

THE INLAND ARCHITECT AND NEWS RECORD

Vol. XXIV.

JANUARY, 1895.

No. 6



A Monthly Journal Devoted to
ARCHITECTURE,
CONSTRUCTION, DECORATION AND FURNISHING
 IN THE WEST.

PUBLISHED BY THE INLAND PUBLISHING CO.,
 19 Tribune Building, Chicago, Ill.

L. MULLER, Jr., Manager. ROBERT CRAIK MCLEAN, Editor.
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TERMS: Regular number, \$5 a year; Photogravure edition, \$10 a year.
 Single copies, Regular number, 50c.; Photogravure edition (including 7 photogravures), \$1. Advance payment required.

The columns and illustration pages of THE INLAND ARCHITECT are open to all alike, merit and availability only determining what shall be published. Contributions appropriate to its pages are always desired.

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NOTE.—Officers elected enter upon their term of office January 1, and continue until December 31, unless reelected, except in the case of Directors for two and three years.

The Government Architecture Bill.

The time has now come when the most earnest work on the part of the architectural profession is necessary in behalf of the government architecture bill, now before Congress. As will be seen by the circular issued by the Institute committee printed in this issue, the passage of the bill was assured during the last session of Congress, and now awaits a fitting opportunity to be presented and passed. It is probable that in the near future the Congressional Committee on Rules will give a day or more to consideration of the recommendations of the Committee on Buildings and Grounds, one of the most important of which is the McKaig bill. Architects throughout the country should at once give their support to the efforts of the Institute committee, and use every endeavor to call the attention of their congressmen to the McKaig bill and place the advantages of its enactment before them, so that when it comes up for passage every member will be well informed upon its provisions and scope. This can best be done by personal letters to these representatives from all friends of the bill. One of the strongest reasons a congressman can have for favoring the bill is the fact that after its passage any public building which he secures for his district will be designed and built immediately, while at the present time it must wait the slow development of the system in vogue. The artistic side of the argument for the inauguration of the system such as the bill outlines can have no better illustration than the Columbian Exposition, where the rapidity and economy in its construction should convince the most skeptical that the saving in time and money on government buildings designed and constructed under similar conditions will be phenomenal. Let every architect make it his chief interest until the passage of this bill to urge its passage and secure for it every influence available. It is exceedingly encouraging to note that the American Institute of Civics, of which Justice William Strong, of the United States Supreme Court, is president, is taking a lively interest in the subject, and the daily press throughout the country has at last recognized that the time has come when the government of the United States should be represented by a higher art and a greater economy in the construction and operation of its buildings.

Institute Directors Meeting at Chicago.

The Board of Directors of the American Institute of Architects held its regular session in Chicago, on January 7 and 8. The Executive Committee elected for the year includes the president, secretary, treasurer, and W. S. Eames, of St. Louis; L. H. Sullivan, of Chicago; George B. Post, of New York, and Robert Hastings, of Washington. The new member of the Committee on Uniform Contract taking the place of W. W. Carlin, deceased, is George W. Rapp, of Cincinnati. The newly established standing committee on Education and Library consists of W. L. B. Jenney, of Chicago; R. W. Gibson, of New York; Theo. Carl Link, of St. Louis; Henry Van Brunt, of Kansas City, and Cass Gilbert, of St. Paul. The sessions, which were attended by fifteen members, occupied two days, and a large amount of detail work was accomplished.

MECHANICAL HEATING AND VENTILATION.

BY M. C. HUYETT.

SIXTH PAPER.

BOILERS.

IN churches, schools and other public buildings, safety for occupants should have first and constant consideration in the development of plan and application of the mechanisms required for heating and ventilating plants.

Owing to the limited height of basements, it is a difficult matter to install "water-tube" or "safety" boilers, and their high price increases first cost of plant to such an amount as to practically prohibit their use.

Horizontal tubular boilers, made of open-hearth, homogeneous steel plate of 60,000 pounds tensile strength and standard thicknesses, tested at 150 pounds hydrostatic pressure, will have a safety factor exceeding four hundred per cent; they should be proportioned for maximum requirements with not to exceed twenty-five pounds steam pressure, and have a lever safety valve set to blow off at fifty pounds pressure. *Pop valves may cause a panic.*

SPACE REQUIRED.

Horse-Power.	Size.	Floor Space.	Height of Brick and Front.	Top of Dome.
20	35" by 10'	14' 6" by 68"	92"	106"
25	42" by 10'	14' 8" by 74"	98"	111"
30	44" by 10'	15' by 76"	100"	117"
35	44" by 12'	17' by 76"	100"	117"
40	44" by 14'	19' by 76"	100"	117"
45	48" by 14'	19' 2" by 88"	103"	124"
50	54" by 12'	17' 6" by 94"	112"	138"
60	54" by 15'	20' 8" by 94"	112"	138"
70	60" by 14'	19' 10" by 108"	118"	146"
80	60" by 16'	22' by 108"	118"	146"
90	66" by 15'	21' 6" by 114"	124"	156"
100	66" by 16'	22' 2" by 114"	124"	156"

For double settings double the width will be safe for space required.

Half-iron fronts should not be tolerated for a first-class plant.

SUMMARY.

The advantages mechanical heating and ventilation possesses over other systems are:

First.—The quantity of air to be supplied for ventilation can be based on the number of occupants up to or above the highest sanitary standard, and be delivered regardless of the temperature of the radiating surface, internal or external air temperatures, varying atmospheric pressures, direction and velocity of external air-currents, height of ventilating shaft, and heat-force supplied to and maintained therein.

Second.—Temperature and volume of the air, together or separately, changeable at will. Experience has demonstrated the fact that when a room has been warmed sufficiently for occupancy with comfort and safety, if there be many persons the animal heat will so nearly maintain the required temperature that the steam pressure can be largely decreased, or fifty per cent or more of the radiating surface be "cut out," reducing the heat supply without decreasing the fresh-air supply.

Third.—Uniform low temperature of the radiating surface; the temperature of steam is,

At 5 pounds pressure.....	225° Fahr.
" 10 " "	237° "
" 15 " "	248° "
" 20 " "	257° "
" 25 " "	265° "
" 30 " "	273° "
" 35 " "	279° "
" 40 " "	285° "

But the temperature of the radiating surfaces with which the air to be warmed has contact will not record as high as stated.

Fourth.—No leaky valves, joints and radiators in rooms and corridors.

Fifth.—Quickness with which a building can be warmed. If steam has been used the day previous, a building can be warmed ready for occupancy in from one hour to an hour and a half from the time the fan is started; when exterior air is at or below zero, starting with water at normal temperature, steam can be made and a building be warmed in about three hours. Under like conditions the average direct-heating systems used in churches requires firing

all day Saturdays—and some at night also—and up to the hour for service on Sunday, in order to warm a building sufficiently.

Sixth.—Freedom from inflow of cold air, causing cold drafts, so common in all buildings with warming apparatus which depends on "natural means" to give diffusion and displacement.

Seventh.—The air supply can be conducted from the highest position practicable, insuring pure air, which need not be brought in contact with overheated radiating surfaces.

At what elevation the air of London is purest has been made the subject of scientific investigation by Prim, a chemical expert, the result in question being realized, it appears, at about thirty or forty feet from the ground; lower than that the dust is encountered, and higher, the smoke from the chimneys reaches. Certain experiments in determining this matter were resorted to—that is, frames of wood covered with blanketing material were placed at different elevations, one being put on the top of the clock tower of Westminster, another on the highest point of the roof, and others at various heights down to the courtyard. After five hours' exposure in these various localities there were found to be more smuts at high elevations than at the low, but on the level of the courtyard considerable quantities of dust were present. The conclusion arrived at is that, on the whole, the purest level is at the height of between thirty and forty feet, nothing being gained by going higher, unless it be to some four hundred or five hundred feet.

Eighth.—All parts of a building or rooms can be heated with like certainty; the full volume of ventilation and heat—force—can be delivered through the ordinary avenues for distribution, or the power can be cumulated at the points of maximum exposure.

Ninth.—Economy in the consumption of fuel; the average architect and heating engineer will probably "receive that statement with a degree of allowance."

In heating, the combustion of fuel is *cause*, and the warmed air in a building or in rooms is *EFFECT*, but a like cause does not always produce an equal effect.

Apparatus that will warm the air in an inclosed space in the shortest time, and supply the required volume of fresh air for ventilation at the least expense for fuel, will maintain the after required conditions at the lowest cost.

Where non-continuous heating and ventilation is required—as for churches, schools and other public buildings—the fuel expense will favor hot-blast, or mechanical heating and ventilation, at least twenty-five per cent.

Tenth.—Non-liability of freezing. The radiating surface is less than that required for direct heating, and is all cumulated in one place, with one or two short feed pipes which can be fully protected against loss of heat.

The circulation is short and quick, with automatic return of water—the result of condensation—to the boiler, making the conditions of quick drainage of the radiator, and no danger from low water in the boiler, certainties.

All-night firing to prevent pipes from freezing is not necessary. Apparatus which has been through five winters in Wisconsin, with temperature as low as forty-eight degrees below zero, has never had a frozen pipe.

With mechanical heating and ventilation, when a school session closes for the day, or in a church when an audience has been dismissed, the fire, if it has not expired, may be drawn, and the consumption of fuel ceases; the next morning the water in the boiler will not be cold, and one quick fire will ordinarily raise steam and heat the coils in the radiator in less than forty minutes, after which, in about sixty minutes, the building or rooms will be comfortably warmed; subsequently light firing will maintain the required temperature.

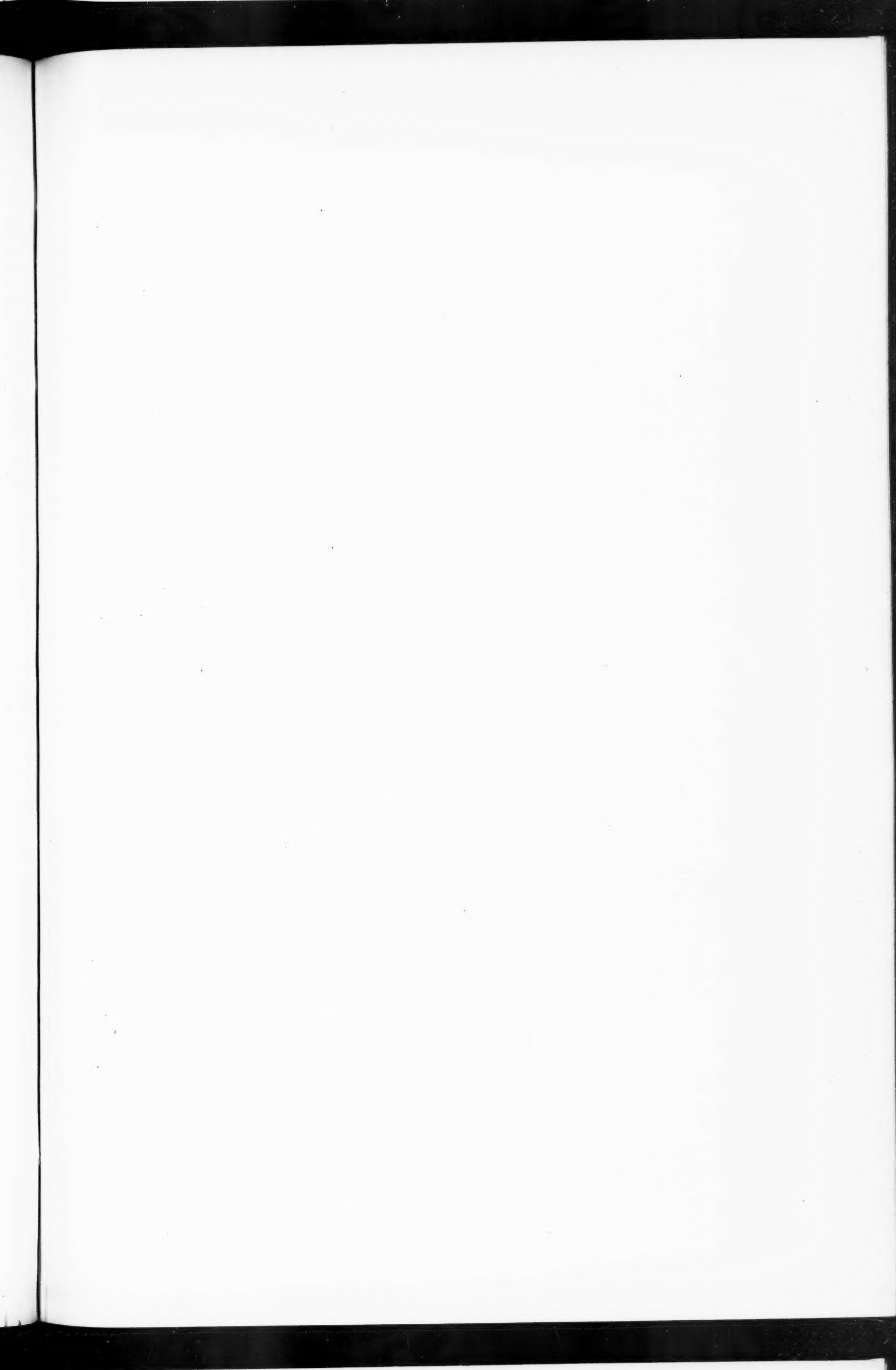
A report signed by an expert and a citizens' committee of six persons, who made a critical examination of all school buildings in Chicago, acting with the Board of Education, stated:

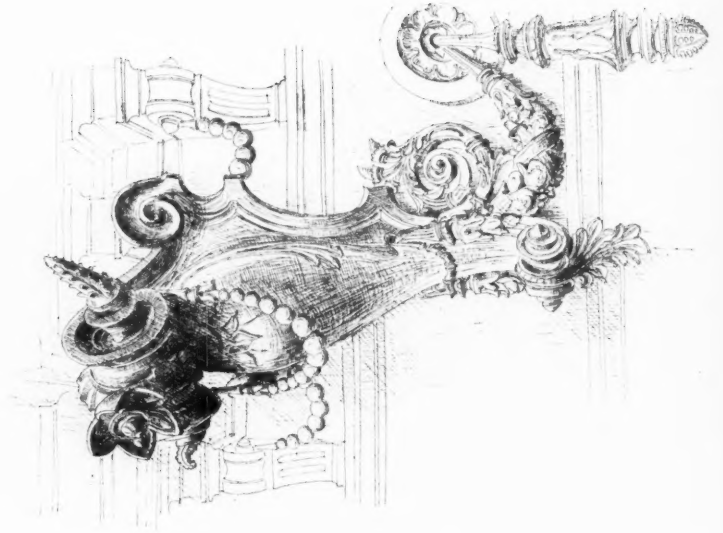
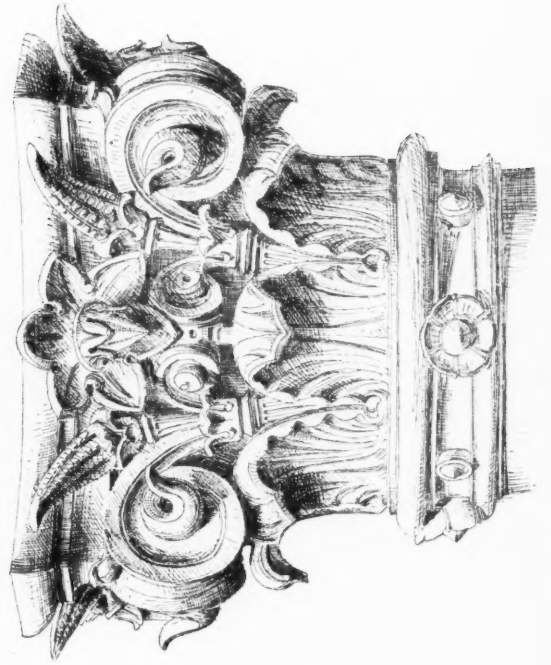
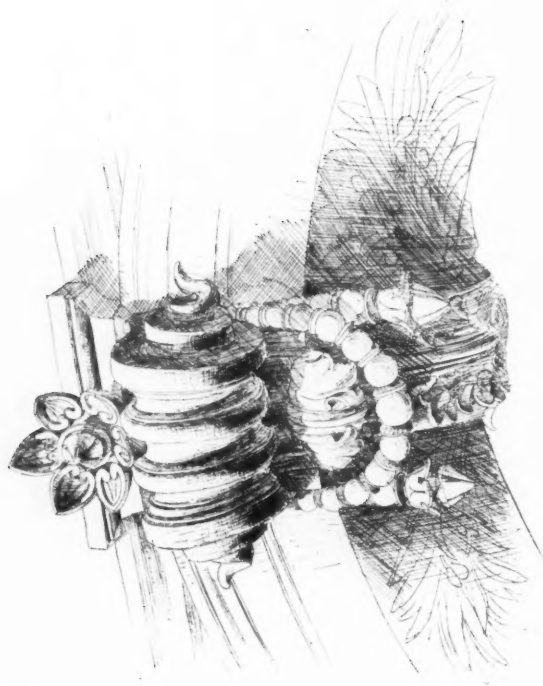
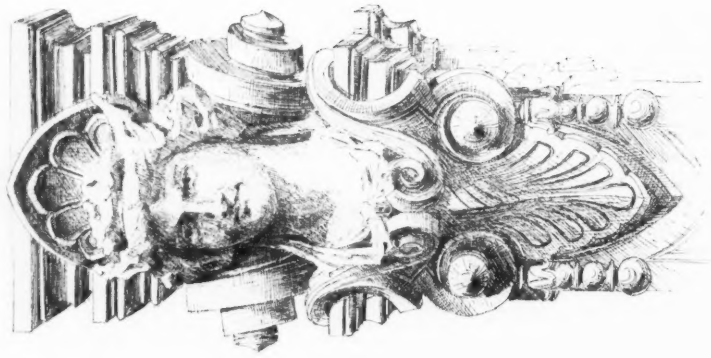
"The difference in economy between steam apparatus with and without fan, is demonstrated by the following comparison:

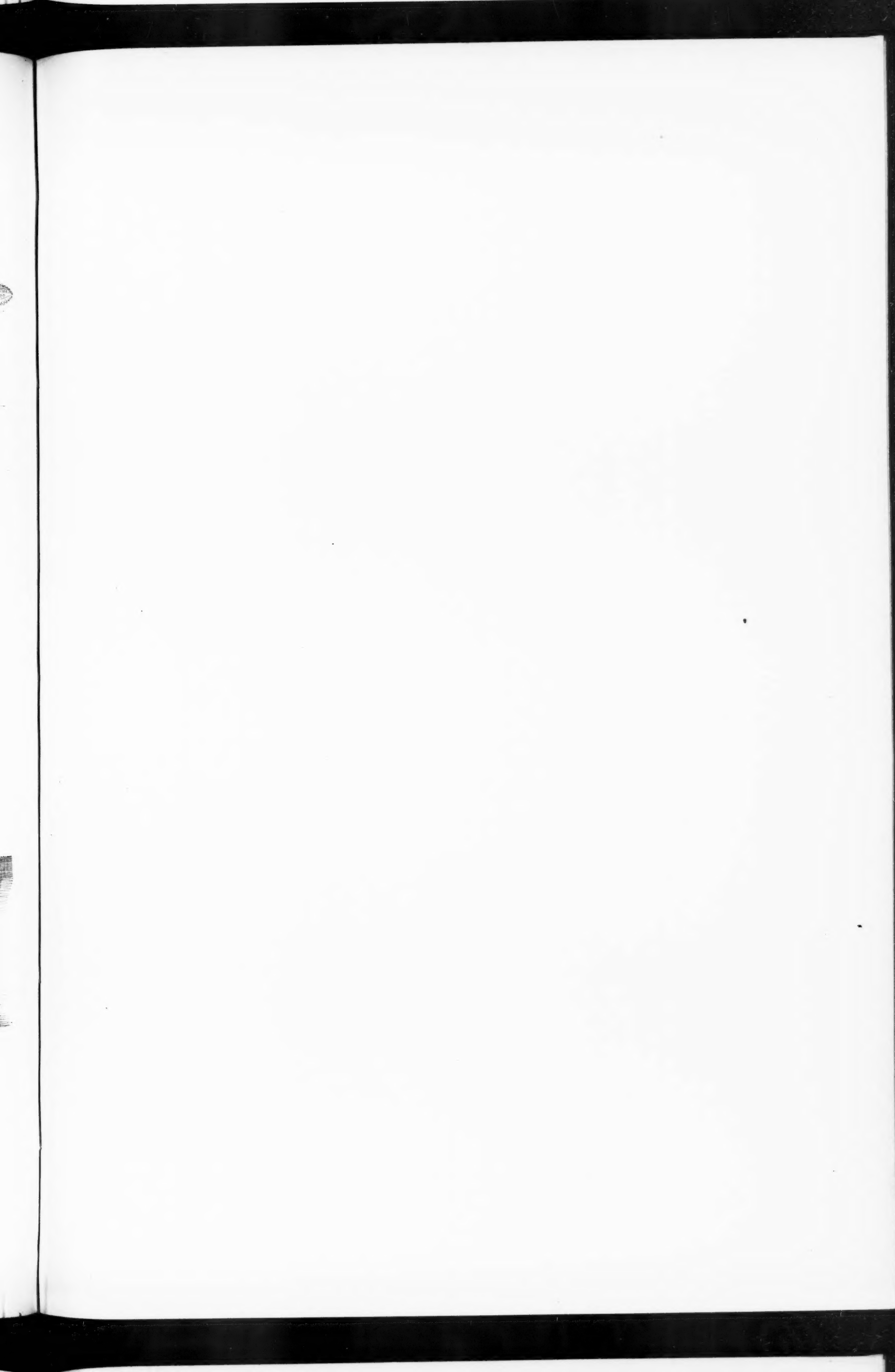
"The average cost per sitting of thirteen buildings without fans, built since 1879, is.....\$3.14
 "The average cost per sitting of all the buildings in which fans are used is.....2.71

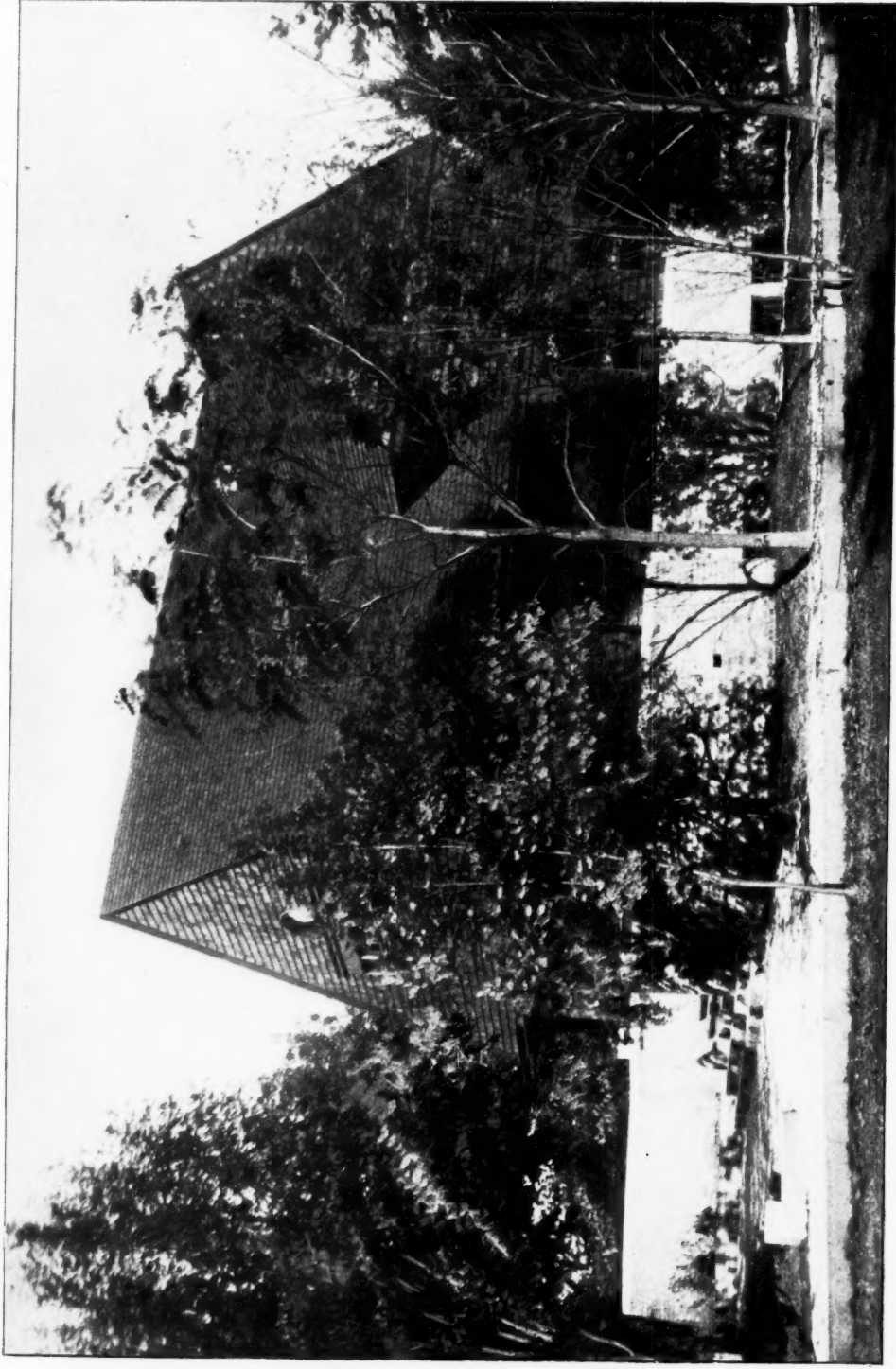
"The difference in favor of fans is\$0.43

"In these thirteen buildings there are 10,736 sittings, and the departure made in recent years from the fan system has cost

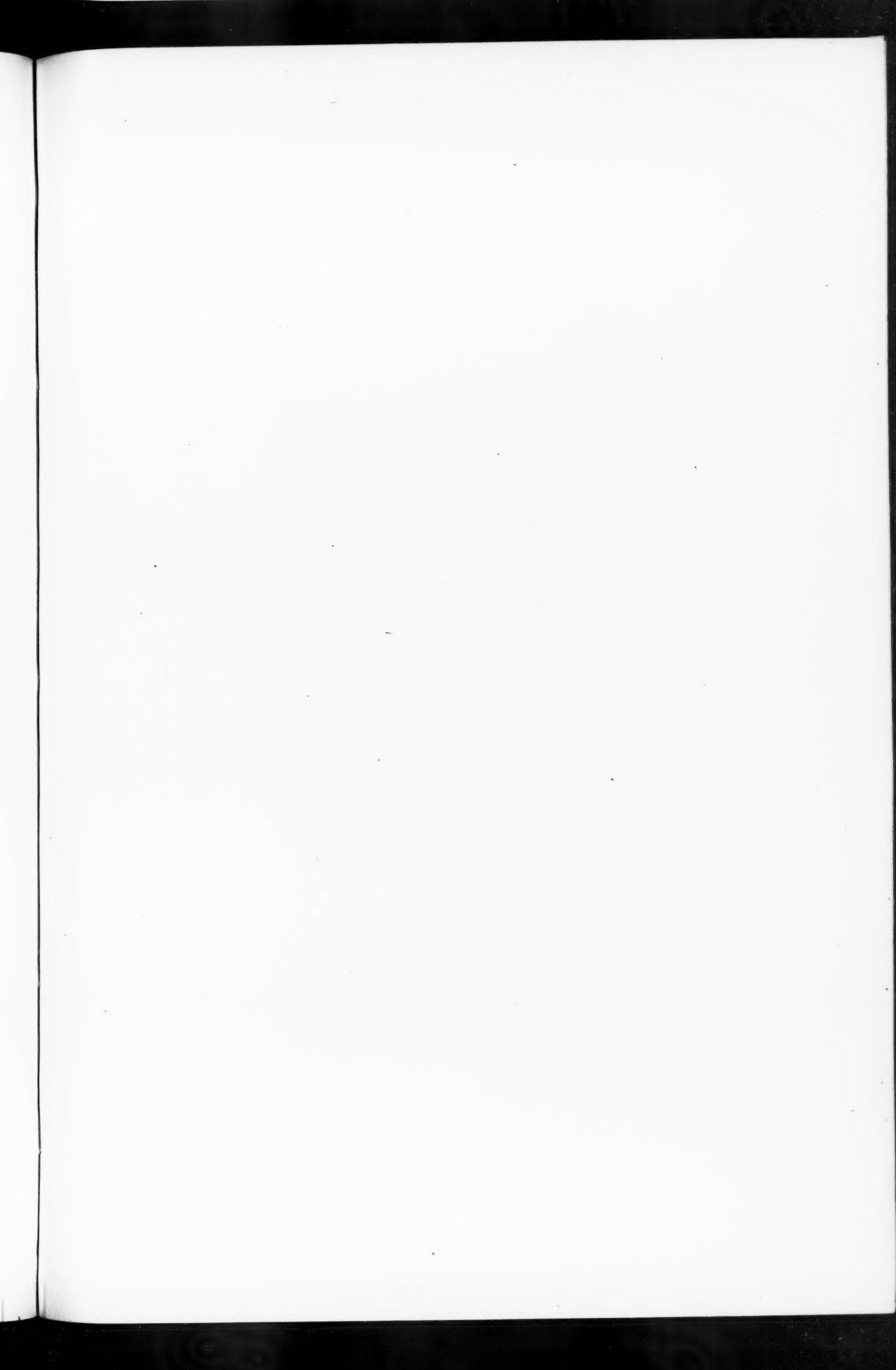


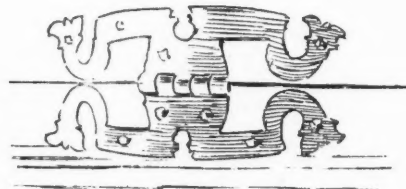
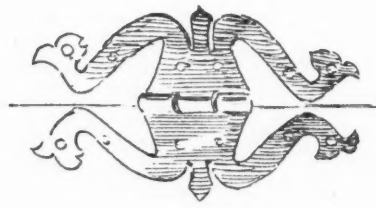




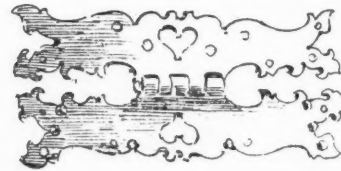
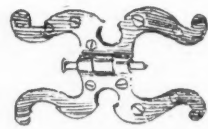


RESIDENCE BY ARCHITECT FRANK L. WRIGHT, FOR HIMSELF, OAK PARK, ILLINOIS.

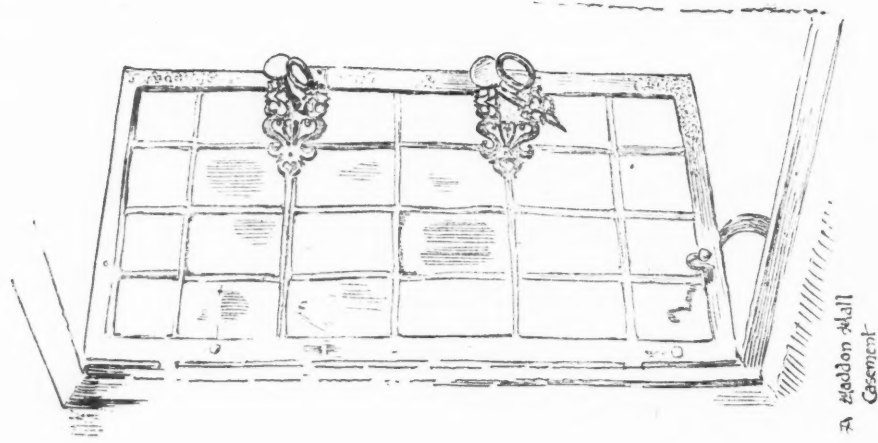




Hinges from Meladon

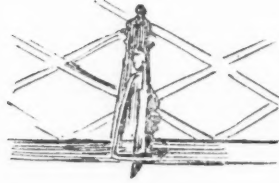


SKETCHES BY T. RAFFLES DAVIDSON 1101

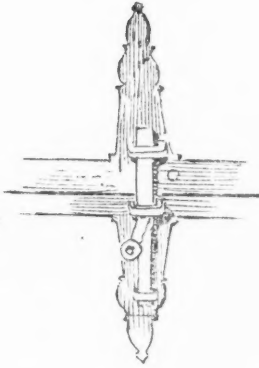
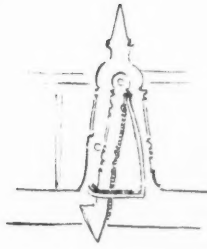
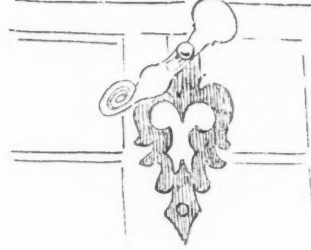
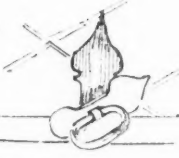


Meladon Hall
Casement

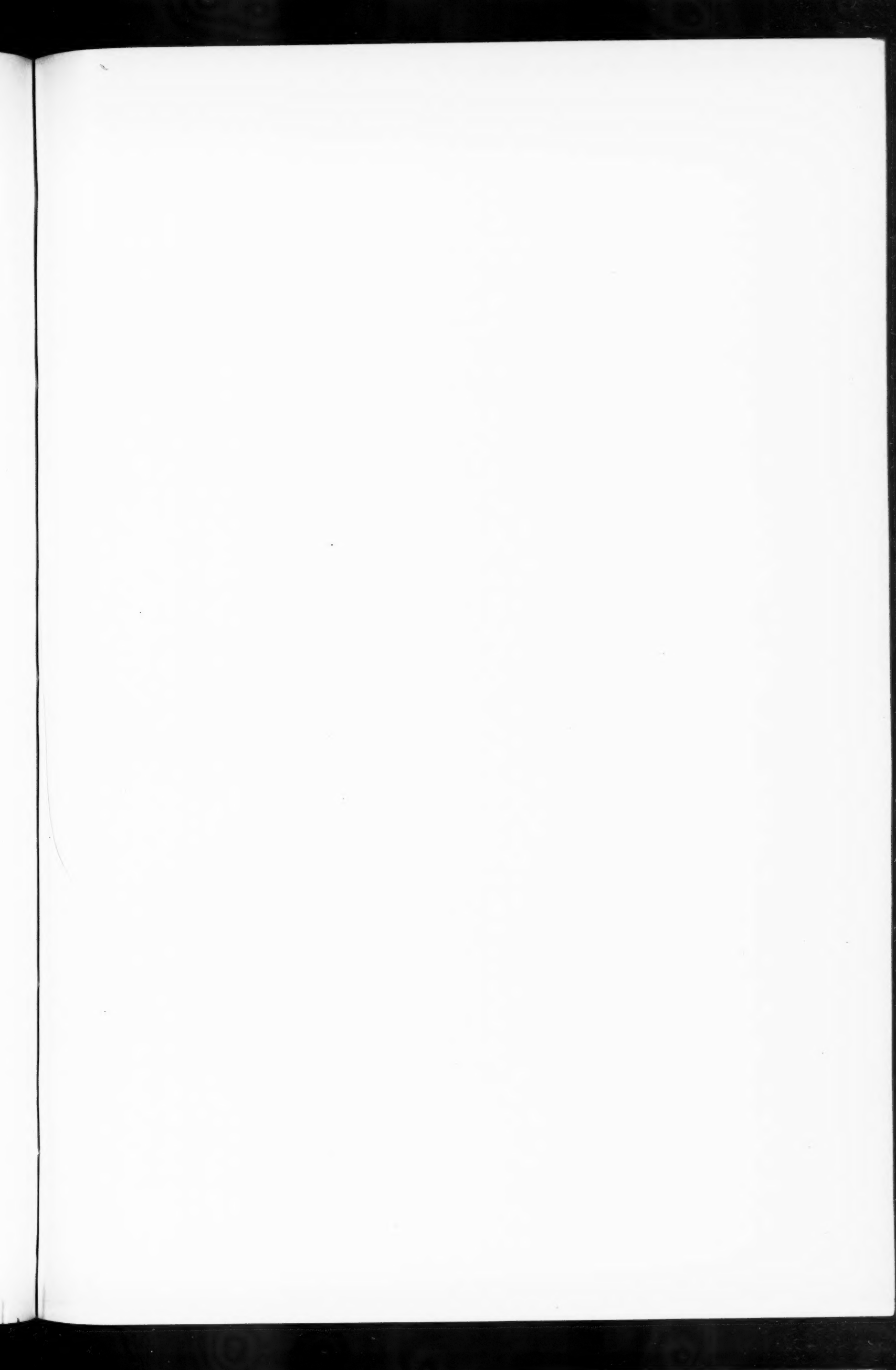
from "Metalwork Old & New"
by Geo. Bridgman.



