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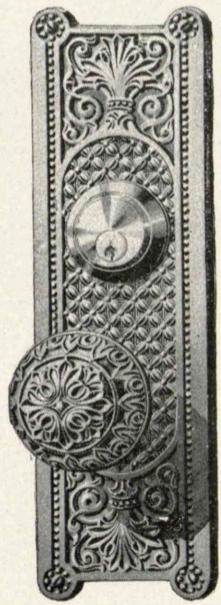
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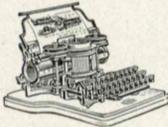
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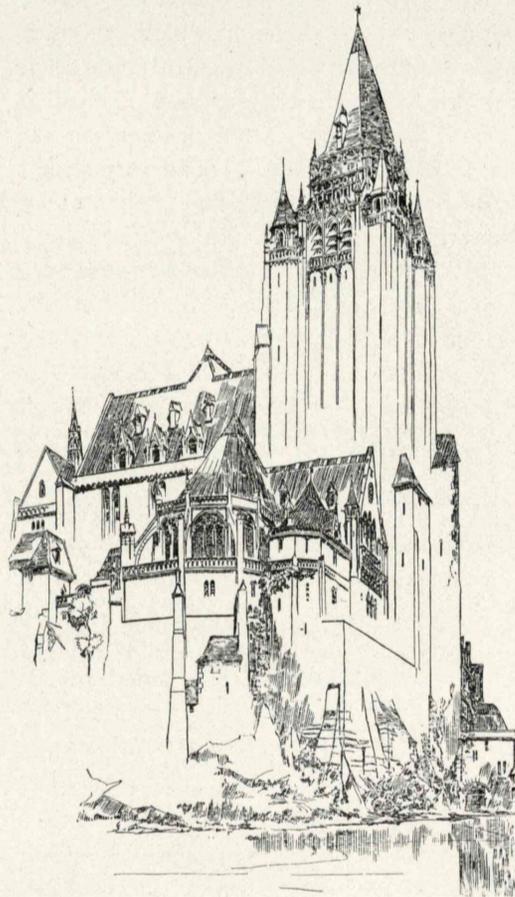
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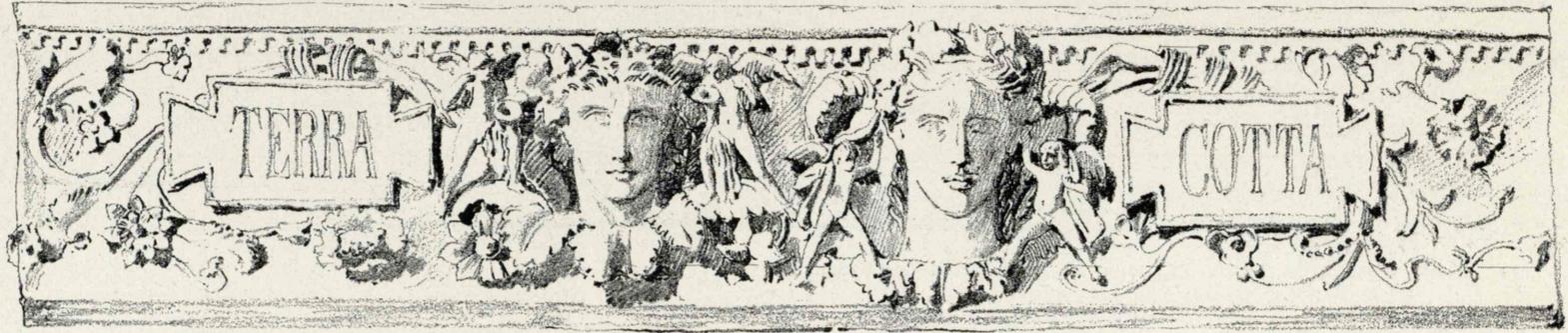
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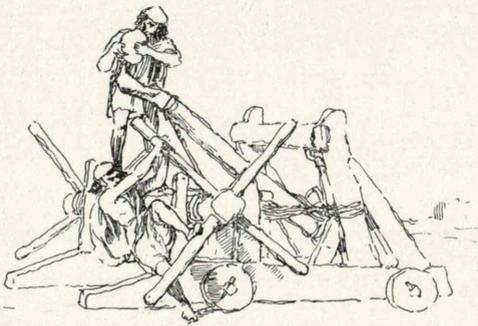
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trenches to frighten the enemy. The captains drained pateræ holding spiced wine before they entered the fray, and received, when wounded and burning with

thirst, water from the earthen bottles carried by the hoplites. Everywhere in the midst of sieges appeared this imperishable material. The walls of cities were built of it, with corbelled projecting battlements, whose overhanging masses were pierced with apertures through which, mingled with the streams of molten lead, the speeding arrows and stones, great masses of baked clay, were hurled down upon the heads of the besiegers. The very streets were paved with it, and the ditches about the walls were filled with broken sharp-edged potsherds to cut the feet of assailants. The cohorts of slingers in the armies carried bags of clay bullets about their waists, which were replenished, as



their stock was exhausted, from great sacks of ammunition under which long lines of camels staggered in the rear of the combatants. These bullets were stamped with the symbols of the country from which the soldiers came, as, for instance, those of the Egyptians bore an ape's head, the Asiatics a hawk or a pomegranate, the Greeks a citadel or the name of an archon. They also bore inscriptions in much the same way that the swords of later days had inscriptions on their blades,—vindictive wishes or adjuration, such as, "Kill," and "Slay the enemy." The catapults, huge engines brought to the sieges upon carts drawn by horses or oxen, which hurled from a spoon-headed lever projectiles over the city walls, were furnished with great terra-cotta balls, or with earthen pots containing the celebrated Greek fire, or substances giving out a noisome stench. These were the bombs of ancient warfare breaking

upon the ramparts and within the streets, and wounding with flying fragments of sharp cutting clay. They must at least have been more formidable than the



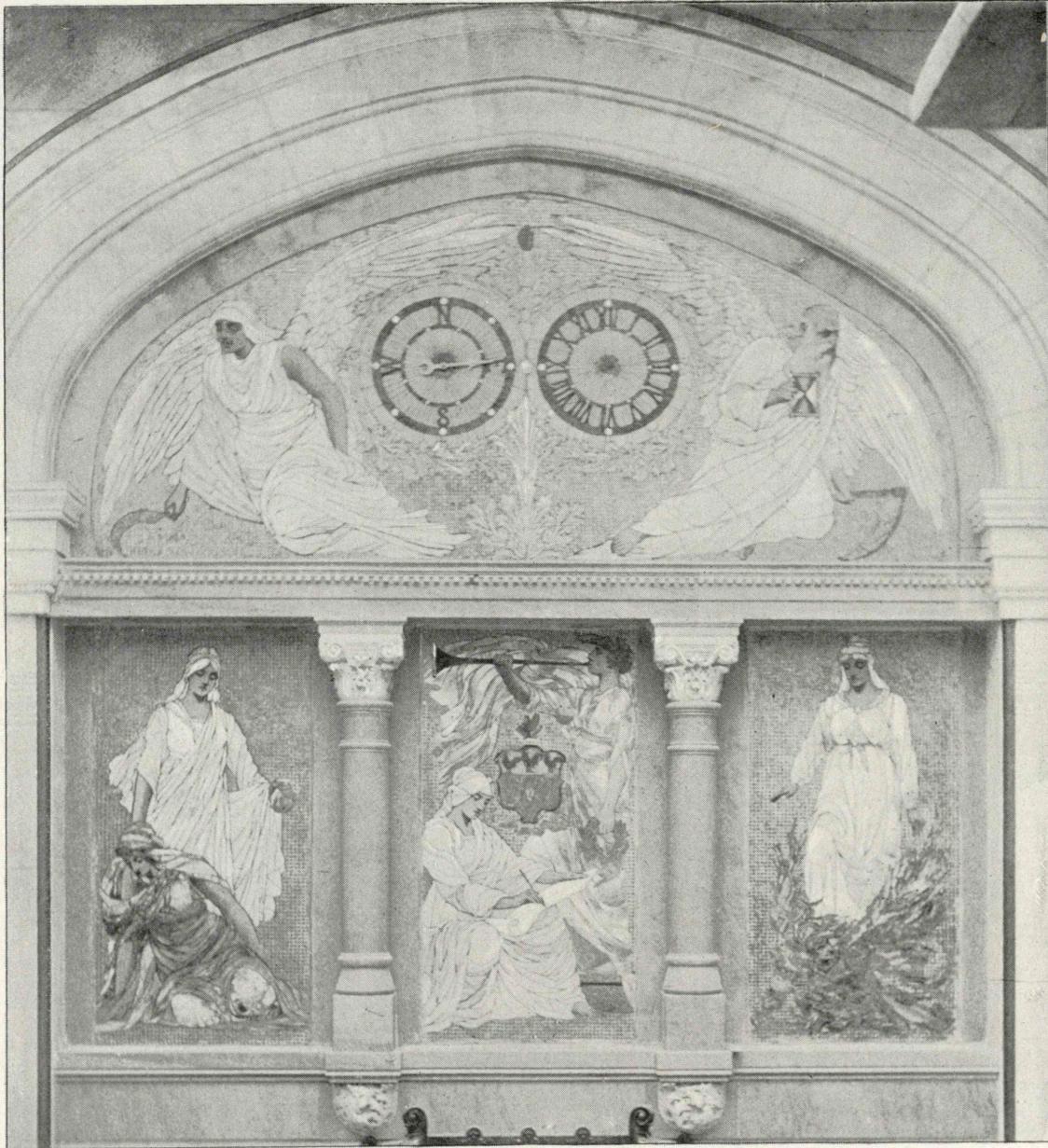
arrows of the heavy and slow ballistæ. The smaller catapults were nicknamed *onagers* or mules, as they threw stones in much the same way as mules kick up the earth with their feet, and were exhorted by the inscription on their projectiles to "kick well." These symbols and inscriptions stamped upon the terra-cotta were the impress of hand seals of metal, the same sort of seals, excepting that they were less fine, as those used to make the Greek coins, and to stamp the Pompeian loaves. The bullets of the slingers, the projectiles of the catapults, and fragments of the broken pots of fire, each was alike imperishable and has lasted through the centuries, and held its testimony of some importance in the slowly growing history of a time with but few other records. The impress in the clay has outlasted gold or silver, brass or iron, and is as intact to-day as when whirled in the leathern thong of a Balearic slinger, or lifted into place upon the catapult by the soldiers of Hannibal or Alexander.



