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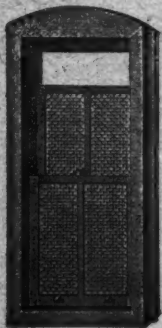


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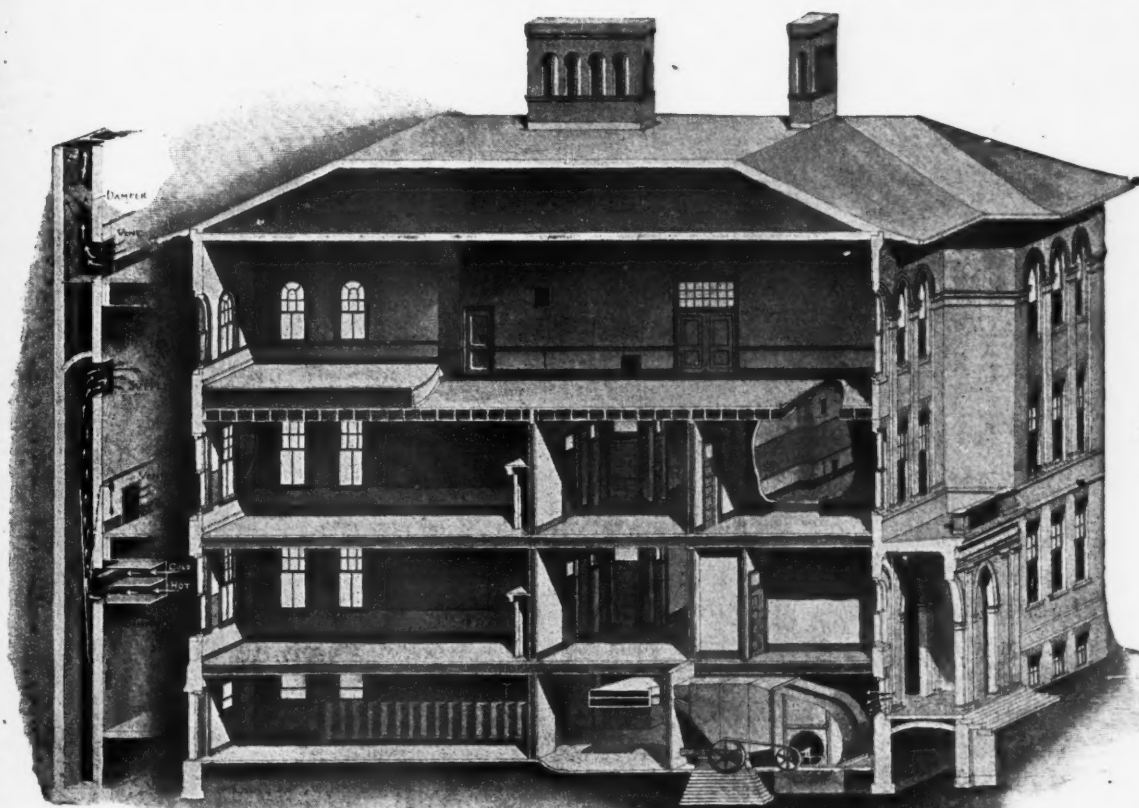
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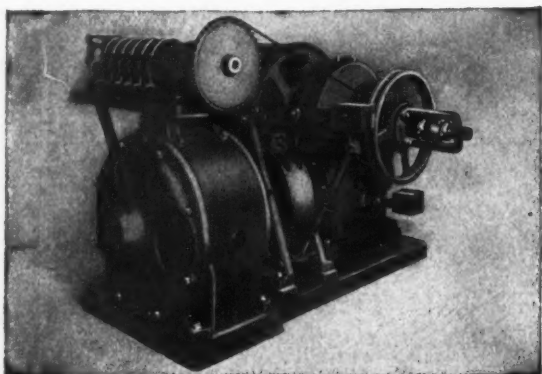


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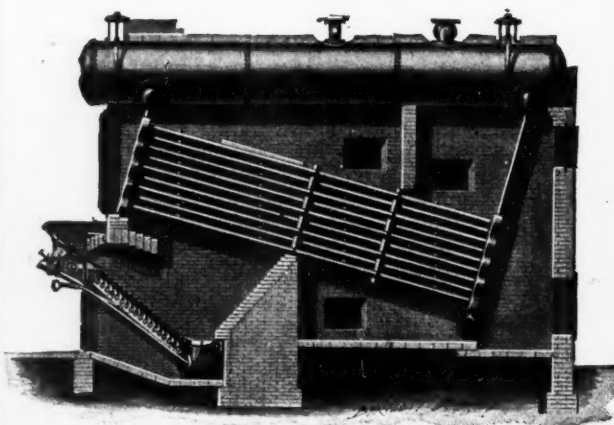
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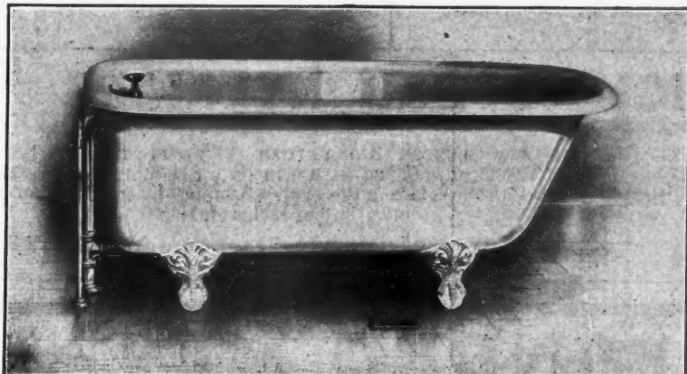


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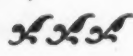
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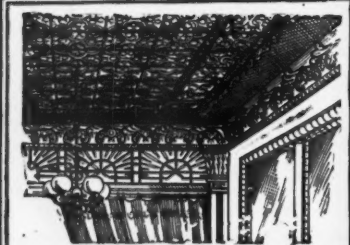
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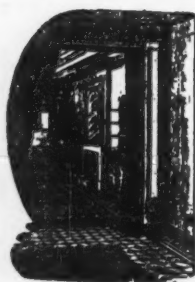
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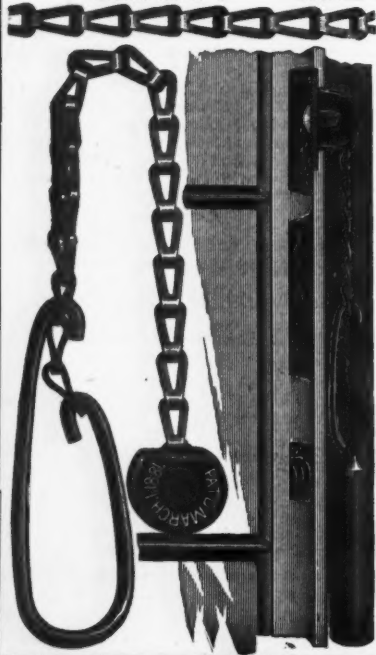
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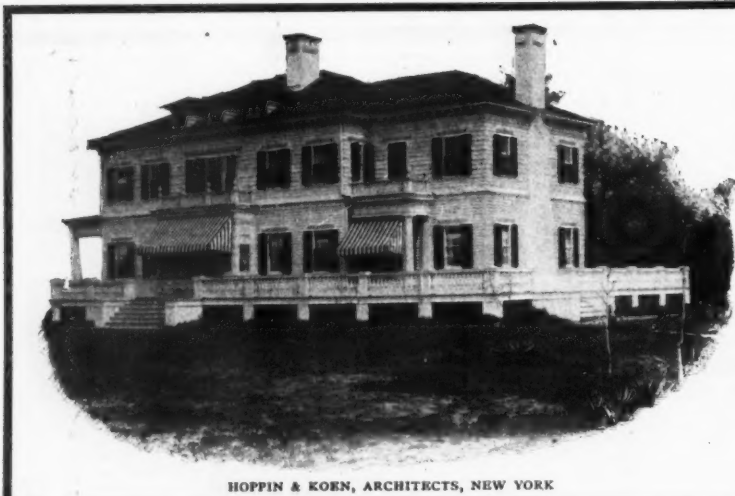
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Low Percentage of Loss in Fireproofed Buildings

The report of the fire underwriters upon the adjustment of the fire losses at Baltimore, particularly the eight steel-frame and hollow-tile constructed office buildings, has been given out. The total valuation of these eight buildings—the Continental Trust, Maryland Trust, International Trust, Union Trust, Equitable, Calvert, Herald and Merchants National Bank—is estimated at \$4,195,853, and the damage computed at \$2,690,107, or about sixty per cent. After the insurance was deducted a net loss of \$592,382, or about seven per cent of the total valuation, remained. Because of this theoretical loss of sixty per cent, or practical loss of seven per cent, the present method of fireproofing buildings has been attacked from time to time in the daily press, and we have even noticed in architectural journals an inclination to speak of "so-called fireproof buildings." The only reason for noticing this is that such statements lead the building public to believe that any investment in fireproofing methods is a waste of money and will decrease rather than increase the use of fireproofing methods which make for safety as well as commercial security in our large cities. The Baltimore fire showed the stability or failure of many building methods under extraordinary fire conditions, but it seems to us that the one lesson that is most prominent is that no fireproofing can be too complete or too general in its application, and that all friends of good building should aid in advancing a public sentiment in this direction.

Outside Work by Draftsmen Employed on Salary.

The movement by the Treasury Department at Washington toward prohibiting draftsmen engaged in the office of the Supervising Architect from engaging in architectural practice out of office hours, brings up a question that has always had its place in the regulation of architects' offices. It is not so much whether the employer has a right to control the action of his employees beyond office hours as how far such employment encroaches upon the service that has been agreed upon by the employee for so much compensation. The draftsman who can command outside commissions is in effect and practice an architect. While employed as draftsman by the Government or a private individual the salary is often much less than his ability warrants. But he has sold this service to his employer, and the objection of the latter to his doing outside work is not that he wishes to control his draftsman's actions, but that he may receive in full that which he has bought, even though the price be admittedly low. In the Supervising Architect's office there are employed some of the best draftsmen to be obtained in the country. Their compensation has never been adequate in individual cases, though good in the line of the rank and file. The hours are short, it is true, but the capable draftsman must receive all that his talents call for. Hence the custom of outside work. With the draftsman in private employ this is also largely the case, but there are many reasons why there should be an understanding in regard to outside work.



