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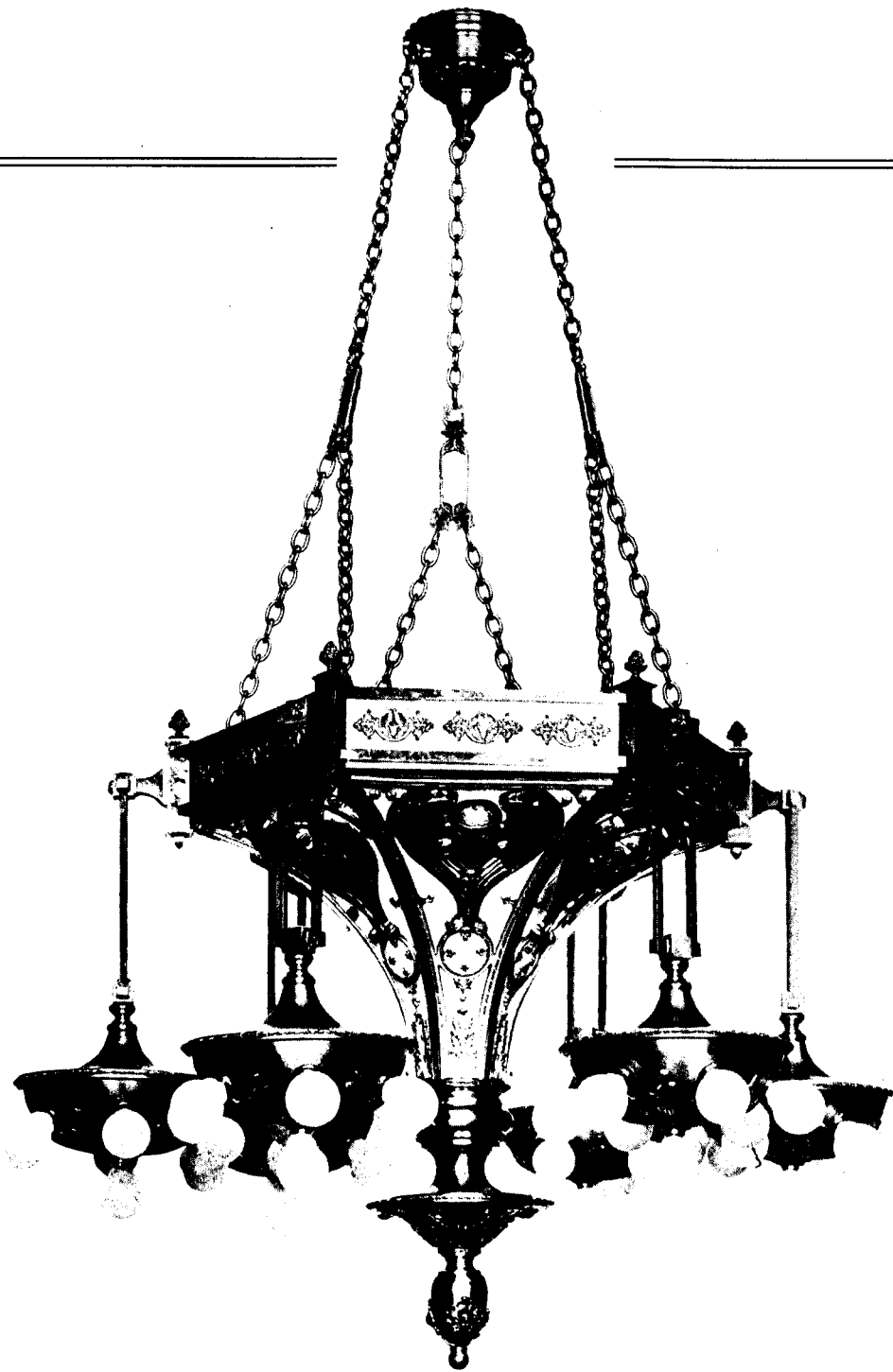
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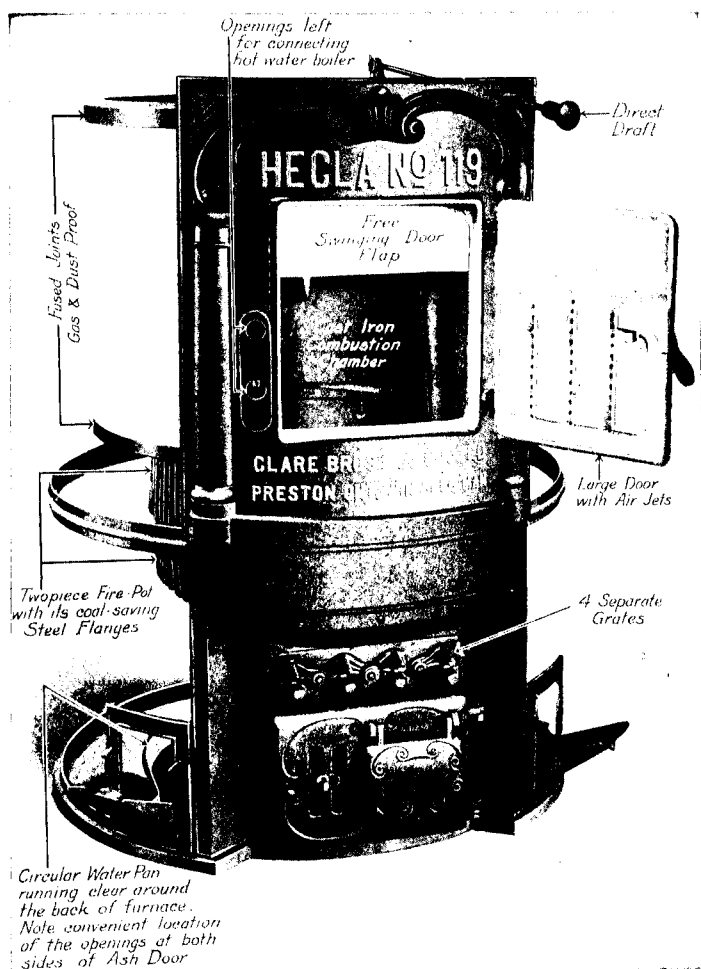
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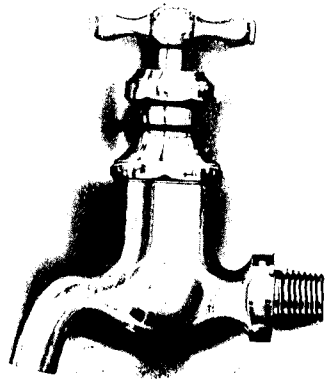


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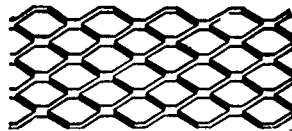
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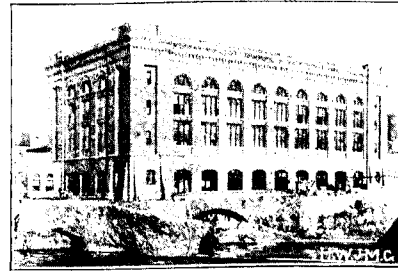


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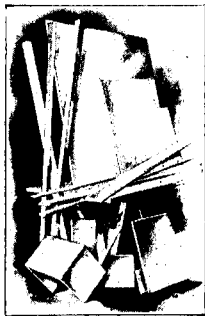
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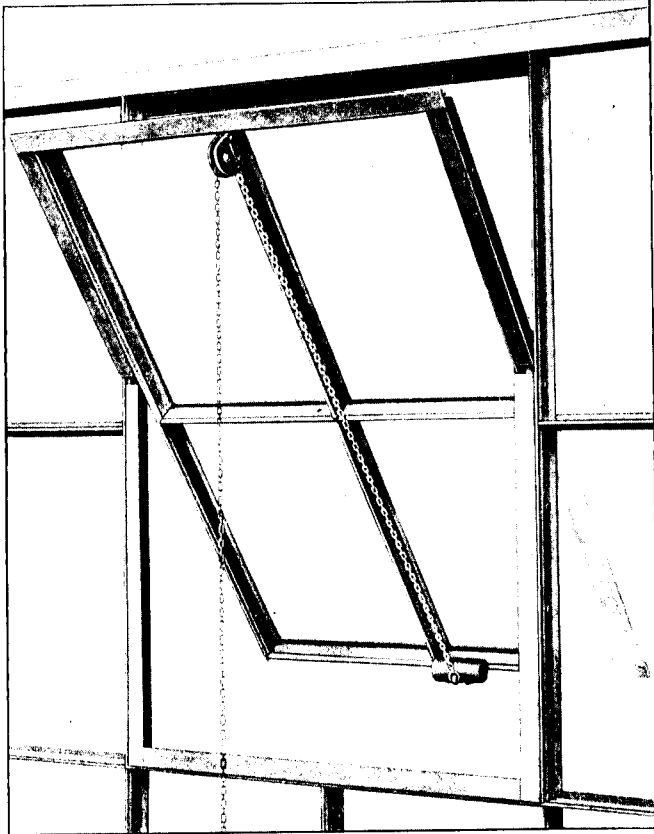
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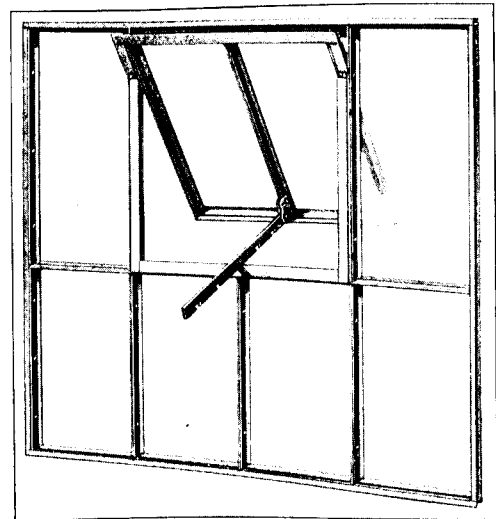


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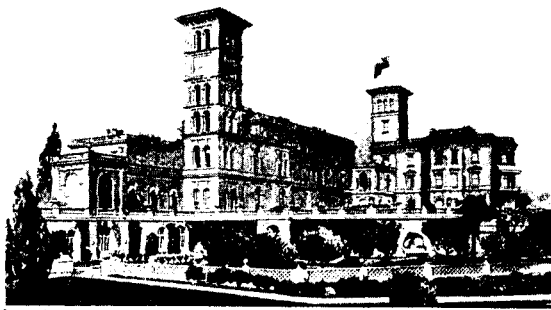
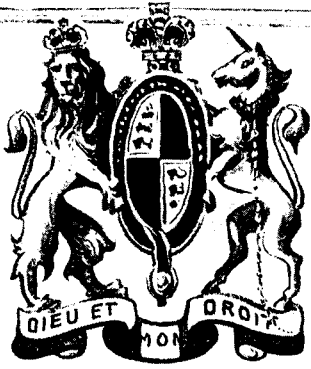


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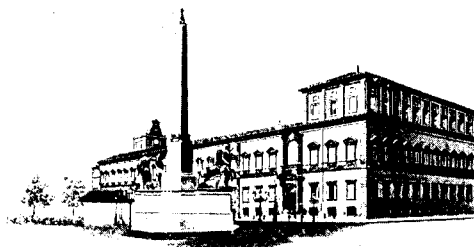
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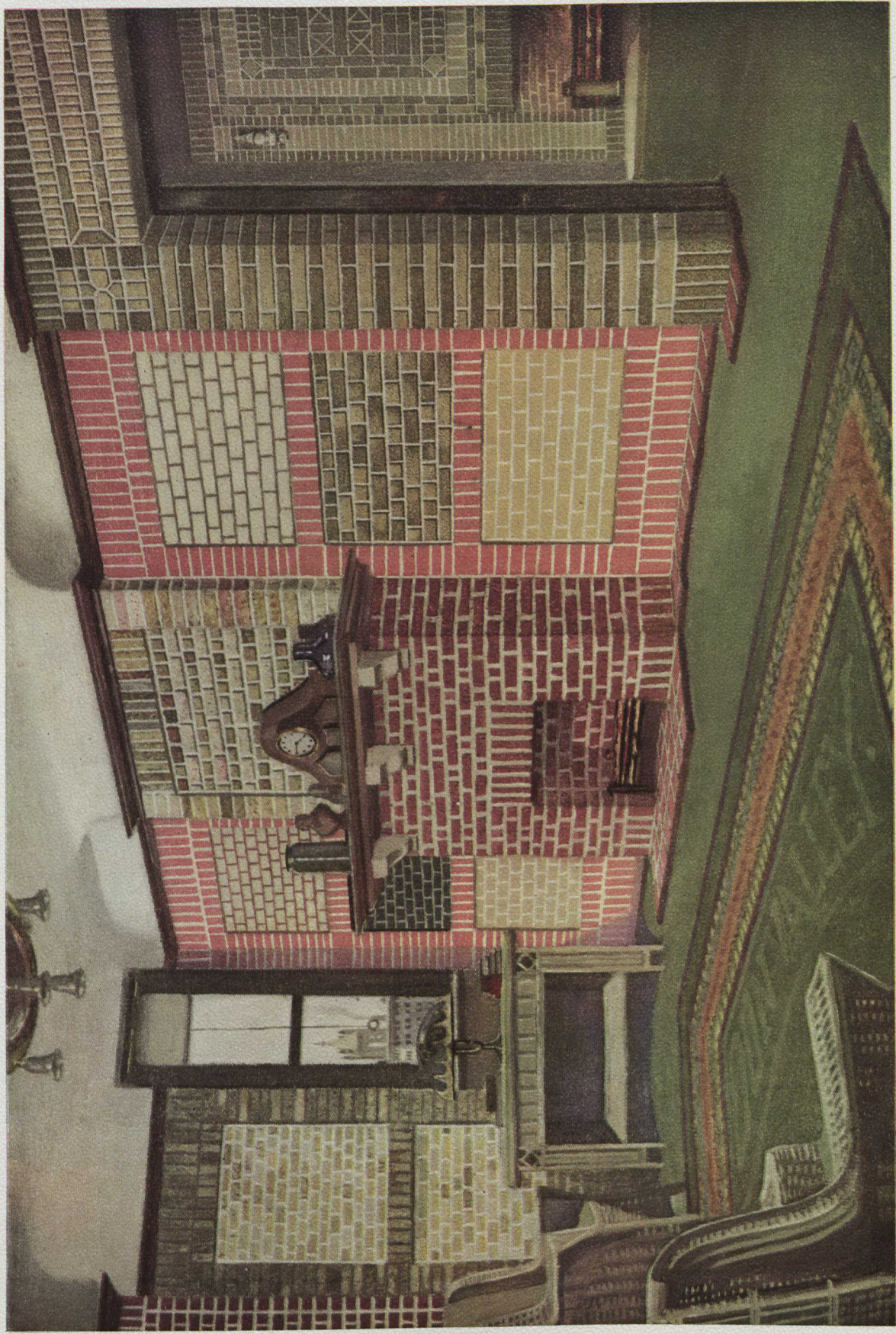
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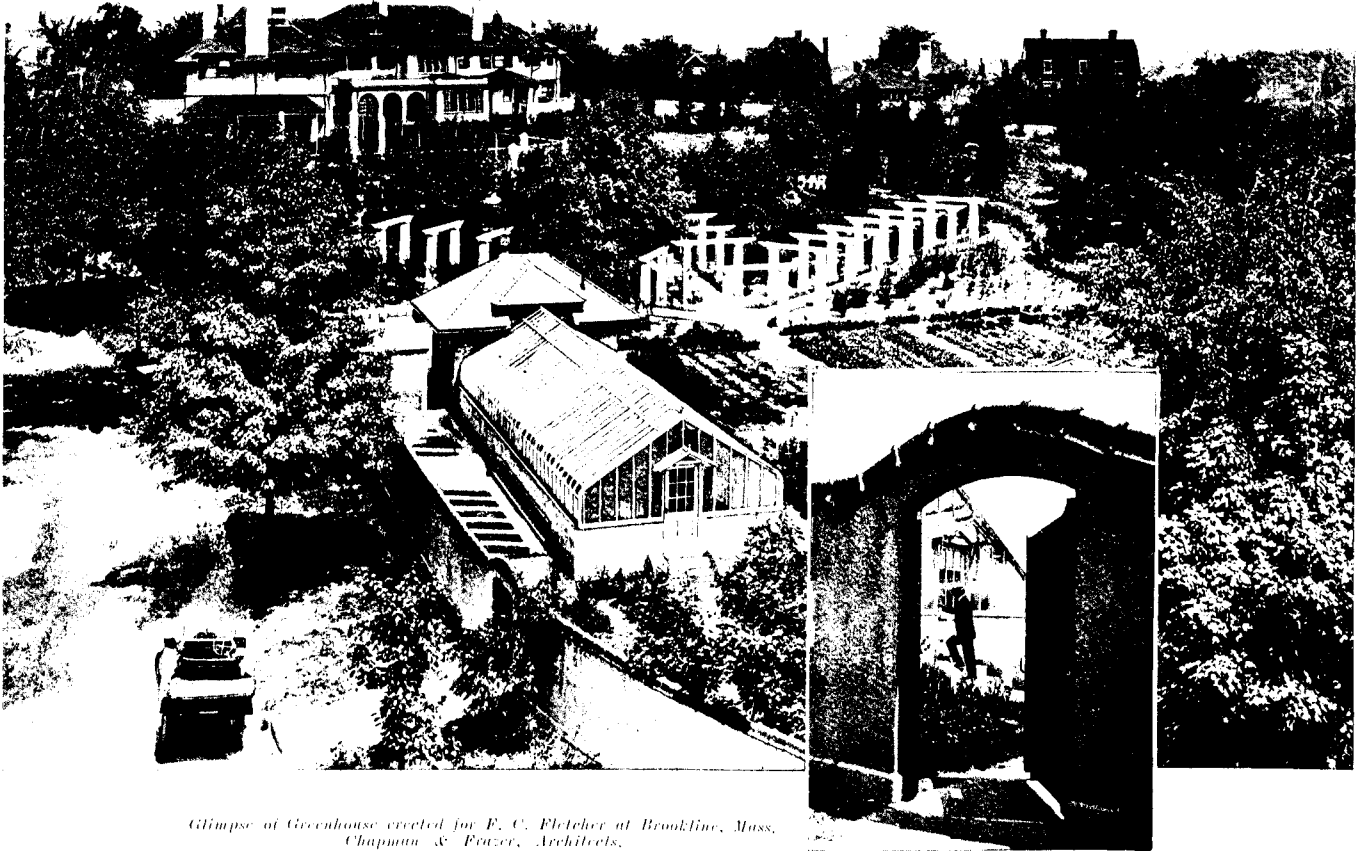
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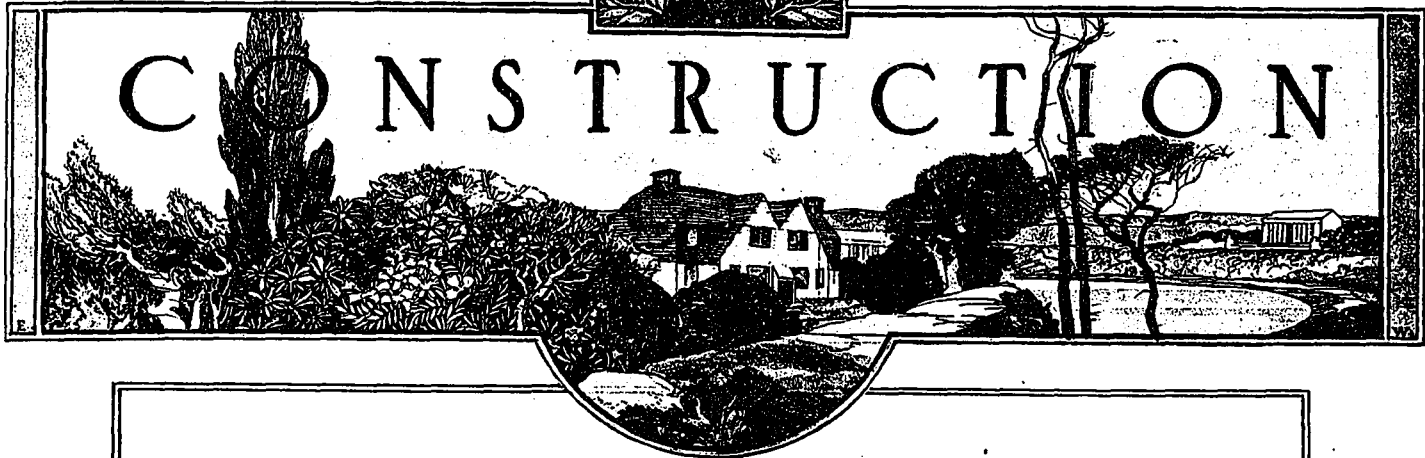
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CONSTRUCTION