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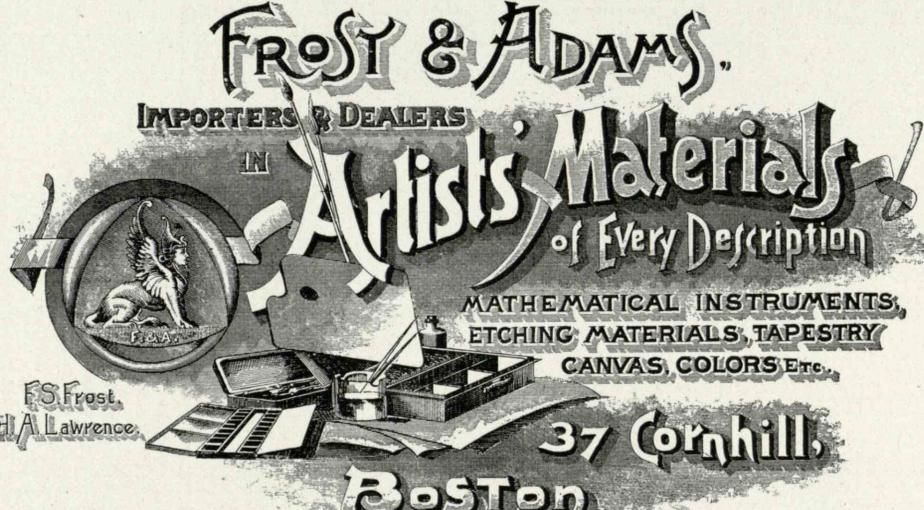
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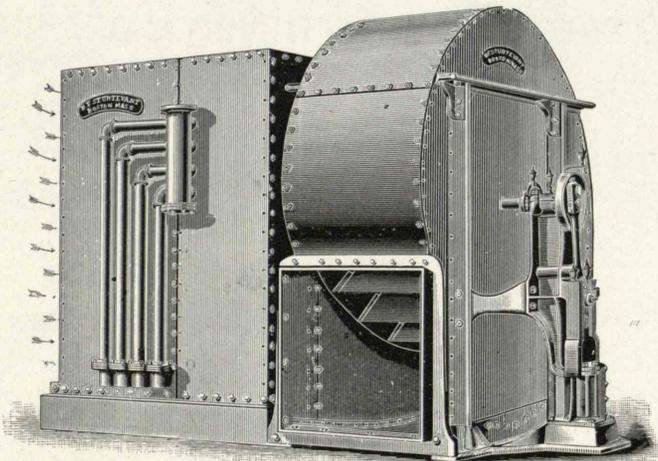
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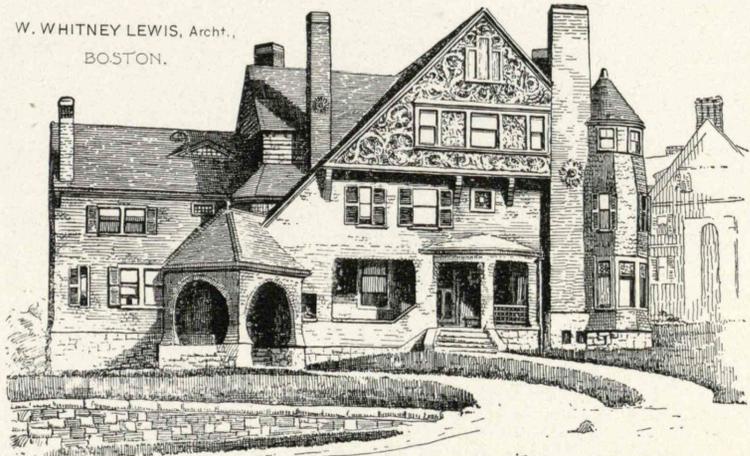
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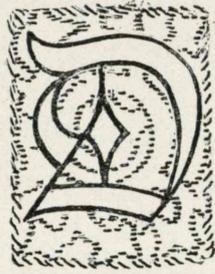
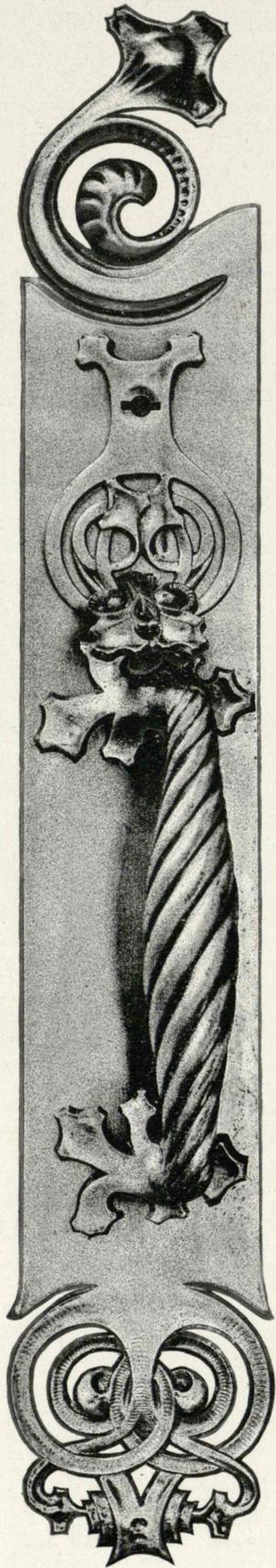
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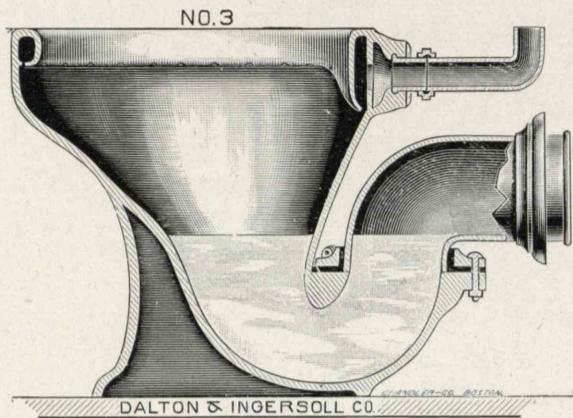
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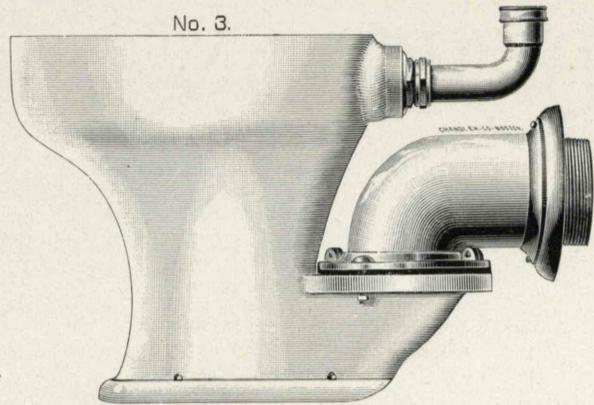
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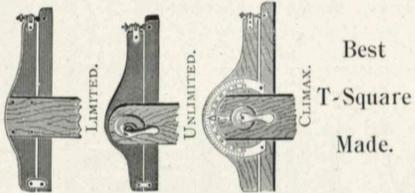
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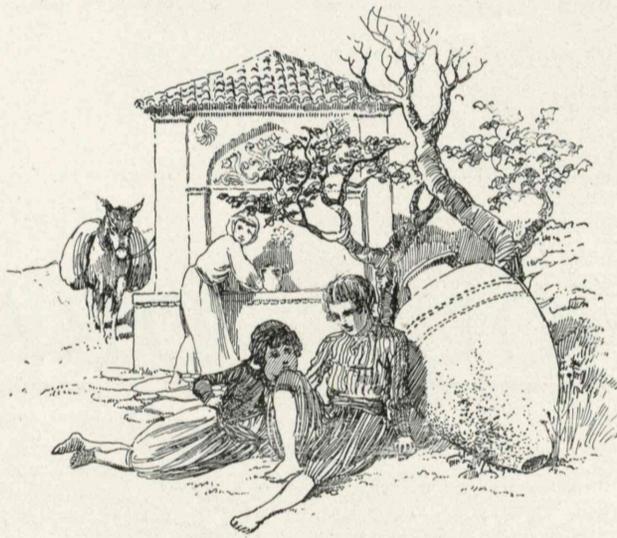
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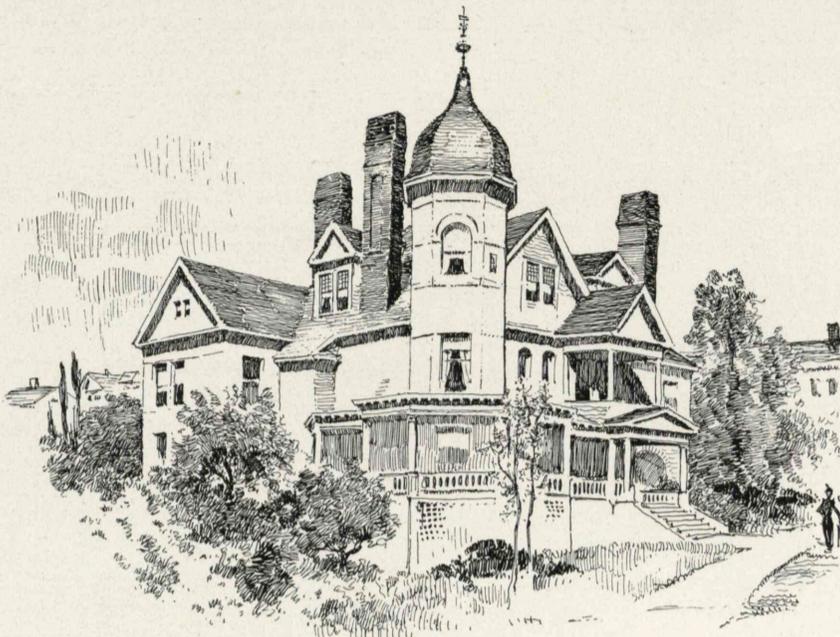
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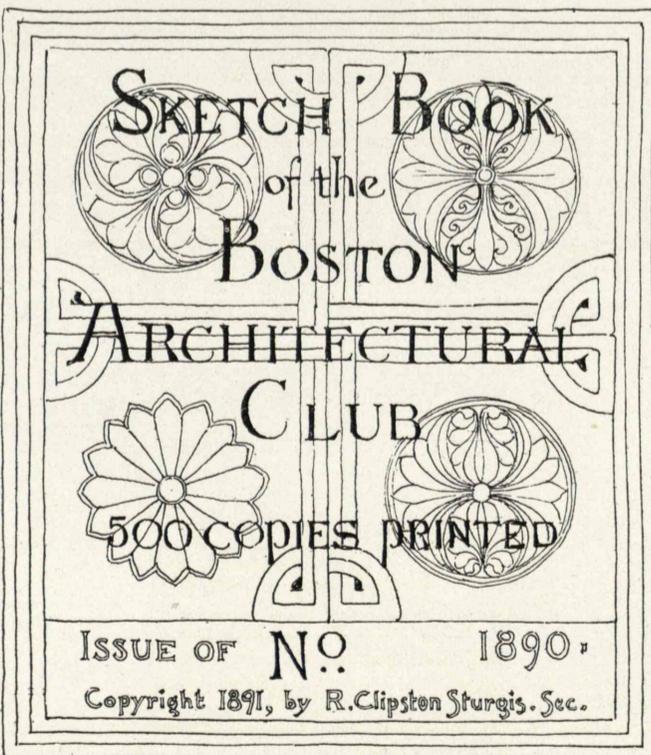
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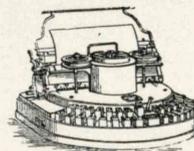
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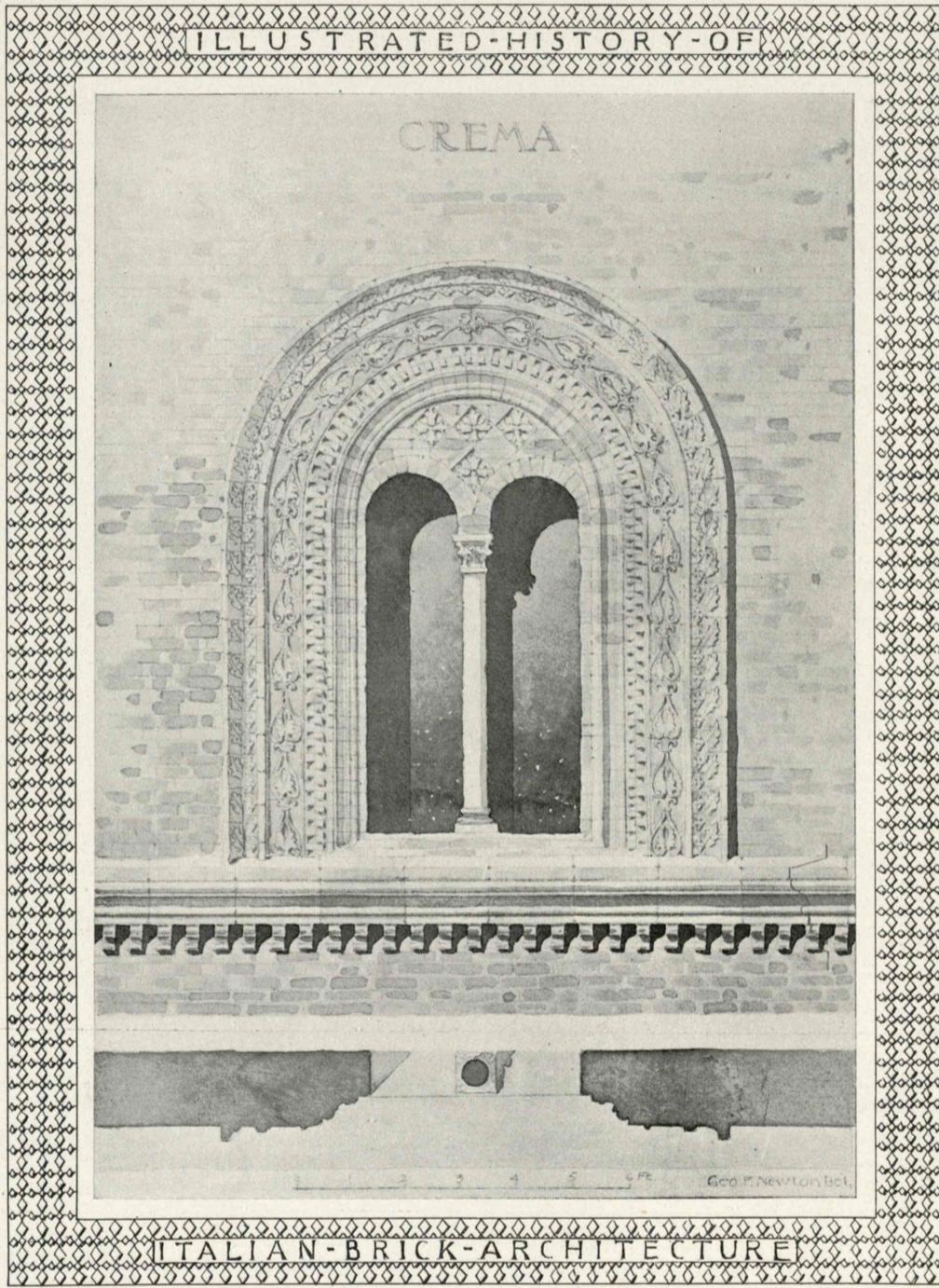
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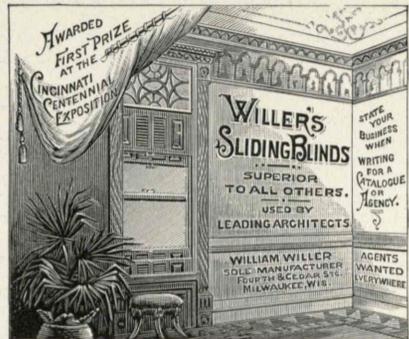
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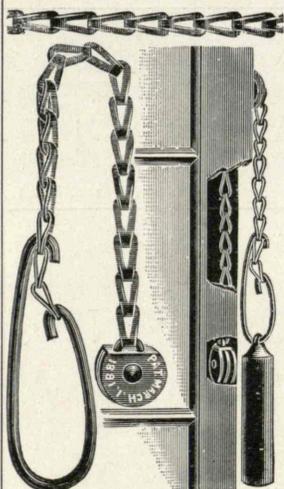
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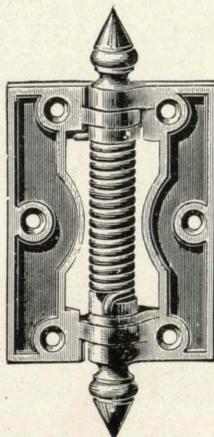