in Bull room

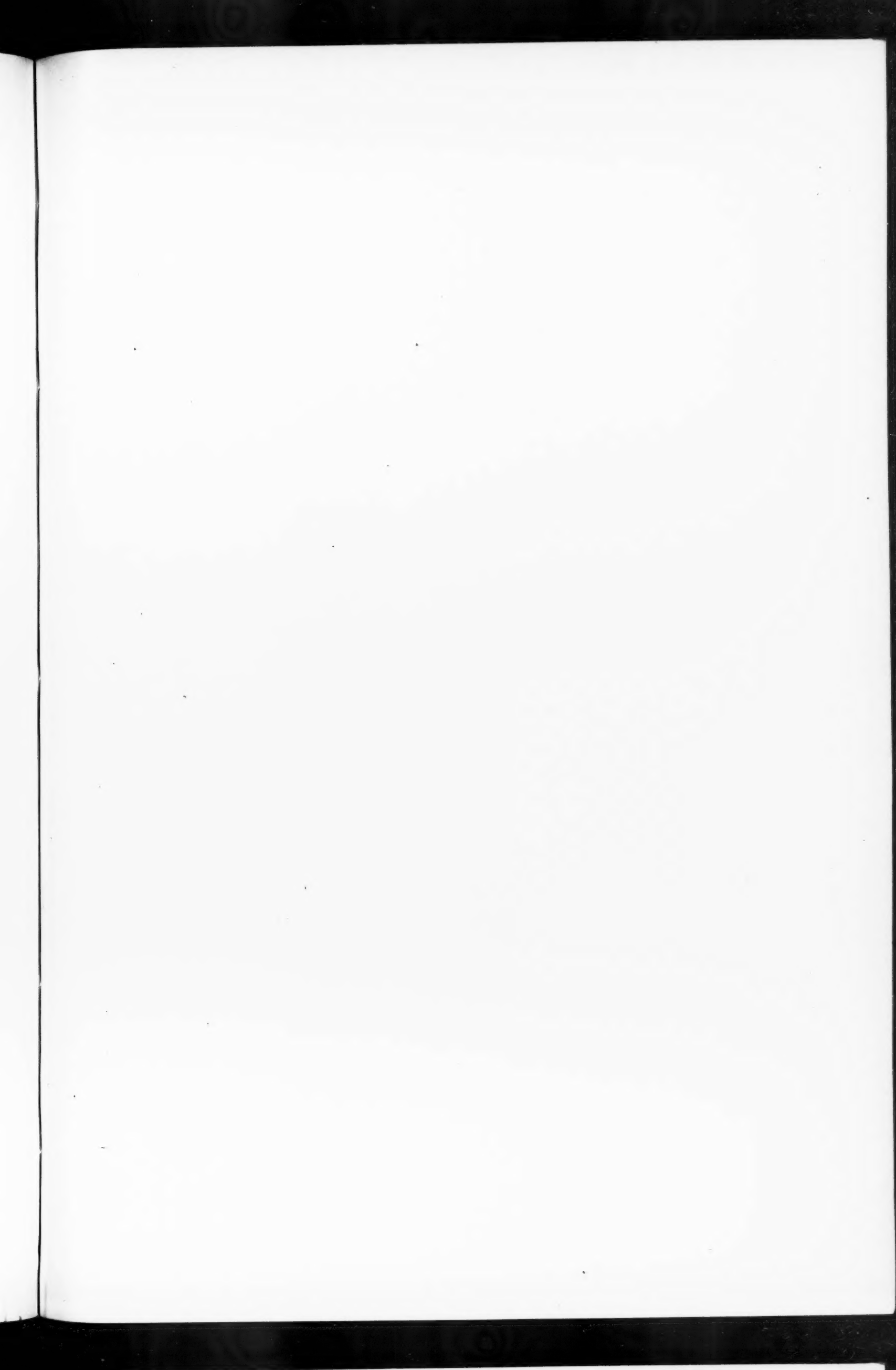


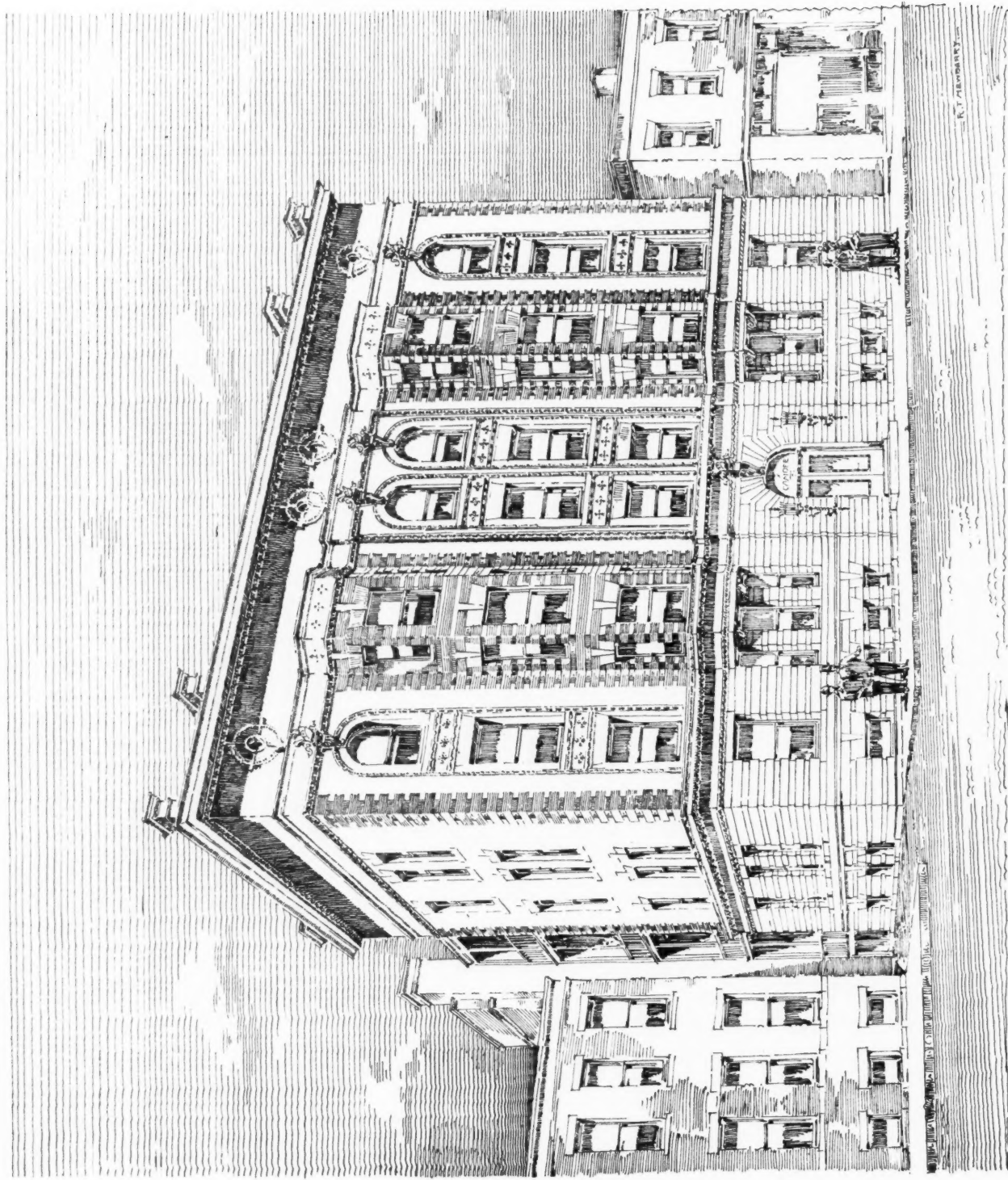
Casement Fasteners from Meladon

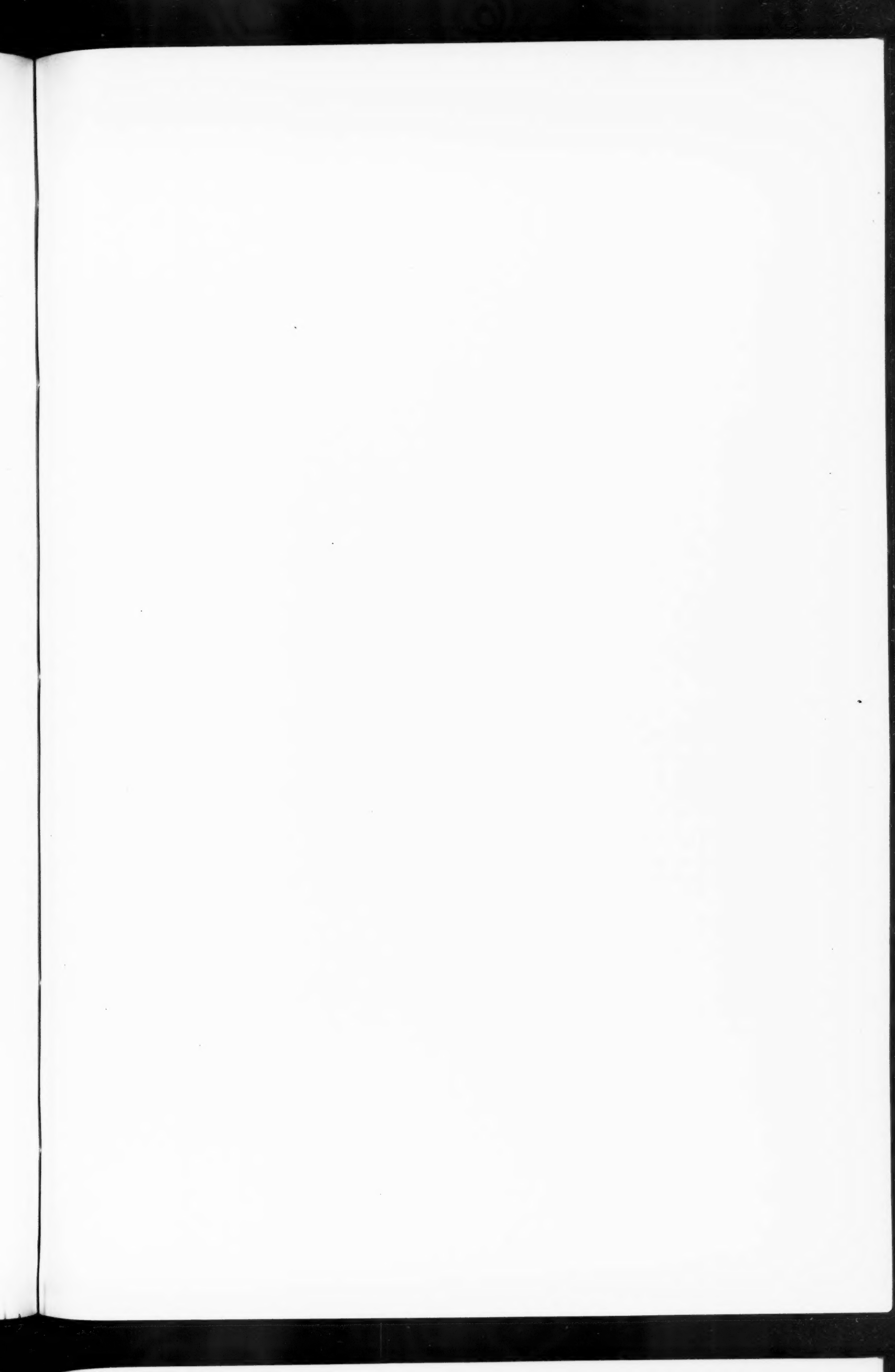


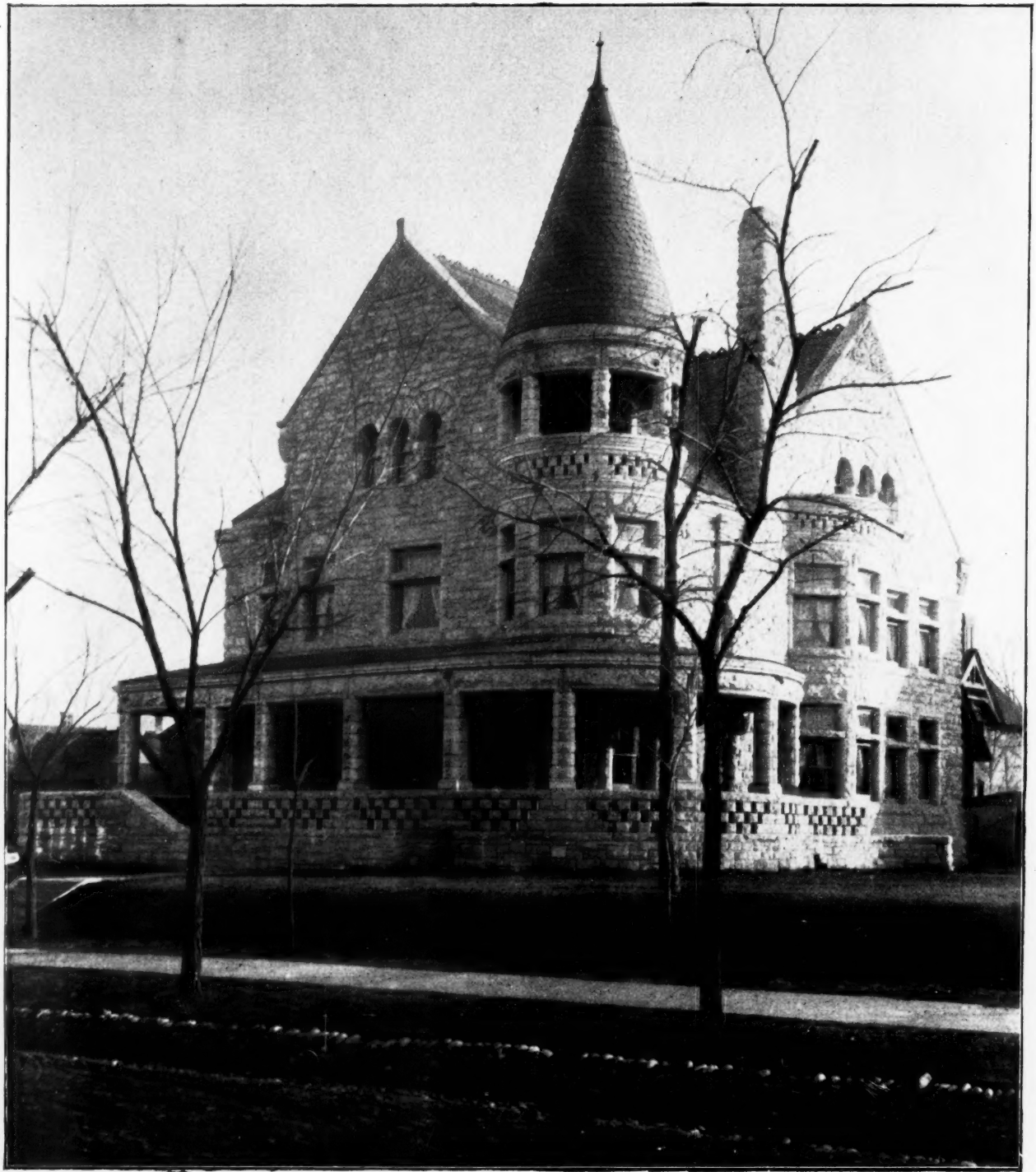


RESIDENCE IN CHICAGO.

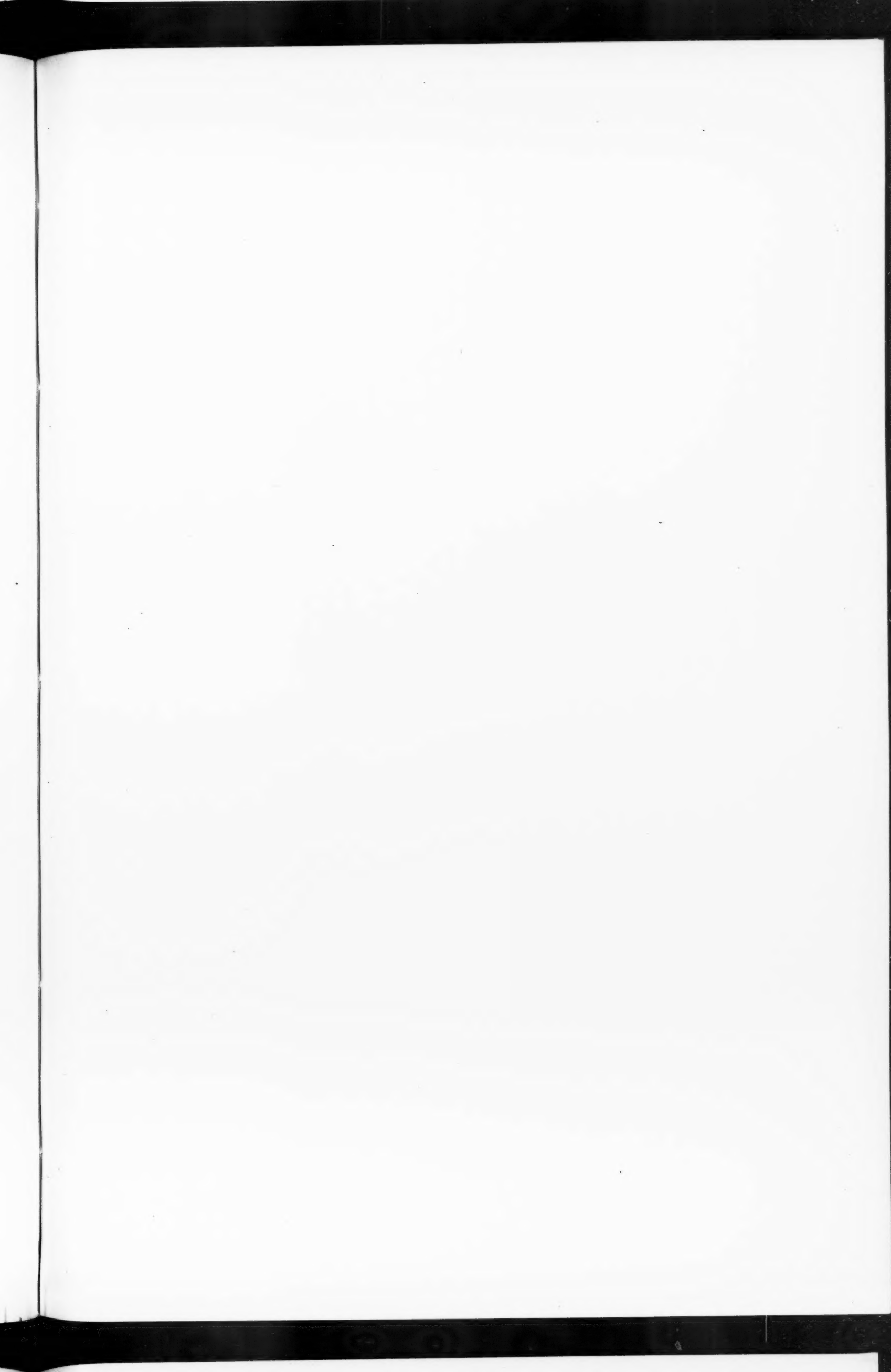








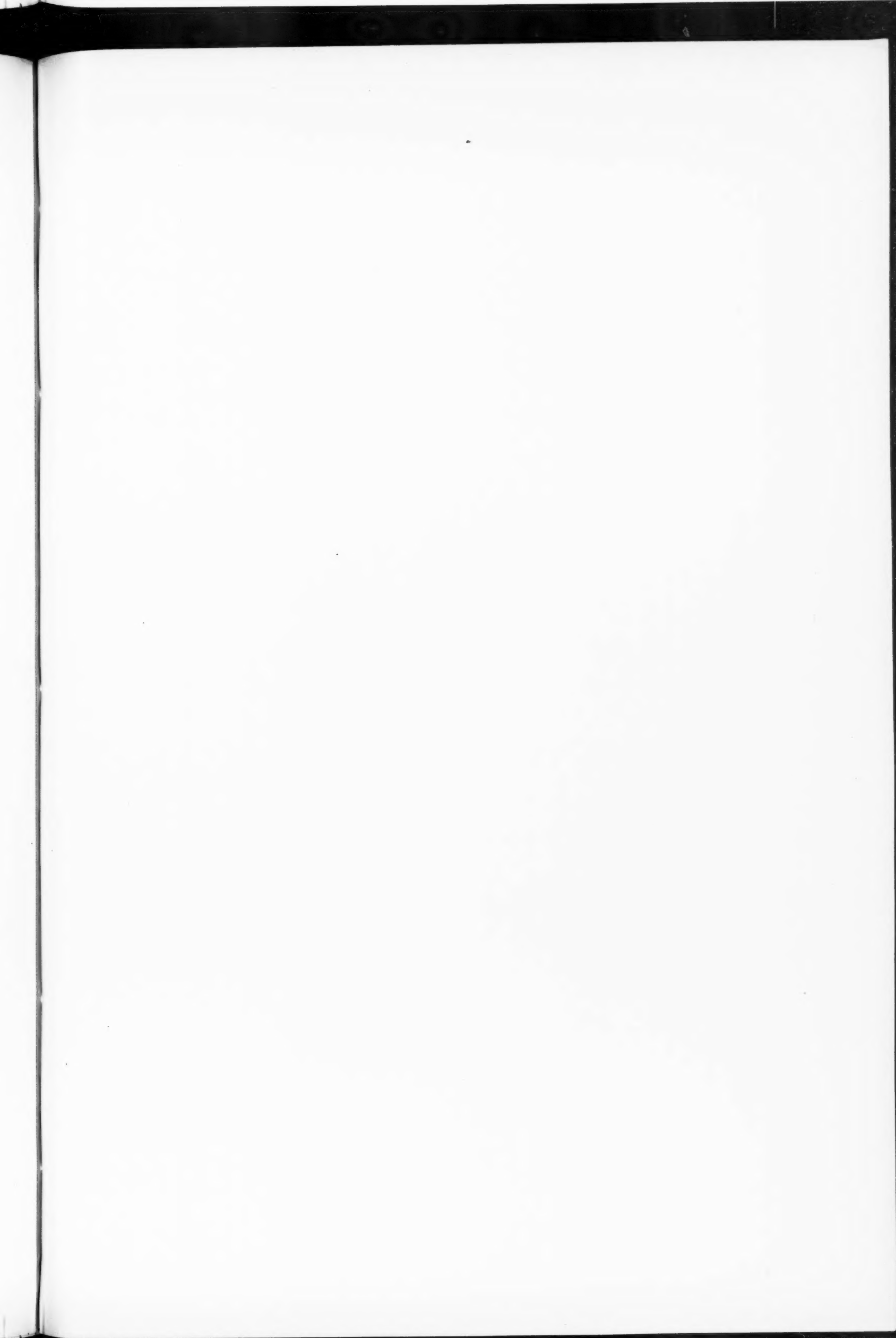
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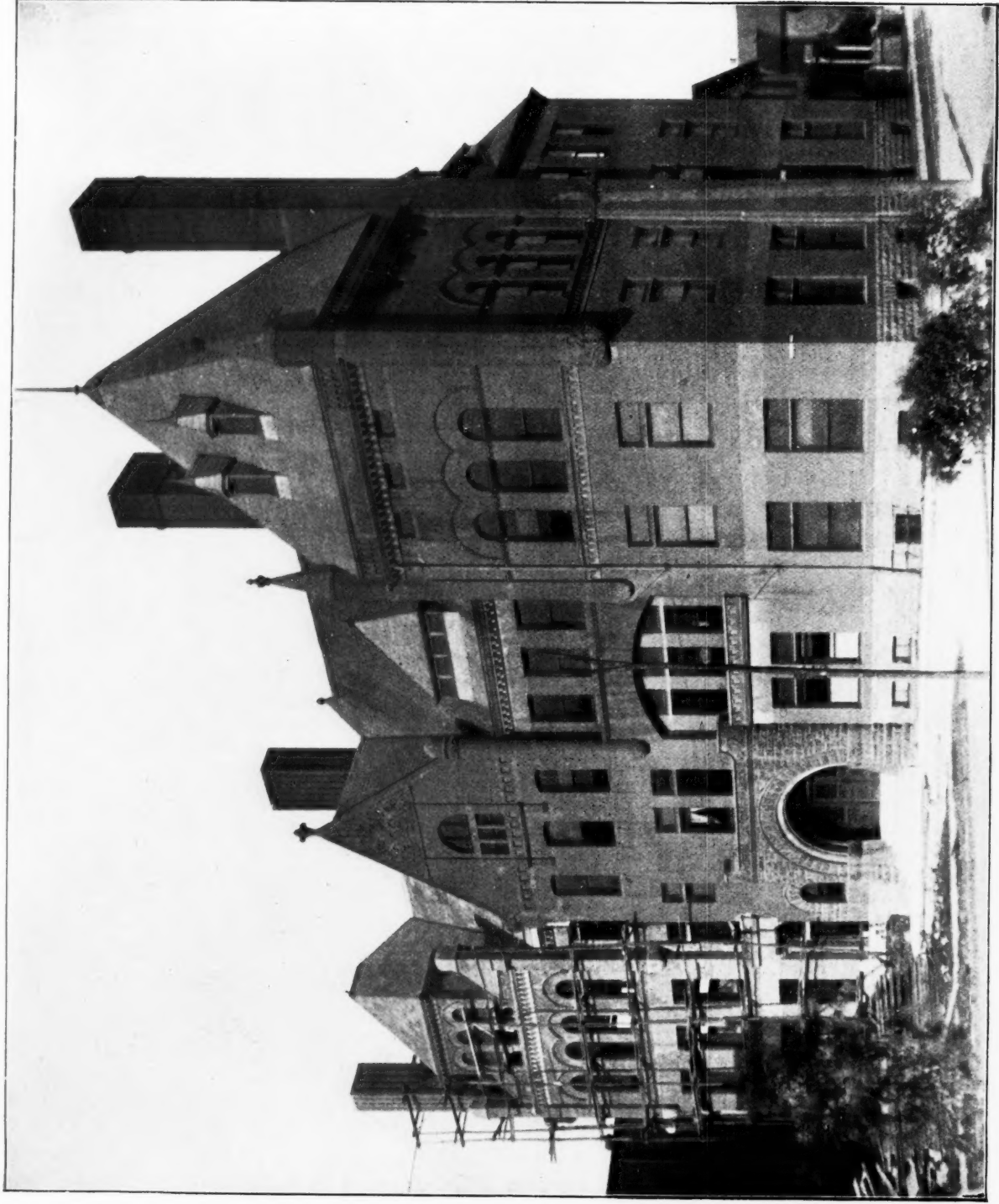


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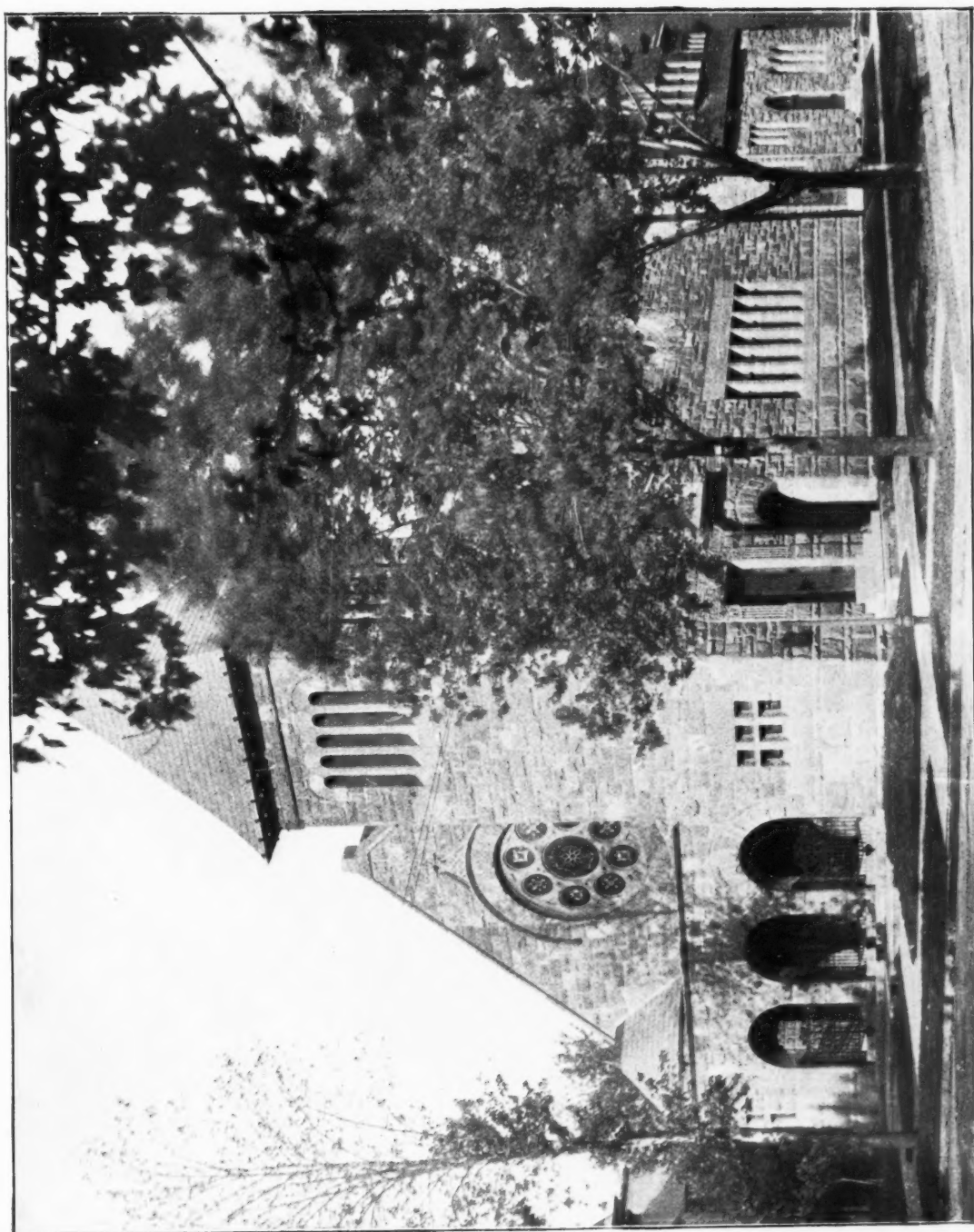


DETROIT MEDICAL COLLEGE.
M. L. SMITH & SON, ARCHITECTS.

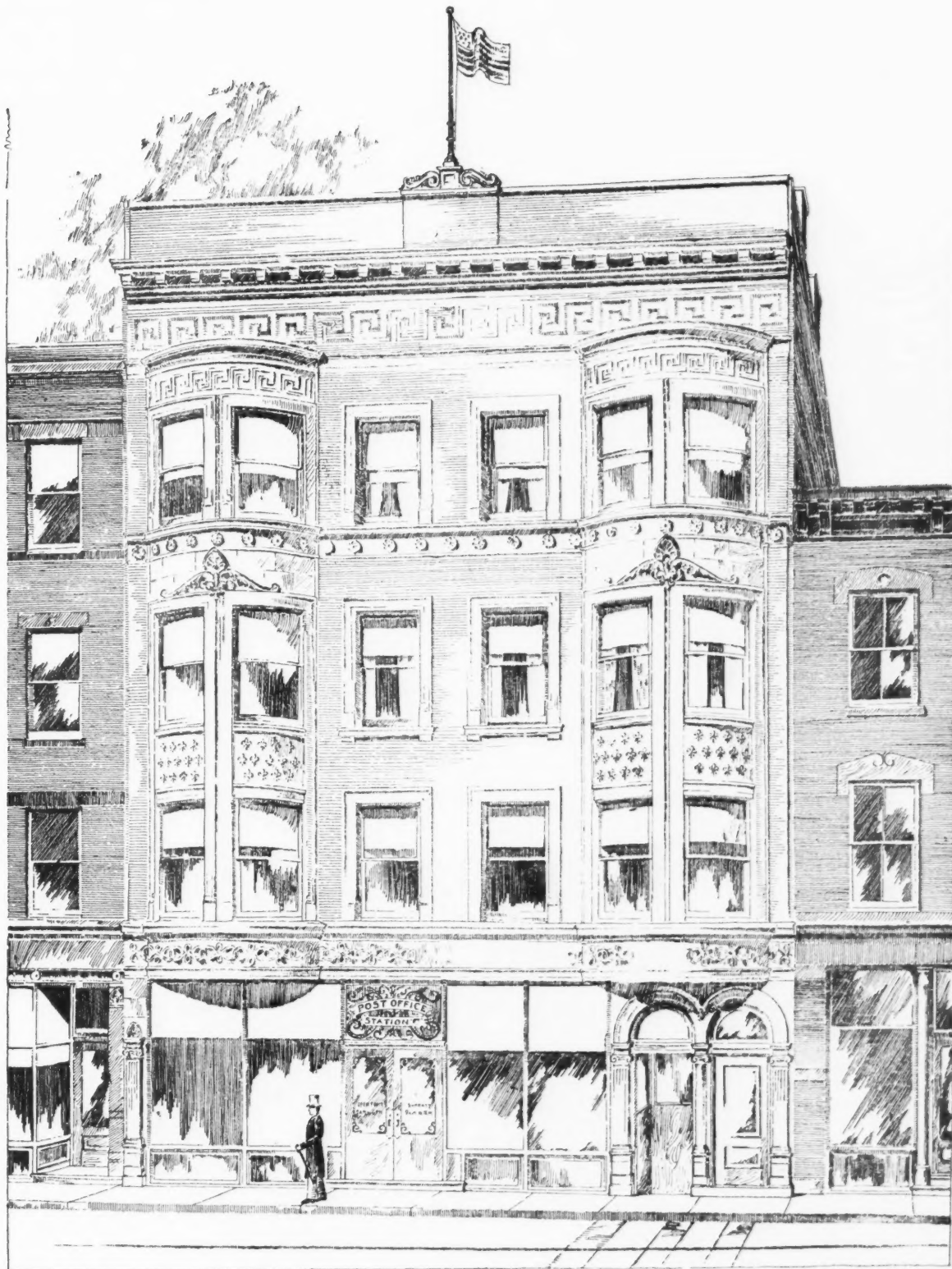


HOUSES FOR C. E. SPRINGER, CHICAGO.
CHURCH & JOHNSON, ARCHITECTS.

INLAND ARCHITECT PRESS.