May, 1915

Vol. 8, No. 5

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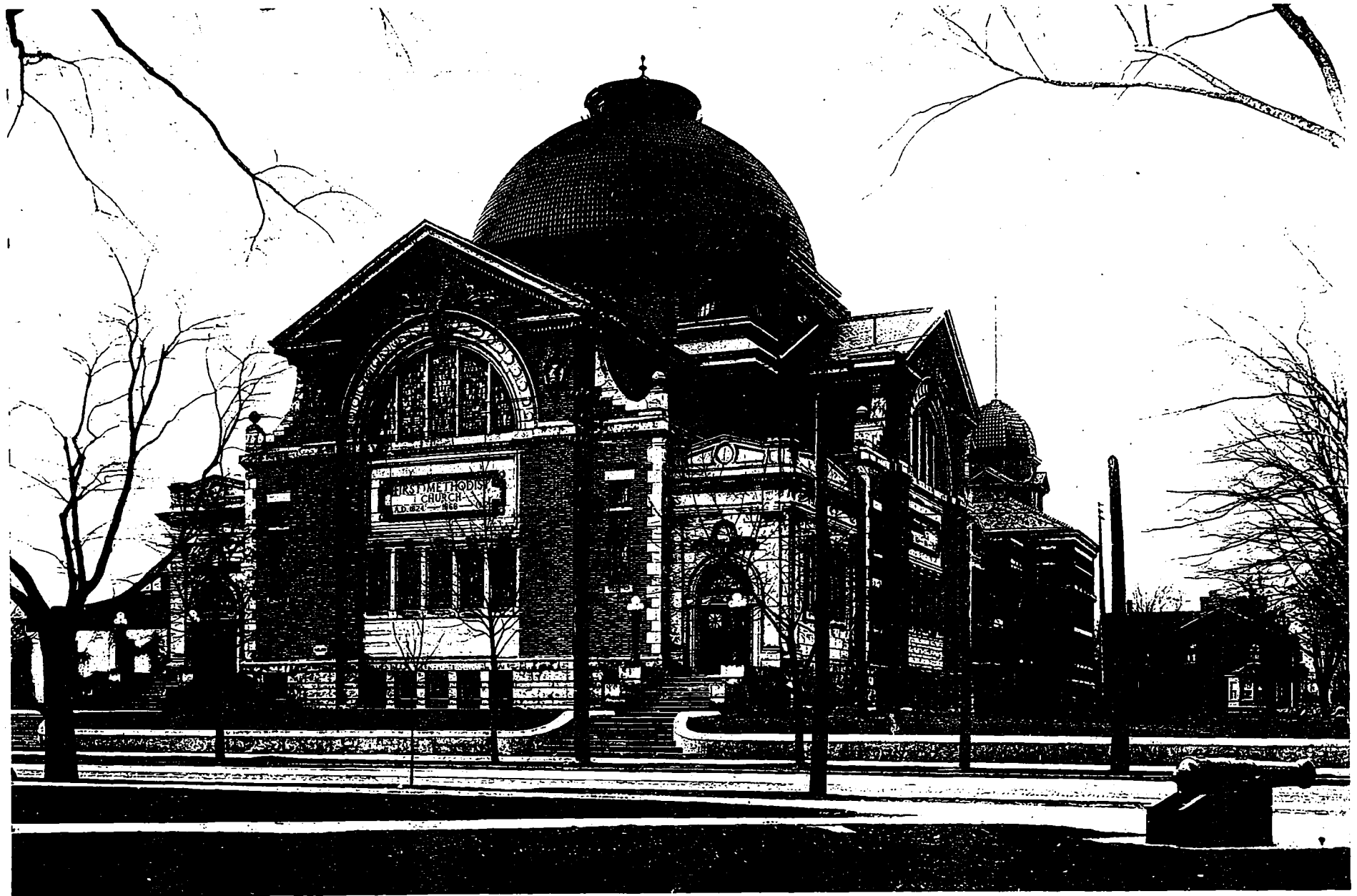
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FIRST METHODIST CHURCH, HAMILTON, ONT.

W. E. N. HUNTER, ARCHITECT.

GROWTH OF HAMILTON, ONTARIO

Hamilton, Ontario, has grown from a small farm, laid out in city lots by George Hamilton, 1813, to a manufacturing centre of one hundred thousand people. Along with its rapid development in industrial, commercial, financial and civic lines is noticeable the rapid strides in architecture. The new Public Library, Young Women's Christian Association, Registry Office and First Methodist Church are indicative of a sane and wholesome attempt to furnish the city with buildings of esthetic taste, practical in plan and of a durable nature. Aside from the

above are many others of equal merit which have been erected in recent years as well as several in the course of construction, among which might be mentioned the New Royal Connaught Hotel. This structure will cost over a million dollars and compares favorably with similar hostelries in other countries. The output from the four hundred factories which has caused Hamilton to be referred to as the Birmingham of Canada is forcing an expenditure of three million dollars on the harbor, which will be of great commercial value to the city.

ECCLESIASTICAL ARCHITECTURE

It is extremely gratifying to present in this issue an article on English church work by C. P. Anderson, who has enjoyed living among these monuments of inimitable grandeur. That he has imbibed the feelings of sincerity and devotion depicted by the great architects in the buildings themselves is quite evident from his sketches and his words. In our own endeavor to make the church structure an inspiration to everyone it might be well to study the spirit which enabled these artists to erect out of lifeless materials edifices which arouse a profound reverence for the teachings of Christianity. Some one has said: "The art of literature has largely superseded, or supplanted the gothic, as an educational necessity and made of it a luxury." Literature is a great educator but will never

bring about the abolition of lofty ideals as expressed by the student who writes his thoughts in works of art. We must build as we think and in so doing impress the people with the things which tend to elevate and ennoble. Sincerity is the one characteristic much needed in the development of true ecclesiastical architecture and the building should embody the great truths contained therein. It is only natural in this modern age to lose sight of the mediaeval gaiety which permeates its work, mainly because we are not profound enough to give it the necessary dignity, but in designing, the thought should always be uppermost that a structure which inspires from without will clarify the teachings within. Therefore in church work the building should depict noble attributes of Christianity.

ROAD CONVENTION HELD IN TORONTO

Considerable interest was manifest at the second Canadian and International Good Roads Convention held recently in Toronto which will undoubtedly prove to be the greatest incentive towards the betterment of our poorly constructed highways throughout the Dominion. This question is an important one to architects, engineers and contractors and should be considered more seriously. All building is hampered if the means of communication has had no practical solution. Congested areas in our financial centres, shopping districts, manufacturing quarters, etc., can be traced more or less to the lack of foresight in supplying adequate space for the administering of traffic. Streets in relation to the present and future needs of the communities wherein they serve are essential to their sane growth and ought to form an

integral part of the whole arterial scheme in each respective city. The commercial activities, industrial trade, civic growth and home life—all are related to the proper planning of roads. Thomas Adams in his address on the Scientific Planning of Roads in Towns and Cities refers to our pride in enjoying a state of government based on democratic principles while we still follow the principles of the anarchist in the planning of our highways. He with other leading authorities dwelt upon our failures and our advancement, impressing the one absolute need of exercising foresight and common sense in regard to the whole system of traffic in our cities and towns. Surely the spirit which prevailed at the conference just held augurs well for the future welfare of Canadian highways and cannot fail when backed by representative men.



DETAIL OF EXTERIOR,
FIRST METHODIST CHURCH,
HAMILTON, ONTARIO.

First Methodist Church, Hamilton, Ontario

THE city of Hamilton is fortunate in possessing an ecclesiastical structure of extreme merit when viewed from every phase of architectural work. This edifice, opened May 10, 1914, occupies a square enclosed on three sides by King, Wellington and Main streets. The site, two hundred by three hundred feet, provides an excellent setting in conjunction with a public park opposite King street upon which thoroughfare the main facade faces. The exterior is treated in buff tapestry brick with raked out joints of five-eighths inch thickness; artificial stone trimmings of crandelled surface and rubbed finish; pitched roofs of purple slate and tile, and dome treated in a deep red Spanish tiling.

The problem in ecclesiastical work, especially in the Methodist, Congregational, Baptist and Presbyterian churches, where the preaching is the most important part of the service, is to provide a well-shaped auditorium, unobstructed and direct view of speaker and choir, and good acoustics. All three are about equally important. In this case it was all important to get a large auditorium and Sunday school at a low cost. The location being so prominent, and the church the first Methodist church in Hamilton, the architect decided to give it a monumental treatment, and elected to work it out in the Italian Renaissance style as well as possible, subject to the limitations of cost and utility.

The building is two hundred feet long by one hundred and ten feet wide. The auditorium seats sixteen hundred persons, the choir sixty, and the Sunday school proper, nine hundred and fifty; besides this there is a large kindergarten department in the basement of the Sunday school to accommodate three hundred and fifty scholars, and capable of grading or subdividing.

There are five large entrances to the building, three to Sunday school and two main entrances to the church. Two of the entrances to the Sun-

day school are also used for the church; and in addition is a wide basement or area entrance to the gymnasium or social hall, so that this room may be used without passing through any other part of the building.

The most important feature is the large auditorium surmounted by a dome sixty feet in diameter, supported on eight large reinforced concrete piers and arches—four small and four large ones with a thirty-six foot span.

The decoration of the auditorium is very striking, the colors blending in a restful harmony. The tones are a sage green ground with enrichments in stencil for border, forming a background for the treatment of the arches, piers and dome. The piers and arches have a dull bronze finish and the dome gold with relief work in the ribs and cornices; the panels are enriched with large acanthus leaf design.

The dome is the central feature of the building, and the glow of light thrown up into the top is reflected into the room proper, furnishing a soft, well diffused light. At the base of the dome indirect mirror reflectors are used, while at the top of the interior dome, sixty feet from the floor, is a ring of electric lights placed in rosettes, giving the effect of golden pollen in a flower. Under the cornice of the dome is the same treatment, which tends to lighten up the shadows caused by the strong indirect light above the cornice. The system of

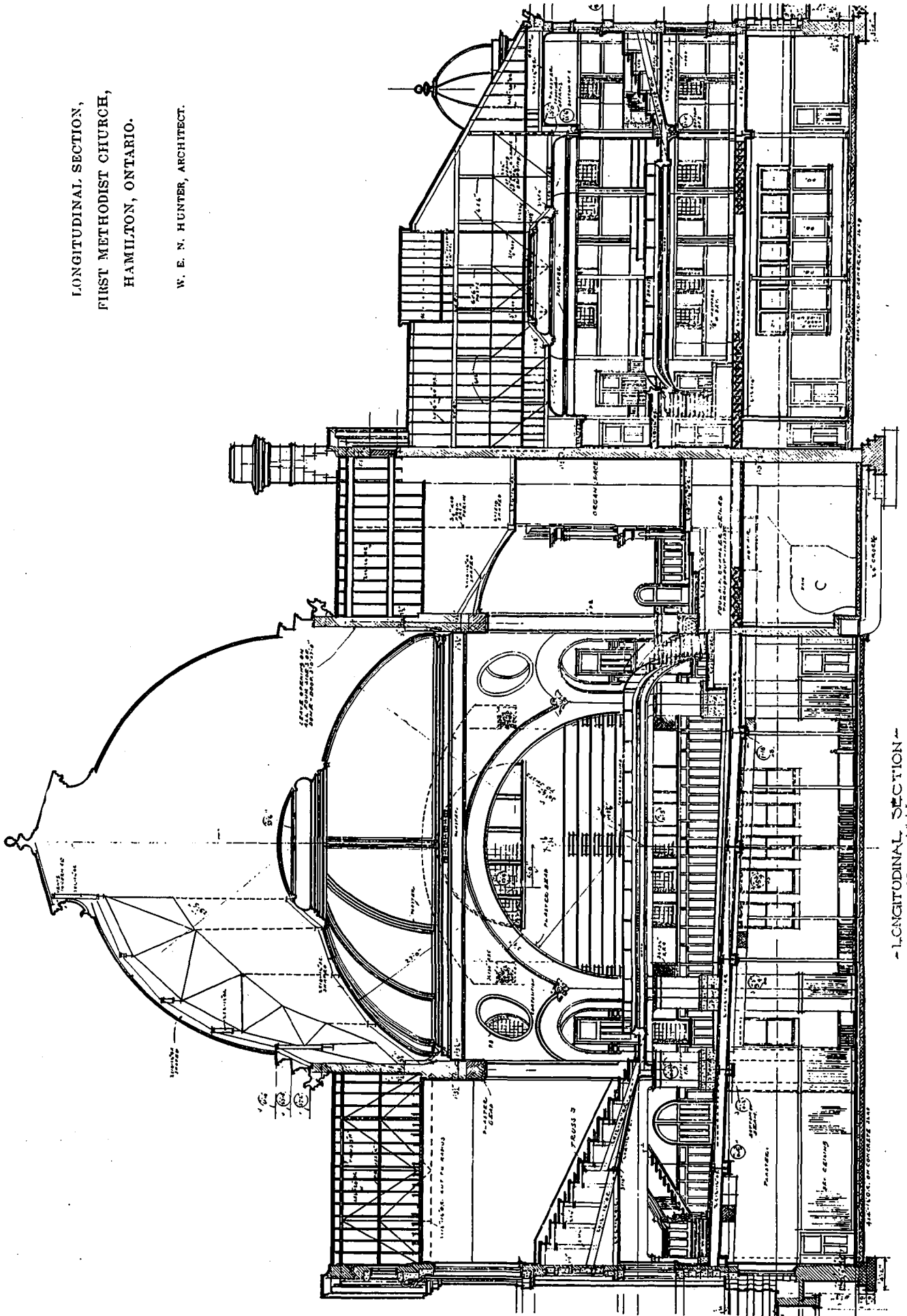
lighting throughout is the semi-indirect.

The interior finish in all halls, stairs, first and second floors is clear white oak, fumed to soft rich brown, the other woodwork is southern pine finished natural. The art glass is a simple amber opalescent field in rectangular panels, with laurel leaf border in soft green and woody browns. In the vestibule is a wainscoting of soft gray brick, Norman size with stone cap and base; vaulted ceiling and red tile six by nine inches with ornamental inserts.

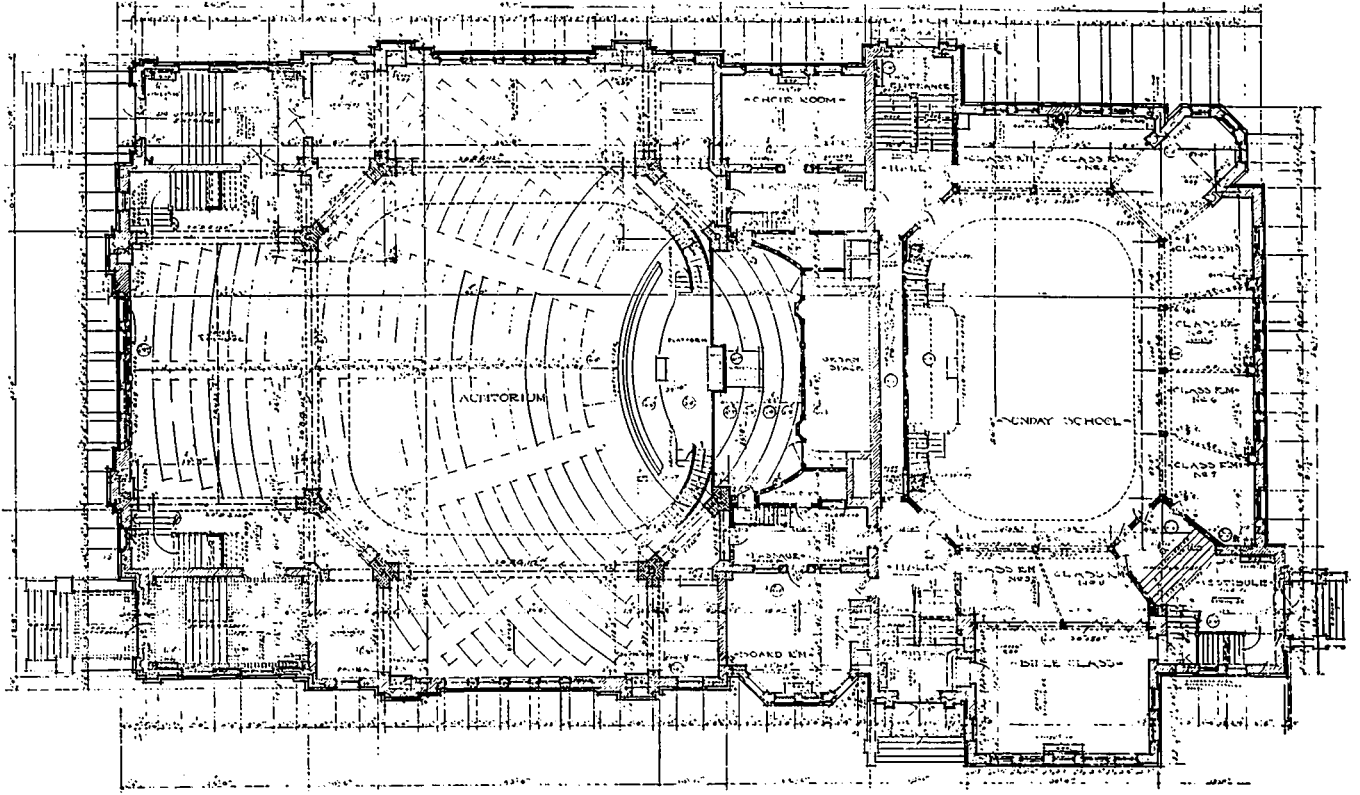


LONGITUDINAL SECTION,
FIRST METHODIST CHURCH,
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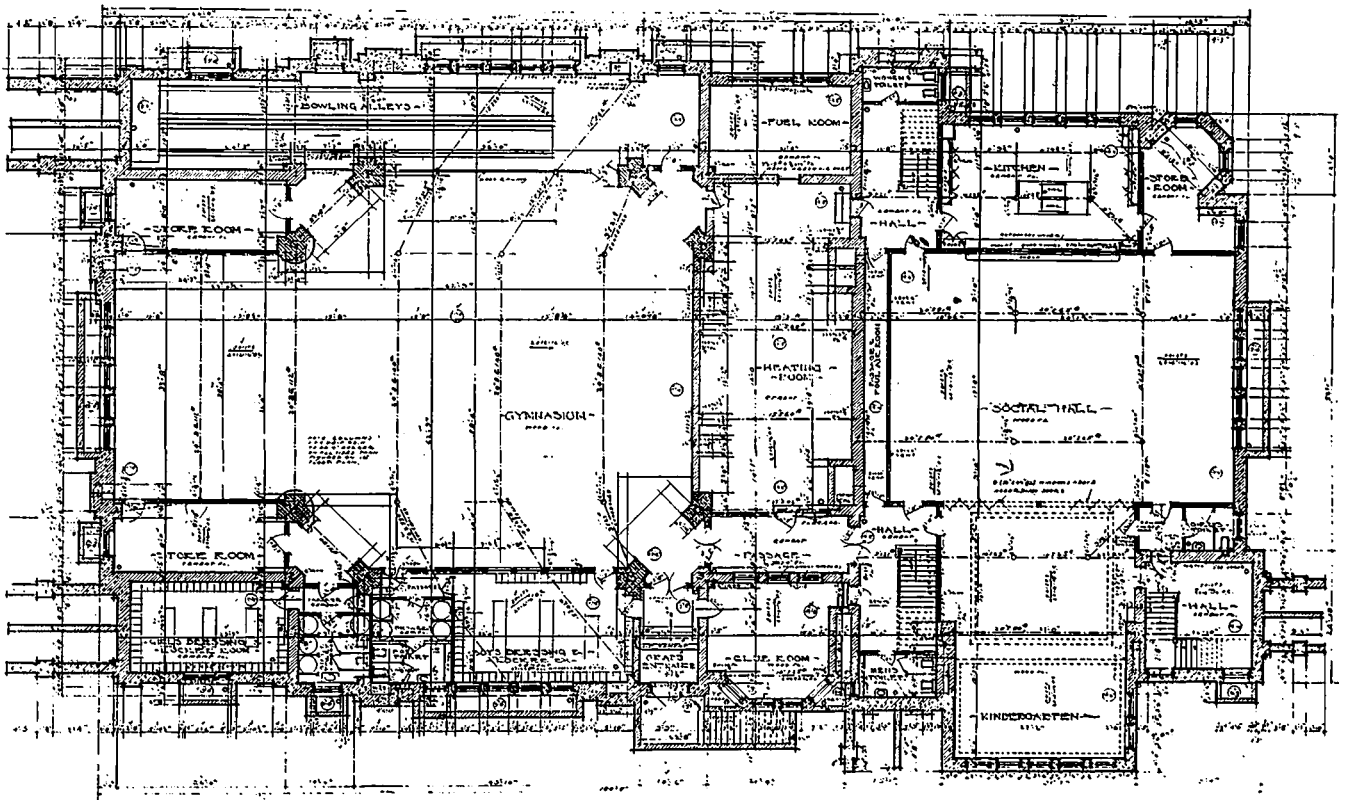
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LONGITUDINAL SECTION
SCALE 1/8" = 1'-0"



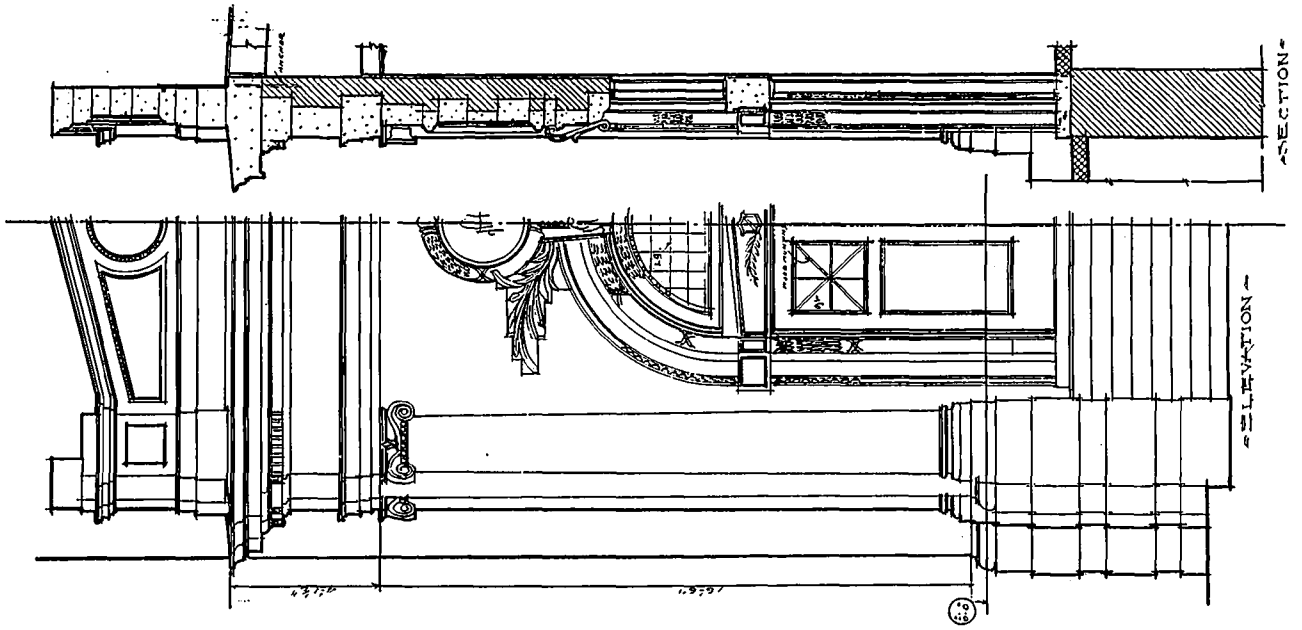
FIRST FLOOR PLAN.