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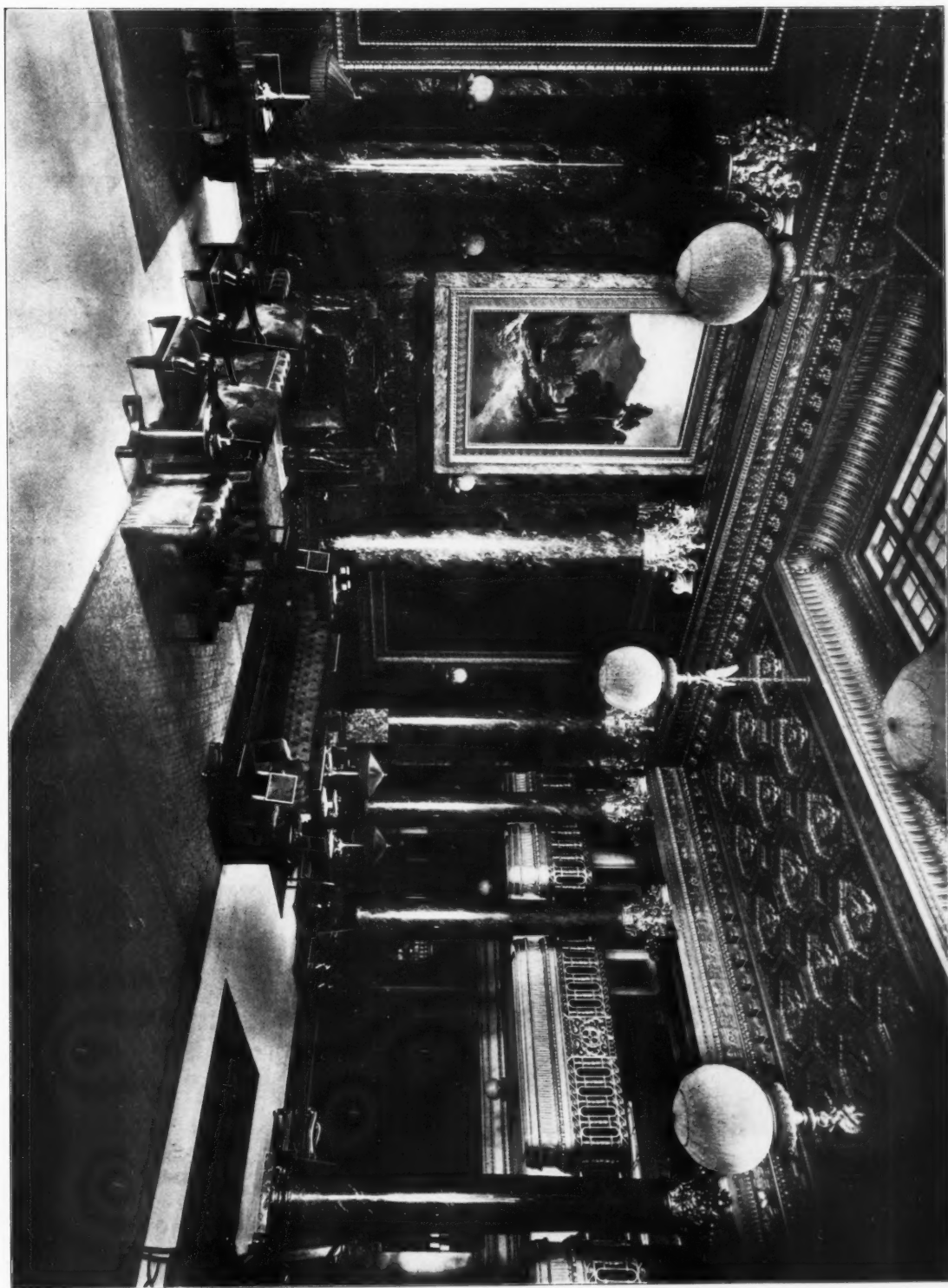
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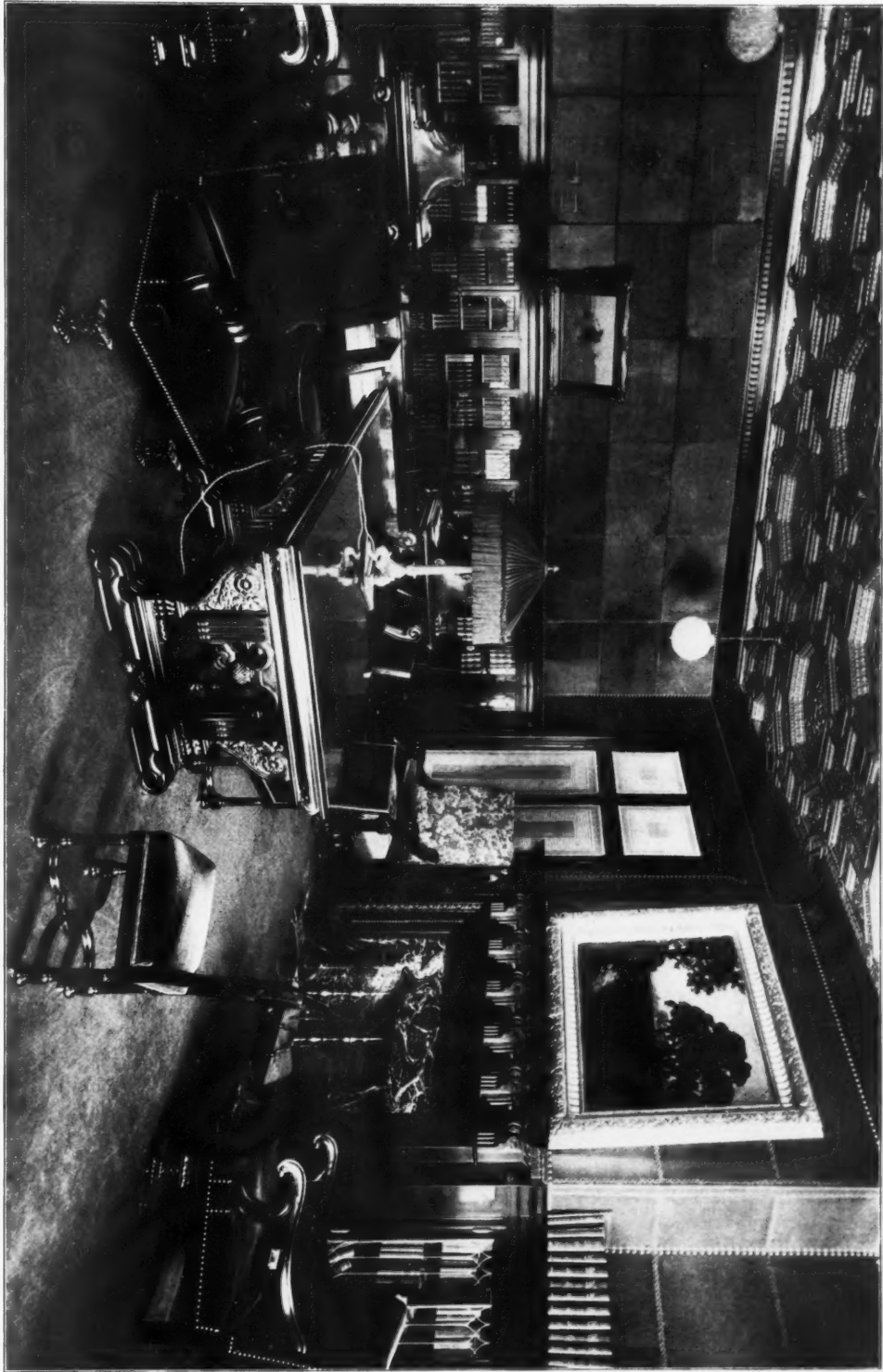
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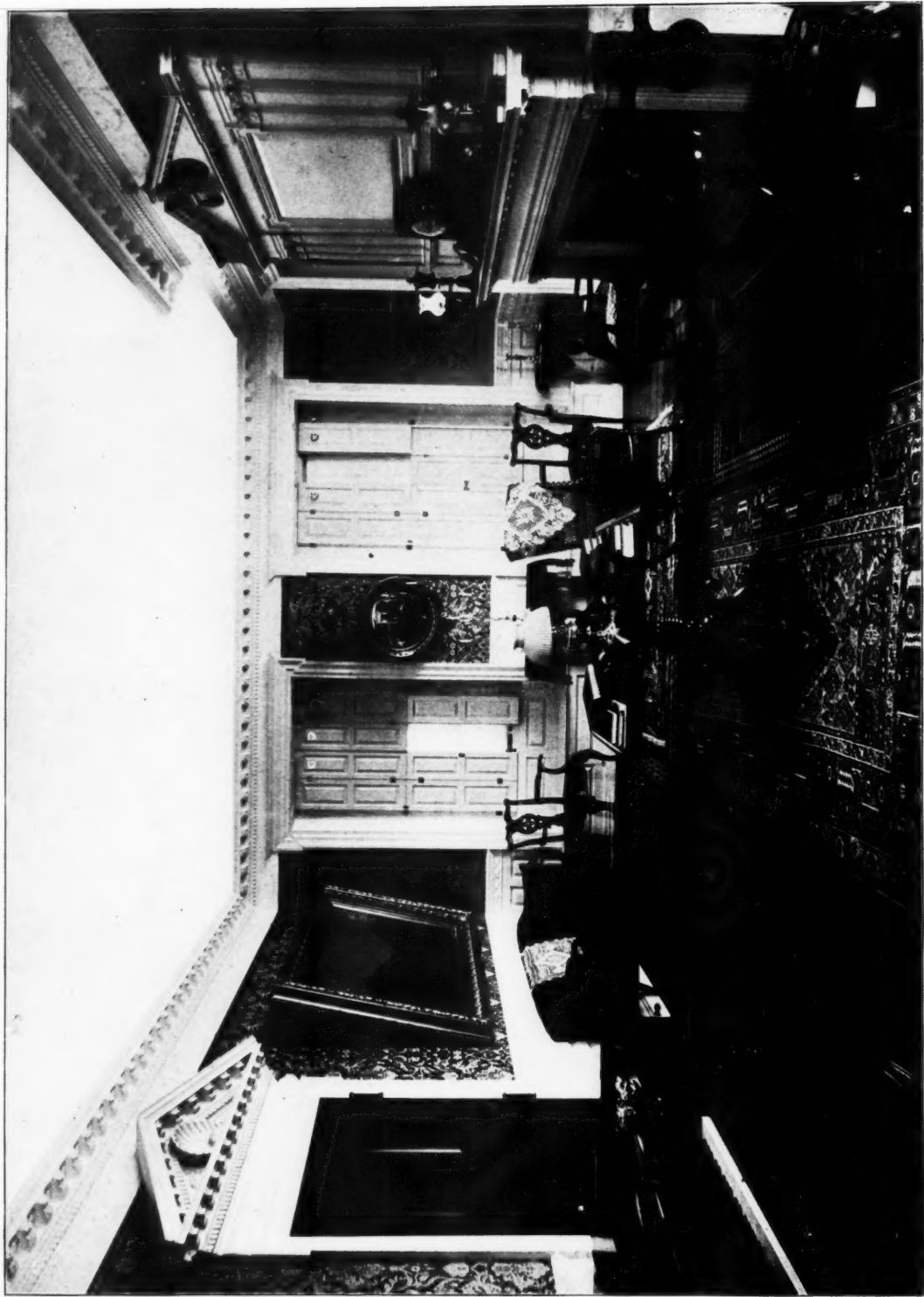
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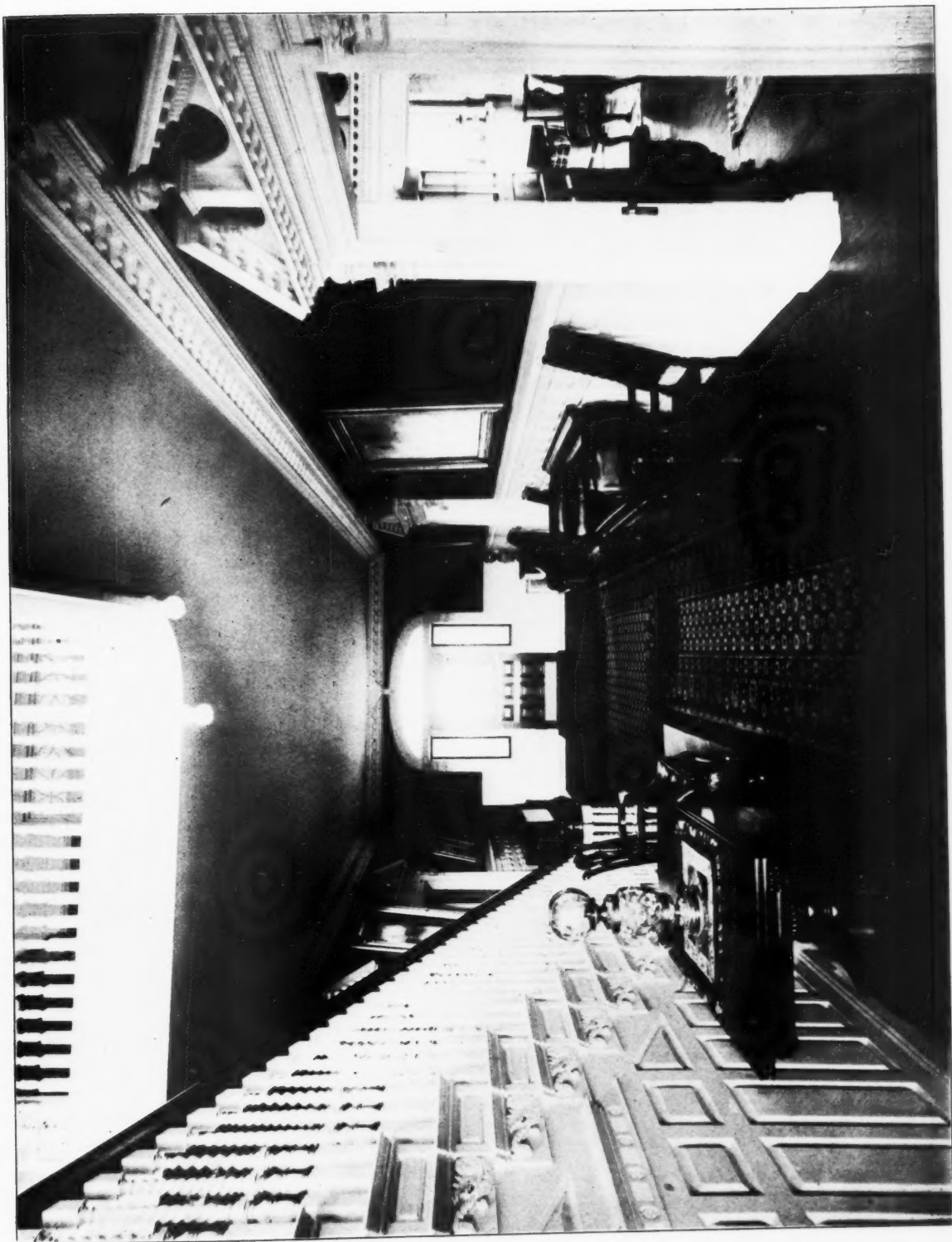
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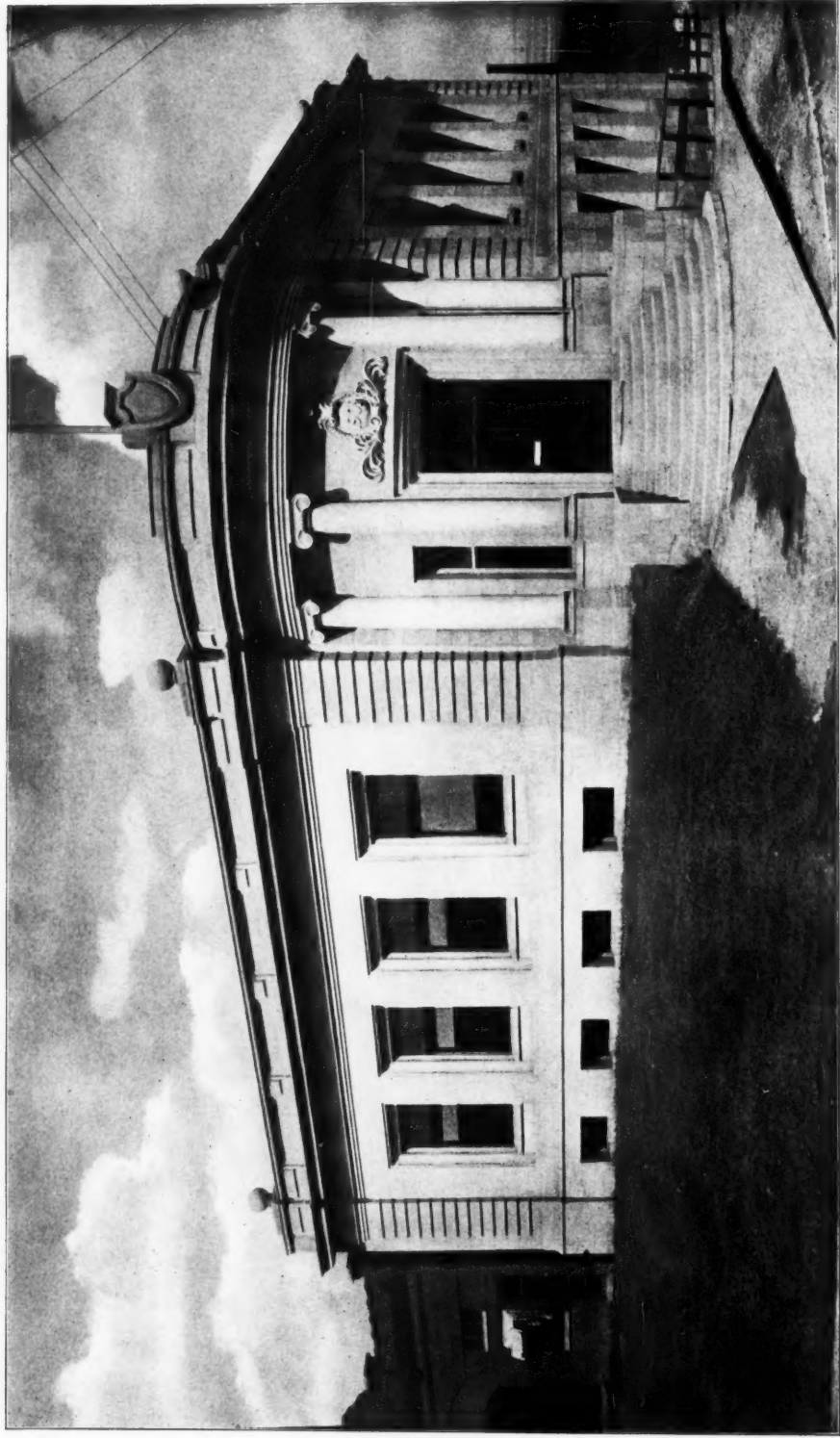
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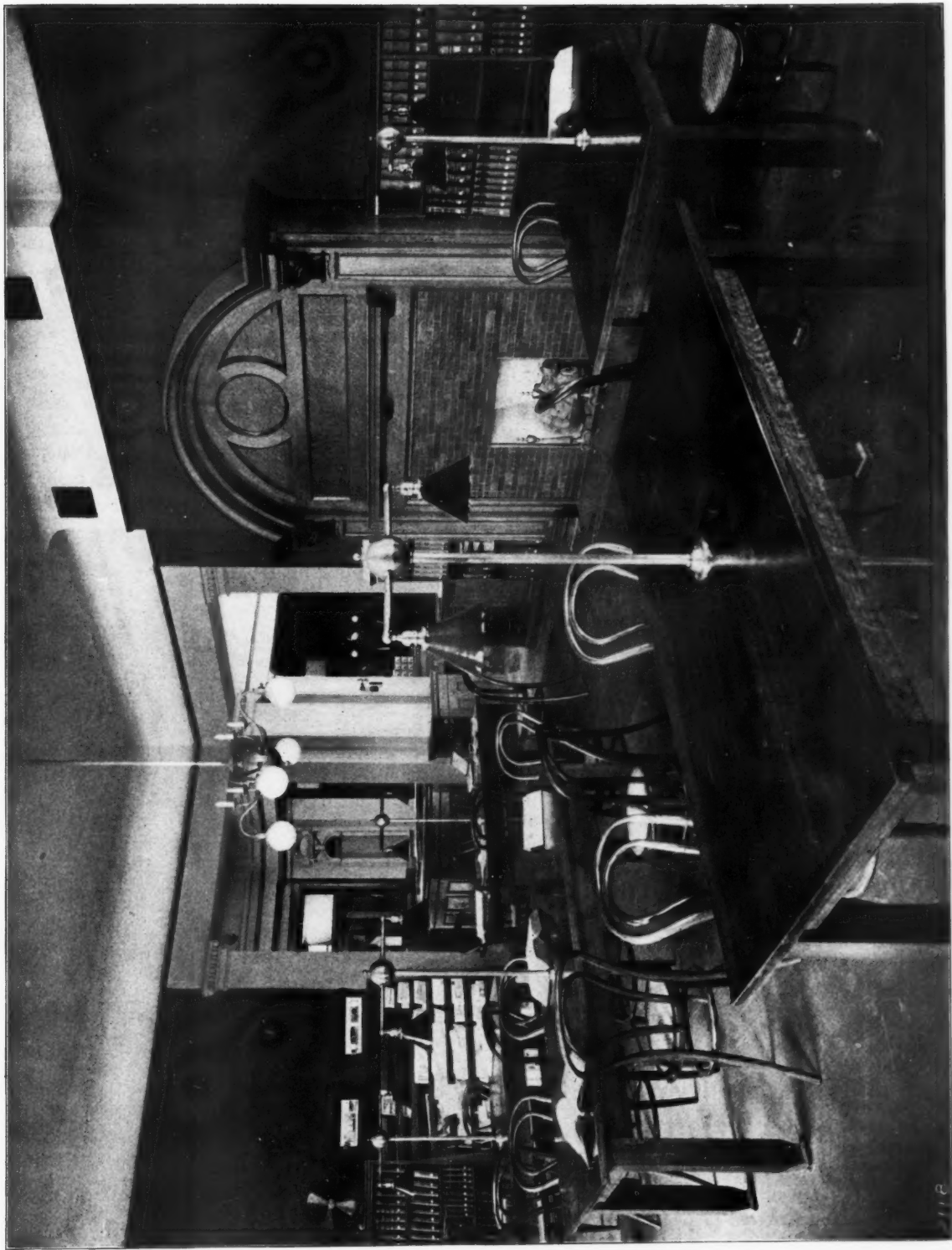
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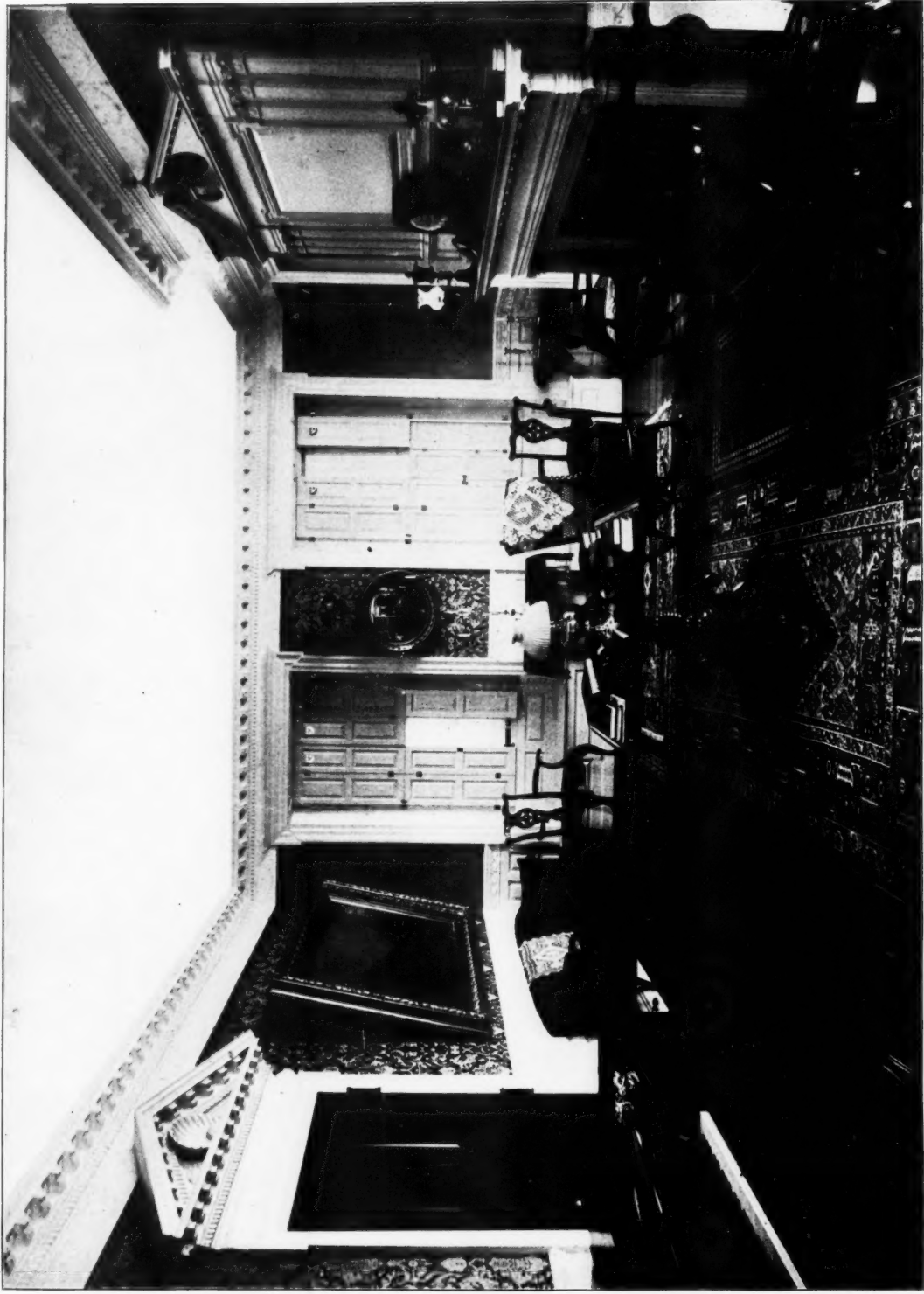