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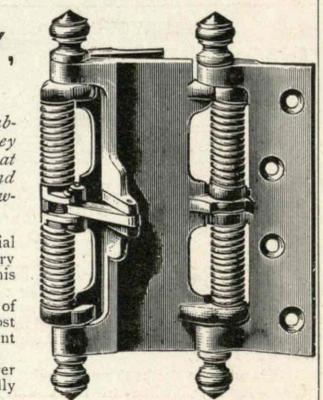
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VOL. III.

BOSTON, NOVEMBER 29, 1890.

No. 7.

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THE EDUCATION OF THE ARCHITECT.

II.

In the last number of the REVIEW I endeavored to show the necessity of a thorough knowledge of the classic formulas, and the convenient method of practice in them. A brief course of reading in the history and theory of architecture was also indicated.

With regard to practice in designing and drawing, it is difficult to pursue a solitary method of study. The student misses the stimulating atmosphere of emulation afforded by the schools, and the incitements to renewed effort furnished by the constant display of good models, by the accessibility of books, prints, and photographs, and by the performances of his fellows. The only practicable substitute is in the formation of students' clubs, not merely sketching clubs, but associations for mutual improvement and encouragement in practice.

In the larger and older cities these clubs have taken the character of organized schools, divided into departments, each governed by its own committee, and each able to command the services of special experts for instruction by lectures, fully illustrated by models and processes. Some of these clubs have their own libraries, and their rooms are made attractive for the social use of the members by exhibitions of drawings. The competitive system of practice is arranged so as to call out serious effort, and the best results of discipline seem to have been attained without the annoyance of unnecessary restraint.

Of course, such organizations are impossible in smaller and more remote towns, where the clubs cannot count on more than a dozen members, and where they cannot call to their assistance advisers competent to teach in their various specialties. I especially desire to address myself to students restrained within these narrow bounds of opportunity.

Emulation has always been found to be one of the most fruitful forces of instruction in art; but emulation, to be really

profitable, should be conducted seriously, upon proper lines, and directed to definite results. In most of these smaller clubs I have found that it is wasted in tournaments of designing and drawing, giving to each member merely an opportunity of exhibiting whatever qualities he may already have. The result is that the one or two who can draw and design better than the rest, or who, by observation of current published works of design, have been enabled to imbibe half a dozen favorite *motifs* of composition, promptly take and easily maintain an entirely fictitious leadership, while the rest struggle on behind in various degrees of discouraging inferiority, and no one is advanced a single step. I have observed the practical working of several such clubs. Competitions so conducted encourage unprofitable invention and discourage profitable study. I am of the opinion that, in the earlier stages of such clubs, invention should be laid aside entirely, or made very subordinate, until the members shall have established a *substantial basis for invention*. No one can become proficient as a performer upon an instrument of music until he shall have passed through a long course of fatiguing practice with the scales and with primary combinations of notes, without meaning or melody. No one can learn to write without studying grammar. No one can learn to design (and this should be the fundamental object of architectural clubs) until he understands the formulas established, through many centuries of concentrated effort, by the usage of the greatest architects the world has ever seen, and how these formulas should be used in designing. To this end the emulative energy of the clubs should, for a long time, be rigidly confined to problems involving the classic orders, with all their absolute requirements of proportion and detail. These problems are used in the primary instruction of all the schools at home and abroad. They can be easily obtained by correspondence with the authorities of any of the principal architectural schools. As examples merely, I may be permitted to suggest the following:—

A kiosk or garden house, correctly introducing four columns of the Ionic order and of given dimensions.

A gateway to the grounds, with similar restrictions.

A bridge in two arches, decorated with Corinthian pilasters and niches.

A window with pediment, balcony, and brackets.

The gateway of a citadel in the Doric style, with an attic order containing guard-rooms.

A steeple in three regular orders.

It needs but little ingenuity to extend this list indefinitely.

The scale, the manner of rendering, and time of presenting such simple compositions should be distinctly specified. They should be designated by fictitious signatures, and submitted to specific criticism. In the absence of professional authority competent and willing to render such service, the mutual criticism of the members themselves, the designs being anonymous, may be used to advantage, and their relative rank in the competition may be assigned by their votes. It might be the privilege of the successful competitor to name the problem for the next meeting.

The excellent examples of academical practice, shown in the files of this journal, may be most profitably used, when the club is further advanced in practice, to suggest subjects and methods of rendering. Another excellent practice in classical composition is to establish a competition of elevations and sections on a given plan, of simple and symmetrical character, in one or two stories of designated height, with arbitrary restrictions as to whether pilasters should be used or not, and if used, of what order or orders. Social evenings may be profitably spent in memory sketches of some academical design of simple character, exhibited to the members for a minute or more, and then concealed.

After thorough and conscientious practice in the orders with such simple problems, the club will be prepared to regard architecture as a serious study and not as a play. Its members will have discovered that they cannot design an architectural *façade* with the freedom which they would use in designing a bureau or a sideboard. They will have been taught somewhat of the inestimable virtue of *reserved force*. Having thus learned to respect their art, they can enter upon the wider fields of invention, and undertake such problems as are illustrated in this REVIEW, without danger of falling into vulgar excess, with fair knowledge of how structural forms should be expressed in architecture, and with a feeling for proportion and for the significance of mouldings. They should be prepared now to admit sentiment as an element of composition. At this point the classic problems might safely alternate with problems in the less exact styles, and the students will find that their exercises in the orders have afforded them the best possible preparation for practice in the picturesque, romantic, and historical styles, without the dangers which lie in wait to betray those less carefully disciplined, bearing in mind that the function of the modern architect is less to quote correctly than to express modern requirements with feeling. Their training will have given them what I have called the architectural conscience. It will be found to have furnished the restraining and purifying force of which I have spoken, and that the appreciation of beautiful form, in whatever style, while it will have become more exacting, will also have become catholic in the best sense. It will have enabled them to command their knowledge, instead of allowing their knowledge to command them; the latter is the worse form of tyranny for the architect. It is not in accordance with the cultivated spirit of our times to divide architects into hostile camps, composed of classicists on the one side, and of mediævalists on the other. The education of the modern architect would be justified if it had done nothing else than to put an end to this absurd "battle of the styles," which raged in England and America fifteen or twenty years ago. We are the legitimate heirs of all that has gone before us, and the great object of our education is to teach us to avoid a prodigal waste of our vast inheritance, and to use it with discretion and self-denial, that we, in our turn, may leave behind us, not anarchy and confusion, but discipline and order, adequately expressing the civilization of our times.

