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AMERICAN ARCHITECT
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VOL. XXVII.

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ARCHITECTURE

ENGINEERING

DECORATION

TICKNOR & COMPANY

CONSTRUCTION

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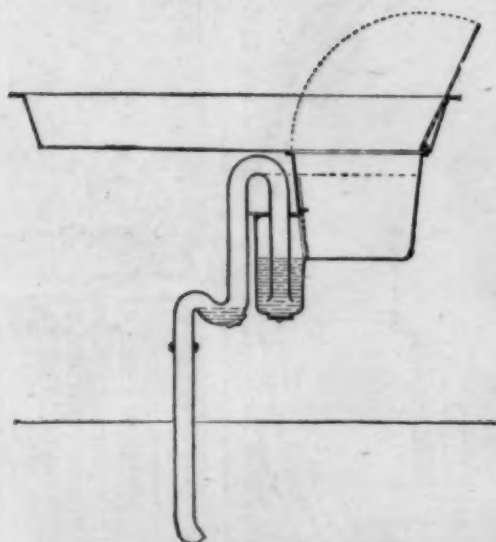
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THE SANITAS Kitchen Sink — AND — FLUSH-POT.



Section of the Sanitas Kitchen Sink.

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SUMMARY:—

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WE endeavored to make it plain that if subscribers wished to have the International edition for 1890 in its completeness, they should make their wishes known in time for us to make our edition of the proper size to fill all demands. In spite of this, we find, now that the enterprise is launched, that many who then hesitated now desire to receive that edition. We have, therefore, increased the edition, and, as the imported plates cannot be replaced, we are now engaged in reprinting them on this side of the water. The results will, of course, be slightly inferior to the originals, but they will, at least, enable a subscriber to have his file complete from the beginning.

MR. GIBSON'S letter in our last issue brings up a point which ought to be settled before any more invitations for public competitions are issued; that is, the meaning of the expression "black-lining." Mr. Gibson says that he, with several others, understood that the restriction that the perspective should be "without painting or shading other than black-lining" meant that such shading would be allowed as could be done with black lines. It is quite possible that this is the correct interpretation, but it is also certain that many of the competitors understood the programme to mean that no indication of shadow would be permitted except that which is given by making the outlines on the side toward what might be a shadow wider than those on the side toward the assumed light. This method of "black-lining" or "back-lining," as we have heard it called, gives a certain appearance of relief, and is still much used by engineers, particularly in machine drawing, but it is nearly obsolete among architects, who dislike the uncertainties of scale introduced by the thickening of the lines. To our mind, the expression, which has appeared in several recent competition programmes, would be best left out altogether. If full pen-and-ink rendering is wished for, it is easy to call for shaded drawings in pen-and-ink, but if only outline drawings are desired they should be so described, without saying anything about black-lining, or, if that is wished for, it should be explained so that there will be no possibility of mistake.

THE daily papers say that the American School of Archaeology at Athens, which obtained from the Greek Government the privilege of buying the site of the temple at Delphi, on condition that the necessary money, seventy-five thousand dollars, should be raised within a limited time, has been unable to secure subscriptions to the required amount. The money is not demanded as the price of the land, but is needed simply to pay the poor people of the village of Castri, which stands in what was once the sacred enclosure, for the loss of their houses, which must be removed before excavations can be begun. With great courtesy, the Greek Government has extended the time of payment to June 1 next, but the subscription-list grows very slowly, and there is little hope of raising the money. It would be a very great misfortune to the cause of art, as well as learning, to have this opportunity neglected. During nearly half the period known to history, Delphi was the centre of the earth, the *terra umbilicus* of the Romans, and the priestess who, under the inspiration of the vapor from Apollo's cave, delivered its sacred oracle, exercised an authority over the ancient world to which even the influence of the Popes in the Middle Ages bears no comparison. (Edipus, before returning to Thebes; Theseus, before sailing with the seven Athenian youths to be sacrificed in the Labyrinth to the Minotaur; Jason, before embarking with his Argonauts to bring back the Golden Fleece; Lycurgus, before undertaking to draw up the Spartan code; Themistocles, before Salamis; and nearly every hero and general of antiquity down to Julian the Apostate, besides deputies from towns and cities on all sorts of occasions, consulted the Delphian oracle, and left in the temple, in acknowledgment of the divine counsel, gifts proportionate to their means. Theseus, according to the legend, cut off his hair and left it there, as the only thing he had to give, and the most precious objects of Greek art must, from the earliest ages, have been collected in vast quantities in the building. It is true that the temple was repeatedly plundered and burnt, but the fact that the Phocians once made a requisition on it of ten million dollars, and that Nero, long after the commencement of the Christian era, carried away from it more than five hundred bronze statues, shows the enormous accumulation of valuable objects, many of which would, by the burning of the structure which sheltered them, have been covered, and thereby protected, even from the most eager plunderers. Upon the ruins of the successive temples now stand the huts of Castri, and we might almost say that Greek history lies beneath. Of all the places where archaeological research is possible, Delphi promises the most intensely interesting and splendid results, and it would be a thousand pities to allow the honor of bringing them to light to pass out of American hands for want of a much smaller sum than many Americans have paid for a single picture. We cannot believe that our rich and intelligent men will suffer the opportunity to pass, but whatever is done must be done quickly, and we shall be very glad, if any one wishes it, to receive the names of subscribers, and see that they are properly added to the list. We presume that subscriptions for this purpose are conditional upon the pledging of the whole amount required before the expiration of the allotted time.

A CASE decided last month in the Tribunal of the Seine furnishes another warning in regard to the importance, for architects and builders, of having all agreements defined and secured by written contracts. A young lady in Paris, Mademoiselle Masson, member of a religious Community, and known as Sister Radégonde, inherited a considerable sum of money, and resolved to use a part of it for the benefit of the convent in which she lived. She wrote to the Superior of the Order to which she belonged, for permission to have the chapel of the convent completed at her own expense, and received the permission desired. She then applied to the architects usually employed by the Sisters of the convent, for plans, which they made. The work, apparently after tenders had been made in the usual form, was awarded by the architects to a carpenter, M. Jeannin, and a firm of masons, who were introduced to Sister Radégonde, and were informed by her that the work was done for her personal account, as a gift to the Community, and was to be paid for out of her own private fortune, which, as they knew, was ample for the purpose. The sacred calling

of the lady apparently awed the builders, as well as the architects, to such an imprudent extent that no written contract was prepared, nor was even a memorandum of the lady's part of the agreement asked for; but the work was carried out on the sole security of her verbal promise. Unquestionably, this would have been kept to the letter, but before the building was finished, she was, unfortunately for the contractors, summoned to her heavenly reward among the saints, while her worldly affairs were left to be conducted by lawyers. By her will, all her property was left to Sister Marie, the Superior of her convent, but the French law—the statute of May, 1825, provides that no gift or bequest by a member of a religious community of women, either to the community or to any member of it, can exceed one-fourth of the property of the person making the gift, in cases where the intended gift would exceed two thousand dollars. Of Sister Radégonde's property, therefore, only one-fourth could legally go to her convent, and, as she had no known relatives to inherit the rest, it was handed over to a curator appointed by what answers in France to the Probate Court. When the work was finished, the builders and the architects presented their bills, amounting to over twenty thousand dollars, to the curator of their employer's property, who declined to pay anything. Sister Marie, the Superior of the convent which owned the newly completed chapel, also declined to pay anything, and suit was brought against both parties. Sister Marie, in the name of the convent, which perhaps had not received enough from the dead sister's legacy to meet the bills, asked the court to decide, on her part, according to pure and simple justice, and the judge ruled that the builders and architects had no claim against her or the convent. Mr. Hébert, the curator of three-fourths of the property, was altogether too good a lawyer to ask the court for justice, and based his refusal to pay a perfectly fair claim on the inability of the architect or the builders to produce a written order from Sister Radégonde to execute the work, or a written promise, signed by her, agreeing to pay for it. The French law in such matters is even stricter than our own Statute of Frauds, and as the claimants could not bring forward the required documents, they were all non-suited, and condemned to pay the costs. Even the letter of the Superior of the Order to Sister Radégonde, authorizing her to carry out the proposed work at her own expense, was rejected as evidence, on the ground that the Superior was not a party to the suit, and that, as in any case it only proved an intention on the part of Sister Radégonde, which might be changed at any time, it did not show an express and formal engagement toward the contractors.

A TEMPEST in a teapot has been raging for the past week or two at New Haven, in the Department of Mechanical Drawing attached to the Sheffield Scientific School. It seems from the newspaper accounts that Professor F. R. Honey, who has for several years been in charge of the Department, directed the members of his Freshman class, at the beginning of the course, to procure drawing instruments of a certain kind, which were kept for sale, presumably at his request, by a firm of dealers in New Haven. It is hardly necessary to say that the more perfect a Freshman's ignorance is of any subject, the less disposed he is to regard any one's advice in relation to it, but the request might have been complied with quietly, had not an enterprising Junior, who saw an opportunity for business in the matter, canvassed the class as agent for a Philadelphia firm of instrument manufacturers, and, as the goods which he offered were sold at a less price than the ones which the Professor had desired the class to buy, he secured many orders from the thrifty youths. When Professor Honey learned what sort of instruments had been purchased by a large part of his class, instead of those which he had specified, he gave orders that they should not be used for the work in his course, and, to enforce the order, gave notice that he should refuse to accept plates made with them. Thereupon ensued the most discreditable proceedings that we ever heard of in connection with any college. The Freshmen, united by their noble zeal, not for the defence of an accused classmate, as is usual in other college squabbles, but for the saving of their own precious sixpences, went to the Faculty, and, with a delicacy of feeling quite worthy of an institution for the training of peddlers, informed them that the reason why Professor Honey wanted them to use a particular sort of instruments, instead of the cheaper kind, was that he received a

commission on sales of his favorite sort, while he could get none on the cheap variety. We have not been able to discover from the daily papers that the smallest ground existed for this very improbable assertion, but the Faculty, or whoever may have been in charge of the matter, were apparently panic-stricken, and Professor Honey was forthwith dismissed, while the triumphant Freshmen, with their cheap instruments, remained in possession of the field. Apparently no inquiry was made as to Professor Honey's reasons for preferring a particular make of instruments; as to the expediency of allowing beginners in mechanical drawing to become habituated to heavy, clumsy or ill-made tools, or as to the real merits of the two sorts; the fact, so far as we can judge from the papers, seems to be that on the simple application of a number of ignorant boys, accompanied by an assertion which, unless supported by either sworn testimony, or documentary evidence, ought to shut out forever both those who made it and those who listened to it from the society of gentlemen, a tried and experienced officer of instruction was thrust out in disgrace from the University, with no more of a hearing than is implied in the opportunity which is said to have been offered him to "retract." We do not doubt that in so business-like an atmosphere as that which appears to prevail in New Haven, the lesson will not be lost, and we shall see next, perhaps, the Professor of Music ignominiously superseded, for daring to object to the substitution of two-dollar fiddles, for which some undergraduate has the agency, for the more costly instruments which he has been accustomed to recommend to his violin classes; or the Football Professor marshalling his men in uniforms of rags tied together with strings, because a member of the University deals in "speculation" jerseys, and cannot, without great risk, he balked of an opportunity of selling them to the team.

L'ARCHITECTURE gives an interesting account of Baron Ferstel, of Vienna, one of the most distinguished architects of the century, who died about five years ago, after reaching the highest professional eminence. Ferstel was born in Vienna, and trained in the public schools, at the Polytechnic School, and, later, in the University, where he took the higher courses. He then entered the Academy of Fine-Arts, as a student of architecture, and, on finishing his course here, became assistant to his uncle, the architect Stache. While with him, he assisted in the design and execution of the altar of the chapel of Saint Barbara, in St. Stephen's Church, and, soon after, entered on his own account the competition for the Votive Church, which was to be built, by popular subscription, in commemoration of the escape from assassination of the Emperor. The Archduke Maximilian, who was later to meet a violent death as Emperor of Mexico, was the principal promoter of the scheme for the church, and an immense sum of money was raised. After sending in his plans, Ferstel, who had just been awarded a travelling-studentship, went to Italy, and while at Naples received notice that his design had been placed first in the competition, and that he was to be the architect of the Votive Church. He was then twenty-five years old. The actual construction was not begun until three years later, and Ferstel had plenty of time to perfect his drawings for the building, which at once gave him a place among the most prominent architects in Europe. He was soon employed in other important work. While the Votive Church was going on, he built a beautiful Protestant church at Brunn, in Moravia, and was appointed architect of the National Bank, the Chemical Laboratory of the University, and the Museum of Arts and Manufactures. The Polytechnic School chose him as professor, and afterwards as rector, and the Emperor made him a baron, while nearly every professional society, including our own Institute of Architects, was proud to have him as an honorary member.

THE St. Louis Academy of Music, which had been so far completed as to have the roof in process of making tight, collapsed not long ago, while fifty men were at work on it, and the walls fell into the cellar, burying eight of the workmen. The crash was a rather leisurely one, the fourth story falling first, followed by the third, and this by the second, and so on, most of the men being thus enabled to scramble to a firm portion of the building. The cause of the accident is said to have been the movement of a vein of quicksand under the foundations.

CIVIL AND DOMESTIC ARCHITECTURE.¹—IV.

WHILE civil architecture was thus springing into life and vigor in France, neighboring countries were not idle. In Italy, Germany, Belgium and Holland, a large number of public edifices and private dwellings were built. In England and Holland, at Amsterdam, Antwerp and London

a clock-tower, the appendage of every municipal edifice, was joined to the structure. In England, also, the Universities of Cambridge and Oxford, Windsor and Norwich Castles, and the great hall of the King's Palace at Westminster were constructed: they were all in mediæval style. After the return from the Crusades, and after a long period of Byzantine influence, we find societies of free-masons in Germany setting

Fig. 13. Hôtel de Ville, Brussels.

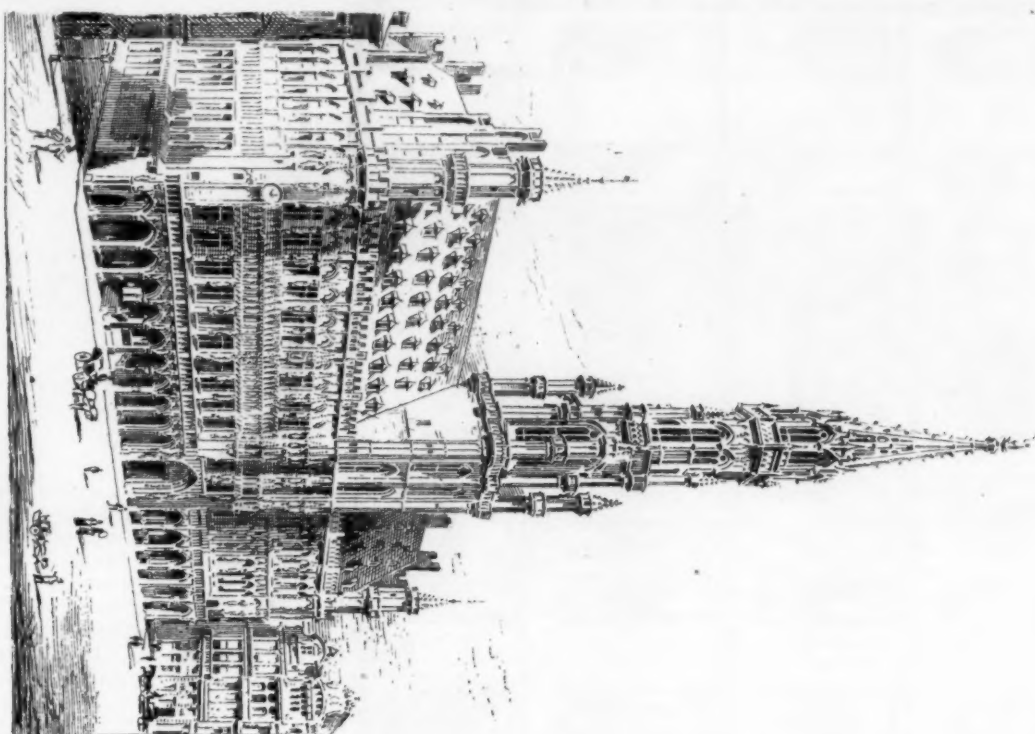
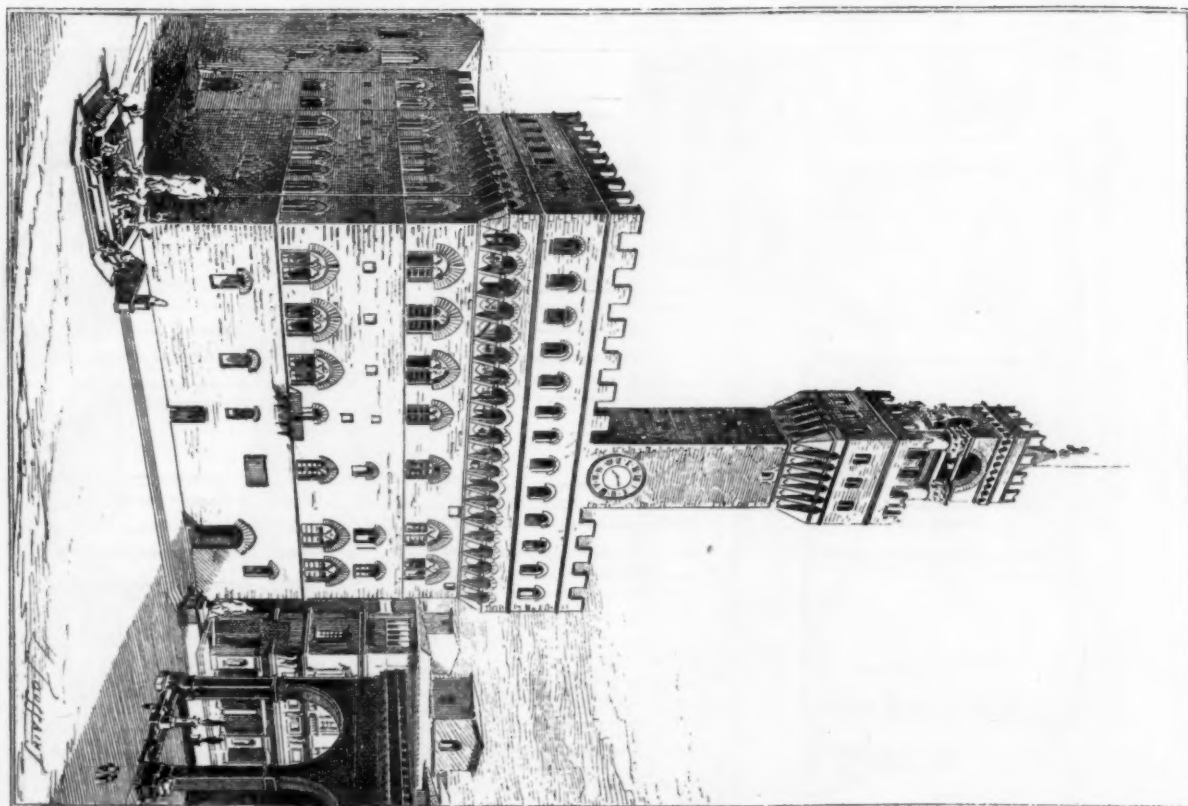


