclean.....	"Sleeping Beauty".....	1865	939 101
Callcott.....	"Italian Landscape".....	1865	735 609
Collins.....	"Sussex Coast".....	1863	1,018 1,155
Collins.....	"The Card Players".....	1865	210 21
H. Hunt.....	"Valentine and Sylvia".....	1862	220 283
Landseer.....	"The Lost Sheep".....	1863	2,341 3,150
Linnell.....	"View in Kent".....	1865	598 493
G. S. Newton.....	"Porcelain".....	1863	955 84
Phillip.....	"The Gipsy's Toilet".....	1865	551 1,785
Phillip.....	"Baptism in Scotland".....		1,842 1,470
Turner.....	"Wreckers" (1834).....	1863	1,984 7,980
Turner.....	"Gloucester, Venice" (41).....	1863	1,727 7,140
Wilkie.....	"Cotter's Saturday Night".....	1872	619 1,312

The prices at the sale, as a whole, seem to prove that however the mode of the moment varies, quality surely holds its own. The influence of what is called "boom" will not explain the general tendency of prices to rule high where the art was exceptional. Sir John Pender as a collector was very catholic in his taste. He could admire Phillip as well as Troyon, and Leader as well as Muller. The boom theory—the temporary rush after a particular artist—will not explain the fluctuations so marked at Saturday's sale. It will account for neither the rise nor the fall. Now no school of painters is in such high request as the Barbizon group, and yet Troyon's "Heights of Surene" fetched not much more than half what it realized eight years ago. In the case of Ary Scheffer's ceramically surfaced "Paolo and Francesca" the drop was ruder still. On the other hand, Millais, Landseer, Collins, Webster all held their own, and there were good prices for good work by men of less renown—by Bough, and Halswelle, and Holmberg. Latterly, John Phillip has declined a little in price, and it was very gratifying to see 5,000 guineas given for the picture which his own mature taste pronounced to be his masterpiece. Even more gratifying was the announcement that this fine picture has been bought for the National Gallery of Scotland. The prospects of art, said this year to be under woful eclipse, are not so gloomy after all when we find such large prices paid for good work done by men of so many different schools. — *London Daily News*.

LONDON KEYSTONES.—Keystones and keystone masks are only to be found in Classic, neo-Classic and Renaissance architecture, by reason of the Gothic styles not using the rounded arch. The pointed windows and doorways ranging from early English to late Elizabethan have no prominent keystones. Perhaps the best known and altogether most notable keystone masks are those that decorate the centre arch of Henley Bridge. The present bridge of five arches that crosses the Thames at Henley was built in 1786. The mask facing up river is a head of Isis; that facing down stream represents the conventional idea of Father Thames, and they are really admirable examples of the sculptor's art. They were the work of that very accomplished lady, the Honorable Mrs. Dawson-Damer, who at that time resided at Park Place, Henley. She was cousin to Horace Walpole, for whom she carved an eagle so exquisitely that he wrote under it—this enthusiastic cousin!—"Non Praxiteles sed Anna Damer me fecit." So, you see, Praxiteles can never slich the credit of that piece of sculpture from this lady-artist of the eighteenth century. But the Honorable Mrs. Dawson-Damer was, after all, but an amiable amateur. She gave her work to the bridge authorities—a most reprehensible vagary. Yet the recipients were grateful, as witness the "Bridge Minutes." True, they only acknowledge one mask: "May 6, 1785. Ordered that the thanks of the Commissioners be given to the Honorable Mrs. Damer for the very elegant head of the River Thames which she has cut and presented to them for the keystone of the centre arch of the bridge." There are several good examples of sculptured keystones in London. There is an elaborate design, for instance, over the western doorway of St. Bride's, Fleet St., contemporary with Wren—possibly his work. It