BASEMENT PLAN.

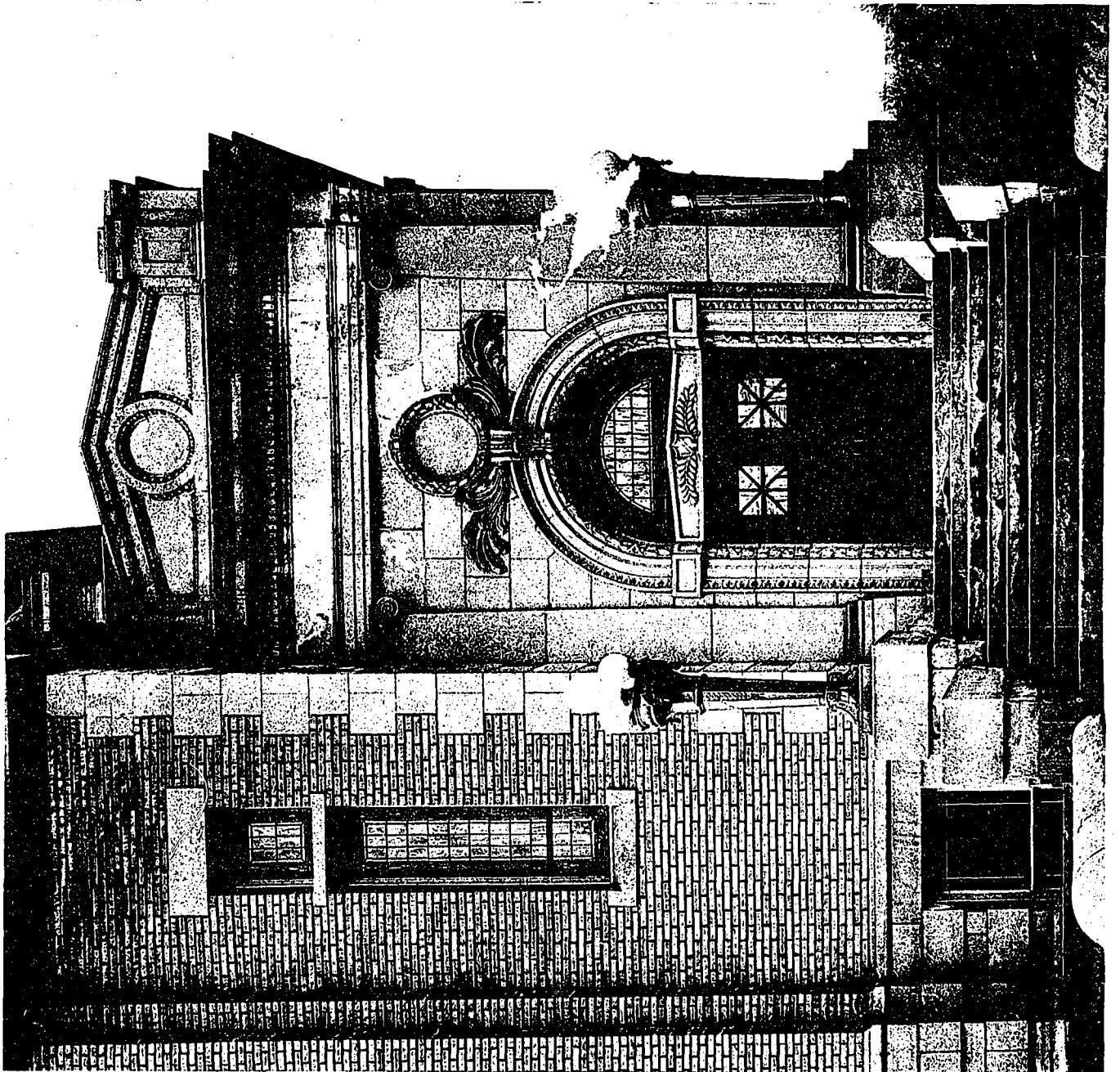
FIRST METHODIST CHURCH, HAMILTON, ONT.

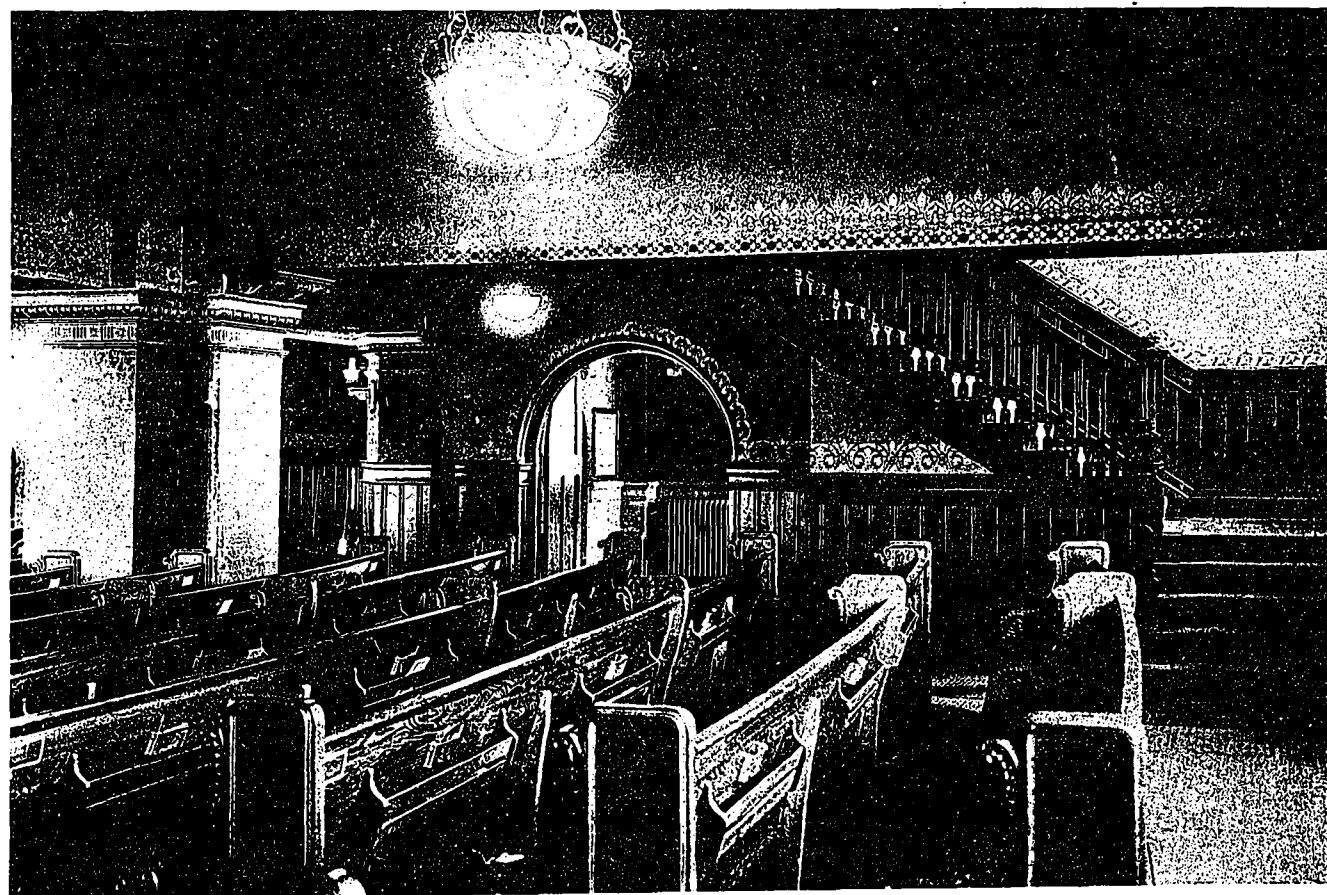
W. E. N. HUNTER, ARCHITECT.



DETAIL OF FRONT ENTRANCES.

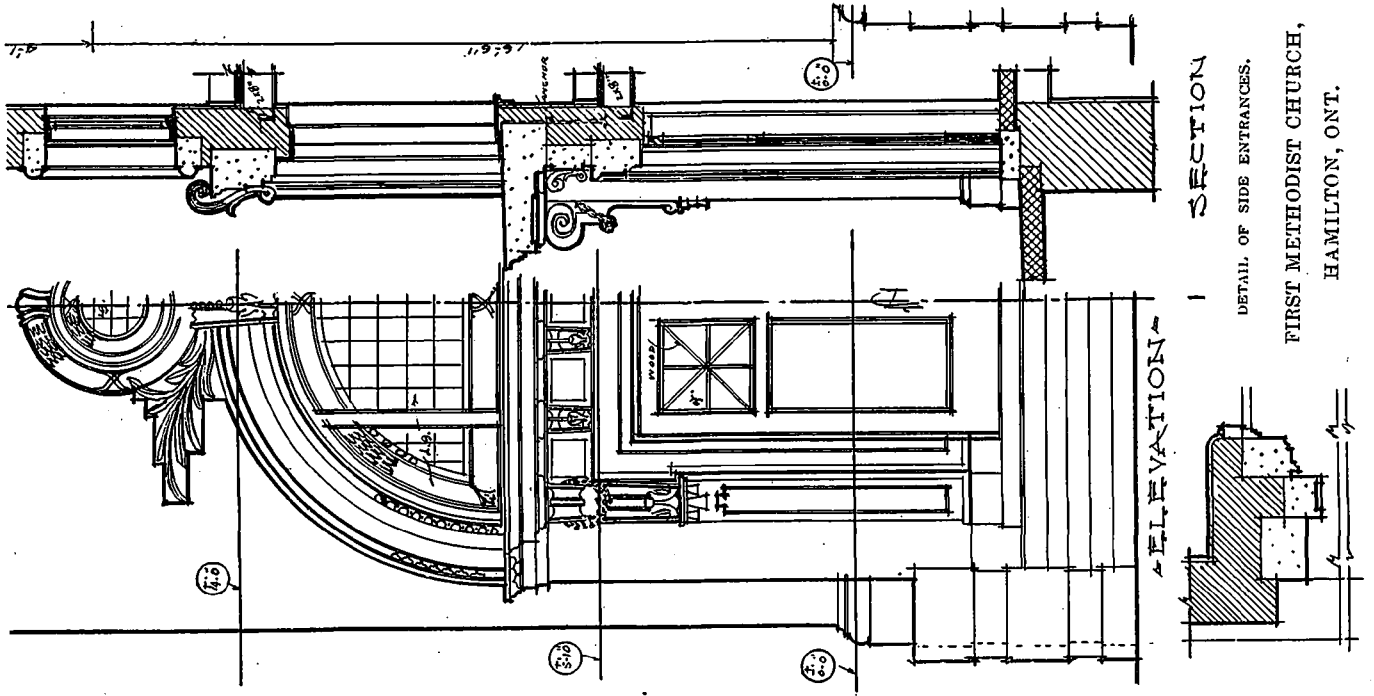
FIRST METHODIST CHURCH, HAMILTON, ONT.





TWO VIEWS OF MAIN AUDITORIUM.

FIRST METHODIST CHURCH, HAMILTON, ONT.

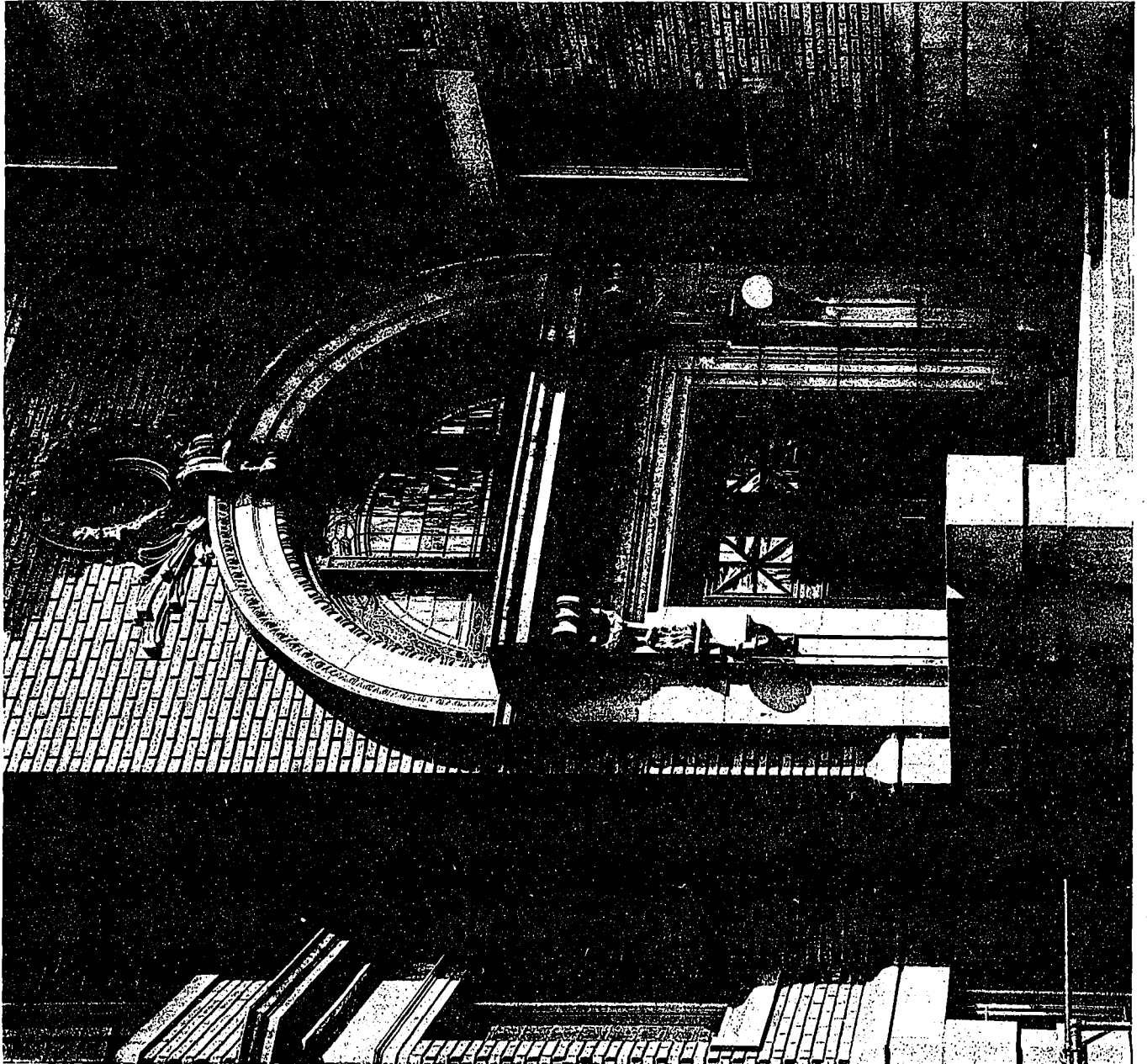


SECTION

ELEVATION

DETAIL OF SIDE ENTRANCES.

FIRST METHODIST CHURCH,
HAMILTON, ONT.



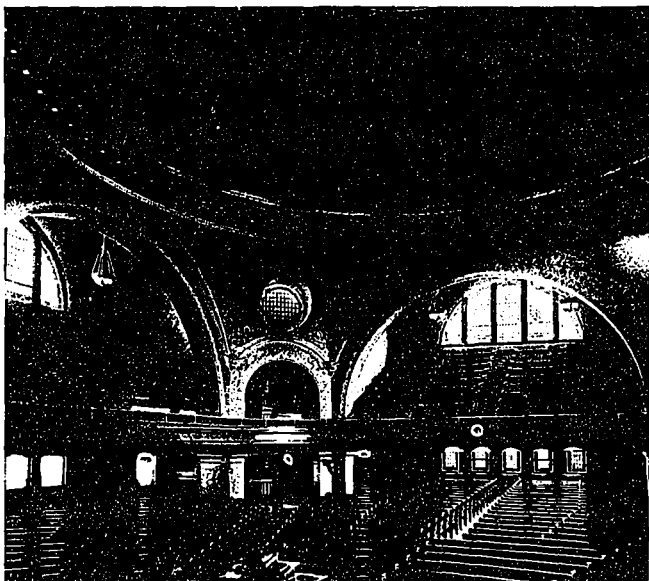
The Sunday school is arranged with a large assembly room in the centre, lighted by skylight leaded glass, surrounded by class rooms, each one seating thirty scholars and entered on each floor by means of rolling partitions. A large ladies' parlor on the second floor is connected with the class-room by folding or accoridian door, and a large Bible class room on the first floor, each of which seats one hundred and twenty persons. A special feature of the Sunday school is an orchestra balcony over the platform, and Choralcello screen on each side. In the face of the balcony railing is a moving picture screen that may be rolled up out of sight and used at a moment's notice.

The gymnasium, consisting of two bowling alleys, dressing rooms and lockers are under the auditorium or church proper, and when used for entertainment will seat about one thousand persons. The dining-room seats three hundred.



tem for a church auditorium, a convenient method is to assume one hundred occupants as a basis, or "unit," and proportion the different parts of the apparatus according to the data given in the following table from an article by C. L. Hubbard on The Heating and Ventilation of churches. In this way the size is easily approximated for the conditions in any particular case, and space may be reserved in laying out the plans; while the location of flues and registers may be determined in a general way.

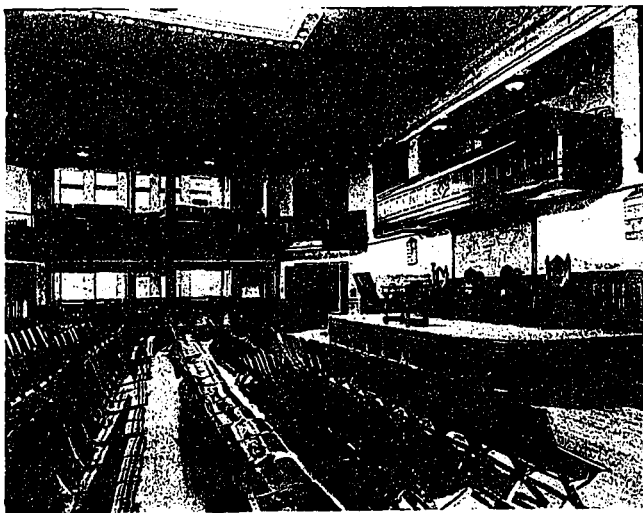
Proportions of Furnace Heating Apparatus for One Hundred Occupants, Outside Temperature 0: Air supply per minute, 2,000 cubic feet; Grate area of furnace, 5 square feet (30 inches diameter); Air passages through furnace, 6 to 7 square feet; Grate area of stack heater, 0.78 square feet (12 inches diameter); Chimney flue, 40 to 50 feet high, 70 square inches for round flue (10 inches diameter), 90 square inches for rectangular flue (8 inches by 12 inches); supply and vent flues, 8 square feet; cold air duct, 7 to 8 square feet. This data is for average conditions; for especially exposed locations, increase furnace grate area from five to ten per cent, or even more, all other dimensions remaining the same as in above table.