This course of competitive problems will have failed in one of its most important objects if it has not taught the members how to draw with various tools and in various ways. It is not necessary to dwell here upon the importance of neatness and precision in the use of the drawing pen; but the architect has still greater need to educate his hand to the quick and facile expression of his thought, so that he can talk and think with his pencil. The graphic power is an essential attribute of the profession, and has great influence in impressing the mind of the client. I know of no other way to obtain it than by constant practice. Observation of the methods and style of the greatest graphic delineator of our time, Viollet-le-Duc, will be of great service. These methods should be copied with precision, and applied freely and copiously

to the sketching of objects and combinations connected with structure and design. Thumb-nail sketches of architectural masses in perspective will be found useful in exercising the mind in composition. They should abundantly precede any attempt at design, so that all the capacities of the problem may be put on trial before the final method is chosen, enabling the student to consider his subject from every possible point of view. This practice keeps the mind open and alert, and protects it from the too frequent error of prepossession in behalf of a favorite architectural motif. So far as possible, the plan, the practical requirements, and the considerations of economic structure should control and suggest the architectural expression.

A thorough knowledge of perspective, and the ability to present the picture by etching, India-ink washes, and water colors, are necessary accomplishments; not less so is training in the projection of shadows and in stereotomy. Prof. Ware's treatise on "Modern Perspective" is the best available guide for the student, and his little collection of books should certainly include T. M. Clark's invaluable "Building Superintendence," and Kidder's "Architects' and Builders' Pocket-Book."

I have endeavored very briefly to indicate what seems to me the very minimum of study and practice on which the student can base his pretensions to enter the profession of architecture. Indeed, if we take into consideration the business ability, and the positive information and training required in relation to art and practice to make an accomplished architect, and the enormous increase in the demands made upon his knowledge by the advance of modern science in its application to buildings, we may well consider architecture one of the learned professions. My last advice to the student and draughtsman, who, undertaking to follow the regimen of discipline which I have outlined, finds that his interest flags, that he has not the courage to attempt even so insufficient a course as this, or the perseverance and honest devotion to continue in it to the end, is that it would be far better for him to turn his back upon architecture, and devote himself to some occupation better suited to his grade of ability and quality of taste. He may succeed elsewhere; but he can never succeed in this pursuit. Indeed, it is a duty to discourage any young man from undertaking this really difficult and complicated course of study, unless he is animated by a genuine artistic feeling, and by an indomitable enthusiasm which will surmount every obstacle in the way of his education.

Such a disposition, so disciplined and informed, will always command remunerative employment; and the inevitable opportunity to do independent service in creating style will come to him in good time.

HENRY VAN BRUNT.

As a supplement to the foregoing article, a list of books is given below, compiled at the request of Mr. Van Brunt, which comprises the works recommended by him, and others likely to be of most value in giving a general introduction to the study of architecture, and, at the same time, of such moderate expense as to be within the means of most students, especially if bought one or two at a time as required. Expensive works, those dealing with special subjects only, and books which are out of print, and therefore unobtainable in the market, have been omitted. Several French books have been included in the list, and it may be in place here to note that a reading knowledge of French is of great importance in an architect's training, as so large a part of the literature of architecture is published in that language.

Hand-Books of Architectural History. Classic and Early Christian. Gothic and Renaissance. T. Roger Smith. London, 1891. 2 vols. \$2.00 each.

Hand-Book of Architectural Styles. A. Rosengarten. London. \$4.00.

Discourses on Architecture. E. Viollet-le-Duc. Translated by Henry Van Brunt. Boston. 2 vols. \$15.00.

Dictionnaire raisonné de l'Architecture Française, du XI au XVI Siècle. E. Viollet-le-Duc. 10 vols. Paris. \$90.00.

Histoire et Caractères de l'Architecture en France depuis l'époque druidique jus qu'à nos jours. Léon Chateau. Paris. \$2.00.

- The Seven Lamps of Architecture. John Ruskin. New York. \$2.75.
- The Stones of Venice. John Ruskin. New York. 3 vols. \$4.50.
- History of Architecture. 2 vols. \$7.50. History of Modern Styles of Architecture. 2 vols. \$10.00. Eastern and Indian Architecture. 2 vols. \$10.00. James Fergusson. *Note.*—The smaller histories by T. Roger Smith are more reliable than the above, and much cheaper.
- History of Ancient Art \$3.50. History of Mediæval Art. \$5.00 Dr. Franz von Reber. Translated by Jos. Thacher Clarke. New York.
- Der Cicerone. Eine Anleitung zum Genuss der Kunstwerke Italiens. Jac. Burkhart. 4 Aufl. unter Mitwirkung des Verf. und anderer Fachgenossen bearb. v. Dr. Wilh. Bode. 3 vols. 1879.
- Geschichte der Architektur von der ältesten bis zur gegenwart. W. Lübke. Leipzig. 2 vols. Development and Character of Gothic Architecture. C. H. Moore. New York. 1890. \$5.00.
- Brick and Marble in the Middle Ages. G. E. Street. \$8.00.
- A B C of Gothic Architecture. John Henry Parker, C. B. London. 1881.
- Concise Glossary of Architecture. J. H. Parker. 1 vol. Oxford and London. \$6.00.
- Principles of Design in Architecture. Garbett. New York. \$1.00.
- The Five Orders of Architecture, according to Vignola. Standard edition of Garnier Frères, with translation by T. R. Kimball. 72 plates with text. Boston. 1891. \$5.00.
- Architectural Perspective for Beginners. 11 plates of practical examples. F. A. Wright. New York. 1885. \$3.00.
- Modern Perspective. Prof. Wm. R. Ware. 1 vol. Plates in portfolio. Boston. \$8.00.
- An Encyclopædia of Architecture. Joseph Gwilt. 1 vol. London. \$20.00.
- Technological Dictionary, in French, German, and English. A. and L. Tolhausen. Published by B. Tauchnitz. 3 vols. \$11.50. *Note.*—This will be found invaluable in reading French or German works.
- Notes on Building Construction, arranged under the Science and Art Department of the South Kensington Museum. 3 vols. 8vo. London. 1891. \$13.50.
- Practical Treatise on Limes, Hydraulic Cements, and Mortars. J. Q. A. Gilmore. New York. 1875. \$4.00.
- Building Superintendence. T. M. Clark. Boston. \$3.00.
- Graphics for Engineers, Architects, and Builders. Part I.—Roof Trusses, Diagrams for Steady Loads, Snow, and Wind. \$1.25. Part II.—Bridge Trusses. \$2.50. Part III.—Arches in Wood, Iron, and Stone. \$2.50. Chas. E. Greene. New York.
- The Architect's and Builder's Pocket Book. F. E. Kidder. New York. \$3.50.

SUGGESTIONS TO TRAVELLING STUDENTS.

(Continued from Vol. III., No. 5.)

The student in Rome is usually so employed with the wealth of material at hand, that he considers himself fortunate if in the course of his stay he is able to form some conception of the work of the Empire, of mediæval basilicas, and of Renaissance palaces; and finally goes on to the other cities of Italy with the general idea that Rome has absorbed her neighboring villages as she has absorbed foreign nations, and that little can be found outside her walls of as great interest as that within them. The result is that the student either goes north to Florence or Siena, making his first stop at Orvieto, or south direct to Naples, omitting the small towns by the way, which, while picturesque, are little mentioned in the guide-books, and have not even been photographed. As a matter of fact, these towns are as interesting as any in Italy. Although near neighbors to Rome and overshadowed by her greatness, they necessarily shared her prosperity. In ancient times they were stopping-places upon the great highways to Perusium and to Neapolis, during the mediæval period were the fiefs of archbishops and cardinals, and at all times have been sought as resorts during the intense summer heat of the Campagna. To the north of Rome, the Campagna, in long undulations, spreads out to the foothills of the Apennines, and there are no towns that have withstood the malaria in its evening mists; but on the east and south the Abruzzi and the Alban Hills are within sight of the walls of Severus, and rise snow-capped in winter along the horizon. In these valleys and upon these heights are the picturesque towns of which glimpses are seen from the train on the way to Naples.

Frascati and Tivoli are usually visited by the tourist, more for their natural beauties than for architectural remains, though at Frascati is one of the best of the square brick campaniles about Rome, and several transition Gothic windows; and besides

the Roman temple at Tivoli, and the interesting plan and interior of the Villa d' Este, there is an excellent campanile somewhat like that of Santa Maria del Popolo in Rome, but of better proportions.

But Subiaco, which is best reached by a wonderfully beautiful hill road from Tivoli, is seldom visited by architectural students, much to their loss, for Subiaco was the cradle of the Benedictine monks, as Assisi was of the Franciscans; and however austere were the manners of the brotherhoods, they vied with each other in glorifying their churches. In Subiaco are twelve monasteries, upon hillsides, in crevices of the rock, with long flights of steps scaling sharp ascents or descending into crypts and oratories buried in the mountain-side, the walls of which are frescoed, as are the superposed churches of St. Francis in Assisi, with a glory of color, blue, crimson, and gold. Here there have been no such masters as Giotto and Cimabue, but the general effects of color are of great beauty. The monastery of Santa Scholastica has an excellent tower built in 1053, and there are interesting cloisters of which the first entered is of the seventeenth century, the second was built in 1052, and has much beautiful Gothic decoration, but the third is the best of the three, having a double columned arcade surmounted by a mosaic frieze by Cosmati, as at S. Paolo Fuori la Mura in Rome. The second monastery is the Sacro Speco, or holy cave of St. Benedict. It is approached by the famous ilex grove of the saint, and the entrance corridor is built on arches over a chasm. The church, dating from 1116, is completely covered with frescos, mostly dating from 1217 to 1227. Palestrina, within a few miles, is full of ancient remains, especially of the great temple of Fortuna. There is also a Palazzo Barberino of merit.

Anagni is one of the most interesting of all the towns; open loggias, foiled windows, arched doorways, and griffs and lions abound. The Papal Palace has a fine multiple arched entrance and loggia of the time of Boniface VIII., 1300. The cathedral of Santa Maria is perched on the south wall, and had formerly a flight of steps like those at Ara Cœli in Rome leading to it. It has a figure of Boniface VIII., over the door against a background of gorgeous mosaic. The tall campanile is Romanesque, and the interior of the cathedral is picturesque, and has exceedingly fine mosaic pavements.