Fig. 14. Palazzo Vecchio, Florence.



great exchanges, genuine basilicas, were erected for the accommodation of merchants. They consisted of extensive porticos running around a court, with covered galleries above;

aside Oriental traditions and adopting forms better suited to the climate and resources of the country. It was at that time that so many town-halls, like the one at Lubeck, were built, and the many belfries, exchanges, slaughter-houses, *entrepôts* fountains, hospitals and bridges [bridges of Lucerne,

¹ From the French of G. Guicciotti, in "Encyclopédie de l'Architecture et de la Construction." Continued from No. 735, page 53.

Ratisbon, Dresden, Prague]. In Belgium, likewise, a large number of exchanges, belfries and town-halls were built. The exchanges of Bruges and Ypres, and the town-halls of Brussels (Figure 13), Saint Bavon, Louvain, Mons, Courtrai and Audenarde are noteworthy examples.

The Latin style prevailed in Italy until the eleventh century.

becoming allied with the Byzantine, a new style was produced, the Romance, sometimes termed the Byzantine Romanesque, and public palaces sprang up in all the cities, modelled after the same general design: there was always a square court surrounded by buildings, of which a portico formed part of the ground-floor; the assembly-halls above were

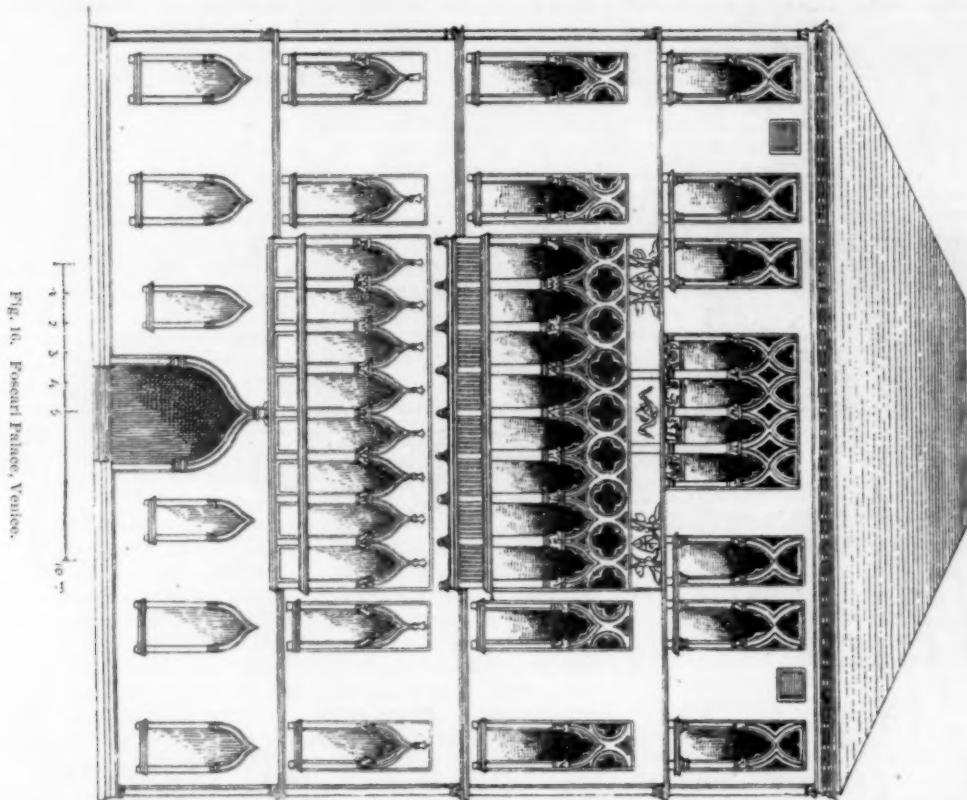


Fig. 16. Procuratie Palata, Venice.

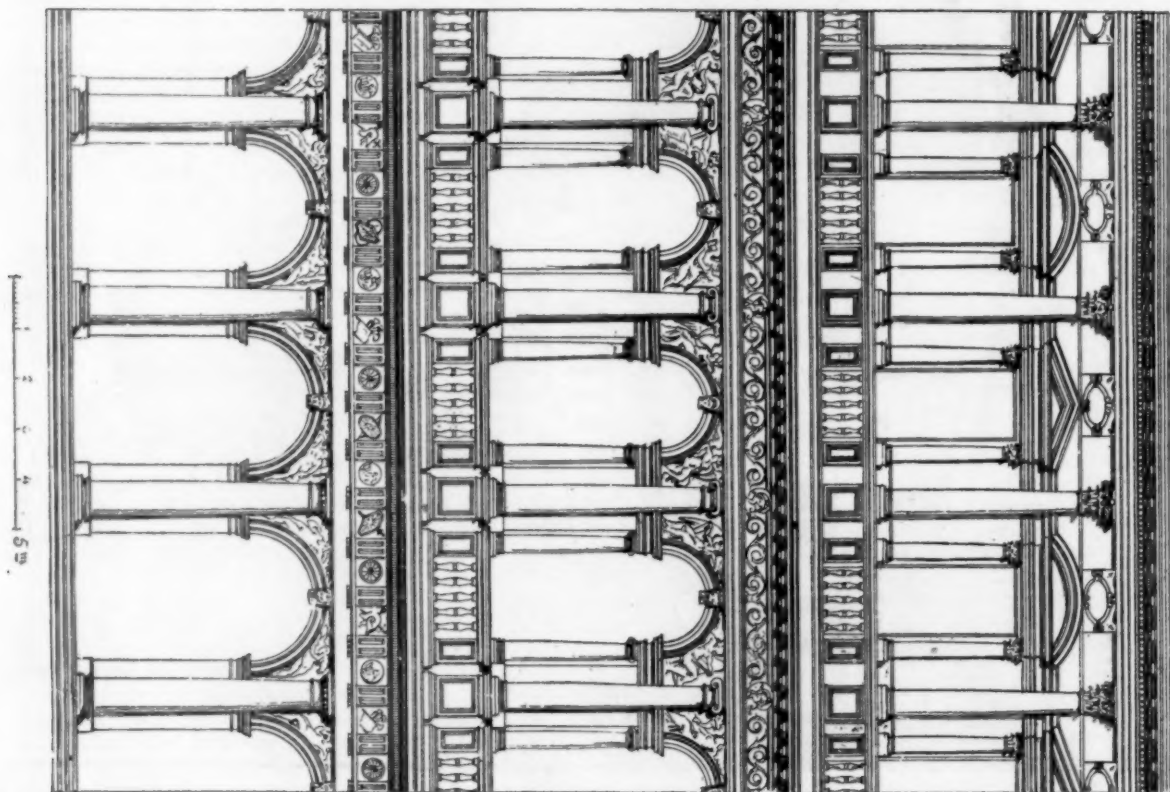


Fig. 17. Procuratie Nuova, Venice.

and down to that period, as was the case everywhere else in Europe, architectural activity was confined to the erection of houses of worship for the new religion. Then, however, civil architecture awoke from its torpor. The Latin element

lighted through broad windows. The municipal palaces and even the mansions of the rich citizens were fortified and embattled. The rivalries existing between different cities, and the frequent struggles between hostile parties of the same

city made these fortifications imperative. The old palaces of Florence, Verona and Vicenza, the ducal palace of Ferrara, the palace of Eccelino, at Padua, the château Delle Torri, at Turin, all presented the aspect of strongholds. The Pointed (*ogival*) style made its appearance in Italy at the end of the thirteenth century introduced by German artists, but it was adopted only with reluctance. The Palazzo Vecchio (Figure

losing more and more of its mediæval characteristics. In Venice the Contarini, Foscari (Figure 16), Vendramin, Corner and Camerlenghi palaces, the Library of St. Mark's, the Procurazie, *vecchie* and *nuove* (Figure 17), the inner façade of the Doge's Palace and the Giants' Staircase were constructed, all most richly ornamented. At Milan less showy palaces—among others the Castiglione—and a lazaretto were erected.



Fig. 18. Hôtel de Ville, Paris.

14), the Loggia dei Lanzi, at Florence, the Doge's Palace in Venice, and the loggias of the public palaces at Padua and Sienna were built in this style.

Italy, in the fifteenth century, was the first to break away from the Pointed style and go back to antiquity for proportions, profiles and decoration. During this period of the Renaissance a tremendous impulse was given to private construction. All over the cities of Tuscany palaces were built with the apartments disposed around an inner court decorated with porticos.

Lastly, the most perfect expression of the Classical Italian style of architecture is to be found in Rome, in the palaces of the Cancellaria and in the Giraud, Farnese, Chigi, Massimo, Berti, Vidoni and still other palaces.

The Renaissance afterward passed into France, encouraged by kings who had been captivated by its charms during their Italian campaigns. Here, however, it was at first applied to the re-dressing of façades, the disposition of the plans being in no way modified. Broader openings were made in castle-walls,

Fig. 19. Plan of First Floor, Hôtel de Ville, Paris.

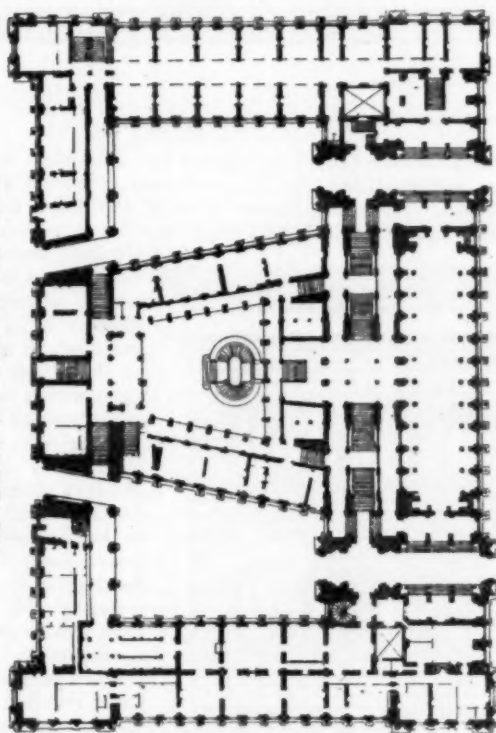
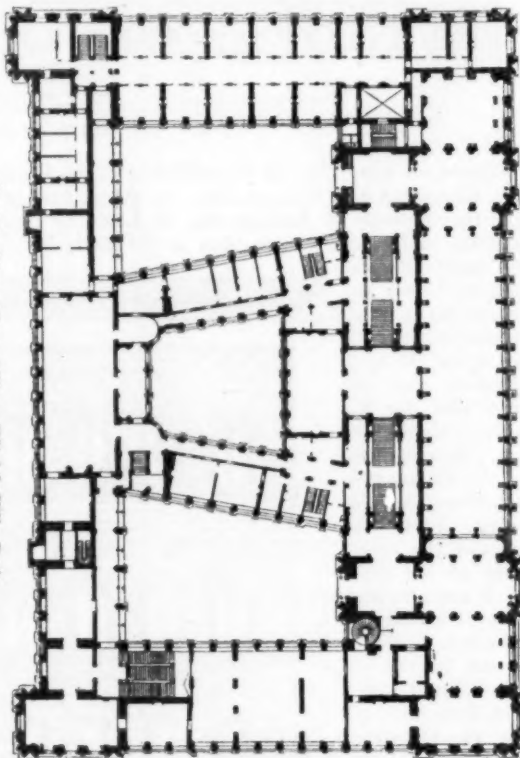


Fig. 20. Plan of Second Floor, Hôtel de Ville, Paris.



Life, however, was no longer wholly confined to this court: windows were opened on the street, though these were quite unimportant in the lower story, and were pierced only at a certain height, but on the other floors they were very broad; especially was this the case in the reception story, the first above the ground-floor. Such palaces are the Pitti, Riccardi, Tornabuoni, Cafareggi and Strozzi (Figure 15) at Florence; very beautiful ones were also built at Sienna and Urbino. Then from Tuscany the new style spread widely, continually

and sun and light were admitted into them through ample windows richly framed in the new style; but the halls were still arranged one after another, without any well-defined destination and without separate entrances. The houses of the *bourgeoisie* were not altered in structure. There were, moreover, no social modifications to call for new architectural designs; the old ones were merely developed and clothed in different forms. The principal constructions of this period were palaces and castles. In the Château d'Amboise the first

attempt was made to acclimate the Italian style in France; then followed the Château de Gaillon, the Château de Blois, the *châteaux* at Meillant (Cher) and Azay le Rideau (Indre et Loire) and the Hôtel de Bourgtheroulde, at Rouen. Not every reminiscence of the original style was abandoned in

sanitary requirements of the public: squares were opened in the cities, streets were widened and straightened. The Place Royale in Paris dates from this epoch (1605): in the surrounding buildings, made of brick and stone, there are galleries on the ground-floor for circulation, with shops in the rear. The



Fig. 21. Colonnade of the Louvre.

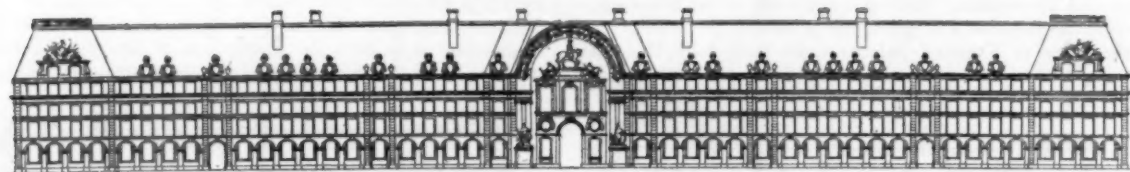


Fig. 22. Façade of the Hôtel des Invalides.

these edifices, no more than in the *châteaux* of St. Germain-en-Laye, Chambord and Chenonceaux, no more than in the tombs of the cardinals of Amboise and of Louis de Brezé in the cathedral of Rouen, no more than in the hôtels de ville of Noyon, Saint Quentin, Compiègne, Douai and Dreux, several of which still preserve the flamboyant style. It is in the Louvre and the Tuileries that the Renaissance exhibits its highest development, and in the Château de Fontainebleau, the *châteaux* of Anet and Ecouen and the lovely Fountain of the Innocents. It was also seen in the Château de Madrid which no longer exists, and in the old Hôtel de Ville, at Paris, begun in 1533 after the designs of Domenico Boccadoro, an Italian architect; and, finally, it was such artists as Philibert de l'Orme, Du Cerceau, Pierre Lescot, Jean Bullant, Salomon de Brosse and Jean Goujon whose works marked the bounds of the Renaissance in France.

Under Henry IV and his minister Sully, *grand voyer du royaume*, attention was for the first time centred on the

Place Dauphine (1608) belongs to the same time, and others were projected, but Ravaillac's dagger prevented their construction. However, Henry IV saw the Pont Neuf completed, and it was during his reign that the corner-stone of the

Hôpital Saint Louis was laid. A large number of convents were likewise built, but the treatment of structures of this kind does not come within the range of the present article.