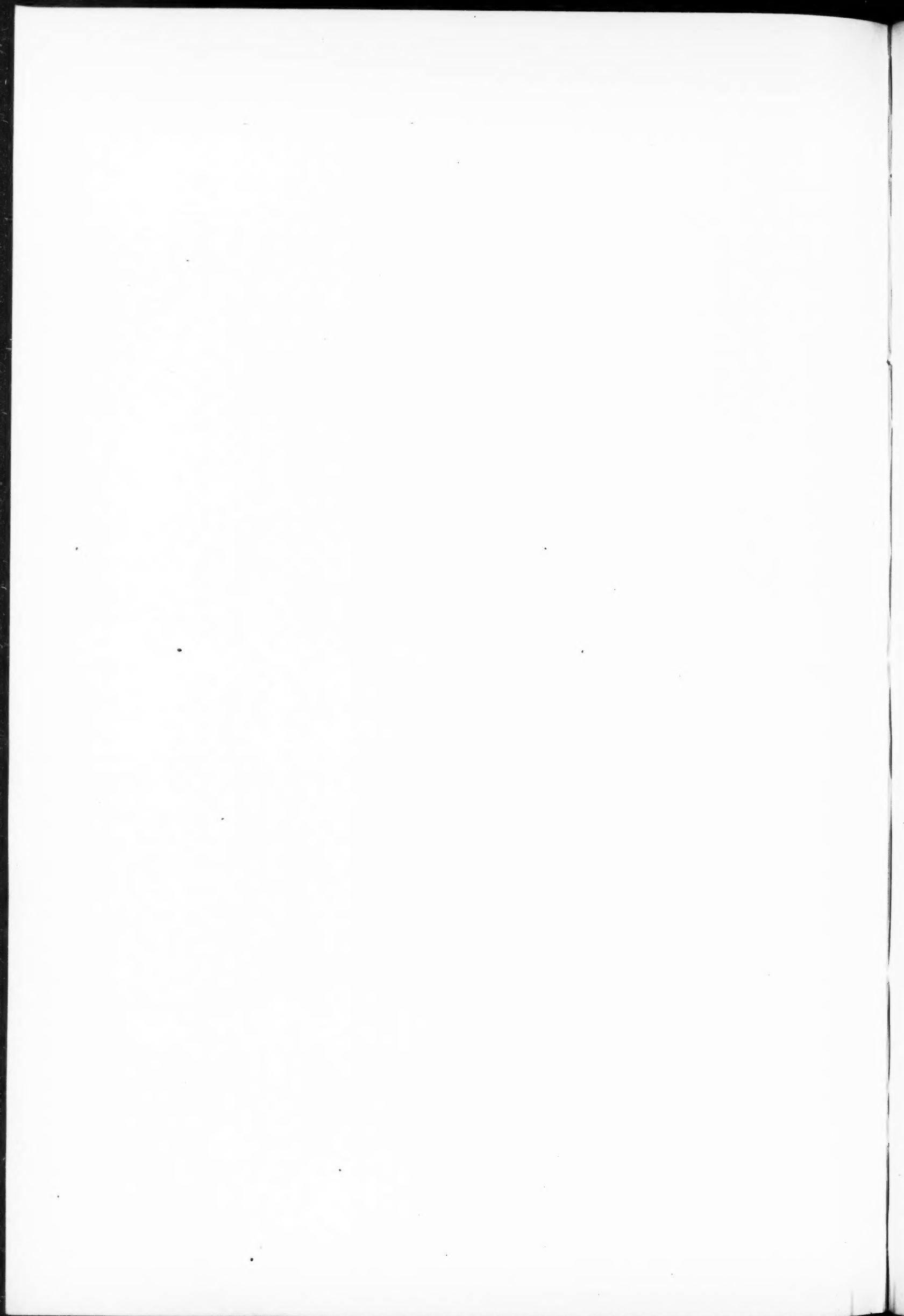
CENTRAL CHRISTIAN CHURCH, DETROIT.
MALCOMSON & HIGGINBOTHAM, ARCHITECTS.

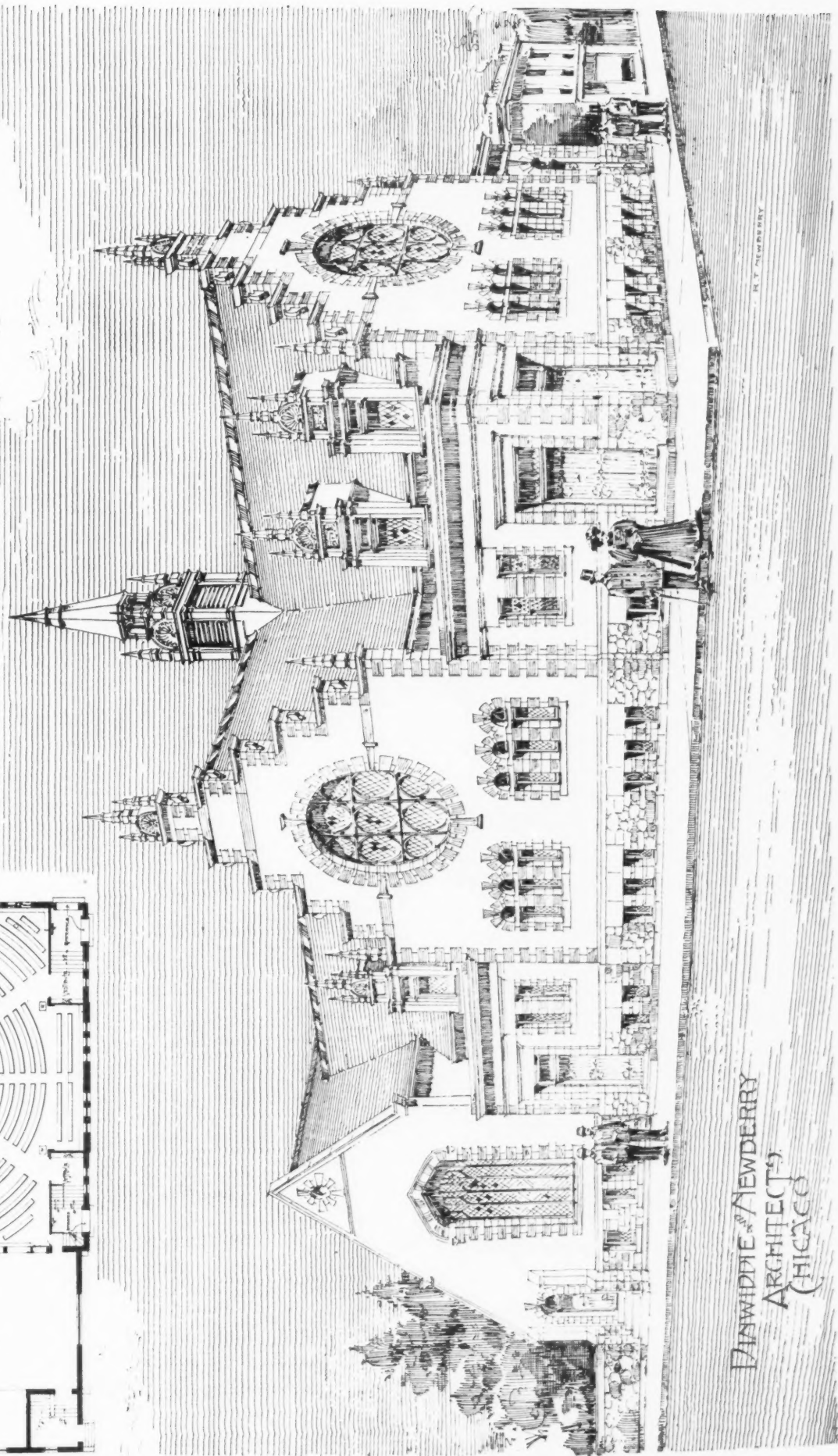
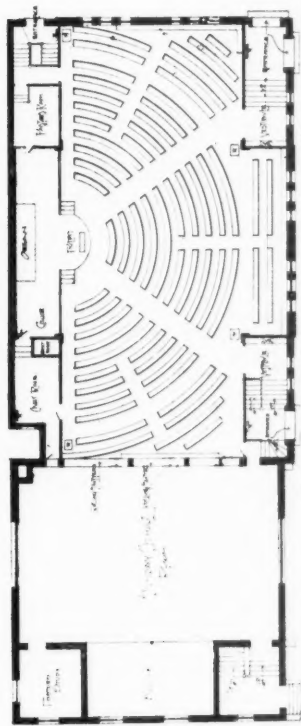


THE LEE BUILDING, ERECTED FOR POST-OFFICE. STATION C.
HILL & WOLTERSDORF, ARCHITECTS.



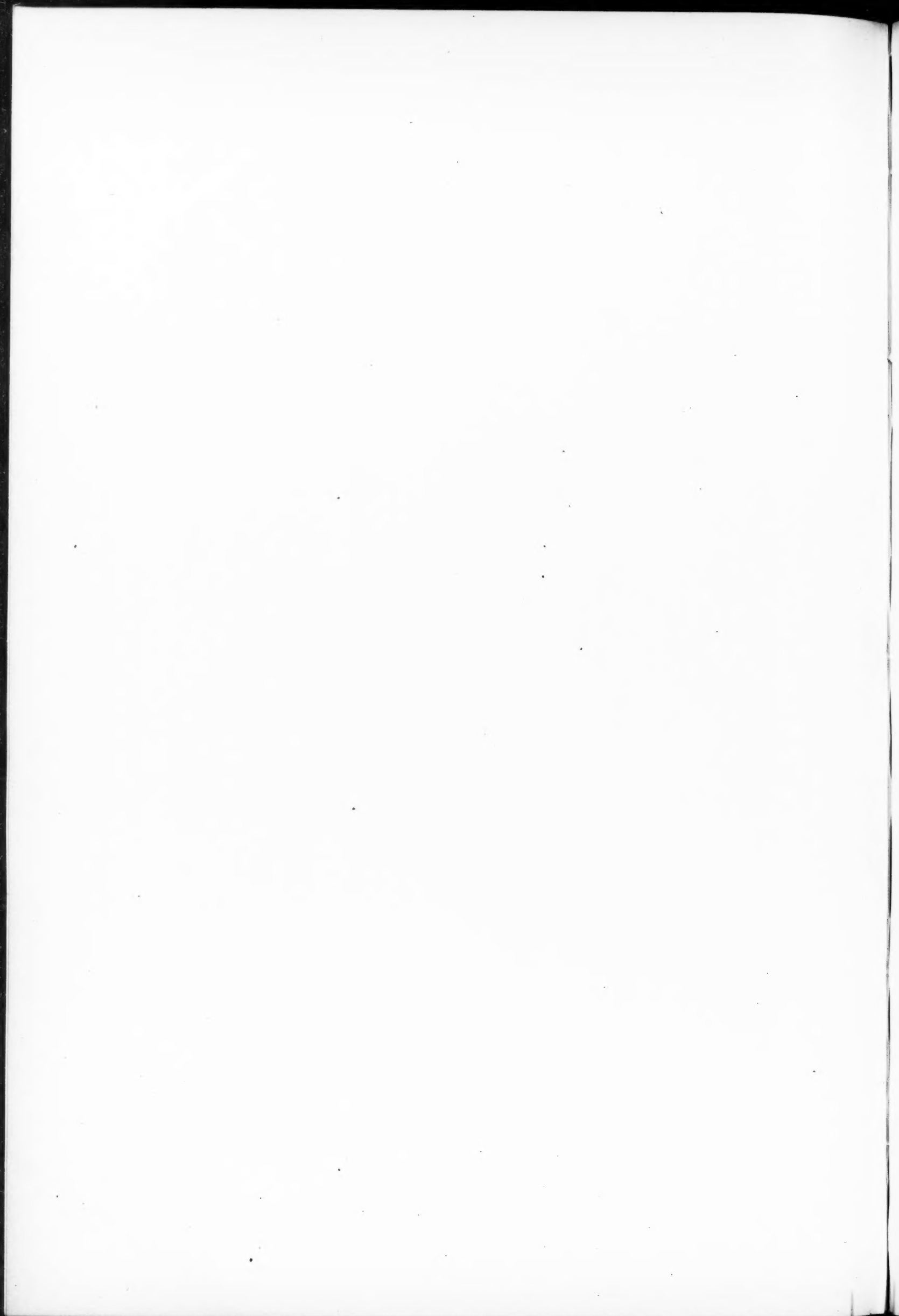
RESIDENCE FOR FRANCIS COLTON, WASHINGTON, D. C.
C. B. KEFERSTEIN, ARCHITECT.

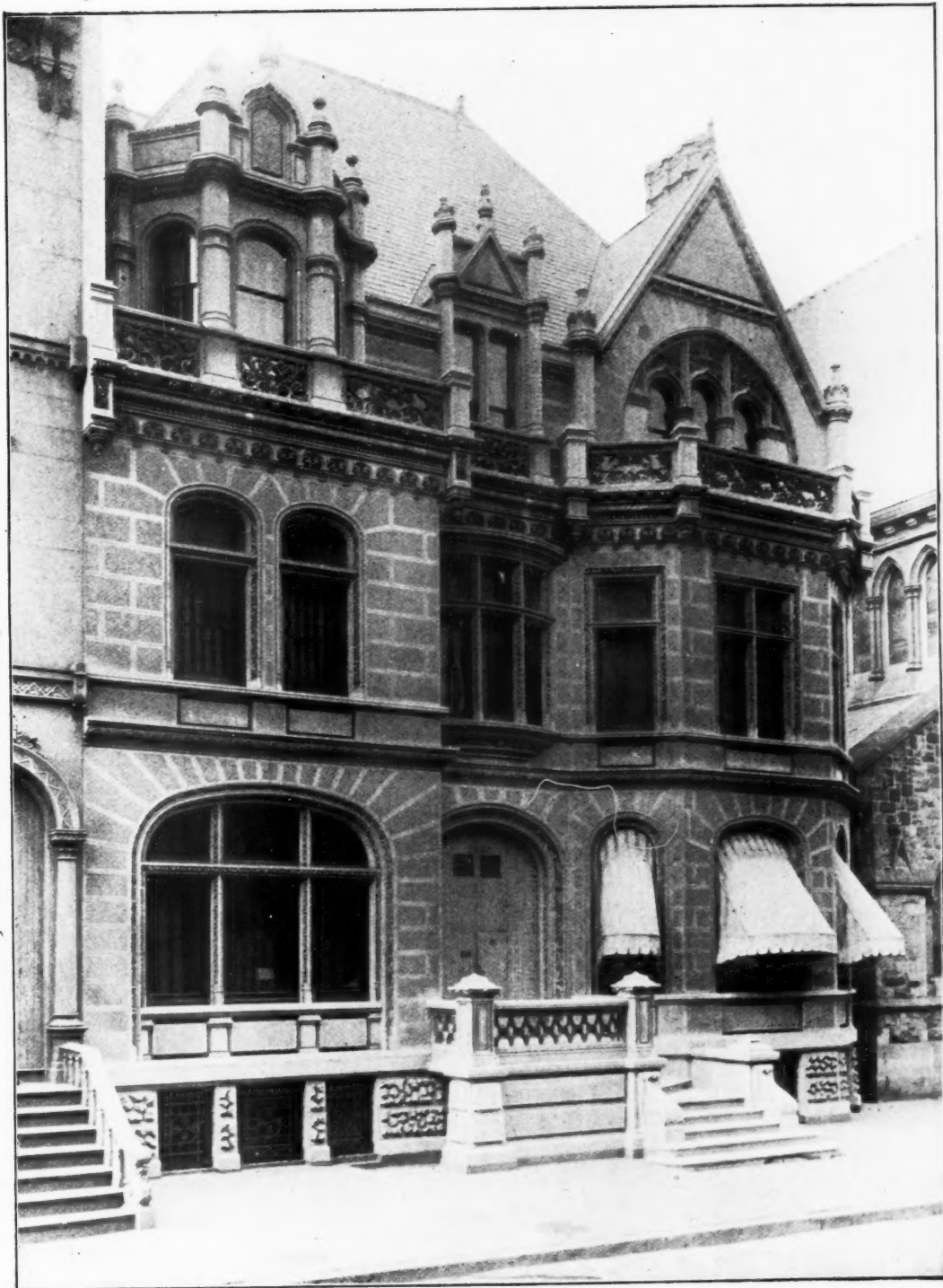




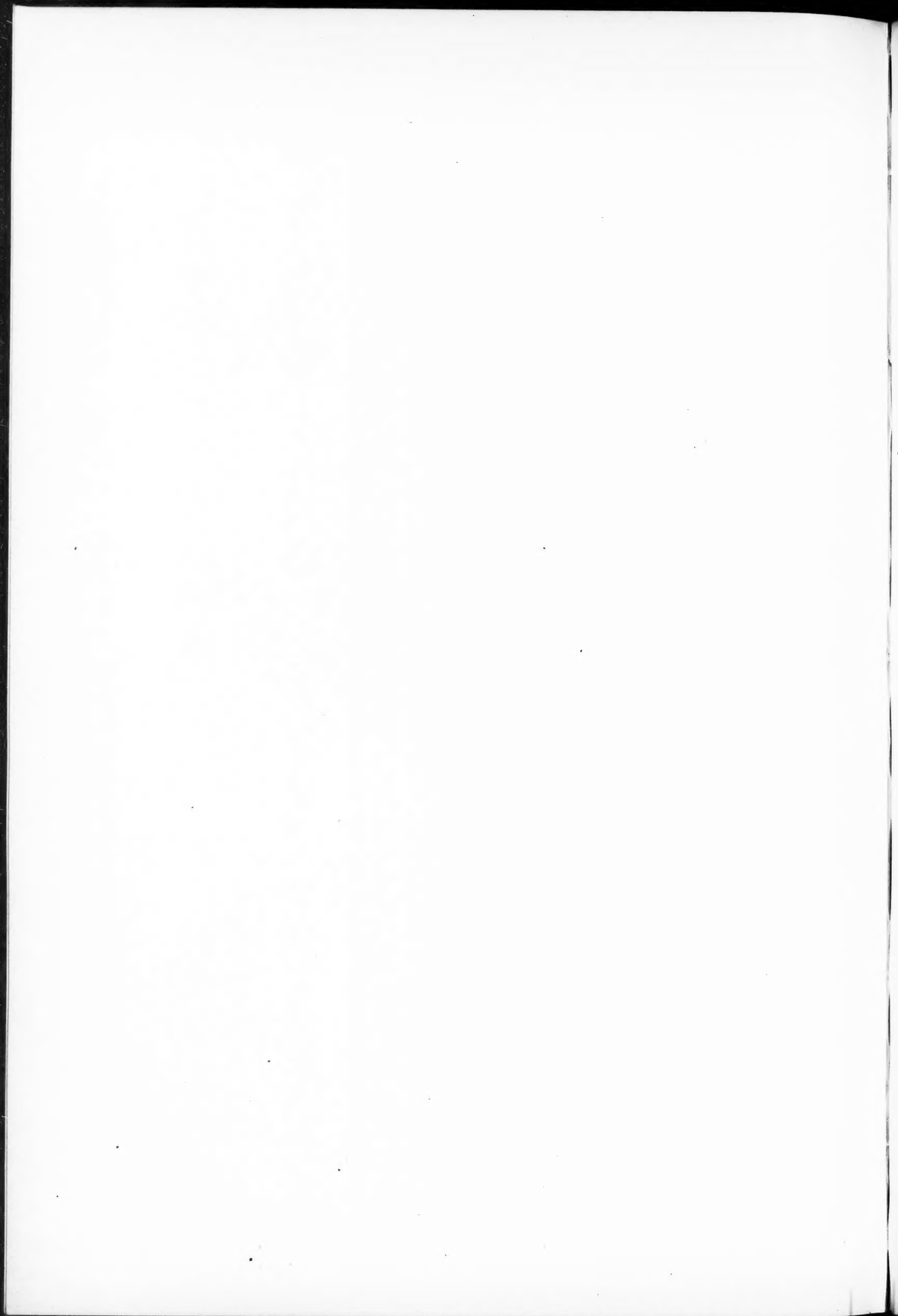
D. W. NEWBERRY
ARCHITECT,
CHICAGO

FIRST PRESBYTERIAN CHURCH, BATTLE CREEK, MICHIGAN.
DINWIDDIE & NEWBERRY, ARCHITECTS, CHICAGO, ILLINOIS.



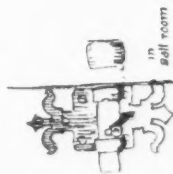


RESIDENCE IN PHILADELPHIA.





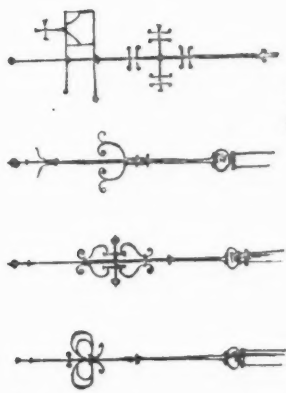
hinge for chapel
outer door



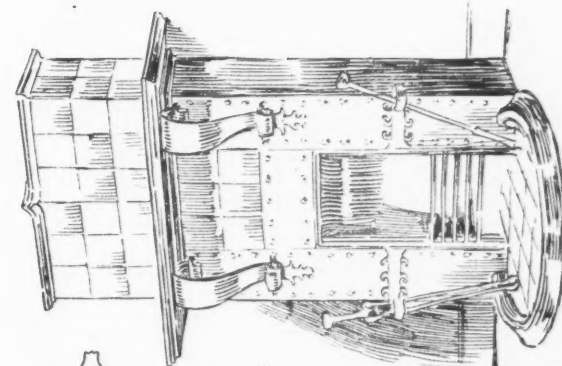
in
cell room



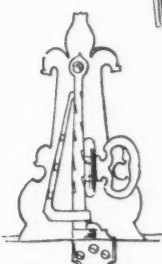
Hinges from Haddon



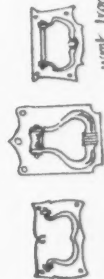
finials



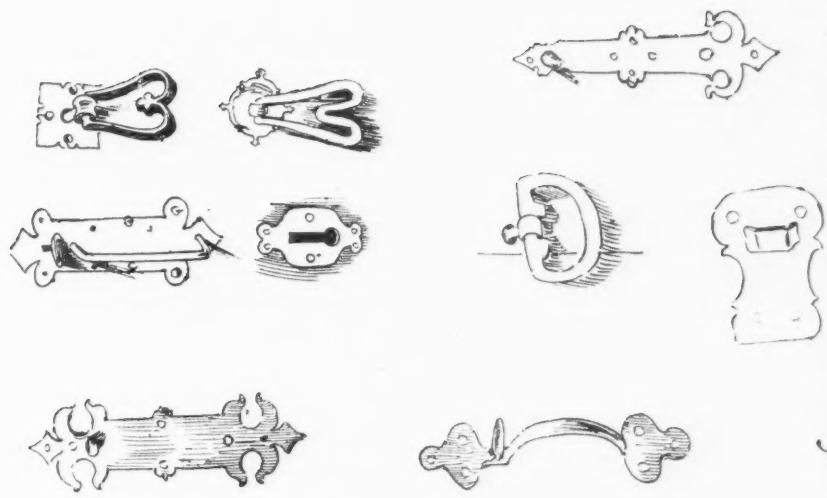
Wroth Ironwork
Mantel sic
M.S. Ch. Bank
Hollinwood
Edgar Wood Architect



Window plates



Wroth Iron
Handles



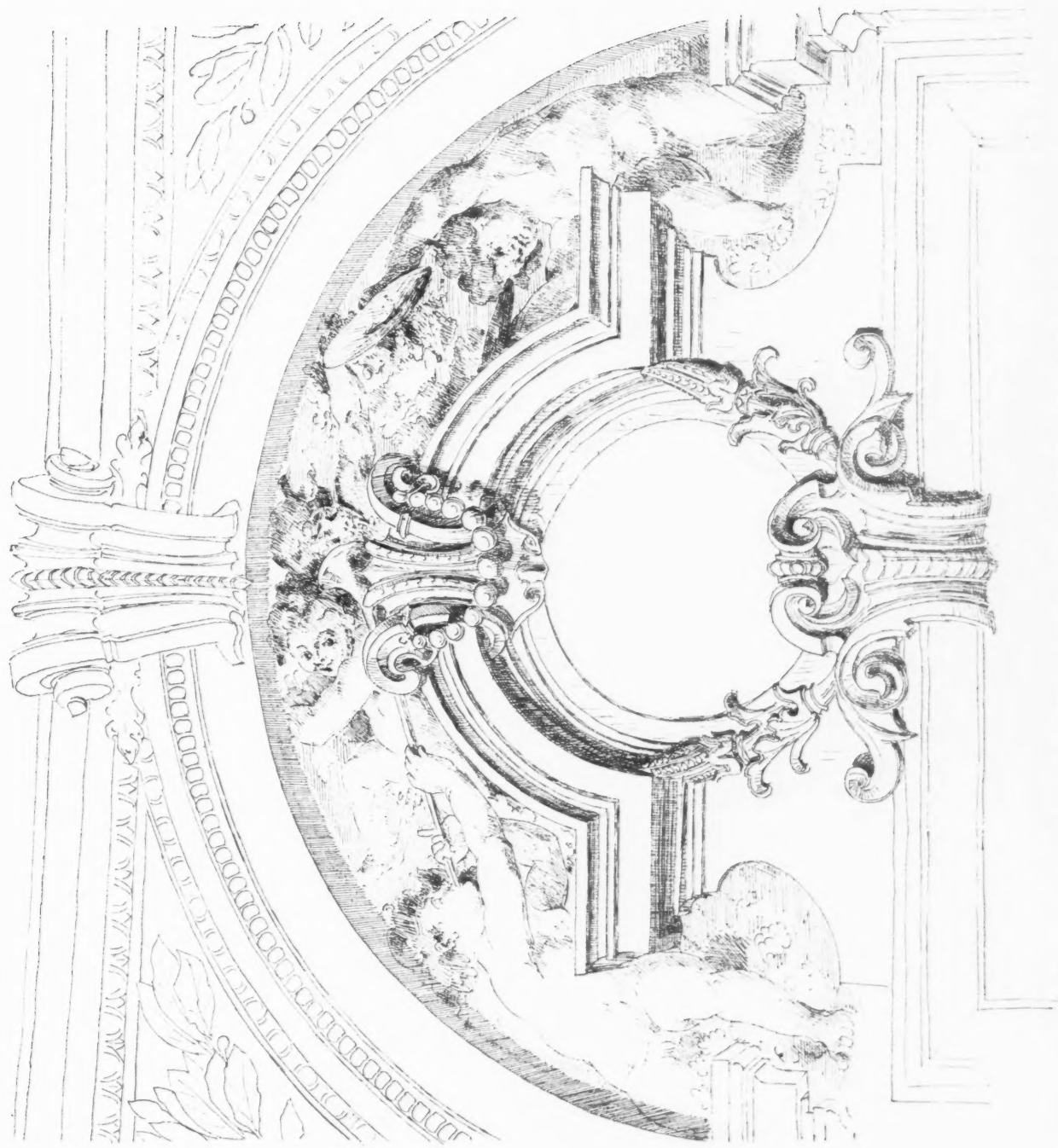
Latch plates & Handles from Haddon

NEW METALWORK BY GEORGE WRAGGE, Salford

REPRODUCED FROM THE BRITISH ARCHITECT.

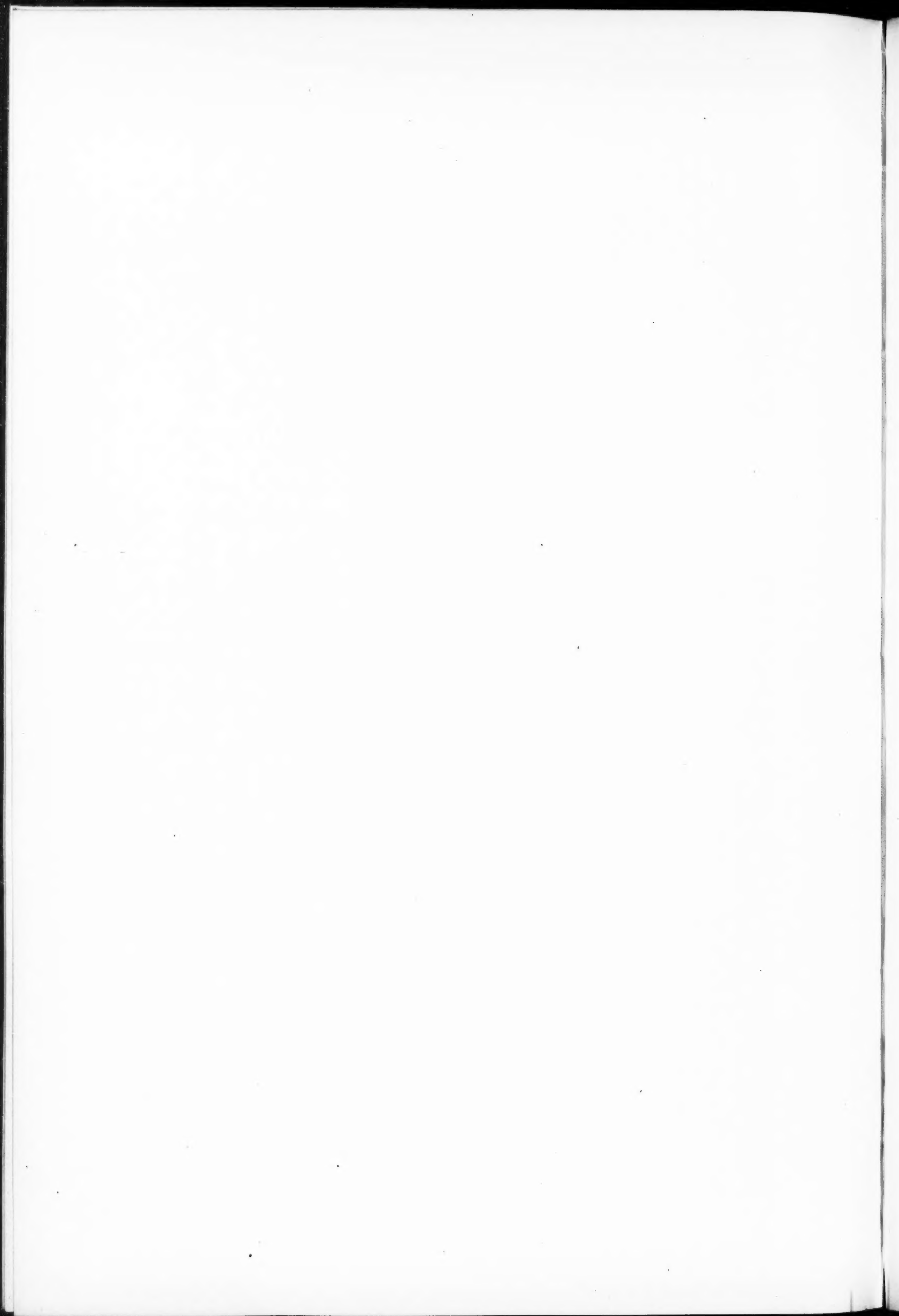


RESIDENCE OF D. A. DANGLER, CLEVELAND, OHIO.
FENIMORE C. BATE, ARCHITECT.



DETAILS OF CASINO AT MONTE CARLO.

CHARLES GARNIER, ARCHITECT.



\$4,616.48 per annum." "Had the fan system been adhered to, it is reasonable to assume that the saving in cost of heating and ventilation during twenty years, the estimated life of the apparatus in these thirteen buildings would have been \$92,329.60." "It is evident that materials of an inferior quality have been used in the construction of some of the apparatus." "The results of this inspection have fully demonstrated to the committee the importance of a careful preparation of the plans for heating and ventilating in connection with the architect's plans."

The committee estimated the life of steam apparatus at twenty years, and furnaces at ten years.

The "air space" per pupil ranged from a minimum of 165 to a maximum of 211 cubic feet per pupil.

The result of the examination and report is that since that date, every school building that has been erected has the fan system of heating and ventilation.

Hot-blast, or mechanical heating and ventilating apparatus, a complete whole, can be constructed and applied at less cost than any other system that will produce like results, and will maintain required conditions at less cost for fuel.

The foregoing statements are not theoretical; they are demonstrated facts.

(To be continued.)

ARCHITECTURE IN INDIA.*

BY N. N. WASLEKAR.

THE subject, "Architecture in India," I am requested to write and read before such a learned and appreciative body as the Illinois Chapter of Architects of Chicago tonight, is so vast and varied and totally exclusive in its nature that I really do not know, gentlemen, where to begin and where to end. I feel utterly diffident to do any justice to the task I have willingly undertaken, and I only hope that you will listen to me with indulgence.

The Indian styles of architecture are as varied and numerous in their details as are the different prominent peoples that had a sway over part or parts of that great continent of India, and even the few who have placed before the world the description of the varied architecture of that peculiar country had to invent names for the styles of architecture, and call it the Buddhist, the Jain, the Saracenic, the Mohammedan, the Pathan, the Hindoo Proper and the Mogul architecture, designating each by the name of the sects under whose sway the several buildings, grottoes, caves, monasteries, temples, etc., were being constructed and which stand prominently before the traveler at this day; but there is no material and prominent difference between some of them, and, strange to say, no records to tell us when each was built historically, and whatever dates recently fixed upon are by the several coins and inscriptions found and deciphered only within the last quarter of a century, and prove that the Buddhist and Jain structures were built about the same time, commencing a few centuries before our present era, and extending a thousand years from that date, and similarly as the Saracenic, Mohammedan and Pathan periods subsequently followed, and are nearly uniform in their styles. I shall broadly classify the whole of India's architecture in three subdivisions only, the Buddhist, the Mohammedan and the Hindoo, giving you, or rather attempting to place before you a description of the principal and world-wide known structures, one of each style—the Elephanta caves, near Bombay, of the Buddhist period; the Ellora Kailas Hindoo temple, constructed over a thousand years after that; and the world-renowned Taj Mahal of Agra, built still later on by the Emperor Shah Jehan of Delhi, of the Mohammedan period contemporaneous with the Elizabethan period—and touch some of the salient points of difference I may think of in connection with these.

But before I begin to describe each of these I must say something more of the historic period and begin from the very beginning. To the western, the Indian architecture is not only an architecture with which he does not care to be familiar, but it is not even congenial to his tastes. The reason may be because that architecture has exercised no direct influence on the later styles of Europe, but is peculiar to itself, being original; and strange to say that, although there have been so many influxes of different nations into India, the Indian has not adopted or even copied any of the western styles, but has simply held his own in its pure originality. Notwithstanding all this, the magnitude and importance of many Indian buildings, now measured, photographed and sent broadcast, show an exuberance of ornamental wealth and an inventive and artistic genius of no mean order. Although by far the larger number of these date subsequent to the Christian era, barring the Buddhist and Jain relics, they clearly manifest that wealthy cities and powerful peoples existed long prior to this era, and that some of the styles must have preceded the classic styles of architecture. In one solitary instance, a date 3101 B. C., corresponding with the Kaliyug of the Hindoo Aryans, has been discovered from the Sanskrit literature when the Aryans proper must have migrated into India through the valley of the Indus

and settled in Punjab and Northern India; and although no stone structures of that period exist, it may be argued that they never used stone but for the purposes of foundations, city walls, gates, bridges and embankments, and that all their buildings must have been built of wood, as is the case in Burmah and China this day, because wood can be easily carved and cut; it facilitates larger spaces being inclosed, and for the same outlay twice the space can be covered, color and gilding done better on wood; or, for some such causes stone was then not used, for had it been used, there would have been some traces left, and there are none to be found anywhere, nor coins or inscriptions of those remote ages discovered. The only clue left is to thrash the Sanskrit literature, a great mass of which still remains unexplored, if I may be allowed to use that term, and if this is done by the learned savants of Europe and Germany especially, and perhaps by the learned Pundits of India's soil, I have no doubt that something tangible on this point may be discovered.

Is it then worth while to go into India's architecture when it is so exclusive, tangled in such intricate meshes? I think it not only deserves a passing notice, but a careful study. Greece and Rome, gentlemen, are dead and gone. India is a living reality. Although there have been influxes, there have not been refluxes, as I said before. The result is that every art has its living representative, every science its illustration, and a majority of them not easily surpassed. The works of an immense portion of the human race who have shown themselves capable of artistic development must be studied; more so, when it is a living art and can only be seen in action in India.