Ferentino has a Duomo of SS. Giovanni e Paolo with interesting exterior, magnificent opus Alexandrinum pavement, and fine mosaic twisted candlesticks, a church of S. Valentine with curious porch, and a noble bishop's palace. In the lower town, the church of S. Maria Maggiore has a fine west front and a beautiful rose window.

Alatri is full of mediæval houses, with Gothic loggias and windows. S. Maria Maggiore has three Gothic portals and a fine rose and richly ornamented acanthus mouldings. Near by, the Monastery Trisulti has a church lined with marbles, 1211. The Monastery Casamari has a Gothic church, like a small cathedral, dating from 1203. The cloisters and chapter house are especially fine.

Aquino has the church of S. Maria Libera, with fine carvings of acanthus leaves around the entrance, and much interesting carving embedded in the walls. There is also a Corinthian triumphal arch, and in S. Tommaso are friezes taken from classic temples. The Casa Reale, the birthplace of St. Thomas Aquinas, has Venetian Gothic windows.

On the direct road from Rome to Naples, Velletri, perched upon a hill, is the first town of any size that is reached. Here there is the palace of the Lancelotti, by Martino Longhi, of which the garden front is well worth study, and which has a superb open gallery. Near by is a palace of the cardinal archbishop, and the church of S. Maria in Treviso, with a very fine campanile dating from 1348,

and a papal summer palace, now called the Palazzo Communale, built by Giacomo della Porta, and with the usual excellent proportions and refined detail of his work. At Cori, which is a few miles from Velletri, are the Roman remains so frequently published, two Corinthian columns of a temple to Castor and Pollux, and eight columns of a tetrastyle Doric temple to Minerva. These temples are supposed to have been built under Sulla. On the slope of the hill above is the convent of Santa Oliva, with cloisters with double row of arches. Near Sermoneta is a basilica to St. Francis, with a fine rose window, and the castle of Sermoneta itself, built by the Cætani, is most picturesque and has fine corbels and several excellent chimney-pieces in the halls.

Piperno, on the hills above the Pontine Marshes, is full of fragments of domestic thirteenth-century work with most interesting detail, and Terracina on the sea, which, with all the towns on the Italian coast, was visited by the Saracens, shows their influence in its art in the pulpit of the cathedral of S. Pietro, which is incrustated with mosaics and has columns supported by lions, similar to those in Amalfi and Ravello, south of Naples.

Fondi, on the road to Cæta, is a picturesque mediæval town, whose castle has beautiful flamboyant windows of fine proportions, and a cinquecento tomb to Onorato Cætani in the cathedral. In Cæta itself, the cathedral of St. Erasmus has a fine thirteenth-century tower. Sessa, some twenty miles farther on, has a twelfth-century basilica with three apses and very interesting detail. From this point on the towns are environs of Naples. This hasty list of interesting work will serve to show that in the comparatively untrodden district between Rome and Naples there is a great deal of material for the architectural student's pencil.

C. HOWARD WALKER.

[To be continued.]

DEPARTMENT OF ARCHITECTURE.

MONTHLY COMPETITION.

THIRD-YEAR REGULARS AND SECOND-YEAR SPECIALS.

PLATE XXXI.

A PUBLIC EXCHANGE, CORRESPONDING WITH THE GREEK STOA AND ROMAN BASILICA.

PROGRAMME:—This building to have a length of 200 feet, width optional. To be two stories in height, the first story to consist of a large open hall, with height of 25 feet; the second story, to be supported upon columns or piers in first story, is to be devoted to offices only. At either end of the first story hall will be several large rooms to be used as special offices for corporations.

Façade to be classic, using the orders with or without arches. Columns to be used in some portion of façade. Pavilion treatment at ends is suggested. Building to be approached by a flight of steps seven feet high, and is to be placed on a terrace. Colonnade or arcade in first story, with second story carried out over it, can be used.

Material,—stone throughout.

C. HOWARD WALKER.

JUDGMENT.

First Mention	E. W. DONN, JR.
Second Mention	J. MCA. VANCE.

NOTES OF CRITICISM.

As plans are not published with these elevations, the criticism will be confined as far as possible to the exterior.

The problem under consideration calls for especial attention to the following points, named in their order of prominence:—

First, the building is public, and must have the expression of its purpose in its exterior. Secondly, it is to contain on the first story a large hall,—the one important interior feature. And thirdly, it is to have in the second story offices, and on the first floor rooms flanking the large hall, which, though important, are distinctly subsidiary to the large hall, and to be so treated in the design. The other important matters as to the arrangement of rooms and staircases, and the lighting of the same, will be passed over, except in so far as they directly concern the exterior and the points named above.

To take these points in order: First, the public character of the building. In the giving out of the problem, the dignity of a public building was called for by the flight of steps, and in the first design this feature of a generous approach was further accented by a correspondingly important feature in the façade. The columns and pediment at once indicate the position of the entrances, and the public character of the building. The columns, however, lose in dignity, and what is still worse, in utility, by being placed on plinths. The mouldings of the plinths not only interfere with the view of the base from below, but are just at the height (5' 0") to be most inconvenient to passers-by.

In the second design a quieter feature, modest and refined, takes the place of the somewhat more pretentious central figure of No. I., but in being recessed instead of projecting, detracts from the importance of the main object of the building, which is neither more nor less than a hall, with certain accessories about it. This might have been partially overcome if the lower entablature had been confined to the central portion, thus not only accentuating its relative importance, but, by its absence, improving the proportion of the wings. The heavy shadow under the architrave perhaps exaggerates the projection of the columns in front of the impost, which seems too great.

Secondly, we consider the importance of the hall and the expression of this importance in the exterior. Neither No. I. nor No. II. has given this sufficient prominence. In both cases the hall is rather hidden than prominent. In No. I. it appears nowhere on the given elevation, and has exterior windows only on the sides, and the colonnade which marks the approach so well, leads only to a lobby, and deprives the second-story offices of much of their light. In No. II. it has at all events the advantage of being clearly *en evidence*, as the elevation presented is that of the long side, and the various office windows on both floors have the advantage of direct light.

Thirdly, we consider the offices, and these affect the exterior but little, and chiefly make the demand, which has been pointed out already, for good light; the chief consideration beyond this being one which affects the plan only, namely, the convenient location for approach to the hall, the staircases, and the entrances.

On the whole, the design placed first has the merit of dignity and good proportion, and the second has the more modest but often greater merit of refinement and simplicity, which qualities if combined mark the great work of architecture in all ages.

R. CLIPSTON STURGIS, *Critic.*

A STUDY OF DECORATION.

(Continued from Vol. III., No. 6.)

RENAISSANCE.—PLATE XXXIV.

The quality of personal expression in Renaissance art has already been mentioned and commented upon, but it is worth while to consider it more seriously, as it becomes finally the dominant characteristic, not only of this phase of art, but of all modern art. Until the fifteenth century, all forms of art were a final result of the combined requirements of the problem presented, and of the development of immediately preceding and adjacent work. It is quite exceptional to find any style that is not an outgrowth from its local predecessor, or that is not rather one of a type than a unique example; and though there are to be noted occasional examples that are not indigenous to the localities in which they occur, these will be found to have been transplanted by colonists or adventurers or merchants from contemporaneous work elsewhere. Such examples are the churches in Southern France, built by Syrian colonists, the Oriental detail affected by Venetian merchants, and the Romanesque examples in Sicily erected by the Norman counts, but up to the fifteenth century, the century when the caldron of humanity begins to seethe, all art has grown by evolutionary processes, has a distinct, unbroken, and simple genealogy, so to speak, and though differing greatly during different periods and in various localities, is uniform in its type at any one period in any one locality. The whole realms of ancient and mediæval art can be compared to a great web of embroidery, where the patterns are continuous and change gradually as they are developed, where there are no repeats, and where the colors blend into each other and have no sharp lines of demarcation and contrast. It is needless to reiterate the reasons for this unanimity of expression of all ancient and mediæval art. The fact that religions were didactic in their demands; that, except in Greece, artists were but a higher class of craftsmen, and had their absolute traditions, which they did not assume to break except in rare instances; that it was difficult, from the conditions of dissemination of knowledge beyond limited bounds, for any one man to be greatly in advance of his fellows, or to be strikingly original in his views, and as a consequence the growth of guilds, and of Freemasonry, and of bodies of monastic designers, all of whom were working along the same lines; the reverence transmitted from the patriarchal system for the forefathers and for their work,—these and numberless minor reasons, such as hieratic customs, maintenance of symbols and of ceremonies, all made it impossible for the individual to be more felt than the community. But the change once begun, the revolution is rapid, until modern architecture and art have become cumbered with a mass of pedantry and of so-called novelty, which has wellnigh crushed it out of existence. In the earlier part of the fifteenth century, although the emancipation of the Italian cities and consequent relative importance of the artists had occurred, traditions were still strongly felt, and the work is homogeneous in character; but by the beginning of the sixteenth, the artists, now recognized and even extolled, welcomed the patronage of the nobility, and instead of working for the good of the church, of the city, or of the people, were already intent upon making personal reputations which would win them patronage.

The artist or architect of the previous time was either a monk or a retainer, whose welfare was assured, though by a pittance, and to whom it was improbable that greater success should accrue. The architect of the Renaissance, and from that time on, was a free lance, whose success was only limited by his popularity, and who consequently made his reputation more by the ingenuity of his invention than by the conservatism of his designs. It is true that a somewhat similar condition of affairs existed at the time of the Romans, and as a result there are some very peculiar and vulgar adaptations of the orders; but the Romans had few motives of design as material for their ingenuity to work upon, and therefore turned their attention to bizarre use of materials and overloading of ornament. The Renaissance designer, on the other hand, had the examples of all ancient art supplemented by mediæval art before him. He forsook the work of his immediate predecessors to return to that of the classic period, and became such a devoted admirer of classic work that he soon forgot the fact that all art worth the name was progressive and evolutionary, and was content to be not only imitative but plagiaristic. Therefore ornament and decoration that in classic work expressed requirement, or accented constructions, were used by him as convenient motives of decoration; plans were twisted and tortured to conform to façades, instead of façades worthily clothing plans; pediments, which were primarily ends of pitched roofs, were in miniature made to do duty as ornaments above windows, and finally were broken into uncouth shapes, so they would not offend by being too severe. Modillions, originally decorated ends of beams supporting cornices, were turned upside down and dubbed consoles, and placed on either side of openings.