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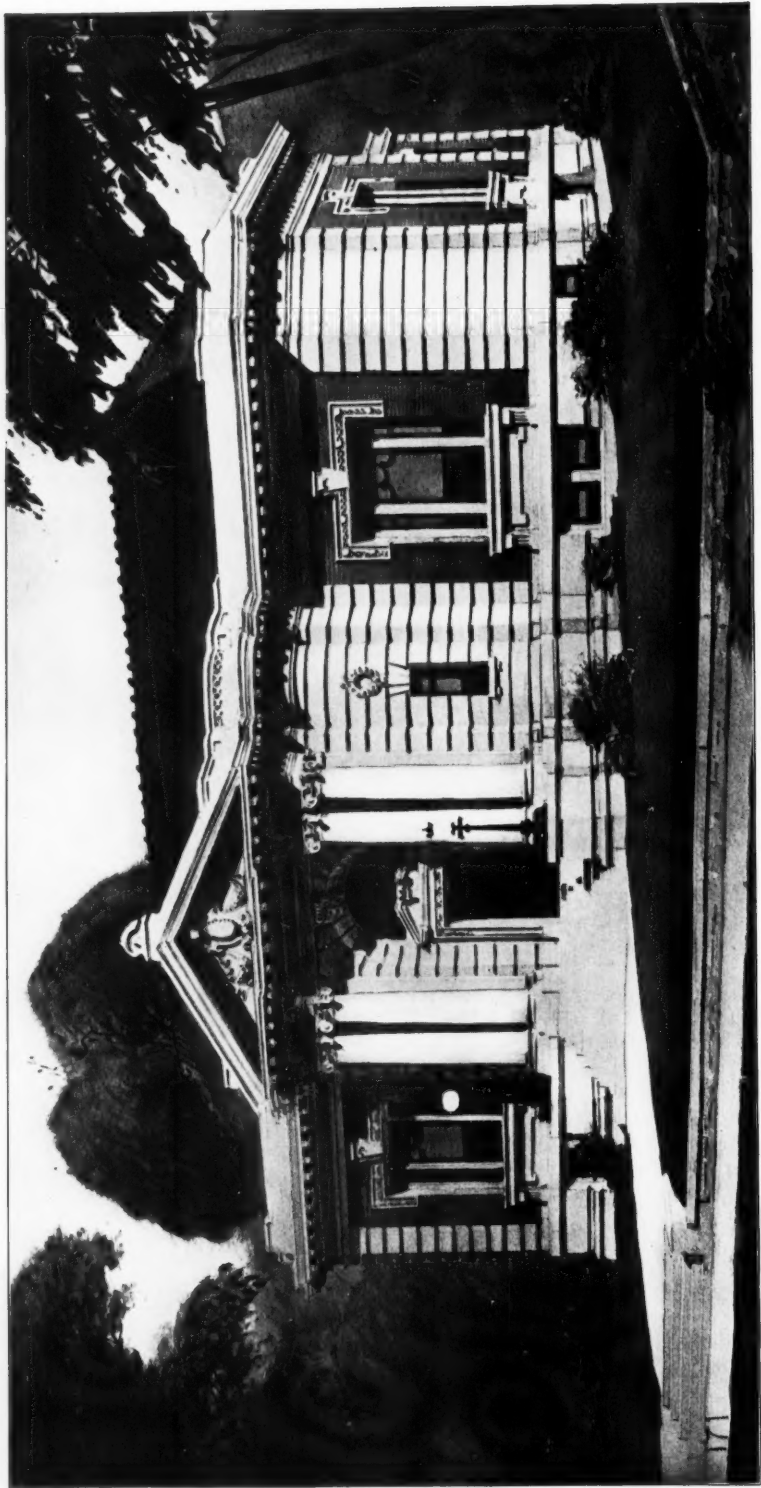
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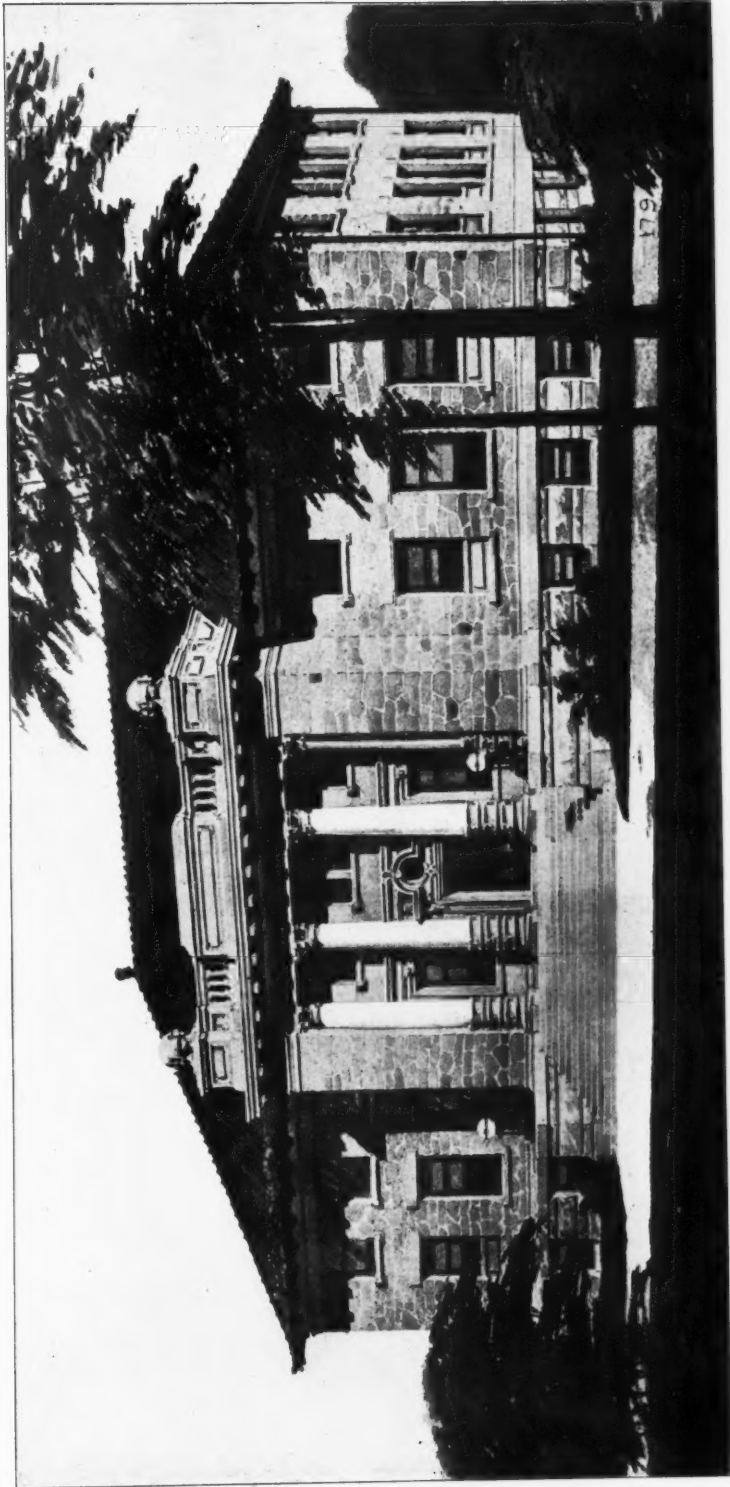
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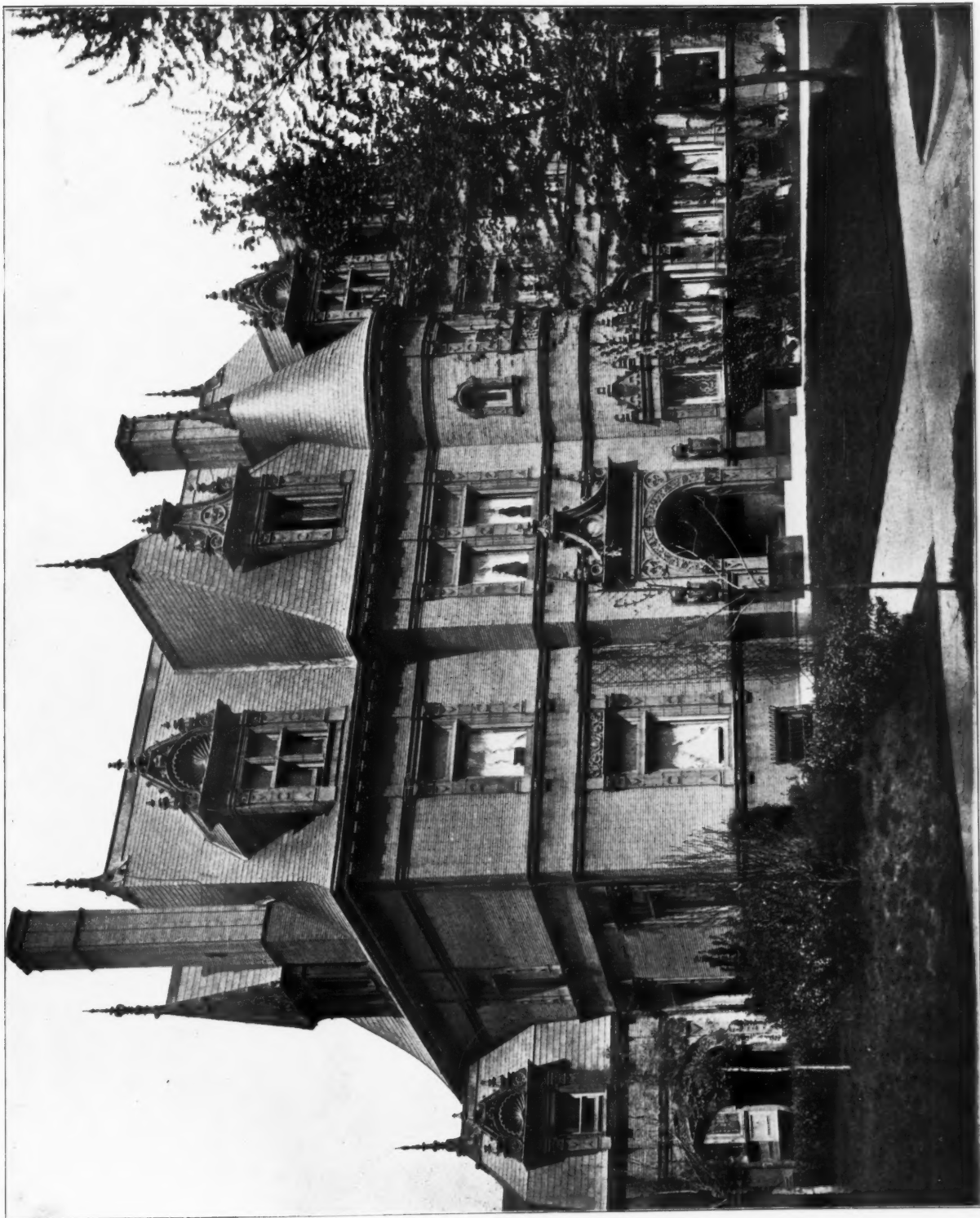
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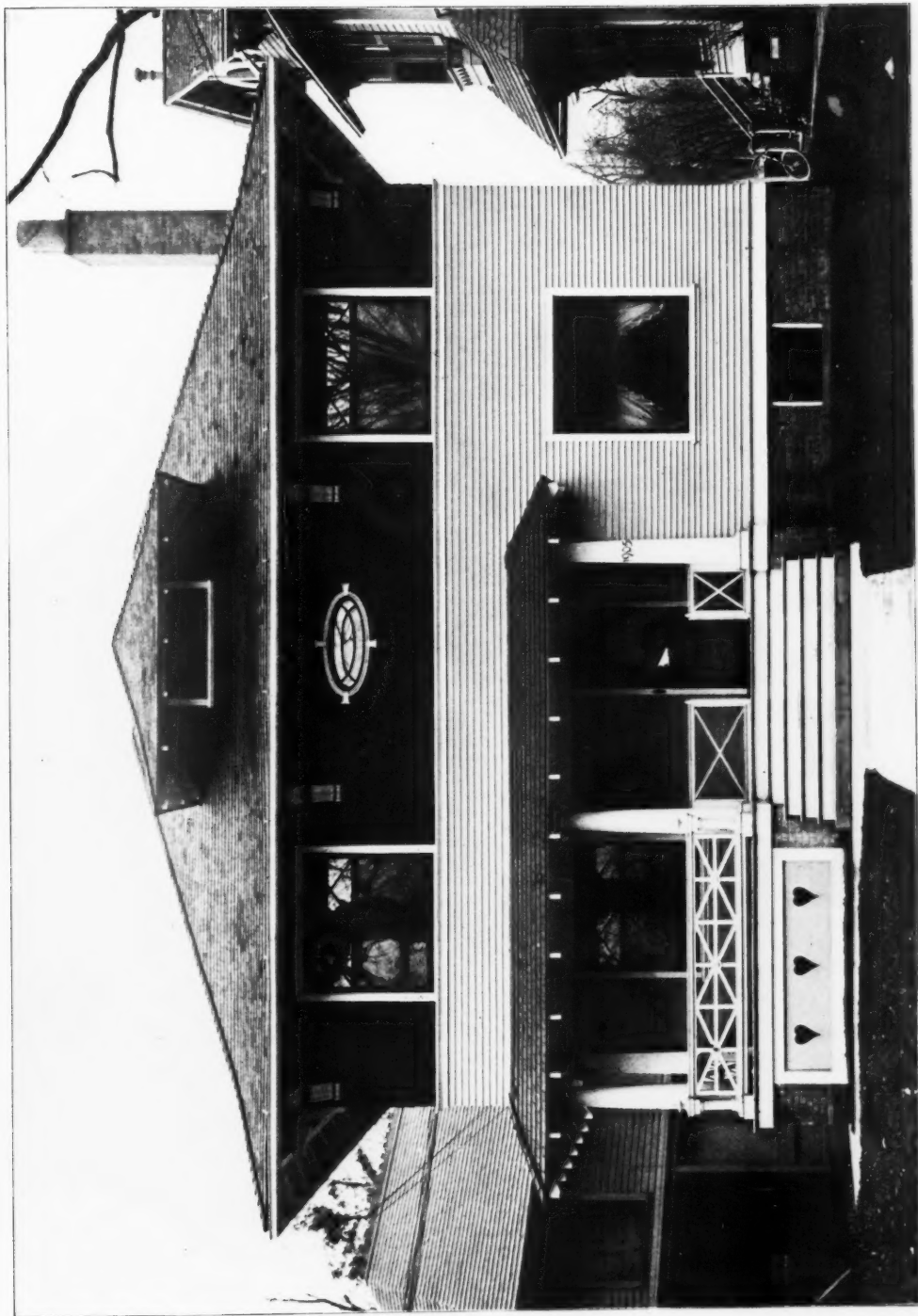