It has been wonderfully developed since the twelfth or thirteenth centuries, during the Mohammedan period of India's history. It is not known, gentlemen, till this day what was the composition of the ingredients used in building structures to make them so lasting. I know in ordinary towns structures are standing this day, for centuries, they say, with cracks from top to bottom and don't give way. Stone not being used in remote ages, as I said, it is useless to look for any architectural remains till after the date of Gautum Buddha, 540 B. C., or rather of King Asoka, the disciple of Buddha, who reigned from 272 to 236 B. C. and who was the first to use stone in structures. Most remote of his relics now left are the *Lats*, or inscribed pillars, ornamented with bands and moldings crowned by a sort of capital. It has been surmised that these must have been approaches to Buddha's temples, now no longer found. Besides these there are *topes* which exist in numbers in India. These are either to note some notable occurrence or to mark sacred spots or to cover the relics of Buddha himself. *Topes* consist of a stilted hemispherical dome surmounting a circular structure, access to which is by steps with niches for the reception of sacred repositories. Central India is full of these, and the most famous of all is at Sanchi, about one hundred and twenty feet in diameter and sixty feet high. This was built by King Asoka. Of the various invasions which have overrun India, some have left traces in the architecture of India. Some semi-Greek forms are yet to be seen in the northern provinces, undoubtedly the remnants of the invasion of Alexander the Great.

Besides these there are caves, temples and monasteries hewn out of solid rock. The older monasteries cut in the rock are several stories in height, and it is probable that these cells must have been used by devout Buddhists for the purpose of meditation or habitation; but many of these, the Jain and the Brahminical temples, display rich ornamentation and very elaborate workmanship indeed. Intricate moldings and other fantastic embellishments abound in numbers. Columns of all shapes and sizes are found; brackets frequently used in lieu of capitals; and where capitals are used, almost every variety of fantastic form is noticeable. Some say no fixed laws exist and govern these relics, but original works of great antiquity do exist which show plans of buildings, their heights and details, and these could not have been merely thought of.

Buddhist structures are to be found in the north and west, while the contemporaneously built Jain structures abound in Central India on Mount Aboo and on Mount Girnar in Kattiawar. Coins found near here of first and second centuries of this era prove this. Buddhists never employed a true arch. Hindoos and Jains use stone arches, but these are invariably horizontal arches. Hindoos quaintly say that an "arch never steeps" which is always trying to thrust its haunches outward, whereas the horizontal arch is in stable equilibrium; but sometimes they carry this dread too far, as in city walls, where there is a superabundant abutment at either end to counteract the thrust, and the horizontal form is out of place here.

We now come to the second heading, the Mohammedan architecture. We all know something about the prophet Mohammed, born in 622 A. D. His caliphate since was recognized in Arabia, Syria, Palestine, Persia, and latterly in India, and Mohammedans having the whole of Upper India to themselves for over five hundred years, it was but natural that their rule should leave an impress on the architecture of India, and so Mohammedan style arose. This did not displace the previous indigenous art of each portion of that empire through which it made its headway, but the Mohammedan architecture at a glance shows itself everywhere, and as it has been in all the other countries, so it is in India. We see Hindoo and Jain temple and its architecture side by side with Mohammedan architecture. A mosque, or Mohammedan place of worship, appears in two forms. The earlier are all of them built in a style which is simplicity itself. Fancy a large, open courtyard with a fountain in its center, surrounded by arcades supporting

* Paper read before the Illinois Chapter of the American Institute of Architects at Chicago, on November 19, 1894.

timber roofs. On the side nearest Mecca, the arcades are increased to several rows in depth, so as to cover a considerable space. Here the devotees assemble, and here in a niche or recess, termed "Kibla," more or less ornamented, is kept the Koran, and hard by a pulpit is erected. A minaret or high tower in a conspicuous corner is built from which call to prayer is given, and is an indispensable adjunct to a mosque.

The second sort of mosque is a dome, somewhat of the pattern of a Byzantium domed church, with a central space, fountain, etc. The arches are all pointed. Gothic arch appears to have been discovered by the very earliest Mohammedan architects at a time when the style was in the zenith of its grandeur in India, and the beauty of the Mohammedan architecture is no doubt due to its adoption. Not the least notable features of mosques and tombs is the marble slab perforations of most exquisite patterns. The dome at Bijapur, a tomb larger than the Pantheon at Rome, is a tower which can vie in comparison with any similar structure of even Florence, and the most conspicuous of the monuments is the one at Agra, the Taj Mahal. These mosques are specially marked for the great skill displayed in roofing and lighting them. This is done by means of a series of domes raised on columns sufficiently above the general level of stone ceilings which cover the intervening space, to admit light under the line of the springing. The beauty of the marble tracery is very great. It is not of massive construction. Extreme lightness, great extent, skillful distribution and admirably combined groupings of features are among the main qualities of the Mohammedan architecture which give the whole structure a rare charm.

Having briefly touched the outline of the several phases of architecture as found in India, I now attempt to give you a detailed description of some of the principal structures mentioned above, and the description of the Kailas Hindoo temple will serve as an illustration of that style, and I shall now try to describe the Elephanta cave, which I must have visited times without number, being near my birthplace, Bombay, and which is the most ancient of all the Buddhist structures of India.

The Elephanta or Gharopuri cave, as we call it, is about six miles from Bombay, situated on the western hill of an island. It is 250 feet above the level of the sea. It is so called because elephants in stone were at the entrance of the harbor when lately the Portuguese occupied it. Daily excursions from Bombay at present leave for this resort. Mr. Prinsep and others fix the date of this relic at 200 B. C. from inscription found; but my friend, the late Dr. Rajendra Lal Mitra, LL.D., who was also honored with the title of Doctor of Philology by a German university, for his researches, etc., has fixed its date at 300 or 350 B. C., which has been since recognized. It seems others had overlooked the twelfth line of the inscription in the Pali language which read, "Nanda, King of Maghada," and it is known from Sanskrit literature that Maghada reigned later than 300 B. C. It is said by a Portuguese writer that a notable inscription was removed by them and is nowhere now to be found. This cave, therefore, is contemporaneous with the Buddhistic period, and the celebrated Ellora cave resembles this in details.

The Elephanta cave is hewn out of a hard trap rock which has been cut away on either side, leaving open spaces at each end, and does not cover the whole area, one hundred and thirty feet square. The principal entrance faces north. Omitting these spaces and back aisle in front of the principal sculptured monuments described later on, the cave proper is ninety-one feet square. It is supported by six rows of columns, six in each row, except at the corners on the west side, to make room for a shrine which occupies a space equal to four of these columns. By actual measurement, it could be seen any day that scarcely two columns are exactly similar in sizes, and even in their principal details or heights, and very often not even square, nor three in a line. The angles at the corners are far from right angles, and the depth of the cave varies, or the floor is not parallel to the ceiling, and hence the height of the columns varies from fifteen to seventeen feet. The porticos have each two pillars and two pilasters. The columns are very massive and were originally twenty-six in number, but eight or so are now nearly broken. It is said that a Portuguese soldier cannonaded the interior to enjoy the sound of an echo! and hence the partial destruction. We notice now that the present government is taking stringent measures to keep what is left intact. The portico on the east side opens into a court, and with a flight of steps leads one to a smaller cave. At the other end of the great hall is also an open court, with a water cistern on south side. This water is very cooling and refreshing even now, and shows there is a spring hard by. At the other side is a small open chapel with a *linga* shrine at the back.

The most striking of the sculptures in this cave is the world-wide famous colossal three-faced bust of *Trimurti* or the Hindoo trinity of Brahma, Vishnu and Mahesha or Siva, at the back of the cave, facing the entrance. It rests in a recess ten to eleven feet deep, about double that in width, rising from a base three feet high. At the corner of the opening both in floor and lintel are holes to receive doorposts, and in the floor is also a groove, as if a screen was used in days gone by to keep back the crowd of devotees. The central face of this *Trimurti* has a mild and calm appearance of Brahma, the creator, the lower lip thick and the breast ornamented with large stones, in the center of which is a rich jewel carved. In the left hand he holds a *Kamandalu*, or a drinking vessel of an ascetic *Yogi*. The nose and right hand are mutilated. The *muguta*, or headdress, is fastened by folds covering the neck. The whole is beautifully carved and is the finest specimen ever to be found anywhere. To the right of this central

figure is that of Siva the Destroyer. The peculiar feature of this image is that he grasps in his hand a cobra twisted round his wrist, and the cobra with its hood expanded looks him in the face, while he in return looks at him with a grim smile. One can see his tongue in his slightly parted lips. The third face of the *Trimurti* is that of Vishnu, the Preserver, holding in his right hand one of his emblems, namely, a lotus flower. This is very tastefully sculptured. On each side of the above *Trimurti* stand gigantic *dwarvals* or doorkeepers, twelve to fifteen feet high, resting their hands on separate dwarf demons seven feet high, one in a noticeable crouching position. I told you at the outset that before we come to the rear, we pass over a shrine. Here are also to be seen *dwarvals* in a row, large or small, tall or short, round the four sides of the shrine. It is entered by doors from four sides and one gets into it by a flight of a few steps and is consequently three to four feet over the general level of the cave. It is dedicated to Siva, *linga* of hard black basalt being placed there on an altar three feet high. The inside is all plain and needs no mention. Then there are several compartments recessed all to the right and left of the *Trimurti*, in one of which is a gigantic figure of *ardha nari* or half man and half woman, resting on *nanda* or bull. Headdress is carved on one side and on the other her hair is shown falling on the brow. This is in good preservation. Then there are several gods—Vishnu, Garud, Indra or the Jupiter Pluvius of the Hindoos, with their respective peculiarities, are clearly discernable. In one of the compartments Siva and Parvati are carved—he sixteen to eighteen feet high and she about four feet shorter than him. From his crown or *keshakalp* rises the three-headed female figure representing either the three great rivers of India—the Ganges, the Jumna and the Sarswati—or, their names being the namesakes of the three wives of the three figures of the *Trimurti*, the figure may be said to represent them. She wears a circlet round the brow, from under which her hair is represented falling in curls and decked with ornaments with a sort of cushion behind the neck, perhaps of the back hair. Another compartment represents the marriage of Siva and Parvati, in which she is made to stand to his right, the only time when a Hindoo wife stands to the right of her consort, and the celestial attendants (*gandhervas*) and *apsaras* (or fairies), rejoicing over the event, are shown throwing flowers over the couple. These are very beautifully carved under the ceiling. Another place the ten-headed and twenty-handed Ravana or King of Ceylon is represented in all his grandeur, but the face and hands have been mutilated. Passing along you come across Kalprhati's image. The headdress is high, the face is full of rage, lips set, and eyes larger. He carries over his shoulders a rosary of human skulls and holds a naked sword in his hand, just in the act of killing his victim. Another place Mahadev is represented dancing his peculiar dance, the *landava*, all gods attending, and in the last compartment Siva is represented as a great ascetic or *Yogi* or Buddha-like. How Siva and his attributes came to be carved in these Buddhistic relics is a mystery not yet solved; perhaps the lost inscription would have told us; but we must not forget that Hindoo-Aryans lived during all these periods, aye, ages before these periods, and this fact may solve the riddle.

By a flight of steps we come to a courtyard opening to the north. To the south side is a temple raised on a basement and on each side of its entrance, on bases, stand tigers. I happened to have my photo taken here, which you can see. This temple has two porticos, chambers each side, a *dwarpal* in front and at the back a *linga*. Besides this great cave there are three other caves on the hill at no great distance and quite distinct from this. They are now in a dilapidated condition, filled with debris, and need no special mention.

(To be continued.)

APARTMENT HOUSES.

IN an article upon the subject of apartment houses, Architect J. K. Cady, of Chicago, in the *Economist*, makes pertinent remarks regarding the too prevailing carelessness and incompetency of architects in the planning of flats. After pointing to the impossibility of securing tenants for the old badly planned office buildings because of the improvements in the new, he predicts the same fate for the badly-planned flat building and says:

"As in an ordinary dwelling we find the parlors, library, dining room and kitchen in the lower story, while the bedrooms and bathroom are in another group above, isolated so as to secure the utmost privacy and quiet, so we should naturally expect that apartment houses would be arranged so that the public rooms of each flat would be kept near its entrance, while the private rooms would be another group disposed so as to permit passage from one to another with at least as much privacy as in the dwelling. It will be readily seen that such an arrangement secures greater quiet for the bedrooms than is possible in the second story of the ordinary dwelling, because in the apartment house bedrooms are over bedrooms, while in the dwelling house they are over public rooms, and the disturbing sounds of musical instruments and of voices are heard through the floors and open stair halls.

"Now what do we find in the prevailing types of Chicago flats? Complete and flagrant disregard and violation of every canon of house planning meet us at the door. Bedrooms are sandwiched between public rooms and cut off from the bathroom in such a manner as to make it impossible to pass from one to the other except in full view of the parlors, front hall or both, and so depriving the occupants of these chambers of the quiet and

privacy which are their right; bathrooms open from the front hall, oftentimes directly opposite the entrance from the public halls, and cunningly planned so as to advise all visitors whenever the bathroom is occupied, and, in many cases, a very slight knowledge of plumbing acoustics is required to enable the visitor to accurately determine which piece of plumbing is in use. In some cases a complete isolation of the bathroom has been accomplished by returning to the "privy in the backyard" idea, and the unfortunate tenants—and their guests—pass from their bedroom through the dining room or the kitchen, or both, in order to reach this room, which should be easily accessible with the utmost privacy.

"Kitchens are planned to open directly into dining rooms, and doors are placed so that full and complete views of the culinary department, together with accompanying sounds and odors, are forced upon the visitor at the entrance door and at the table.

"It is not difficult to see that such arrangements diminish the attractiveness of apartment houses, and that the better tenants, those who have regard for the ordinary decencies of life, will eventually be driven into better planned dwellings, and that means empty apartments of the type now prevailing.

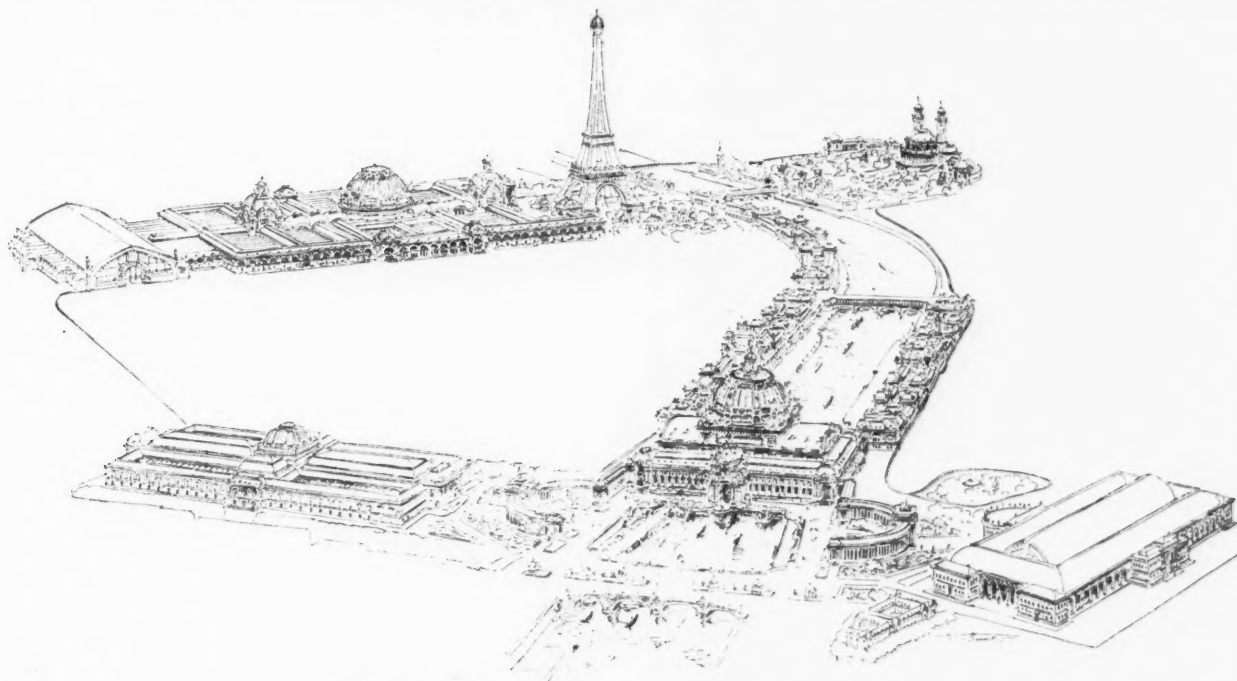
"Tenants have been tempted into flats by the glitter of bronze, the polish of marble and of hardwoods, a show of grille work or

river is to be by bridges, especially one great one opposite Les Invalides.

In their designs the competitors were to indicate the uses to which the different localities would be put, and especially note the main buildings and other principal edifices, among them the following: A great Festival Hall (*Salle des Fêtes*); a hall for World's Congresses; an Administration building; the connection between the opposite banks of the river; parks, gardens, fountains and other decorative features; means of transportation for visitors. The entrances are to be especially studied and arranged for the circulation of large crowds, both outside and within the grounds, and large space reserved for carriage stands. All the dispositions to be made in such manner as not to interfere with the general use of the public thoroughfares in the vicinity, and to always allow the free circulation on the public streets now passing through the grounds.

Also the competitors were to reserve large spaces for the buildings of foreign countries, locate power-houses, etc., for electricity, and to arrange for theaters, restaurants, etc. They were given complete liberty to retain or to remove any of the buildings now within these grounds, excepting only the Trocadero, and certain fine plantations of old trees.

In all the studies, designers must keep in mind the classifica-



BIRD'S-EYE VIEW OF THE DESIGN SUBMITTED BY MR. HERMANT.

In this plan, which is among the best submitted, the author retains the Machinery Building, the Eiffel Tower, and the Palais de l'Industrie, making the river Seine the great artery of the exposition. He places the main entrance at the extremity of an extraordinarily large bridge. In front of this double entrance is erected a great palace, directly over the river, the "*Salle des Fêtes*," and the vestibule of the exposition. Beneath it is a great illuminated grotto, as a landing place for steamers, gondolas, etc. The Fine Arts Building is to be an immense affair at the left, filling the esplanade of Les Invalides.

parquetry, sideboards, cabinets, mirrors and beveled glass, but all of these things will fail if the essentials of the home are lacking.

"Convenience of arrangement, privacy, light, etc., are the essentials in flats as in the ordinary dwellings, and no investor can afford to disregard them."

Although Mr. Cady overlooks the principal defect in flat construction—the drumhead-audiphone combination in the construction of the floors, his remarks are most pertinent.

THE EXPOSITION OF 1900 AT PARIS.

THE great preliminary competition for the lay-out of the exposition of 1900 at Paris has just been closed, and, according to the reports in the Parisian papers, it has been one of the most remarkable that has ever taken place either in France or the whole world. Twenty-three of the great rooms at the Palais de l'Industrie were completely filled, representing the work of over one hundred distinguished architects. In accordance with the French custom the exhibit was thrown open to the public previous to the deliberations of the jury, and the architectural papers are filled with descriptions and sketches—this description and sketch being reproduced from *L'Architecture*:

The jury met for the first time December 17, and, after formal organization, was addressed by the Minister of Commerce. In the course of his remarks he said: This competition was laid out upon quite strict general lines, yet, nevertheless, left as large a field as possible for the imagination and invention of the artists. The space to be devoted to the exposition includes the Champs de Mars, the Trocadero and its grounds, the esplanade of the Invalides, the Palais de l'Industrie, together with strips of land joining all these different localities, stretching along on both sides of the Seine. The necessary connection between the two banks of the

river and necessary proximity of materials and processes of manufacture.

While given complete liberty as to the choice of building material, the authors were required to consider everything as entirely temporary, and to produce the most effect in the most economical manner.

Four months were given for the preparation of designs. The jury is composed of thirty-one persons, ten of them being elected by the competitors. The following prizes were offered: Three prizes of \$1,200, four prizes of \$800, five prizes of \$400 and six of \$200.

More than six hundred competitors entered their names for this competition, but actually only 107 sent in drawings.

In conclusion, he said, "It is not necessary for me to remind you that in accordance with custom, each of us will refuse to take part in the discussions and voting upon the designs of anyone related to ourselves; and in closing my remarks, permit me to thank you, gentlemen, for the work you are about to undertake, and upon which to so great an extent must depend the success of the exposition of 1900."

THE University of Illinois asks for competitive designs for an association building for the Young Men's Christian Association and the Young Women's Christian Association at Urbana, Illinois, the competitors to be architects, graduates or students of the University of Illinois. The cost of the building is limited to \$50,000, and prizes will be given of \$200, \$100 and \$50, the competition to close on February 19. The architect obtaining the first prize, if competent, will be assigned the work at 2½ per cent, the prize money being considered as a first payment for his services as architect. S. W. Parr is chairman, and N. W. Marsh, secretary of the building committee, from whom particulars can be obtained.

THE GOVERNMENT ARCHITECTURE BILL.

THE following circular letter, which architects are requested to keep on their desks, to make constant and repeated efforts, and not to lay the matter aside until the bill is passed, has been issued by the committee of the American Institute of Architects for the information of the profession and public, regarding the status and purposes of the McKaig bill now before the United States Congress:

We inclose herewith a copy of the bill relating to the reorganization of the government architect's office, which was introduced into the House of Representatives by Mr. McKaig, and into the Senate by Senator Brice under the following circumstances:

This bill originated with a few architects in New York city, who happened to learn that notwithstanding the controversy between Secretary Carlisle and the American Institute of Architects, the Treasury Department was anxious to reorganize the Supervising Architect's office, and to have a bill introduced to this effect, because of the many objectionable and illegal features of previous bills—notably the "Tarsney Bill"—which made them undesirable as well as inoperative.

The "McKaig Bill," which was drafted by Mr. George B. Post, of New York, in consultation with these New York architects and with the Treasury Department, embodies an entirely new idea which is based on the very satisfactory lines under which a number of government departments—notably the Lighthouse Department—have been conducted most successfully for a number of years; by placing the initiative and professional work under the management of an expert board, of the highest standing, under whose direction the work would be distributed for the best advantage of the country, of the work, and of the profession; leaving the administrative work in the hands of the government, where it belongs.

The bill as originally drafted was revised a number of times by the committee of architects on the one hand, and by the Treasury Department on the other, and as introduced was entirely satisfactory to all parties concerned. Though many of the minor details may not apply to individual cases in individual sections of the country, they had to be adjusted so as to cover the entire territory, and also so as to meet administrative, legal and other objections not generally appreciated by the profession at large. The powers of the commission are such as to enable them to modify these details from time to time, as they find it necessary and wise. The principle of the bill, namely, of instituting a commission of high character to have charge of the architectural work of the government, and to distribute the work among the most skillful architects of the country, is unquestionably a correct one.

The bill has received the approval of the Secretary of the Treasury. It has passed the Committee on Public Buildings and Grounds, of the House, whose endorsement could not be stronger, and the bill is now regularly before the House. Owing to its introduction at the end of the last session of Congress, at a time when the House was entirely absorbed by the tariff revision, it was impossible to have a day set for its consideration and passage; therefore it had to go over to the present session of Congress.

In the House Committee's report to the House, recommending the passage of the bill, they state, among other things:

"Your committee do not believe that the beneficial results that should be obtained are obtained under the existing methods of planning and constructing public buildings of the United States."

"While the employment of the best artistic thought, and best and most approved systems of construction and equipment ought to be represented in the public edifices of this great nation, the contrary of these propositions is the result obtained under existing methods."

"Your committee are advised that the best and highest types of artistic thought and architectural skill in European countries is found in the government buildings of those countries, while in this country the reverse is the rule, and superiority of architectural design is represented in state, municipal and private buildings, and not those erected by the general government."

"A comparison of modern buildings erected by private citizens and corporations with those belonging to the government of the United States will show, as to the former, constant progress in construction and artistic expression, and continual increase in economy of construction, while in the case of the buildings of the United States there has been but little, if any, advancement. The buildings constructed recently by the United States, as compared with those constructed a quarter of a century ago, show a marked deterioration of artistic quality. The cost has been, relatively and positively, much greater than those of private buildings of the best type."

"Your committee has been furnished reliable and trustworthy information and data, showing the cost of the best type of buildings constructed for states, municipalities, corporations and private citizens range from 38 to 50 cents per cubic foot of space, while the cost of buildings constructed by the United States ranges from 50 cents to \$1 per cubic foot."

"The conditions and results which your committee thus call to your attention, necessarily follow the methods and practices now employed by the government."

"It now transpires that the time of the Supervising Architect is wholly employed in matters of administrative detail, and the architectural work of the office, the plans, designs and specifications, are prepared by mere copyists—cheap clerks."

"After entering elaborately into the present duties of the Supervising Architect, and showing the physical impossibility for one man to find any time for designing, the report continues:

"The Supervising Architect rarely sees one of these buildings while in course of construction. Its construction is generally under the supervision of some local carpenter or builder, who never made any pretense to architectural knowledge or study; whose appointment was secured not because of his skill but because of the political influence he could marshal, and whose greatest solicitude is to prolong the tenure of his employment by delaying the completion of the work."

"A building which, if the property of a private citizen, would be constructed in months, when erected by the government requires years for its completion. A public building at Detroit, Michigan, where the construction was authorized eleven years ago, and \$1,300,000 appropriated by Congress years since, the foundation walls are not yet completed."

"Indeed, the abuses in the method above referred to, have become so serious that the committee cannot conscientiously recommend public buildings at many places where the economical and convenient transaction of the business would require to justify such buildings could they be provided at a cost not greatly exceeding the necessary expenditure by a private owner for similar purposes."

"Of the bills reported from this committee during the present session, many are so reported only under the assumption that the buildings contemplated can be erected under some plan less wasteful than now in operation."

"The scope and purpose of the measure herewith presented is designed to remedy the many evils herein pointed out; to give to the country a better type of architecture in its buildings, and to stop the wasteful extravagance which is the necessary result of the present methods."

"The measure does not abrogate or take from the Supervising Architect any of the functions or authority belonging to the office, which, under existing conditions, he is capable of performing. He will remain and continue the representative of the government, and perform all the duties that now pertain to his office, excepting the designing and preparation of drawings and specifications for such buildings, and the local supervision shall be subject to his approval."

"In fact, this measure is intended to make him what the title of his office indicates, the supervisor of architects: not the government's architect, but the supervisor of the architects of the government's works. Therefore your committee recommend the passage of the bill."

The bill was introduced in the Senate and referred to the Committee on Public Buildings and Grounds too late for its consideration, and has not yet been reported upon by this committee.

To summarize: In the House, the bill is regularly before the House, and as soon as a day can be set for the discussion of the same, it can be passed. In the Senate, the bill is before the committee, and as soon as it can be reported to the Senate and a day set for its discussion, it can be passed.

The bill has received the approval of the Committee of the House, of the Secretary of the Treasury, of the press and of the profession. It has been before the profession for nearly a year. Numerous meetings of different professional societies, and notably of the American Institute of Architects, have taken place in the meanwhile, and its endorsement has been unanimous. Many senators and congressmen have been seen individually, and without exception have commended the bill, and promised their support, many of them in writing. Up to the present date there has not been a single objection raised to the bill, by the public, by the government, by the representatives of the government in the Senate or House, or by the profession; on the contrary, it has received the most positive and hearty endorsement.

The bill should pass both houses with little or no trouble, because:

1.—It is purely administrative in its character.

2.—Its object is to correct an inefficient system which was instituted years ago, and which has become not only obsolete, but positively pernicious.

3.—It does not interfere with the present system, in so far as that system is efficient, but tends to relieve the present system of a burden to which it is not equal, and to enact proper measures to provide for this part of the work.

4.—It asks for no appropriations or expenditure of money, but aims, on the contrary, to effect economy in the expenditure of the moneys, and to raise the character of the work to the highest standard of the present age.

5.—In raising the standard of the work, it will raise the standard of the art, create new incentive, bring forth new men, new opportunities, and result in covering this country with monuments which will eventually compare with those of other countries, and in time perhaps excel them.

6.—It has received the hearty approval of everybody concerned or interested, on whichever side of the question they may be.

7.—It will not legislate out of office any of the present officeholders—many of whom have served the government faithfully for many years—because the work now in hand under the present system, and the maintenance of the buildings now completed, will demand the services of this force for many years to come, and it only applies to future work.

8.—It will relieve the Secretary of the Treasury of all work of an expert character, for which he must necessarily depend upon outside advice; by placing at his disposal, in this connection, an expert board of the highest standing.

9.—Not only will the buildings be equal to the best types that are erected in the United States, both artistically and constructively, but they will be built, as stated by the Committee of the House, at a saving of at least thirty per cent on the actual cost of construction, at least three years in the time of construction, saving not only the interest on the cost of the land and the cost of construction, besides salaries of superintendents, watchmen, etc., during this period—the cost of repairs and maintenance due to suspension of the work, but also three years' rent for temporary quarters pending completion of buildings.

10.—It can be demonstrated by figures, that under the new bill, with better buildings, erected in a much shorter time, in the cost of the construction of the buildings, the commissions of the architects, and the necessary appropriation for the Supervising Architect's office, the United States government would save at least \$1,000,000 per annum, as compared with the present system.

Yours truly,

JOHN M. CARRERE, Secretary.*

December 11, 1894.

By order of the Legislative Committee on Government Architecture.

Permanent Committee:

BRUCE PRICE, Chairman,

ED. H. KENDALL,

JOHN M. CARRERE, Secretary.

Advisory Committee:

R. M. HUNT, Chairman,

CHARLES F. MCKIM,

GEORGE B. POST.

The bill, which has already been twice printed in this journal, is again presented in order that its provisions may be studied carefully and its advantages urged by architects upon all legislators accessible.

A BILL to provide for the securing of plans and for the erection of the public buildings of the United States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the President, by and with the advice and consent of the Senate, shall appoint a commission on public architecture, consisting of three architects of high scientific and artistic attainment and large practical experience, and two officers of the Engineer Corps of the United States Army. If necessary, a separate appointment of any or all of three members of the commission who are architects may be made for each building under consideration, and members of the commission for one building may act upon other buildings. That the commission, under the general direction of the Secretary of the Treasury, shall discharge all the administrative duties relating to the procuring of designs and the appointing of architects for all buildings hereafter erected by the Government of the United States.

SEC. 2. That the Secretary of the Treasury shall be the president of the commission ex officio, and the Supervising Architect of the Treasury Department shall be a member of the commission ex officio. In the absence of the president of the commission, one of the members shall be elected as chairman by ballot, and he shall preside at the meetings and perform such other duties as the rules of the commission may prescribe; and the Supervising Architect of the Treasury shall act as secretary of the commission.

SEC. 3. That the Secretary of the Treasury shall convene the commission whenever in his judgment the exigencies of the service require it.

SEC. 4. That the commission shall adopt rules and regulations governing competition in the procuring of designs, and for the government of its meetings and the general performance of its duties. The members of the commission shall be paid their actual expenses and subsistence and a per diem allowance of ten dollars while actually engaged in the performance of their official duties, but no per diem allowance or salary shall be allowed to any civil or military officer on account of his being employed on the commission, but his actual traveling expenses and subsistence shall be paid while engaged thereon.

SEC. 5. That in case the limit of cost provided by law is one hundred thousand dollars or over, the commission shall select by ballot, for each building, five architects to prepare designs in competition; in case the limit of cost is less than one hundred thousand dollars, the commission may, in its discretion, select by ballot an architect without competition. No architect shall be eligible for entering as a competitor, or for appointment, who has not had at least ten years' experience as an architect-in-chief, and unless he can satisfy the commission, through work already done by him, or otherwise, that he is competent to take charge of the economical construction of the building. The

*[NOTE.—Copies of the circular, for distribution, can be had on application to Mr. John M. Carrere, 44 Broadway, New York.]

COMMITTEE ON PUBLIC BUILDINGS AND GROUNDS.—Of the House: John H. Bankhead, Alabama, chairman; Joseph Abbott, Texas; Wm. M. McKaig, Maryland; Timothy J. Campbell, New York; John L. Bretz, Indiana; Cornelius A. Cadmus, New Jersey; Benjamin F. Grady, North Carolina; Albert S. Berry, Kentucky; Robert C. Davey, Louisiana; Seth L. Milliken, Maine; William Sumit, Idaho; Elijah A. Morse, Massachusetts; Myron B. Wright, Pennsylvania; John M. Wever, New York; David H. Mercer, Nebraska. Of the Senate: George G. Vest, Mississippi, chairman; John W. Daniel, Virginia; Samuel Pasco, Florida; Calvin S. Brice, Ohio; John B. Gordon, Alabama; Justin S. Morrill, Vermont; Matthew S. Quay, Pennsylvania; Walter C. Squire, Washington; Joseph M. Carey, Wyoming.

"McKaig Bill" is known as H. R. 7470. Fifty-third Congress, First Session. Report is known as Fifty-third Congress, Second Session. House of Representatives, Report No. 1370.

The rules of the House and Senate permit that the bill should be made the subject of a special order, having a special day set for its consideration and passage.

Copies of bill and report can be obtained by addressing the clerk of the House.

commission shall cause to be made and issued to competing architects surveys, schedules of requirements for the building, limitations of cost, and all facts which might control or influence the character of the required design. The commission shall specify the number and character of the drawings required, and fix a definite time for their completion. The Secretary of the Treasury, upon the recommendation of the commission, shall pay to each unsuccessful competitor, to reimburse him for expenses incurred in preparing the competitive drawings, the following amounts: For designs for buildings to cost not more than one hundred and fifty thousand dollars, the sum of one hundred and fifty dollars, and for each and every one hundred thousand dollars of the limit of cost of the building above that amount, the additional sum of one hundred dollars; but in no case shall more than one thousand dollars be paid to any unsuccessful competitor.

SEC. 6. That the commission shall reject and return to the author any drawings which have failed to exactly comply with the requirements and regulations adopted by the commission for the competition, and no compensation for their preparation shall be paid, and the author thereof shall be debarred from all further participation in the competition. The commission shall carefully examine the drawings of each competitor in competition and shall select one design as the design of the proposed building, and shall recommend its author as the architect for that building and return forthwith all other drawings to their authors. The Secretary of the Treasury shall thereupon appoint the architect so recommended and he shall perform all the customary duties performed by an architect in private practice, namely: The making of all preliminary sketches, the modification of his designs to meet possible requirements of the commission, the preparation of a set of general working drawings to procure estimates; the preparation of a set of general details on a larger scale, a set of full-size drawings for molded, carved or ornamental work, and a set of all other original drawings and specifications required by the commission. He shall supervise the construction of the building, and no payment shall be made to any contractor until the certificate of the architect has been received by the Secretary of the Treasury that the work has been executed in conformity with the contract. He shall file a complete set of the construction drawings in the Treasury Department, from which all duplicates shall be made, which duplicates shall be paid for out of the appropriation for the building. The architect shall be paid for his services a fee of five per centum upon the total cost of the work and the usual traveling expenses. The expenses of the commission and the fees of the architect shall be paid by the Secretary of the Treasury out of the appropriation for the building in the erection of which they were incurred.

SEC. 7. That the Secretary of the Treasury, upon the recommendation of the commission, shall authorize the architect to employ a competent clerk of the works, at a salary to be established by the commission, and he shall be paid for his services out of the appropriation for the building.

SEC. 8. That the supervising architect of the Treasury Department, under the direction of the Secretary of the Treasury, shall be the representative of the government in all matters connected with the erection and completion of public buildings and the payment therefor. He shall receive proposals for the work and, with the approval of the architect of the building, he shall award the contracts therefor. He shall perform all other duties that now pertain to his office except such duties as are vested by this Act in the architect of the building.

SEC. 9. That all Acts and parts of Acts inconsistent with this Act are hereby repealed.

NOTES FROM OUR FRENCH EXCHANGES.*

THE PALAIS DE JUSTICE AT BRUSSELS.

ALTHOUGH the very remarkable Palais de Justice at Brussels has now been dedicated for over ten years, and the architect is dead, yet the tide of criticism, both artistic and constructional, seems to continue, and latterly the engineer, who had charge of the engineering portion of the building under the architect, read a paper upon the subject. It appears that the total cost of the building and land was nearly \$10,000,000, and that work was in progress during sixteen years, while nearly four years previous was spent on the plans. It contains twenty-four large courtrooms or halls, and 236 smaller ones, together with a great number of offices for persons connected with the various services of the building. The architect was obliged not only to seek to carry out probably the most extensive and complicated series of requirements ever imposed upon an artist, but had also to, of course, carefully consider the effect and great prominence of a building which would be so noticeable in the general panorama of the city from any point.