After the death of Henry IV, Marie de' Medici commissioned the architect Salomon de Brosse to erect the Luxembourg Palace; the Italian forms were preserved in it, but were treated to suit the French taste. To furnish the great supply of water required for the gardens and palace, de Brosse restored the aqueduct of Arcueil. This restoration led to the construction of a great many public fountains on the left bank of the Seine. The

same architect rebuilt the great hall of the Palais de Justice at Paris.

In the reign of Louis XIII the progress in civic architecture continued; edifices were modelled more and more after antique

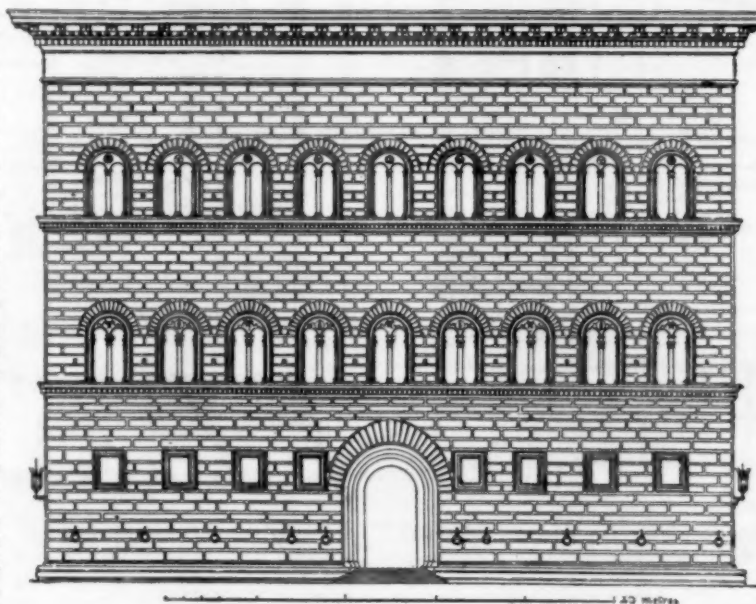


Fig. 15. Strozzi Palace, Florence.

designs which the works of Vignola, Palladio and Serlio, with their accompanying illustrations and rules, had just made known. Richelieu commissioned Lemercier to erect for him the magnificent Palais Cardinal between the Louvre and the Tuileries, and in it he had two play-halls constructed, the first,

The same minister also built the Sorbonne and the work on the Louvre, the Tuileries and the Château de Fontainebleau was carried forward. New fountains were erected; new bridges were built [Pont Saint Michel, Pont Marie, Pont au Change], as well as castles, and private dwellings which became veritable

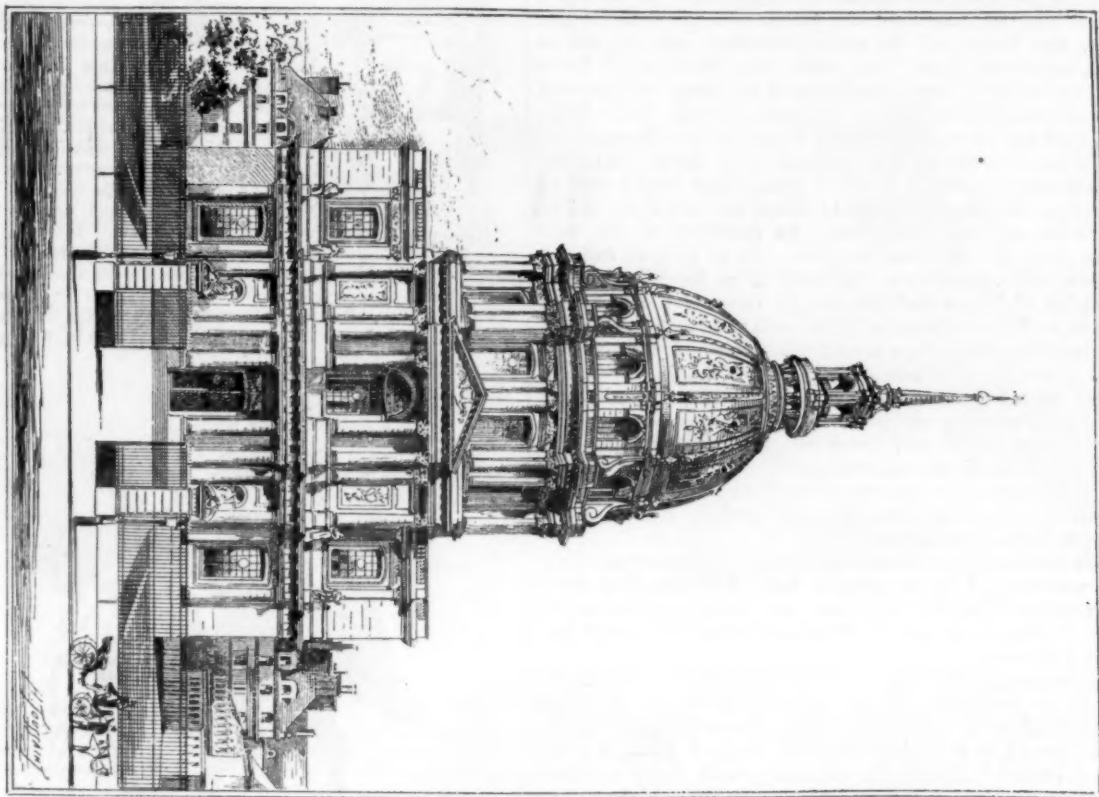


Fig. 23. Chapel of the Hôtel des Invalides.

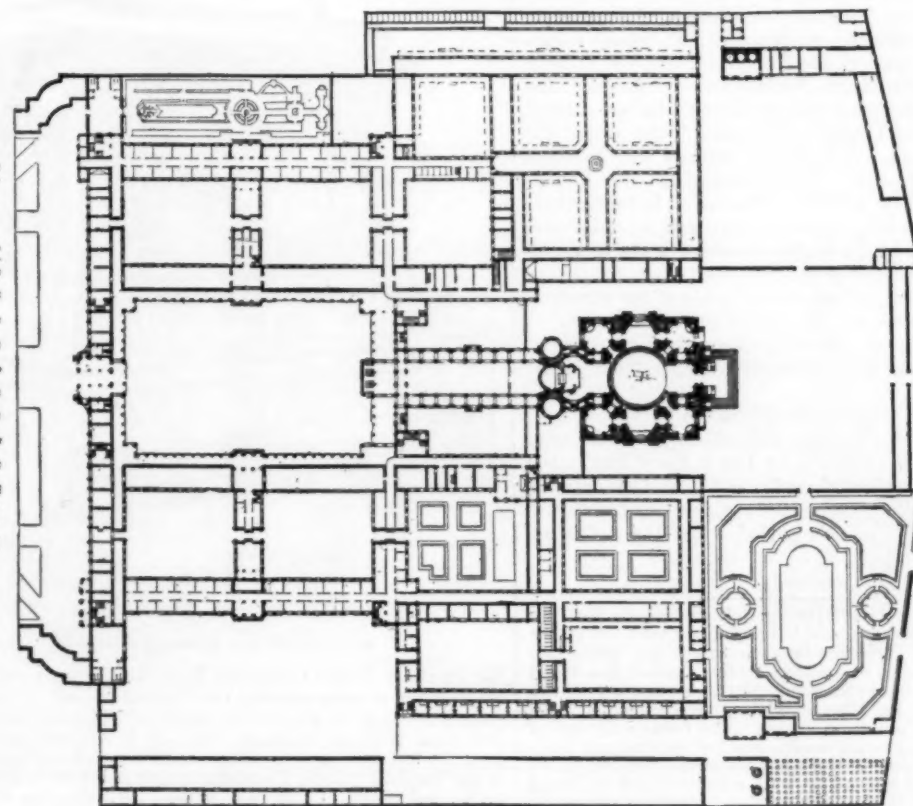


Fig. 24. Plan of the Hôtel des Invalides.

perhaps, to be designed in accordance with the modern spirit. The seats of the ancient theatre were replaced here by balconies or rows of boxes; and the stage was deepened in order to give room for the theatrical machinery and for purposes of perspective.

The Hôtel de Rambouillet, which belongs to this period, served as a model for later constructions of the same kind, and in the Hôtel Lambert a wealth of painted decorations was introduced hitherto undreamed of. Winding-staircases were replaced by staircases in the Italian fashion, the windows

no longer had stone mullions, and the disposition of the interior bore witness to an entirely new spirit, in harmony with the refinements and distinction of the society of the times.

In several cities town-halls were erected, with a campanile in the centre of the façade which recalled the belfry of the Middle Ages. But the whole was clothed in antique dress. As examples of these may be mentioned the one at Rheims, with its two stories, one Doric and the other Corinthian, and the one at Lyons, which was begun three years after the death of Louis XIII, and which already foreshadowed the pomp and splendor that were to find their highest development under Louis XIV.

England and Germany followed France in the Renaissance. The Gothic style persisted in Germany until the middle of the sixteenth century; and it required great effort on the part of the princes, who were the first to adopt the new style and to procure its universal acceptance. As examples of this style may be cited the portico of the Belvedere at Prague, and the palaces of Otho, Henry, and Frederick IV at Heidelberg; then the castles of Toyau and Dessau, the court of the palace at Dresden, and the *châteaux* of Gadebusch and Gustow.

Among the town-halls, a great number of which were erected at this period, those of Cologne, Augsburg, Nuremberg, Bremen, Breslau, Altenberg and Dantzic are especially noteworthy.

In the seventeenth century, Italian influence was united in Germany with French and Dutch influence. Frederick William built a superb royal palace, and, following the example of Louis XIV, the German princes erected magnificent residences: they imitated the Palace of Versailles with more or less success at Stuttgart, Rastadt and Mannheim.

Later the Germans fell for a brief space into an uncouth style which was inspired by the style of Louis XV; but they were soon recalled to the study of Classic art by the excavations begun at Herculaneum, and by Winckelmann's work on the history of ancient art.

In France with the unity of monarchical power under Louis XIV, we see institutions become general which until then had been confined to here and there a city. The arts, like the State, were subjected to a single will which directed them to truly national ends. Undoubtedly originality and fancy suffered thereby deplorably, but it must in justice be acknowledged that a grand and imposing civil architecture grew out of this powerful unity of organization. In this seventeenth century were erected, first under the ministry of Mazarin, the famous palace of Mazarin, in which a part of the National Library is at present kept; the College des Quatre Nations now the palace of the Institute; and at Blois the great wing of the château, constructed by François Mansart for Gaston d'Orléans. Then under the administration of Colbert, Louis Leveau restored the Tuileries and went on with the Louvre. The Colonnade of the Louvre (Figure 21) was the work of Charles Perrault. It harmonized perfectly with the prevailing ideas of pomp and splendor and it had a considerable success: in the *theatrical* style of architecture, which was destined to gain a hold in France, the nature of materials, as well as fitness and the purposes of the structure were too often disregarded, for the sake of show and pomp.

The highest expression of this colossal architecture, with its imposing and symmetrical distribution of parts, is found in the Palace of Versailles.

After the Palace of Versailles the Hôtel des Invalides is the most important work of the century, and certainly it is the most marked (Figures 22, 23, 24). The Porte Saint Denis, the chief work of François Blondel, and the Porte Saint Martin by his pupil René Bullet, especially the former, still figure among the noblest works of this period. But the list is too long for us to follow it up.

[To be continued.]

SWEDISH PENALTIES FOR BAD BUILDING.—It so happens that two or three days ago I was holding a most interesting conversation with a gentleman who has resided in Sweden for twenty years, and during that time been largely interested in the building trade. I asked him why it was that, whereas here we have rotten buildings all around us, in such places even as Gottenburg, buildings other than those erected with the most perfect constructive soundness are not to be found? He replied that in Sweden, if a building owner contravenes the by-laws, he is liable to have not only the building destroyed, but his ground forfeited to the municipality; and, further than this, that for minor faults he brings upon himself the whole of the expenses of the supervising city architect and his staff, which, where all goes well, are borne by the public. I suppose, therefore, the gist of the matter is, that England being a "free" country, this freedom at times amounts to the permitting of licentiousness in some things. Yet it remains to be proved whether some of the more stringent building regulations which, in several Continental countries, stamp out the foul jerry-building fungus would not in this country be equally productive of good results. — *Building News*.

EQUESTRIAN MONUMENTS.—XXIII.

THE THIRTY YEARS' WAR.



Chair at Khorsabad.

IN speaking of the statue of Alessandro Farnese at Piacenza a brief reference was made to the wars in the Netherlands in which, towards their close, he acted a leading part as the Spanish Governor of the country and in the field the worthy successor of the Duke of Alva and Don John of Austria. Against these three famous generals in succession one man contended with varying but at length triumphant fortune. This man is known in history by a *soubriquet* which singularly belies his real character. Though called "the Taciturn" or "the Silent," William of Nassau, Prince of Orange, was not the morose and misanthropic man betokened by this nickname—a title which makes his great popularity with his adherents incomprehensible to those who do not know his real character. In reality William is known as "the Silent" because, when a youth and a hostage with the Duke of Alva at the court of France for the proper observance of the conditions of



William of Orange. De Nieuwerkerke, Sculptor.

the Treaty of Cateau Cambresis, Henri II of France confided to him his intention of exterminating the Protestants, and William kept his counsel although the project was utterly abhorrent to his nature. At this time William, although born of Protestant parents, was a Catholic, had been in spite of his youth a valued and trusted adviser of the Emperor Charles V and was at this time held in similar esteem by his son Philip II. It was natural then that the French King should have no misgivings as to the wisdom of confiding his intention to a fellow religionary, so the keeping of the secret became a thing remarkable enough to found a nickname on only in the light of after events. William's change from the Catholic to the Protestant faith was very gradual, the first stages taking the form of a political

Continued from page 194, No. 722.

change of heart which led him to oppose the oppressive measures which the Spaniards adopted towards the natives of the country: particularly did he object to the introduction of the Inquisition with its attendant gloomy horrors. As a statesman and politician William of Orange has had few equals, and his success in holding his ground in the early struggles was largely due to the skill with which he

Church in 1573, doing all in his power to uphold and advance the Protestant faith, though he took the liberal attitude of seeking only to secure absolute freedom of worship. The Massacre of St. Bartholomew cut him off from the expected alliance with the French Huguenots, although he later succeeded in forming a more personal alliance by taking as his fourth wife a daughter of the unfortunate



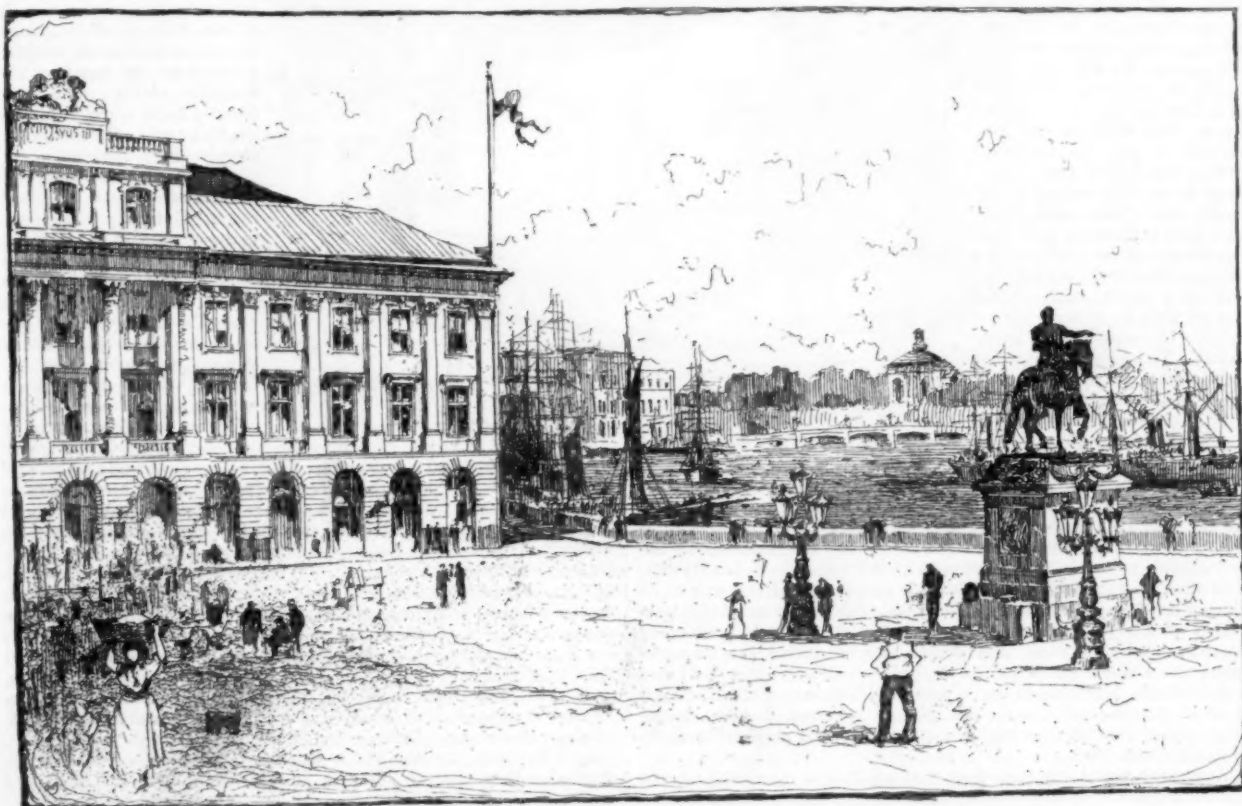
November 16th, at Stockholm.