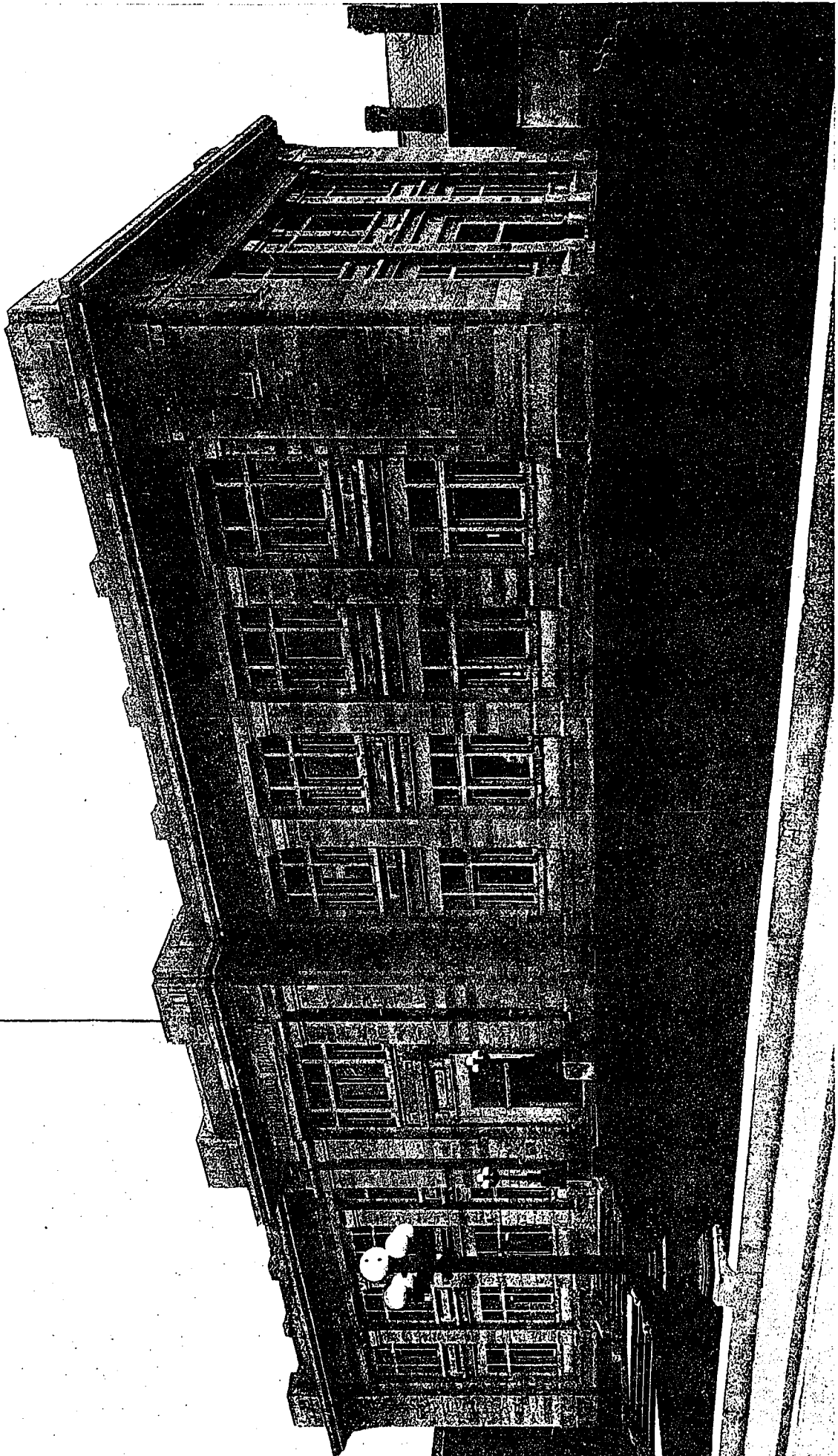
MAIN AUDITORIUM.

One of the important things in church building is the heating and ventilating. The system in this building is known as the fan system; the fresh air passing over steam coils and into the building at an average velocity of three hundred and fifty to four hundred feet per minute, and drawn off by vent shafts through the roof. Direct steam is used to heat all outlying points, such as vestibules, halls, toilets, board room, parlors, kitchen, shower room, etc. Re-circulating dampers are provided, so that the air in the building can be re-circulated over steam coils and into the building, until the audience assembles, when the fresh air is drawn over the coils and the foul air expelled. The electric fan is ten h.p. and the steam boiler one hundred and twenty h.p. The air is changed four times per hour and controlled in various rooms by means of dampers or deflectors in pipes or ducts, also cables to control board in the boiler room.

In planning for a heating and ventilating sys-



SUNDAY SCHOOL ROOM.



PUBLIC LIBRARY, HAMILTON, ONT.
A. W. PEENE, ARCHITECT.

New Public Library, Hamilton, Ontario

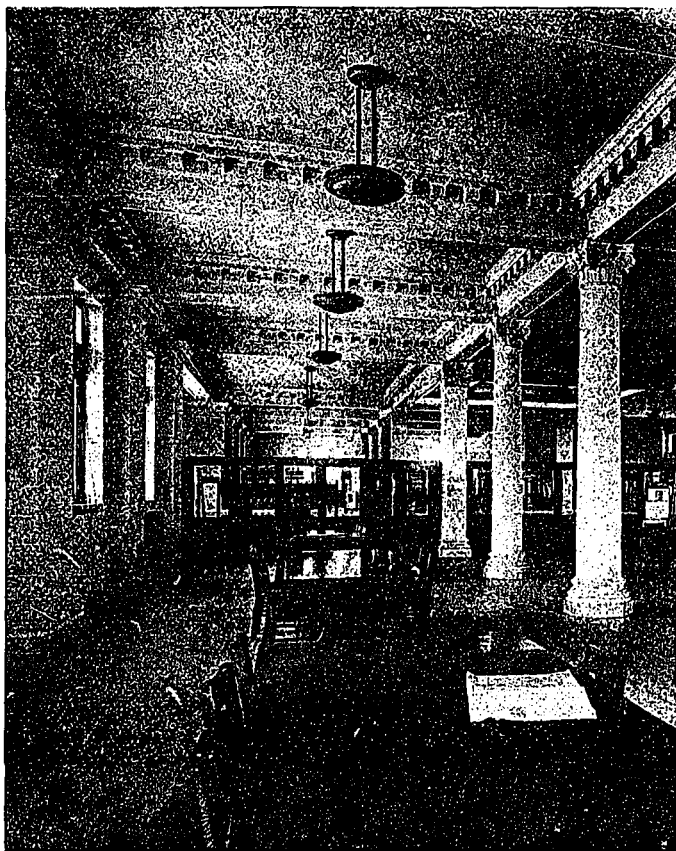
THE library is an institution of the past, for archaeological excavations have furnished us with relics of imperishable burned clay tablets. When we realize how valuable these records are towards the linking of present to past, we wonder what future generations will think of our temporary materials of paper and ink which soon decay. According to C. C. Soule the first mention of a separate public library was in Egypt in the time of Ptolemy Philadelphus, the third century B.C.

The spread of libraries at this time was rapid and by the fourth century A.D. there were twenty-eight public libraries in Rome. From this time to the close of the western empire, A.D. 476, we know little or nothing of the buildings themselves and their architectural merit.

The growth of libraries was greatly influenced by monastic orders. They were introduced into England about the sixth century. The first rooms were located over cloisters with long windows opening directly into each alcove, the exterior of which becomes the precedent for our modern stock rooms. The earliest types of libraries were long and narrow, while great attention was paid to the question of lighting—for example, the room at Zutphen, Holland, 1289, was one hundred and twenty feet long and thirty-six broad with nineteen large windows; the one at Clairvaux, 1517, one hundred and ninety feet long by seventeen broad, well lighted on both sides. During the Reformation over eight hundred "papistical" libraries were destroyed, the only survivors being at Oxford and Cambridge, aside from the cathedrals. Wall shelving spread rapidly and became the progenitor of early American interiors which have given away to the modern stock system first used at the University of Leyden in 1610. Two centuries later Leopoldo della Santa published in Florence a book on library construction from a utilitarian stand-

point which influenced the planning of the Newberry Library at Chicago. But the first distinctive types on this continent were the Astor Library in New York, 1853, and the Boston Public Library five years later. The large accumulation of books led to the adoption of the "stack," although bitterly opposed by many prominent librarians. The final spur to this type of building has come through the Carnegie gifts. Up to January, 1905, he had given 1,290 buildings to the English-speaking people at an aggregate cost of \$39,325,240, three-fourths of which went to the United States. By January, 1914, he presented to the United Kingdom and Colonies 2,570 buildings costing \$60,795,322. Of this number the province of Ontario has secured one hundred and six, including the one at Hamilton, designed in Indiana limestone with a total expenditure of \$160,000.

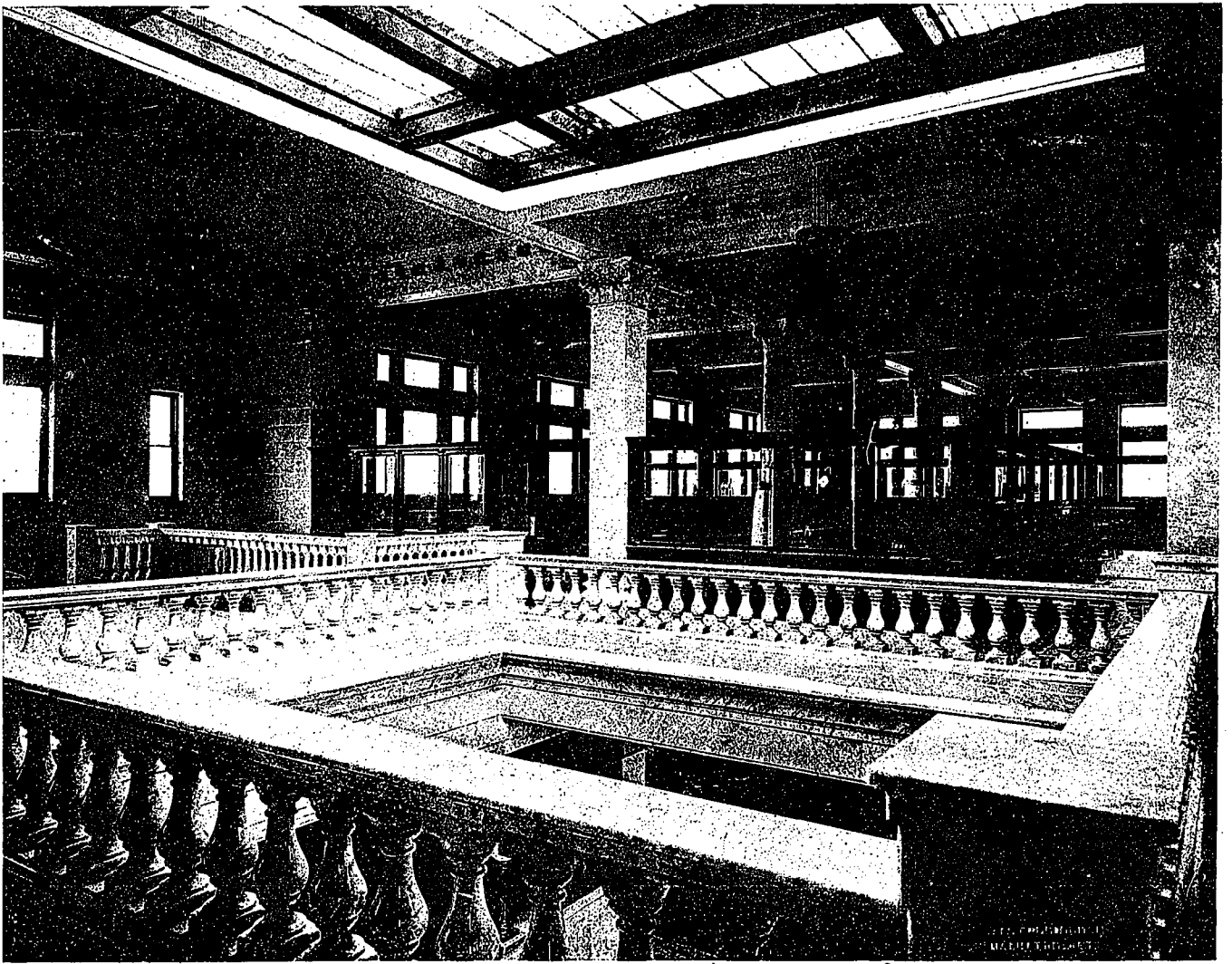
The architectural treatment of the library building at Hamilton has broken away somewhat from the fettered condition arising from precedent. It has grasped the essential requirements of use, fitness and artistic excellence. For in this type of structure the first point to be considered is ample space for the work to be transacted. Naturally local conditions qualify the amount allotted to the various departments, although certain principles are general in their application. The lay-out is most important and has to be considered with a view to its class, scope, size,



MEN'S READING ROOM.

site, environment and upkeep. Every facility must be arranged for the economical performance of the work done by the staff and at the same time provide the public with every convenience.

Here the public enter into a stair lobby leading to the upper floor. The plans consist of one large space divided into various departments by means of screens which permit of an exceptional lighting opportunity and allow of a minimum



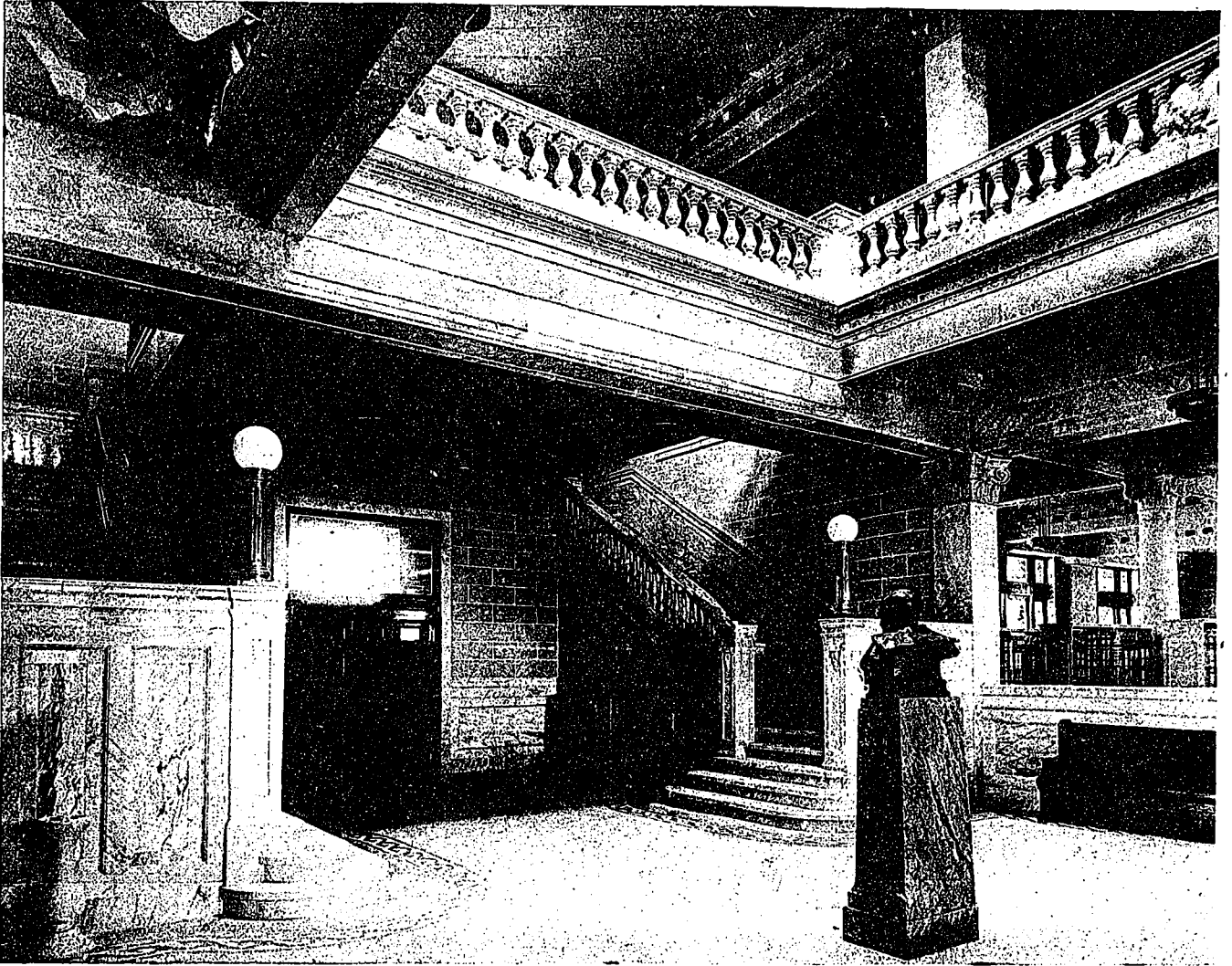
UPPER HALL.

working corps. It also is quickly understood by the stranger who sometimes experiences considerable embarrassment in exploring unfamiliar corridors. Special attention should be paid to the staff who should have the benefits of pure air, good light and practical planning. Economy of time leads to the best disposition of various departments from the administrative viewpoint, and this in turn brings the working corps up to the highest state of efficiency.

The problem of heating and ventilation in libraries is of the utmost importance. Dr. Billings, of the New York Public Library, published a volume on this question in which he feels that if any sacrifice is necessary it should come from another source. He says it is important that those who form and direct opinion on this subject should look to it that the buildings which they plan, especially these in which numbers of men, women or children are to be brought together, are so constructed and arranged that no one shall poison himself or others by the air which he expires. Among the first points which the designer must know is the amount of money for ventilating purposes and which of several methods will this cover to satisfy the character and location of the building. No matter how

much he may be inclined to neglect certain phases of the work, or if he runs up against ignorant committee-men the architect should always insist on the proper methods for heating, ventilation, drainage and plumbing.

As for the style of a library design, this is essentially a matter belonging to the architect and the nature of the city wherein it is to be erected. It has been wisely stated that a structure which is a work of art is in itself a powerful educational factor; that a dignified building commands respect for the work with which it is associated; and that an attractive exterior and pleasing interior are great inducements towards the use of the building. Surely in the case of an edifice devoted to the sphere of learning, it should present an example of the noblest and best in modern design. As for the personal conduct of people, they are more considerate and quiet in a dignified structure which instills into one a feeling of respect. When this feeling is aroused by the external appearance it should not be lessened by the design within. It should be elevating and cheerful but not elaborate enough to attract the people and take their thoughts away from the real use for which it has been erected. Nowhere is this more clearly demonstrated than at the Boston Public Li-



ROTUNDA.

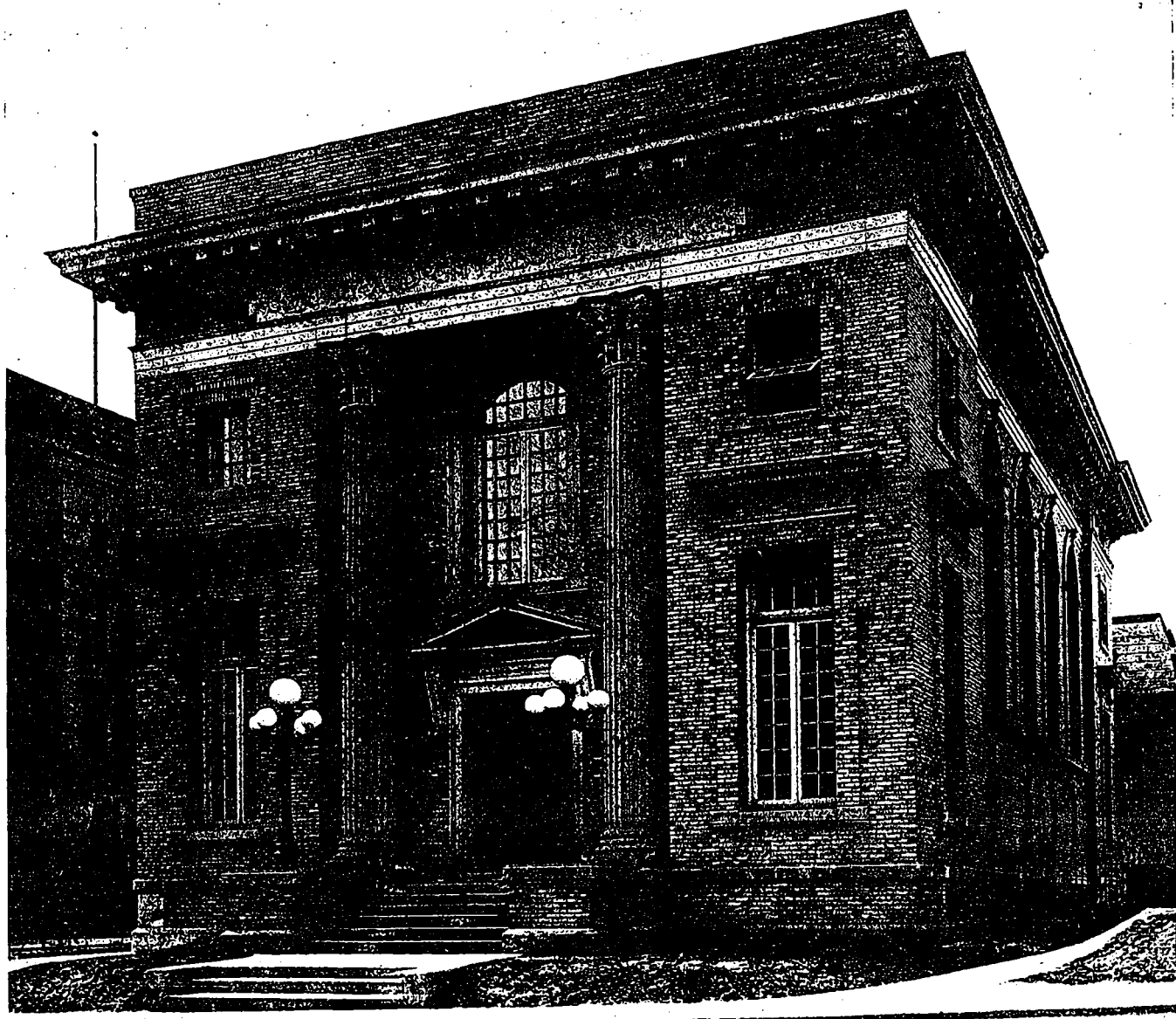
brary, where thousands of visitors go trooping through to see the Frescoes of Purvis de Chavannes Abbey, Sargent and others, thereby taking the reader's thought from his work and centering it upon the unthinking intruder.