exhibits that widespread convention of the winged cherub, podgy and smiling, whom you may find gracing all the city churches in different positions of usefulness; now as a keystone, now a corbel, and again, most appropriately used as a decoration for fonts. The Guildhall Museum—that *olla podrida* of London antiquities, from Romano-British old boots and potsherds to massive Jacobean carved fireplaces—has two keystones in its crepuscular crypt. One came from an old house in Paternoster Row, now demolished; it was the keystone of a window. Another, from the doorway of a house in Spital Square, is an example of that very debased art, the domesticated keystone mask, so to speak. There was at the end of last century, and at the beginning of this, quite a Classic rage. Buildings fondly believed to be of Classic design sprang up everywhere, and traces of that fallacy are to be seen at this day, even in the undistinguished streets of what were at that time the suburbs of London. Parts of the Marylebone Road, the Clapham Road, the old Kent Road, and many streets of Kennington and Brixton show this debased classicism, and many of these houses bear keystone masks over their arched doorways. For the most part, however, they are not sculptured. They are of, perhaps, half a dozen different patterns, and they are nearly all cast in plaster from a mould. Also, the would-be classicism of them is generally very dreadful to look upon. A keystone that no longer fulfils its office of completing an arch is to be seen in the shape of a grotesque head built into the wall of a house in King's Cross Road, above a singular tablet bearing the inscription: "This is Bagnigge House near the Pindar a Wakefeilde, 1680." The "Pindar of Wakefeilde" was the sign of an old inn that stood near here, and took its name from a popular play of that time that was written in the time of Queen Elizabeth. Bagnigge House, too, is gone, and also Bagnigge Wells, that one-time fashionable suburban spa. There is an archway in the Renaissance style leading into New Square, Lincoln's Inn, that has a sculptured keystone on either side—gaping and glowering masks that look down with forbidding aspect upon the barristers and solicitors, the attorneys and clerks who pass beneath them continually to and from the law courts across the street. Dour and threatening they are, and typical of the terrors of the law to unsuccessful suitors, mulct in heavy costs, but never yet have portents, even more insistent than these guardians of the legal precincts of Lincoln's Inn, dissuaded the angry and litigious Briton from rushing in where oftentimes lawyers fear to tread on their own account. — *St. James's Budget*.

SOUTH AFRICAN ASBESTOS.—Canadian and Italian asbestos will find a serious competitor in the blue asbestos recently discovered in the Cape Colony, since the South African product is less than half as heavy and furnishes fibres considerably finer and longer than any other. The South African fibre has been worked into webs, which are but little inferior to those made of vegetable fibre, and are absolutely fireproof. Twine, cord and rope made of this blue asbestos will not only resist fire, but also most of the known chemicals, corrosive vapors and atmospheric influences. These qualities will open a new field for the employment of asbestos fabrics in chemical laboratories and for the caulking of chemical apparatus. In order to test the resistance of the new material, a blue asbestos rope of about three-fourths of an inch in diameter was weighted at one end with 220 pounds and exposed to a constant flame from a large gas-jet, so that the rope for a considerable length was surrounded by fire. The cord only broke after twenty-two hours. Still it was a trifle lighter than a rope of the same diameter made of Russian hemp. Compared with a new hemp rope, the asbestos rope has two-thirds of its strength, but as the ropes get older the proportion is altered in favor of asbestos ropes, since they suffer but very little from the influences of the atmosphere. Another novel application of this material is the working of blue asbestos fibre into mattresses for hospitals. They are cooler in summer and warmer in winter than those made either of animal hair or vegetable fibre, and no vermin can live in this mattress. Experiments are now being made of working this fibre into cloth for firemen's apparel. Of course, the long fibre of blue asbestos can also be employed for all the uses to which white asbestos has been put heretofore. While a trifle more expensive, its superior qualities make it well worth the difference. — *Philadelphia Record*.