It was particularly from the last consideration that the architect decided to adopt what he calls the Greco-Roman style, as permitting him to strongly accentuate the principal features that he intended to make prominent on the exterior.

Like all great public buildings, this one cost much more than the first estimate. However, neither the province of Brabant nor the municipality of Brussels hesitated about carrying out the scheme as originally designed.

Some of the most severe criticisms are more matters of sentiment than anything else, one party complaining "that the absence of the cross, marking the desire to do away with the divine blessing, would bring neither protection nor success to the new building."

At first it was only intended to use one kind of stone; but for political reasons it was later deemed necessary to use others if it could safely be done, and very long and exhaustive experiments were undertaken to determine these points.

The dome and the great central portico were the two features that required most particular attention from an engineering point of view, and from the fact that many of these problems were worked in an entirely new way arose great criticism. Especially the frequent use of iron and great girders in connection with the stonework was an innovation in architectural construction not easily accepted by the conservative element of the profession, which would have willingly used either one separately.

However, the important problems appear to have been worked out in most satisfactory and often very ingenious ways, and the success of them can scarcely be doubted when the cupola, which weighs over 25,000 tons, is so carried that "all the parts are perfectly bound and tied together, and to this day there has not been the sign of the least movement." The author continues: "I do not conclude from this that the building is indestructible; we can, of course, foresee that, like all other monuments, it will eventually succumb to the effects of time, but I am certain that never will there

* Translated and arranged for THE INLAND ARCHITECT by W. A. Otis.

be ruins of any monument that will be more remarkable and grand than this, with its massive stone and its immense iron arches in the shape of girders, some of which are over six feet in height."

As a matter of comparison the cost of buildings per square meter is as follows: Palais de Justice, 1,500 francs; Grand Opera House, Paris, 3,600 francs; Pantheon, Paris, 3,000 francs.—*L'Emulation.*

THE IMPRINT OF A HUMAN FORM IN ALSACE.

An important archaeological discovery has, according to *L'Emulation*, recently been made at Schlestadt, in Alsace. The church of Sainte Foy at that place is a building of quite pure Romanesque, which owes its origin to the Countess Hildegarde, great-grandmother of Frederick Barbarossa.

This pious dame built, about 1087, for a tomb, a crypt which was the exact reproduction as to all dimensions of the Holy Sepulcher at Jerusalem. For a time this tomb became a much frequented spot for pilgrimages, but gradually fell into disuse, and finally the entrance was walled up and its very existence would probably have remained entirely unknown but for a very ancient manuscript by Beatus Rhenanus, which makes mention of it.

A few years ago the restoration of this old church was decided upon, and very recently, while repairing the stone floor, the workmen came across a large opening leading down to two subterranean chambers. Continuing the excavations the architect discovered three vacant tombs, as well as a fourth one of large dimensions, the latter of which had been closed up with masonry.

In this fourth tomb was found a quantity of debris of all sorts, and among it a large block of mortar especially attracted the attention of the architect, who believed he there recognized the imprint of a human form. A plaster cast was taken, and a mold obtained of the bust of a dead or sleeping woman. The face was calm and sweet, with a touch of melancholy, while the features exhibited culture and nobility. Who was this dead woman of high degree? has been the interesting question discussed by archaeologists. Some thought it was Hildegarde herself, but the youthful features were scarcely in accord with her known age, and it now seems to be generally admitted to be rather her daughter, the "beloved Adelaide," as she was called in the original charter of the basilica, while the probable circumstances leading to this burial are believed to be as follows: At the end of the eleventh century an epidemic of the black plague ravaged Alsace, and history recounts the death of Hildegarde herself, as well as her son Conrad and her daughter Adelaide, victims of this dread malady. The survivors, panic stricken, hastened to bury her, as a victim of the pest, in lime mortar, and as a result we have the extraordinary block of cement and the human imprint. That in most parts the impression is perfect even to microscopic details seems to be due to the fact that the lime in the mortar filtered through the sand and covered the body with a lime coating, which quickly hardened, forming an envelope which modeled each feature exactly, even in minutest details. The entire mass of coarse sand and lime on the outside then gradually setting and hardening, formed one single, solid block, within which, when the body fell to decay, the mold remained and safely guarded for centuries the form of the body which it had originally covered.

The burial appears to have been very hasty, since the position was evidently not carefully considered, and in parts the weight of the mortar had caused portions to be flattened out of shape. The hair was braided, a beautiful cast of which was preserved. The chest was covered with a knit woolen garment, the exact stitches of which are plainly visible.

Unfortunately, the lower portion of the body is lacking, having been broken by the pickaxe of the discoverers.

CHICAGO ARCHITECTURAL SKETCH CLUB.

THE first meeting of the eleventh year of the Chicago Architectural Sketch Club, which occurred on January 7, was an auspicious event and one of the most distinguished in its history both in the number of attendance and the prominence of the visitors. The occasion was the sixth annual exhibition of the designs submitted in the Clark medal competition, the result of which was mentioned last month. The designs, sixty-four in number, were hung in the club assembly rooms and an artistically printed catalogue gave the names of the competitors.

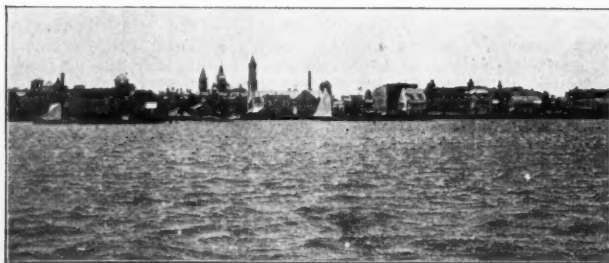
The evening was occupied by the reading by Mr. D. H. Burnham of a paper upon "The Organization, Design and Construction of the Columbian Exposition." There were present, besides almost the full membership of the club and many visiting draftsmen, distinguished architects, members of the directory of the American Institute of Architects, which was in session in Chicago, as well as its president, secretary and treasurer. It was probably the first time that a sketch club of draftsmen ever entertained so distinguished a body of architects, and the fact was appreciated by the club members. Mr. Burnham's paper was a remarkable condensation of facts and was illustrated by the large number of original plats, drawings, etc., which were used in the frequent consultations of the architectural commission. These with the bits of inside history connected with those conferences made the paper of exceeding interest to Mr. Burnham's auditors. It is, probably, also the most accurate condensation of the history of the Fair that could be written. After a hearty vote of thanks to Mr. Burnham by the club, Mr. S. A. Treat, on behalf of the Illinois Chapter A. I. A.,

presented the gold medal offered by the Chapter to the club members for the best architectural drawing by a member of the club. This was won last year by Hugh M. G. Garden. In his absence the medal was received by Mr. Dillon, secretary of the club.

President Dean announced that the syllabus was not quite ready for distribution, but that a very attractive programme had been arranged for the year's work. There will be meetings at the clubhouse every Monday evening, the alternate evening being devoted to social enjoyment, the bohemian character of which will offset the intellectual programme of the regular fortnightly meeting. Considering the large number of draftsmen who have been out of employment and the heavy expense of maintaining a clubhouse, the club is in a remarkably flourishing condition, which, with the interest taken in it by draftsmen generally, is the best possible indorsement of the conservative management of its officers. This so impressed a number of the visiting architects, that several requested to be placed upon the associate list of the club, among them being the treasurer of the Institute. In the near future a scheme for reorganization will be developed by which the club will enlarge its membership into the general character of an art society, while still retaining as its main feature that of an architectural sketch club.

WHY HE WENT.

HE was a medium sized man, with a medium amount of intellectuality in his features, but he stood on the corner and shivered in the icy wind that blew from the top of the Masonic Temple down the back of his neck. He had been to his office, and after looking at the drafting boards stacked in the corner and the few draftsmen gathered around a table industriously studying a plan which failed to conceal a pack of cards, had concluded that there would be more liability of a client calling if he went home and let the office run itself while he inspected the supply of coal in the cellar. But he felt tired and told his wife when



ST. AUGUSTINE FROM ANASTASIA ISLAND.

he arrived that he believed he had caught cold, and thought to himself that the past five years of hard work without a vacation was not as hard as the enforced inactivity of the past few months. He had met a friend who was going to Florida for a month and who had told him that he could live, in St. Augustine even, for less money than at home, and the desire to get away from the cold and the discouragements of business for a time took hold of him. The next day found him studying the Big Four time tables and the



IN THE SURF IN JANUARY.

advantages of the Queen and Crescent-East Tennessee, Virginia & Georgia route, with its quick time to Jacksonville. He remembered meeting Mr. B. W. Wrenn, the genial passenger agent of the latter road, last summer, on the St. Lawrence, and learning that he had since assumed the general traffic management of the Plant system, which by rail and boat ramifies the whole state of

Florida, he wrote to him for further information. He didn't believe half the delightful stories his correspondence brought him, but they were sufficiently attractive to convince him of the wisdom of taking a trip to that sunny land. He told his wife that he expected to design a big hotel next year and must see those at St. Augustine, and would take her for a pleasure trip next winter, and went. Well, since he came back it has been noticed that while he says little about the architectural beauties of the state, his fish stories beat E. O. McCormick's tarpon story or Paul Laurup when he describes the delights of Bluff Lake, and as the office boy, while he was absent, took in a client for a \$200,000 flat building he is so enthusiastic on the subject of a vacation in Florida that he has decided to build down on the Indian river and go every year.

ENAMELED BRICK.

THERE is perhaps no one product in general use that so distinctly marks the progress of a nation's growth and wealth as its clay products, in their various forms. Steel is a wonderful factor in the construction of the larger modern buildings, but its skeleton has to be clothed with the production of the clay-worker, and for exterior uses (as well as interior), there is no doubt but that enameled brick will take front rank in the future for this purpose, especially when it becomes known that all the beautiful designs in architecture and harmonious blending of colors are attainable in this class of work, to which is combined durability, beauty and freshness for all time. While great strides have been made in this country in the manufacture of common and pressed brick, paving brick, terra cotta, roofing tiles, etc., the enameled brick industry has not kept pace, and is in its infancy, chiefly on account of the greater difficulties involved in the manufacture of this specialty, so that hitherto most of the needed supply has been imported at large cost from England; but within the past year Chicago has added this industry, in all its completeness, to her former productions, so that the projectors of such structures as the great Marquette and Reliance buildings were able to procure the immense quantity of enameled brick required for these structures right at home, and no finer enameled work can be found in this city or elsewhere.

The true enameled brick is equally as good for external as for interior use. They stand the most severe and sudden climatic changes, and may be used in any climate and in any situation.

It is a surprise to anyone visiting England, to see the variety of purposes for which enameled bricks are being used in that country. The approaches to their railway stations, exterior of buildings surrounding the platforms, booking offices, waiting rooms, toilet rooms, etc., are worked out in patterns and beautiful designs of different colored enameled bricks. They are used also in the large hotels and stores, postoffices, banking and insurance offices, factories, engine rooms, cemetery vaults, stable interiors, and also in the underground railways. Enameled brick have won such favor in England that the municipality of London requires that all courts and alleys be lined of this material. It reflects light, is fireproof, acquires no odor, is impervious to moisture and forms a finished surface which is highly ornamental.

The use of them is increasing each year. Heretofore many millions of English enameled brick have been shipped to this country annually; but that should no longer be necessary, as it is within the reach of architects to satisfy themselves, beyond all doubt, that the Chicago product is equal, if not superior to the best imported bricks, and saves the delays incidental to distant transportation. As compared with terra cotta, which is now being so extensively used, the cost of enameled brick is much less, laid in walls, and this, with its cleanliness, unchanging color (of any shade) and indestructibility, leaves it unapproached by any other building material.

NEW PUBLICATIONS.

ARCHITECT, OWNER AND BUILDER BEFORE THE LAW. Macmillan & Company, 66 Fifth avenue, New York, publishers. Price, \$3.00. A. C. McCurg & Co., Chicago.

The excellent typographical execution of this work at once attracts pleased attention; its composition, highest regard. Mr. T. M. Clark, the author, modestly disclaims a legal learning that would enable him to speak as an authority, but his apt as well as copious citation of cases, his discriminating judgment as to what was actually decided by the courts, his grasp of legal principles, all display a knowledge of the subject he treats of and a legal ability that would honor the ablest lawyers in the country. It is a masterly exposition of a much misunderstood and most important subject. It is written with judicial impartiality and fairness, yet with a felicitous style of expression that relieves it from the dullness of legal decisions. The practical and experienced business man as well as the laborious and painstaking compiler of authorities, conflicting as well as harmonious, and extending over the broad range not only of every state in our Union, but Great Britain and France, is stamped throughout the whole work. There have been many erroneous decisions rendered in this class of litigation, because neither court nor counsel understood the business features of the cause in hand. The nature of his work licensed Mr. Clark, in giving the law as decided, to clearly set forth, as he does, wherein it was variant to justice, and an improper interpretation because of that lack of technical knowledge. His criticisms of erroneous decisions are neither petulant nor frivolous. He writes with a practical knowledge of what he

treats, is independent, and points out errors of courts in no capacious spirit, but because he sees what is right from the superior vantage ground of practical experience. While it was not intended to be, and will not be quoted as an authority, acquaintance with it will be of the greatest aid to bench and bar in gaining a correct knowledge of the rights and duties of parties engaged in building operations. It will prove of exceeding usefulness to lawyers, as well as architects, owners and builders—a needed work well done, and sure to take high rank as a legal, literary and business treatise.

A TEXT-BOOK ON ROOFS AND BRIDGES. Part 3, Bridge Design. By Mansfield Merriman and Henry S. Jacoby. New York: John Wiley & Sons.

This book opens with a chapter on the history and literature of bridge design, which will be of use to the beginner. The subject of bridges does not interest architects, and therefore we shall not dwell upon it; but there is a chapter on roof trusses which is of interest to them. This chapter gives the design of a roof truss, with the specification thereof and details of the work; a young architect could not do better than to go through this example entirely and thoroughly. But few remarks can be made on the method pursued. The author gives the calculation of the rafter of the truss considered as a column, and this is, of course, correct; but the ordinary practical method is to select the proper columns by means of a table already calculated. He also speaks of tenons, or dowels, being used in the ends of the struts. We object to the use of tenons for the reason that it is more difficult to make a true square bearing when there is a tenon in the way than when there is not, besides it diminishes the area of the bearing. A spike or two will serve all the purposes of tenons, and be cheaper and better. It will not break off as a tenon may. In the drawing the truss shows an iron shoe, and is of a good design, but more complicated than is usual in such cases after all the strain is thrown upon the bolts. We regard the indent of the shoe into the tie beam as not to be relied upon, and while it may be well enough to make it, it should be disregarded in the calculations. With regard to the splices in the tie beam; we are not in favor usually of fish plates; if they must be used, then they better be of iron, in trusses of long span. The writer has found the easiest and best method, taking everything into consideration, is to make the tie beams out of two-inch joist bolted together, with the joints properly broken. This makes good, stiff work, and the timbers being all narrow there is no danger of any rotten or inferior timber, such as sometimes occurs in the inside of large scantlings. There is also a description of iron roof truss in the Berlin Iron Bridge Company's building, which may be of interests to architects. There is a good deal of detail information given with regard to methods of doing work which will be of use to that class for whom the book is intended, that is, the beginner. Like all the author's works it is orderly and rational. We judge it will (and ought to) have a considerable sale among the schools, and also among those young engineers, and even architects, who think it lies within their province to know something about what they are supposed to control.

J. R. W.

CLARK'S BUILDING SUPERINTENDENCE. A manual for young architects, students and others interested in building operations as carried on at the present day. By T. M. Clark, F. A. I. A. Twelfth edition, 1894. Macmillan & Co., New York; A. C. McClurg & Co., Chicago. \$3.

This valuable book, which we noticed some years ago when it first appeared from the press of Tichnor & Co., has now reached its twelfth edition. In its new dress it is published by Macmillan & Co., into whose hands the plates have gone. As a practical work on building art it stands alone, the field never before having been covered by any other. While the title states that it is a "manual for young architects and students," there are few practitioners that cannot find profit in reading it. While the influence of locality upon the author is evident (his practice has been mainly in the vicinity of Boston) he has made an honest effort to make it useful to any American architect. It is easy to make allowance for this, especially if the reader is acquainted with the different meanings of technical building terms which unfortunately prevail in various parts of the United States. It must, therefore, be borne in mind that the names of materials and parts of buildings are such as prevail in the eastern states. If the best methods of building described are not those of the central and western states, it is only because they are good models to follow. Western architects will do well sometimes to go back to the old way of doing things. Considering the vastness of the subject, if all the classes of buildings were described in their evolution with the thorough analytical treatment that the author has adopted, it is no wonder that he has only selected three. The first two, the Stone Church and the Frame Dwelling, are such as come within the experience of the largest number of practitioners. The third, described as a Town Hall, would be also applicable to many other classes of large buildings, and gives the author an opportunity to lay down the sound constructive principles that are applicable to the execution of heavy foundations, retaining walls, arches, buttresses, and large roof areas, that are common in other classes. Business buildings are not touched upon, but the excellent advice to superintendents in the first and second parts will also be valuable to those who are concerned with them. The first part dwells mainly upon the experience of a superintendent representing the architect in the erection of a church. The second part is addressed not only to the superintendent, but the architect and the owner, and it would be good preparation for anyone who proposes or expects to have a house of his own, to read it. The third part is addressed mainly to architects, and has more to do with planning the construction

of a building than its execution. The specifications in the latter part of the book are good food for young architects. We would have liked very much to have seen the imperative mood dropped entirely in these. A specification being part of a contract, in which tautology is not objectionable, and the variation of grammatical expression not essential for literary style, it is better to use the forms "are to be," "is to be," "should be," or "must be," throughout, rather than the imperative mood, which in some cases savors of a dictatorial manner toward contractors and builders.

The most important things for young architects and superintendents to learn are the tricks, subterfuges and prejudices of builders and foremen, especially in rural districts. The next is how to detect and overcome them. Firmness and tact are both necessary. The main object should be to get the best results with the least friction. Mr. Clark has covered nearly every point that may arise, and the treatment of the subject is altogether novel. He has shown how it is necessary to detect an error in its earliest stage—then to determine whether it was intentional, accidental, or the result of ignorance, and to take the proper course in each case without exciting the temper of the offender. A proper handling of each kind of dereliction generally results in gaining the respect and confidence of the builder, and the avoidance of such things in the future. An assumption of superior knowledge by the mechanic together with a prejudice based upon deeply grounded habit, which in many cases even is inherited, are the most obstructive mountains that the young architect has to encounter. Yet they may be surmounted. It often happens, too, that the architect has much to learn from the experience of the builder, without necessarily accepting his exact methods. As a result of friendly conference in such cases, both may be benefited. The architect, if he has tact enough to conceal his own ignorance, may always come out of the contest with dignity. But if he is too positive and iconoclastic he may not get the best of it, even if he is in the right.

There is no spectacle so sad, if not amusing, as a dictatorial and conceited young architect superintending his first important creation. He fills out to perfection an illustration of the well-known words of Shakespeare, "Man, fickle man, clothed with some brief authority," etc. To such Mr. Clark's book may be a useful guide to avoid the pitfalls which beset their paths. There may not be many of these gentlemen, but there should not be any. All young men must get experience in some way, and the sooner it is over the better. The slight office training that some of our young men receive after passing through the architectural schools is poor training for outdoor work. It would be better for them if their employers made it more a practice to take them on the rounds of their buildings occasionally instead of letting them wander about by moonlight alone. This seems to be the age of architectural precocity—that sort of precocity which enables young men with good family and social connections to secure important orders before they are duly qualified to undertake them. They very often get through with the first part, the designing, by employing clever draftsmen, just as that old school of so-called architects (now rapidly dying out), who could not hold a pencil, used to do. But the first superintendence, in which the old fellows were at home, often proves a *pons asinorum* to the young practitioner. Mr. Clark now offers him in this book advice drawn from some of his own experiences, for which years of practice might not suffice to the novice.

P. B. WIGHT.

THE BRICK AND CLAYWARE INDUSTRY IN THE UNITED STATES AND AT THE WORLD'S FAIR AT CHICAGO. By K. Duemmler, Halle, (Prussia), 1894.

The above is a work in German of 180 pages in quarto form and contains a large number of well-executed illustrations. An introduction gives the author's impressions of the country and her cities. He is delighted with the appearance of later buildings of New York, but does not—with noted exceptions—admire those at Chicago. In general appearance, however, owing to the many trees and grass plots in front of houses, he prefers the latter city. The work is divided into three chapters: Ceramic products; Machinery for their production; Cements. The author is delighted with the perfection of brick material prevailing in the United States, which is due to the facts that we are using more bricks than does any other country in the world, and that we do rarely, if ever, besmear our façades with stucco. This fashion undoubtedly has been the main cause of keeping other nations, especially Germany, in the background as to brickmaking. We find it stated—to give an instance—that in Germany a yard for the production of a few hundred thousand bricks occupies the same area of space which is occupied in St. Louis for the production of twenty millions. A complete survey is given of all other ceramic industries, from the making of tiles, common and glazed, up to the finest and most artistic porcelain ware of all nations, China and Japan not excepted. Many neat illustrations accompany the text. The second chapter, treating on machinery, is very thorough and of the highest interest to all manufacturers of brick and ceramic ware. It would lean too far to give particulars. The third and last chapter treats on Portland cement. Merely facts are given and no analysis. We are informed that Germany is decidedly ahead in this branch of industry. From 2,400,000 barrels manufactured at twenty-nine places in 1877 an advance has been made to more than 11,000,000 barrels now manufactured at sixty-three places. German cement is notably ahead of English cement and more so of American. The reasons, we opine, are that Germany is decidedly ahead in chemical science, which is the *conditio sine qua non* in the delicate process of the production of Portland

cement. In addition to this there is established, on demand of the manufacturers, a governmental test office, which judges of all brands by a certain standard. And it is asserted that there are manufacturers who produce qualities above the standard. The book is well printed on good paper, its language terse, fluent and agreeable. It ought to be in the hands of brickmakers, manufacturers of ceramics, and all lovers of these industries.

COLEMAN'S MECHANICS' LIENS. A treatise on the Mechanics' Lien Law of the State of Illinois. By J. A. Coleman, counselor-at-law, Chicago. The Wait Publishing Company, 1894.

This is not only a law book for lawyers, but for everybody that may have any interest in or relation to the erection of buildings. As its title indicates, it is mainly of local interest to the inhabitants of this state, but the copious decisions recited and references given are applicable to experience in every part of the United States. It is especially interesting to architects, for it is the first work of the kind in which the position of the architect with reference to the protection afforded him under the laws of Illinois has been clearly defined. It is a generally accepted fact, that while other states have for years been floundering in the mystery of uncertainty as to where they stand with reference to their mechanics' lien laws, the statutes of this state have been subject to revision in this respect during several of the recent sessions of the legislature. The best professional and lay talent has been employed on the work, experiments have been tried, and those features that have not proved successful have been eliminated from the statute books, so that now it is conceded that all conflicting interests are satisfied and the laws are proving to be as efficacious as possible in protecting the interests of all who are concerned in their execution. Of course, the party that, standing on high business principles, opposes all lien laws is not satisfied, and never will be until they are expunged. But it is a small one, and consists only of contractors of large capital who hope thereby to limit the number of persons in the contracting business, to drive out the small contractors by curtailing their credit with the material dealers, and even in the labor market. It is not likely that this will ever be done as long as labor is such a potent factor in choosing legislators, and the latter, when in office, are so anxious to concede so much to the labor vote. While there may be good reasons why all lien laws should be abolished, it is too late to expect any results from the well-known argument that they discriminate in favor of one class of business men and force those with whom they do not deal directly to become sureties for others who would have no standing in business without them. These pleas seem of late to have been abandoned, and the strongest agitation on the subject is that which had its birth in the National Association of Builders, namely, for uniform lien laws in all the states. To accomplish this is a herculean task, but no other organization is so competent to undertake it as this now powerful body. It is not probable, however, that this will again be attempted, for at their last convention, in Boston, the committee that had been considering the subject of lien laws for eight years was discharged, and it was recommended to the local exchanges to advocate reforms in the lien laws in their several states. When they get to work they cannot do better than to take the statute laws of Illinois as a model.

To the architects, who have now for some time enjoyed the protection of the lien laws of this state, those parts of Mr. Coleman's treatise that refer to them will be especially interesting. They are, however, very brief. Yet they contain useful warnings to architects to be not too confident as to the amount of protection they are entitled to. The first time protection was given to architects and superintendents was in the law of 1874, in which the first section said "that any person who shall, by contract, expressed or implied, or partly expressed or partly implied, with the owner of any lot or piece of land, furnish services as an architect or superintendent in building, altering, repairing or ornamenting any house or other building or appurtenance thereto on such lot, or upon any street or alley, or connected with such building or appurtenance, shall have a lien upon the whole of such tract of land or lot, and upon such house or building and appurtenance, for the amount due to him for such services." In this quotation the words referring to *labor and materials* have been eliminated. It will be seen, however, that the architect's services are classed with and afforded the same protection that is given to any other kind of service. Mr. Coleman says: "According to this, an architect has no lien, though he completes and delivers the plans and specifications; does all that his contract obliges him to do, unless the contemplated improvement is in part or whole put on the realty. He, as others named in the statute, cannot assert his lien on any lot of the owner. He can assert it only on the lot his work was done for; and if nothing were done on that lot through indecision, caprice, or change of mind on the part of the owner, he would have no security. The statute may mean 'who performs services for the purposes of such an improvement shall have a lien on the lot or tract intended to be improved,' but it does not say so. The architect must risk the doing of what his work is a guide of and preparation for to enable him to establish his lien." The architect being by law entitled to all the protection of an original contractor it would seem to be a wise precaution on his part to make his contract clearly with the owner. This can only be done, and the disputes which too often unfortunately arise can only be prevented by a written contract. Most architects seem to have great faith that the reference to their position and the incorporation of their names in the written contract between the owner and the builders, secures to them all the legal recognition that they require. This

is a mistake, for such is only an implied contract. It presumes that one has been made, but in reality it only has been a vague and indefinite verbal agreement and subject to all sorts of interpretations.

Section 103, on *Architects' Certificates*, is one of great interest to the profession, and is full of valuable information and instructive references. Having stated that the architect is on the same footing under the law as any contractor, the author adds (p. 23), "The statute gives them a lien only for their services as architects or as superintendents, and none for settling with contractors, etc. For any services they may render not included under the special character of such professional employment, they have no lien. If the charge for their services be a gross one, and includes compensation for services not strictly architectural, not strictly within a superintendent's duties, *there would be no lien in their favor for anything*. For any services outside of a strictly professional character they must keep a separate account, make a separate charge and collect as any ordinary debt." Sections 43 and 44, on the powers and duties of the architect and superintendent, are especially interesting, but too long to be repeated herein. They will furnish some architects good food for reflection, and clear up many matters that have been heretofore in doubt and have not been previously considered in any other legal treatise.

P. B. WIGHT.

STEAM, ITS GENERATION AND USE. Twenty-eighth Edition, 1894. The Babcock & Wilcox Company: New York and London.

Some 75,000 copies of "Steam" in the long form were issued previous to the edition of 1889, when it was determined to put the work into a shape more suitable for a library. Since that time new plates have been made and the work has been carefully revised, much new matter having been added. The edition of 1894 is a handsome octavo volume of 180 pages, in cloth, gilt, and is issued in English, German and French. "Steam" has long since been recognized as a standard work in nearly all the schools of technical engineering in this country, and is worthy a place on the shelves of any library.

OUR ILLUSTRATIONS.

Residence in Denver.
Residence in Chicago.
Residence in Philadelphia.
Detroit Medical College. M. L. Smith & Son, architects.
Details, Casino, Monte Carlo. Charles Garnier, architect.
Residence by Architect Frank L. Wright, for himself, at Oak Park, Illinois.
Residence of D. A. Dangler, Cleveland, Ohio. Fenimore C. Bate, architect.
Residence for Francis Colton, Washington, D. C. C. B. Keferstein, architect.
Wrought Ironwork from "Metal Work, Old and New," by George Wragge.
Store and warehouse for A. F. Risser & Co., Chicago. Willett & Pashley, architects.
Central Christian Church, Detroit, Michigan. Malcomson & Higginbotham, architects.
The Lee Building, Chicago, erected for postoffice, Station "C." Hill & Woltersdorf, architects.
Candee Apartment Building, Chicago. James H. Dinwiddie and Robert T. Newberry, architects, No. 1210 New York Life Building, Chicago.
First Presbyterian Church, Battle Creek, Michigan. James H. Dinwiddie and Robert T. Newberry, architects, No. 1210 New York Life Building, Chicago.
Photogravure Plate: House for C. E. Springer, 3801 to 3829 Forest avenue, Chicago. Church & Jobson, architects.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure edition.

Residence of Egbert Jamieson, 28 Newport avenue, Chicago. J. L. Silsbee, architect.
Residence of O. W. Meisenburg, 145 Astor street, Chicago. Thomas & Rapp, architects.
Residences of Howard Shaw and Charles Atkinson, 4833 and 4835 Lake avenue, Chicago. Howard Shaw, architect.
Front View, St. Joseph Seminary, Nottingham, Ohio. C. F. Schweinfurth, architect. Cleveland. Also side view of same.
Residence of J. W. McClymonds, Masillon, Ohio. C. F. Schweinfurth, architect. Cleveland. Also interior view in same.

ASSOCIATION NOTES.

AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS.

The American Society of Heating and Ventilating Engineers completed its organization and adopted a constitution and by-laws September 10, 1894. The headquarters of the society are in New York. The objects of the society are, in general, the promotion of the arts and sciences connected with heat and ventilation, and the encouragement of good fellowship among the members. The society will maintain a high professional standard, establish a uniform scale of prices, encourage legislation requiring the society's standard of heating and ventilation, etc.

A regular member must be either a heating or ventilating engineer or expert, or a mechanical, civil, electrical, mining, naval or

military engineer, or an architect who has been professionally engaged in the work of heating or ventilating for at least five years, and not less than twenty-seven years of age. A junior member must be at least twenty-three years of age, and must have had three years' active experience in heating and ventilating, or one year's active practice if a graduate of a technical school. An associate member must have such a knowledge of the applied science of heating and ventilation as to qualify him to cooperate with the society. Honorary members are chosen by the society from among distinguished persons. Only regular members may vote or hold office. Every candidate must be proposed by at least two members. The initiation fee is \$15, and annual dues \$10.

The board of managers, consisting of seven members, including the president and secretary, have general control of all the affairs of the society. The annual meeting of the society will be held in New York in January of each year. Special meetings may be called at the discretion of the president.

Seventy-five charter members were enrolled at the organization, and the following officers were elected: President, Edward P. Bates; first vice-president, W. M. Mackay; second vice-president, Wilsie F. Wolfe; third vice-president, Charles S. Onderdonk; secretary, L. H. Hart; treasurer, J. A. Goodrich. Board of managers—Fred P. Smith, chairman; H. J. Barron, James A. Harding, Edward P. Bates, Albert A. Cary, Henry Adams; L. H. Hart, secretary. Council—Prof. R. C. Carpenter, chairman; Charles W. Newton, F. W. Foster, Albert A. Cryer; U. G. Scollay, secretary.

The address of the society is postoffice box 1818, New York.

THE ARCHITECTURAL LEAGUE OF NEW YORK.

A supplementary circular is issued by the Architectural League, stating that at the December meeting it was resolved that architects be especially requested to contribute rendered plans, to accompany elevations and perspectives, to the tenth annual exhibition; and that the exhibition's committee, therefore, notify intending exhibitors that sets of drawings of this description will be more prominently hung than perspectives unaccompanied by plans.

ILLINOIS CHAPTER A. I. A.

The Illinois Chapter of the American Institute of Architects gave a dinner to the visiting architects attending the meeting of the Board of Directors of the Institute at Chicago on January 8, at the Chapter's quarters in the Institute of Building Arts. The handsome and spacious assembly room was greatly admired by the visitors, and the manager, Mr. Perse, received many congratulations for the manner in which every arrangement for the entertainment of the large company were carried out. As a prelude to the dinner Mr. Taylor, the architectural photographer, made a flash-light photograph of the assembled company. The few speeches that were indulged in were almost wholly by the visitors and were echoes of those which made the last convention notable.

MOSAICS.

W. P. TINSLEY, architect, Lynchburg, Virginia, and Charles C. Wilson, architect and sanitary engineer, formerly of Roanoke, Virginia, have formed a copartnership for the professional practice of architecture, under the firm name of Tinsley & Wilson, with Lynchburg, Virginia, as the base for future operations.

THE famous service of the Queen and Crescent route from Cincinnati, and Big Four from Chicago and the north, to Florida, is better than ever this year, the time from Cincinnati to Jacksonville being twenty-five hours in solid vestibule trains without change. Information regarding the Florida country can be had in abundance from any of the Queen and Crescent or Big Four offices at Cincinnati, Cleveland, Detroit, Chicago or any other large city, east or west.

A CONTRACTING firm, recently organized, which will enjoy the confidence of Chicago architects generally is that of Dungan & Powers, with offices at 611 Security Building. Mr. Powers, for the past twelve years the superintendent for Joseph Downey, the well-known contractor, has acquired a knowledge not only of the operation of the largest contracts but of the general details of a contracting business operated on a most extensive scale that is invaluable, while Mr. Dungan, having filled a corresponding position with G. A. Moses, completes a firm equipment that is most competent. Dungan & Powers have among other contracts one for a \$40,000 apartment house for Mr. Downey.

THE Christmas numbers of the best-known periodicals all seem to show a disposition to produce something unique in the way of cover designs. That by Will H. Bradley, of the *Inland Printer*, of Chicago, being probably the most exceptional in the list. This design is the last of a series which Mr. Bradley has designed and which have appeared on the current numbers of that journal during the year. The enterprise which is evidenced by the securing of so excellent an artist in black and white—and in this work Mr. Bradley occupies a field that is distinctively his own—is an index to the progressive spirit shown throughout this leading exponent of the typographical art. Its editor, Mr. A. H. McQuilkin, took charge of the editorial department of the journal at a time when its pages showed a thorough misunderstanding in regard to the proper relation between the business office and the editorial chair. Always handsomely printed and illustrated, the news and editorial features were neither classified nor at all times pertinent. This

has all been changed through Mr. McQuilkin's careful study of the wants of his readers and ability in catering to them. Each subject has its proper department and information is sought among the representative authorities in each class. The text matter is lightened by artistic photographs reproduced in half-tone, and when specimen pages are sought they are selected from the most artistic subjects to be procured. Thus the Christmas number of the *Inland Printer* probably illustrates, and in the most thoroughly technical and artistic manner, the best thought as well as the best typography and presswork known to modern journalism. The publishers and proprietors, the H. O. Shepard Company, of Chicago, have in this journal advanced the typographic art to an immeasurable extent, and the *Inland Printer* has done much to show foreign countries how the art of Gutenberg has advanced in the United States and assumed a status which is beyond ordinary criticism.

SYNOPSIS OF BUILDING NEWS.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than \$5,000 are not published.

Buffalo, N. Y.—Architect W. H. Archer reports: Church of Ascension, North Tonawanda, Medina stone and pressed brick, metal and shingle roof, gothic, seats seven hundred, steeple 130 feet with tower, with basement Sunday School, gothic style; cost, \$18,000. Orphanage, Front avenue, Buffalo, 105 by 108 feet; Medina stone and pressed brick, three stories and basement, metal roof, sanitary plumbing, steam heat, natural wood finish inside, plumbing and lighting, and all modern improvements, classic style; cost, \$55,000. An apartment building, to be erected at 218 Seneca street, Buffalo, for Charles Berrick; to be 27 by 75 feet in size, and three stories high; built of brick with stone foundations, tin roof, iron beams, plate glass, electric bells, gas fixtures, grates, steam heating, bathroom outfit, plumbing, washstands, water closet fixtures; cost, \$8,000. St. Hyacinth's Public School, to be located at Dunkirk, New York; to be 94 by 60 feet, three stories and basement, built of brick and stone, tin and shingle roofing, galvanized iron cornice, blackboards, school seats and furniture, steam heating, ventilators and plumbing fixtures; cost, \$20,000.