All the previous classic motives and many of the mediæval ones were seized, developed, tormented, and ignorantly adjusted, until Renaissance design became a fabric eccentric and monstrous. The decadence of the style was not the result of ignorance or lack of skill as in antecedent work, but of sophistication; not of artistic deterioration of the people, but of fantastic imagination of the artists, in fact, of the competitive struggle of the individual, which produced sensational results. The same conditions obtain to-day, and produce the same results to even a greater degree; and it is only when economy on the one hand or refined taste on the other is able to temper the general arrogance and vulgarity, that work worthy to be called art is produced. To follow the progressive stages of the decline of Renaissance art is to continually recite the same story under different local conditions. The art that has noble dignity in Florence, and great refinement in Rome, under Bramante, became sumptuous in the palaces of Genoese and Venetian merchants, and riotous in Spain. Wealth, unless it is communal, has always tended to make art degenerate in the long run, and the wealth of princes has been less beneficial than that of merchants, perhaps because it has been more arrogantly misapplied. The last decade of the fifteenth century saw the nearly impoverished coffers of Spain filled to overflowing from the treasure of the vanquished Moors and the newly discovered Western Indies. The designs of the Italian architects were beginning to be extraordinary in Italy, under the patronage of local dukes, but they were as nothing compared with the exuberant fancies conceived for the delectation of the *nouveau riche* Spaniard. The restraint of constructive form was ignored, and surfaces were covered to such an extent with carved decoration that the style became known as the Plateresque style, that is, the style of the silversmith. Overwrought and ostentatious as was this work, it was outdone by the Spanish artists themselves; and while Berruguete contented himself with covering surface with arabesques richer than those of the Moors, Churriguete fretted every form and surface for the sake of bizarre light and shade, and produced an ensemble that seemed the

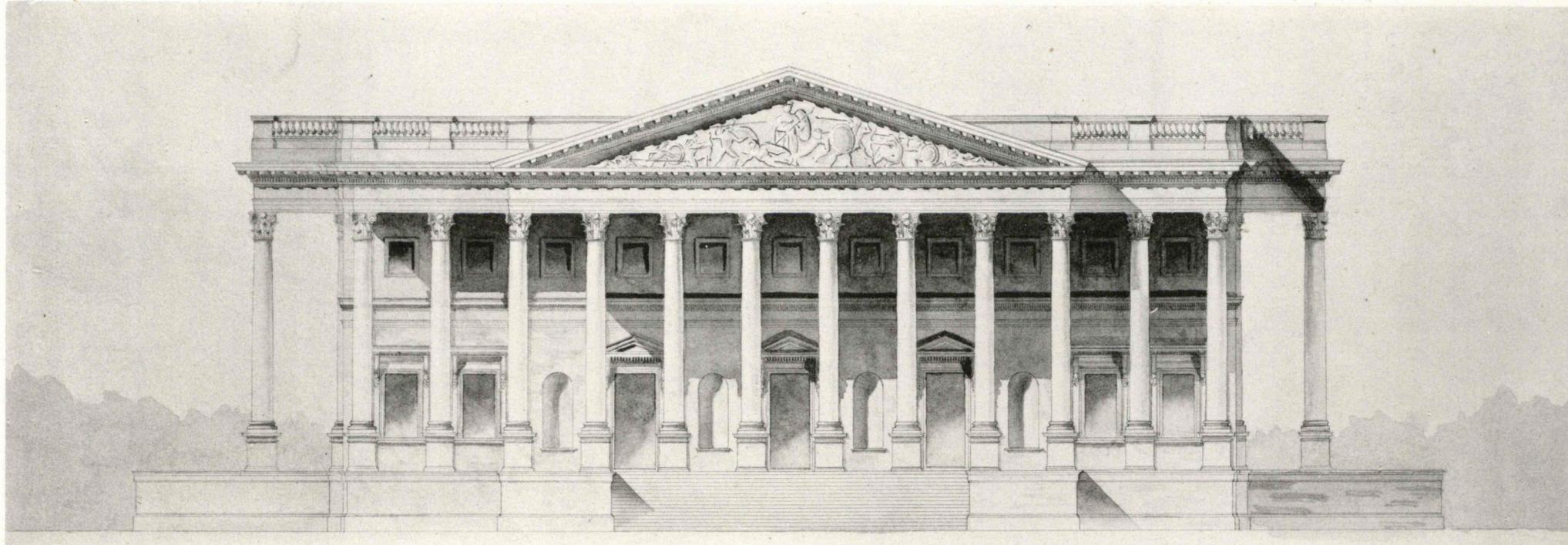
substance of a delirious dream. Form the ornaments had none, they were merely corrugations to produce contrasts of light and shade; lines they occasionally possessed, but were in no way to be compared with the later delicacies of the Louis Seize. Color was confined to the statues only, in which, singularly enough, the polychromy of Greek sculpture has been maintained to the present day.

Sculpture, Spain owes chiefly to Italian masters, and it is very probable, and in some cases well established, that much of the sculptured ornament is the work of Italian hands. The fountain at Malaga is a direct importation from Genoa, or from near there, and while Charles V. employed the talents of Titian, Veronese, and del Sarto, the minor artists of Italy, such as Francesco Nicoloso, found a broad field for their energies in Spain. Naturally, therefore, Spanish Renaissance is merely a variety of Italian Renaissance, and is individualized more by the presence of a corrupted taste than by new motives or methods of handling. There are one or two new motives, in most cases symbolic. There is, for instance, the "concha," or shell, the mark of the pilgrims to Palestine, which frequently occurs, and the knotted cords of the pilgrim's girdle; there are the two columns of Hercules with the accompanying motto, "*Ne Plus Ultra*," which appear in a variety of forms, and there are the lions of Leon, the castles of Castile, the pomegranate of Granada, and the bound sheaf of arrows of Seville, all of which, though heraldic, are used in such profusion that they become distinctive units of ornament. The one individually Spanish adaptation of Renaissance design, however, is in the tiles. These tiles, or azulejos, could easily have a volume devoted to them. They are the direct descendants of the Moorish tile, which in its turn came from the Persian and Assyrian. The Moorish tiles have already been mentioned, each cut to accurately fit into a pattern. After the Moors were driven out of Spain in 1492, there seems to have been a desire to produce the effect of their patined walls without the labor of making the many-sided tiles, and consequently the Moorish pattern was stamped and colored upon square tiles. A few of these tiles are to be seen in the museum in Seville. Their effect in a wall would be lacking in the brilliancy of the Moorish work. These, however, seem to have been the first of the patterned square glazed tile, at least since those of centuries preceding in Persia. The Moorish designs are soon forsaken, and Renaissance designs take their place. These are almost identical with the contemporary designs for heavy hangings, silks, brocades, etc., but apparently have little resemblance in effect, as they are upon white grounds, while the hangings themselves have dark colored grounds. The designs, being based on squares, with regular and not drop repeats, are necessarily simple and with few lines, and consist of circles, squares, quartrefoils, etc., supplemented by leafage and flower forms. The colors are those of the Moorish tiles, blue, green, a rich yellow, and occasionally a dull red. The general effect of a wall of these tiles is rich and varied, more varied in fact than one of the Moorish walls, as the stamped patterns and the running of the colored glaze produce accidental effects. The industry of the manufacture of these tiles has continued to modern times, but their artistic value has decidedly depreciated, the coloring gradually disappearing until blue alone is used, and the tiles are smooth and merely painted, not filled with rich colored glazes. In the sixteenth century the art was considered of such dignity that a royal master maker of azulejos was appointed by the king from year to year. The cutting of the tile was so difficult that aspirants were obliged by municipal law to pass a regular examination before they were allowed to exercise their trade. This was in regard to the earlier cut work similar to that of the Moors, and which was only continued in Andalusia. The Moriscos or Moors who had become

Christians remained in Spain from 1492 to 1610, when they were finally expelled, and they seem to have continued the old methods of cutting and matching tile in some few localities, though seldom using Renaissance design. There are a few very beautiful tiles with lustre remaining, of which several are in the Casa de Pilatos in Seville. The principal tile potteries were in Seville and Toledo, those for Faience were at Talavera and Valencia.

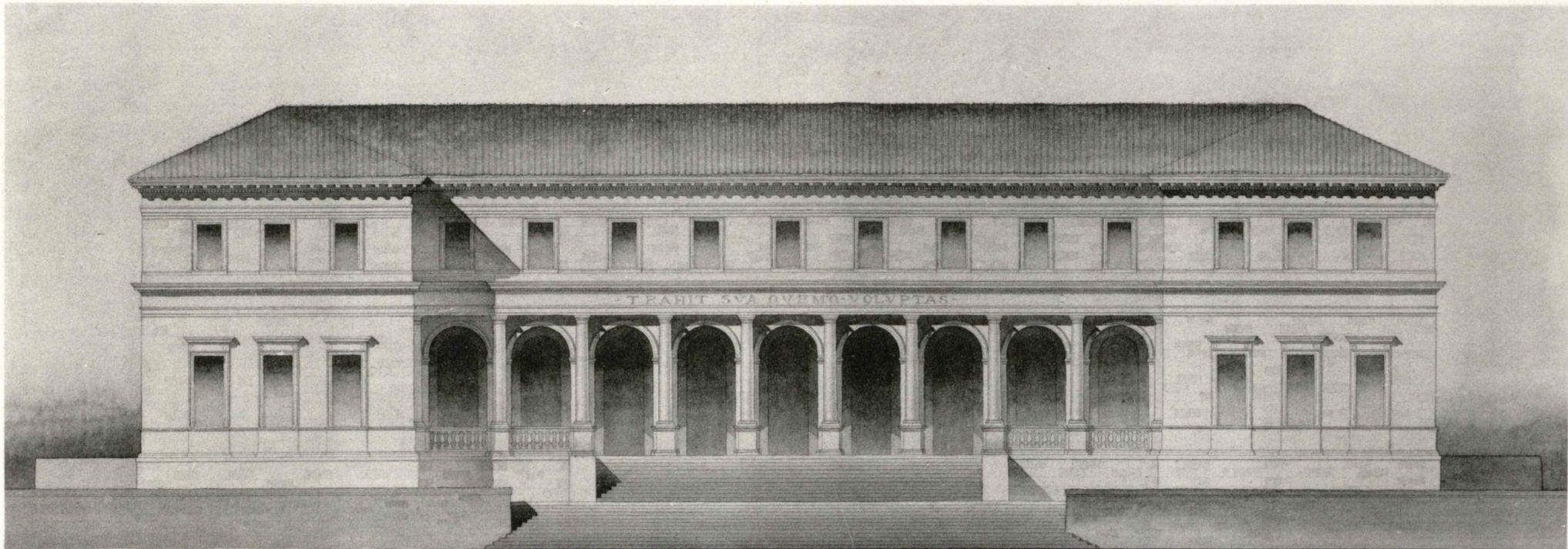
There was one industry in Spain at the time of the Renaissance that has never been equalled elsewhere; that is, the use of iron in the screens and grills which are known as rejas. These wrought-iron screens, principally used to isolate the coro or choir of the cathedral, which in Spain is always in the centre of the nave, or to enclose the capilla mayor, or chief chapel, are of great size, sometimes fifty feet in length by twenty feet in height, and are wrought with an incomparable skill. The iron is wrought, repousséd and chiselled with wonderful facility, and the designs are refined at the same time that they are rich in both motives and workmanship. The employment of the reja antedates the Renaissance period, and undoubtedly was stimulated by the work of the Moors, which in iron as in all other materials was especially skilful. A considerable number of Gothic rejas exist, notably those in the cloisters of Barcelona. These, however, are of straight, occasionally twisted, iron bars, crowned with a narrow frieze of thin plate iron, pierced and repousséd, and terminated by the rod split into several pieces, each wrought into spiny, flamboyant leafage, which is twisted and tangled with the utmost abandon. In the Renaissance rejas the rods become elongated delicate balusters of iron or bronze, divided at intervals by sharp projecting mouldings that seem like disks strung upon the rod, and the reja usually has both a base and frieze of repousséd and chiselled Renaissance ornament, while the upper part is crowned with scrolls and figures which are painted or covered with silver and gold. Silver especially is used with great discrimination, the mouldings being defined by it, and the prominent and salient points accented with it. As with the Italians, a knowledge of a craft was by no means considered derogatory to a sculptor or architect, and constantly both are found to be named as maestro rejero, or iron masters, to certain districts in Spain. Villalpando of Valladolid, for example, was known as sculptor, architect, goldsmith, and iron master. The designs for the principal rejas were made in competition, and the successful competitor received considerable fame, and signed his work with a pride that he could well feel. The individual factor becomes manifest in the Renaissance art of Spain as elsewhere. Most of the iron work comes from Toledo and Seville. The finest of the screens are those in the Royal Chapel at Granada, finished in 1520 by Maestro Bartolome, and those in the Cathedral at Toledo, by Villalpando and by Domingo de Cespedes. Iron pulpits were also occasionally made. Besides the choir screens, iron was used for many minor purposes, the nail-heads especially being extremely interesting. These are imitated from or suggested by the Oriental nail-heads used by the Moors, and are finest in Jaen and Avila. Damascened work, also suggested by Eastern influence, is frequent, and is still made by Alvarez of Toledo. The Spanish gold and silver work of the Renaissance period is extremely rich and varied, including all sorts of chased and repoussé work, silver, gilt, enamels, inlays, and damascened work, but the motives, though rich, soon become extravagant and baroque, though the effect is much better than in the architecture where the eccentricities, pardonable in jewellery, are perpetuated in stone.