JOEL T. HART AND HIS WORK.—When the Court-house at Lexington burned, a few weeks ago, there was regret that extended far beyond the boundaries of Kentucky over the fact that included among the works of art destroyed by the fire was the statue, "Woman Triumphant," upon which in great part rested the fame of Joel T. Hart, a sculptor who brought deserved credit to himself, his State, and the whole country. It was at first supposed that the model of this statue was still in existence, and that, therefore, the loss was not irreparable, but a letter recently received from Florence, Italy, by a resident of Lexington who had made inquiries on the subject, takes away all hope of duplicating the beautiful figure. It says: "All of the models belonging to Mr. Hart were left with a Mr. Saul of this city, and five years after Mr. Hart's death many of the models were destroyed, that of the statue 'Woman Triumphant' being among them. It is very much to be regretted, as poor Mr. Hart counted upon this figure to represent him in the years to come." There is a Hart Memorial Association in Lexington and its members will try to collect from the ruins of the Court-house all the pieces of the statue. They will be put together in something like the original shape, if possible, and even if this proves to be impracticable, the fragments will be carefully preserved. Hart was born in Clark County, Ky., eighty-seven years ago, and died in Italy in 1877. Beginning as a stonecutter, he soon manifested high artistic talent, and found friends who believed in him enough to send him to Italy and make possible the acquisition of thorough training for his chosen work. His first notable production was the statue of Henry Clay that now stands in Richmond, and his second, a