Architect William G. Reimann: For Louisa Johns, a three-story store and flat building, size 41 by 70 feet; cost, \$12,000.

Chicago, Ill.—Architect L. G. Hallberg: For J. Lehman, at Rokeby near Grace, a two-story house, to have all modern improvements. For Engquist & Carlson, a three-story flat building; to have a stone front, all the best of sanitary plumbing, mantels, gas fixtures, etc.

Architects Fry & Cunningham: For J. A. Reimann, a three-story flat building; to have a stone front, the sanitary plumbing, hardwood finish, gas fixtures, heating, etc.; to be erected at Twelfth street near West Fortieth.

Architect James Burns: For M. Dawson, a two-story flat building, to be erected at 946 Hamlin avenue; stone front, hardwood finish, the modern sanitary plumbing, gas fixtures, mantels, furnace, etc. For M. Branchfield, a two-story flat building, 22 by 50 feet, to be erected at 1214 Oak Grove avenue; to be of pressed brick and stone front, have hardwood interior, furnaces, mantels, gas fixtures, laundry tubs, bells and tubs.

Architects Dwen & White: For F. A. Crane, a two-story residence, 38 by 34 feet in size; to be erected at Wilmette; to be of frame construction, have stone basement, the sanitary improvements, furnace, etc. For J. Warden, a three-story residence, 25 by 70 feet in size; to be erected at Michigan avenue near Thirty-eighth street; to have a handsome stone front, hardwood interior, mantels, gas and electric fixtures, furnace, etc.

Architect H. M. Hansen: For M. W. Robinson, a four-story store and flat building, 48 feet front; to be of pressed brick with stone trimmings, have the best of modern sanitary plumbing, gas and electric fixtures, etc.

Architect Thomas Wing: For George Hankins, a three-story apartment house, 132 by 182 feet in size; to be erected at the northwest corner of Michigan boulevard and Eda street; to be of stone and pressed brick, have hardwood interior finish, mantels, gas and electric fixtures, etc.

Architect W. H. Lamson: For H. L. Wheatley, a three-story flat building, 45 by 50 feet in size; to be erected at the southeast corner of Commercial avenue and Addison street; to be of pressed brick and stone on two sides, have the best modern sanitary improvements, gas fixtures, etc.

Architect W. F. Pagels: For T. Sweeney, a three-story store and flat building, 25 by 125 feet in size; to be erected at Sheffield avenue, near School street; to be of pressed brick and stone front, have hardwood finish, the best of modern plumbing, gas fixtures, mantels, electric wiring, etc.

Architect H. T. Kley: For Thomas Brothers, a six-story warehouse, 45 by 80 feet in size; to be erected at the southeast corner of Randolph and Jefferson streets; to be of pressed brick and stone front, have elevator, electric light, etc.

Architects Brompton & Lawson: For J. Wing, at Montrose boulevard and Lincoln avenue, a two-story store and hall, 24 by 84 feet in size; to be of pressed brick with buff Bedford stone trimmings, have the necessary plumbing, gas fixtures, heating, etc.

Architects Hallstrom & Strandell: For N. E. Nelson, a three-story and basement flat building, 45 by 70 feet in size; to be erected at Orchard street; it will have a handsome stone front, hardwood interior finish, sanitary plumbing, gas fixtures, mantels, heating, electric wiring, etc. For M. Lofblad, a three-story store and flat building, 22 by 60 feet in size; to be erected at Newport avenue between Clark and Halsted streets; stone front, hardwood finish, electric wiring, mantels, etc.

Architect Niels Buck: For F. X. Gosselin, a two-story flat building; to have a New York marble front, hardwood finish, gas fixtures, the sanitary plumbing and mantels; to be erected at Woodside avenue, near Cornelia street. For M. H. Crosby, two two-story double residences, 40 by 65 feet in size; to be erected at Montrose boulevard, near Halsted street; they will have handsome buff Bedford stone fronts, all the modern sanitary arrangements, gas fixtures, mantels, etc.

Architect W. K. Johnston: For Messrs. Pease & Higgins, two two-story residences, to be erected at Elmhurst; to be of frame with stone basement, have hardwood interior, gas and electric fixtures, etc.

Architects Schroeder & Koster: For Captain Turnbull, at the corner of Twenty-fourth street and Homan avenue, a two-story store and flat building, 23 by 75 feet in size; to be of stone and pressed brick front, have mantels, gas fixtures, furnaces, etc. For J. H. Blass, a three-story and basement store and flat building and barn and dairy, 51 by 115 feet in size; to be erected at 6245 and 6247 Cottage Grove avenue; it will have a handsome buff Bedford stone front, slate sinks, laundry tubs, electric light, steam heating, etc. For R. Planet, a two-story frame residence to be erected at 5939 Carpenter street; to have a stone basement, hardwood interior finish, mantels, gas fixtures, etc.

Architects Watson & Hazleton: For Charles M. Smalley, at 5760 Rosalie court, a two-story residence, 21 by 40 feet in size; to be of pressed brick and stone front, have hardwood finish, mantels, gas fixtures, etc. For F. M. Kummerow, a two-story livery stable and store and flat building, 46 by 118 feet in size; to be erected at 532 West Chicago avenue; to be of pressed brick and stone front, have all the sanitary improvements, gas fixtures, mantels, etc.

Architects Elmendorf & Park: For J. S. Lamb, a three-story flat building, 25 by 48 feet in size; to be erected at Warren avenue near Sacramento; to be of pressed brick and stone front, have the sanitary conveniences, gas fixtures, furnaces. For Charles Elvey, a two-story store and flat building, 25 by 52 feet in size; to be erected at Madison street near Spaulding avenue; it will have a

stone front, all the modern improvements, furnaces. For Charles Jantz, at Adams street between Forty-first and Forty-second streets, a two-story flat building; to be of pressed brick and stone front, have hardwood finish, mantels, etc.

Architect H. P. Harned: For R. S. Peale, a four-story and basement apartment house, 150 by 50 feet in size; to be erected at Forty-seventh street and Grand boulevard; to be of pressed brick and stone front, have the best of modern plumbing, electric light, steam heating, etc.

Architect C. M. Palmer: For A. M. Ross, a four-story and basement apartment house, 80 by 150 feet in size; to be erected at the northeast corner of Bellevue place and Rush street; to be of pressed brick and stone front, have all the best of sanitary improvements, hardwood interior finish, mantels, gas and electric fixtures, electric light, steam heating.

Architects Stiles & Stone: For Arthur Butz, a three-story and basement flat building, 50 by 122 feet in size; to have a very neatly designed front of pressed brick and terra cotta, hardwood interior finish, gas and electric fixtures, heating, etc.

Architects Beers, Clay & Dutton: For S. S. Whitehouse, two three-story and basement residences, 45 by 75 feet in size; to be erected at 3957 to 3959 Ellis avenue; the fronts will be of pressed brick with terra cotta trimmings, the interior to have hardwood finish, gas and electric fixtures, the best of open plumbing, mantels, gas ranges and fireplaces, steam heating, etc.

George L. Otis will build at the corner of Madison street and Kedzie avenue, a three-story store and flat building, 99 by 60 feet in size; to be of pressed brick with terra cotta trimmings, have the modern sanitary plumbing, gas fixtures, etc. H. P. Harned made the plans.

Architects Cowles & Ohrenstein: For Barry Brothers, three two-story residences; to be erected at Forty-sixth street and Grand boulevard; they will have handsome stone fronts, hardwood finish, gas and electric fixtures, steam heating.

Architect Julius Speyer: For Messrs. Elmsley O. Whistler and Fred W. Deutsch, a seven-story and basement apartment house, 99 by 99 feet in size; to be erected at the corner of Vincennes avenue and Thirty-sixth street; the first story will be of stone and the rest of pressed brick with buff Bedford stone trimmings, have hardwood interior finish, mantels, gas and electric fixtures, marble and tile work, steam heating, etc.

Architect F. W. Kirkpatrick: For J. Frese, a four-story store and flat building, 25 by 65 feet in size; to be erected at Madison street between Homan avenue and Central Park boulevard; to be of pressed brick and stone front, have all the modern plumbing, gas fixtures, etc. For R. H. Thomas, a two-story and basement flat building, 25 by 60 feet in size; to be erected at Walnut street near Kedzie avenue; pressed brick and stone front, sanitary plumbing, mantels, etc.

Architect D. S. Pentecost: For John A. Richards, at 1514 West Monroe street, a three-story flat building, 51 by 62, and a two-story 48 by 51 feet in size; to have pressed brick and stone fronts, all the modern sanitary arrangements, gas fixtures, mantels, electric wiring, etc.

Architect Fritz Lang: For T. E. O'Brien, a four-story and basement double apartment house, 50 by 105 feet in size; to be erected at Prairie avenue south of Forty-seventh street; it will have an arcadian brownstone front; the interior to be finished in quarter-sawn oak, have hardwood floors, the best of open nickel-plated plumbing, mantels, gas and electric fixtures, laundry fixtures, electric light, steam heating, etc. For O. Schoenecke, on Hoyne avenue near Thomas, a two-story and basement residence; to have a buff Bedford stone fronts, have oak finish, hardwood floors, laundry, gas fixtures, heating. For Henry Hoeppe, on Milwaukee avenue, Lincoln and Brigham streets, a four-story and basement store and office building; to be of pressed brick and stone front, have all the best of modern plumbing, gas and electric fixtures, elevator, steam heating, electric light, speaking tubes, etc.

Architects Fraenkel & Schmidt: For R. Rosenthal, five two-story and attic residences; to be erected on Ellis avenue and Fifty-fifth street; they will have handsome stone fronts, hardwood finish, the best of modern plumbing, gas and electric fixtures, furnaces, etc.

Architect Ira C. Saxe: For Hulda Saxe, a two-story and basement flat building, 22 by 60 feet in size; to be erected at Sangamon street between Seventieth and Seventy-first streets; to have a front of pressed brick with buff Bedford stone trimmings, hardwood finish and mantels, gas fixtures, furnaces, etc. For Elizabeth Hayes, a two-story and basement store and flat building; to be erected on Follansbee street near Humboldt Park; pressed brick and stone front, all the modern improvements, furnaces.

Architect R. B. Powell: For F. T. Murphy, three two-story flats; to be erected at Fifty-fifth street near C. & I. R. R.; to have stone fronts, the modern plumbing, mantels, etc. Also made plans for three two-story residences, to be erected on Vernon Park place near Forty-third street; stone fronts, hardwood finish, mantels, gas fixtures, etc. Also for a three-story and basement flat building, to be erected at Prairie avenue near Forty-seventh street; to have a buff Bedford stone front, hardwood interior, and mantels, gas and electric fixtures, etc.

Architect G. L. Harvey: For J. R. Hoxie, at Forty-fifth street and Michigan avenue, a three-story residence, 44 by 88 feet in size; to be of pressed brick with blue Bedford stone, have hardwood finish, mantels, gas and electric fixtures, electric light, etc.; also stable of pressed brick and stone; size, 32 by 50 feet; cost, \$45,000. For J. E. Jenkins, at 2625 Prairie avenue, a three-story residence, 35 by 100 feet in size; to have a handsomely designed front of blue Bedford stone with Spanish tile roof, interior to be finished in mahogany, curly birch, pine and English oak; the cost will be about \$30,000. For H. W. Bryant, at 844 Fifty-fourth court, a two-story double apartment house, 29 by 70 feet in size; to have a front of Raindrop stone and Raindrop pressed brick, hardwood floors, and mantels, gas fixtures, ranges and fireplaces, furnaces, etc. For Dwight Bryant, at 833 Fifty-fourth court, a two-story flat building; to have a front of similar materials as above, will put in all the modern improvements. Also at West Forty-eighth and Lake streets, a two-story store and flat building, 23 by 70 feet in size; to have a front of pressed brick, stone and iron, the modern sanitary plumbing, mantels, gas fixtures, etc. For William M. Derby, at West Forty-eighth and Lake streets, a two-story store and flat building, 50 feet front; of pressed brick, stone and iron, have hardwood interior finish, and mantels, gas fixtures, furnaces, etc.

Architects Curry & Foster: For E. H. Allen, a two-story, basement and attic residence, 25 by 46 feet in size; to be erected at South Evanston; to be of frame with brick basement, have hardwood finish, and mantels, the best of sanitary plumbing, etc. For R. D. Curry & Co., a three-story store and flat building, 72 by 125 feet in size; to be erected at the corner of Lytle and Taylor streets; the fronts will be of pressed brick with buff Bedford stone trimmings, have hardwood interior finish, and mantels, gas fixtures, heating, etc.

Architects Swift & Hall: For Mrs. E. J. Gamet, a three-story flat building, 22 by 80 feet in size; to be erected at Elaine avenue near Cornelia street; the basement will be of stone and above of pressed brick and stone, will put in all the modern plumbing, mantels, gas fixtures, etc.

Architect A. F. Hussander: For A. D. McLean, a three-story and basement store and flat building; to be erected at Halsted street near Lill avenue; pressed brick and stone front, the sanitary plumbing, gas fixtures, mantels, furnaces, etc.

Architect E. H. Turnock: For A. W. Kistenbrock, a handsome two-story residence, 40 by 50 feet in size; to be erected at Oak Park; to be of frame with stone basement, have hardwood interior finish, mantels, gas and electric fixtures, laundry fixtures, furnace, etc.

Architects Jenney & Mundie: For H. Channon, at 144 Ontario street, a six-story warehouse, 50 by 100 feet in size; to be of pressed brick and stone front; have steam heating, elevators, etc.

Architects Beyer & Rautert: For The Best Brewing Company, a brewery, 120 by 138 feet, at Herndon and Fletcher streets; to be of stone and pressed brick, have elevators, etc.

Architect D. E. Postle: For Mrs. Toussaint, a three-story flat building, 25 by 83 feet in size, to be erected at 4148 Grand boulevard; it will have a handsome stone front, hardwood interior finish and mantels, gas and electric fixtures, steam heating, electric light, laundries, etc.

Architects Hill & Woltersdorf: For Mrs. Turnbull, a two-story and basement flat building, 25 by 58 feet in size; to be erected on Adams street near Maryland avenue; to have a stone front, the best sanitary improvements, gas

fixtures, ranges and fireplaces. For Frank O. Day, a two-story and basement store and flat building, 25 by 125 feet in size, to be erected at the corner of Twentieth and Robey streets; it will be of pressed brick with stone trimmings, have iron store fronts, the modern plumbing, gas fixtures, etc.; will put in bowling alley; there will be five stores and five suites of apartments.

Architect J. L. Meriam: For R. J. Nelson, at Cottage Grove avenue, north of Thirty-eighth court, a block of stores 70 by 66 feet; to be of pressed brick and stone; have plumbing, gas fixtures, etc.

Architect S. N. Crown: For O. Benson, a four-story and basement apartment house, to be erected at 494 to 500 Belden avenue; to have a handsomely designed front of pressed brick, with buff Bedford stone trimmings, hardwood interior finish and floors, the best of modern open plumbing, gas fixtures, laundries, steam heating, etc.

Architect William Gauger: For Julius Tesme, a three-story and basement flat building, 48 feet front, to be erected on Elston avenue; it will be of pressed brick and stone front, have the modern plumbing, mantels, etc.

Architect Robert C. Berlin: For Theodore Gothman, a two-story, basement and attic residence, 36 by 56 feet in size; to be erected at Malden street and Wilson avenue, Ravenswood; it will be of frame, with stone basement, have hardwood interior finish, mantels, gas and electric fixtures, laundry fixtures, electric bells, speaking tubes and furnace.

Architect Ernest Mayo: For J. M. Thomas, a two-story residence, 35 by 50 feet in size, to be erected at Evanston; it will be constructed in the old English style—in plaster, brick and timber—have all hardwood finish for the interior, the best of open plumbing, gas and electric fixtures, furnace, etc.

Architect C. H. Gottig: For J. Kalbas, a three-story flat building, 25 by 60 feet in size, to be erected at Melrose street; the front will be of pressed brick and stone; the interior will be finished in hardwood, have the modern plumbing, mantels, gas fixtures and laundry fixtures.

Architect A. Sandegren: Made plans for a handsome three-story residence, 21 by 70 feet in size; to be erected at Forty-eighth street near Vincennes avenue; it will have a stone front, hardwood interior finish and mantels, gas and electric fixtures, etc.

Architect H. H. Richards: Made plans for a two-story, basement and attic residence, 40 by 60 feet in size, to be erected at Berwyn; it will be of frame construction, with stone basement, have all the modern sanitary improvements, hardwood interior finish, mantels, furnace, etc. Also made plans for a four-story store and flat building, 50 feet front; to be of stone and pressed brick, have hardwood finish, mantels, gas fixtures, electric wiring, laundry fixtures, etc.

Architect Victor Hellstrom: For M. J. Faherty, a two-story flat building, 22 by 54 feet in size; to be erected at 1046 Addison avenue; to be of ornamental pressed brick front, have all the sanitary improvements, oak and cypress finish, mantels, gas fixtures, furnaces. For P. M. Johnson, a three-story flat building, 22 by 54 feet in size; to be erected at 1225 Oak Grove avenue; to have a front of pressed brick with stone trimmings, all the sanitary improvements, gas fixtures, oak and cypress finish, beveled and plate glass, furnaces, etc. For Arthur W. Peterson, a three-story store and flat building, 24 by 56 feet in size; to be erected at 1270 North Halsted street; to be of blue Bedford stone front, have interior finished in oak and cypress, all the modern plumbing, heating, etc. For N. Nelson, a three-story and basement flat building, 22 by 57 feet in size; to be erected at Melrose street; pressed brick and stone front, etc.

Architects Kohn & Sandegren: Making plans for remodeling the Commercial Hotel, at the corner of Lake and La Salle streets. The hotel part will be strictly first-class, and be handsomely finished in hardwoods and marble wainscoting, mosaic floors, etc.; in addition there will be a Roman bathing establishment which will include Russian and Turkish baths, swimming baths, etc.; a separate establishment for ladies and gentlemen; they will be elegantly finished up in marble, mosaic and onyx; they will be similar to the Roman baths in Vienna, which cost about \$5,000,000; work will be commenced immediately and will be under the superintendence of B. Fried, who has made a special study of the Roman baths in Vienna. The same architects are making drawings for "The Waldorf" apartment house, 42 by 102 feet in size, four stories and basement, to be erected at Lake avenue and Fifty-fifth street; it will be of pressed brick and stone front, have hardwood interior finish, copper cornice, the best of open, nickel-plate plumbing, elevators, electric light, steam heating, etc.

Architect Maurice G. O'Brien: Is taking figures for two ten-room, stone-front residences, to be built on Forty-ninth street, 200 feet east of Grand boulevard, for Richard Walsh; they will cost \$10,000. Also for R. Walsh and L. J. Thomas, three handsome three-story stone front residences, on Forty-eighth street, 150 feet east of Grand boulevard; finished in hardwoods, to have consoles, sideboards, hall trees, cheval mantels, steam heating, etc.; cost \$18,000.

Denver, Colo.—Architect J. J. Huddart: For Mrs. J. P. Gilsin, a two-story brick dwelling, size 26 by 50 feet; cost \$6,000.

Architect W. E. Fisher: For A. L. Doud, a two-story brick residence, size 36 by 47 feet; cost \$6,000.

6 permits during December for dwellings	Value
5 " " " " business blocks	\$9,500
16 " " " " miscellaneous	5,400
6 " " " " stables	2,800
33 " " " " total	\$37,200
Total for year 1894	\$795,180

Detroit, Mich.—Architects John Scott & Co.: For Gabriel Torch, a two-story double brick residence, on southeast corner Brush and Brewster streets; cost \$6,500. For H. H. Dickinson, a two-story double brick store, to be built corner Third and Larned streets; cost \$5,000.

Architects Donaldson & Meier: For The Art Store Works, a four-story addition to factory plant on Russell street, size 72 by 100 feet; brick; cost \$8,000. For Schwaubeck Brothers, a two-story brick factory at the junction of Milwaukee avenue and D. G. H. & M. R. R. tracks, size 48 by 207 feet; \$9,000.

Architects M. L. Smith & Son: For M. A. Edwards, two two-story brick residences, to be built on Erstine street near Woodward avenue, pressed brick and stone; cost \$10,500.

Architect Joseph E. Mills: For W. W. Hill, a three-story brick store in Plymouth, Indiana; cost \$7,000. For Mrs. M. O'Toole, a two-story brick flat building, to cost \$7,500.

Architects Mason & Rice: For John D. Monat, a four-story brick apartment building, on Lincoln near Alexandrine avenues, size 72 by 46 feet; cost \$20,000.

Architects Spur & Rohns: For Charles E. Sigelko, a two-story brick apartment and store building; cost \$5,000.

Architect R. E. Raseman: For Mrs. Mary T. Bemart, a two-story brick residence, on John R. street; cost \$5,000.

Architects Stratton & Baldwin: For M. B. Stevens, remodeling brick residence in Grosse Point, Michigan; cost \$5,000.

Architects Rogers & Macfarlane: For N. S. Smith, a two-story frame residence, to cost \$5,000.

Architect H. W. Chamberlin: For H. W. Holcomb, an eight-story brick and stone apartment building, on Nerick avenue near Greenwood, size 50 by 100 feet; cost \$75,000.

Architect F. J. Greiner: For George Hooper, a two-story stone and brick residence, with all modern improvements, to cost \$7,000.

Minneapolis, Minn.—Architect W. C. Whitney: For J. T. Gilbert, of Milwaukee, remodeling three-story flat building, at a cost of \$18,000.

Architect William M. Kenyon: For A. R. Rogers, a two-story residence, size 30 by 70 feet; cost \$5,000.

Pittsburgh, Penn.—Architect Charles Bickel: For city of Pittsburgh, a six-story building for Department of Public Safety, brick and stone, tile roof, size 53 by 180 feet; cost \$180,000.

St. Louis, Mo.—Architects C. W. Kellogg & Son: For Ira J. Hedrick, a two-story store and flat building, size 212 by 197 feet; brick and stone, composition roof; cost \$75,000.

Architects Kirchner & Kirchner: For Board of Education, a three-story brick and stone schoolhouse, size 80 by 100 feet; cost \$50,000.



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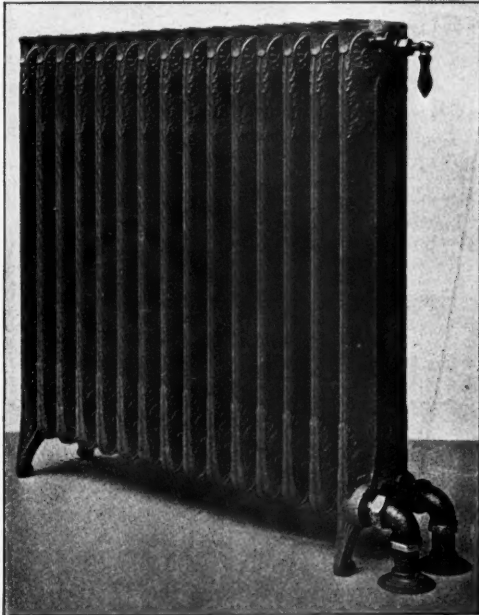
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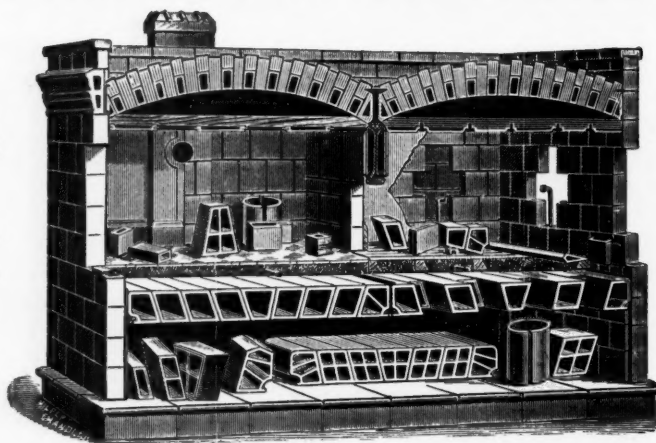
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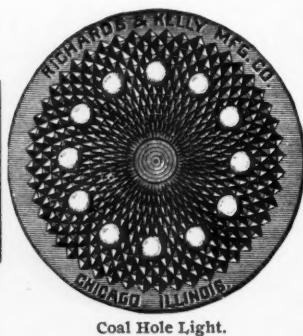
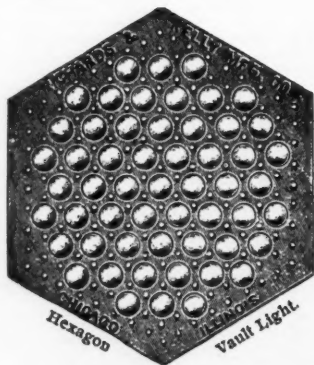
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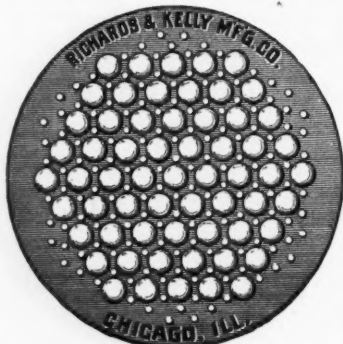
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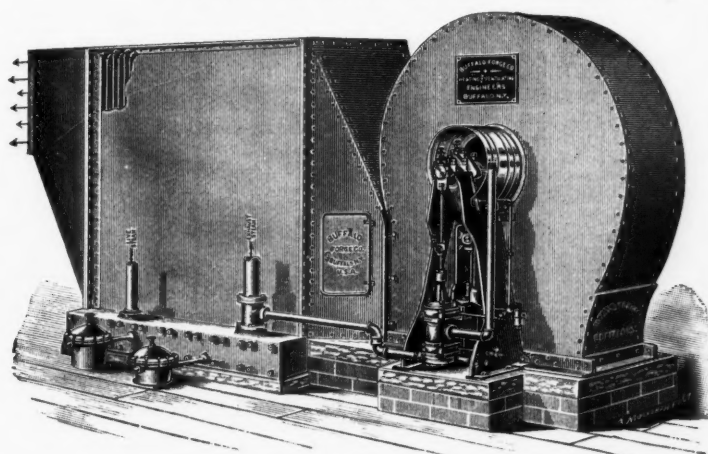
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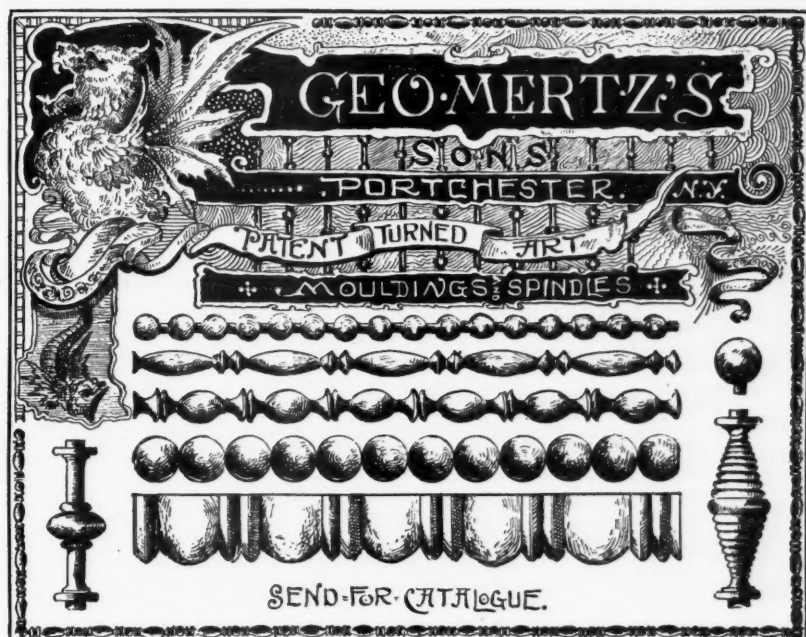
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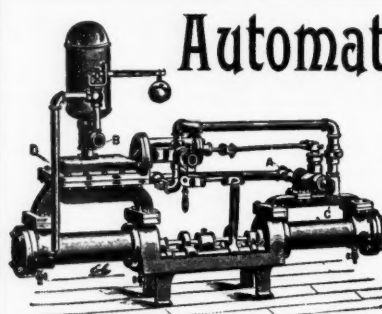
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Any architect can secure valuable books of reference without cost by sending for the catalogues of materials, etc., noticed from month to month in these columns. Large sums are spent on these catalogues, and they contain much practical information. Many are art productions. They may be obtained free on application to those issuing them. In writing please mention THE INLAND ARCHITECT, and oblige the journal and the dealer.

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HERMANN KRETZ & CO., Architects, 1016 1017 New York Life Insurance Building, St. Paul, Minn.

THE VAN WAGONER & WILLIAMS HARDWARE COMPANY.

The reorganization of the Van Wagoner & Williams Company, says the *Iron Age*, has been effected, the receivership terminated, and the business has been transferred to a new corporation called the Van Wagoner & Williams Hardware Company, organized under the laws of New Jersey, with an authorized capital of \$750,000, upward of \$500,000 of which is fully paid up. The new company start business with very little indebtedness, the basis of the reorganization having been payment in full of all obligations with preferred stock. The officers of the new company are as follows: C. S. Van Wagoner, president; William H. Williams, vice-president; Sylvanus Borne, treasurer; C. T. Stork, secretary. Mr. Van Wagoner will have charge of the manufacturing and general business, and, with Mr. Borne, will locate in Cleveland, Ohio. Mr. Williams will be in general charge of the sale department, with headquarters in New York, where Mr. Stork will also be located. The new company start under favorable auspices, and their many friends in the trade will extend to Messrs. Van Wagoner & Williams their hearty congratulations on this solution of their business difficulties. It will be remembered that the Van Wagoner & Williams Company had just completed a new fine plant at Cleveland, when the general financial distress of the country forced them into the hands of receivers at a time when they were apparently entering upon a career of prosperity. With the adjustment of their difficulties on so satisfactory a basis and the retention of their former officers and force, a successful future may reasonably be expected for this popular firm.

THE EFFECT OF CHEAP STEEL BEAMS.

The low price of steel beams is now opening up a wider field for them. They are no longer a luxury, available only by those erecting large buildings, and to whom cost is a secondary consideration. Builders of moderate sized structures are using them freely in the place of large wooden girders. Warehouses and stores, with no architectural pretensions whatever, are now absorbing considerable quantities of beams, whereas but a short time since they would not have been seriously considered by the builders. Some progressive architects are even specifying them for use in certain places in dwelling houses. Notwithstanding the general depression in the building trade at present, the tendency to substitute steel beams for wood is a notable feature of the beam business, and manufacturers are hopeful that the movement will continue to grow. In this prospect of enlarged consumption in the

future they see some compensation for the very low prices now ruling. Cheapness is a very effective missionary.

In the construction of buildings, particularly in large cities, economy of space is often very desirable, and a steel beam will often be found decidedly preferable for that reason to a bulky wooden girder. Again, the matter of shrinkage is something that proves very annoying to builders, who find their best work frequently marred by the unexpected shrinkage of a large girder, guaranteed perfectly seasoned, but susceptible to atmospheric changes, as all wood is. There is hardly a house of moderate size in which some steel beams could not be used to advantage. In building expensive dwelling houses, however, architects and builders, by the use of steel beams, could make them either fireproof or of a "slow combustion" type. It would be of much interest in this connection if some competent person were to make a comparison of cost between such a house and one fitted with wooden joists. It is believed that the enhanced cost would be found so moderate that the man who could afford to build such a house would prefer to pay the increase, and not only enjoy the sense of security from danger of fire, but find an absolute saving in the lessened cost of insurance.—*The Iron Age*.

TRADE NOTES.

THE N. & G. Taylor Company, Philadelphia, have again outdistanced their competitors and have scored another victory for the Genuine Taylor "Old Style" brand of extra heavily coated roofing tin. This fine brand was selected and is now being used on the Fourteenth Regiment Armory, Brooklyn, New York, the first shipment made being over a carload. It is also used on the Inman Line Steamship Company's pier, North River, New York. This contract took over two hundred boxes of the Taylor "Old Style" brand. The Grocers' Exchange building has just been covered with it and many other buildings in and about New York city. A first-class tin roof is secured by asking for the Taylor "Old Style." Every sheet is stamped or embossed with the name of the manufacturers, N. & G. Taylor Company, Philadelphia, the thickness of the tin, and the brand "Old Style," without which none is genuine.

A NEW catalogue and price-list, containing heliogravures of many prominent buildings in which their work is to be seen, has been issued by the Northwestern Terra Cotta Company. Following the preface, in which the statement that the output of the Northwestern Company last year is equal to that of any two factories combined, appears an imposing list of buildings, 264 in number, in each of which from \$5,000 to \$100,000 worth of their work has been used. This of itself is a sufficient indorsement of the quality and popularity of the work of the Northwestern Terra Cotta Company. The beauty of their designs is strikingly brought out in the new catalogue and is familiar to architects generally by reference to the completed work. The many practical advantages of modern skeleton construction, including its absolute fireproof qualities, insure the more and more extended use of terra cotta in the building operations of the future. The importance of this method of building merits the best study of every architect, and the Northwestern Company, having had a wide and varied experience in this work, are prepared to give valuable advice to architects engaged in preparing plans for buildings of iron incased in terra cotta. On application they will give the benefit of their experience in regard to the most practical adjustment of terra cotta in connection with iron. It only remains for us to say that this company employs the best artists obtainable, and in addition to a large variety of stock designs can furnish on comparatively short notice any special

design ordered. Six standard colors, brown, red, buff, Bedford gray, salmon and white, are made, but any color desired can be produced.

THE use of rubber for steam valves where high pressure and high temperature make a durable and heat-resisting substance a necessity has long been considered most desirable, but practical difficulties have hitherto prevented its general application. For several years past Jenkins Bros., of New York, have been experimenting with and using a rubber compound for use on high-pressure steam valves. This compound has been applied to the Jenkins valve disks, and the results obtained have been so satisfactory that Jenkins Bros. now report a most wonderful improvement in the manufacture of this rubber compound. They regard this discovery as the greatest advance they have ever made in the manufacture of steam-valve specialties. The improvement is applied to their goods without any increase in the selling price. Further improvements in Jenkins Bros.' valves have been made recently by the adoption of a new form of holding the disk-holder in place, increasing the number of bolts in valve bonnets, and increasing the thickness of the flanges, the result being valves suitable for high steam pressure. In future, but one grade of valves will be manufactured by this firm, and that suitable for any pressure, so that it will not be necessary to specify "valves for high steam pressure."

THE Buffalo Forge Company, Buffalo, New York, have put in operation their heating system in the general office buildings of the East Tennessee Railroad, at Knoxville, of which the *Knoxville Daily Journal* has the following: "The new system is a model of comfort and convenience, its excellent sanitary feature especially commending itself to the numerous inhabitants of the big four-story building. Through the courtesy of General Manager Hudson, a *Journal* representative was shown the plant of the system, which is located in the basement of the building. An eighty-inch Buffalo Forge Company's fan draws air through a heater of 1,800 feet of steam pipe. The fan at normal speed will change the air of the entire building every fifteen minutes, and can be regulated at will. It will run or furnish 12,000 cubic feet of air per minute, and its distribution, after leaving the fan in pipes, varies according to the amount necessary to furnish the various rooms of the building. The steam is furnished from a locomotive boiler. The fan is operated by a gas engine, both of which are located in the basement. This fan's work will be greatly appreciated in the summer, for its distribution of refreshing whiffs of air during the sultry months. The system was arranged not so much to economize on coal, as to provide for the comfort and convenience of the several officials and numerous clerks in the building."

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OLD STYLE ROOFING TIN.