In planning the building the librarian is an important factor and becomes more so as the number of departments and rooms increase. Sturgis says: "As the library grows, the rudimentary divisions still prevail, sub-divided according to special needs, such as separation of books, as under art, music, patents, etc.; separation of work, as librarians, delivery, janitor, etc.; separation of readers, as adults, children, serious and light reading, etc." The principles change only in their application to the relations of books, administration and students. And as this need arises the librarian is responsible for the practical advice which enables the units to become one practical ensemble.

Relative to the furnishings, they should be chosen for their special use and fitness in every detail. Their architectural effect must be subordinated although there is no reason why they shouldn't harmonize with the general surroundings. In this respect the architect should insist on furniture of a simple ornate design, easy to handle, and comfortable. They should not, how-

ever, be too cheap, for unsightly accessories are unprofitable, and they should be colored with soft and soothing shades in order to protect the eyes.

In commenting on the lighting of libraries, L. B. Marks, Consulting Illuminating Engineer, New York City, claims that the design of the illumination involves considerations which are quite unlike those that ordinarily confront the illuminating engineer, and are in many respects more difficult to meet than in almost any other class of buildings. Very often economy of operation is a governing factor in the design of library illumination. In planning the lighting installations of the Carnegie branch libraries, economy of operation was of perhaps more than usual importance as the libraries purchased electric current for lighting from the public service company at the retail rate. The aim of the design of lighting in libraries is to secure sufficient illumination on the reading tables and bookshelves; sufficient illumination for the library staff to oversee the entire floor; sufficient illumination to provide a moderate reading light in all parts of the room; moderate cost of installation; economy of operation; simplicity in construction.



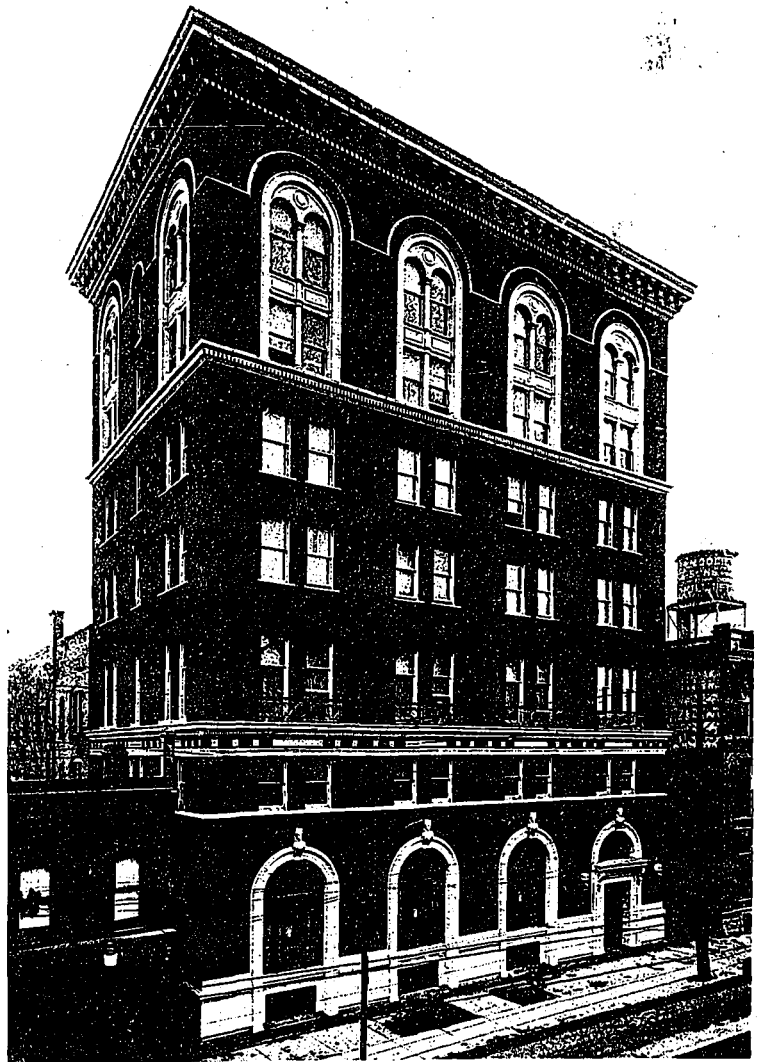
COUNTY AND CITY
REGISTRY OFFICE,
HAMILTON, ONT.

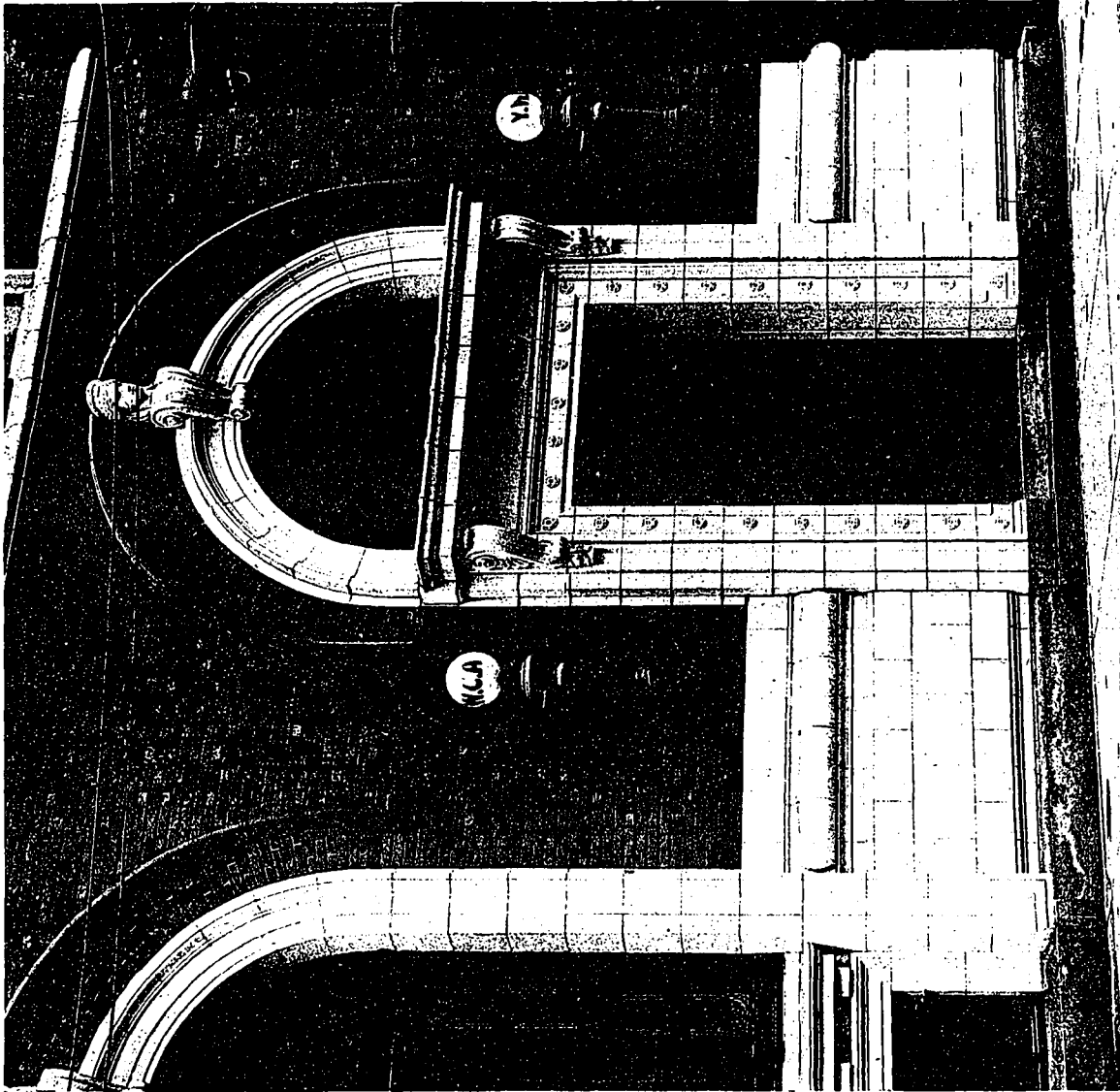
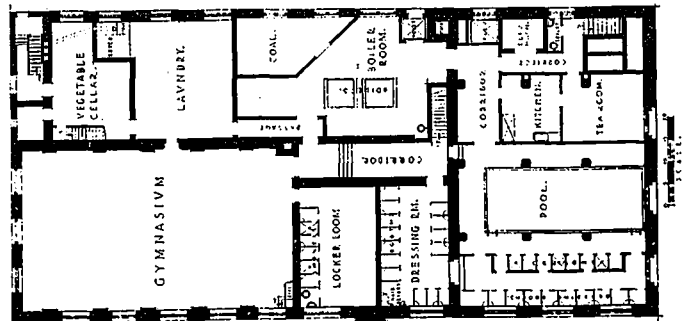
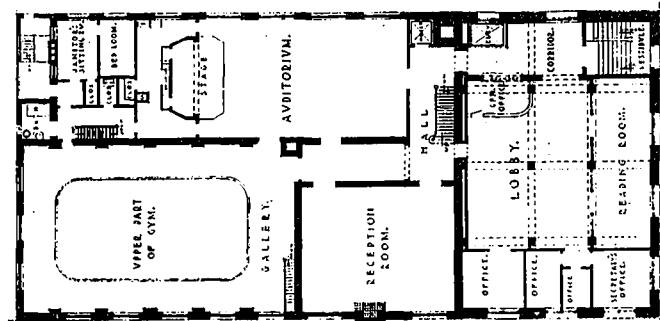
MCPHIE, KELLY & DARLING,
ARCHITECTS.

Y. W. C. A. Building, Hamilton, Ontario

THE Young Women's Christian Association building at Hamilton is designed to meet the ever changing needs of a growing institution, and each room has been considered in respect to present demands, as well as future exigencies. Constructed of reinforced concrete, the exterior is faced with varied shades of red tapestry brick laid in a Flemish bond with dark brown joints raked out, and matt glazed terra cotta trimmings of a light cream color. The outside concrete columns are concealed, excepting at the rear, which anticipates further extension when conditions warrant such improvement. The main lobby, reached through the vestibule and corridor, is finished in fumed oak, with a panelled dado seven feet six inches high; the floor consisting of mosaic tile and marble base, which material is also used for the corridor and reading room, the latter being separated from the lobby by means of a glass screen. The main vestibule is treated throughout in Royal antique marble; the offices in oak and the elevator enclosures in cast-iron with wire chipped plate glass at all floors. In the basement the pool is equipped with marble showers and a plunge lined with mosaic tile and glazed terra cotta; ventilated by the exhaust fan system; heated with steam jets controlled by a circulating pump and arranged to accommodate an adequate filter plant. All floor construction in basement is terrazzo, excepting the gymnasium. On the second floor are class rooms in conjunction with a large private sitting room, to the rear of which are dormitories. The dining-room, sixty-six by forty feet, occupying a prominent position on the third floor, is finished in cypress, stained a dark brown; the walls above the panelled wainscoting being tinted stucco, the floor of terrazzo and the ceiling of wooden beams, encasing richly moulded plaster panels. In the kitchen cleanliness is the keynote, with cypress in its natural color, marble-top tables, porcelain sinks, steam tables and ice machine operated in serving room by a switch. The fourth, fifth, sixth and seventh floors are typical, arranged entirely for dormitories with proper toilet facilities, having tile floors, marble base, and enamelled walls and ceilings. Each floor is provided with a trunk room, linen closet and slop sink room; the stairs are

of concrete, covered with Italian marble, the balustrades and newels of ornamental iron. The rooms, finished in stained cypress, are planned to take two beds, and possess a clothes closet large enough to accommodate two people. At the rear of each dormitory floor is a balcony, while the roof is used for a garden. Between the seventh floor and the roof, arrangements have been made for storage space, janitor's workshop and large dormitory room. The elevator is an electric with necessary mechanical equipment in the basement. In the general office is installed a private phone system which connects each part of the Y.W.C.A. with the administrative corps. In every detail the work shows a keen appreciation for the comfort of the girls within and reflects great credit upon the institution. The building, which is fireproof throughout, has floors consisting of tile and concrete construction, costing approximately \$95,700 including the architects' fee.



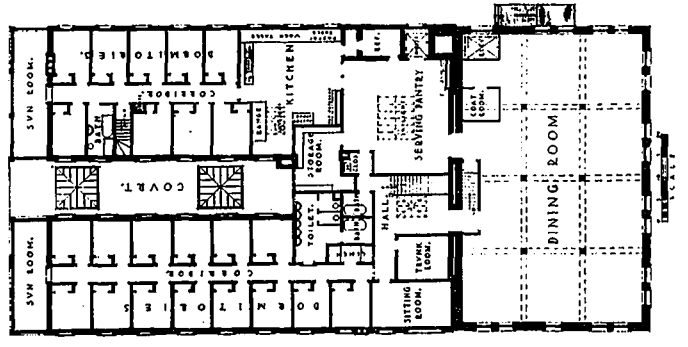
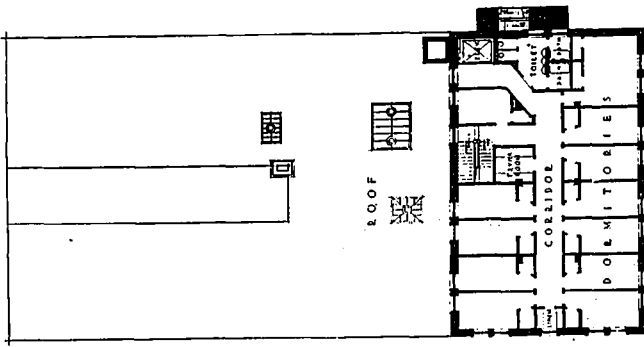


MAIN ENTRANCE.

GROUND FLOOR.

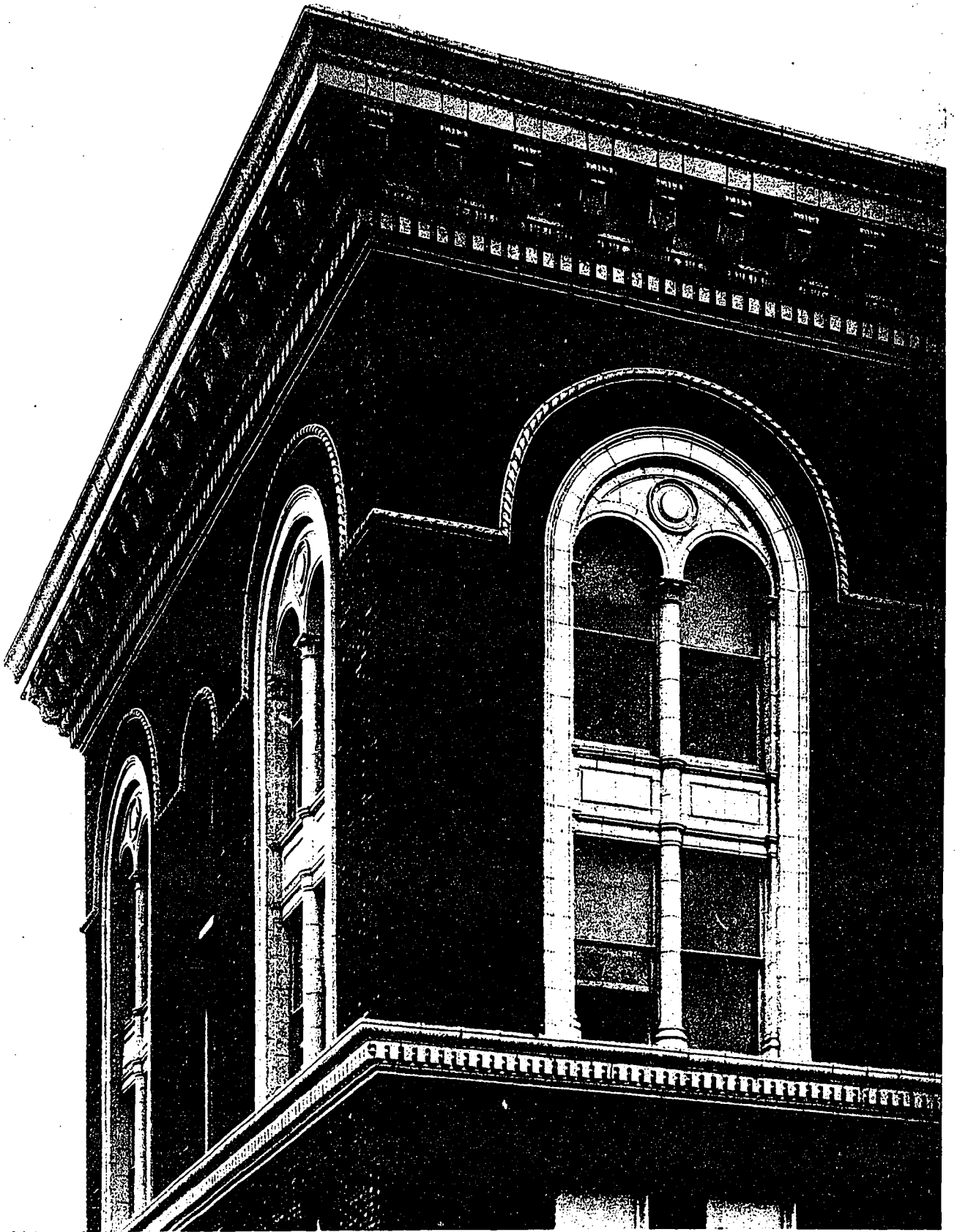
YOUNG WOMEN'S CHRISTIAN ASSOCIATION BUILDING,
HAMILTON, ONTARIO.

MILLS & HUTTON, ARCHITECTS.



TYPICAL FLOOR.

THIRD FLOOR.



DETAIL OF CORNICE AND UPPER STORIES.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION BUILDING, HAMILTON, ONTARIO.

MILLS & HUTTON, ARCHITECTS.



LINCOLN CATHEDRAL.



YORK MINSTER.

TWO EXAMPLES OF ENGLISH CATHEDRALS.

Gothic Ecclesiastical Work in England

C. PEAKE ANDERSON

I KNOW of no better introduction to Gothic work in England—a subject, by the way, wide as the heavens and perhaps as difficult to find a focal point in as are the night skies—than to suggest, that, for a starting point you concentrate your attention on one of the brighter stars of the firmament, to wit, a great cathedral. In this way, at the outset, you will at least have learned to know a star of the first magnitude, and you will have started off on your tour of observation with this advantage, that here you have Gothic work in its entirety: here is no small edifice in which necessity has placed her curb on the aspirations of the designers, nor “Lack of Funds,” a cruel hand-maiden of the goddess of architecture not wholly unknown to ourselves, restrained the tools of the craftsmen. But here rather you will learn to know Gothic architecture in its width and length and height, Gothic architecture in its sublimity.

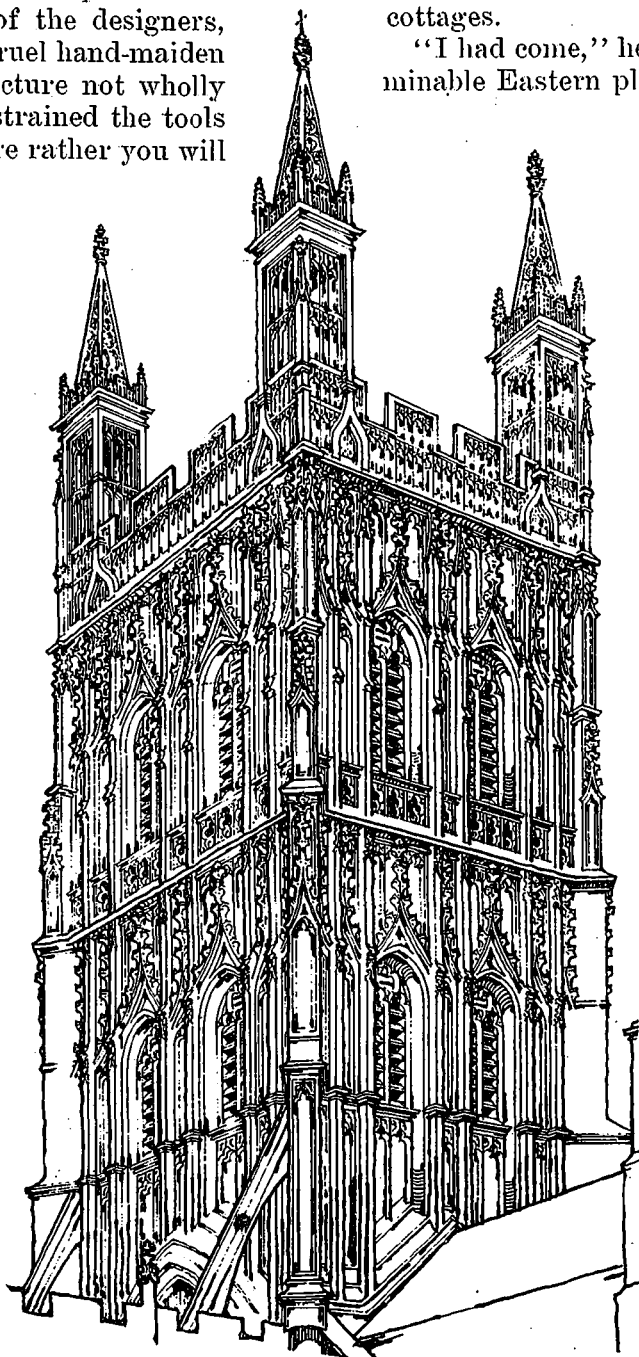
There are but two spots in all England on which our forefathers, seizing on those advantages which nature had bestowed, raised a cathedral worthy in the highest sense of the word “sublime.” The one is on the right bank of the river Wear from which Durham’s Norman bulk looks down upon the waters. The other is that hill from which, with its three towers fronting the sunsets, the cathedral church of Lincolnshire dominates the plain.