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RECENT EXCAVATIONS IN THE ROMAN FORUM.*

THE news of the discovery within the large concrete base which probably belongs to the equestrian statue of Domitian† (*Builder*, January 2, 1904, page 3) of a block of travertine containing, in a nearly square cavity, five specimens of prehistoric pottery, created a considerable sensation in archeological circles. Upon March 9 Commendatore Boni, in searching for traces of the inaugural ceremonies which he supposed had been observed when the monument was dedicated, came upon a slab of travertine embedded some three feet deep in the concrete of the base. The slab was four feet square and one foot thick, and on its removal the next day it was found that it covered the block of travertine already referred to, which was of the same dimensions, and contained, in a cavity of slightly trapezoidal shape, the sides of which are each two feet in length and the depth one foot, five pots, which resemble very closely those which have been, and are still being, discovered in the prehistoric cemetery close to the temple of Antoninus and Faustina. One of them is globular, red, with striated sides; another is a small black amphora with a double spiral incised decoration; two others are small black cups, with incised decoration; while the fifth is, to borrow an every-day analogy, of the shape of a clotted cream pot, yellowish, with bands of red painted upon it, and one small handle in the upper part.

The vases were left *in situ* for a few days, and then removed one by one in the presence of the King of Italy, who has taken a considerable interest in the present excavations. In the largest was found a piece of unrefined gold, but a few pieces of pitch and some fragments of tortoise shell were the only other objects that were detected in the earth in which the vases were embedded.

The meaning of the discovery is anything but clear. Commendatore Boni believes the vases to have been placed in the stone at the ceremony of the inauguration of the monument—the laying of the foundation stone, as we should call it—and the custom would thus be one of those which has come down to us from very early times. It is perhaps curious that no "coins of the realm" should have been found; copies of contemporary newspapers we could not expect. But there are more serious objections. In the first place, could an equestrian statue of an emperor be regarded as a sacred building, and therefore be "inaugurated" with solemn rites? And, in the second place, how came these prehistoric vases to be available at the time of Domitian?

We should have to suppose that a store of them was preserved by the priests for use on such occasions. We know that the *simpvium Numa* (King Numa's sacrificial bowl, which was made of rough earthenware, and black in color) continued to be an object of veneration for many centuries, and the brotherhood of the Arvales, one of the most ancient of the priesthoods, prayed and sacrificed to vases which had come down to them from remote antiquity. In fact, when excavations were made on the site of their sacred grove in 1868, some fragments of undoubtedly prehistoric pottery were discovered which may have belonged to some of these very objects of veneration.

We are told that they were extremely like the specimens which had come to light in the primitive cemeteries of the Alban Hills, and utterly dissimilar from the pottery of a later date, which was habitually found in the excavations of Rome and its neighborhood. (It is, however, to be noticed that they were not found in any part of the sacred buildings, but in an underground chamber, the character of which is not more nearly defined.)

This fact is of considerable weight in connection with the present discovery, but there is a certain amount of difference between the preservation of prehistoric pottery as an object of worship and the existence of a stock of it which was available for use when required for inaugural purposes. If, on the other hand, we suppose that vases of this primitive nature were still manufactured (even for sacred purposes alone, for which in several cases, e. g., in the worship of Vesta, the use of earthenware vessels always formed part of the prescribed ritual) in the first century, A. D., we are in danger of upsetting the whole of our chronological system of the development of the potter's art.

It is not that the secret had necessarily been lost. Commendatore Boni, after many experiments in order to find out how the ancients had made it, was able to imitate the prehistoric pottery almost exactly—so exactly, in fact, that he was obliged to date the pots he had made in order to avoid confusion! But such a survival of a primitive style of manufacture would be difficult to admit, from what we know of the development of art and decoration in Rome.