[To be continued.]



FIRST MENTION.

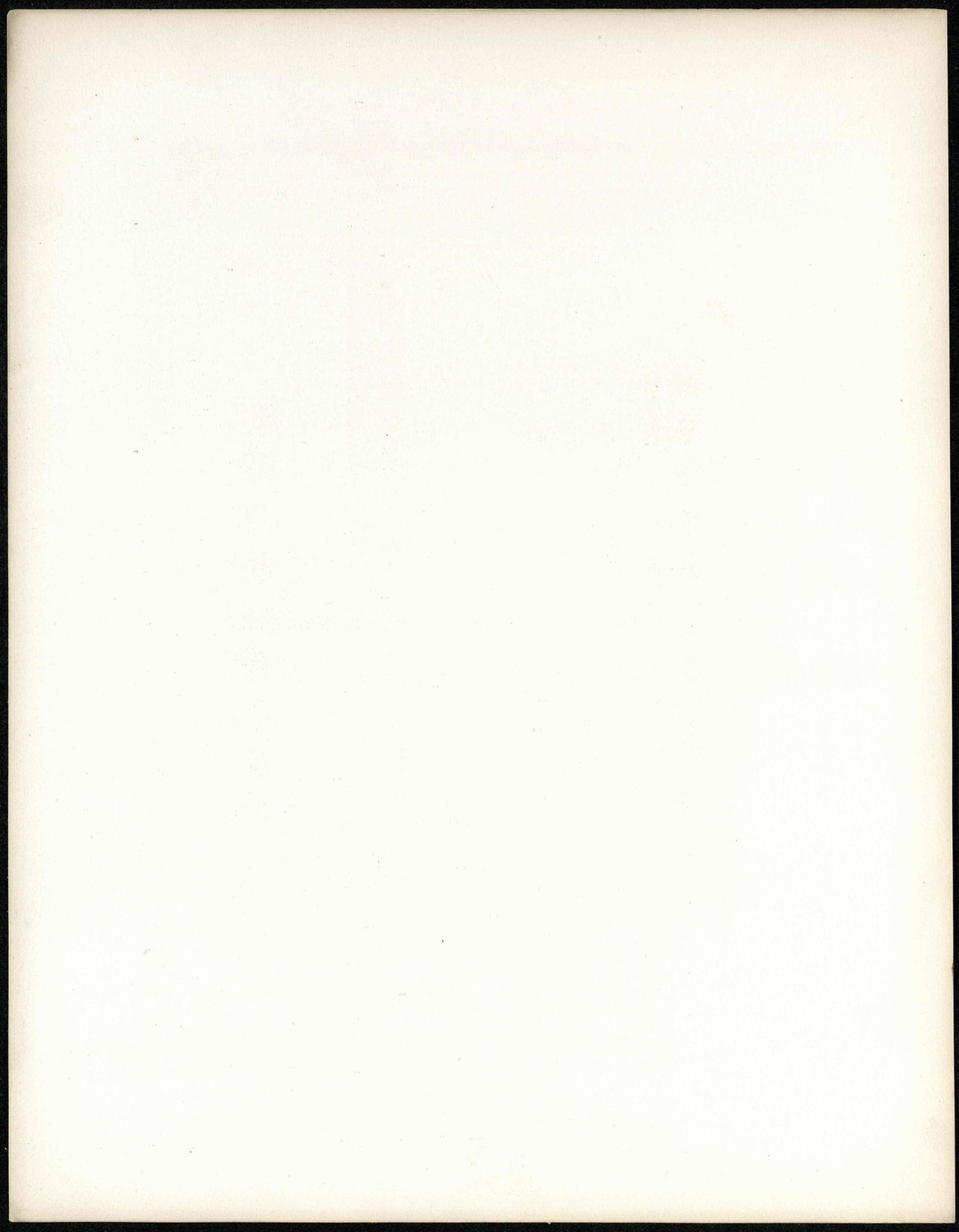
E. W. DONN JR.

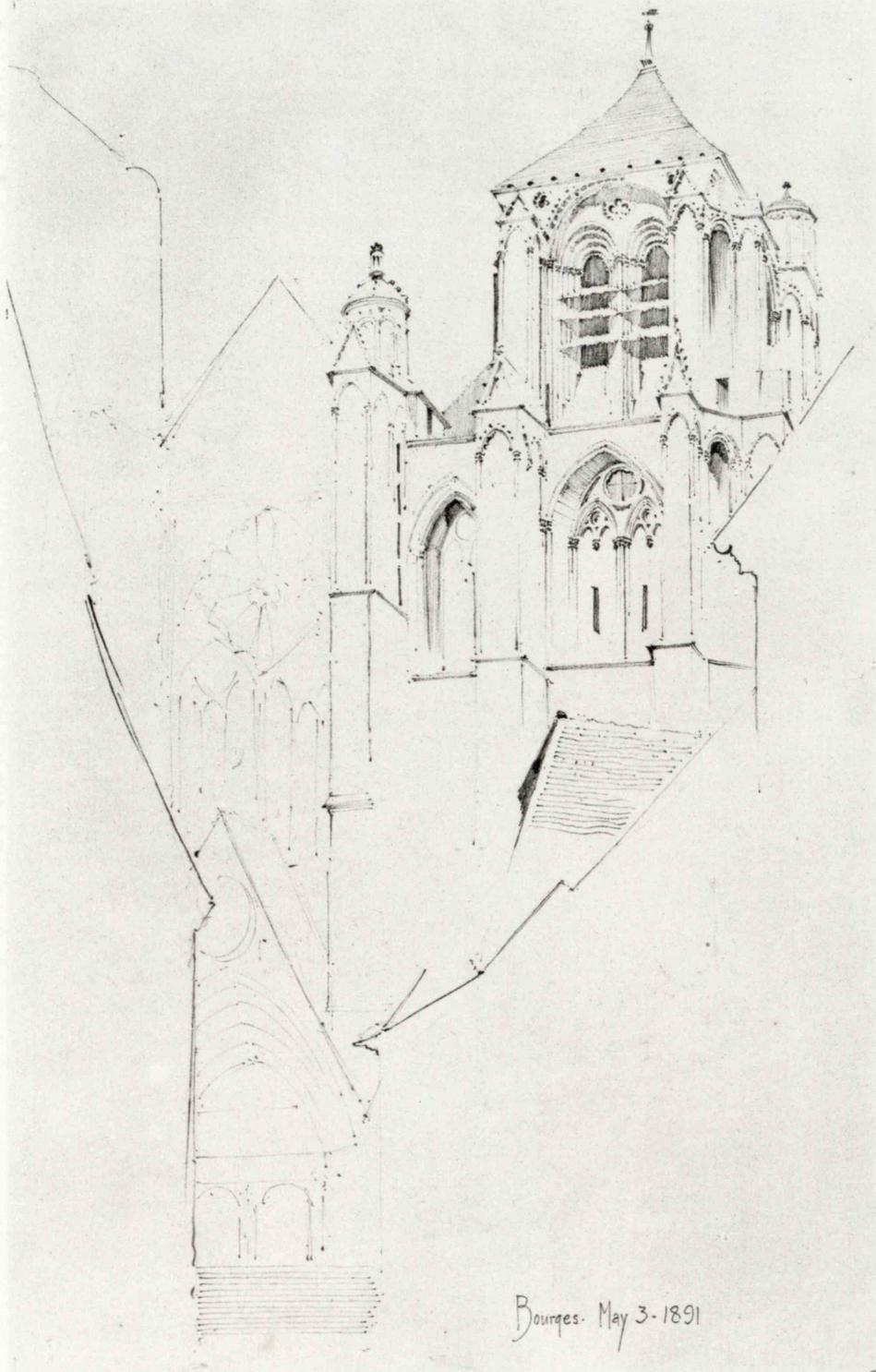


SECOND MENTION.