The N. & G. Taylor Company, Philadelphia, have just supplied their "Old Style" brand of extra heavily coated roofing tin for covering the State Library and Executive Building at Harrisburgh, Pennsylvania. The architect, Mr. John T. Windrim of Philadelphia, *exacted this brand* over all competitors on account of its acknowledged quality and durability. The same

brand, their "Old Style," was also used on the House of Representatives.

The genuine "Old Style," as our readers are no doubt aware, is made by the palm oil process. This method, in addition to its extra heavy coating, gives the plate its great durability. The sheets do not come in contact with any acid flux, rolls, machinery, etc., nor are any artificial means whatever employed to secure an appearance on the sheets at the expense of the quality.

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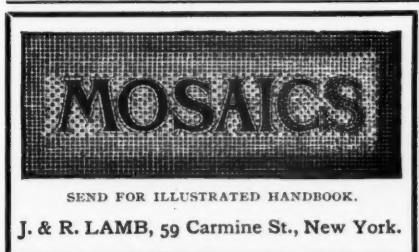
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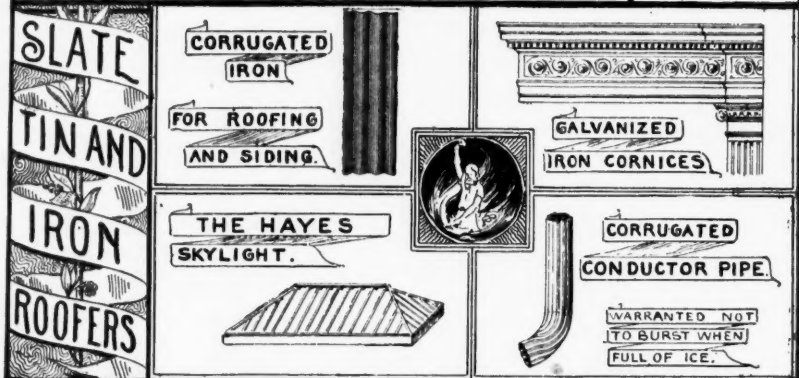
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The Graves Elevator Company have also just been awarded the contract for two of their high-speed hydraulic passenger elevators for the new Tremont Temple, Boston, Massachusetts.

AN IMPORTANT HARDWARE CATALOGUE.

It would be difficult to imagine anything in the line of builders' hardware that is not fully illustrated and described in the Orr & Lockett Hardware Company's new catalogue. The book contains 662 pages and nearly 2,000 illustrations. It is invaluable to the architect and practical builder, and is interesting to everyone who delights to "look into" the mysteries of the building art. Just such publications as this astonish us by their magnitude and challenge our admiration for the enterprise of the firms that can issue them. Orr & Lockett have long been known for their progressive spirit in their important line of business. Their latest catalogue shows a continued advance along the same line. The completeness of their list of locks, builders' and special hardware, and art metal work in bronze and iron is seen when it is stated that the work contains not only a large line of goods of their own manufacture but also the best goods of all the leading makers. Not being confined to one make of goods the line presented is representative of the best of every manufacture, including the cheapest as well as the most expensive.

The subject of locks is treated very extensively. About 250 pages are devoted to this important feature, and every conceivable pattern of mortise, rim and sliding door locks and padlocks are fully illustrated. Then come knobs, handles, escutcheons, keys, etc., electric push buttons, bells and batteries, knockers, speaking tubes, letters, name

plates, letter boxes, push plates, door pulls, latches, butts and hinges, springs, cabinet and art hardware, bolts, door hangers, sash locks, and in fact everything from a wire nail to a dumb waiter. One can hardly believe that so many articles of rare invention are consumed for the comfort of this *fin de siècle* generation, yet a careful perusal of the Orr & Lockett catalogue fails to discover any superfluous device or any omission of an article of hardware necessary to the proper equipment of a modern house.

ENAMELED BRICK OF HIGHEST GRADE.

Enameled brick of the best quality, which heretofore have been obtainable only by importation from England, are now successfully manufactured by the Tiffany Pressed Brick Company of this city. This new departure will be hailed with genuine satisfaction by the architects and builders of the West. The advantage of a near source of supply for this important building product is evident. Although the Tiffany Company have but recently perfected their process they have already secured some important contracts, among others being a contract for several thousand enameled bricks for the new Marquette office block at the corner of Dearborn and Adams streets.

The new bricks are made of the standard English size, 3 by 9 by 4½ inches, and include stretchers, quoins, soaps, radius and round-end bricks; they are made in white, ivory, cream, buff and other colors. The enamel forms a complete and inseparable union with the bricks, making them indestructible in any climate. This has been demonstrated by the severest tests made by Mr. Dankmar Adler. The bricks were alternately immersed in water at 150 degrees Fahrenheit for one hour and kept in the coldest freezing room for the same length of time, the process being continued for three days, the bricks remaining in the freezing room at night. The result of this treatment showed that the enamel is stronger than the brick itself. The cost of the enameled brick laid in the wall is about midway between the cost of the best pressed brick and terra cotta.

TRADE NOTES.

A GENUINE novelty in advertising is the handsome pocket match safe sent out by Pratt & Lambert to advertise their already famous line of varnishes. Accompanying it is a box of candy matches, wintergreen flavor, with the inscription, "There is nothing that matches or equals Pratt & Lambert's coach and car varnishes." The ingenuity of this attractive and interesting method of advertising matches the quality of the Pratt & Lambert goods. The superior points of these varnishes are paleness, transparency, limpidity, freedom of working, safety, drying in six to ten hours, brilliancy, luster, fullness, roundness, durability, elasticity, reliability and constancy of quality. Their Palest Durable Body Varnish is considered faultless. It is almost colorless, of mirror-like brilliancy and durability, and is not affected by sulphuretted hydrogen, ammonium or mineral sulphide paints.

A TIMELY subject is screen doors and windows; so the popular Willer Manufacturing Company, of Milwaukee, find it just now. In addition to the manufacture of sliding, folding and Venetian inside blinds they make a specialty of window and door screens of every variety, also screen door hardware. Their sliding screens are a decided novelty. They cover one-half of the window, slide up and down and stay at any position desired. These screens are balanced by a new spring of the Willer Company's invention. Stationary screens are made to cover the entire window like an outside blind. In the manufacture of screen doors the Willer Company also excels. Their original designs for double and single

screen doors are handsome to look upon and are considered standard patterns for the trade. Both plain and fancy designs are manufactured. But one quality is made—the best. An important feature of this work is putting up the screens. This is often quite as troublesome as the manufacture, and the Willer Company are prepared to take entire charge of all such details without the slightest responsibility on the part of the owner or architect except to pay the bill. With a Chicago office at Room 25, Adams Express Building, and a St. Louis office at Room 307, Fagin Building, they are enabled to give careful attention to every interest of their business in these as well as neighboring cities.

EXPANDED metal is best known by its rapidly increasing use in the form of lath, where a fireproof plastering is desired. The metal is also used for fences and gates, window guards, tree boxes, etc. The Northwestern Expanded Metal Company have had great success in the use of their expanded metal lath in some of the largest buildings in the West. A prominent example is the Chicago Beach Hotel, in which 75,000 square yards of expanded metal lath were used. The crowning virtue of expanded metal lath is that it is so constructed as to hold the mortar in the rear as well as in the front, and thus is so encased that it becomes absolutely fireproof. A partition built on channel studs is as solid as a stone wall and only one and one-half inches thick, thus making every room fireproof. This is an especially valuable feature in residence construction. Expanded metal lath is also found to be especially adapted to sustain elaborate and artistic forms of plaster decoration and is free from all liability to crack or fall. In outside work when plastered with portland cement it forms a surface as durable as stone, and can be made into a beautiful imitation of cut stone. Several buildings at the World's Fair were examples of this construction, except that staff instead of cement was used. The cost of expanded metal lath has been reduced so that now it is but little in excess of wooden lath.

ONE can scarcely appreciate the rapidity with which progressive foreign manufacturers are adopting the most approved American machinery for perfecting their products. In the line of woodworking machinery, this feature is especially prominent. Visitors to the recent Columbian Exposition, found much to admire when passing through the Wagner & Pullman train, and at other points on the grounds, in the way of foreign woods so effectually used. As in our own country, these timbers are now being dried and seasoned by the "fan" system, in preference to the usual outdoor method. Cured in this manner, the product is far superior in every way, being brighter, more lustrous and evenly dried, which prevents checking. The Buffalo Forge Company, of Buffalo, New York, have furnished within the past year a number of plants for various foreign countries, including the largest sizes of progressive lumber dryers. Usually, the average foreigner is slow in purchasing machinery which he feels is at all difficult to set up and operate. Concerning this feature, from a recent letter received by the Buffalo Forge Company from one of their foreign customers, we are allowed to quote as follows: "It affords us pleasure to say a good word for your fans, engines and heaters, as we have placed them in our factory. The outfits were placed by our own hands; your specifications have been so carefully drawn up, that we were not put to the expense of securing the services of an expert for the purpose. The kiln answers every purpose to perfection; the dryrooms are run with exhaust steam at mere nothing in the way of cost compared with the old way. The whole arrangement is very simple and easily managed, besides being a money-saver in operation."



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Vol. XXIII.

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No. 6

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A BEAUTIFUL SOUVENIR.

A beautifully illustrated little volume in half-tones on plate paper has been issued by the Bedford Stone Quarries Company as a souvenir of the famous Oolitic district of Indiana. Bedford is the capital of Lawrence county, Indiana, and contains about eight thousand inhabitants. It is reached via the Ohio & Mississippi Railway, the Evansville & Richmond Railroad, and the Louisville, New Albany & Chicago. The quarries, four in number, are situated about five miles northwest of Bedford, on "Buff Ridge," a district about one mile wide and three miles long. The Bedford Belt Railway connects the quarries with all the railroads entering Bedford.

The property of the Bedford Stone Quarries Company embraces in the neighborhood of one thousand acres of the choicest limestone deposit. Here twenty channelers, ten steam derricks, nine gangs of saws, headers, planers, etc., are in active use.

The Bedford limestone was first used in 1851 in the White River Railroad bridge near Bedford. Recent examination has shown that the stone abutments are as perfect as when built, more than forty years ago. The stone is of the same geological age and of equal quality with the celebrated Portland stone of South England, used in St. Paul's Cathedral, which was finished in 1700, and other famous buildings.

The present capacity of the Bedford quarries is soon to be nearly doubled by an increase of machinery. In addition, the Bedford Quarries Company propose to lease to quarrymen sites for the opening of new quarries. The strata are not less than forty feet deep, so that the output will run at least 1,750,000 cubic feet to the acre.

IMPORTANT DECISION IN THE U. S. COURT OF APPEALS.

Judge Rufus B. Smith, of the Superior Court, yesterday morning handed down his decision in the case of the Walker Paint Company against the Anchor White Lead Company.

The case, which was closed some ten days ago, lasted nine weeks, and testimony was offered from various parts of the country, while some of the heaviest legal pounding done in the courthouse for a good long time was that indulged in by the attorneys on both sides of the important suit. Judge Smith dismisses the petition of the plaintiff. The Walker Paint Company sued the Anchor White Lead Company and the Eckstein White Lead Company in August, 1891, claiming that the defendants were using false analyses of the plaintiff's goods; that the plaintiff did not use barytes in its alleged pure oxidized white lead, and that

the defendants were issuing circulars containing chemists' analyses showing the goods of the plaintiff to be adulterated with barytes. Action was brought for an injunction and \$50,000 damages. Judge Smith was rather severe in his remarks. His decision will attract widespread attention, in view of the fact that the case involves much more than shown on the face of the petition. The attorneys in the case were: Plaintiff, Joseph B. Foraker, Charles Prior, Frank H. Kinney, Drausin Wulsin, and Frank O. Suire, for the Anchor White Lead Company, and Elliott H. Pendleton for the Eckstein White Lead Company. Judge Smith gave judgment for the defendants and dismissed the plaintiff's petition.

The gist of the Court's decision is expressed as follows:

JUDGE SMITH'S DECISION.

"In the length of time which this case has taken, ten weeks, in the stupendous proportions which the record has reached by reason of the volume of testimony, depositions and exhibits, in the absolute contradiction in many parts of the testimony, and in the sensational surprise which resulted from the testimony of two of the witnesses, and in the zeal, perseverance, and apparent conviction of the respective counsel in the justice of their cause, the case presents features which mark it as a case which may justifiably be characterized as extraordinary. The defendants admitted that they had published the analysis complained of, and their principal ground of defense was that the statements contained in the analysis were true, and that the plaintiffs, as manufacturers of white lead, under their different brands, had during the years 1889 and 1890, notwithstanding their statements to the contrary, used barytes as an adulterant. The defendants further claimed that having had numerous analyses made of the product of the plaintiff, all of which showed the presence of this adulterant, they were justified in publishing these analyses for the purpose of informing the trade and public generally of the fact that the plaintiff's goods were adulterated. Nearly fifty different analyses were introduced in evidence on both sides, and in those made of goods manufactured prior to August, 1891, the presence of barytes as an adulterant was almost invariably shown. The plaintiff attempted to establish, by the testimony of its officers and three of its employees, that no adulterant had ever been put in its goods, but the Court finds that the analyses show conclusively that such was not the fact.

THE GOODS WERE NOT ADULTERATED.

"The Court finds that the claim of the plaintiff that the defendants tampered with or caused to be adulterated any of the kegs of the plaintiff's goods is wholly unfounded and unsupported by any evidence worthy of belief. The Court further finds that the testimony of Alexander Matthews is entitled to no credit whatever, and that the testimony of William B. Burke was as deliberate a case of perjury as has ever been attempted in a court. The Court further finds, after excluding from its consideration a number of the analyses, not because there is any question as to their correctness, but as it is unnecessary to follow them, that the evidence shows that the plaintiff did adulterate its goods in the years 1889-1890, as shown by the analyses made by the different chemists which the defendants caused to be published and circulated." Judge Smith, in concluding his written opinion of a very lengthy written document, says: "In conclusion, my finding is that by a clear preponderance of the evidence the defendants have established, and to my mind beyond all reasonable doubt they have proven, that during the years 1889 and 1890, when the analyses complained of in the petition were made, that the plaintiffs were sending out goods as first-class which were adulterated with barytes; that the analyses complained of in the petition are true, and that

the petition should be dismissed upon that ground. It is therefore unnecessary that I should consider the other defenses made by the defendants." The decision, owing to the prominence of the parties involved, is of international importance and interest.—*Cincinnati Commercial Gazette*, May 29.

REMINGTON BROTHERS' NEWSPAPER MANUAL, 1893.

We have received the seventh annual edition of the Newspaper Manual of Remington Bros., of Pittsburgh, Pa., and New York, N. Y. The Manual appears in a greatly enlarged form, and is now one of the most concise, convenient and reliable works of its kind. The general arrangement of this useful book remains unaltered, but important and valuable additions have been made, thus increasing its value to the general advertiser as a reference work and in the compilation of his lists.

The contents include complete lists of all newspapers in the United States and Canada, with their days of issue, politics and circulations, and properly classified lists of the principal dailies and weeklies, and the best agricultural, religious, scientific and trade publications and leading magazines. All the lists are catalogued by towns in alphabetical order, and in the general list the population is given of each town and of the county in which it is located.

To advertisers especially the Manual must prove invaluable, containing as it does every particular necessary for the general description of each newspaper, and so arranged as to admit of the readiest reference.

TRADE NOTES.

ELEVATORS AND THEIR LATEST IMPROVEMENTS.—We have no doubt that the new catalogue which has just been issued by the Graves Elevator Company, of Rochester, New York, will be of value to every architect or builder contemplating their use. This catalogue is up to date in every particular, illustrating and describing most every description of elevator, and many new devices for speed, safety and economy. The several systems described are as follows: Hydraulic, electric and steel screw passenger and freight elevators; also the patent spur gear freight elevator. In the last pages of the catalogue is published a list of over twenty-six hundred actual users of the Graves elevators, comprising hundreds of the best business houses, hotels and office buildings in the country. The Graves elevators have been in use since 1875; very limited at first, but of late years the sales have increased so rapidly that they are constantly making additions to their already large plant, having just finished a substantial five-story building (60 by 100 feet) to be used for building cars. Those contemplating the purchase of elevators should send for one of these catalogues.

RAILROAD NOTES.

THE Queen and Crescent route invites inquiries in regard to summer resorts on its line in the picturesque mountains of Kentucky, Tennessee and Alabama. The line passes near famous battlefields at Mill Springs, Mission Ridge, Chickamauga and Lookout Mountain. They are surrounded by charming summer resting places at Burnside, Cumberland Falls, High Bridge, Rugby, Rhea Springs, Lookout Mountain, Springville, Alabama, and other points. Low railroad rates—charming mountain homes—perfect rest and quiet. We invite correspondence, cheerfully giving the information desired, for the purpose of having you arrange to spend your summer recreation on our line. W. C. Rinearson, General Passenger Agent, Cincinnati.



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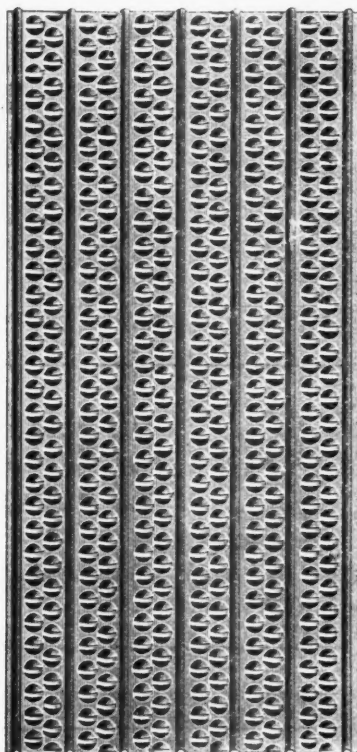
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THE "PIQUA" METALLIC LATH.

The Cincinnati Corrugating Company, with rolling mills, corrugating works and offices at Piqua, Ohio, have recently perfected and are now placing upon the market a new and improved form of steel lath, shown in the accompanying engraving, for which is claimed a number of improved features of interest to the reader.

The material used is of the best grade of steel, in sheets 27¼ inches wide by 48 inches long, each sheet covering exactly one square yard of surface. These sheets are traversed lengthwise at intervals of 3¼ inches by ¾-inch corrugations, thus providing great rigidity and stiffness to the entire sheet.

Between these corrugations, as will be noted upon reference to the illustration, are formed a series of slots at right angles to the



"PIQUA" METALLIC LATH.

corrugations, the metal on either side of the slot being depressed into cup-like shape, into which the mortar or plaster easily slides, and passing through forms a "key" of extraordinary strength and perfection,

besides obviating entirely the useless and expensive waste of plaster incurred when wire, expanded metal, or common wood lath is employed.

The "Piqua" metallic lath requires no stretching, stiffening pieces, nor staples for securing it to the framework, common nails only being used for attaching it in position.

While this lath is used quite largely in buildings of wooden construction, still it is principally used in strictly fireproof buildings in connection with iron beams and furring, and it is here that the rigidity and stiffness formed by the corrugations makes it especially valuable, for the reason that the studding can be placed at least two feet apart, making thereby a great saving in the cost of the studding. Where this lath is used in connection with iron, the usual method is to wire it into place, the cost of which is little, if any, more than the cost of nailing it to wooden studs.

It is especially adapted for adamant or patent plaster, and the rapidity and ease with which it may be applied to round, square or angular surfaces, together with the fact that it affords a much firmer holding surface for the plaster, and its fireproof qualities commend it to all architects, builders and owners of buildings.

TRADE NOTES.

A RECENT test of lubricants on hoisting tackle in the Brooklyn navy yard, by Robert Grimshaw, M. E., in collaboration with Lieut. John A. Bell, of the United States navy, proved that the saving in power by the use of Dixon's waterproof graphite grease represents the work of one man in three. In other words, it enables two men using clean and lubricated hoisting blocks to do as much hoisting as three with rough and dirty blocks, and the percentage of saving is increased with the load.

It is now a very generally conceded point that the seasoning of lumber by the Progressive "Fan" System of Dry Kilns is the most efficient and economical manner. Very large kilns of this sort are no longer uncommon. It is seldom in very large dryers that anything but a ¾ housing fan is employed. With this style of fan the horizontal type of engine is used for driving same, and is readily accessible for oiling and repairs on account of the lower scroll of the fan being underground, bringing the engine down low. The Menasha Woodenware Company, Menasha, Wisconsin, who employ in their plant over a dozen dryers, find it impossible to install a ¾ housing fan for the reason that their kilns, for the most part, are located on spiles driven into low marshy ground; in fact, close up to the water's edge, in order to facilitate handling the green timber. The largest full housing fan ever employed for a lumber dry kiln was purchased by them of the Buffalo Forge Company, Buffalo, New York, about three months ago. The fan stands 150 inches in height, and is supplied with a direct-acting 10 by 10 cylinder engine, the working parts being entirely inclosed. A heater containing 14,000 lineal feet of 1-inch pipe is used in conjunction with the above fan. Although this engine runs continuously, and upon a foundation anything but solid, highly satisfactory results are obtained. The Menasha Woodenware Company have just ordered of the Buffalo Forge Company a duplicate of the above plant, in which they state as follows: "From the fact of our giving you a further order, you can imagine that we are pretty well pleased with the apparatus that we now have, taking into consideration the special inducements which have been offered us by your competitors? The apparatus referred to is the first Buffalo kiln installed into their immense works, although they have been using the "Fan" system for a number of years.

GOETZ BOX ANCHOR.

It is a fact that a greater number of cities than usual have adopted new building laws, and in nearly all of them there has been made special mention about the method by which joists and timbers should be tied to the walls. In these later ordinances there is a provision which requires that all joists must be anchored to the brick walls by some approved method, so that the falling joists will release themselves from their anchorage without damage to the wall. Insurance companies have also noticed the importance of a provision of this kind, and in the new universal schedule for rating risks they allow a reduction

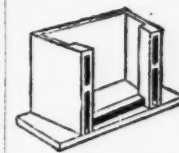


FIG. 1.

in rates if the joists are anchored to the walls by means of metallic anchor boxes. The Goetz Box Anchor comes nearest of any in filling the requirement of both building laws and insurance companies. The method consists of a simple cast-iron box of dovetail form, built into the wall into which every fifth joist is notched over a lug in the bottom of the box. For large timbers a plate is added to the bottom, and air spaces to the sides, as shown in Cut No. 1;

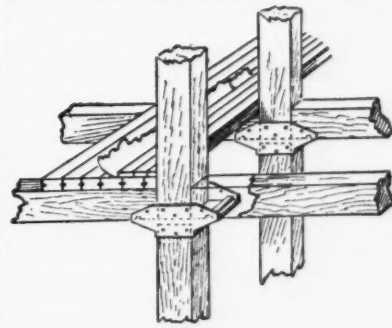


FIG. 2.

this gives ample air around the wood and positively prevents dry rot! so liable to occur in large timber because of being used in an unseasoned condition. Fig. 2 illustrates the Goetz Post Cap. It costs no more than any metal cap. The advantages are ease of fitting, a continuous post from cellar to roof, all tied together, and still any horizontal beam in falling will release itself without damage to the other parts. The cap is of cast-iron, and the material is arranged to secure the greatest possible strength. The old system of mortising joist when trimming around flues, stairways and hatchways, is fast disappearing, for with the new wrought-iron Goetz joist hanger, shown in Fig. 3, a stronger and better job is done. The cost of the hanger is about the same as the time consumed in making the old mortise and assembling the parts; the new hanger is easily employed by boring two holes with no fitting to be done, as shown in Cut 4. The company and its agents have supplied four hundred buildings



FIG. 3.

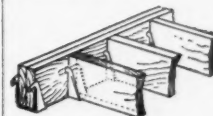


FIG. 4.

to date with these new devices, they are decided improvements over the old methods, and owners will be glad to see that architects adopt these in their building. The company has located agencies in nearly every large city so that consumers can get bids and the articles at home without trouble or loss of time, and in addition save the freights. Send to home of the company for illustrated catalogue. Goetz Box Anchor Co., 73 State street, New Albany, Indiana.



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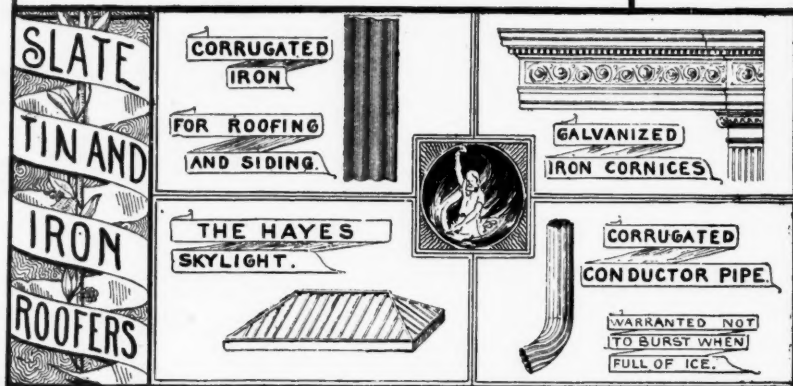
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THE INLAND ARCHITECT AND NEWS RECORD

Vol. XXIV.

ADVERTISERS' TRADE SUPPLEMENT.

No. 2

Valuable Publications Free.

Any architect can secure valuable books of reference without cost by sending for the catalogues of materials, etc., noticed from month to month in these columns. Large sums are spent on these catalogues, and they contain much practical information. Many are art productions. They may be obtained free on application to those issuing them. In writing please mention THE INLAND ARCHITECT, and oblige the journal and the dealer.

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THE NEW DEAFENER.

Cabot's Sheathing and Deafening "Quilt" has already scored a triumph over the ordinary methods. Actual tests have shown that three thicknesses of the best felt are not equal to a single thickness of quilt. This, of course, shows a very important economy in application, in addition to the low cost of the quilt, and it also means economy of space and weight. The flat blades of sea-grass, of which the filling of the quilt is composed, overlay each other at every possible angle, forming innumerable air-spaces, which are of the greatest importance for deafening or insulating.

The quilt has been subjected to many tests, notably, one for deafening in the Massachusetts Institute of Technology, and its superior nonconducting power has been shown repeatedly.

In dwellings, refrigerators, cold storage warehouses, office buildings, etc., it will be found much more effective than papers, felt or back plaster, and the ease of application is fully equal to any of them. The sea-grass contains silicon in place of carbon, and the quilt is thus much less inflammable than felts or papers, because this grass will not burn, simply shrivelling when heat is applied. Sample and information can be had upon inquiry of the manufacturer, Samuel Cabot, Boston, Mass.

THE FAN SYSTEM OF HEATING.

Many of the foremost heating and ventilating engineers and architects of today agree in the statement that the "Fan" system of heating and ventilating is, undoubtedly, the future one for large public buildings, halls of audience, schools, theaters, factories, mills and the like. Nothing is more indicative of this than that during the present pressed times, the well-known manufacturers of this apparatus, Buffalo Forge Company, Buffalo, New York, have been running their works full time in order to keep pace with orders.

The following are from a few recent pages of the Buffalo Forge Company's order books:

Ashland Avenue High School, Denver, Colo., requiring two fans, 130 and 100 inches respectively, with heaters containing nearly 30,000 feet of 1-inch pipe; Dartmouth street school, Worcester, Mass.; Grammar Schools, Nos. 59 and 79, New York city, 130 and 140 inch fans, respectively; Oregon State Agricultural College; Pennsylvania State College; several Detroit public schools; Eldora High School, Eldora, Iowa; Kirkwood Hall, Bloomington, Ind.; Mason City High School, Mason City, Iowa; George W. Childs School, Philadelphia; Ninth Ward School, Rutland, Vt.; Bank of Commerce, Buffalo, N. Y.; Erie County Penitentiary,

Buffalo, N. Y.; Gallipolis Epileptic Asylum, Gallipolis, Ohio, nine buildings; Baltimore Music Hall, Baltimore, Md.; Denver State Capitol, Denver, Colo.; National Union Building, Toledo, Ohio; Brooklyn High School, Brooklyn, N. Y.; Erskine Church, Montreal, P. Q.; Old Ladies' Home, Englewood, N. J.; State Insane Asylum, S. C.; Winnebago County Asylum, Wis.; Bay Shore School, Bay Shore, Long Island, N. Y.; High School, Delavan, Wis.; Tenth Ward Public School, Milwaukee, Wis.; Lancaster High School, Lancaster, Wis.; Fifth Ward School, Milwaukee, Wis.; Normal School, Pasadena, Cal.; Stevens Point Normal School, Stevens Point, Wis.; State University, Minneapolis, Minn.; Union Depot, St. Louis, Mo.

COLEMAN'S "MECHANICS' LIENS IN ILLINOIS."

The value of this recent work is shown by the following testimonials: JUDGE WILLIAM G. EWING—"It would be difficult to add anything of importance or value to the work. It is, in my judgment, a comprehensive presentation of the whole subject with which it deals." JUDGE JOHN BARTON PAYNE—"Am much pleased with it. I trust the profession may appreciate the effort to render plain this difficult branch of the law." See advertisement in this number.

TRADE NOTES.

MEMORANDUM of proposals received and opened in response to advertisement of July 19, 1894, for furnishing and putting in place Iron Furring and Lathing, etc., in the building for Library of Congress.

The Expanded Metal Fireproofing Company, Chicago, Ill. \$10,100.00
Snead & Co. Iron Works, Louisville, Ky. 11,187.00
Bartlett, Hayward & Co., Baltimore, Md. 12,625.00
Rutter & Merritt, Philadelphia, Pa. 12,831.11

The contract has been awarded to the Expanded Metal Fireproofing Company, the lowest bidder.

THE "Tandem" continuous roofing tin is one of Merchant & Co's "metal specialties for 1894." This tin is furnished in 14, 20 and 28 inch wide rolls, made from sheets 96 inches long. The seams are soaked on both sides during the process of coating. This plan of roofing saves labor, soldering and material, and, like Merchant & Co's other specialties, metal tiles and "Star" ventilator, is deservedly popular wherever best known.

ED. WERTHEIM, 207, 209 Lake street, Chicago, has recently issued a neat catalogue of the German asbestos specialties manufactured by his father, Louis Wertheim, at Frankfort-on-Main, Germany. The elder Wertheim has been interested in the manufacture of asbestos goods ever since 1867, and for many years has enjoyed a considerable trade in this country, but it was not until the World's Fair year that he determined on establishing a permanent agency here. His manufactures of most interest to architects are building paper, mill boards, felt, wall paper, cloth and paints. Asbestos appeals especially to the architect in these days of fires caused by electricity, inasmuch as it is a non-conductor and therefore a protection against the deadly current as well as against fire.

THE Joseph Dixon Crucible Company, Jersey City, New Jersey, manufacturers of lead pencils, crucibles, stove polish and other graphite products, have felt the necessity of stiffening the backbones of their salesmen who have complained of competitors' cut prices, and do it after the following fashion: In times like these, when work is none too plenty, and the manufacturer is anxious for orders and the salesmen likewise, there is great temptation to cut prices for the sake of getting a quantity of business and thereby deluding ourselves into the idea that we are prosperous because we are busy, forgetful of the fact that the more

business one does at a loss the slimmer will be the bank account at the end of the year. Prices once broken down are hard to reestablish, and it is even doubtful if they can be reestablished. Furthermore, a manufacturer who once gets the reputation of making cheap goods will find it difficult to obtain good prices even for his best goods, and fine products at good prices are always in fair demand at all times.

An ingenious device for cleaning the outside of windows has been perfected in the Security Window Appliance.

The lower portion of the right-hand stop is removed, the cord is temporarily supported by a hook, and the sash is then swung inward on a crane which hooks into lugs on the window frame on one side and corresponding lugs on the sash on the other side, thus forming a long hinge, as it were, the entire length of the sash. The cut which appears on another page will make clear the operation of the crane. The lugs are permanently attached to sash and frame, but the crane is inserted only when it is desired to support the sash. The upper sash is similarly supported by another crane, and both sashes are quickly and easily returned to their normal position as soon as the work of cleaning is done. An important consideration is the fact that no alteration in sash or frame is required in attaching the appliance. Apart from the saving of time and labor by the use of this invention, the absolute security of life and limb which it affords makes it invaluable. The Security Window Appliance Company is represented by W. H. Martin, general agent, 309 Chicago Herald Building, Chicago.

ACCORDING to the fourth annual edition of Hendricks' "Architects' and Builders' Guide and Contractors' Directory," there are 5,673 masons and builders in the United States, 5,000 dealers in paints, oils and glass, 4,625 roofers of all kinds, 3,968 civil engineers, 2,900 sash, door and blind manufacturers, 2,000 dealers in hot-air furnaces, 1,826 electric light companies, 1,670 granite producers, 1,981 stone producers, and 1,600 brick manufacturers. A feature specially aimed at in this directory is careful classification of industries. Thus firms classified under "Heating Apparatus" are further distinguished as manufacturers or jobbers of steam, hot-water or combination heaters, furnaces, hot-air or hot-blast apparatus, hot-water or steam radiators, cast or wrought iron pipe, globe or air-valves, etc., etc. A revised list of American architects and 175,000 names of builders, material men and manufacturers are comprised within the 800 pages of this work. New York: S. E. Hendricks & Co., 54 Broadway.

DR. WELLS, in his report to the Cleveland Board of Health, says that the fetid organic vapors associated with sewer gas impart no odor by which they can be recognized, and that "to depend upon water traps to prevent the passage of sewer gas is fallacious, since water will readily transmit gaseous bodies, particularly when they are compressed, absorbing them at its lower surface and giving them off at its upper." With a view to perfectly resisting this passage of sewer gas upward the Bower Sewer-Gas Trap was devised. A hollow rubber ball floats in the trap beneath the end of the inlet pipe. Water poured in forces the ball away, but the slightest pressure backward merely presses the ball (which is already held in its place by flotation) more firmly to its seat. The Bower trap has a removable glass section, giving ready access to all portions and exposing valve and water seal to view. The hollow rubber ball yields to pressure sufficiently to prevent freezing. The Bower trap is made in sizes and styles adapted to all classes of work, and mechanically is carefully constructed. The importance of the rubber ball is so great that only a superior quality, such as those furnished by the Bower Company, should be used.



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JOSUE SMITH SOLAR, Architect, Santiago de Chile. ALEXANDER HAY, Architect, 74 Baronne street, New Orleans, La.

C. D. DART, Architect, 40 Mercantile Block, Salt Lake City.

TRADE NOTES.

SOME specimens of work of the Baltimore Engraving Company are to be seen in our August number. This company, which is located at No. 205 East Fayette street, Baltimore, Maryland, is favorably known for the uniform excellence of their work, as well as a conscientious desire to please patrons in every particular. As a consequence, their patronage has become very large, and their reputation for satisfactory results extensive. Their plant is complete, and their facilities are second to none for first-class engraving of every kind. Whatever the purpose for which an engraving is required, or the process by which it is best produced, the Baltimore Engraving Company give it equal care and attention. They also make a specialty of embossing plates. Their genial representative, Mr. John G. Hoblitzell, is deservedly popular with the trade among a very wide circle of business acquaintances.

THE latest production of the Gardner Sash Balance Company, Chicago, is their steel sash lock, which has recently been perfected after months of careful experiment. This lock is indestructible and burglar proof. The latch and keeper are made of cold rolled steel, hence are much stronger than they possibly could be if made of cast iron. The lock is simple in construction, neat in appearance and perfectly safe from outside intruders. The latch has two distinct motions, the first when it is thrown into position on the keeper, the second to draw latch and keeper together. Both these motions are noiseless and perfect in action. The range of the lock is long enough to accommodate the loosest sash, while its binding quality is positive. The indestructible sash lock is furnished in any finish desired.