Another theory has been suggested by Professor Barnabei, the ex-director of the Department of Antiquities, in one of the daily papers (*Giornale d'Italia*, April 2), and merits considera-

* Thomas Ashby, Jr., in the *Builder* for May 28, 1904.

† The discovery of a hole in the center of the base, which would have served to contain a support for the body of the horse, has rendered the attribution of the base to this statue more probable, for hitherto it was a little hard to see how the three shallow cavities in the blocks of travertine, in which the hoofs were supposed to have been fixed, could have been a sufficient foundation for so great a weight as a bronze equestrian statue about six times life size.

tion. Further investigations on the southwest side of the base have revealed the presence of a portion of a human skeleton at a very considerable depth below the level of the Forum of the Imperial time, and below many different strata, each representing a period of human life, so that it would seem that here there had been a burial ground at some remote date. Is it not possible that in the course of the construction of the base the workmen came upon a prehistoric tomb, and, out of respect for the dead, enclosed the vases from it in the solid concrete mass? But, it may well be asked, what happened to the remains of the deceased? for no ashes and no bones were found in any of the vases. Professor Barnabei's explanation, therefore, can not be treated as altogether satisfactory; but, as we have seen, Commendatore Boni's is open to certain objections also. In the meantime, the discovery remains one of the most mysterious of the many inexplicable finds that have been made during the present excavations.

Between the base of which we have been speaking and the temple of the deified Julius Caesar there has come to light the concrete base of another statue, of similar construction. In both cases the concrete, which was below the ground level, has been allowed to set between planks supported by vertical beams, and has not been faced in any way. Remains of the wood itself may, in fact, often be seen in such concrete constructions, and the marks it leaves are always clear.

The new base stands in front of the temple of Castor and Pollux, where Livy (IX., 43) tells us that an equestrian statue was erected in honor of Quintus Marcius Tremulus, consul in 306 B. C., and conqueror of the Hernici, a tribe who dwelt in the mountains to the southeast of Rome. There are no remains, however, at present to be seen of this early monument, though the excavations are by no means complete, and have not yet been carried to any great depth. What is visible at present is merely the upper portion of a concrete base of the Imperial period, perhaps, on which rest some blocks of travertine, belonging to some still later restoration, as the concrete has been cut away to take them. There are also one or two of the marble blocks of the actual pedestal.

In the course of the excavations a fragment of a marble architrave, bearing the words "Profelicitate," came to light, which fitted on to another fragment previously discovered, with the names of the Emperors Arcadius and Honorius, and of Aurelius Symmachus, the well-known statesman of the last quarter of the fourth century, A. D., who dedicated the monument to which the architrave belonged.

The southeast end of the Forum of the late Republic was marked by a road, traces of which have been found beneath the foundations of the temple of Julius Caesar, erected after his death, and under those of the Arch of Augustus, which stood between this temple and the temple of Castor and Pollux. The road would have passed just southeast of the last-named temple, between it and the *Lacus Juturna*—the basin in which the sacred spring of Juturna still rises.

Immediately to the northwest of, and parallel to, this road ran a line of those small rectangular pits lined with slabs of stone which have been found in other parts of the Forum, and are believed to have some ritual significance. Here, as on the southwest and northwest sides—in front of the Basilica Julia and the Rostra respectively—they may well be held to mark the limits of the open area of the Forum of the time of Julius Caesar and Augustus, just as those which run in three parallel lines near the boundary between the earlier Comitium and the earlier Forum preserve the older (solar) orientation. Seven of them have so far been discovered, of which two are beneath the foundations of the temple of Caesar.

In the Basilica of Constantine the marble pavement is now being exposed to view, and, though it is much damaged, several pieces of it, composed of elaborate patterns of different colored varieties, are visible. But it is the primitive Forum and the cemeteries that preceded it that are now the object of the greatest interest; and it is difficult to foresee what discoveries the future may have in store for us. The exploration of the necropolis close to the temple of Antoninus and Faustina is not yet complete; and already traces of another close to the great concrete base in the center of the Forum have been found, and await further investigation. It will be interesting to see whether these burial grounds belonged to different tribes or no, and to what extent they confirm the traditional history of the origins of the city of Rome.

THE CARNEGIE TECHNICAL SCHOOLS COMPETITION.

THE program for a competition for the proposed Carnegie Technical Schools at Pittsburg has been issued for a structure, the floor space of which will cover nearly twelve acres and cost over \$5,000,000.

The program of the competition is a handsomely printed booklet of forty-seven pages, which gives full information about the several schools. It is announced in the program that Prof. Warren P. Laird, of the University of Pennsylvania, has been appointed as adviser of the committee, and that five architectural firms—Carrere & Hastings, New York; Frank Miles Day & Brother, Philadelphia; Cass Gilbert, New York; Howells & Stokes, New York, and George B. Post, New York—have been

selected as paid competitors and to receive \$1,000 each for the designs that they have been asked to submit.

Aside from these five architects another five will be selected, and receive the same compensation, from among those who can prove to the satisfaction of the committee that the work they have done in the past warrants the committee in extending to them an invitation to take part, and to these competitors the five awards of \$1,000 each will be paid to the five architects whose designs stand highest in merit, one of these five being assured in any event to an Allegheny county architect.

The buildings to be designed are broadly classified as Administration, School of Applied Science, School for Apprentices and Journeymen, Technical School for Women, School of Applied Design and Service. As the schools are to be technical and industrial in the fullest meaning of the word, a great many of the buildings are to be shops, and in the steel manufacturing department the school will have perfect examples of the Bessemer converter, open hearth furnaces and annealing furnaces, while in the clay working, glass manufacture, forging foundry work, etc., the shops will be of an equally practical and elaborate character.

There will also be shops for house, fresco and sign painting, sheet metal and cornice work, plumbing, brick laying, plastering, printing, for making machinery of various kinds and schools covering the widest range of industrial and engineering work.

In the technical school for women, for instance, there will be schools devoted to dressmaking, costume designing, house-keeping, leather work and upholstery, needle work and embroidery, for housemaids and laundresses, cooks and waitresses and all phases of domestic and house labor.

The architects are given four months in which to send in their designs, which it is expected will be the most notable grouping of educational buildings ever erected in the United States.

SIENESE ART.

THE art of Siena seems to be attracting considerable attention in England at the present time, and the Burlington Fine Arts Club has made a collection illustrative of Sienese art.

This exhibition, says *The Builder*, though small, is a representative one arranged as nearly as can be in chronological order and follows the course of Sienese art from its earlier purely decorative paintings, with their flat gilt surfaces, to the more free and pictorial style of Benvenuto and Beccafumi.

It is not an exhibition to arouse popular enthusiasm. Sienese painting, in its early and more characteristic forms especially, appeals to an acquired taste; its style and its interest are so totally different not only from picture-painting as a modern art, but from the better known forms of early Italian Renaissance art. Giotto is a familiar name to many who have hardly heard of his Sienese contemporary Duccio di Buoninsegna, and his works have a natural and dramatic expression which many can understand who would find the Sienese painter only interesting, if at all, as a historical study. But that is the value of an institution like the Burlington Club; it brings before us works for which there would be no demand in a popular picture gallery.

The little walled town on the top of a rock, which has attracted so many lovers of ancient art of late years, seems indeed to have been as much shut up and fenced in esthetically as it was materially and politically. Her art pursued its own path, and dwindled from inanition and isolation just as the great art of the Italian Renaissance was reaching its largest development. To come into the Burlington clubroom is like going into a separate and obscure compartment of art history, where things are attempted and judged by a special standard quite apart from that which rules in the great world of Renaissance painting. Stiff and formal is the art shown here; that of producing small pictures of sacred subjects, rather symbolical than illustrative, and decorated with gold backgrounds and nimbi so as to produce almost the effect of a kind of jewelry. Beauty of a kind there is in many, not in all; for, at the risk of rousing the contempt of the amateur in things of Siena, not a few of the works here are interesting, to the non-collecting mind, more as curiosities than in any other sense. In the preface to the catalogue this restricted interest of Sienese art seems to be recognized, and the reader prepared for it in advance, by the remark that "Men will always do them less than justice until they realize that the Sienese painters simply did not choose to follow the broad road trodden by their fellow artists." We reject the conclusion. Our opinion is that the earlier Sienese painters were a set of men isolated (to a great extent) by circumstances, and confined within a narrow ground of their own, from which they could not escape. That they did not even try may be true enough, but we do not know that they were any the more praiseworthy for that. Among the later painters we do indeed see evidence in this room of a certain choice in style, for if we compare Benvenuto's (1470-1524) four scenes from the Life of Christ, No. 54 in the catalogue, with his "Portrait of a Lady" (52), it is difficult to realize that they are by the same painter, the Christ scenes being purely conventional painting in a stiff style, and the portrait showing how near the artist

could go to nature if he chose. But among the paintings of two centuries earlier there seems no evidence of any power but that of painting missal-like miniatures of a decorative stamp. They shut themselves up in this, but they have left us a little curiosity shop of art which has its own peculiar interest.

Among the examples of Duccio represented are four scenes from the "Life of Christ": "The Woman of Samaria"; the "Temptation on the Mount"; the "Raising of Lazarus," and "Follow Me, and I will Make You Fishers of Men." There is a naive attempt in all these to tell the story in a plain and recognizable manner. In the "Lazarus" the nearest figure to the resuscitated corpse puts his drapery to his nose, reminding one of a similar homely incident in Orcagna's fresco at Pisa. Architectural backgrounds play a considerable part in the scenes, especially in the "Temptation," and are of some interest, as being no doubt based on what the painter was in the habit of seeing around him. The best work of Duccio that is exhibited is however the "Crucifixion" (4), which belongs to his last period, and shows a considerable advance in the drawing and grouping of the figures; the figure of the centurion especially is noticeable, and might be assigned to a much later date if seen alone. The arrangement of the six very conventional angels in the sky around the head of the cross reverts to the purely decorative conception of a scene. In several of the paintings of this period by Duccio and others, the folds and creases of the drapery are lined out and modeled by gold lines; the expression in the catalogue in regard to one of these, "a dark blue robe heightened with gold," is hardly the right way to put it; the gold lines are not a decorative treatment of the drapery, they are the method employed for modeling it, in order to combine drawing with decorative effect.

The curious picture, attributed to "the School of the Lorenzetti" (16), in which a number of scenes from the lives of hermits of the Thebaid are combined into one painting, only linked together by the foreground landscape with its river, though anything but beautiful, is worth studying as a curiosity, and is full of odd illustrations of medieval religious legend. Among the curious incidents is the representation of an angel as a nude figure with a gold nimbus; the only instance we can recall of a nude angel in early art.

A quarter of a century or so later we come on the examples of Simone Martini, the most characteristically Sienese of all the artists of Siena.* His "Christ Found in the Temple" (18) is a fine example of a form of art which may be said to be midway between painting and decorative illumination; a cabinet picture in which sumptuous decorative effect is kept in view in every detail, not excluding, however, grace and beauty in some of the figures. The picture is in its original very well-preserved Gothic frame, with a cinquefoiled arch in low relief forming a suggestion of a canopy over the picture. A still better example of Martini is the picture called "Scenes from the Life of Christ" (21), in which the two figures representing the Annunciation, the angel in a panel on one side of the frame and the Virgin in the opposite panel, are of real beauty and expressiveness. Here again we see the practice of lining out the drapery folds with gold.

Space will not permit of our doing more than mentioning a few other of the most interesting among the works exhibited. "The Annunciation," by Giovanni di Paolo (1403-1480) is noteworthy, among other things, for the curious and elaborate architectural details—the gables in concave curved lines with a gold boss in each tympanum, with the careful effort to draw them in perspective, and the canopy of roof of segmental section, divided into small squares of alternate green and gold, and each ornamented with a square flower like the "dogtooth" ornament of early English architecture. In the picture of "St. Bernardino Preaching," by Vecchietta (1412-1480), we come on entirely Renaissance architecture—pilasters with gilt classic capitals, gilt consoles, etc.; though this is much the same date as Giovanni di Paolo's much more Gothic architecture just referred to. In the "Flagellation of a Saint" (38), of the School of Matteo di Giovanni (1430 circa-1495), we have a most orderly Renaissance classic treatment, niches with pilasters and small pediments, etc.; while in another interior of the same school and date (43) there is a curious mixture of orthodox classic detail with long clustered Gothic shafts. The architectural student will notice the row of wide round-arched niches of almost purely Roman character which form the base of the architectural composition. The "Madonna and two Saints" (48) by Pietro di Domenico (1457-1501), is noticeable for the tender expression in the graceful head of the Virgin.

The later works have less of interest, since the peculiar Sienese style of decorative treatment has been abandoned, while the freedom and beauty of the greater Renaissance are not reached. The large "Venus" of Girolamo del Pacchia (1477-1535) is an ugly nude with nothing to recommend it. There is spirited action in the "Flight of Clælia," by Beccafumi, the most prominent of the later names (1479-1549); but then for the kind of thing it is not good enough. The Roman background, with the naive representations of the Castle of St. Angelo and the Colosseum (neither of which of course existed at the supposed date

* Simone Martini, it may be as well to observe, is the painter who, owing to a mistake of Vasari's, who confounded him with Lippo Memmi, was known in art histories till a comparatively recent period as Simone Memmi. We have found the mistake still lingering in an encyclopedia published only ten or fifteen years ago.

of Clælia), is interesting as an exemplification of the historic confusion of mind in regard to ancient Rome.

There are two cases of objects illustrating the minor arts in Siena. Among these are to be noted some curious triangular tiles from the original pavement of the Piccolomini Library at Siena, bearing the Piccolomini cognizance of a yellow crescent on a blue ground; a magnificent illuminated initial letter on vellum (case A, 10); a circular dish of rich and unusual ornament (A 12); an illuminated frontispiece of the "Book of the Biccherna" for the year 1460 (A 15); and some interesting porcelain work and painted wooden panels in Case B. In the room downstairs is a splendid frame in carved walnut wood, about as fine an example of wood-carving as could be seen, attributed to the school of Antonio Barilli.