Gustavus Adolphus. Larcheveque, Sculptor.

made it appear that he was acting as a faithful servant of Philip in resisting what he was able to make appear the unjustifiable assumption of power by Cardinal Granvelle, the regent's prime minister. In these early attempts William was associated with Counts Horn

Admiral Coligny. Whenever his efforts were unsuccessful he retired to his possessions in Germany and waited for time and opportunity to furnish the means of recruiting his forces and making a new attempt. It was while the Spaniards were advancing to attack



Gustaf Adolfs Torg, Stockholm, Sweden, with the Statue of Gustavus Adolphus.

and Egmont, having married Egmont's daughter two years before—the first of his four wives. From this time, 1568, to 1579, when the Union of Utrecht was formed, which dated the beginning of the Dutch Republic, William was constantly in the field resisting the oppressions of the Spaniards and, from the day of his entering the Calvinist

Leyden that the dikes were cut by the determined Dutchmen which enabled Admiral Boisot to sail his ships over the flooded land to the relief of the city. It was not until 1581 that was abandoned the fiction that the rebellious provinces were still faithful subjects of King Philip, and that they were really only striving to get rid

of obnoxious and overbearing garrisons of foreign soldiery. In July of this year the United Provinces declared their independence, and William was still more than ever the most popular man in the country. In the previous year Philip had offered a large reward and a patent of nobility to any one who would capture or slay his able opponent, and this led to the murder of William Prince of Orange in 1584 by Balthazar Gérard, a Burgundian fanatic, who slew him as he was leaving his dining-room. Gérard was seized and put to death with a refinement of cruelty with which the torturers of the Inquisition had made the people familiar.

To a man so famous and so popular as the Prince of Orange many statues have been erected, and if so amphibious a people as the Venetians looked with favor on equestrian monuments one might expect that other men who similarly affected aquatic pursuits would not wholly neglect the superior form of the equestrian memorial. The Hague, however, contains the only equestrian statue of William the Taciturn, the work either of the sculptor de Nieuwerkerke, or of the sculptor Royer, who carried de Nieuwerkerke's design into execution. The statue was erected at the order of William II of Holland, in 1845, and now stands in front of the palace. Upon the pedestal are sculptured the armorial bearings of the seven provinces of the kingdom.

Of the cruel Duke of Alva, the more illustrious predecessor in power of Alessandro Farnese, there was at Antwerp a colossal statue, which some authorities describe as equestrian, though later and more reliable writers speak of it as pedestrian. This statue which the Duke himself caused to be erected in the famous citadel which his engineer Pacheco built, not to defend but to overawe the city, was destroyed by the citizens in 1576, three years after the Duke, discouraged by the vain outcome of his attempt to crush the Protestant movement, obtained his recall. It was erected in honor of the campaign against the Prince of Orange in 1568, in which the Duke so successfully imitated the tactics of Fabius Cunctator that, though William changed his position twenty-nine times, he did not succeed in inducing Alva to give him battle. The Duke knew that William had no money to pay his hireling troops, and could not keep them in the field unless they could win battles and consequent plunder, and he reasoned that he had everything to lose and nothing to win by a battle that could not as well be gained by a policy of avoidance and delay. To carry out such a policy with an opponent of the address and military skill of the Prince of Orange was a task that even the consummate Spanish soldier found by no means easy.

If the statue consumed three or four years in the making, as so large a statue probably did, it could have had but a brief existence, for no sane man could expect that men with blood in their veins could, when they were free to act, suffer the existence of an immortalizing memorial of so atrocious and blood-stained a tyrant. The atrocities committed by Alva are simply incredible, and if he himself could boast, on his return to Spain, that he had caused the execution of 18,600 persons, it is hardly likely, in the face of other records, that he did less. Every form of torture and every complicated and heart-rending method of inflicting death that a vindictive and merciless nature could devise was used without ruth. His treatment of women can be guessed at, when it is known that the disembowelling of pregnant mothers was among his more merciful methods of dealing with them.

A greater moral contrast than that offered by the humane and liberal William with the inhuman and narrow-minded Alva could not be conceived. Even if humanity and liberalism were not natural to the Prince of Orange, it was clearly the part of wisdom to simulate them as, by so doing, he could be sure of the support of those who had suffered under the Spaniard's heavy hand.

In these wars the Protestants of other countries interested themselves actively, and the final success of the Dutch patriots was in no small measure due to the aid of Elizabeth of England, who held her late sister's husband in especial detestation. The French Huguenots

would have given greater aid than they did but for their own struggle for existence at that same moment; while the German followers of Luther and Calvin did furnish both men and money.

This war and similar contests elsewhere had done a good deal in the way of shaking the belief of the lower classes that they were made of such vastly inferior clay to that which composed the frames of the lords and gentles. The fact that they could at need defend themselves led them more and more to believe that they might think for themselves, and the more they thought the more they disbelieved in the superstitions fostered by the Roman Church, and the more they believed in the doctrines expounded by the Reformers.

This gradual disbelief in the tenets of Catholicism did not gain ground only in the lower classes and with those closet-students who naturally did most of the thinking and expounding, that is, the real leaders of the Reform movement. For many hundred years the possessions and wealth of the Roman Catholic priesthood had increased, sometimes gradually and sometimes by great steps and bounds, according as there happened to be in St. Peter's chair at Rome a more or less astute practical political economist—and there were very few Popes who were not able to so influence affairs as to throw into the hands of the minor dignitaries of the Church more or less wealth in the way of money and landed possessions; so at this time Europe was thickly sprinkled with wealthy abbeys and monasteries, where monks and priests lived in a good deal of physical

luxury, while the higher dignitaries of the Church, bishops, archbishops and cardinals, were men of vast wealth and very considerable temporal power. Indeed, at this time, the archbishops of Cologne, Mentz and Treves were three of the seven electors upon whose votes depended the succession to the throne of the Emperor of Germany. For many years nobles of more or less power had looked with longing eyes upon the fat and flourishing possessions of these many dependencies of the Church, and they were only too willing to take advantage of the opportunity which the march of the Reform offered them to add to their own worldly possessions by ousting the Catholic clergy; consequently many German nobles embraced Protestantism merely for the sake of pillaging the possessions of the Church within their reach. Naturally this change in the ownership of the much desired wealth was not accomplished without violence in all cases, and for many years the history of all Germany had been the history of a series of petty conflicts. One of these disturbances which had a considerable effect in bringing about the

Thirty Years' War was caused by the sudden immigration of Dutch refugees who could no longer endure the cruelties practised by Alva and his followers. These people came to Aix-la-Chapelle in considerable numbers, and shortly established a place of Protestant worship and behaved in such orderly manner that others of the inhabitants were gradually converted to the new religion, and Aix-la-Chapelle finally became a Protestant stronghold. What, however, brought about the final conflict between Protestantism on the one hand and Catholicism on the other, was the accession of Ferdinand II to the throne of the empire. The emperor of Austria was also the king of Bohemia; but Bohemia, where the name of John Huss is still more revered than that of Martin Luther, was the very hotbed of Protestantism, while Ferdinand, who had been brought up under the care of the bigoted Spaniards, was an ardent Catholic. In almost all of the German States there were certain rights and privileges vested in the people by former rulers, whose workings it is hard to understand. Just what they were in the case of Bohemia it is here needless to particularize, but the Bohemians declared that they would not have Ferdinand for their king. This practical deposition took place at just the same time that Ferdinand was soliciting the suffrages of the seven electors with a view to securing the succession to the Imperial throne; so that the curious spectacle is presented of a king who is dethroned and almost at the same time is elected to the Imperial throne, and so reacquires a somewhat larger authority over the people who had rejected him. In place of Ferdinand, the Bohemians elected the Palatine Frederick V, and naturally war at once



Maximilian I. Thorwaldsen, Sculptor.

followed between Ferdinand and Frederick, which gradually embroiled the whole of the central part of Europe, in a struggle in which the Catholic provinces and kingdoms openly sided with the Emperor, while the Protestants less openly aided the Palatine. The control of the Imperial armies gradually fell into the hands of Tilly, who proved himself one of the most capable generals of the day, and who would have left, in spite of his general severity, a fair name to posterity, if it had not been for the atrocities which were committed at the taking of Magdeburg. The Catholic cause gained such headway that all the Protestants of central Europe took alarm, and they finally united under the leadership of Christian IV, King of Denmark, who, at the same time with Gustavus Adolphus of Sweden, had offered his services. The more powerful armament of the Protestants now brought into the field on the Imperial side an even greater general than Tilly, Count Wallenstein, a Bohemian noble of great wealth and greater ability, a soldier trained in the wars in Hungary, a profound diplomat, but ambitious before everything. Against Tilly and Wallenstein the Protestants could make no head, and finally they were driven to the extreme north, and a portion of the Imperial army quartered itself upon the shores of the Baltic. This brought the seriousness of the situation home to Gustavus Adolphus with telling force.

Just before this time he had successfully repulsed the Russians and added to his kingdom a large territory, and as a consequence he possessed an army of hardy and well-trained veterans. All Protestant Germany appealed to him to cross the Baltic and assist their common cause. After for a short time weighing the chances, he crossed over into Pomerania, and, after several minor engagements, he had the address to make an ally of the Elector John George of Saxony, who had until then taken sides neither with one party nor the other. The united forces of Saxons and Swedes, reinforced by other contingents, defeated Tilly at the battle of Leipsic; and from that time on the career of Gustavus Adolphus was one of continued prosperity. This was in no small measure due to the sagacity of Richelieu, who, although a Catholic, and as such opposed to the Reformation, was as a statesman still more opposed to the aggrandizement of the power of the House of Austria, which was so strongly allied with the interests of the Spaniards. Richelieu had the address to overcome the natural suspicions of Gustavus Adolphus and perfected an alliance between Louis XIII of France and Gustavus Adolphus, the Swedes furnishing 30,000 men, the French \$400,000 yearly.

During his entire career Gustavus Adolphus showed himself most humane and considerate to friend and foe alike. Wherever his army went there order followed, and the contrast between the behavior of the Protestant army and that of the Catholics constantly led to the increase of the former. At length Ferdinand was so ill-judged as to dismiss Wallenstein in disgrace, and for some time the proud Bohemian noble lived in seclusion but surrounded by regal magnificence at Prague, perfecting his plans and waiting only for a chance to accomplish his revenge. Finding that all his other generals were unable to make head against Gustavus, Ferdinand at length found himself forced to recall Wallenstein, who, though at heart willing, pretended the utmost unwillingness to again enter the Imperial service. Finally he consented, raised a large army and took the field, but only under the extraordinary conditions that absolute power should be in his hands; that the Emperor and the Emperor's counsellors were to have

no voice in his doings; that he was to be allowed to use as he chose all territory and possessions that might be conquered; that he was also to receive at once a large estate in Austria, and on the successful completion of his undertaking was to receive the Grand Duchy of Mecklenburg, with a still higher rank. Under these conditions he at length took the field with 60,000 men and approached Gustavus, who was then in the vicinity of Nuremberg, a free city attached to the Protestant cause. Gustavus immediately entrenched himself about the city, as his force was much smaller than the Imperial forces, and awaited reinforcements. Wallenstein entrenched himself outside of these fortifications, and blockaded the city and the army. At length reinforcements made their way to Gustavus until the armies were about equal; but as it was almost impossible to subsist such mighty forces, the sufferings and sickness on both sides were extreme, and

finally Gustavus, who had several times offered battle, determined to assault the Imperial camp. The conflict which followed showed that it was impossible to dislodge the Imperialists, and at length Gustavus drew off his forces in one direction while the Imperialists departed in the other, only to meet again a short time afterwards on the fields of Lützen, where a pitched battle was fought, during which Gustavus lost his life, as some say, assassinated by a treacherous friend, Francis Albert, Duke of Saxe Lauenburg.

As Wallenstein seems never to have been honored with an equestrian monument, it is useless to follow to the end his schemes of ambition, which led to his final overthrow and assassination; but Gustavus was at once so noble a character and so able and successful a general that he afforded an attractive subject for the sculptor's chisel. Unfortunately the equestrian monument which has been erected in his honor is not a very successful work of art. This statue, the work of the French sculptor Larchevêque, stands near the Hotel Rydberg at Stockholm, and on the 16th day of each November the square surrounding it is filled with Swedes who congregate there to pay annual tribute of respect to their former ruler. One

of the features of the exercises is the singing of the battle hymn which Augustus himself composed just before the battle of Lützen.

This statue was designed in 1777, but was erected only in 1796 so that it can hardly be the equestrian statue of Gustavus, which Patte describes in his book on the statues of Louis XV, since this book was published in 1765; moreover, the descriptions which Patte gives of this statue, also by Larchevêque, does not at all apply to the one now at Stockholm. As Patte says that he himself saw the statue, and as others speak of it as having been in the Place de l'Opera, it probably had an existence even if it never passed beyond the model stage. There is now no trace or discoverable record of its fate. It is possible it was only one of the sculptor's early studies, for the long time consumed in the production of the actual statue may indicate that he had to make several attempts before he could meet the wishes of those who placed the work in his hands, or, more probably still, before he could bring the cost within the limits of the appropriation. This vanished statue would seem to have been conceived in a very original vein for it represented Gustavus galloping at full speed and pursued by a mounted Victory who was vainly endeavoring to overtake him that she might place a laurel crown on his brow. The allegory pointed to the great rapidity of the King's movements which never allowed his enemies to escape him nor gave Victory, who by right should have perched on his banners, time to overtake him.



Portrait of Marshal Rantzau. From Gavard's "Galleries Historiques de Versailles."

Throughout the war, Ferdinand's firm ally and most valued adviser was Maximilian I of Bavaria, a strenuous Catholic, a statesman of great ability and a military leader who had few equals at the time. When the Protestant malcontents formed their Union the Catholics responded by creating a League, at the head of which Maximilian was placed. During the early struggles Bavaria was left in comparative peace, but it was finally invaded by Gustavus, who would have overrun the whole of it if he had not been called off in the middle of his victorious career to relieve his ally, the Elector of Saxony, and take part in the fatal battle of Lützen. Maximilian's faithful adherence to the interests of Ferdinand was rewarded with the transference to him of a portion of the Palatinate, which Frederick V lost together with his Bohemian crown, and with it went the electoral dignity.

In 1830, King Louis of Bavaria commissioned Thorwaldsen to model an equestrian statue of his ancestor. The sculptor consumed six years at Rome on the task, but the cast was so successfully made at Munich that very little hand work was needed to finish it; yet, in spite of this, it was not unveiled before 1839. The statue, which shows the Elector in the armor of the period, is eighteen feet high, or, including the marble pedestal, thirty-five and one-half feet. It now stands in the Wittelsbacherplatz at Munich.

Of all the soldiers and nobles who made name and fame during this tedious war, Gustavus, on the one hand, and Maximilian, the haughty Elector of Bavaria, on the other, are the only persons whom posterity has honored with equestrian monuments, though there were very many to whom such monuments might properly have been erected. One of these, a most picturesque personality, has come very near achieving such sculptured fame, at the hands, too, of a royal sculptor.

Josias, Count Rantzau, by birth a Dane, had served with distinction in the Swedish army, and at a later date had followed Gustavus's famous chancellor, Oxenstiern, into France, for, as has been



Marshal Rantzau. Dom Fernando, Sculptor.

said, the French had in the Thirty Years' War become the allies of the Swedes. Here Count Rantzau remained, and devoted himself to the service of France. Rising, thanks to his own impetuous personal bravery, to a position of considerable importance, he was finally made a marshal of France on promising to abjure the Lutheran faith. Owing to his rashness and unwillingness to keep himself out of danger, as a great leader should, he suffered bodily injury on several occasions. He lost an eye; he lost an arm; he lost an ear; and for years balanced, when in the saddle, a living foot on one side with a wooden peg on the other. So buffeted and mutilated had he been, that when at length he was laid in his grave, after having not only to endure physical suffering from wounds, but physical and mental torture through a long and unjustifiable imprisonment in the Bastille—where he died of the dropsy in 1650—that the following epitaph upon his tomb in the Church of Minims, at Chaillot, seems to be a not too grandiloquent tribute to his merits:

*"Du corps du grand Rantzau tu n'as qu'une des parts:
L'autre moitié resta dans les plaines de Mars.
Il dispersa partout ses membres et sa gloire.
Tout abattu qu'il fût, il demeura vainqueur;
Son sang fût en cent lieux le prix de la victoire
Et Mars ne lui laissa rien d'entier que le cœur."*

This interesting and heroic character attracted the admiring attention of Dom Fernando, the King Consort of Donna Maria II,

Queen of Portugal, and, as Dom Fernando was an amateur of some ability, he amused himself with modelling an equestrian statuette of this, his favorite hero. The statuette was finally cast in bronze, and the one copy in existence now stands in the famous castle of Cintra, the country-seat to which Dom Fernando retired on the accession of his son to the throne.