G. K. Chesterton beheld a vision once in a street of the town of Lincoln, and he has told in his inimitable manner how “An optical illusion accidentally revealed to him the strange greatness of Gothic architecture.” Because it may impress on you a point of view from which to survey

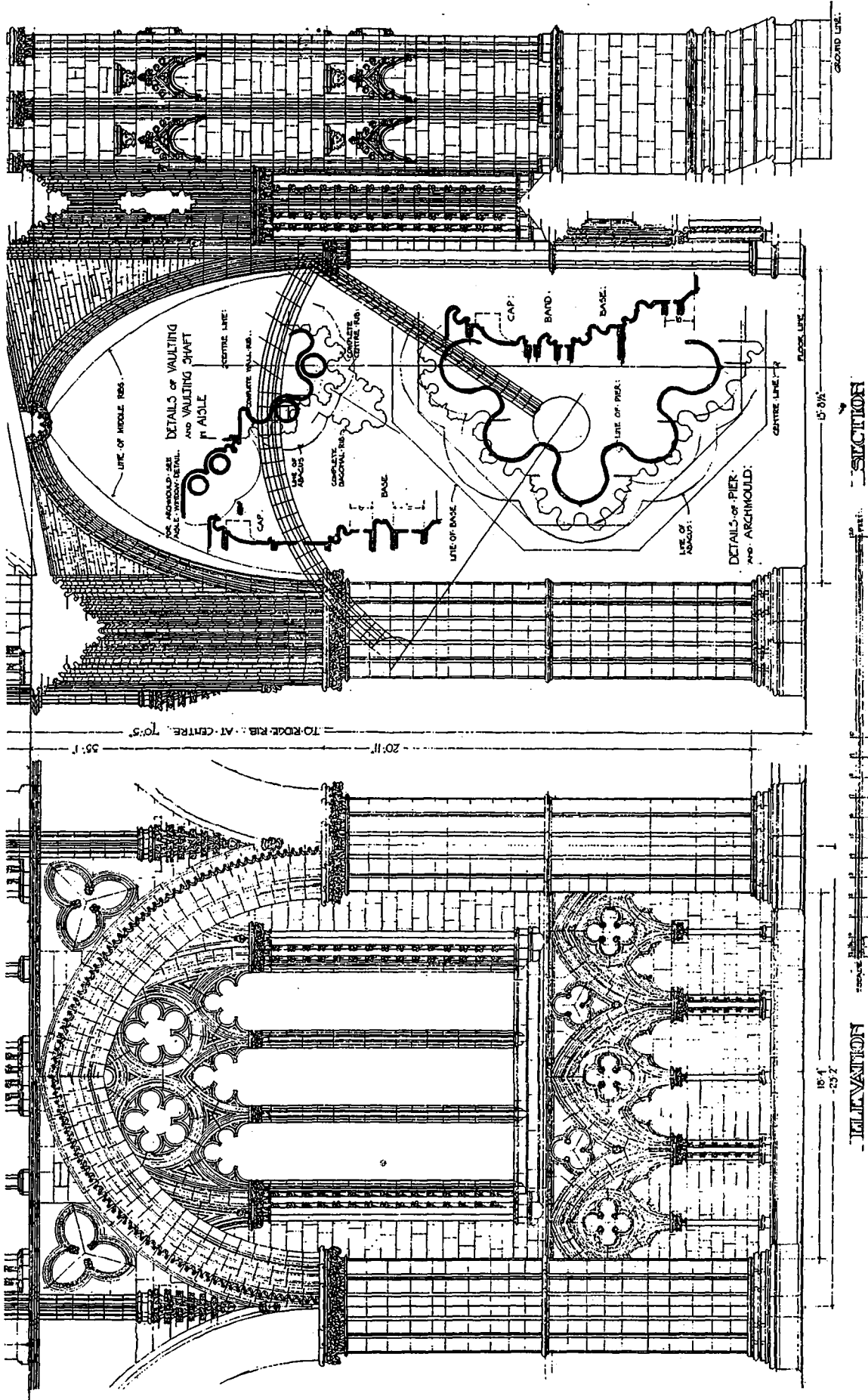
Gothic architecture, a point of view which is largely lost sight of with dire results in these days when we are all crying out for “Life in Architecture,” and because it may suggest a new manner in which to look for the spirit of Gothic, I will quote a portion of what Mr. Chesterton said. Approaching Lincoln, he tells us that in the smoky distance he beheld the Cathedral Towers, and in the nearer distance some large furniture vans, which, owing to the fact that a low stone wall cut off their wheels, and to the fact that they resembled in color the surrounding cottages, he actually took for cottages.

“I had come,” he says, “across that interminable Eastern plain which is like the open sea, and all the more so because the one small hill and tower of Lincoln stands up in it like a lighthouse. I had climbed the sharp, crooked streets up to this ecclesiastical citadel; just in front of me was a flourishing and richly colored kitchen garden; beyond that was the low stone wall; beyond that the row of vans that looked like houses; and beyond and above that, straight and swift and dark, light as a flight of birds, and terrible as the Tower of Babel, Lincoln Cathedral seemed to rise out of human sight.

“As I looked at it I asked myself the questions that I have asked here; what was the soul in all those stones? They were varied, but it was not variety; they were solemn, but it was not solemnity; they were farcical, but it was not farce; What is it in them that thrills and soothes a man of our blood and history, that is not there in an Egyptian pyramid or an Indian temple or a Chin-



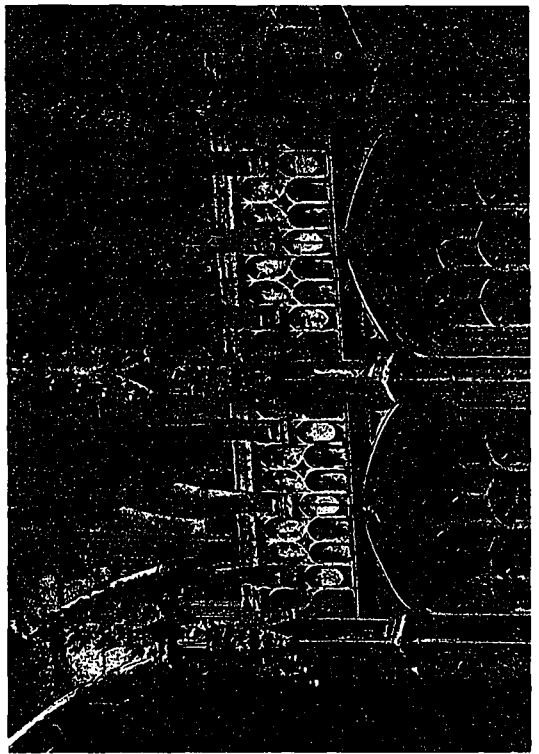
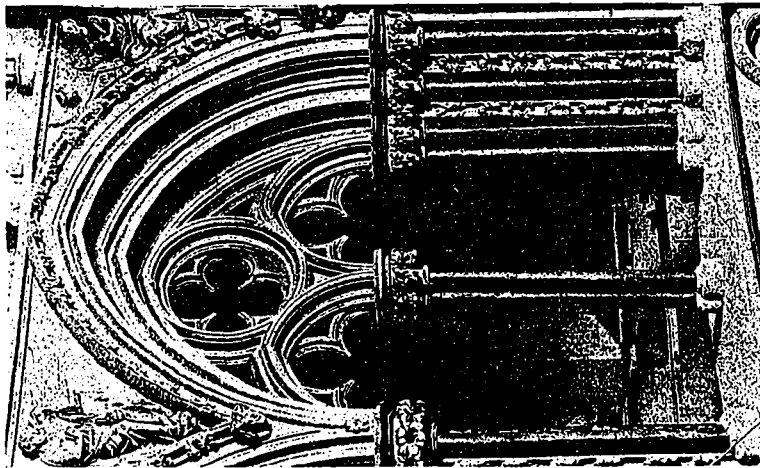
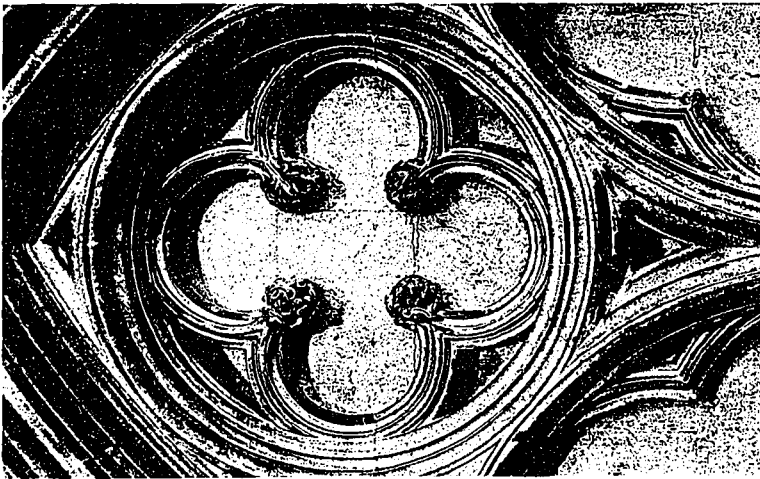
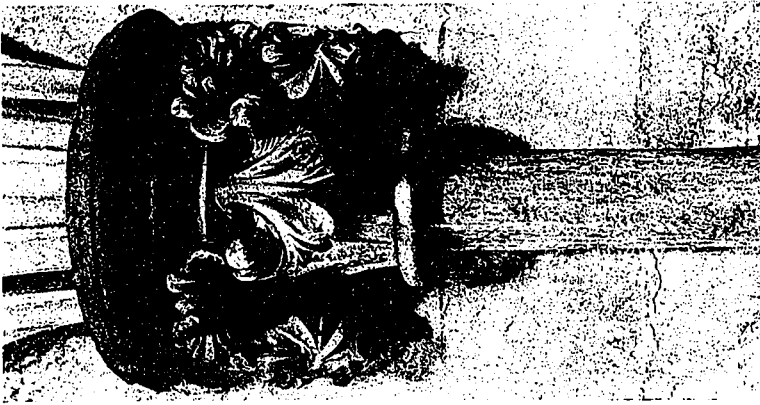
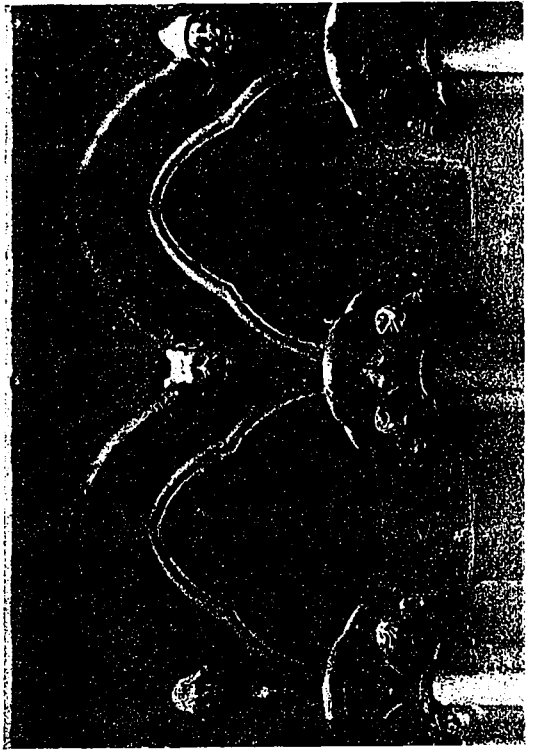
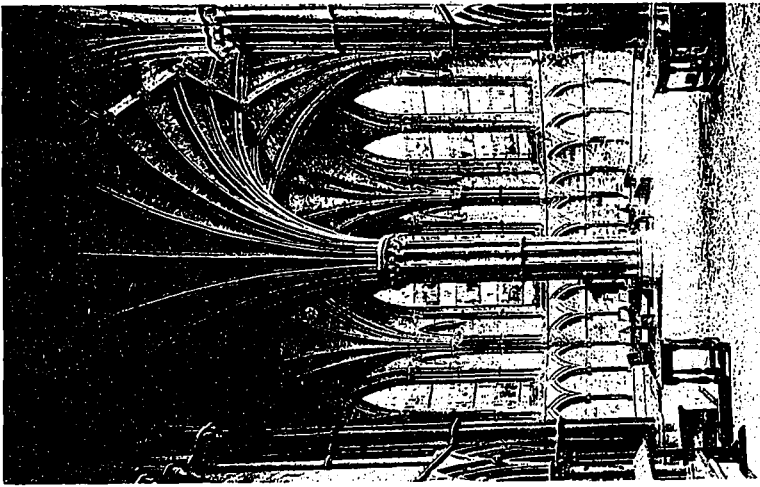
TOWER OF GLOUCESTER CATHEDRAL.



LINCOLN CATHEDRAL, ENGLAND—DETAIL OF ONE BAY OF ANGEL CHOIR.

(The preceding page is a part of this detail.)

MEASURED AND DRAWN BY C. PEAKF ANDERSON.



DETAILS OF
LINCOLN CATHEDRAL,
ENGLAND.

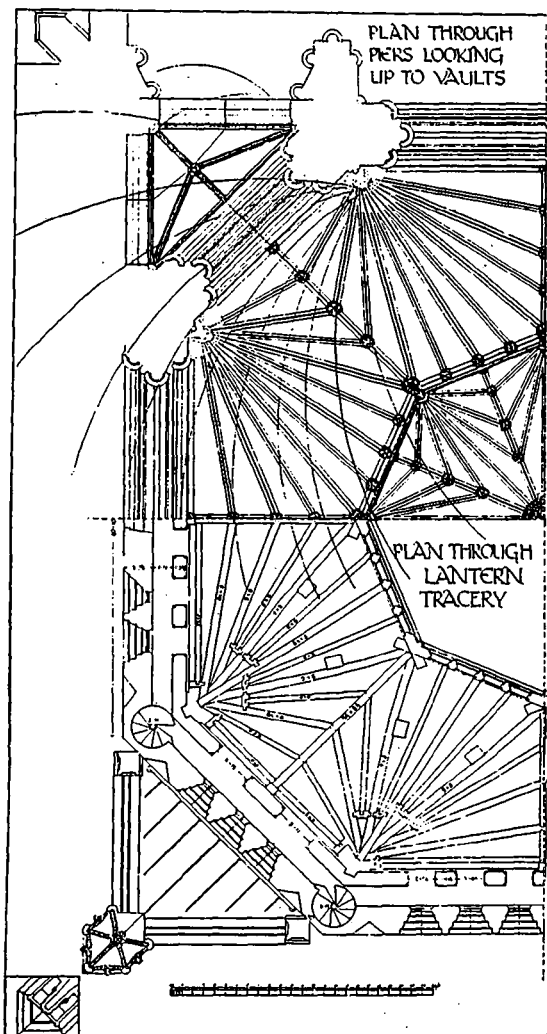
FROM LEFT TO RIGHT:—
TRIFORIUM ARCADE;
WALL ARCADE;
CARVED CAPITAL;
CHAPTER HOUSE;
SIDE CHAPEL;
EXTERIOR ARCADE.

ese pagoda? All of a sudden the vans I had mistaken for cottages began to move away to the left. In the start this gave to my eye and mind I really fancied that the Cathedral was moving towards the right. The two huge towers seemed to start striding across the plain like the two legs of some giant whose body was covered with the clouds. Then I saw what it was.

"The truth about Gothic is, first, that it is alive, and second, that it is on the march. It is the Church Militant; it is the only fighting architecture. All its spires are spears at rest; and all

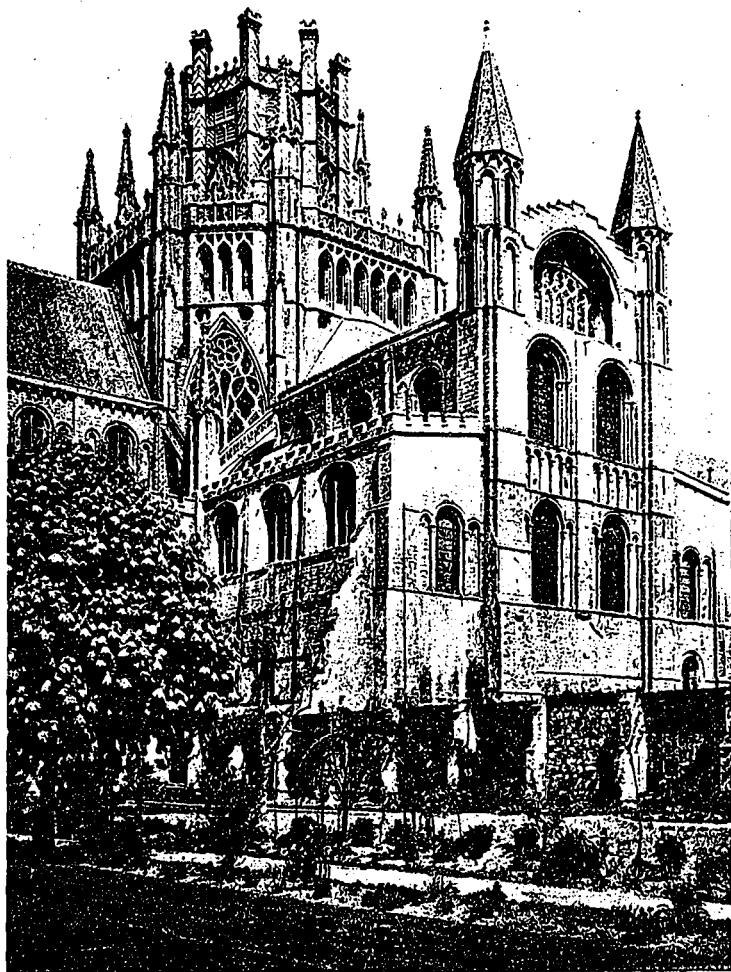
evangelist clashed his wings of brass."

Not so, however, was my vision of this Cathedral Church, for I saw it first from the great straight Roman road that runs to the north from Lincoln; saw it first as the evening sun was sinking in the west, as the grey mists were beginning to creep over the marshes, dimming the distances, and hiding the lower slopes of Lincoln hill until the great church seemed some ghost fortress of the twilight; saw it first an ethereal city, floating in the limpid air. As we neared the town, and the mists grew thinner so



PLAN OF OCTAGON.

its stones are stones asleep in a catapult. In that instant of illusion, I could hear the arches clash like swords as they crossed each other. The mighty and numberless columns seemed to go swinging by like the huge feet of imperial elephants. The graven foliage wreathed and blew like banners going into battle; the silence was deafening with all the mingled noises of a military march; the great bell shook down, as the organ shook up, its thunder. The thirsty-throated gargoyles shouted like trumpets from all the roofs and pinnacles as they passed; and from the lectern in the core of the cathedral the eagle of the awful



ELY CATHEDRAL.

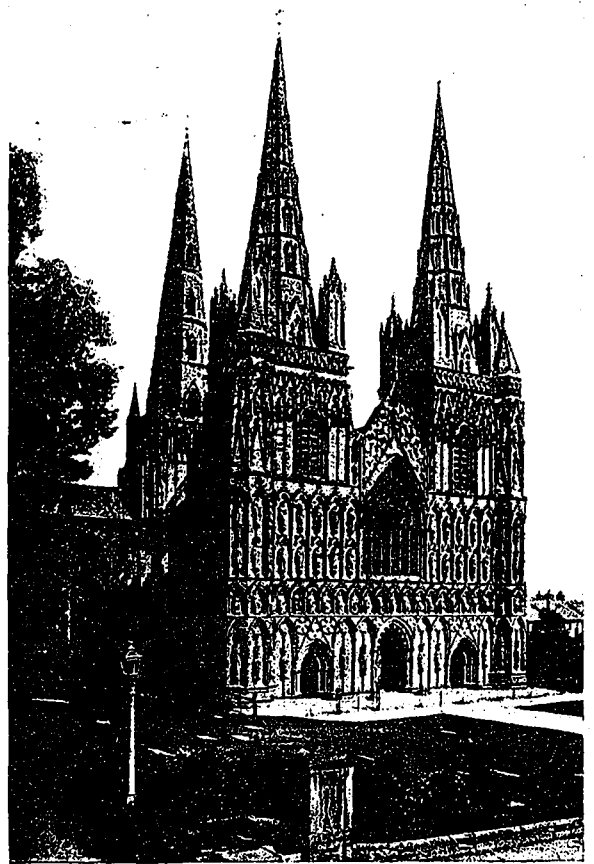
VIEW OF OCTAGON.

that we could discern the red tiled houses that clustered, rank upon rank of them, about the slopes of the hill, and the great dark towers that seemed to buttress back against the East—such was the sharp perspective as we stood below; I saw it not "striding with clash of arms," but silent, and stern, even as some giant sentinel on guard above a sleeping encampment, awake but motionless, I saw these guardian towers of Christendom watching the encrimsoned west where the pagan god, the sun, had sunk behind dark battlements of cloud.