MESSRS. N. & G. TAYLOR Co., Philadelphia, advise us that their Tinplate Works have been continuously running on full time right along; the demand for their Special High Grade Ternes, especially the "Old Style" brand, constantly increasing. The following are a few of the most prominent buildings lately covered with this fine brand, the "Old Style": The Auditorium, Philadelphia; The Trinity Chapel, Philadelphia; Veterinary Stables, Philadelphia; Central Fire House, Philadelphia; St. Bonaventure College and Seminary, Allegany, N. Y.; The New Executive and Library Building, Harrisburg, Pa.; Depot Quartermaster's Quarters, Ft. Sam Houston, Texas; Wasatch School Building, Salt Lake City; Chamber of Commerce, Richmond, Va.; The State Normal School Building, Williamantic, Conn.; The Thompson Laboratories, Williams College, Williamstown, Mass.; St. Lucy Schoolhouse, Syracuse, N. Y.; The

Smith Premier Typewriter Works, Syracuse, N. Y.; The Binghamton Trust Company's Building, Binghamton, N. Y.; Engineering Hall, College of Engineering, University of Illinois; The Winthrop Normal and Industrial College of South Carolina; the Medical Lake Insane Asylum, Washington Territory; The American Line of Steamers, pier sheds, New York city; New York Institute for Feeble Minded Children, Syracuse, N. Y.; The Grocers' Exchange, New York city; The Seton Hospital, Spuyten Duyvil, N. Y.; Masonic Temple, Norwich, Conn.; 14th Regiment Armory, Brooklyn, N. Y.; The Dolgeville Turnhalle, Dolgeville, N. Y.; The City Hall, Springfield, Ill.; The Illinois State Fair Buildings; The Industrial Training School, Indianapolis; The Rolling Mill Company's Elevator and Mill, Claremore, I. T.; St. Mary's Roman Catholic Church, Baldwinville, N. Y.; High School Building, Wabash, Ind.; Grand Central Railroad Station, Portland, Ore.

MERCHANT & Co. have issued a fourth edition of their catalogue of metal roofing tiles, which they manufacture in copper, steel, or tin. The pattern chosen is the Spanish, as being the most ornamental and artistic. The weight per square is less than 200 pounds, a saving in the necessary strength of roof construction which is worth considering. The copper tiles make an indestructible roof, growing more beautiful with age. The copper, under the influence of the elements, takes on that beautiful mellow color peculiar to that metal. The steel tiles are painted, glazed, or galvanized. Where tin is desired the highest grade roofing plates are used, as only the best tin will stand the strain of the stamping machine and dies. Messrs. Merchant & Co. are meeting with deserved success in the sale of their new and artistic roofing material.

THE Chicago Interior Decorating Company is prepared to furnish interiors complete with fine finish, either from architects' designs or from special drawings if desired; wood mantels, from their own designs, of which they carry an exceptionally large and excellent sample stock; fine furniture—their own designs—for residences, clubs, etc., of the best class and including upholstered goods, with special designs where required; bank and office fittings complete; ceramic mosaics for floors and beautiful enamel mosaics for ceilings and wall decorations; tile pavements, Maw & Company's celebrated English tiles; enameled and ornamental tiles for mantels, wainscots, etc.; fine marbles, including onyx, African, sienna and all the rare varieties; also andirons, grates, etc., in brass and iron, their stock of metal fireplace furniture being most complete. In short, the Chicago Interior Decorating Company covers the entire field of interior decoration and furnishing in the most modern and approved manner. Their specialty is in artistic designing for residences, clubs, etc., and they are ever ready to submit estimates upon any work required. The fine display of their manufactures to be seen at the warerooms, 149, 150 Michigan avenue (premises formerly occupied by the Henry Dibblee Company) is familiar to many thousands of Chicago art-lovers who have been attracted by it.

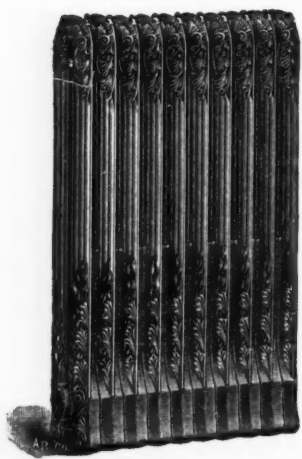
It is noticeable that in the new terne plate catalogue, issued by C. Sidney Shepard & Co., of 23 and 25 Randolph street, Chicago, American plates are given a prominent place. Four brands of American manufacture are handled by this firm, namely, the Westmoreland, Kenwood, Farmston and Apollo. The three former are of the regular 14 by 20 and 20 by 28 sizes, while the latter is made in 14 by 120, 20 by 120, 20 by 126, 24 by 96 and 30 by 96. Two Welsh plates are illustrated; they are the Worcester and the Morrilton Old Style. These latter are made by the Morrilton Tin Plate Company, and are guaranteed as heavily coated and equal to any old style or old

method terne plates on the market. They are made from best Siemens-Martin soft steel, hand-dipped and treble-coated, and the makers' guarantee that the tin and palm oil used in the manufacture of these plates are of the richest brands, being purified by a filtration process exclusively their own, which gives the purest and finest terne plate surface. No flux of any kind is used. Of English plates, one brand, the Pontymister Old Style, is handled by Messrs. Shepard & Co.

THE DEVELOPMENT OF THE SOUTH is being furthered by the Queen & Crescent Route by means of a special series of monthly excursions to Southern points at one fare for the round trip. These rates are in effect from Cincinnati, Ohio, Louisville and Lexington, Kentucky, on June 5, July 5, August 7, September 4, October 2, November 6 and December 4; good twenty days from date of sale for return. They are sold on these dates to all points in Kentucky, Tennessee, Alabama, Mississippi, North and South Carolina, Georgia, Florida (except Key West), and to New Orleans and all points on our line in Louisiana. The Queen & Crescent has over a million acres of farms and timberland for sale along its line at \$3 to \$5 per acre. Stop-overs are permitted on these excursions, at any point south of the Ohio River, within the final limit of the tickets. This offers an excellent opportunity to those who desire to go South to look into the present great movement of Northern farmers to that section. Send us your name for advertising matter and any information you may want as to lands and immigration to the South. W. C. Rinearson, General Passenger Agent, Cincinnati, Ohio.

THE siphonic system of water closets, as manufactured by the Park & McKay Company, of Detroit, Michigan, represents an advance in sanitary science. The Hamilton patents, which the company own, fully protect the designs and patterns of their "Utopia" siphon jet closet. The siphonic action of this closet is secured by means of a single direct jet of water under pressure from the tank above; one-half the contents of the water in the tank goes through the jet, and this forces the air that is between the two traps, along with the water in the lower trap, down into the soil pipe, thus creating a partial vacuum and establishing a siphon which draws out the contents of the bowl. The other half of the water passes to the flushing rim, thoroughly cleansing the bowl and assisting to discharge its contents. The refill is effected by means of a refill tube, connecting the ball cock inside of tank to the flush pipe, and filling the bowl with absolutely clean water direct from the tank. No trap is required, the back ventilating pipe being run from the bend under the floor. There is no horn connection on the back of the "Utopia"; the flush pipe connection is at top of bowl, vertical, connected with double revolving slip joint and spud, which prevents breakage. The "Utopia" has but one connection with the tank, the same pipe being used for flushing and overflow. The manufacturers claim that the "Utopia" is the only closet made that will siphon equally as well with the tank at an elevation of four feet as eight or more feet, and one instance is mentioned where the closet is in successful operation with the tank only three feet above. The greatest possible depth of seal is secured in the "Utopia"—4 inches in the bowl and 2½ inches in the lower trap. The water surface is very large, removing all danger of any part of the bowl becoming soiled; and insuring with the combined pressure of the jet and vacuum the passage of any substance whatever. The discharge of the "Utopia" is instantaneous, thorough and noiseless. Not a particle of the original water or other substance remains either in the bowl or trap after the flushing action is over.

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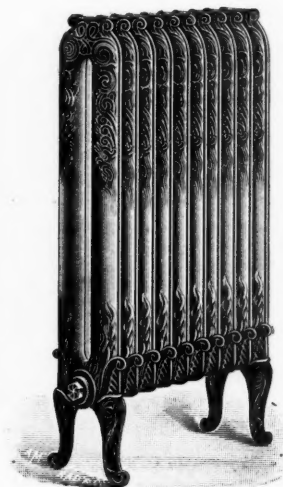
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THE INLAND ARCHITECT AND NEWS RECORD

Vol. XXIV.

ADVERTISERS' TRADE SUPPLEMENT.

No. 4

Valuable Publications Free.

Any architect can secure valuable books of reference without cost by sending for the catalogues of materials, etc., noticed from month to month in these columns. Large sums are spent on these catalogues, and they contain much practical information. Many are art productions. They may be obtained free on application to those issuing them. In writing please mention THE INLAND ARCHITECT, and oblige the journal and the dealer.

REQUESTS FOR CATALOGUES AND SAMPLES.

Those wishing catalogues and samples sent them by dealers in general can have their names inserted under this heading free of charge. The only recompense desired is that the dealers who send catalogues to these addresses give THE INLAND ARCHITECT proper credit.

ALEXANDER HAY, Architect, 74 Baronne street, New Orleans, La.

BRAINERD & HOLSMAN, Architects, New York Life Building, Chicago.

BREDE & ZIMMERMAN, Architects, Kanter Building, Detroit, Mich.

JOSUE SMITH SOLAR, Architect, Santiago de Chile.

"GATES, OF CHICAGO."

J. Holt Gates, General Agent Western States of the Mather Electric Company, reports the following sales of Mather electric apparatus since passing of tariff bill:

DYNAMOS.

New Davidson Theater, Milwaukee.	2	1,000 light.
V. W. Perry, Boston, Mass.	1	350 "
Hotel Minot, New York City.	1	500 "
Hoboken Quartet Club, Hoboken, N. J.	1	150 "
Henry Reinhardt, New York City.	1	100 "
E. P. Gleason Manufacturing Co., New York City.	1	150 "
Piscataquis Woolen Co., Guilford, Me.	1	250 "
Danvers Insane Asylum, Danvers, Mass.	1	600 "
Newport Gas Light Co., Newport, R. I.	1	250 "
State Almshouse, Tewksbury, Mass.	1	600 "
Whittenton Manufacturing Co., Taunton, Mass.	1	100 "
Whittenton Manufacturing Co., Taunton, Mass.	1	50 "
Weise Bros., Moline, Ill.	1	250 "
Chambers Electric Light & Power Co., Truro, N. S.	1	500 "
Union Central Life Insurance Building, Buffalo.	1	250 "
Beck Brewing Co., Buffalo.	1	600 "
Comstock Construction Co., Chicago	1	250 "
Gallagher Bros., Meridian, Miss.	1	100 "
New Ford's Opera House, Washington.	1	450 "
Grenada Hotel, Chicago (Gas Engine).	1	500 "
City Water Works, Chicago	1	300 "
Council Bluffs Deaf & Dumb Asylum, Iowa.	1	600 "
Henry R. Worthington, Brooklyn.	1	600 "
J. Holt Gates, Chicago	1	250 "

MULTIPOLARS — BELTED.

Jones Bros. Electric Co., Cincinnati.	1	50 H.P., 220 volt.
New Pittsburgh Coal Co., New Pittsburgh, Ohio.	1	60 K.W., 250 "
Morris Coal Co., Sand Run, Ohio.	1	60 K.W., 250 "
Hartford & West Hartford Railway Co., Conn.	3	180 K.W.
Danbury & Bethel Railway Co., Danbury, Conn.	2	100 K.W.
Bloomington (Ill.) Railway Co.	1	100 K.W.
Pocahontas Coal Co.	1	60 K.W., 250 "
James I. Ayer & Co., St. Louis.	1	30 K.W.
Henry R. Worthington, Brooklyn.	1	50 K.W.
George W. Furbeck, Chicago.	1	15 K.W.
Charles R. Lewis, Belleville, Ill.	1	30 K.W., 125 "
J. H. Somers Fuel Co., Belle Vernon, Pa.	1	60 K.W., 250 "
John Jermyn, Scranton, Pa.	1	100 K.W., 550 "
Gardner.	1	130 K.W.
Stamford Hotel, Chicago.	1	50 K.W.
J. Holt Gates, Chicago	2	60 K.W.

MULTIPOLARS — DIRECT CONNECTED.

Harry S. Smith & Co., Philadelphia, Pa.	2	45 K.W.
Odd Fellows' Hall, Philadelphia, Pa.	1	30, 1 50, 1 75 K.W.
South Chicago City Railway Co.	1	75 K.W.
Bartram Apartment Building, Philadelphia.	2	50 K.W.
J. Holt Gates, Chicago	1	60 K.W.

The factory, covering three acres, is now

being worked late at night, and orders are coming in by telephone for immediate shipment.

TRADE NOTES.

N. & G. TAYLOR COMPANY, tinplate manufacturers, Philadelphia, are running eighteen stacks. The demand for their plates was so great during the latter part of last month that they were compelled to run up to 10 o'clock at night. They say they not only propose to keep up the quality of their standard brands, but improve them in every manner possible, and have now under way a plan for increasing the wearing qualities of the genuine Taylor "Old Style" brand, which already carries every ounce of coating that can be put on. They further say that they can meet the competition of the cheap plates with heavy coating, by selling a better article at a less price, and this they have in plates which are carrying from forty to fifty pounds per box of 38 by 20.

ONE of the most distinguished gatherings of military and naval officers ever witnessed in the city of Philadelphia took place on the evening of Tuesday, October 9, when Clarke Merchant, head of the well-known tinplate and metal house of Merchant & Co., Incorporated, tendered a reception at his residence, 1615 Walnut street, to the Commander-in-Chief of the Military Order of the Loyal Legion, assembled in the Quaker City for its tenth annual meeting. The handsome residence of Mr. Merchant was beautifully decorated for the occasion with palms and flowers, while a string orchestra discoursed delightful music. After the reception in the main parlor a collation was served to the guests, the list of whom included many famous names. Mr. Merchant is a graduate of the Annapolis Naval Academy and served as a lieutenant commander in the navy.

A NEW radiator and quick-opening valve, especially designed for hot-water heating only, has been brought out by the L. H. Prentice Company, of 203 and 205 Van Buren street, Chicago. The new radiator is a valuable addition to the already fine line of steam and hot-water radiators manufactured by this company. Its principal features are a construction which enables the supply and return pipes to be connected either at opposite ends or both at one end, and the placing of a quick-opening valve at the top. The object of having a double connection at one end is that it saves labor in cutting of joists, economizes space, and will admit of the lengthening of a radiator without changing connections. The slight additional cost, if any, can be saved by the steamfitter in the labor of making the connections. Meantime, the radiator can be connected at opposite ends, where so required, without any expensive changes. The valve, located at the top of the radiator, in convenient position for quick opening or closing, and operated simply by a quarter turn, is of great practical convenience to the user. The L. H. Prentice Company will not confine the sale of this radiator to their contract work, but will sell them to the consumer through dealers and steamfitters at a price little higher, if any, than other radiators of first-class make. No doubt both trade and consumer will be quick to appreciate so important an improvement as is comprised in this new radiator.

THE new catalogue of plumbing and sanitary work of Peck Bros. & Co. is a large quarto volume of 588 pages, containing 1,682 illustrations, printed on heavy toned paper and bound in Turkey morocco. It is a fine tribute to the regard shown in modern architecture for sanitary plumbing. Two editions of the work are published, one for plumbers and another for architects, the latter being somewhat abridged. Peck Bros. & Co. are the well-known manufacturers, of New Haven, Connecticut, whose showrooms

in New York, Chicago and Boston are familiar to architects and to the plumbing trade. Their factory at New Haven is a mammoth structure, having a floor space of over three acres, and containing every facility for the manufacture of all the various parts and fixtures pertaining to their plumbing and sanitary specialties. The new catalogue of Peck Bros. & Co's manufactures is as complete as it is elegant. It illustrates fully their large line of lavatories and accessories, including an attractive display of decorated basins; also bath tubs of every conceivable variety; siphon, "Triple Jet" siphon, single trap pneumatic, and double trap pneumatic water closets; slop hoppers, barber shop fixtures, kitchen sinks and laundry trays, lawn sprinklers, etc. To the progressive plumber the work is invaluable. The architects' edition of Peck Bros. & Co.'s catalogue is arranged with special reference to convenience in specifying, and from this point of view the work cannot fail to be of assistance to many an architect who finds the details of plumbing in specifications a source of frequent misunderstanding and annoyance. The several parts of each combination are illustrated, numbered and named in this catalogue, so that any changes desired can be readily made and indicated in the specifications by designating the parts desired by their numbers.

RAILROAD NOTES.

THE QUEEN & CRESCENT ROUTE is the best equipped and shortest line to Florida. Solid vestibuled trains and through sleepers. To New Orleans the Queen & Crescent Route is the direct line, ninety miles shortest from Cincinnati. Solid vestibuled trains. Take the Queen & Crescent Route to Knoxville and Asheville. Only through car line Cincinnati to Asheville.

"WHAT THEY SAY."—Is the title of a booklet issued by the Queen & Crescent Route. It is devoted to the interests of immigration to, and the development of, lands along its lines in the South, and contains letters from Northern farmers who have made new homes in the South, telling how they live, how they prosper, and in how much they are pleased with the new home. Send a postal to the undersigned for a copy of the little book. W. W. Jones, Immigration Agent, Port Huron, Michigan; C. A. Baird, T. P. A., 155 Jefferson street, Detroit; A. J. Lytle, N. P. A., 193 Clark street, Chicago; W. P. Cooley, T. P. A., Cleveland, Ohio; Charles W. Zell, D. P. A., Cincinnati, Ohio, or to W. C. Rinearson, G. P. A., Cincinnati.

THE DEVELOPMENT OF THE SOUTH is being furthered by the Queen & Crescent Route by means of a special series of monthly excursions to southern points at one fare for the round trip. These rates are in effect from Cincinnati, Ohio, and Lexington, Kentucky, on November 6 and December 4; good twenty days from date of sale for return. They are sold on these dates to all points in Kentucky, Tennessee, Alabama, Mississippi, North and South Carolina, Georgia, Florida (except Key West) and to New Orleans, and all points on our line in Louisiana. Stop-overs are permitted on these excursions at any point south of the Ohio River, within the final limit of the tickets. This offers an excellent opportunity to those who desire to go south to look into the present great movement of northern farmers to that section. The Queen & Crescent has over a million acres of farms and timber land for sale along its line at \$3 to \$5 per acre, on easy terms. Send us your name for advertising matter, and any information you may want as to lands and immigration to the south. Charles W. Zell, D. P. A., Cincinnati, Ohio; W. W. Dunnivant, T. P. A., Cleveland, Ohio; C. A. Baird, T. P. A., Detroit, Michigan; W. A. Beckler, N. P. A., 111 Adams street, Chicago, Illinois.



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TREASURY DEPARTMENT,
OFFICE SUPERVISING ARCHITECT,
WASHINGTON, D. C., October 27, 1894.
SEALED PROPOSALS will be received at this office until 2 o'clock P. M. on the 27th day of November, 1894, and opened immediately thereafter, for all the labor and materials required for the erection and completion of the United States Postoffice building at Camden, Arkansas, in accordance with the drawings and specifications, copies of which may be had at this office or the office of the Superintendent at Camden, Arkansas. Each bid must be accompanied by a certified check for a sum not less than two per cent of the amount of the proposal. The right is reserved to reject any or all bids and to waive any defect or informality in any bid should it be deemed in the interest of the Government to do so. All proposals received after the time stated will be returned to the bidders. Proposals must be inclosed in envelopes, sealed and marked: "Proposal for the erection and completion of the U. S. Postoffice at Camden, Arkansas," and addressed to
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THE INLAND ARCHITECT AND NEWS RECORD

Vol. XXIV.

ADVERTISERS' TRADE SUPPLEMENT.

No. 5

A FINE-ART FEELING.

It is absolutely necessary in this day of progress. In building a house or in decorating it inside the presence or absence of the fine-art principle can be determined at a glance. When anything is thoroughly artistic it is restful to the eye and fits in among its surroundings as nature's work always does. Probably in no other incident of the interior decoration or furnishing of a house does the presence or absence of the genuine fine-art feeling manifest itself so frequently as in the gas and electric fixtures. W. C. Vosburgh Manufacturing Company, whose Western house is at Chicago, C. A. Vosburgh resident manager, are ready to show the exquisite designs as evidence of their genuine art feeling, as well as thorough workmanship, in developing those ideas.

In the realm of designing beautiful effects, the house has a deserved high standing east and west, some of the special designs shown by them being marvelously beautiful, and yet in so quiet and modest a way that they are not at all obtrusive in their artistic lessons. We recommend to owners who are erecting new edifices, or to those who are about to furnish their houses, to see Mr. Vosburgh and trust the matter to him, as he will serve them better than they can serve themselves.

TRADE NOTES.

PROMINENT among American exhibitors at the Antwerp Exposition of 1894 was the Troy Laundry Machinery Company, who received an award, designated as a medal of the first class, for their complete exhibit of improved laundry machinery. The specialties manufactured by this company include the latest and most advanced improvements in their line. They are now, as in the past, at the front in the invention of new laundry appliances. Their business history dates from the inception of the machinery idea in laundering, the very name "Troy" being suggestive of the beginnings and the perfection of fine laundry work. The company now has offices in Troy, Chicago, New York, San Francisco, London, Paris and Berlin, with factories at 648 and 650 Fulton street, Troy, and 395 to 401 Fifth avenue, Chicago.

THE new illustrated catalogue and price list of the Lunkenheimer Company, Cincinnati, manufacturers of brass and iron valves, lubricators and steam specialties, is a very handy and complete volume of reference for the engineer or steamfitter. The Lunken-

heimer steam specialties have been on the market for thirty years, and all being made according to the United States government standard of steam composition, they are of the best possible quality, and consequently of highest durability. The demand for the Lunkenheimer goods has become world-wide. The main offices and works are located at Cincinnati, Ohio, but increasing trade has necessitated the opening of branch houses in the East and in Europe, the former at No. 51 John street, New York, and the latter at 35 Great Dover street, London.

We take pleasure in publishing the following very high testimonial to the superior quality and finish of the Tiffany Enameled Brick:

CHICAGO, November 2, 1894.

J. Van Inwagen, Esq., President, Tiffany Pressed Brick Company, 403 Chamber of Commerce Building, Chicago:

DEAR SIR.—We have used about 160,000 of your American Manufactured Enameled Brick (English size) in the Marquette Building, the largest and most expensive office building in the West. They have proved very satisfactory as to quality, finish, etc., and we believe them to be equal to those of the best English manufacture. Yours truly,
GEORGE A. FULLER COMPANY,
Per GEORGE A. FULLER, President.

THE following circular announcing changes has been received:

STAMFORD, Conn., November 5, 1894.

To the Hardware Trade:

We beg to announce that on and after November 19, our general offices will be located on the second floor of the Stewart office building, No. 280 Broadway, New York, at the corner of Chambers street, in the center of the "hardware district," and within a few doors of our New York salesrooms at No. 84-86 Chambers street.

We take pleasure also in advising you that at a recent meeting of the directors of this company Mr. William F. Donovan, the present general manager, was elected also to the position of vice-president. The management of the new general offices, at No. 280 Broadway, New York, will be under the immediate direction of the vice-president, whose headquarters will hereafter be at that point. Our New York branch house and salesroom, under the charge of our assistant treasurer, Mr. Thomas F. Keating, will be continued at 84-86 Chambers street, and the business of that office will be conducted in all respects as heretofore. Our other branch houses and salesrooms in Chicago, Philadelphia, Boston, Pittsburgh and San Francisco will also be continued without change, and will each constitute the point of distribution and correspondence for the business within its territory.

The direction of the manufacturing and financial affairs of the company, including the management of its plant at Stamford and Branford, will continue to be conducted from the executive offices in Stamford. Respectfully,

THE YALE AND TOWNE MANUFACTURING COMPANY,
By HENRY R. TOWNE, President.

"GATES, OF CHICAGO," the general western agent for the Mather, Card and the Elwell-Parker electric companies, has secured the contract for the installation of the

complete electric plant of the Fort Dearborn building, corner Monroe and Clark streets, Chicago, Jenney & Mundie, architects. This includes engines, dynamos and wiring, the latter being brass armored conduit, and in its entirety will be one of the most complete electric plants installed in any of the new mammoth office buildings in Chicago. The Mather Electric Company, Mr. Gates reports, has just been awarded the contract by the United States government for three 2,000-light direct-connected dynamos for the new Congressional Library at Washington, D. C.

THE Clayton Air Compressor Works, Havemeyer building, 26 Cortlandt street, New York, have sent us a copy of their newest publication on the "Uses of Compressed Air." This list cites about seventy different applications of air under pressure, and is a most convincing commentary upon modern advancement in engineering, manufacturing and industrial lines. It is of especial interest to engineers, railroad men, machine and construction shops, marble and granite works, chemical works, sugar refiners, rubber and silk mills, tin ware, pipe and hose manufacturers, and to all industries which use artesian wells, automatic sprinklers for fire protection, oil for fuel, and to physicians, hospitals or baths which use sprays for curative purposes. The list is mailed free on application.

RAILROAD NOTES.

THE QUEEN & CRESCENT ROUTE is the best equipped and shortest line to Florida. Solid vestibuled trains and through sleepers. To New Orleans the Queen & Crescent Route is the direct line, ninety miles shortest from Cincinnati. Solid vestibuled trains. Take the Queen & Crescent Route to Knoxville and Asheville. Only through car line Cincinnati to Asheville.

IMPORTANT TO COMMERCIAL TRAVELERS.—On and after December 1, baggage agents of the Baltimore & Ohio Railroad Company will accept coupons from mileage books issued by Baltimore & Ohio Railroad, Pittsburgh & Western Railway, Baltimore & Ohio South-Western Railway and Valley Railway of Ohio, in payment for excess baggage charges, at their face value, 2 cents each. This arrangement will not include Baltimore & Ohio mileage books indorsed "good only on B. & O.," Baltimore & Ohio South-Western mileage advertising books, nor books older than one year from date of issue.

Why Not SPECIFY Frink's Reflectors?

LAST week we contracted to re-light with our Reflectors two prominent churches and one of the finest Young Men's Christian Association halls, to take the place of fixtures recently put in under the supervision of representative architects, who, at the time, would not listen to the use of our Reflectors.

The fixtures taken out, although elaborate, are practically useless to us, and we could therefore allow in exchange only ten per cent of their original cost.

In each case we were called upon by the committees to make the change with no solicitation on our part.

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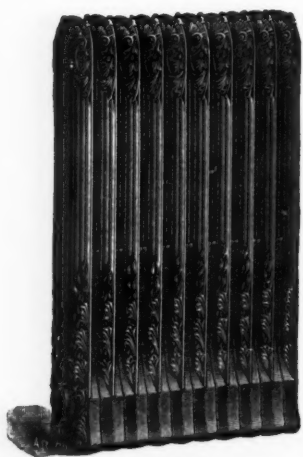
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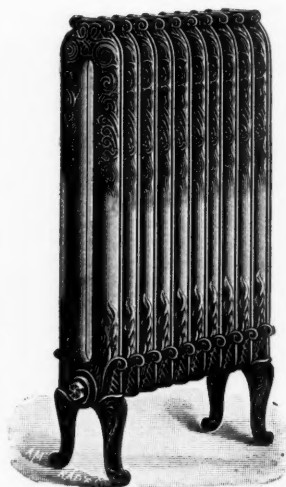
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HELENA PUBLIC LIBRARY, Helena, Montana.

JOSUE SMITH SOLAR, Architect, Santiago de Chile.

UNIVERSITY OF CALIFORNIA, Department of Drawing, Berkeley, Cal.

WM. H. BOUGHTON, Architect, rooms 77, 78, No. 110 Pearl street, Buffalo, N. Y.

FISHER BROS., Architects, Civil and Electrical Engineers, Crofoot Block, Pontiac, Mich.

H. W. BEARDSLEY, Architect, Niagara Power & Development Co., Model City, Niagara County, N. Y.

F. S. HUSTED, Architect, No. 9 Law Exchange, Buffalo, N. Y.

MORRISON H. VAIL, Architect, 1425-1427 Unity Building, Chicago.

"A GOOD ROOFING TIN."

Only an expert can judge of the comparative excellence of tin roofing-plate, fresh from the manufactory, and even an expert may be deceived by the outward appearance, as the defects of material are not manifested until it has been subjected to actual wear, and it follows that architects, roofers and builders should specify or employ such brands as have stood the test of time and service, and whose high and uniform excellence is steadfastly maintained in the face of the competition of inferior products. The Genuine Taylor "Old Style" brand is unquestionably the finest made, and the heaviest coated and the greatest care is exercised in the selection of material and the processes of coating and recoating. Messrs. N. & G. Taylor Company, Philadelphia, the manufacturers of these celebrated brands of American roofing tin, have never been tempted by the competition of other manufacturers to sacrifice quality to price. They have shown their appreciation of the fact that the triumph of depreciated products is but temporary at best by adhering to the single

standard of perfection, and have proved that true merit and consistent prices are always rewarded by permanent and lasting success.—From the *Chicago Illustrated Century*, December 22, 1894.

MODERN SANITARY FIXTURES.

The L. Wolff Manufacturing Company, of Chicago, have issued Supplement No. 3 to their Advance "B" catalogue, containing a revised price list, and many new designs not shown in the "B." It is hardly necessary to state that the L. Wolff Company are manufacturers of every description of plumbing goods, including Wolff's washout water-closet ranges, enameled iron lavatories and urinal stalls for schools and public buildings.

The washout water-closet range is furnished with or without galvanized iron partitions, and with either a single row of seats or a double row, back to back. A single tank flushes the entire range of from two to ten seats. The tanks range in size from twelve-gallon tanks for the two or three-seat ranges, to thirty-gallon tanks for the nine and ten-seat ranges. The system is novel, economical and successful. The ranges are furnished either enameled or painted, as desired.

"TIN IN ROLLS."

N. & G. Taylor Company, Philadelphia, are offering to the trade what they call "Roofing Tin in rolls." These are referred to as sheets of tin thoroughly soldered and painted on one side, ready to put on the roof. They are made in widths of 10, 14, 20 and 28 inches, 103 square feet in a roll, of IC and IX thickness, and can be furnished in any quality that may be desired, from the "Old Style" brand of extra coated roofing tin down to the cheapest grade. The rolls are referred to as particularly desirable for dealers who keep no tin-men or for work at a distance, as the tin is ready for use at a moment's notice. The rolls are in straight lengths and require no resquaring. The seams are said to be well soldered by hand. Prices may be secured upon application.

"CAMARET."

The quality of that celebrated brand of roofing tin known as the "Camaret," which is imported by Merchant & Co., of Philadelphia, Chicago, New York and Brooklyn, has never been affected by tariff changes. The coating and weight remain the same as before the McKinley tariff went into effect, and it is for this reason that Merchant & Co., discarding other makes, still continue to import the "Camaret." At the time of the enactment of the McKinley law, an

erroneous impression became current to the effect that Messrs. Merchant & Company had discontinued the importation of certain brands of tin of Welsh manufacture for the purpose of making tinplate in Philadelphia, or with a sort of patriotic view to "help" the McKinley bill. Nothing could be farther from the truth, however. Merchant & Co. are now giving the widest publicity to their indorsement of the "Camaret" brand of roofing tin because the manufacturer of that brand has always maintained the superior quality of his product in spite of higher tariffs. Of this fact the wearing qualities of the "Camaret" are the best evidences, as architects who have used it in the past will testify.

HENRY S. DOWNE.

The American Radiator Company, of Chicago, will open a branch office in London, England, and Henry S. Downe, Chicago, will be placed in charge of this important branch. Mr. Downe, who is one of the best known heating engineers in this country, was born in Mason, New Hampshire, and is thirty-three years old. Always accustomed to positions of responsibility, he was at one time superintendent of the Simonds Rolling Machine Company. He has been many years associated with the heating business in various capacities, and always with the leading companies engaged in the trade. He is a member of the American Society of Mechanical Engineers, and is a graduate of the Worcester Polytechnic Institute. He was vice-president of the National Hot-Water Heating Company, and when that company became a part of the American Boiler Company he became one of the directors of that enterprise, and leaves its service only at the most urgent request of the American Radiator Company, who feel that in opening their branch in London they need the services of a thoroughly representative heating engineer, and we believe the European heating trade will welcome him heartily. He sails January 16.

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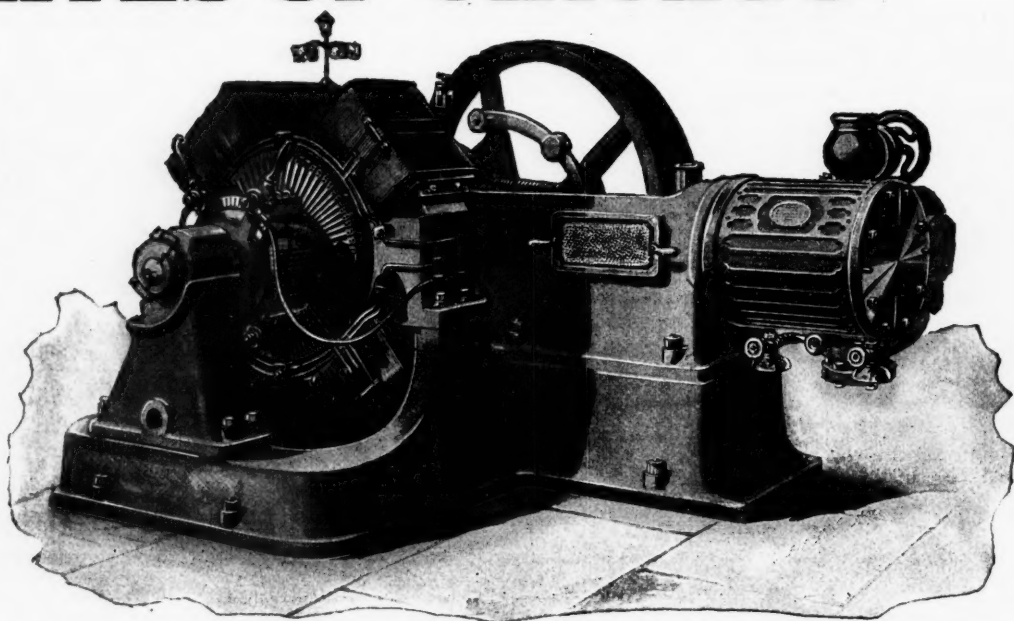
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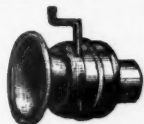
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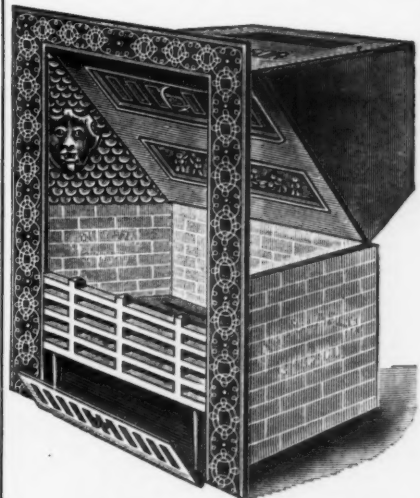
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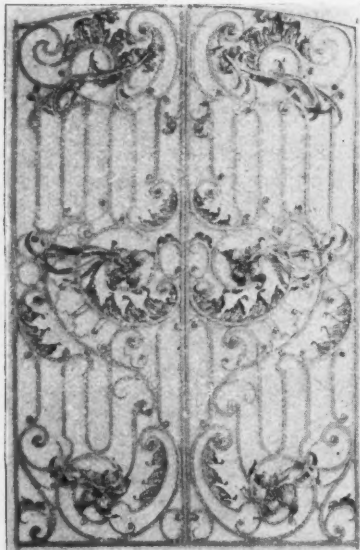
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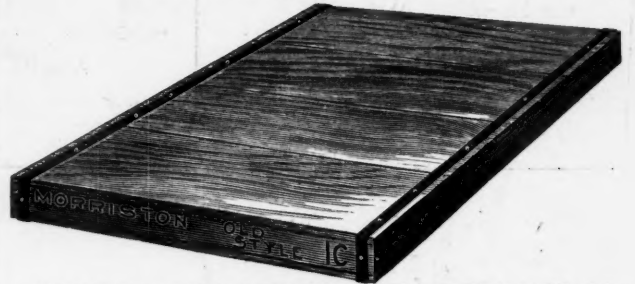
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