colossal bronze figure of the same statesman, is one of the ornaments of New Orleans. Hart passed thirty years of his life in Florence. His most admired works were the "Woman Triumphant," now lost; a "Charity," and a figure called "Penseroso." — *N. Y. Times*.



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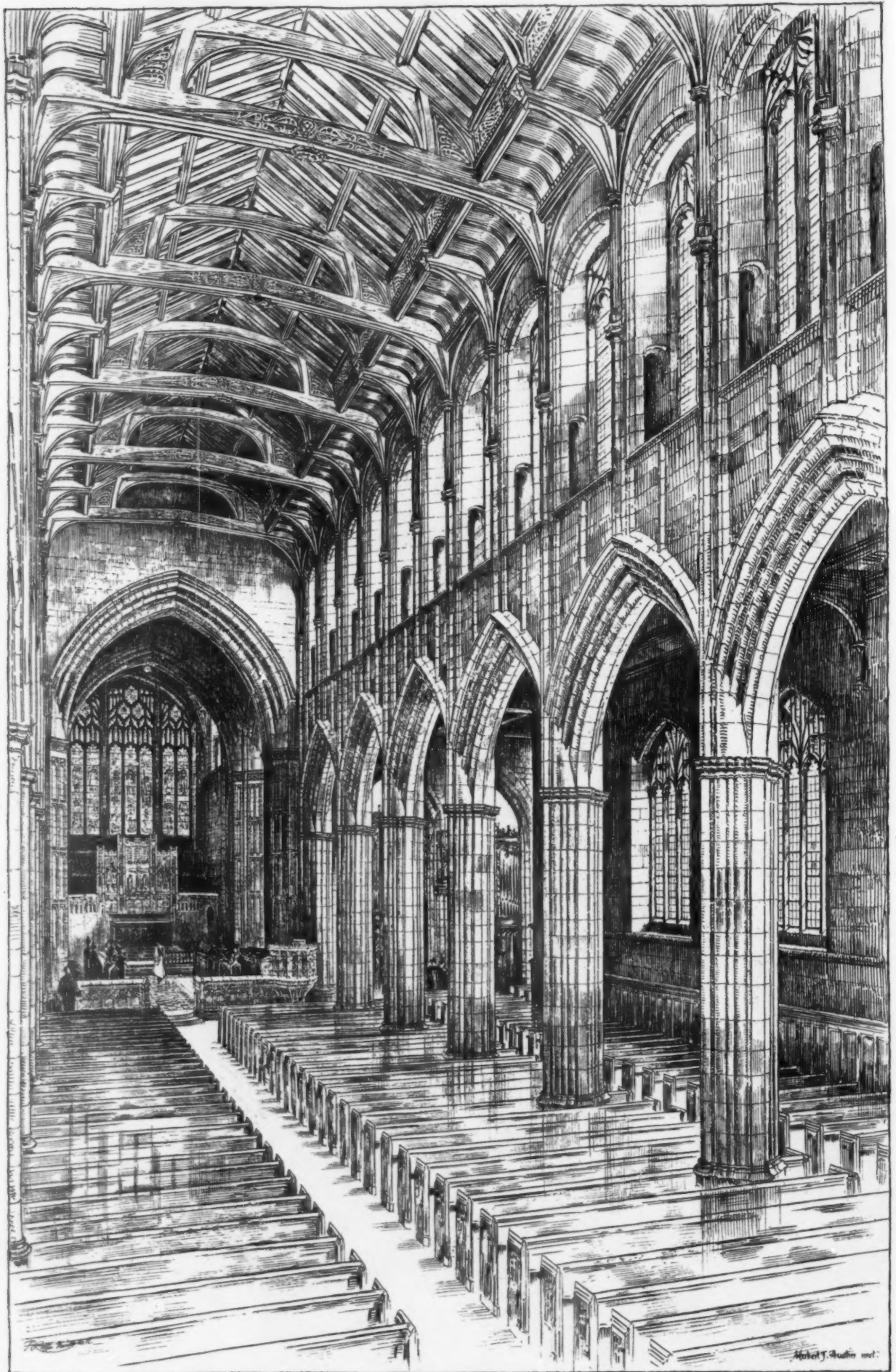
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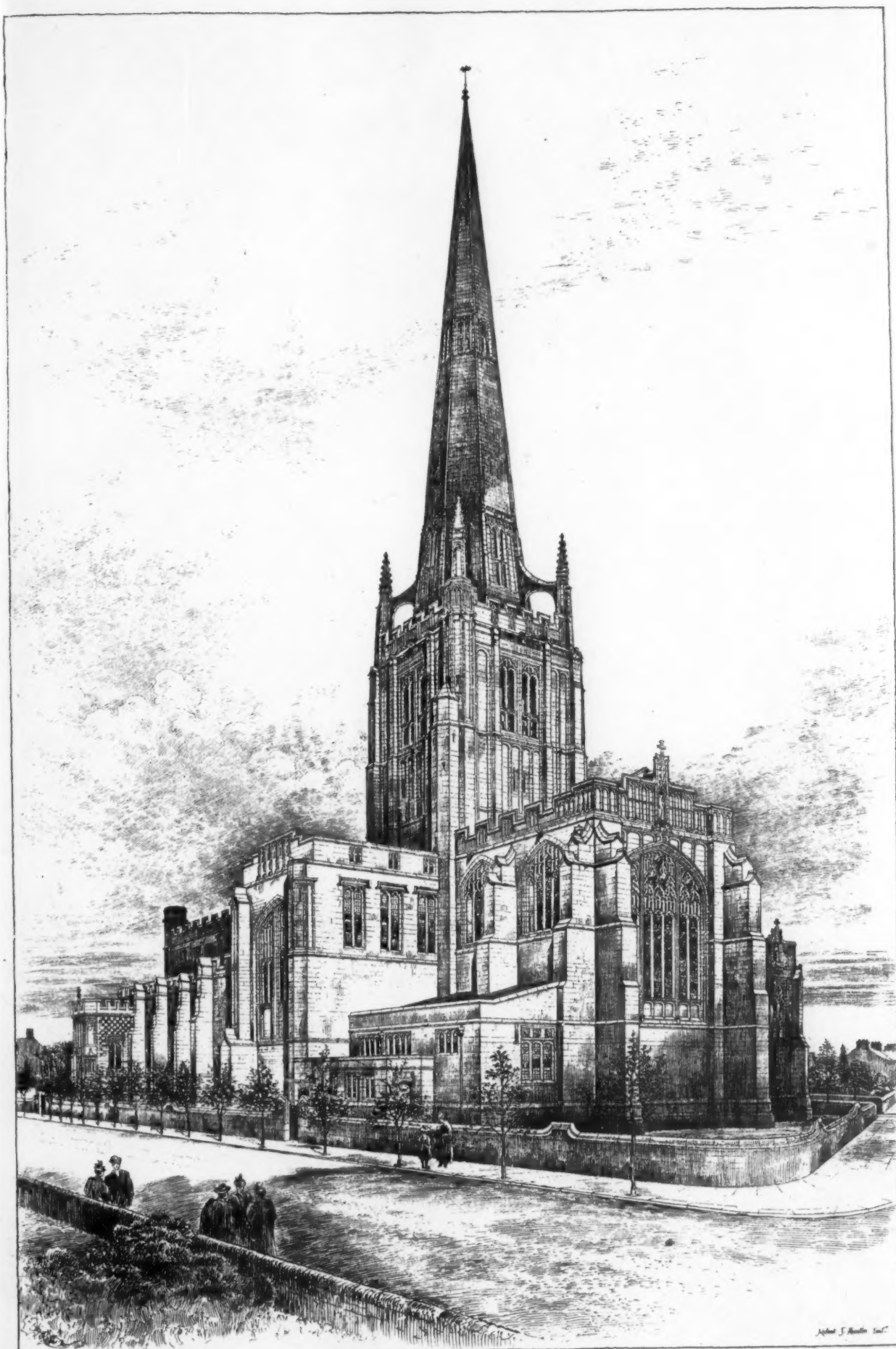