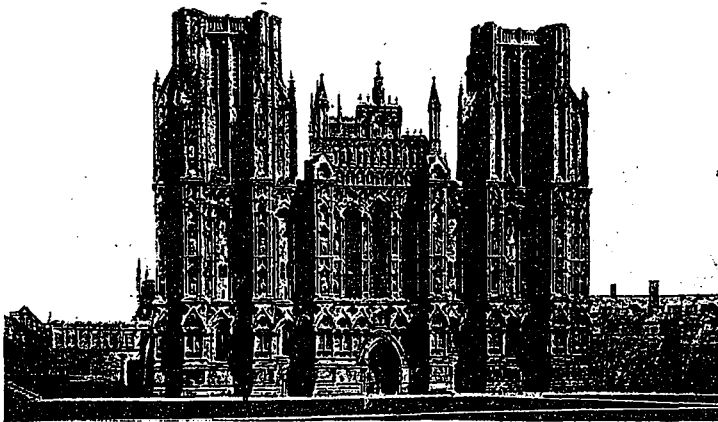
For it matters little to you whether you see Gothic architecture as "clad in armor with



ELY CATHEDRAL.



LICHFIELD CATHEDRAL.

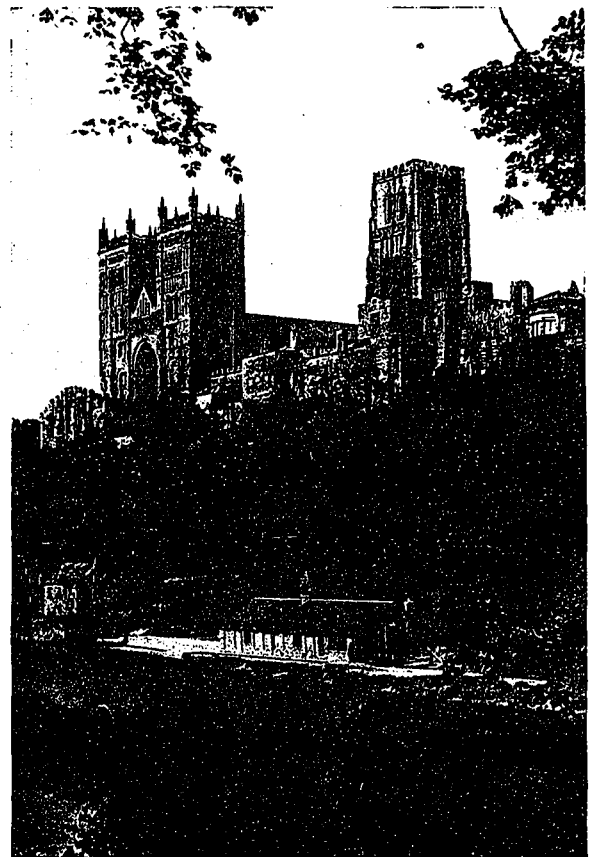


WELLS CATHEDRAL.

GOTHIC ECCLESIASTICAL WORK IN ENGLAND.



CHESTER CATHEDRAL.



DURHAM CATHEDRAL.



WORCESTER CATHEDRAL.

spears at rest" or couched for attack; it matters not whether "the gargoyles shout" for you, or "ghost bells toll" for you, or whether "graven foliage wreaths and blows like banners going into battle" to your entranced sight; it matters not though you *never* see it "stride across the Plain" with great imperial feet, so you see it as it certainly was to those men who builded it—a putting into tangible form of all those aspirations around whose feet men dwelt secure while heathen deities still danced in forest glades, and Pan still piped by the sequestered waters.

Thus it was, then, that we came by the Roman road to Lincoln, and thus it was we saw it in the

in her west front to the east window in her "Angel" choir, she is an epitome of the greatest Gothic periods.

It was most especially to study the justly famous "Angel" choir that we had come to Lincoln. This choir is reckoned by many to be the finest piece of early English work in England. We felt that we could do no better than completely measure a bay of it, and the resultant drawing, and knowledge gained we count more than adequate reward for the days of study.

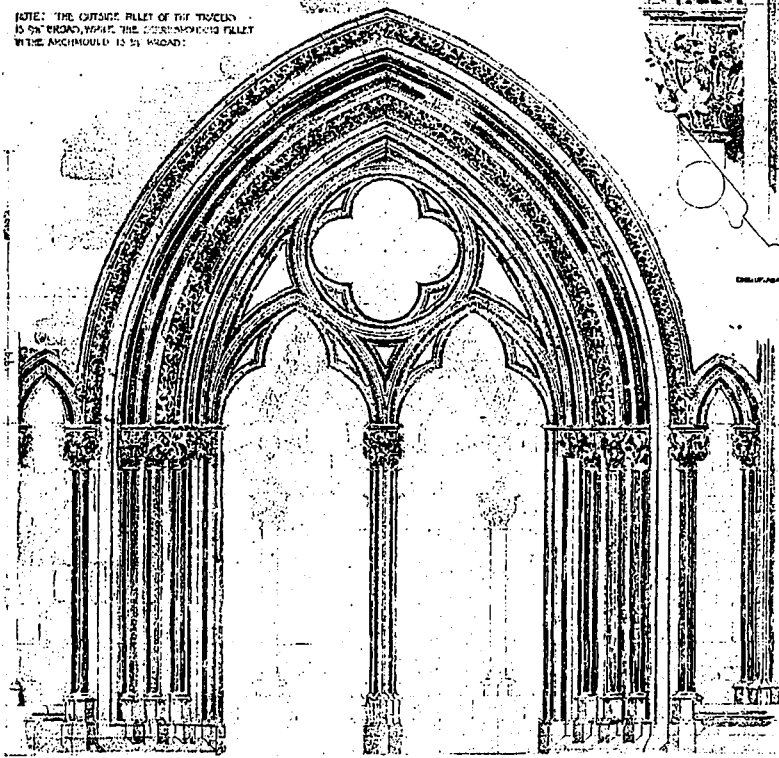
While Lincoln is, as I have said, an epitome of Gothic, and a perfect mine of interesting work, space only permits that I mention the choir screen with its lovely carved diaper work; the

SOUTHWELL MINSTER
CHAPTER HOUSE DOORWAY—WALL ARCADING

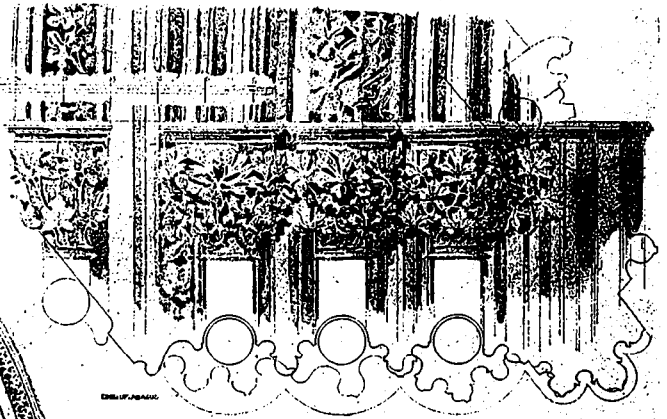
DATE: CIRCA 1294

REMARK: FOR COMPLETE DRAWING OF THE DOOR, BY A. C. POPE, DRAWING, 1897

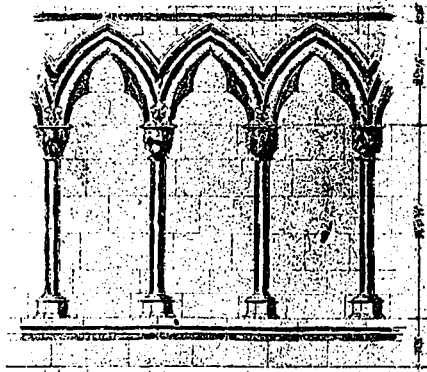
NOTE: THE OUTSIDE FILLET OF THE TRACERY IS ON EXTERIOR, WHILE THE CORRESPONDING FILLET WITH ARCHITRAVE IS ON INSIDE.



DOORWAY:



DETAILS: 1/2 FULL SIZE, REDUCED ON THE SPOT.



ARCADING IN PASSAGE:

twilight almost a city of enchantment, certainly of dream-crowned towers.

The morning showed us the church we had come to see as we then dimly guessed it to be, and as further knowledge proved it—the finest of all the Cathedrals in England. For if Durham be majestic, yet its Norman is rather Romanesque than Gothic. If Salisbury's exterior, set as it is amongst its stately elms, is one of the fairest sights in England, yet its interior is no less than harsh. Canterbury, Ely and Gloucester have lovely towers; and Gloucester lovely cloisters, and Peterborough and Wells, great west fronts, yet Lincoln is amongst them as a queen among fair women; she has a completeness that the others lack. From the great Norman archways

great chapter house, sixty feet in diameter; and the cloisters; or do more than touch on the beauties of the exterior: The famous "Galilee" porch to the south transept, the south-east door, or the group of south-east transept and central tower. I must mention, however, that the Cathedral is built of a warm yellow stone which has made it the delight of succeeding generations of water-color artists, and note, both inside and out, the admirable use of Purbeck marble, that most perfect material for columns and slender shafts, to great advantage. If Lincoln Cathedral be like a rich man who has many flocks, there is, not far distant from it a cathedral church which is indeed the poor man who has but one ewe lamb, a lamb, for-



CLOISTERS IN GLOUCESTER CATHEDRAL.

tunately in this case, never to be taken from it.

Southwell Cathedral became a cathedral only in 1884, A.D., but the church itself is of Norman date, and it is out of a nave frankly heavy and uninteresting that you pass to a chapter house that is one among the glories of all Gothic work. The doorway to this chapter house is the most perfect example of the "naturalistic" phase of "decorated" work in England. The chapter house itself was built around 1294 A.D., and is one of the two in England that have no central pillar, the other being York where the vault is of wood; here, however, the vault is of stone as is the whole chapter house, and we begin to wonder, as we look at these stone caps of the doorway which are all, be it known, of one large stone, whether any advance in stone carving be possible on these thin stems which rival the work of Grinling Gibbons. The student will leave Southwell, as we did, well satisfied that the digression to this out-of-the-world little cathedral has been amply repaid.

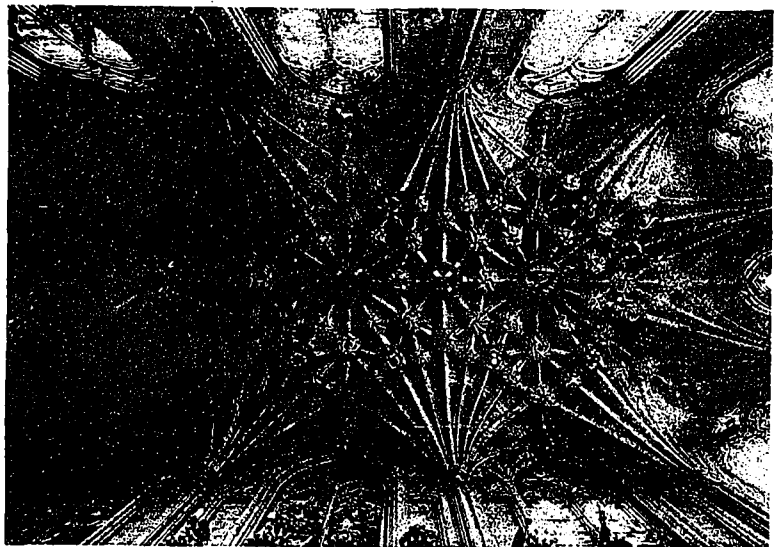
To mention York brings me back to the most mediaeval city in Britain, to the city in which its cathedral church seems most at home. Its walls, its gates, its old-world churches, and houses all standing in narrow old-world thorough-

fares, its famous street, "The Shambles," known to artists probably the whole world over, all create an atmosphere for, and lead up to and enhance the interest of its wonderful cathedral.

The cathedral itself is a storehouse of fine design. Its wonderful windows are well known, its east window, which is the second largest in England, its west window which rivals that at Carlisle in beauty, and the "Five Sisters," in the north transept, which stand for all that is most sublime in pure Gothic architecture, and which have been, as all fine work must sometime be, the inspiration of artists in other spheres; D. T. Cameron, to mention but one, has found in them inspiration for his etcher's needle. All these windows retain their original glass, a circumstance which aids not a little the beauty of the dignified and spacious interior of this the largest English cathedral.

To be in York means to be in the centre of a great Gothic district; Beverley Minster with its west towers which outrival those of York, Hull, Hedon and Patrington on the estuary of the Humber; Selby Abbey, restored since the unfortunate fire of some years ago; Ripon, Knavesborough, Fountains, Rievaulx, Jervaulx, Byland and Guisborough are all near York and all well worthy of study. While the drawings of Skelton church, just outside York, of the lovely wooden lectern in All Saints Pavement, and of the Norman porch of St. Margaret's church, both in York itself, show what a wealth of interest even the smallest churches contain.

As far as ecclesiastical work is concerned, England may be divided roughly into four Gothic districts. The north we have touched on; it stretches northwards from Lincoln and includes York, Durham and Newcastle, and westwards to Carlisle and Furness Abbey. The central group contains the cathedrals of Lichfield and Oxford, Peterborough, Ely and Norwich, and might well be taken as reaching as far



CEILING VAULTING, THISTLE CHAPEL, EDINBURGH.



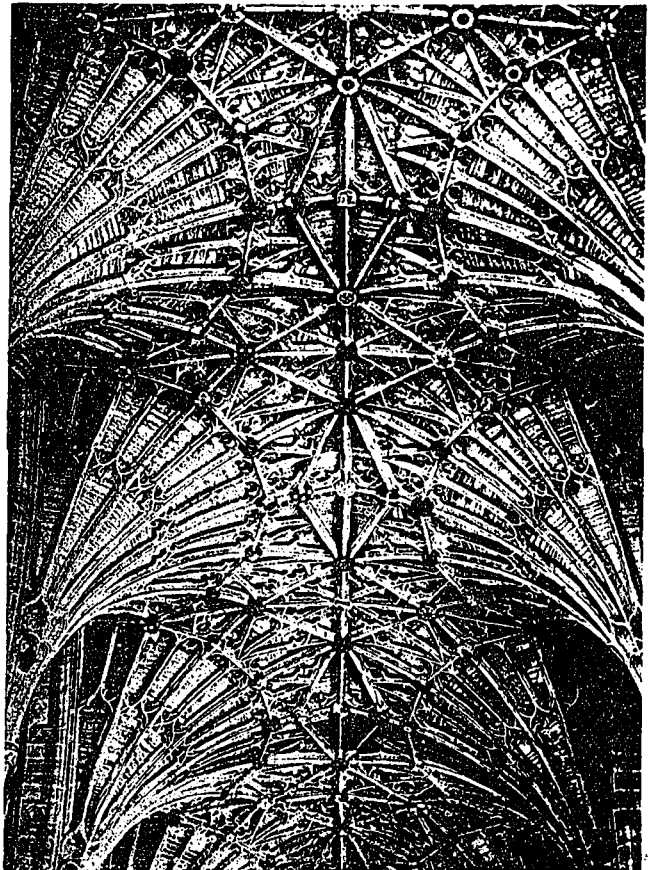
CLOISTERS IN WELLS CATHEDRAL.

south as London. This great district contains numberless churches of note such as Hettering, Oundle and Heckington in the centre; Warwick, Stratford-on-Avon, Burford and Fairford in the west; and the great group of East Anglian churches: King's Lynn, Fakenham, Walsingham, Swaffham, Aylsham, North Walsham, Wymondham, Bury St. Edmunds and Lavenham in the east. This is the district, moreover, of the painted rood screen and hammer-beam roof.

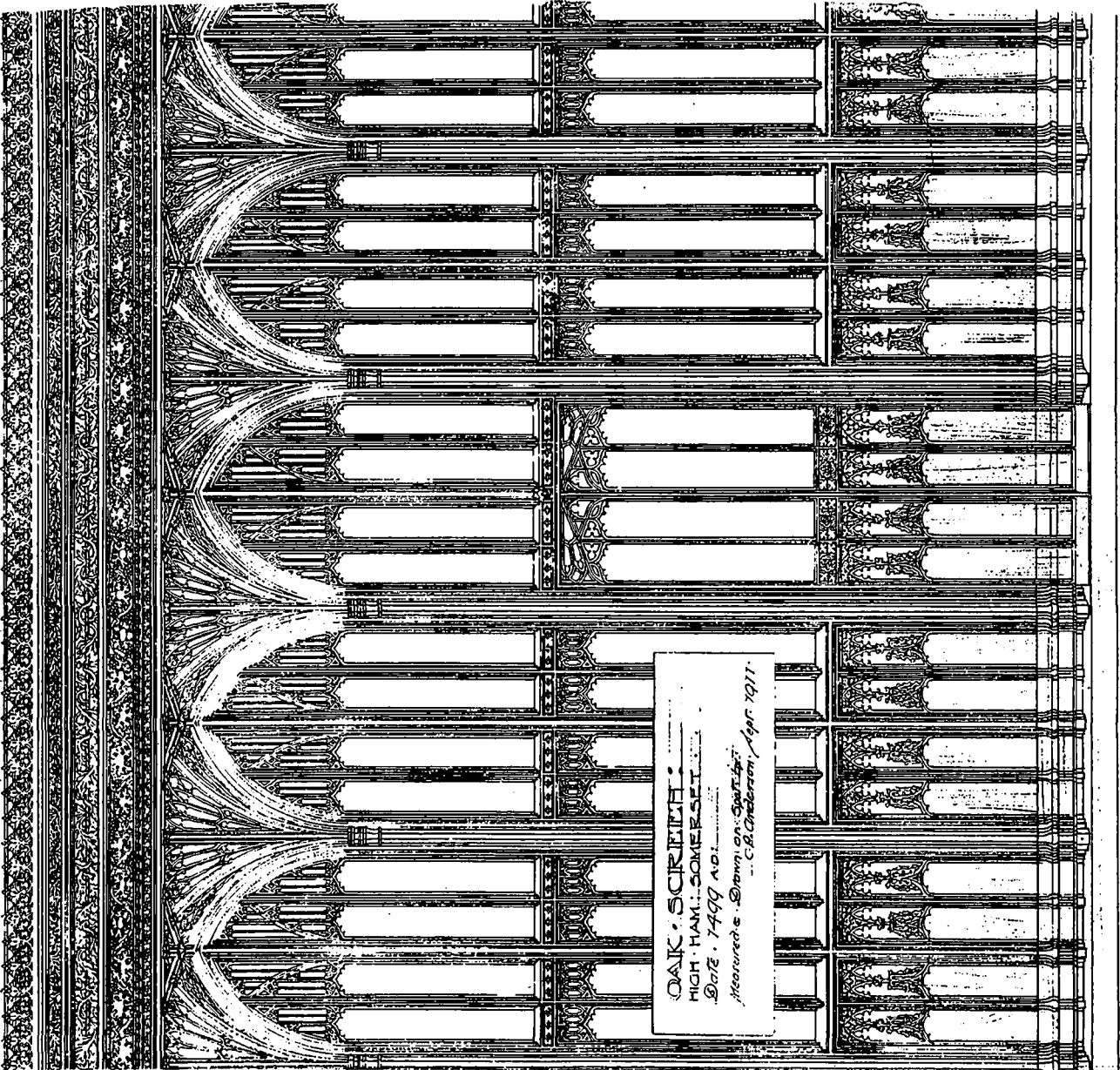
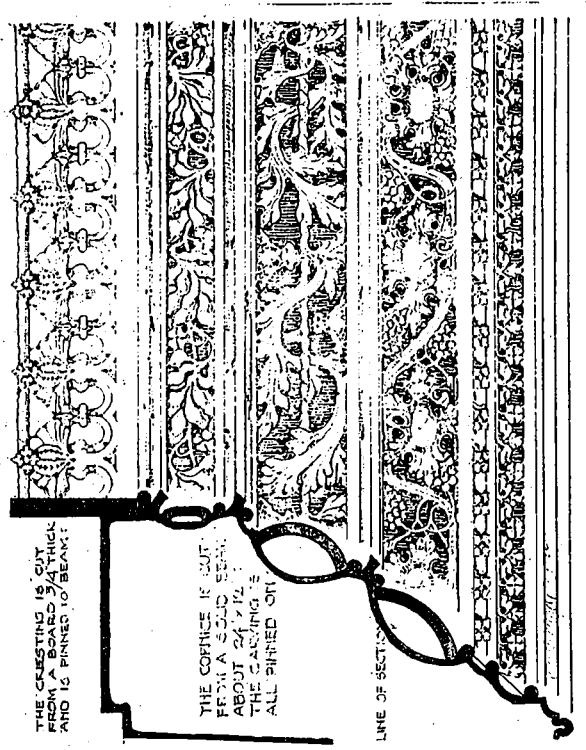
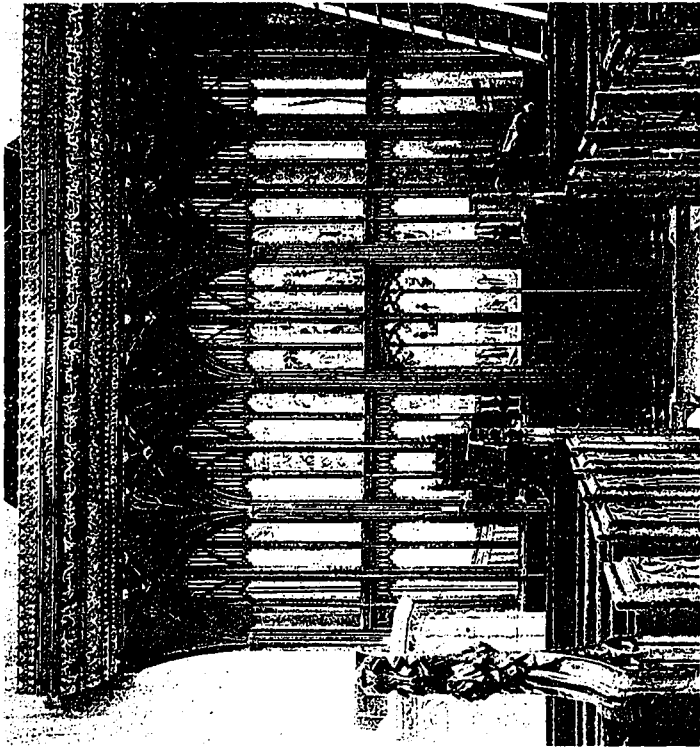
The south might be taken as stretching from London to the English channel, and from Canterbury in the east to Christ Church in the west, and contains the cathedral churches of Salisbury, Winchester, Chichester and Rochester, and all the wealth of small churches of Kent, Surrey and Sussex. Last, but by no means least, there is the great western school of Gothic, and it is with this work, that, for many reasons, I personally spent most time. Here the work is more intimate than in any other district in England. And here are cathedrals which, while indeed not comparable with the great cathedrals of the north and east as regards bulk and general dignity of mass, yet bear comparison with any in England for general charm and interest of detail. Here are Gloucester and Worcester with the Abbeys of Tewkesbury, Pershore, Malvern and Tuitem. Here are the cathedrals of Wales, Llandaff and St. Davids, and the few lovely little Welsh screens.