Of Richelieu's ability as a writer of inscriptions for equestrian monuments we have in a previous paper quoted the evidence, and at the same time was mentioned the statue of Louis XIII, which now stands in the Place des Vosges at Paris.

The reason that the French were not able to give Gustavus more actual assistance during the Thirty Years' War was because Richelieu and his generals had their hands full at home in suppressing the



The Great Condé. Fremiet, Sculptor.

growing power of the Huguenots, who were favored at one time by Henry of Navarre, and subsequently oppressed with a heavy hand by the same great ruler. These malcontents made the reign of his immediate successor greatly disturbed by internal dissensions. Thanks, however, to his great Prime Minister, the feeble Louis XIII saw the royal power greatly extended. These internal dissensions, the wars with the Spaniards and the constantly-recurring troubles along the Rhine bred a class of great soldiers and greater leaders, who have left imposing records on the page of history, and none more glorious than that which describes the career of Louis of Bourbon, Prince de Condé, who, as Voltaire said, "was born a soldier." As he rose in power, through what he had accomplished in the field, he gradually excited the enmity of the carpet knights who staid at home; and they were at length able to give their jealousy such effect that during the wars of the Fronde he was cashiered by Cardinal Mazarin, and imprisoned for a year, in 1650. As soon as he was free, he went over to the Huguenot's side, and even besieged and took Paris, where, as we know, he caused the destruction of the equestrian bas-relief of Henry IV over the doorway of the Hôtel de Ville through the fire with which he burned down the door which opposed the entrance of his troops. In this siege and in other battles he was opposed to the almost equally famous Turenne. As one result of this rebellion he was sentenced to death, and in order to avoid the execution of the sentence he took refuge in Spain, where he remained until a general amnesty allowed him to return to France. After this he served in Holland, and only retired from active work in the field in 1675, after a career of thirty-seven years.

Such a character as this afforded the best material for such a sculptor as Fremiet, and he has modelled an equestrian figure, which shows the prince in the armor of the period, bare-headed except for the flowing wig of the time. It can hardly be said that this statue or statuette is one of the sculptor's most successful efforts.

Of Turenne, the famous opponent of the Prince de Condé, there is an equestrian statuette in gold and silver which was formerly in the Hôtel des Invalides, but now is placed in the Ecole Militaire, where it is impossible to get access to it because of the superabundance of official red tape; so what its actual character is cannot here be told.

WILLIAM OF ORANGE.—William of Nassau, Prince of Orange, called "William the Silent," the founder of the Dutch Republic, was born at Dillenburg, in Nassau, in April, 1533, and was the eldest son of William, Count of Nassau. He inherited princely estates in Brabant, Flanders and Holland and the small principality of Orange, in the southeast of France. He was educated by his parents as a Protestant, but, when about fifteen, was made a page of the Emperor Charles V, who soon saw his superior abilities, and placed much confidence in him, which he showed by making him a general-in-chief of the army, in the absence of the Duke of Savoy, in 1554. At Charles's abdication in 1555 he leaned on the shoulder of young William, who was considered the greatest Flemish subject of Spain, and was made one of the hostages given by Philip II to Henri II of France in 1559 for the execution of the treaty of Cateau Cambrésis. William's humanity and love of country decided him to oppose the cruel designs of Philip II and Henri II, but he acted with his characteristic caution and secrecy, and continued to serve as Stadtholder of Holland, Zealand and Utrecht and Councillor of State. In 1566, a great insurrection was provoked by

the attempt of Philip II to establish the Inquisition in the Netherlands. In 1567 William refused to take a new oath of unlimited obedience, and offered to resign all his offices. The same year saw the arrival of the Duke of Alva, who came with an army and supreme civil power as governor to complete the subjection of the revolted provinces. A successful issue of the long struggle was at length reached, and the republic was founded by the union of the seven Protestant provinces of Holland, Zealand, Utrecht, Friesland, Groningen, Overijssel and Guelderland in 1579, when William was chosen Stadtholder. In July, 1584, he was assassinated by Balthazar Gérard, a Catholic fanatic. His life had many times before been attempted by Catholic assassins. To him belongs the honor of being the first among European statesmen to make a practical application in government of the principle of religious toleration.

DE NIEUWERKERKE.—Alfred Emilien, Count de Nieuwerkerke, was born at Paris in 1811, his family being of Dutch origin. A French administrator and senator, he practised sculpture only as an amateur, but meeting with much success exhibited some of his works in public. In 1849 he was made director-general of French museums by Louis Napoleon, then president of the Republic, who when emperor created for him (in 1853) the office of superintendent of the fine arts. In 1852 de Nieuwerkerke purchased for the Louvre, at the sale of Marshal Soult's pictures, Murillo's "Immaculate Conception" for \$123,000, and during his administration added many other important and valuable works of art to the national collections. The annual appropriation for purchases of this nature was increased through his efforts and he rendered great services to the cause of art in many ways, especially by his energetic reforms in the Ecole des Beaux-Arts and the Prix de Rome. He retired from public life in 1870. His works in sculpture include the equestrian statues of William of Orange at The Hague, of Napoleon I and Napoleon III at Lyons and of Napoleon III at Napoleon-Vendée (now La-Roche-sur-Yon); an equestrian statue of Isabella the Catholic entering Granada; a statue of Desportes at Tours; one of Marshal Catinaut for his tomb in St. Gratien; and a number of portrait busts. He has won a number of honors at the *Salon* and is a member of the Institute.

ROYER.—Louis Royer, a Dutch sculptor of Belgian extraction, born at Mechlin in 1733, died at Amsterdam about 1807. He studied at Paris under Debay, and in 1821 gained the Grand Prix de Rome at Brussels. After a stay of four years in Italy he settled at The Hague in 1825, and became sculptor to the king, and a member, and later director, of the Academy of Amsterdam. His principal works are: "Claudius Civilis"; "A Shepherd fleeing from a Serpent"; "Diana at the Bath"; "Hebe"; "Concord"; "Amity"; "Paul and Virginia"; "Ecce Homo"; "St. Cecilia"; "Rembrandt" and "Erasmus"; and he also produced a large number of portrait busts.

GUSTAVUS ADOLPHUS.—"The Lion of the North." "Sweden's Glory." "The Saviour of Protestantism." Gustavus Adolphus or Gustavus II, King of Sweden, born at Stockholm, December 9, 1594, was the son of Charles IX and grandson of Gustavus Vasa. He ascended the throne at the age of seventeen and soon gave evidence of his great abilities. Sweden having been invaded by Sigismund, King of Poland, and his ally the Czar of Russia, Gustavus defeated them, and in 1629 concluded a peace by which he gained a great part of Livonia and the town of Riga. Not long after he was invited to champion the Protestant cause in Germany. Before setting out, he published a declaration stating that he did so not for love of conquest but in defence of his religion and to avenge his injuries at the hands of the Austrian emperor. He landed in Pomerania with 8,000 men in June, 1630, his army being soon reinforced by six Scottish regiments under the Duke of Hamilton, and took the fortress of Wolgast. Advancing into Mecklenburg, he was met with overtures of peace from the emperor accompanied by the offer, among other things, of Pomerania, but these proposals were rejected. Gustavus lost his life at the Battle of Lützen, November 16, 1632. Schiller called him "incontestably the first commander of his century, and the bravest soldier in the army which he had created."

LARCHEVEQUE.—Pierre Hubert Larcheveque, a French sculptor, born at Paris in 1721, was a pupil of Bouchardon and won the first prize of sculpture in 1745. In 1755 he was made Associate of the Royal Academy at Paris, and afterward received the knighthood of the Order of St. Michael. About 1760 he was invited to Stockholm, and commissioned to execute the models for a statue of Gustavus Vasa and for an equestrian statue of Gustavus Adolphus. They were both cast in bronze, of colossal size, by a Swede, named Meyer. Larcheveque established a school for sculpture in Sweden and was honored with the Order of the Polar Star. He returned to France in 1776 and died there in 1778.

MAXIMILIAN I.—Elector of Bavaria; born in 1573. On the formation by the Protestants of the confederacy called the Union (1608), Maximilian put himself at the head of the opposing Catholic faction of the League. In conjunction with the Emperor Ferdinand II, he fought in the Thirty Years' War against the Palatine, Frederick V, and conquered the Upper and Lower Palatinate. In 1623 he obtained the electoral dignity of the Palatinate and the hereditary domains of Frederick V. Maximilian was an able ruler, and founded a number of colleges and other useful institutions. He died in 1651.

THORWALDSEN.—Bertel Thorwaldsen was born in Copenhagen in 1770. He was the son of a wood-carver, and while very young learned to assist his father. At the age of eleven he entered the Copenhagen school of art, soon displaying exceptional talents and won the highest prize, the travelling-studentship. In 1796 he started for Italy and arrived in Rome when Canova was at the height of his popularity. Thorwaldsen's first success was the model for a statue of Jason, which was highly praised by Canova, and he received from Thomas Hope, a wealthy English art-patron, a commission to execute it in marble. From that time the sculptor's future was assured, and he did not leave Italy for twenty-three years. On his return to Denmark in 1819 he was received with the greatest enthusiasm, and was commissioned to make the colossal series of statues of Christ and the twelve apostles, now in the Fruekirke at Copenhagen. These were executed after his return to Rome, and were not completed until 1838, when he again returned to Denmark. Thorwaldsen died in 1844 and bequeathed a large part of his fortune for the building and endowment of a museum in Copenhagen, and also left to fill it all his collection of works of art and the models for all his sculpture. He is buried in the court-yard of this museum. Among his principal works may be mentioned the *Lion of Lucerne* (the monument to Pius VII in St. Peter's); the frieze representing the entry of Alexander into Babylon; the "Gutenberg Monument" at Mayence; the "Schiller Monument" at Stuttgart; and an equestrian statue of Poniatowski, formerly at Warsaw. He produced a great number of ideal statues and bas-reliefs, being especially gifted in designing works of the latter nature, and numerous portrait busts. Many of his productions represent Classical characters and incidents, and in their portrayal he was eminently successful. Probably his most widely known reliefs are those of "Night" and "Morning."

RANTZAU.—Josias, Comte de Rantzau, was born of an illustrious family in Holstein, which was then part of Denmark, in 1609. In his youth he served with distinction in Sweden, and then accompanied the Chancellor Oxenstiern to France and became attached to the service of Louis XIII, who made him colonel of two regiments. He covered himself with glory at the siege of Dole, in the campaigns in Flanders and Germany, and at the siege of Arras. He contributed to the victory of Rocroi, replacing Marshal Guebrant, who had been wounded. He was made lieutenant-general in 1643, and signalized himself in Flanders and Picardy, taking Cassel and Gravelines. In 1645 he received the baton of a marshal of France, and in the years between 1647 and 1649 gained possession of all the maritime cities of Flanders. But, suspected by Mazarin of holding communication with some of the malcontents, he was imprisoned in the Bastille, where he lay for eleven months. His innocence was finally established, but, in the words of a French writer, "this mutilated ruin of all our wars, after having faced a hundred combats," died of a droopy, which he had contracted in his prison, in 1650. With all the qualities of a great general, Rantzau lacked discipline over himself, and was an incorrigible drunkard.

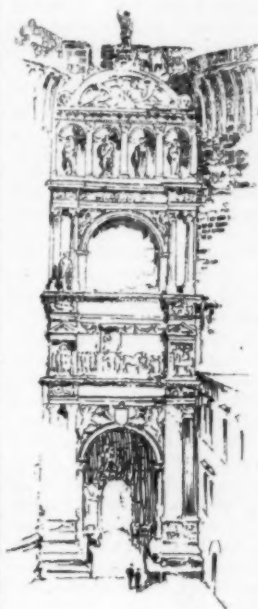
DOM FERNANDO.—Ferdinand Augustus Francis Antonio, Duke of Saxe-Coburg-Gotha, was born in 1816. He was the son of Prince Ferdinand of Saxe-Coburg, and first cousin of the Prince Consort of England. In 1836 he married Dona Maria II, Queen of Portugal, and, on the birth of his eldest son, received the title of King Consort. On the death of the Queen, in 1853, he assumed the regency and conducted the affairs of the kingdom until September 16, 1855, when he resigned the royal authority into the hands of his son, Dom Pedro V. Dom Fernando was an amateur artist of no mean talent, practising in

the arts of painting, sculpture and etching, a man of literary tastes and an ardent book-collector. He shared with his cousin, the Prince Consort, a love for building, planting and improving the estates he purchased, and was an enthusiastic collector of furniture and bric-a-brac. He spent 8,000,000 francs on the erection of his country-house at Cintra. Dom Fernando died at Lisbon in 1885.

CONDE.—Louis II de Bourbon, Prince de Condé, styled "the great Condé," was born in Paris in 1621, and was the son of Henri II and Charlotte de Montmorency. Under the title of Duc d'Enghien, he made his first campaign at the age of seventeen. In 1641 he married a niece of Cardinal Richelieu. He gained a great victory over the Spaniards at Rocroi in 1643, and another one in 1645 over the Germans at Nordlingen, also defeating the Spaniards in 1648 at Lens. In the civil wars of the Fronde he at first commanded the royalists, but, being arrested by the Queen, or Mazarin, in 1650 and imprisoned for a year, he, in revenge, raised an army and attacked the royalists under Turenne at Paris in 1652. In 1663, having been sentenced to death, he entered the Spanish service and directed several Flemish campaigns, being, however, less successful in these than usual. The treaty between France and Spain in 1659 procured him an amnesty, and he returned to his native land. He received the command of an army against Holland in 1672, and in 1674 defeated William of Orange at Seneffe. He retired from the service in 1675 on account of the gout, and died in 1686.

(To be continued.)

AMERICAN BRICKS.



IN our Boston market three kinds of brick are best known: the Eastern or State of Maine, the New Hampshire and the Cambridge. The Eastern bricks are small in size, $7\frac{1}{4} \times 2\frac{1}{4} \times 3\frac{1}{4}$ burned very hard, to a bluish red color, much admired, and rarely found elsewhere. For this peculiar and fine color these bricks have been shipped as far as the New York and, I think, the Philadelphia market. There is an abundance of very fine clay in the State of Maine. The New Hampshire bricks are a little larger in size, a fine brick, shipped largely to Boston, New Bedford, Fall River, and Providence. But Boston, with its consumption of from 150,000,000 to 200,000,000 bricks per year, depends mainly for its supply upon the Cambridge brick, so-called, including practically those of Chelsea, Revere, Everett, and Medford. These bricks are the standard, with us, for excellence, and none better are made anywhere.

I remarked a few moments ago, that the brickmakers of New England were keeping well abreast of ancient times, I will now complete the sentence. They are keeping well abreast of ancient times in the quality of their brick, and that is saying a good deal in their praise, I think. I really believe that there are no better bricks manufactured anywhere, or in all time, than are being made in New England to-day. Until recently no moulded bricks have been produced in our market, but we have looked to Philadelphia, New Jersey and Baltimore for our pressed brick and ornamentals. Within two years, however, two large plants have been erected at Boston for the manufacture of fine pressed brick by the semi-dry process, and are a great addition to the brickmaking industry of New England, viz.: the New England Anderson Pressed Brick Company and the Boston and Philadelphia Front Brick Company. These enterprising parties have, perhaps, somewhat anticipated the demand, but as a good article ready for the market often creates a demand, so, no doubt New England will duly appreciate the invitation thus extended.

One thing I wish to impress on your minds, gentlemen, about New England brick, viz.: It is not necessary to paint them in order to get a fine-colored, rich-looking front. To the mind of a New England brickmaker, the idea of painting a brick wall is a horrible one. No wonder that a great New England poet, familiar all his life with the beauty of New England bricks, should sing in plaintive strain:

"Of all sad words, from our lips which fall,
The saddest are these, 'A painted brick wall.'"

Now I want to say a word right here about our late great fire in Boston. Mr. Ittner spoke yesterday about seeing a statement to the effect, that the stone melted—well, some of the stone did melt, and some of the brick melted too, though not a great deal of either. The great fault with those stone fronts was, that the moment they became heated to a certain degree, they began to fly, especially if a stream of water was turned on them, they exploded as if they were being blasted with powder. This cannot be said of the brick walls, which stood this test much better. That fire was a great lesson in favor of brick and terra-cotta construction.

My own experience in clay working has been confined to the manufacture of architectural terra-cotta, fire-brick, and specialties in front bricks, and this brings me to one phase of the brickmaking industry which is very interesting, just at present, and that is the large and

¹ Extract from a paper by Mr. George M. Fiske read at the Fourth Annual Convention of the National Brick Manufacturers' Association.

growing demand for light-colored bricks for fronts. This demand is fully upon us in Boston. New Jersey sends us these bricks to some extent, but our architects can also find what they want nearer home. To be sure, we labor under this disadvantage, that we depend upon New Jersey for our most available supply of light-burning clays. About the best we can do is to buy at seventy-five cents per ton on vessel at Jersey, pay \$1.25 flat as freight, which puts the clay in the pile alongside the factory at about \$2.25 per gross ton.