THE INFLUENCE OF GREEK ART ON THE PERSIAN ORDER.

WHEN, in 1851, shortly after Layard's discoveries at Nimroud, Fergusson published his work on the Palaces at Nineveh and Persepolis, and later on reproduced in the Assyrian Court at the Crystal Palace his conjectural restoration of an Assyrian Palace, he copied therein the Persian order as developed in the Great Hall of Xerxes at Persepolis, his assumption being that Xerxes had copied in stone the columns and capitals which in the Assyrian Palaces had been in wood only, and had consequently perished either in course of time or in a conflagration. Layard's subsequent discoveries, followed by those of La Place at Khorsabad, have thrown additional light on the subject, which render Fergusson's theories extremely doubtful. Into this subject we do not propose to enter here, but the unfortunate selection of architectural details made by Fergusson from the palaces built by Xerxes in 485 B.C. on his return from his expedition through Greece and Asia Minor has led the student into the belief that the Greek Ionic order owes the origin of some of its principal features to an Assyrian source, and in his description of Greek architecture Fergusson refers frequently to this subject.

The object of this essay* is to show that, in his development of the Persian order, as found in the Palaces of Persepolis and Susa, Xerxes was indebted to Greek models and possibly to Greek artists, and this task has been rendered easier in late years by the discoveries of archaic Greek work, some of which is nearly two centuries earlier than the work in the Palaces referred to.

It is necessary first to point out that the early work of Cyrus and Darius (restricting our inquiry to the Persian order of columns only) bears no resemblance whatever to any remains found in Assyria, or suggested in the bas-reliefs which have been brought to Europe, or known by drawings made from other examples. If we are able to accept the clear description given by Polybius of the great Palace at Ecbatana, constructed probably by Cyaxares about 620 B.C., and enlarged and restored by the Achæmenian monarchs, it is to the Capital of the Median Monarchy that Persia owed the source of her inspiration. Polybius states that the columns of the stones and peristyles of the Palace at Ecbatana were in cedar and cypress, supporting beams and framed ceilings in the same material, all covered with silver plates, and that the roof was covered with silver tiles. The ephemeral nature of the one material and the intrinsic value of the other are sufficient to account for their entire disappearance, but of the restorations by Darius and Xerxes, who occupied Ecbatana as one of their capital cities, many remains have been found, and the stone columns, bases and capitals are similar to those found at Persepolis and Susa. If the *stoas* and *peristyles* mentioned by Polybius were halls of columns and porticoes, we are able not only to account for the origin of the Persian order, but for the plans of the palaces at Persepolis and Susa, the only change being that stone columns have been substituted for those which, in the palace built by Cyaxares, were in timber only, the entablature being still in wood, as evidenced by the wide intercolumniation of from $4\frac{1}{2}$ to $5\frac{1}{2}$ diameters.

The earliest Persian palace of which remains exist was that built by Cyrus the first king (560 B.C.) at Pasargadæ, where he defeated and took prisoner Astyages, the last Median monarch. Of this Persian palace there remains *in situ* only one column, unfluted, over 30 feet high, built in three drums, with a plain circular base, and three stone antæ, 21 feet high, on the upper portion of which are the sinkings in which the timber architraves were housed. The foundation bases of other columns have been found and portions of the foundations of walls, which showed that the Palace consisted of a central hall of columns and, at least one portico. The design was evidently of the simplest kind, showing that in its origin the Persian order had none of the elaboration found in the work of Xerxes. The same may be said of the Palace built by Darius at Persepolis in 521 B.C. No columns were found there, but the foundation bases of all those in the central hall and entrance portico were still *in situ*. Only one stone anta remains, in the upper portion of which are the sinkings for the housing of the entablature. Here we find the oldest example remaining of the Persian capital, which consisted of two bull's heads and half-bodies, forming a bracket capital to support the architrave, and carrying on their backs a *corbel* which projected in front of the columns so as to carry a projecting

architrave. Such a feature actually exists in the tomb façade and the sinking in the anta proves its existence in the portico of the Palace. In order to balance the weight, we have suggested a similar feature at the back, so that the Persian capital was a quadruple bracket capital, which neither Coste, Dieulafoy nor Perrot and Chipiez seem able to realize. In the tomb the columns carved are only semi-attached, so that the bracket in the rear does not occur. The columns carved in the tomb are unfluted, and their bases consisted of a plain torus molding on a square die. The only other early example of a base is that found by M. Dieulafoy at Susa, with the name of Darius inscribed on it. This base is known as the campaniform base, and its origin, as also that of the bracket capital, which represents a portion of a projecting porch or shed in front of a peasant's house, as found down to the present day. The oblong block had for its object a better support for the architrave beam than that given by the post alone, and to preserve from damp the lower portion of the post, it is usually raised on a base consisting of rubble stones coated with mud. As both these features, namely, the bracket capital and the campaniform base, are peculiar to the Persian order, and are not found in any other known style, we are inclined to assign to them a Median origin.

In 1891 Mr. Weld Blundell went out on a mission at the instance of, and partly at the cost of Lord Savile and Mr. Cecil Smith, to take casts of some of the sculptured bas-reliefs at Persepolis, and the author of this essay furnished him with a plan of the site and directed his attention to some of the points at issue. Mr. Weld Blundell ascertained, firstly, that of the vertical stone drains, the remains of one of them (*a* on plan) rose 15 inches above the pavement of the hall and must, therefore, have been carried up in the wall to drain the roof; secondly, that these drains* were not at their feet connected one with the other, but that each one at its foot was diverted into other drains running between the first and second row of columns (see plan); thirdly, that the natural rock as it appeared to Flandin and Coste on the south side of the hall and on each side of the main front, was one which had been formed in the course of time by nature; the fine clay moistened by rain had been baked by the blazing sun to the apparent consistency of the natural rock, and was as fine and smooth as that which existed elsewhere. Mr. Weld Blundell broke through this crust, and on the south side of the hall found, about six inches below this crust, the foundations of a wall 11 feet 8 inches thick running the whole length of the south front, and at the angles of the north front he found the foundations of the corner chambers with an accumulation of charred wood which he concluded had fallen from the floors and roofs of these halls. Messrs. Perrot and Chipiez's work on "La Perse" were published before 1891, and they were therefore not aware of these discoveries, which throw an entirely new light on the actual plan of the Great Hall, though Fergusson contended from the first that Coste must have been mistaken in his conjectures and in the plan he showed of the drains. These subterranean drains were entered by Mr. Weld Blundell; they were partly cut in the solid rock and partly hewn out of immense blocks of stone; they measured from 2 feet 3 inches to 2 feet 8 inches wide, and in some parts were 8 to 10 feet high. They crossed the palace in two lines, and were connected with other drains leading to the outside of the great acropolis platform. The vertical stone conduits were cut in solid blocks of stone, the apertures of the gullies being 1 foot 3 inches square.

The principal development in the Persian column, as set forth in the palaces built by Xerxes at Persepolis and Susa, was in the variety of design given to the campaniform basis, the fluting of all the columns and the additional decorative features of the upper part of the shaft under the bracket-capitals, not found in any earlier examples. In these we seem to recognize a new influence, which we attribute to the result of his expedition through Greece and Asia Minor; to the art treasures which he took back with him, and possibly to the Greek artists whom he is said to have brought over from Miletus and Eretria. The execution of the carving is so much more refined than that which exists in earlier examples that we are inclined to the belief it was carried out by Greek artists;† they must, however, have worked under the direction of Xerxes or his art director, otherwise it is difficult to understand the strange jumble of various decorative forms which are employed in the carving of the upper part of the shafts under the bracket-capital. If we assume that the first essay was made in his Great Hall at Persepolis, the result would seem to have been quite satisfactory to him and to his successors, as it was employed in all palaces subsequently built in Persepolis, Susa, Istakhar and Ecbatana, without any material change in design. The columns of the east and west porticoes of the Great Palace were not decorated in this way, and the only difference shown there is in the substitution of lion's heads and half bodies in the bracket-capital of the east portico. These columns are nearly 13 diameters high, and, with the forty-eight flutes to their shafts from top to bottom, which seems to increase their height, have an extremely attenuated appearance. Moreover the junction of the shaft with the bracket-capital is ungainly, so that it is quite possible this may have called for the further enrichments

* Mr. Blundell found six gullies, which he described and traced their connection with the others. The other vertical drains were filled up with silt.

† According to Mr. Cecil Smith, the mason's marks on the upper surfaces of the bases (now exposed) of the Hall of the Hundred Columns are characters from the Greek alphabet.

* By Mr. R. Phené Spiers, in *The Builder* for June 11, 1904.

which were subsequently given to all columns whatever their dimensions might be. The columns at Istakhar, 25 feet high, are only smaller copies of the great columns at Persepolis, which are 68 feet 9 inches high. The enrichments are three in number, separated one from the other by the bead and reel string, a favorite Greek ornament found in nearly all archaic Ionic capitals, the earliest known existing example being those at Ephesus and Naukratis, both B.C. 560. The upper enrichment consists of four Ionic volutes placed vertically, with supplemental volutes at the top and bottom. They mask to some extent the junction with the bracket-capital. If Xerxes took back with him some of the archaic capitals from the Temple of Miletus, which he destroyed, they may have suggested the feature. In these early Ionic capitals the abacus is generally twice as wide as its depth; they are in fact bracket-capitals, but the Persians already possessed their own type, which they preferred, so they utilized the feature in another way, by the decoration of what was the under surface of a Greek volute-block with the fillets of the cushion carried down vertically. The extra volutes may have been suggested by some Assyrian capitals, or were added to increase the height of the feature.

The middle enrichment at first sight resembles the well-known Egyptian palm tree capital, except that the leaves of the same are always indicated in the Egyptian example by incised lines each side of the stem; here under each lobe is a bud, which may be that of the papyrus plant, so that they represent the flower of same, and may have been copied from an Egyptian ivory brought from Egypt by Cambyses, just as the windows with balconies supported by shaft balusters shown in Assyrian bas-reliefs were copied from the ivories found at Nimroud by Layard and now in the British Museum. The lowest enrichment reproduces the pendant petals of a flower, of which the complete form is shown in a capital found at Delphi by Professor Cockerell (not probably of very early date, but indicating the original *motif* from which the egg and tongue decoration in the Ionic volute was derived). The earliest existing example is that found at Naukratis, now in the British Museum. In the capital of the Votive Column at Delphi the divisions between the petals are merged into the fluting of the shaft. In the Athens capital the petals are painted only. In the terra-cotta capital from Gela the petals are almost as long proportionately as those in the Persian capital. The examples from the archaic temple at Ephesus still suggest the origin of the egg and tongue (the upper part is at back), and one of the capitals has its volutes decorated with a flower similar to that found in the capital from Susa.

Coming now to the shaft, the earliest examples of fluting are those found in the works of Xerxes. The number of flutes varies according to the size of the column; at Istakhar, already referred to, there are only thirty flutes. The number in the other palaces at Persepolis varies from forty to fifty-two. The flutes in the early Greek examples vary in number: in the earliest examples at Ephesus, 560 B.C., there are fifty-two. There are no fillets in the Persian examples, as shown in Texier, but Dieulafoy's photogravure shows that some of the edges have worn away, which may have led Texier to the belief that he recognized fillets. To direct Greek influence, therefore, we may attribute the Persian fluting of the shafts.

If in the capital and enrichments below the same no change would seem to have been made, the bases show considerable variety, and these compared with various selections from Greek work suggest the source from which some of the designs may have been derived. We have already referred to the pendant petals; there is another peculiar form to which the French give the name of *rais de cœur*, shown in the cornice of the archaic stem from Ephesus and in the capitals from Æge and Neandria.

When compared with the primitive base of Darius the various combinations of design and their similarity to well-known decorative features throughout Ionia, some of which predate the work by Xerxes by nearly two centuries, constitute a strong argument in favor of the influence of Greek art upon that in Persia.

TIME WASTED IN WATCHING CONSTRUCTION.

SOME one with a statistical turn of mind has called attention through the daily press to the time wasted by citizens who stop to watch the construction of the great steel "skyscrapers" that, with their steel and hollow tile and terra cotta, brick or stone veneer walls, are continually rising in our large cities, particularly at Chicago. The phenomenon was doubtless witnessed in that city, for the writer says:

"Three hundred and fifteen years, in eight-hour working days, is the economic loss to Miss Chicago in the building of a great corner skyscraper! Chicago, birthplace and nursery of the skyscraper, and fast becoming the greatest city of skyscrapers in all the world, has never stopped to count the economic cost to the public of even one of these steel buildings.

"To consider at this time that the erection of only one of these buildings under ordinary conditions costs in working days of eight hours each the working lives of more than seven men is something to startle the economist and the chance citizen alike. Yet this matter of time lost to the community because of this building of a single structure is scarcely half the computed loss possible on the part of the community.

"Accidents, irritations in a score of forms to the citizen, dangers in traffic that come of the congestions at street corners,

the missing of appointments because of it, the shocks that come to the nerves of the nervous in passing—all these go into the sum of community costs for the great structures in the downtown district.

"One of the greatest of these buildings is at the corner of Dearborn and Monroe streets. Going up in two sections, that portion of the corner itself may be taken for an example of the greatest possibilities in public cost. Before it shall be occupied by its tenants the working time of seven human lives, between the ages of twenty-one and seventy years, will have been lost in looking, in blockading of the streets, and in the mere impeding friction that crowds and jammed vehicles in the streets impose. Three hundred and fifteen years, in eight-hour days, sacrificed by the individual Chicagoan!

"In the preparation of these tables there is a latitude taken with reference to the weather governing the onlooker, but from observations taken in the locality of the building mentioned the daily averages of people congested there in the processes of the work are low. The table shows as follows:

THE ONLOOKER IN THE STREET.