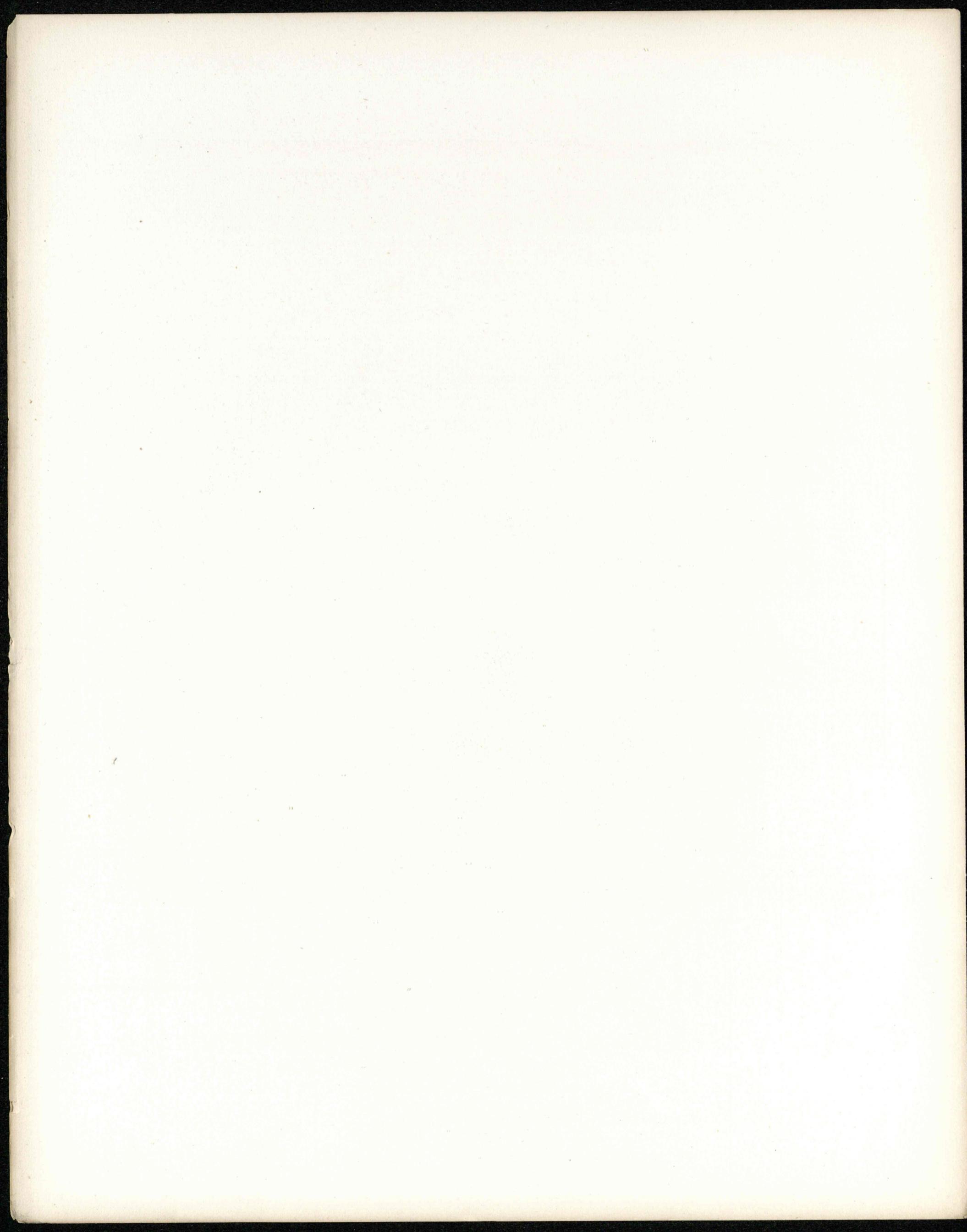
J. MCA. VANCE.

PROBLEM IN DESIGN.
MASSACHUSETTS INSTITUTE OF TECHNOLOGY.
A PUBLIC EXCHANGE.
THIRD YEAR.



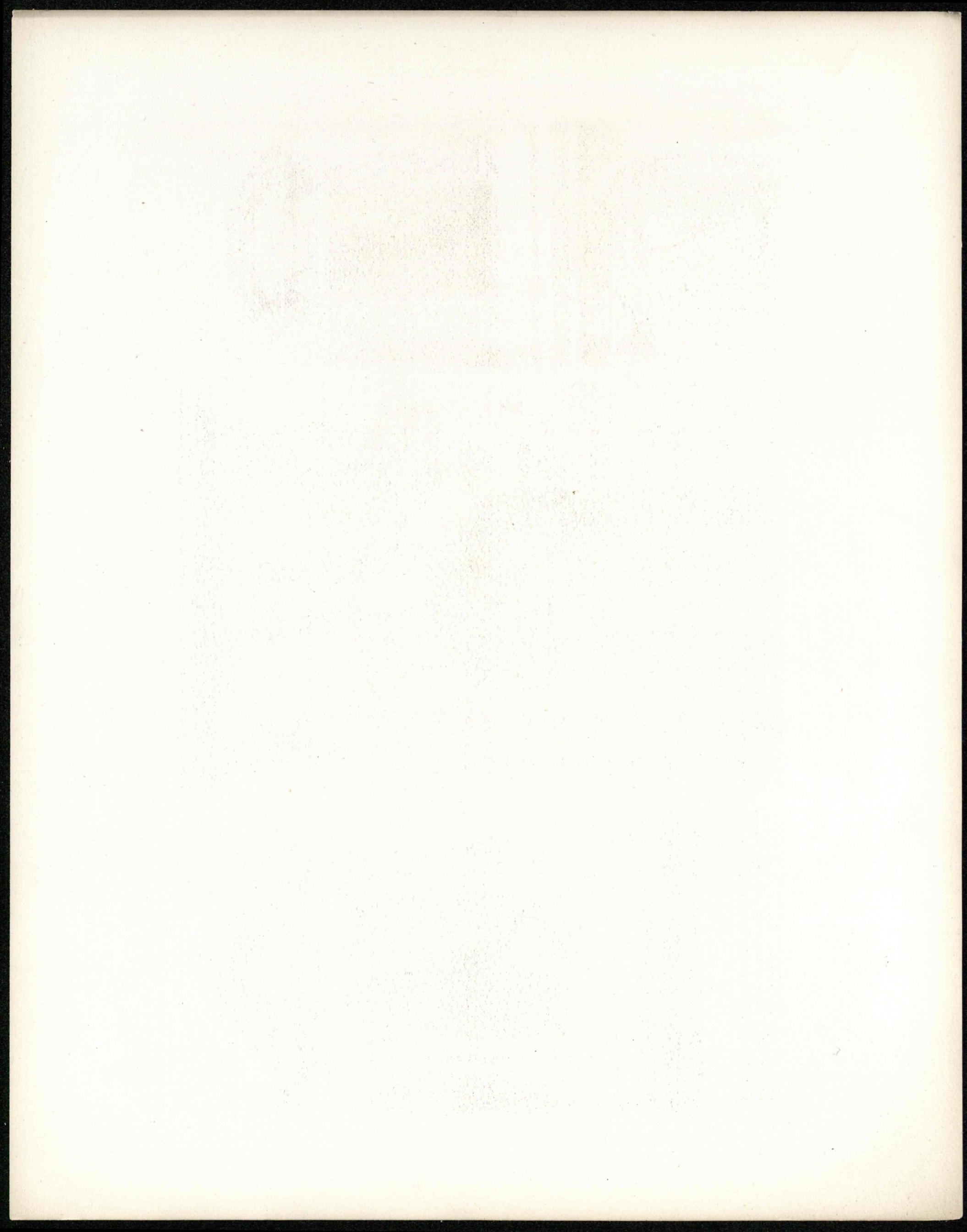


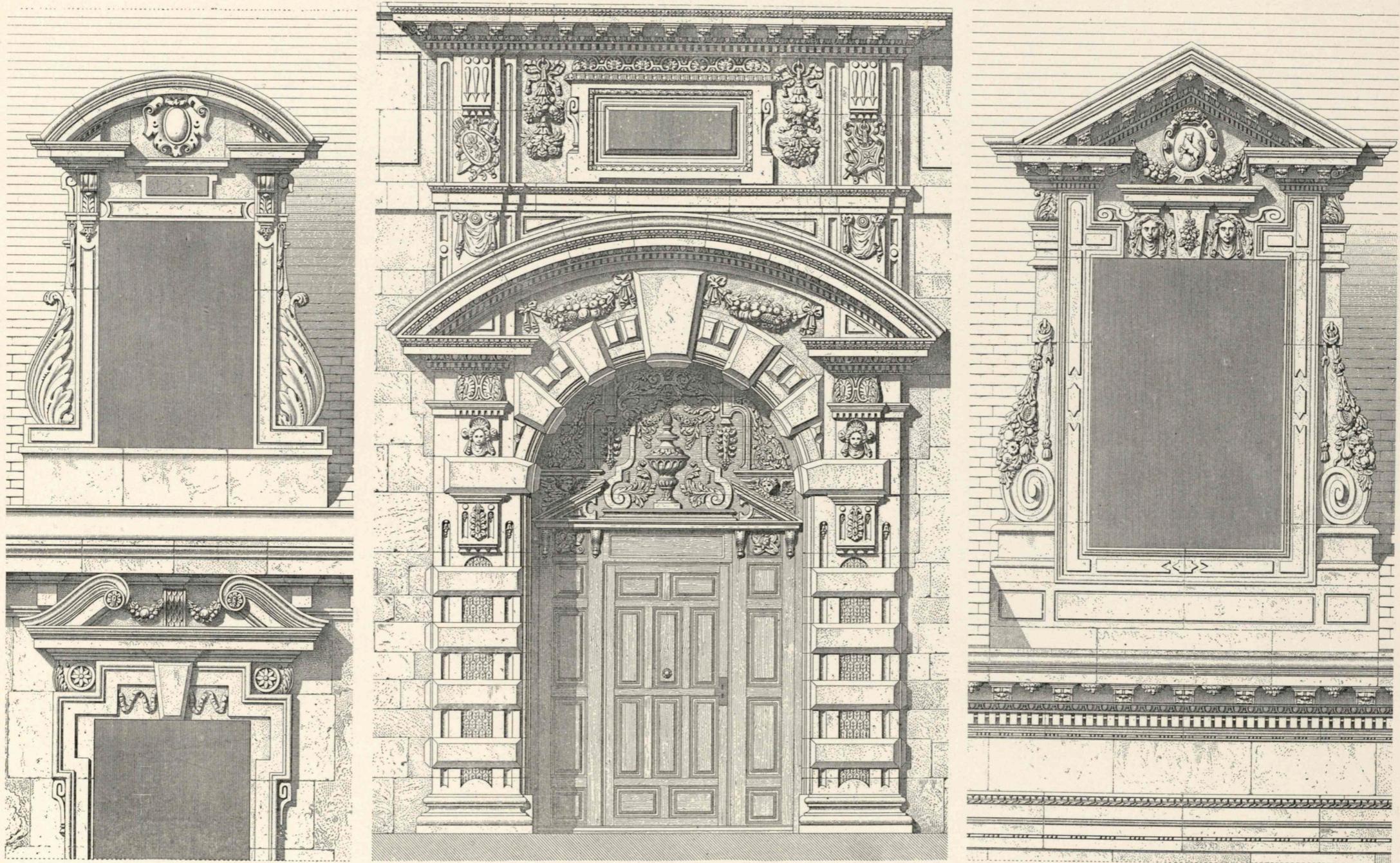
SKETCHES IN BOURGES, FRANCE.
BY HENRY BACON, JR.
SIXTH ROTCH TRAVELLING SCHOLAR.





CHARCOAL DRAWING FROM LIFE, BY LASAR.
LOANED BY THE COWLES ART SCHOOL, BOSTON.





A STUDY OF DECORATION.

BY C. HOWARD WALKER.

French Renaissance Pediments, after C. Sauvageot.