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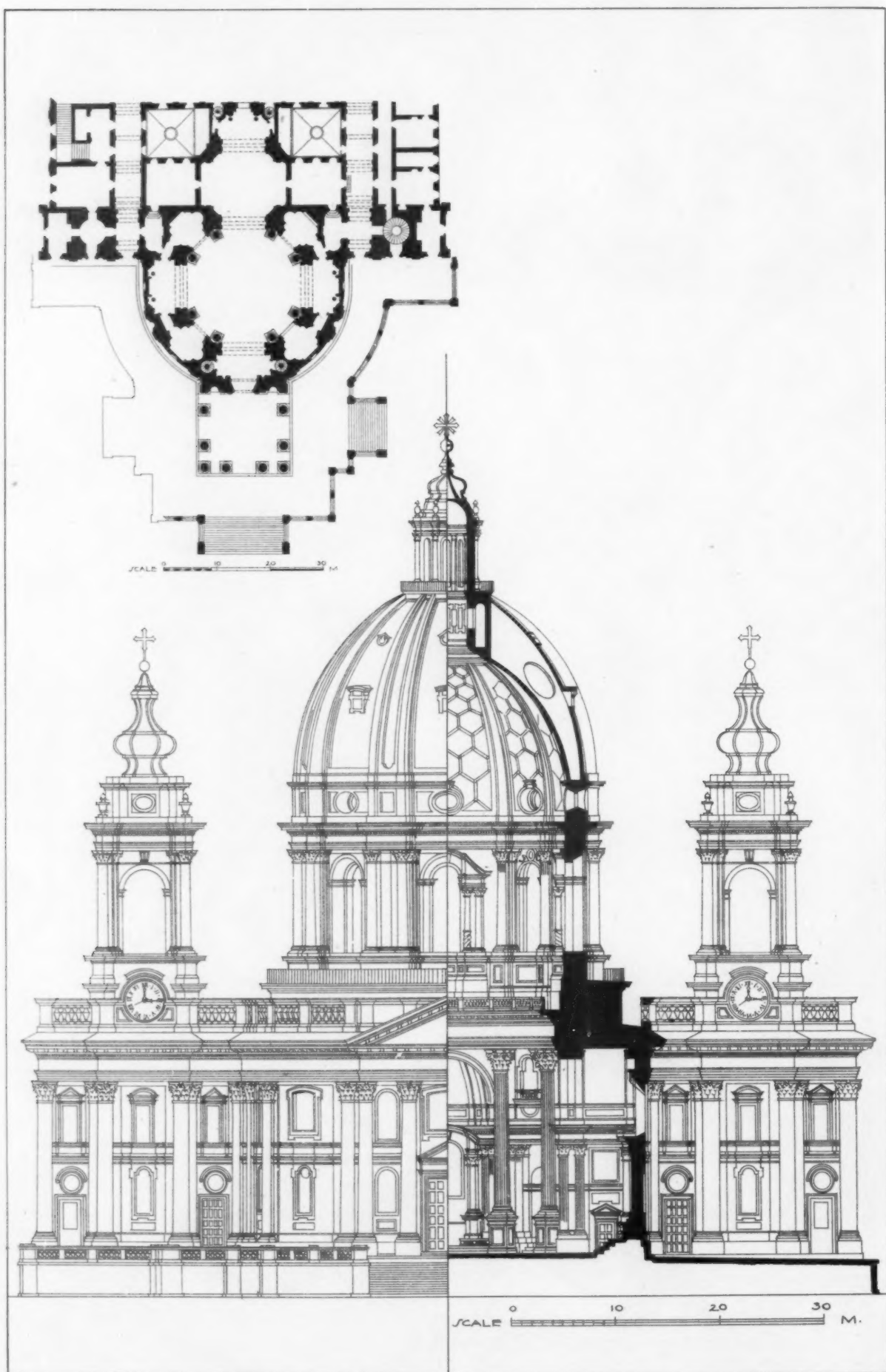
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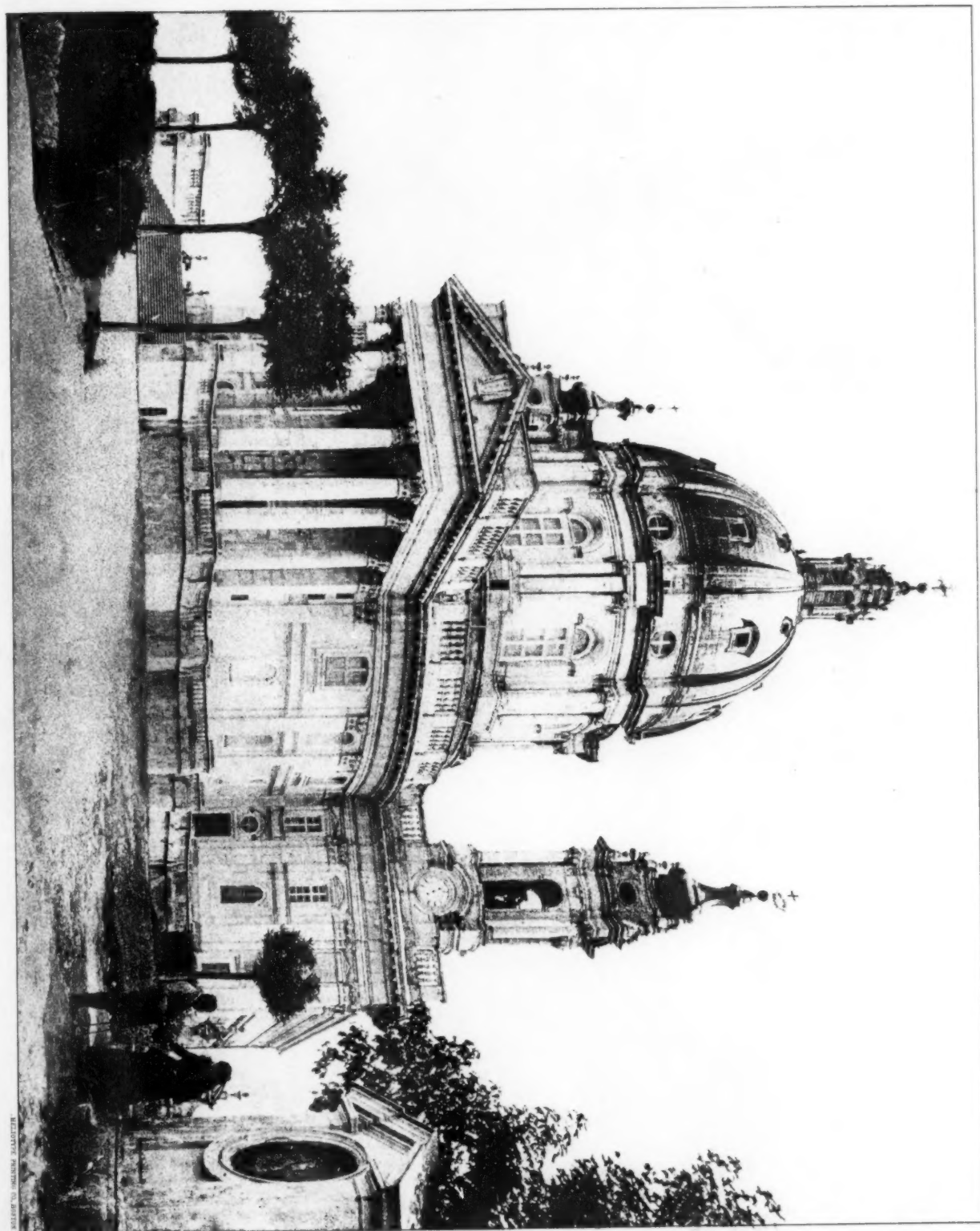
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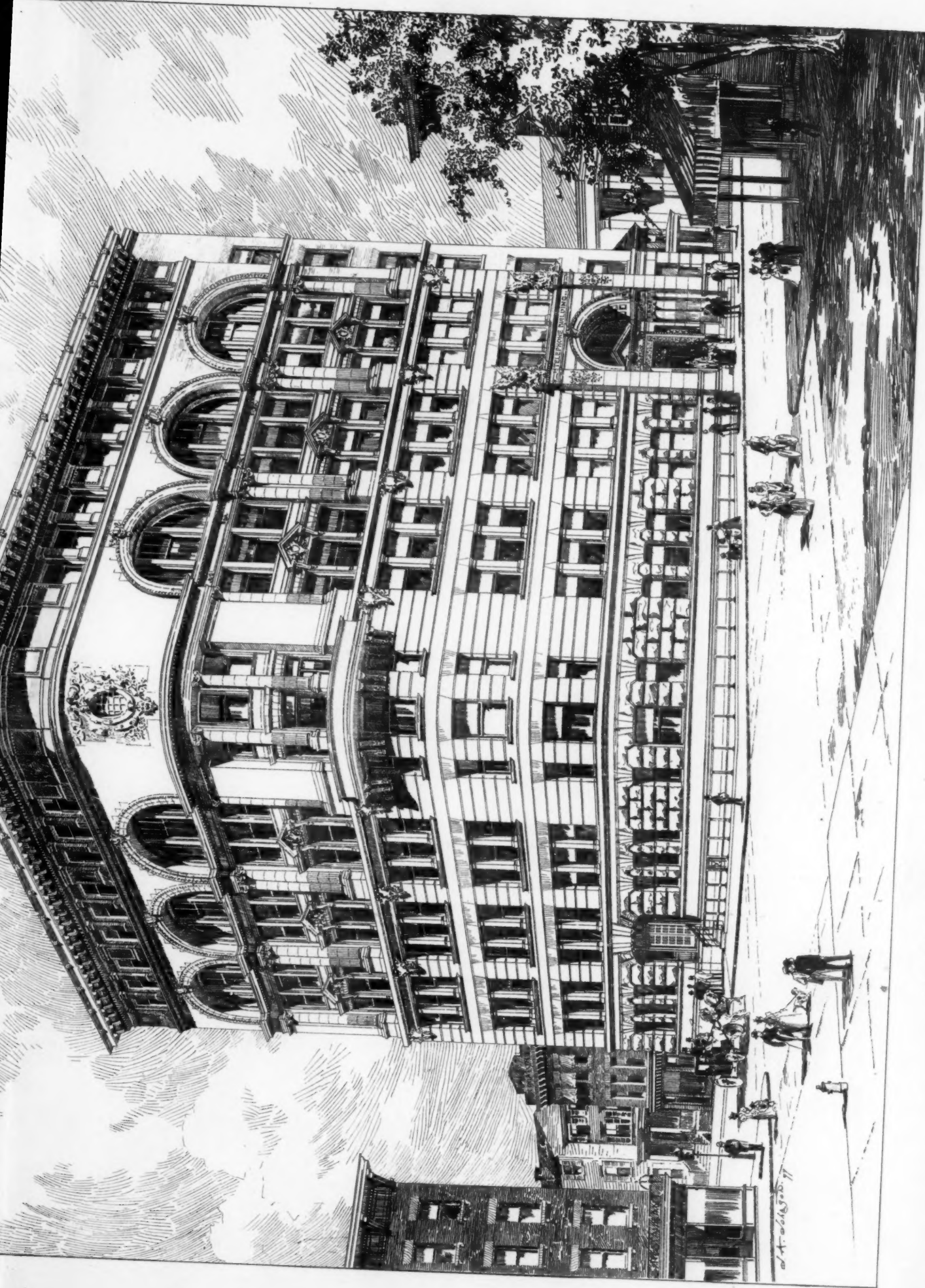
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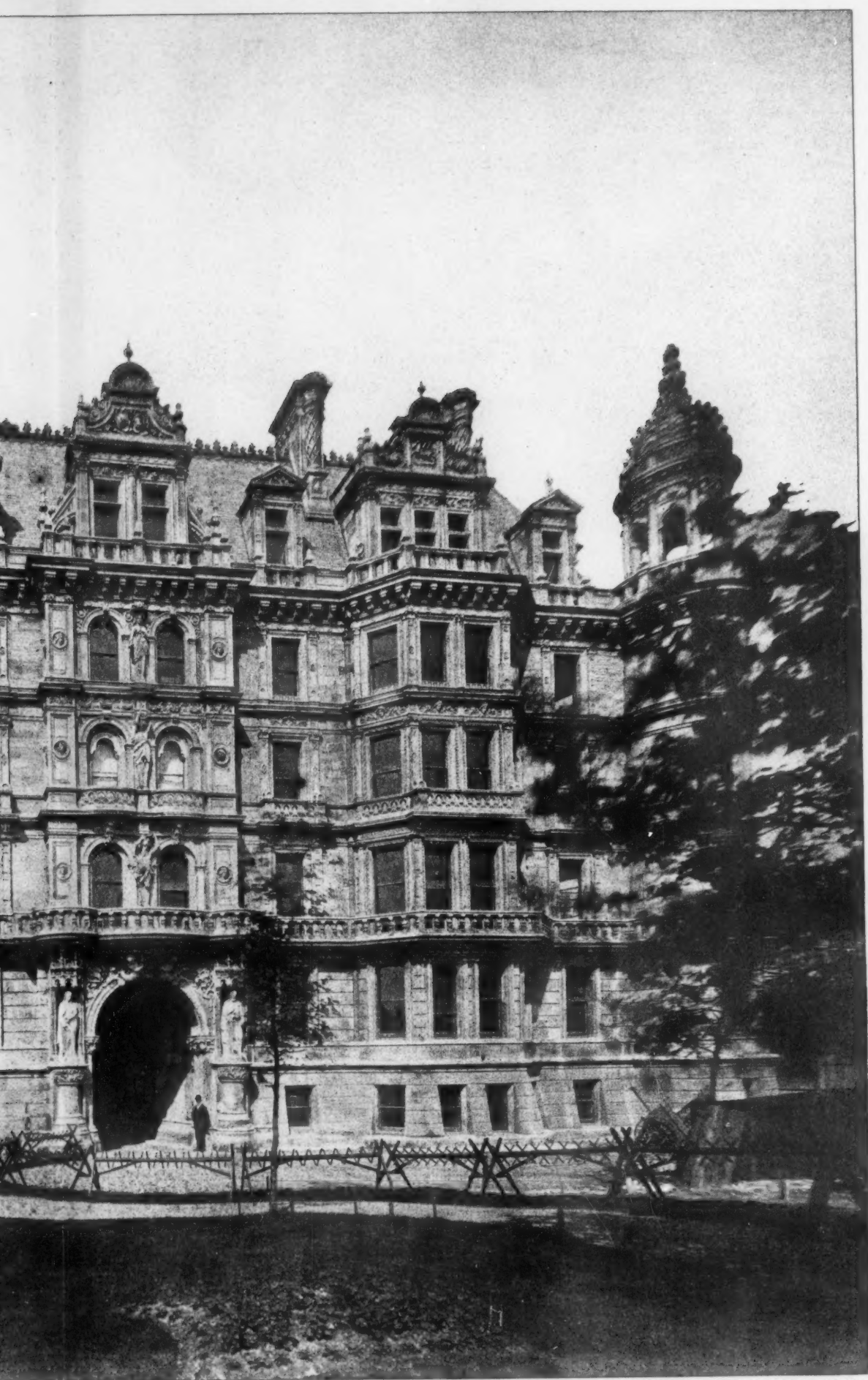
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