Stage of the work.	People gazing.	Time total in hours.	Period of the work in days.	Total of eight-hour days lost.
Dismantling	50	8	30	1,500
Basement and piling	150	8	30	4,500
Steel construction	400	8	60	24,000
Stone work	200	8	90	18,000
Finishing	100	8	90	9,000
Total				57,500

DELAYS IN TRAFFIC.

	Period of the work in days.	Days lost.
To pedestrians, 85,000 (loss 1 minute each)	200	25,400
To north side trains, 240, average 20 passengers and losing ½ minute each	200	1,000
To vehicles, 4,800, losing ½ minute each, 1 man to wagon	200	1,000—37,400
Total loss in days		94,900
Total loss in years of 8-hour working days		315

"These figures are lumped with reference to the full working day on the building and deal with the conditions of traffic on the particular corners affected. As an average for the day, for instance, fifty persons are taken as the number for the eight working hours as looking on at the work of dismantling the old building through a period of thirty days. This work is interesting enough, but fewer people look on at it for the reason that there is dirt and dust and perhaps a fence shuts off much of the early part of the work.

"Modern methods of excavating for buildings become more interesting and an empty wagon suspended in air thirty feet up and lowered into the basement level by a steam crane is a sight for almost any one. When the snorting little engine begins to lift the hammer for driving the piles, too, the spectators for the day show a sharp rise in numbers and interest. From the corners of Dearborn and Monroe streets this interest spreads to the four points of the compass and on both sides of the streets, the length of the lines averaging one-third of a block.

"By all odds, however, the steel construction makes the mazes of congestion in the streets. With its necessary choking of traffic as to cars and team movements, the interest on the part of the individual pedestrian is multiplied until at the noon hour on a bright day 1,500 people may be lined north and south and east and west watching the great girders rising 150 feet into the air to the sputterings of the donkey engine, regulated by the boatswain's whistle which pipes somewhere unseen in the skeleton of the structure.

"As the steel construction grows in height this street interest also heightens. It exacts greater exertion on the part of the spectator, but he gets more out of it. Perhaps as one of these girders rises to some particularly troublesome point in the spidery heights of the structure a workman may be poised upon it, signaling, and looking the human spider in his web of steel. At such a time business comes more nearly stopping in the sight of the picture than it might were a 4-11 fire raging there. The crowds are not so large as would be at a fire, but for those who look it has all the fire's fascinations. The chance of the man's fall—the dizziness of the heights—the diminutiveness of man as compared to his work—all have the allurements that appeal to the man with the least flexible of necks.

"Next in order of interest is the elevation of the granite blocks of a building, the stones weighing tons in some instances and yet going up with all the ease of the old oaken bucket that hung in the well. Men showing black dots in the upper structure; the chattering of the pneumatic riveting machines sounding like giant woodpeckers at work in a forest of steel; the roar of the work of the builders, mingling with the roars of traffic in the streets—all are of the setting out of which Chicago is losing years of time in a day.

"Every type of man, and boy, and woman, and girl is represented in the spectators looking upon the work of the builders or elbowing through the congestions in the streets. Radiating from these corners affected by this one building are influences touching every quarter of the city in one way or another.

"The messenger boy with the expected note or package has stopped to look and the minutes are going beyond his count. Somewhere there is somebody waiting and impatient, perhaps.

"The street car that so frequently is delayed from three to ten minutes at the curve into Dearborn street flies past waiting groups at the corners of north side streets and maledictions are cast upon the company and the crew alike when the skyscraper is to blame.

"Trains are missed by passengers. Appointments are late because of the necessities of office quarters 250 feet or more in the air. Nerves of the nervous are shocked when suddenly finding himself under five tons of skeleton steel rising a hundred feet up, the pedestrian forsakes the sidewalk for the middle of the still more dangerous street. The pedestrian with the nerve, but with the spirit of hurry goading him, plunges at the lines of congested onlookers and the caravans of trucks, and drays, and cars, and cabs, irritated and anathematizing as he goes.

"From the windows of buildings that are neighbors to the new skyscraper there are complaints of the losses that come to those employing help. Looking down upon the work of the builders, no less than looking up at it, has its fascinations, and there are months of lost working days to be credited to the office employee looking down, in addition to the years that are lost in the aggregate by the pedestrians in the streets looking up.

"But the skyscraper as a Chicago institution has come and is still coming to stay. New York took the lead of it in the first years of the steel construction as it was developed in Chicago, but with the completion of the buildings already under way in downtown Chicago the city will present a district famous in all the world as housing more people to the acre than ever before was accomplished by man."

A SUGGESTION.

THE beauty spots of a city are remarked by their clean, bright appearance, the parks are green and rich with foliage and lawns, but the streets are lined with great buildings of somber hue, caused in many cases by settlements of smoke and dirt. In the period of the past ten years the uses and values of dull enameled white or cream brick have been utilized almost wholly in the courts of great office buildings, their value in reflecting light into the many offices facing on the courts, without glare or blinding light, has enhanced the rental value of these offices. They are readily cleaned down by soap and water, and look as clean and bright as when first placed in position. Interiors, lobbies and hallways are made light, bright and clean by the utilization of these bricks.

The appreciation of the values of the satin-finished enameled brick, such as is made by the Tiffany Enameled Brick Company, of Moline, Illinois, which don't craze or scale off, has progressed rapidly and its importance is being recognized by the architects of the country, especially in large cities where many office buildings are constructed with a façade of these bricks, an example of which is shown among the illustrations in last issue, of the Ingalls building, of Cincinnati, Ohio, Elzner and Anderson, architects.

The many values in the uses of this enameled brick, both as to beautifying and brightening wide or narrow streets in the congested business section of a city, can not be too highly praised. After a rain storm which washes their surface they shine out clean and white and are as pleasing to the eye as the parks' green verdure after the same storm. Many churches and private dwellings have also been constructed of enameled brick and their value as one of the leading materials in all departments of construction, exterior and interior, is rapidly forging to the front in the eyes of an appreciating public and the architectural progression toward a clean white city.

EXTENSION OF THE CAPITOL.

IF the present plans for extending the eastern central front of the National Capitol, authorized by the Sundry Service Bill, are carried out, a marked change will be made in the architectural lines of that building. The detail of construction will carry out the same features that prevail in the old plans of extension designed by Thomas U. Walter during the administration of President Fillmore. Walter drew the plans for the Senate and House wings and the present iron dome that supplanted the first low wooden structure.

The plan now under consideration proposes two projections—one adjoining the other—from the central portico toward the east. The first projection, which will abut the present portico, will extend 67 feet and have a frontage north and south of 352 feet 4 inches. Adjoining it will be the second projection extending to the east 41 feet, with a frontage of 196 feet. The smaller projection—or the one the furthest to the east—will carry with it a portico and pediment after the style of the one that now dominates the eastern central front of the building. Leading through the two extensions will be a marble vestibule, forming a grand entrance to the rotunda.

In the original Walter plan, provision was made for very large rooms for the purpose of installing minor courts, such as the Court of Claims, which since have been provided with other quarters. The general demand for more working space, both in the Senate and House, led to a modification of the Walter arrangement, and it now is proposed to construct in the extensions sixty-six rooms which will be apportioned equally between

the two branches of the National Legislature. The arrangement of these rooms will be on the same lines as those in the north and south wings. Each room will be large and commodious, approximating 22 by 30 feet in dimension.

The estimated cost of the improvement is \$2,500,000. The total cost of the Capitol, including the additions that have been made to it and the grounds, is, up to the present time, about \$15,000,000.

The Senate Committee on Appropriations gave a hearing recently to a delegation from the American Institute of Architects in regard to the extension now proposed. The delegation was composed of George B. Post, Cass Gilbert and Walter Cook, of New York; Frank Miles Day and Edgar V. Seeley, of Philadelphia; Glen Brown, of Washington, and Alfred Stone, of Providence. The committee consented to leave the entire matter of making the improvements to a commission of three eminent architects to be named hereafter. A model of the Capitol showing the changes contemplated has been made and is on exhibition in Washington.

ARCHITECTURE AND STATESMANSHIP.

ARCHITECTURE and statesmanship are widely different vocations. We should not suppose that an expert in either would deem himself well qualified to lay down the law in relation to the other. As a matter of fact, says the *Minneapolis Tribune*, we do not know that any architects pose as statesmen except the so-called architects, who are generally carpenters or stone masons with political pull, who figure in Tammany contracts. But statesmen are accustomed to think that what they do not know about architecture is not worth any student's trying to acquire. They criticize styles and designs that have borne the test of ages of the best human culture with the same supreme confidence they display in voting for the artistic monstrosities in stone and canvas that make the National Capitol and other public buildings asylums of horrors.

The older public buildings of Washington have the beauty of simplicity and purity of design and obvious adaptation of plan to purpose. The statesmen of the earlier period either knew more about architecture or meddled less. The White House and the Capitol, controlled through all their vicissitudes by the original artistic designs, remain types of beauty in buildings and warnings against legislative defiance of settled laws of taste. But both the White House and the Capitol are too small for modern uses. When President Roosevelt brought his big family into the former, it had to be expanded to be barely habitable.

Congress made the necessary appropriation and the work was entrusted to the American architects of highest reputation. They carried out the reconstruction and expansion on the pure and simple lines of the original building. Senators and Representatives have been abusing them and the President ever since for missing the opportunity to turn the White House into a mongrel horror of ornate and meretricious design, like many of the more modern public buildings in Washington, to which they point with approval.

The National Capitol must be extended also to meet the demands of increasing service. Architects of reputation have worked out a plan for extending the east front as intended by the original designers, on the pure and beautiful lines of the renaissance wings. The Senate is raising its voice against this proposed extension; mainly, it appears, because the Senators want to spend \$3,000,000 or \$4,000,000 on a detached building, like that authorized to afford offices for members of the House. There is plenty of room in the Capitol, or would be with the east front extension, for offices of Senators; but they want to play with millions and architectural design as well as the House.

Judging from the criticisms on the White House and the Capitol extension, the Senators want to make their new building a nightmare horror, topped with a mansard roof, stuck over with toothpick towers and warty with stone bay windows, like some of the later public buildings that so excite their admiration. There are great possibilities of architectural beauty in the city of Washington; but we fear they will never be realized until statesmen learn to stick to their trade.

THE PROBLEM OF DEFLECTED CHOIRS.

PROF. W. H. GOODYEAR, curator of fine arts in the Brooklyn Museum, read an interesting paper recently upon Notre Dame, and, in referring to the deflected ground plan, gave the following interesting conclusions: "As distinct from the phenomenal but hitherto unnoticed irregularities in the last four lectures, there is one which is widely known to the observation of intelligent tourists and which is very constantly pointed out by the Sacristans of churches in which it occurs, that of a twisted or deflected ground plan. Notre Dame offers a well-known instance of such a plan, in which the choir bends to the left. There are instances of deflection from the normal straight line of the nave in which the center of the choir is fifteen feet out of line, when compared with the center of the façade.

"It is customary to explain these deflected choirs as representing a medieval symbolism which intended to represent the bending of Christ's head on the cross. This explanation is attractive to the sentimentalist and has spread from one locality to another, until it has become accepted as a matter of fact. Three

things are significant about this explanation: First, the matter is not mentioned by any of the medieval symbolists; second, there is no trace of the tradition in Italy, where there are many deflected plans; and, third, there is no published mention of this peculiar construction, or of its supposed symbolism, of earlier date than the nineteenth century.

"It appears likely that the explanation is either a sentimental fiction, dating from our own period, or else that it is an explanation which was offered by some of the master masons of the Middle Ages as likely to appeal to their ecclesiastical employers and relieve the Masons from the ungrateful task of giving lectures on architectural refinements. To offer such an explanation would satisfy curiosity and would avoid the disclosure of Masonic secrets. The true explanation of these deflections is doubtless to be found in that which must be the true one for this as well as many other phenomena of mediaeval asymmetry, namely, that they represent the abhorrence of monotonous formalism, and the desire to produce that effect of mystery which springs from optical confusion. The argument for this conclusion has points in its favor. There is absolutely no dividing line between churches of the cross form which have deflected choirs and churches without transepts, and therefore without a cross, which have plans oblique to the façade, choir and façade out of parallel, side walls out of parallel, side walls of unequal length, alignment of piers out of parallel, or lines of piers arranged in curves, bends or serpentine alignment. In other words, all these phenomena must be considered together. When this is done there is only one possible explanation—that an effect of mystification and of optical confusion was desired—in other words, an effect of mystery.

"Impressionist painters will have no difficulty in understanding these architectural mystifications. Among the modern painters of the men who would have understood them best is the least understood of modern painters, and that painter is Monticello; one of the very greatest of modern artists, a man whose very existence is unknown outside of the circle of the elect. The American painter, George Fuller, the Hawthorne of American art, is another mystic who would have reveled in these optical illusions of cathedral architecture. Painters like Raffaeli and Monet, like Blakelock and Homer Martin, could understand them readily.

"The firm of Heins and La Farge has actually introduced these illusions into their own modern work, in consequence of these investigations. There is not much margin left for incredulity when this fact is made known. Another New York architect, John Beverly Robinson, deputy superintendent of school buildings for the Borough of Manhattan, has said that 'these discoveries appeal so strongly to every artistic sense that no proof of intention is needed; it is enough merely to point them out.'

"The fact is, that these cathedral optical mystifications were, and are, a matter of temperament. They appeal to the mystic, to the dreamer, to the man who has what Taine calls 'the religious vertigo.' Such men were frequent once. They are not so frequent now. But there are some of them left. It is the temperament of literature of Edgar Allan Poe, of Wilkie Collins, of Balzac, of Lenau, and of Victor Hugo.

"A last word in these matters is this: Do not confuse the means with the end. The end was always attained—the mystery and power of the medieval cathedrals are obvious to every observer. It is only the analysis of the means by which the end was attained which is something new for modern observers. The diagram and photographic details which represent the means are not the means. They are like a Muybridge photograph of the action of a running horse. They are like broken pieces of the film of a cinematograph. In themselves, these diagrams and details may be puzzling and uninteresting. But the cathedrals are the thing. They remain as they were, yesterday, to-day and forever—as far as human existence is concerned. They will be as enduring as the pyramids of Egypt and are not less marvelous."