This, I say, is about the best we can do. Our higher grades of fire-clay cost us more. But, I hear some one ask, You don't use fire-clay in making front brick do you? Certainly. In fact, all clays which will produce a light-colored brick, are in a degree fire-clays. I am aware that there is a difference of opinion as to what constitutes a fire-clay, but a line must be drawn somewhere, why not draw it at the color line?

But the Boston front brick, to which I have referred, are not always composed of a low grade of fire-clay. Some of the best bricks which we have produced have been made of a high grade of fire-clay, so manipulated in the manufacture and burned so hard under intense heat, that a brick is produced upon whose enduring qualities I would be willing to stake my reputation, every time. But it is not in Boston alone that fire-clay building bricks are produced. In New England, at Somerset, Mass., the Somerset Potter's Works, have just completed a fine plant with a capacity of three million or more per year, for the production of fireproof front bricks. They are fitted up with a fine layout of English methods and machinery, and their enterprise is an important one in the history of New England brickmaking. I have spoken of the demand for light-colored bricks, as being an interesting one, but the demand is not merely for a light-colored brick, but for specialties in color. Buff, old gold, mottled, and other odd and beautiful colors, which can be produced by fire-flashing under heavy fire.

Not only that, but the demand is for diversity of shade in bricks for the same front. Now, right here, a great change has come over "the tenor of the dream" of our architects. A few years ago, we had the greatest difficulty in inducing them to accept our architectural terra-cotta, unless it was burned to very nearly even shade. Now, the desire is for a diversity of shade; in some brick fronts recently erected in Boston, bricks of as varying shades as these two pieces which I hold in my hand are laid side by side. This is a great gain to the brickmaker in the matter of culling, and ought to suit us if it does the architects and owners. But there is still another interesting fact connected with this demand—and that is that the architects in their desire to obtain these specialties in color, are throwing mechanical perfection to the winds. You brickmakers well remember that, not many years ago, there came a strong demand for a mechanically perfect brick. Our friends here in the Quaker City, were among the first to cater to that demand, and their bricks became famous throughout the land. Others took it up, and ere long the semi-dry process, with wonderfully improved and perfect machines and presses was turning out bricks, whose mechanical perfections have never been excelled in all the world. You can go to scores of yards to-day, and select moulded bricks, so perfect in form and finish that they would make good parlor ornaments. But that spirit of change, which keeps the world moving and gives us that variety which is the spice of life, has suggested to our architects, that mechanical perfection alone, in bricks, will not produce the strongest and most beautiful effects in architecture. Color and outline are equally important.

It is well-known to all clay-workers, that heavy firing means, more or less, warped, twisted, and crooked work, and as the heavier the fire the more beautiful the color—our architects are saying, "only give us these colors, and we will use your rough and twisted brick." And so it has come about that some of the roughest and coarsest material is being used to produce some of the finest effects in architecture; some of the Pompeian mottled bricks are so rough that the man who lays them showers malediction on the head of the man who makes them; but when well-laid in the wall, they look as soft as velvet. An architect asked me not long ago, "Have you any accidents at your factory?" "What do you mean?" said I. "Why I mean any bricks which have been accidentally burned too much." "Oh, yes," I replied, "plenty of them." He came over and I showed him a lot of refuse stuff, some of which had been broken out of the kiln with a crow-bar, and which I expected to send to the dump. He was delighted with it. "Beautiful!" he exclaimed—"elegant! I will take the lot and build a cottage at the beach for a rich client of mine." So I expect to get double price for my accidents after this.



[Contributors are requested to send with their drawings full and adequate descriptions of the buildings, including a statement of cost.]

ENTRANCE HALL IN HOUSE OF PROF. C. E. HART, NEW BRUNSWICK, N. J. MR. HENRY RUTGERS MARSHALL, ARCHITECT, NEW YORK, N. Y.

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

HOUSE OF PROF. C. E. HART, NEW BRUNSWICK, N. J. MR. HENRY RUTGERS MARSHALL, ARCHITECT, NEW YORK, N. Y.

THE frame of this house was very old, but the good form of the exterior had been entirely destroyed by modern carpentry decoration some forty years ago. The doorway, as it appears on the elevation, was the centre of the house as found. It was desirable to increase the size of the house, and so there was added on the portion shown on the right of the picture, and, leaving the door where it was, the front porch was built out in such shape as to gain new symmetry for the house. Then a new roof, the cornice and all the decorative features as shown were added. The interior hallway was originally the parlor, but by putting the stairs in the rear of the room, the chimney, as it existed, was thrown out of the centre and a symmetrical arrangement was attained as is shown, by the triple columns, with seat on the right-hand and the fireplace on the left. The whole of the finish of this hall is new.

HOUSE OF WM. STORRS WELLS, ESQ., NEWPORT, R. I. MESSRS. G. E. HARDING & CO., ARCHITECTS, NEW YORK, N. Y.

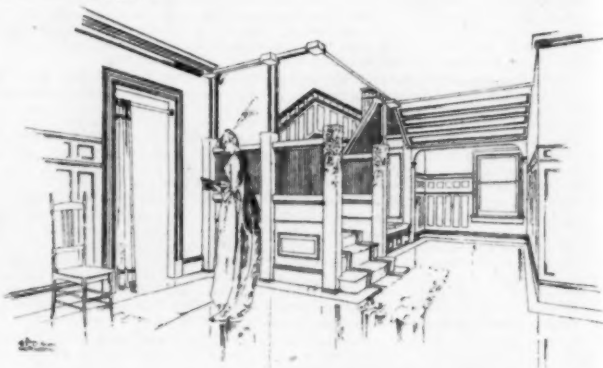
HOUSE ON PORTSMOUTH TERRACE, ROCHESTER, N. Y. MR. W. C. WALKER, ARCHITECT, ROCHESTER, N. Y.

TOWER SKETCHED FROM THE COMPETITIVE DESIGN OF MR. C. B. ATWOOD, ARCHITECT, FOR THE NEW CITY-HALL, NEW YORK, N. Y.

A TOWN CLOCK-TOWER DESIGNED BY MR. WILLIS POLK, ARCHITECT, SAN FRANCISCO, CAL.

HOUSE OF J. H. HOWE, ESQ., ROCHESTER, N. Y. MESSRS. NOLAN BROS., ARCHITECTS, ROCHESTER, N. Y.

HALL IN HOUSE OF
J. H. HOWE, ESQ., ROCHESTER, N. Y.



SITTING-ROOM IN HOUSE OF J. H. HOWE, ESQ., ROCHESTER, N. Y. MESSRS. NOLAN BROS., ARCHITECTS, ROCHESTER, N. Y.

[Additional Illustrations in the International Edition.]

STREET VIEW, SANTIAGO, CHILL.

[Gelatin Print.]

A STREET VIEW IN DINAN, FRANCE.

[Grano-chrome.]

COMPETITIVE DESIGN FOR THE CATHEDRAL OF ST. JOHN THE DIVINE. MR. J. L. FAXON, ARCHITECT, BOSTON, MASS.

COMPETITIVE DESIGN FOR THE CATHEDRAL OF ST. JOHN THE DIVINE. MR. S. C. EARLE, ARCHITECT, WORCESTER, MASS.

COMPETITIVE DESIGN FOR THE CATHEDRAL OF ST. JOHN THE DIVINE. MR. EDWARD P. CASEY, ARCHITECT, NEW YORK, N. Y.

THE DRAWING-ROOM, HOLCOMBE, CHATHAM, ENG. MR. JOHN BELCHER, ARCHITECT.

HALL, COOMBE-HOUSE, NEAR SHAFTESBURY, ENG. MR. E. TOWRY WHYTE, ARCHITECT.

This house, which has been recently erected for Mr. Mark Beaufoy, M. P., is situated on the borders of Wiltshire, and is built

of local green sandstone, with red Farleigh dressings. The hall, of which we give an illustration, is two floors high, and has a dado panelling of oak and teal; the staircase and gallery are of oak, the chimney-piece of black Galway marble, with oak overmantel and walnut columns. The house is lighted with electric-light. The drawing which we reproduce was exhibited in the last Royal Academy Exhibition.

THE CHAPEL OF ST. MARY OF NAZARETH, EDGWARE, ENG. MR. JAMES BROOKS, F. R. I. B. A., ARCHITECT.

This illustration shows part of the fine church now in course of erection at Edgware. The design fully exhibits its author's feeling and thought, and is one of much power, happily expressed by Mr. Burke Downing's picturesque sketch.

SWIMMING-BATH AND GYMNASIUM AT THE GROCERS' COMPANY'S SCHOOLS, HACKNEY DOWNS, ENG. MR. H. C. BOYES, ARCHITECT.

This building, recently built, is arranged for use as a swimming-bath in summer and a gymnasium in winter, a removable floor being fitted over the bath, which is eighty feet long by a width of thirty feet.



THE CLERK-OF-WORKS. — CONTRACTS WITH CLIENTS.

At the Cincinnati Convention of the American Institute of Architects a Committee was appointed to consider and report upon the subject of supervision and the employment of clerks-of-works.

The purpose of this Committee is to better define the responsibility of the architect in the matter of supervision, and also to inquire as to the best means of introducing the system of the employment of clerks-of-works.

The Committee is collecting information, and without doubt there are many of your readers who could offer them valuable suggestions. Will you therefore kindly invite an expression of opinion upon the subject in your columns, for the consideration of the Committee when it meets?

One of the questions which will arise is, Shall supervision be defined by means of a printed contract between the architect and client?

Another is, Shall this contract include stipulations that a clerk-of-works shall be employed in certain cases?

Any experiences or views upon the subject will be very welcome.

Yours respectfully,

R. W. GIBSON,
D. ADLER,
W. G. PRESTON, } Committee.
J. G. CUTLER,
W. R. FORBUSH,



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

A CORRECTION.

CLEVELAND, O., January 27, 1890.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs:—In this week's issue of the *American Architect*, the residence for Mrs. S. T. Everett, Cleveland, O., should be credited to C. F. and J. A. Schweinfurth, architects, Cleveland, O.

Mr. J. A. Schweinfurth was associated with me during the early part of its construction.

Very truly yours,

C. F. SCHWEINFURTH.

[Not knowing whose house our camera had captured, we had to write to a Cleveland architect for the necessary identification and published the information as obtained in this way.—Eds. AMERICAN ARCHITECT.]



ELECTRICITY AND INSURANCE.—Notwithstanding that rules for safe running of wires and installation of electric-light plants are well-known, or, at least, can be gotten out with very little trouble, the fact

remains that the manner in which this class of work is still done is open in many cases to criticism. The fact, says the *Electrical World*, has been called to our attention more than once by electricians from abroad, the most recent of whom, Mr. Addenbrooke, in a paper read before the London Institution of Electrical Engineers, speaks on this point at length; but these criticisms have often little effect upon those in charge of such installations, and it is only when their pockets become directly affected by the condition of affairs involved in such practices that they begin to realize that some change is desirable. This does not happen, as a rule, until the insurance inspector, on his rounds, sees the faulty construction both of the station and of the equipments, and fixes the rate of insurance accordingly. Then there is heard a great wail, and not unfrequently complaint of unfair treatment. It is safe to say, however, that the insurance companies would not place any obstacles in their own path to secure business, and their action is prompted as a measure of self-defence. They are, indeed, in many cases justified, especially when they get a report such as that which has been recently made by Mr. A. E. Braddell to the Secretary of the Insurance Association of the Middle Department at Philadelphia. Mr. Braddell, who is thoroughly equipped with a theoretical and practical knowledge of electric-lighting, inspected fifty-seven electric-light stations and isolated plants in Pennsylvania, and, as his report shows, the work as a whole is poor, particularly in the running of wires. The defects which he points out as existing in the installations are probably but a fair sample of what would be found in almost any other State upon as rigid an examination. It is natural to suppose that the insured parties will at first object to the enforcing of what might appear too stringent rules; but the experience gained in New England is, that once the change has been made, the insured parties themselves are pleased even more than the insurance companies, and, leading, as it does, to lower insurance rates, it finally turns out to be a direct gain to the insured. Mr. Braddell's experience also demonstrates that a better class of attendance should be insisted upon for electric-light stations than seems to be the case at present, and it is to be hoped that some measures may be adopted to secure for other localities the benefits which undoubtedly have accrued from the establishment of the license system undertaken by the New England Electric Exchange, whose work has served to lift the standard of efficiency far above that which existed in the New England stations, especially in the district of Boston. The Middle Department is to be congratulated on securing the services of so competent and conscientious an inspector as Mr. Braddell.

WATER USED IN THE BOSTON FIRES.—At a recent meeting of the New England Water-Works Association, held in Boston, President Dexter Brackett made some remarks on the recent Boston fire. The total number of engines in use on this occasion was 52, which, with the assistance of the hydrants of two large business concerns in the district, gave a total of about 86 streams of water, yielding approximately 20,000 gallons per minute. He estimated that, exclusive of leaks and waste, there was a total of 24,000,000 gallons of water thrown on this fire. Twenty-five hydrants supplied all the water drawn through 8-inch and 12-inch pipes, fed by the 24-inch main, and there was an ample supply of water, as was shown from the fact that water could be drawn during the fire at the tops of buildings in the water-circuit then in use. Referring to the great Boston fire of 1872, Mr. Brackett, stating that there were 21 engines belonging to the city, assisted by 45 from outside, making a total of 66 engines used at that time, said it was a question whether the quantity per minute then shown was any greater than at the conflagration of November last. A member of the Association said that there should be some understanding between the fire and water departments of a city as to the number of streams to be used in any given circuit, illustrating his remarks by referring to the case of a house between two hydrants being completely burned on account of using both hydrants at the same time, whereby the pressure was so reduced as to give two small streams, doing little or no good, in place of one large and effective discharge of water, which might have been obtained by using only one of the hydrants. At the Lynn fire, from the cause spoken of, the pressure was reduced from 60 to 23 pounds.—*Providence Journal*.

VANDALISM IN ROME.—Rome is threatened with one of the most barbarous demolitions which have been either proposed or carried out in this city, and this time it is not the municipality which proposes it, but the royal Government, through the Minister of Public Works. It is proposed to cut away the front of Sangallo's bastion on the Tiber side of the Castle of St. Angelo, the erstwhile Tomb of Hadrian, in order to widen the street, a mutilation which would entirely destroy the symmetry and picturesque aspect of one of the few mediæval structures left in Rome, as the ancient form of the tomb is beyond any restoration, and its present condition is the work of one of the most celebrated and masterly of the architects of the end of the fifteenth and beginning of the sixteenth centuries. The slicing off of the fronts of these bastions would destroy altogether its mediæval character without restoring the antique. The more modern outworks are of no importance and their removal would display to advantage the whole of Sangallo's plan and would give all the roadway needed. The Ministry of Public Instruction, with its usual zeal for the ancient monuments, has entered a protest against the mutilation, but as it is a case of one ministry against another, it is not sure that the building can be saved.—*London Times's Rome Correspondence*.

THE INCREASE IN THE NUMBER OF ELECTRIC LIGHTS AND MOTORS.—The increase in the use of electric-lights and electric-motors is shown by the *Electrical World* to be even greater during the past few years than most people probably imagine. The number of electric-lighting companies in the United States and Canada operating central stations at the beginning of 1886 was 450. This number had increased at the

beginning of 1887 to 750, at the beginning of 1889 to nearly 1,200, and at the beginning of 1890 to 1,277, including twenty-five in Mexico and Central America. Meantime 206 gas companies have engaged in electric-lighting, so that the total number of companies engaged in electric-lighting at present is 1,543. The number of isolated or private incandescent and arc-light plants at the beginning of 1887 was about 1,000 each. Now there are 3,925 private plants in the United States, 175 in Canada, and 200 in Mexico and Central America, making 4,300 in all. The number of arc-lamps in use in 1882 was 6,000. This number doubled each year, for four years, and has since grown rapidly until there are now 235,000 arc-lamps in use. The number of incandescent lights has increased from 525,000 in November, 1886, to 3,000,000 at present. The number of electric-motors now in operation in the country is estimated at 15,000, many of them of from fifteen to fifty horse-power. There are nearly 200 electric-railways in over 125 towns and cities, and these have in operation or under contract 1,884 cars on 1,200 miles of track. These motors find their greatest application in connection with electric-light plants. Electricians, however, look for a great development of electric-motors for railroads of all kinds during the next two years. Electric light and electric-power for mining is a new development of considerable promise. The electric-tramway and electric-power for pumping, drilling, cutting, etc., has already been adopted to some extent with good results.

BAD BLOOD AMONG THE ARTISTS.—It is impossible to avoid recurring to the subject of the quarrel among the French artists; otherwise I should be accused of not being *dans le train*. The difficulty is not yet arranged, and it looks as though the committee of the Artists' Society, with M. Bouguereau at its head, would be forced to give in its resignation. The dissenters, under M. Meissonier's lead, are forming a new society, and decline to entertain any propositions from the committee of the old society. "Il est trop tard," is the only reply that M. Meissonier has deigned to make to the delegates appointed to wait upon him and to endeavor to harmonize the conflicting interests. Meanwhile the Artists' Society has decided to print in the next *Salon* catalogue the names of all the artists recompensed at the Universal Exhibition, and to suppress hereafter all exemptions. The prospect of two distinct societies is more agreeable to the painters than to the engravers, sculptors and architects, who are eager for reconciliation. They see very well that while exhibitions of paintings alone can be numerous without great detriment to the artists, it would not be the same for statuary and architecture. M. Guillaume, of the Institute, is of opinion that two distinct *Salons* would seriously injure the French school of sculpture, which is now so flourishing, and that if a double *Salon* is the final result of the present dispute, the *Salon* itself will soon disappear. — *London World*.

THE RESULT OF THE ARTIST VAN BEERS'S SUIT.—Mr. Jan Van Beers, the Belgian artist accused by certain workmen, formerly in his studio, of signing paintings made by them and others and selling them as his own, has had his reputation cleared by a court of justice. His defeat in a lower court caused Sedelmeyer, the art-dealer who brought to this country Munkacsy's "Christ Before Pilate" and other pictures of notoriety or repute, to break a contract he had made with Van Beers to allow him the use of his gallery in Paris for an exhibition of the artist's works. Since Van Beers has won his case in an upper court, which reverses the decision in the lower and clears him of the charge of manufacturing spurious Van Beers's, the art-dealer has had reason to rue his haste. Van Beers has won a suit against Sedelmeyer, who will have to pay damages and costs. — *New York Times*.

ARCHAEOLOGICAL DISCOVERY IN ROME.—An important archaeological discovery has been made in the course of the works for the drainage of the quarter on the right bank of the Tiber. At the point where the new canal-collector traverses the Via Lungaretta, and at a depth of twenty feet below the surface, there have been brought to light the remains of a massive and well-preserved construction in square blocks of tufa. They consist of two large arches, one of which has been entirely uncovered, and the other partially so. They have an opening of nearly ten feet and a depth of nearly twenty, the pilaster upon which they rest having a front measurement of about eight feet, and a lateral one of nearly twenty. Over the frame of the arch rise five courses of blocks of stone, the uppermost of which projects on both sides, forming a cornice. The date of the construction, which has a certain resemblance to the Servian walls, goes back probably to the first centuries of the republic. The engineer, Signor Domenico Marchetti, who is employed by the Government, has measured and examined this construction. He traces in it the remains of a very ancient viaduct which connected the Janicolense, Cestio and Palatine bridges. The Via Lungaretta exactly follows the direction of this viaduct, and has preserved approximately the same width. The Romans, according to Signor Marchetti's explanation, saw the necessity of artificially raising the road on the shores of the Tiber at this point, where it dipped into a valley into which flowed the waters from the Janiculum Hill, and stagnated there. The open arcades left a free passage for the waters to find their way to the Tiber, and the viaduct formed a level and direct communication between the bridges. The actual road is ten feet above the ancient level. — *London Standard's Rome Correspondence*.

REMARKABLE COPPER-ROLLING.—Some interesting trials of skill have recently taken place among the workmen employed in the rolling-mills of Birmingham and Ansonia, Conn. One operative rolled an old-fashioned copper cent into a strip 18 inches long and 3-2000ths. inch thick. In a spirit of emulation, other workmen essayed cent-rolling, and the record was broken by an Ansonia roller, who, commencing with a modern alloy cent, finished with a strip of metal 38 inches long and 1-500th. inch in thickness. Afterward, with an 1888 cent, the same man

obtained a ribbon of bronze 50 inches long, 3-4 inch wide and 1-2000th. inch thick. Trying again with a cent of this year's coinage, the Ansonia man succeeded in producing a strip 60 inches long and less than 2-1000ths. inch thick—so thin that there was no instrument delicate enough to measure it, while it had to be glued to a strip of ribbon to prevent its breaking. Considering that the rolls used were those employed for forming great bars of copper, it will be seen what extraordinary skill and delicacy of touch were required. — *Exchange*.

TRADE SURVEYS

ONE of the curious and interesting commercial phases of the hour is the extraordinary investment of capital in new enterprises on both sides of the Atlantic. In Great Britain the investments in corporations and companies of all sorts amounted to \$450,000,000 in 1884, while last year the amount was \$900,000,000. A craze exists for investment and many schemes are, of course, hurried to the front to catch the wind of popular favor which are undeserving of confidence. The only applicable comment perhaps is, that the mistakes that will unavoidably be made will act as a conserving factor and lead to the future investments of surplus cash in safer and more profitable directions. In this connection it should be remarked that British capital is seeking investment very largely in South America, in Australia and also in Canada. The same spirit of enterprise has been abroad in the United States for years past, but has showed itself in a different way; it has been the means of establishing yearly from 10,000 to 12,000 new industries, big and little, in the United States; and so far as commercial statistics show, the great majority of them have been successful, or at least are still alive. In Great Britain these investments are made under the direction of large companies; in our own country investments are made by individuals under their own supervision and at their own risk. In the one case commercial character and capacity in the individual is not developed; in the other case it is. In the States the investor, perhaps in a majority of cases, is responsible for the fate of his dollars; he looks after them with a keen eye, and develops foresight and capacity for management which would not be the result were his investment under the control of a corporation as is usually the case in England. The opportunities for investment in America are, of course, many fold greater and of a character which large corporations could not so well manage. Hundreds of foundries were started last year, hundreds of saw-mills, scores of shoe-shops, hundreds of machine-shops, in fact a thousand and one manufacturing enterprises have taken root through the efforts of individuals and firms in nearly all sections of the country. The American people are developing a commercial character which will not much longer be content with home victories. Schemes are coming to the front for the development of foreign trade, and the establishment of industries under the control of American capital and skill in several foreign countries. Of course a great deal of this enterprise is experimental and will be unproductive. Great Britain has the advantage of us, and it will probably be many years before we learn the necessary lessons, the necessary capital provided and banking facilities established. Even had America the products to sell, it has not now the facilities for selling them in foreign markets. The establishment of contemplated ship-lines is only one step in that direction; prominent mechanical engineers have been engaged to furnish approximate estimates for ship-yard work, and it is understood that so far as the canvas has been made for capital, there will be no difficulty in obtaining all that is necessary.

Referring for a moment to the iron trade, it is found that productive capacity is galloping ahead. Furnace managers are endeavoring to accumulate stock, but with orders mortgaging the bulk of their production two to three months ahead. In many cases an accumulation is practically impossible. There is a great deal of inquiry this week for pipe-iron, plate, structural iron and steel blooms and billets. In Western and Southern markets, the multitude of inquiries is a strong intimation of a smouldering demand. The expansion of the agricultural West and South is creating a market that will be of the utmost value to industrial interests east of the Mississippi River. A great deal of iron is going into buildings, because of the low prices which have been established for it within a year or two. In financial quarters, excellent reports are given out. At latest count-up, the surplus reserve reached \$15,000,000, as against \$20,000,000 at this time last year, and this, too, in spite of the fact that the volume of business is fifteen per cent greater than then, according to all accounts. This fact is worthy of attention. It proves that an increasing volume of business can be done with less money, but the precise reasons why this fact exists would call for too much detail for this column. More solvent conditions, shorter credits, a more intimate knowledge of the country's requirements, greater business capacity and a little higher standard of business integrity are among the considerations which make more business with less money possible. The abounding confidence of the people in themselves and in the future of the country ought not to be lost sight of in making up the account. There is an extraordinary demand for American breadstuffs and provisions, as well as cotton and petroleum, and a great increase in the demand for American machinery, implements and tools. On the other hand, the cost of living is declining, and the worst complaint which many flour-manufacturers and provision-dealers have to make is that the accumulated stocks make large margins impossible. In the labor field, the latest developments would seem to point to a determination upon the part of the more radical leaders to precipitate a fight at all hazards. It is barely possible that the more conservative sentiment prevailing among the great majority of laborers would prevent a general strike, but this conservative element is frequently led at the heels of the few. Herein lies the danger. The master-builders, so far as they have spoken, will individually and collectively resist all forcible efforts to reduce the normal working-day to eight hours. They argue that there is need of all the labor which nine hours can give; that advantage ought to be taken of the present exceptional opportunities; that the shorter day will naturally come when the conditions are ripe. It is well that the agitation has set in in earnest so early, because second thoughts among workmen are generally the best, and by the time the spring trade opens they will have had the opportunity of dispassionately considering all the risks and disadvantages, as well as advantages, of the proposed movement. It is recognized that widespread success would stimulate labor organization and lead to demands of various kinds, and create entanglements which it would be disagreeable to encounter. It is the sense of this that has drawn so many employers together.

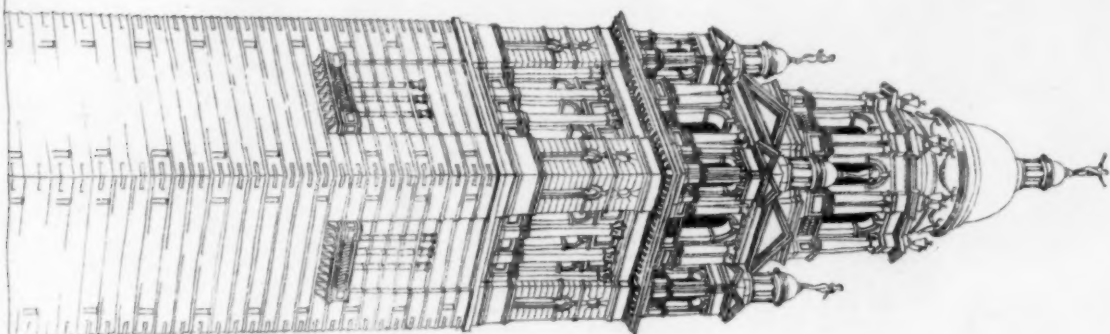
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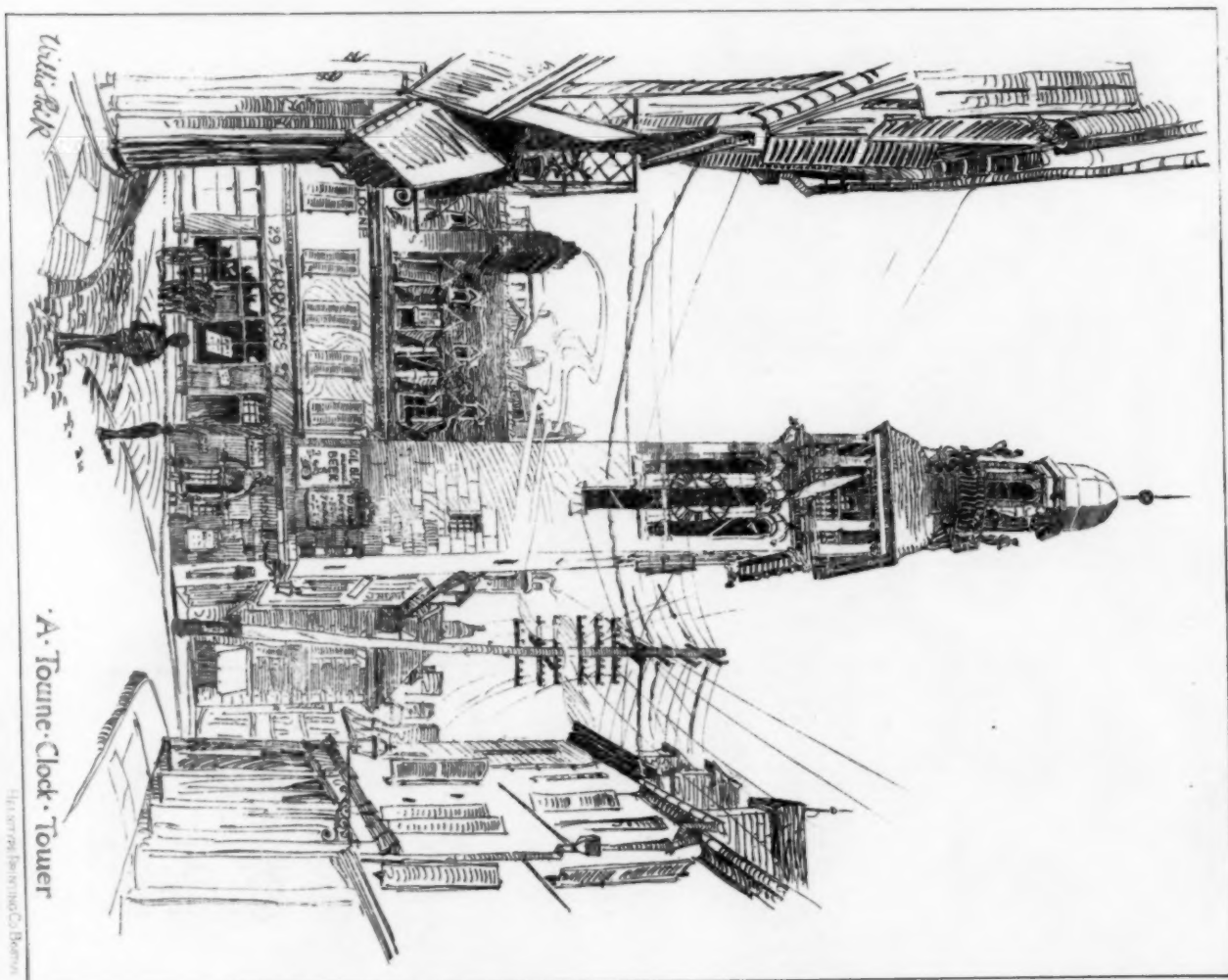
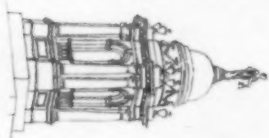
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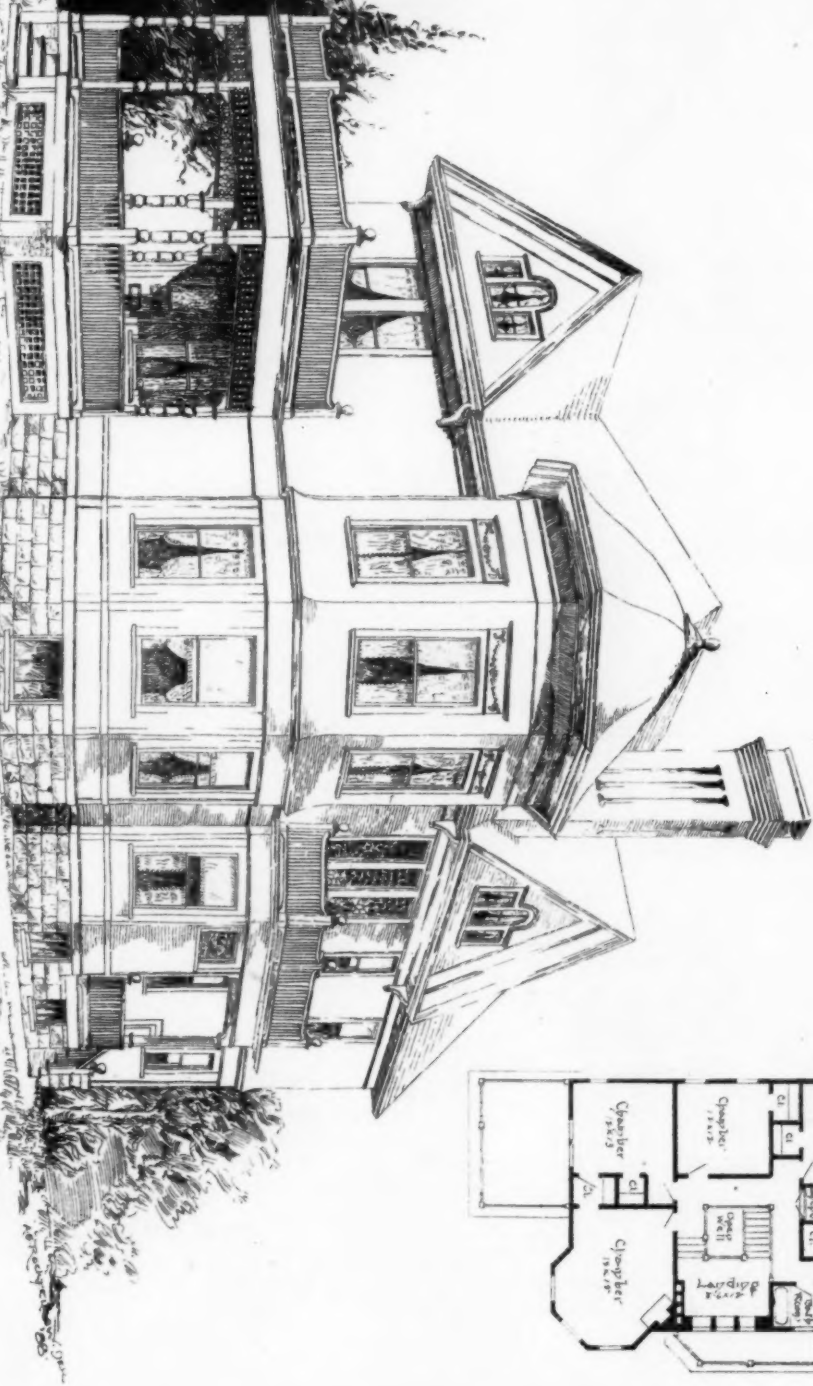
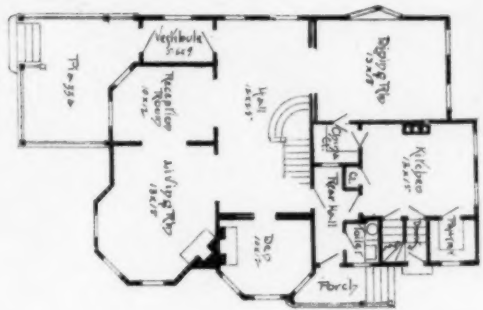
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dwelling on
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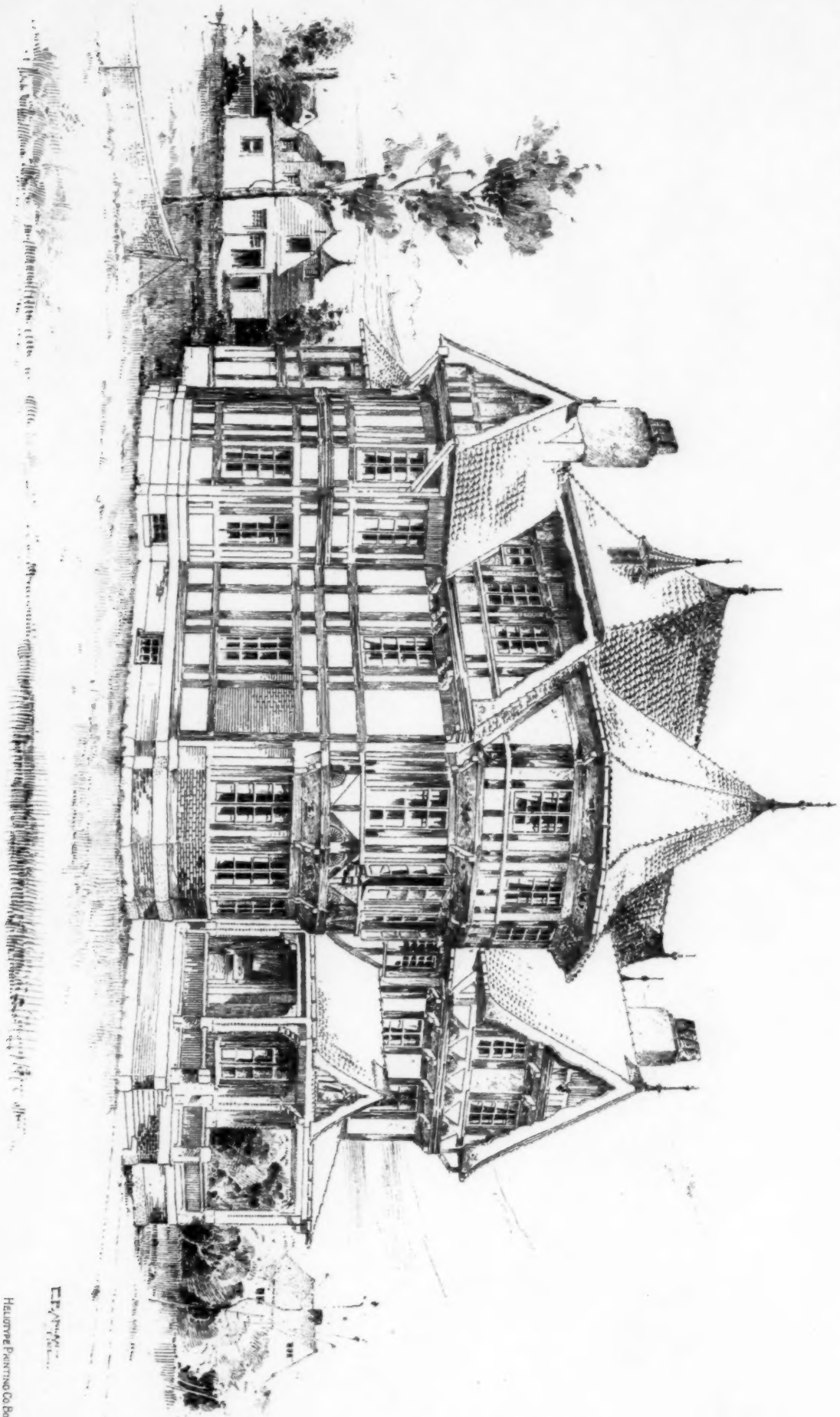