CORRESPONDENCE.

THE FACTS IN REGARD TO FIRE LOSSES AT BALTIMORE.

The recent issue of the *American Architect* made some surprising statements editorially in regard to the fire losses at Baltimore, intimating that the really fireproof building is a myth, the inference being that in view of the loss on the steel-constructed buildings at Baltimore owners are wise when they decline to go to the extra expense of hollow tile. The article concludes its review of the insurance report on these buildings with, "It will be seen that these very fully insured owners have a very substantial grievance against whomsoever it was who allowed them to believe they were investing their money in really fireproof buildings." The statement was referred to an expert in fireproofing, who makes the following comment on the article and deductions from the salvage report of the insurance companies. It states clearly from the standpoint of one fully versed in the subject what proportion of cost is involved in steel and fireproofing, and the percentage of salvage even in so extraordinary a test as the Baltimore fire.

Editor *Inland Architect*:

CHICAGO, July 5, 1904.

DEAR SIR,—Yours of the 1st inst., with clipping and request for the facts, is received and noted. I think the writer of the article certainly takes a very narrow view of the subject of which he writes, especially so far as the fireproof material is concerned.

He states that there is a loss of full sixty per cent on the eight buildings referred to, as a whole. This would infer that there was a salvage to the insurance company, therefore, of at least forty per cent; rather an excellent showing, it seems to me, when the fact is taken into account that the original cost of the steel and fireproofing in these buildings did not exceed twenty per cent of their cost value. It is apparent, therefore, that the combination of tile and steel afforded a salvage (in addition to their own value) of twenty per cent, or forty per cent in all. Per contra, what do we find in the way of salvage on any of the other buildings in Baltimore? Apparently not one dollar for either the owner or the insurance company.

Articles like these appear to me to be written by men unfamiliar with the subject or character of fireproofing; otherwise, they would be more just in their expressions, and would portray the actual facts in a more comprehensive manner for the layman.

Ordinary fireproofing, in a first-class skyscraper, approximates in value, in an average office building, from eight per cent to eight and one-half per cent of the gross cost of the structure. The steel skeleton frame above the foundations approximates about twelve per cent to fifteen per cent of the aggregate cost. The balance of the building, or practically four-fifths, is made up of ornamental fronts, interior finish, plastering, marble work, ornamental iron, elevators, painting, decorations, plate glass, hardware, electric wiring and fixtures, etc. Now, it is entirely beyond the bounds of reason to expect the fireproofing material to protect the inflammable contents of a building, nor have I ever heard that such a claim has been made by any fireproofing company. No matter what class of fireproofing had been used in the Baltimore skyscrapers, even though it might have been calcined brick, the loss on the inflammable contents, as well as the ornamental exterior and interior finish, would have been equally the same.

Therefore I maintain that tilework fulfilled its mission in the protection, practically intact, of all the steel construction in Baltimore skyscrapers. Had it been a failure and unfit for the use for which it was sold, the steel buildings would have collapsed, and there would not have been a dollar for either the owner or the insurance company. It is, therefore, puerile and childish in the extreme for an editor of an enlightened journal to cast slurs upon the merits of a system of construction which has successfully withstood, for the past twenty years, hundreds of small conflagrations with nominal insurance loss, and which went through the greatest conflagration of modern times, protecting the buildings and saving them from collapse, as it did the high steel skyscrapers of Baltimore.

Very truly yours,

E. V. JOHNSON.

A RECENT NEW JERSEY DECISION AND THE ILLINOIS LICENSING BOARD.

Editor *Inland Architect*:

CHICAGO, July 7, 1904.

It is stated in a recent publication that a decision handed down by the Supreme Court of New Jersey is being used by some papers as an argument against the laws which prevail in some States providing for the licensing of architects.

In the case referred to the Board refused the application of Newman H. Raymond, of Jersey City, for an architect's license. The ground assigned for refusing to issue a license was that Mr. Raymond was not an architect, but merely a builder. After reviewing the facts the court set the decision of the board aside and ordered a license to be issued. The result of this case is not to be wondered at if one reads the law of New Jersey relating to such matters. Section 10 of the law says:

Any person who shall at the time of the passage of this Act be engaged in the practice of architecture in this State, and who shall present to the State Board an affidavit to that effect . . . shall be entitled to receive such certificate upon the payment to the said board a regular fee of \$5.

It will be seen by this that the board has no discretion in such cases, and was obliged to grant all the licenses applied for at the time the law went into effect on July 1, 1902, on presentation of an affidavit from the applicant. The New Jersey law further states in Section 12:

Any person whose certificate shall be refused or revoked by said State Board shall have the right to appeal by certiorari to the Supreme Court for a review of such action, and the Supreme Court is hereby authorized and empowered to review and correct the action of said State Board, and the State Board shall forthwith carry out the judgment of the Supreme Court on such review.

The decision thus rendered under these clauses can have no bearing upon the efficiency of the Illinois law which was passed in 1897. That law gave the State Board discretionary power in such cases, and this discretionary power in granting licenses to those who claimed to be practicing architects at the time the law went into effect was sustained by the Appellate Court of Illinois in its decision of the case of Harbers vs. the Illinois State Board of Examiners of Architects, rendered October 2, 1900. The claim of Harbers for a license was based on exactly the same grounds as those made by Raymond in New

Jersey. In its decision the court quoted the language of the law in the following sentences:

In the language of the law a person desiring a license without an examination must by affidavit show to the satisfaction of the State Board of Examiners of Architects that he or she was engaged in the practice of the profession of architecture on the date of the passage of this act. This certainly leaves some discretion to be exercised by the board, and while a mandamus would lie in a proper case to compel the board to act upon an application, yet in the absence of a wrongful abuse of power, amounting to a fraud against the rights of the applicant, it would not lie to compel its members to decide in a certain way.

Neither does this decision in New Jersey have any bearing upon the constitutionality of laws for the licensing of architects. It applies only to the individual case in question and would not have arisen had the New Jersey board been vested with discretionary power, as is the case in Illinois.

All attempts thus far made to dispute the authority of the Illinois Licensing Board have fallen to the ground.

PETER B. WIGHT,

Secretary, Illinois State Board of Examiners of Architects.
July 6, 1904.

THE HABIT OF LAZINESS.

AN architect whose name is frequently mentioned in connection with some of the best work in Chicago and neighboring cities has been frequently noticed, especially on Saturdays, going north on the Wisconsin Central road by a friend who is an enthusiastic fisherman and has the leisure to enjoy the sport. So often, indeed, did he meet his friend in dining-car, sleeper or day coach, that he began to wonder how a man who had such an absorbing business could leave it so frequently for pleasure. At last his curiosity overcame his politeness to such an extent that he, with proper apologies, asked the architect how it was and if it was business or pleasure that so often found him going to or coming from the Wisconsin lakes. His answer while unique was full of the deepest philosophy. He said that while he had a fair business that it might be much larger if it wasn't for a rule he had that he never violated, and that was: "Never let business interfere with pleasure." He was willing to judiciously mix it at times, but when necessary, he made the choice of pleasure every time. He was a great philosopher. He also pointed out by way of a map and elegantly gotten up pamphlet that the road to the largest and quickest field for enjoyment and no waste time was the one they were riding on. He even confessed that he had, like Mr. Wegg, "dropped into poetry" on the subject and exhibited the following:

If you fish, if you travel or dine
The Wisconsin Central's the line.
It will take you to lakes
Where the bass jumps and takes
The bait at the end of your line.

It will feed you à la carte when en route,
And you'll sleep in a Pullman to boot,
If Duluth or St. Paul
Or to any or all
Of these Northern cities you scoot.

So apply to the agent in time
For the handsomest book in the line
Of railway instruction
Or a sure introduction
To sport in the old summertime.

It was about this time that the string came off the bag of green frogs he had purchased of the train boy to use as bait for the elusive bass, and they, the frogs, hop-skip-and-jumped all over the car, and while their owner was gathering them from under the seats his friend escaped. The poetry and the frog supplement was too much for him.

But when one studies the map it is remarkable how many lakes are accessible from Chicago along this route. From Rockefeller the famous Diamond lake is reached, and at the next station, Gray's Lake, is the lake of that name, while from Rollins it is but a short distance to Round, Third, Fourth and Taylor's lakes. Lake Villa and Cedar lake is a well-known resort and from there a large number, headed by Fox lake, such as Pistakee bay, Deep, Hastings, Crooked, Sand, Slough, Long, etc., are reached. Antioch is the center of this lake country, for from that station besides those named are Loon, Grass, Maria, Channel, Catherine and Bluff, all noted for their picturesque surroundings and sport-producing qualities, and between there and Burlington, which is less than four hours' ride from Chicago, are Camp, Silver and other lakes in the State of Wisconsin. The average Chicago man has the habit of work. Would it not be well to get the habit of laziness at least every summer?

THE LATEST INLAND MARINE.

WHILE on the seaboard the building of passenger vessels has not kept pace with the demand, it is not so on the great lakes. The shipyards at Cleveland, Chicago and other points are supplying every demand and in their vessels rivaling those turned out in any part of the world. The latest triumph of the shipbuilding art is a passenger steamer just placed in commission by the Northern Michigan Transportation Company. It is called the Missouri and is the sister ship to the Illinois built for this line two years ago, and which in fineness of line, seaworthiness, speed and interior appointments rivals the best ocean liners.

The equipment of this great lake passenger line has not only been brought about by present demands, but looking into the future this company observed the growing habit of the people is to take their summer vacations not only on the east shores of Lake Michigan, but to go to and from these points by water. No hotel can give greater comfort than the staterooms and dining-rooms of these great passenger steamers, with freedom from noise and dust and the hundred and one annoyances of railway travel, for these inconveniences are all unknown to those who take the lake route to the northern Michigan resorts. Aside from all this, the safety of water travel appeals to the thoughtful mind. There has been no disaster to a passenger steamer in recent years, in fact in those recently designed and built any serious result from accident is well-nigh impossible. But in the last fifty years, among the thousands of steamers carrying millions of people there have been but three vessels lost, and only one of these wrecks, the Lady Elgin, lost in 1860, was attended with any considerable loss of life. There are still old boats in service, and with these accidents are possible; but in the new boats, such as the Illinois, Missouri and Kansas, of the Northern Michigan Transportation Company, where from the latest designed boilers and machinery to the steel frames and watertight bulkheads all is substantial and in the highest degree perfect, the highest degree of safety is obtained, so that each season but adds to the general preference of the people for a trip by water. It is such steamers as these that show that the advance in marine architecture has kept fully abreast with that of the designing of houses, and comfort is one of the most notable features in this growth.

MOSAICS.

The N. & G. Taylor Co., Philadelphia, has issued, in the form of a handsome little volume, a series of talks by "Rufus the Roofer," who is familiar to our readers by his dissertations on the subject of good roofing tin in "The Arrow," their monthly house organ. These conversations are supposed to take place between "Rufus the Roofer" and his son and contain many good practical suggestions and arguments in a homely, matter-of-fact style. Incidentally, he manages to include a number of "personal recollections," which give a humorous tone to the work. This book will make bright, newsy reading for anybody, whether he is the man who puts the tin on the roof or the man who lives under it. The cover shows a portrait of "Rufus" ready for business, and the book is fully illustrated throughout. Sent to any one upon receipt of 10 cents in stamps.

A DRAMA that is not without its humorous features is noted by the New York papers, the leading characters being a millionaire and a young architect of artistic temperament. The scenario will be written by a lawyer who is preparing to present the drama in court. The millionaire, who is known by the euphonious title of Howard Gould, decided that he would like to decorate Sands Point, Long Island, with a replica of Kilkenney Castle, and engaged Abner J. Haydel as decorator. The architect, misunderstanding the matter, evidently thought that incidentally Mr. Gould would like to have the "castle" made habitable and modernized it to some extent for this purpose. This idea, it seems, ran counter to that of the proprietor, who also had ideas and which he tried to enforce. Hence a suit by the owner and a counter-suit by the architect, who refuses to be discharged for insubordination. The latter may have a case in law, but when he consented to "reproduce" the castle he might have continued to the extent of even a blarney stone, made of Wagner terra cotta that is said to be indestructible, if the owner demanded it. He should not refuse to make two bites of a cherry. His artistic mistake was in being tempted to take the first bite.

OUR ILLUSTRATIONS.

Residence, St. Louis, Missouri.
Apartment Building, Los Angeles, California.
View Toward Elevators, Hotel, San Francisco.
Residence at Toledo, Ohio; Bacon & Huber, architects.
Residence at Toledo, Ohio; Becker & Hitchcock, architects.
Residence of C. Sprague, Pasadena, California; F. L. Roehrig, architect.
Washburn College Library, Topeka, Kansas; Patton & Miller, architects, Chicago; cost \$40,000.
Kendall Young Library, Webster City, Iowa; Patton & Miller, architects, Chicago; cost \$45,000.
Carnegie Library, Waukegan, Illinois; Patton & Miller, architects, Chicago; cost, \$27,500. An exterior and interior view are shown.
Interior Views, Residence of Henry J. Steere, Nayatt, Rhode Island; Stone, Carpenter & Willson, architects. Two views are shown.
Special Plate: Residence of Henry J. Steere, Nayatt, Rhode Island; Stone, Carpenter & Willson, architects, Providence.

SPECIAL PLATES.

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St. Francis Hotel, San Francisco, California. Five full-page plates of exterior and interior views are shown.

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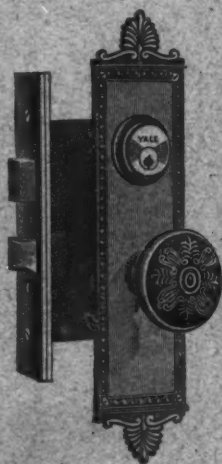
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