SITTING ROOM IN FIFTH AVENUE HOUSE.
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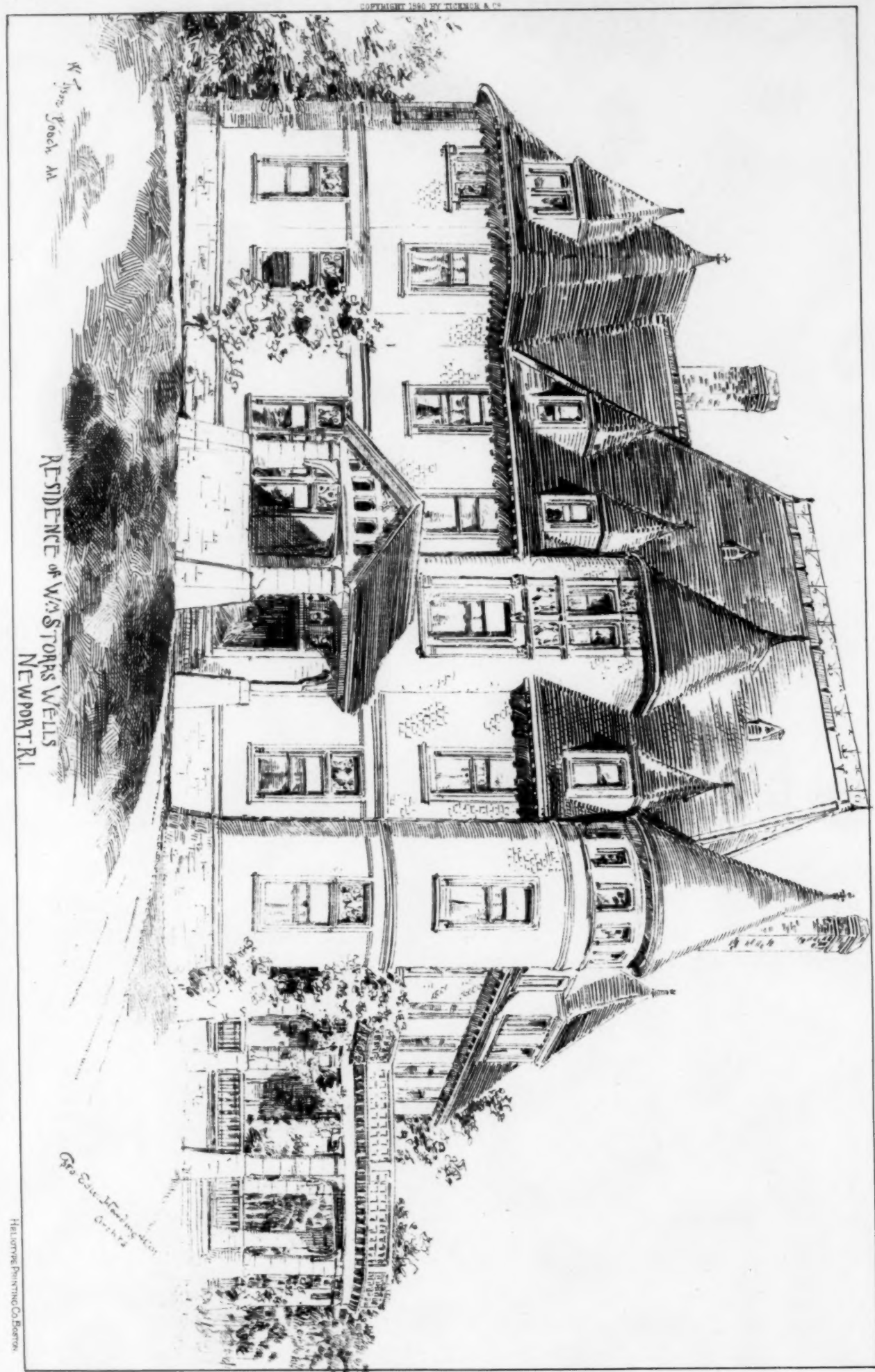
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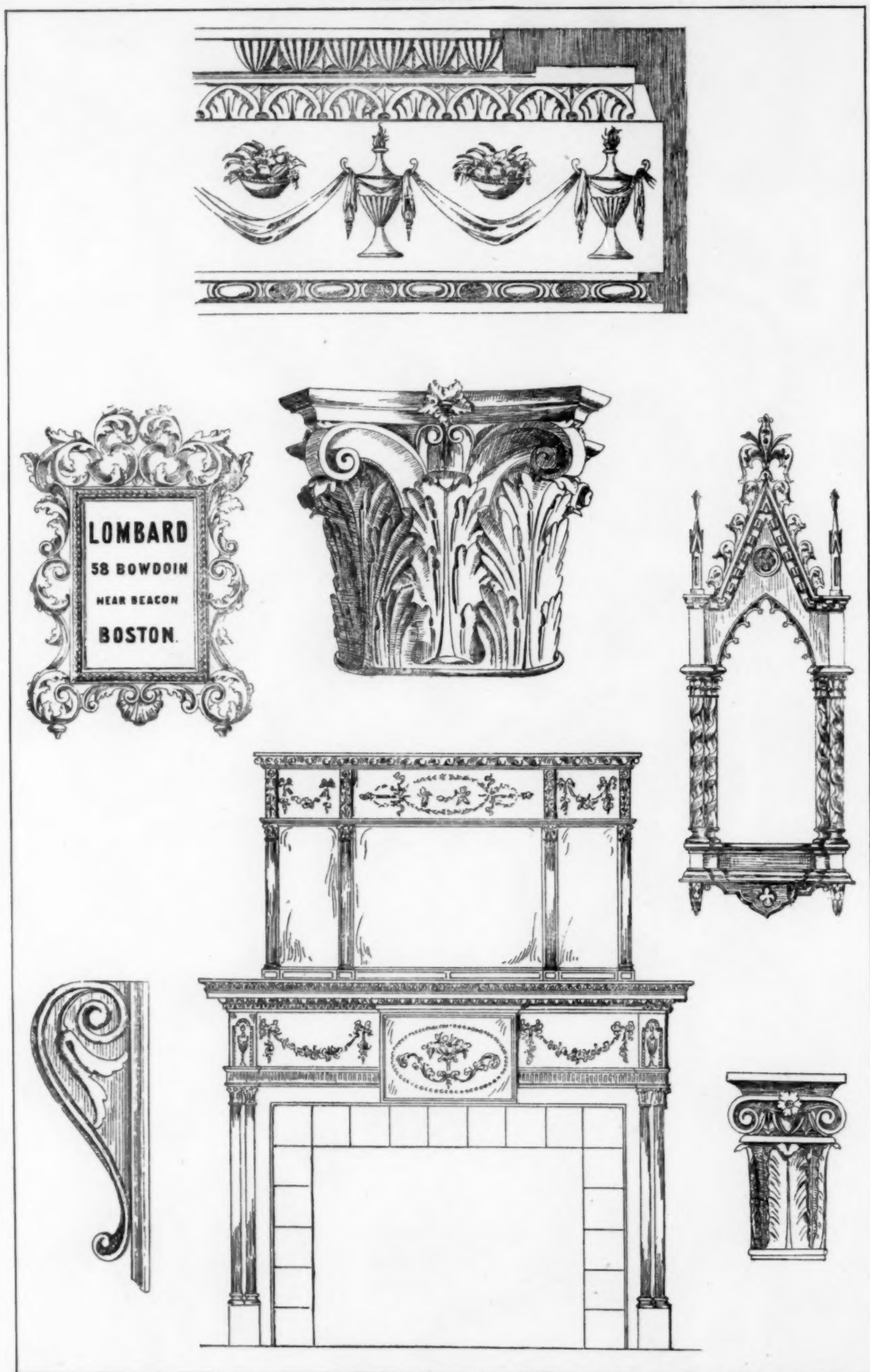


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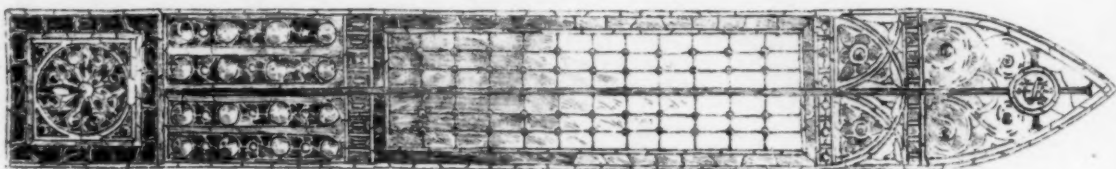
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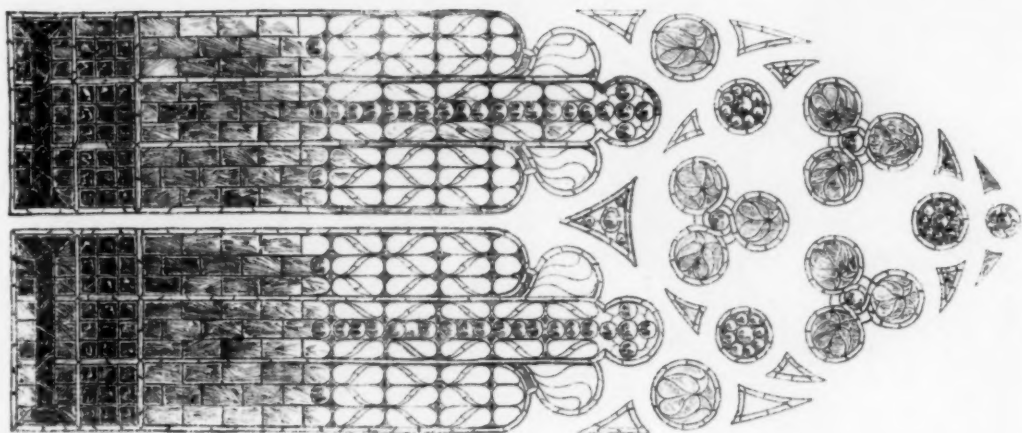


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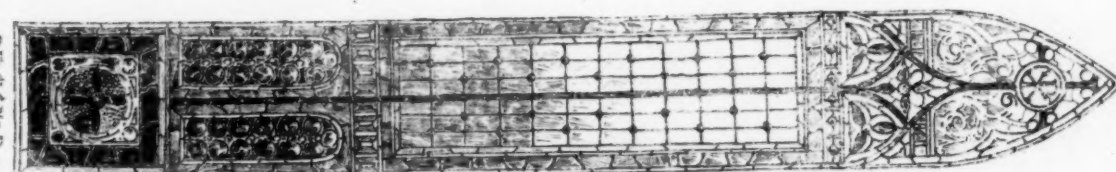


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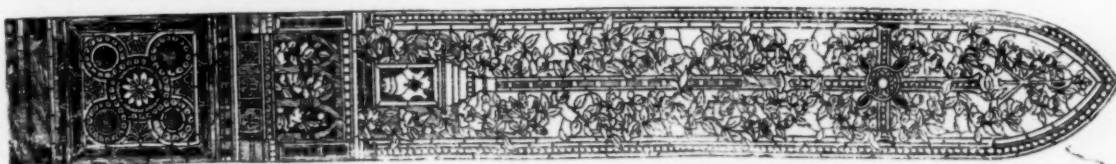


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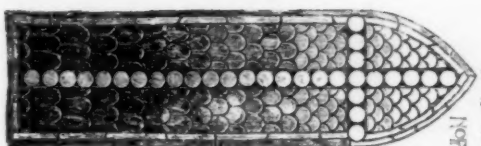
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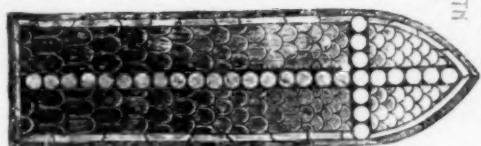
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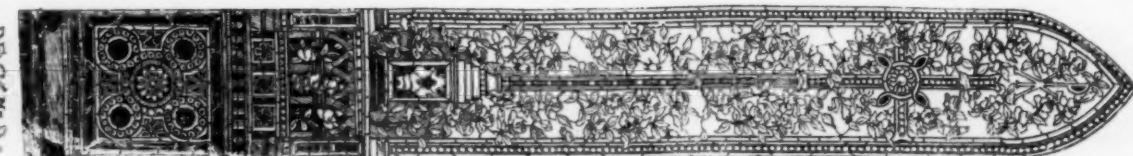
POSE. WINDOW.
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DESIGN D.
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TRADE SUPPLEMENT.

Illustration prepared by Henry