Here is the parish church work of Somerset, of like date, and quite comparable with the work of East Anglia. This work centres around Wells Cathedral and includes such churches as St. Cuthbert's Church, Wells, Glastonbury, Bath, Bristol, Langport, Muchelney, High Ham, Yeovil, Sherborne, Taunton and Minehead, and a host of smaller and less known churches which, however, are full of interest to the student. And here finally is Exeter cathedral, with one of the most charming interiors in England, and a centre of interest for Devonshire, the county whose church work suffered least during the dangerous period of the Reformation, and which, as a result, contains probably the finest collection of Gothic church wood-work in the world.

Thus then, in a most hasty manner, I have reviewed the Gothic Ecclesiastical Work of England. To the Canadian student the division of English Gothic work into groups may at first seem unnecessary, but once over there in England—and I cannot insist too strongly that Gothic work must be seen and studied "on the spot" if any real knowledge of it is to be attained, the student will find so much more than he anticipated, that such a division of the work to be studied will help him to "find" himself. And as the work was originally done by different schools, belonging roughly to the districts I have mapped out, the student will, if he studies



FAN VAULT IN SHERBORNE ABBEY.



15' 7 1/2"

DETAILS OF OAK SCREEN AT HIGH HAM, SOMERSET, ENGLAND.

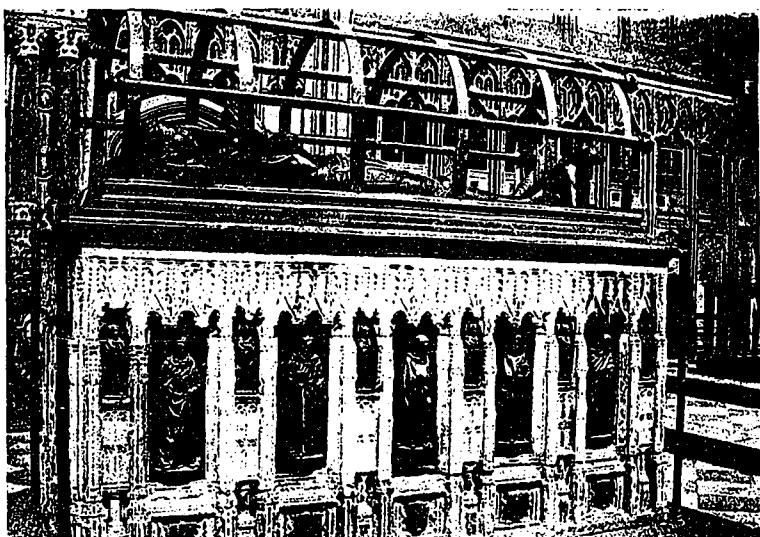
by these districts, get much nearer to that secret of much of the charm of English Gothic work—its complete sympathy with its surroundings.

This brings me to my last point, a point which I emphasized in the former paper on Domestic Work in England. It is the question of materials.

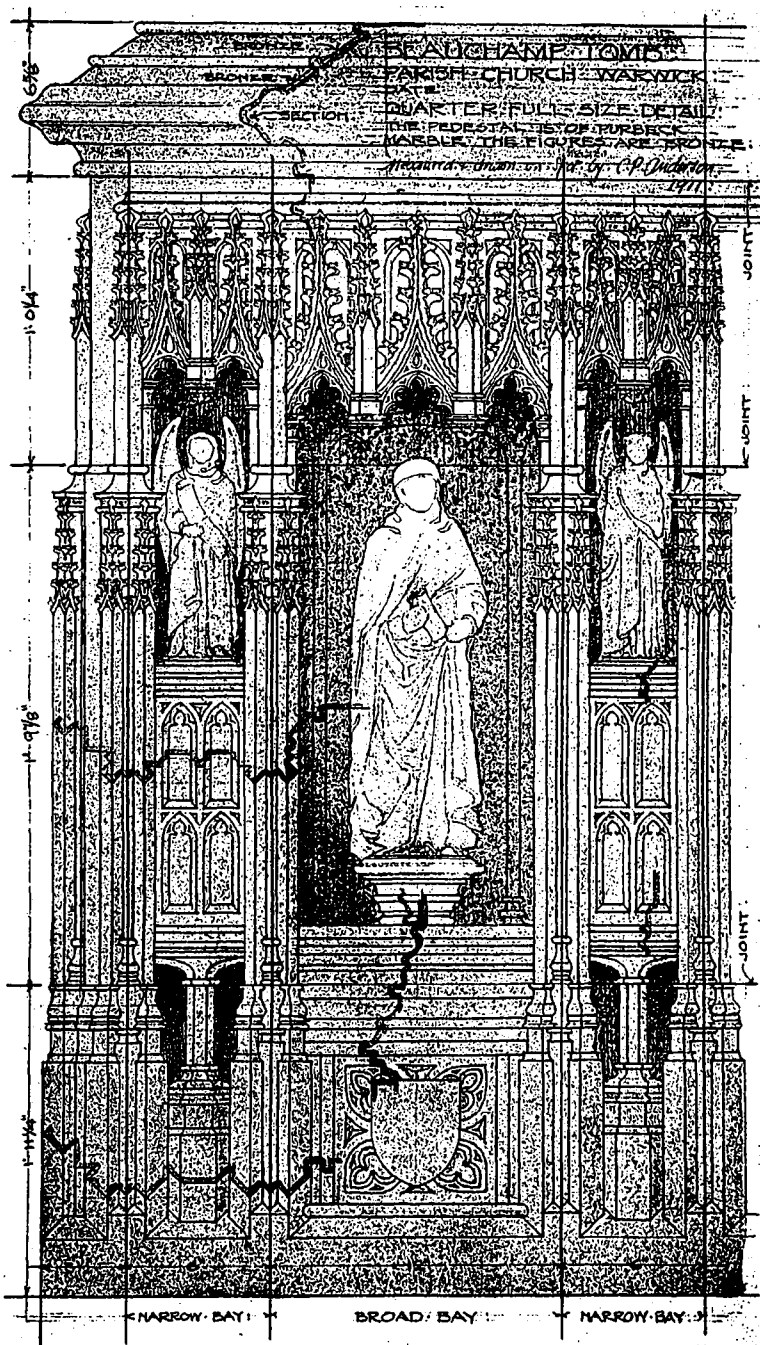
In church work we find the builder less bound to the use of local materials than he was in domestic work, for the church possessed funds which the private man did not, and so was able to bring desired materials from a greater distance. This explains the presence of Purbeck marble in northern England, a stone quarried in the very south of England; it explains the presence of French caen stone at Chichester, and of Somerset Oolite at Christ Church, Dublin; moreover, by means of the funds at her disposal a church could bring a group of masons, or as they were then called, a Guild of Craftsmen, from one part of the country to another. It is told, in this connection, that a Bishop of Canterbury sent to a brother Bishop in Elgin, five hundred miles away, the masons who built Elgin Cathedral; and this greater freedom explains that great uniformity which distinguishes church work in comparison with domestic work in England.

But while noting these lesser facts the student must never lose sight of that greater thought of Gothic work in England, and especially of good Gothic work anywhere, be it ecclesiastical or domestic, that one great all important truth of Gothic architecture—that it is essentially an architecture of materials. This is that for which we need to go back to mediaeval work more than for anything else to-day, to learn anew the first uses of materials, and to learn aright of their possibilities and of their limitations; for only through sympathy with our materials are we in sympathy with the true life spirit of architecture.

DURHAM and Ely Cathedrals are often classed together in histories of architecture. Durham, however, is a particularly magnificent example of Norman work, a most remarkable specimen of a war-like period. Certain small contemporary churches in England may surpass Durham Cathedral in richness and ingenuity of detail; but to those who prefer the stern grandeur of the Norman style, Durham Cathedral in its bold simplicity of conception stands unrivaled.



BEAUCHAMP TOMB, WARWICK.





WEST DOORWAY, ROCHESTER CATHEDRAL.

Ely Cathedral, though it is of Norman or Early English architecture mainly, does not have, as a whole, the purely Romanesque character of Durham. While the nave, transepts, and West Tower are Norman, and the beautiful Galilee Porch—"a perfect gem of exquisite architecture," "the most gorgeous porch of this style in existence"—is Early English, the remaining parts of the buildings are Gothic or Renaissance architecture. But as so much of the Norman and Early English work still stands it is of exceptional interest to the antiquarian or the lover of early architecture. To some it may be of even greater interest than Durham Cathedral, for it represents both Norman and Gothic architecture of a very remarkable type.

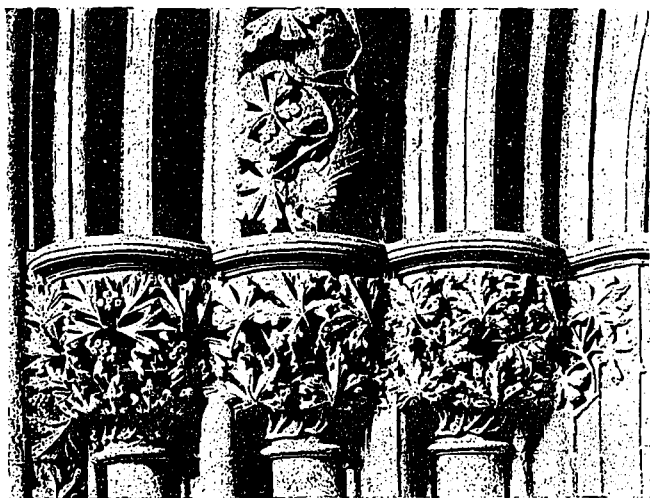
The distinguishing feature of Ely, however, is its great octagon and lantern over the crossing of nave and transept. In 1322 the great tower, which occupied this part of the cathedral, fell, destroying also three bays of the choir. No one was better fitted to repair these damages than Allan of Walsingham, "The Flower of Craftsmen." That he was singularly adapted for such a stupendous undertaking is evidenced by the remarkable result achieved.

The traveler in North Germany will remember the lofty and imposing Romanesque cathedrals and churches, with bold steeples and high towers which are so characteristic of that country's early architecture. Often four, or even five, lofty pinnacles stand pointing heavenward, but they are almost invariably dominated by an octagonal tower of great dignity, marking the crossing. The cathedrals of Osnabruck, Limburg-on-Lahn, and Mayence; the minster at Bonn; and the churches of Gelnhausen, Laach, Sinzig, and St. Quirinus at Neuss, with many others, well illustrate their "National Thirteenth Century" style. It almost seems as if "The Flower of Craftsmen" must have had such structures in mind; but his lantern and its supporting octagon here at Ely far surpassed the early German examples—if they were his examples. Fergusson says that the roof of the octagon is the only Gothic dome in existence, and certainly it is unique in England. The whole is of both wood and stone construction.

The nave and transepts, of the severest type, are full of dignity and beauty. Here is Norman architecture indeed at its best. The simple and massive piers, the cushion capitals of absolute plainness, the early work in the transepts, that oldest part of the present edifice, all give the one impression that is ever present in such a cathedral; that is, the peculiar mystery and grandeur of Norman architecture. Scholars have often conjectured what the result might have been if Norman architecture had ever reached its full consummation. The Gothic, into which it merged, has a marvelous beauty of its own, a grace and an inspiration that are unequalled; but Gothic buildings lack some of the quality of mystery, and they have not to such a degree that kingly majesty.—*A. Curtiss.*



ARCADE IN NORTH AISLE OF LINCOLN CATHEDRAL.



CAPITALS IN SOUTHWELL MINSTER.

THE cathedral of St. Cuthbert, Durham, rising immediately from the steep wooded bank of the river, is surpassed in beauty by no other English cathedral. Its foundation arose from the fact that here, after wandering far over the north of England, the monks of Lindisfarne rested with the body of St. Cuthbert, which they had removed from its tomb in fear of Danish invaders. This was in 995. Soon afterwards a church was built by Bishop Ealdhune, and the see was removed hither from Lindisfarne. The peninsula was called Dunholme (Hill Island) which in Norman times was softened to Duresme, whence Durham. It is said that the monks of Lindisfarne, knowing the name of the place where they should find retreat, but ignorant of its situation, were guided hither by a woman searching for her cow, and the bas-relief of a cow on the north wall of the church, commemorates this incident. In 1093 Ealdhune's church was rebuilt by Bishop Carilef, who changed the early establishment of married priests into a Benedictine abbey. The grand Norman building in which his designs were carried out remains with numerous additions. The stone vaulting is particularly noteworthy. The choir contains the earliest work, but Carilef's eastern apses made way for the exquisite chapel of the Nine Altars, with its rose windows and beautiful carving, or late Early English workmanship. The nave is massive Norman, with round pillars ornamented with surface-carving of various patterns. The western towers are Norman with an Early English superstructure. The famous Galilee chapel, of the finest late Norman work, projects from the west end. The central tower is a lofty and graceful perpendicular structure. Other details especially worthy of notice are the altar screen of *c.* 1380, and the curious semi-classical font-cover of the 17th century. There is a fine sanctuary-knocker on the north door. The cloisters are of the early part of the 15th century. The chapter-house is a

modern restoration of the original Norman structure, a very fine example, which was destroyed by James Wyatt *c.* 1796, in the course of restoration of which much was ill-judged. The cathedral library, formerly the dormitory and refectories of the abbey, contains a number of curious and interesting printed books and MSS., and the portable altar, vestments and other relics found in St. Cuthbert's grave. The Galilee contains the supposed remains of the Venerable Bede. The total length of the cathedral within is 496½ ft., the greatest height within (except the lantern) 74½ ft., and the height of the central tower 218 ft.

WORCESTER is in Worcestershire, a mid-land county, 120 miles from London. Vigorna, the Roman name, was mispronounced by the Saxons Wigerna. Cæster, meaning a fort, was added, hence Worcester.

Archbishop Theodore advised the founding of a see at Worcester in 673, but it was not carried into effect till 780. The building was finished by Oswald in 983; rebuilt in 1100 by Bishop Wulfstan. It is a cathedral of the New Foundation, and is dedicated to the honor of the Blessed Virgin, St. Peter, and the Holy Confessors, Oswald and Wulfstan. Its dimensions are: length, 394 feet; width at transept, 126 feet; height of central tower, 196 feet.

There are few cathedrals in which so fine an unbroken vista from end to end can be obtained. The church is noted for its admirable proportions. The crypt is very old and curious, and is



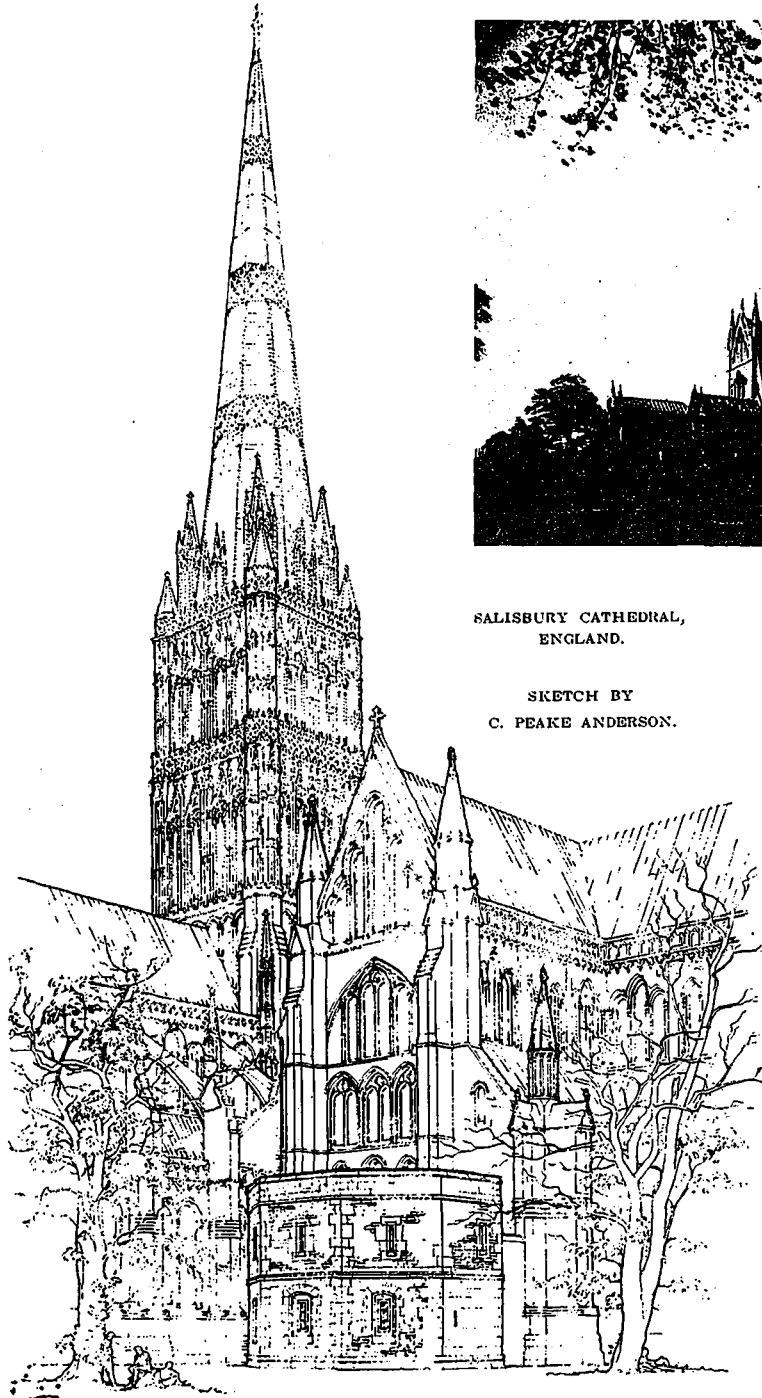
PORCH OF HIGH HOLDEN CHURCH, KENT.

one of the chief glories, not only of this cathedral, but of all English architecture. It has been compared to the mosque of Cordova in the impressive solemnity of its effect.

* * *

Chester is in Cheshire, in the western part of England, 180 miles northwest of London, and

dition was a nunnery for St. Werbergh, the daughter of the Mercian king. Then it became an abbey church, which was at first dedicated to St. Werbergh, but was rededicated by order of Henry VIII. to Christ and the Blessed Virgin. It is a cathedral of the New Foundation. Its dimensions are: length, 350 feet; width at



SALISBURY CATHEDRAL,
ENGLAND.

SKETCH BY
C. PEAKE ANDERSON.



transept, 200 feet; height of tower, 127 feet.

The west front is a singular and beautiful composition, but crowded by the king's school, which is built against one of the flanking turrets. The turrets are octagonal, and have belts of panelled tracery and embattled parapets; the doorway and the large window above it are in the modern perpendicular style. The south transept is unique and entirely different from the north side; it was long used as the parish church of St. Oswald, and is as large as the choir, and almost as large as the nave.—*M. J. Taber.*

sixteen miles from Liverpool. Chester meant *the chester*, the great camp, Chester par excellence. Winchester, Chichester, Rochester, Dorchester, Silchester, Gloucester, Worcester, and Leicester were all Roman camps or forts, but of less importance. Cheshire has the same derivation.

Tradition has it that a Druidical temple once stood on the site of the cathedral, followed by a temple of Apollon. The first Christian foun-

next erected only the west part of the choir remains. The present cathedral, built in the Early English style of Gothic, was commenced about 1200, and was not finished until 1325, builders being employed all the time. Though numbered among the smaller cathedrals, Lichfield is very beautiful, possessing a great charm in the ruddiness of the stone used in its construction. Its most striking features are the

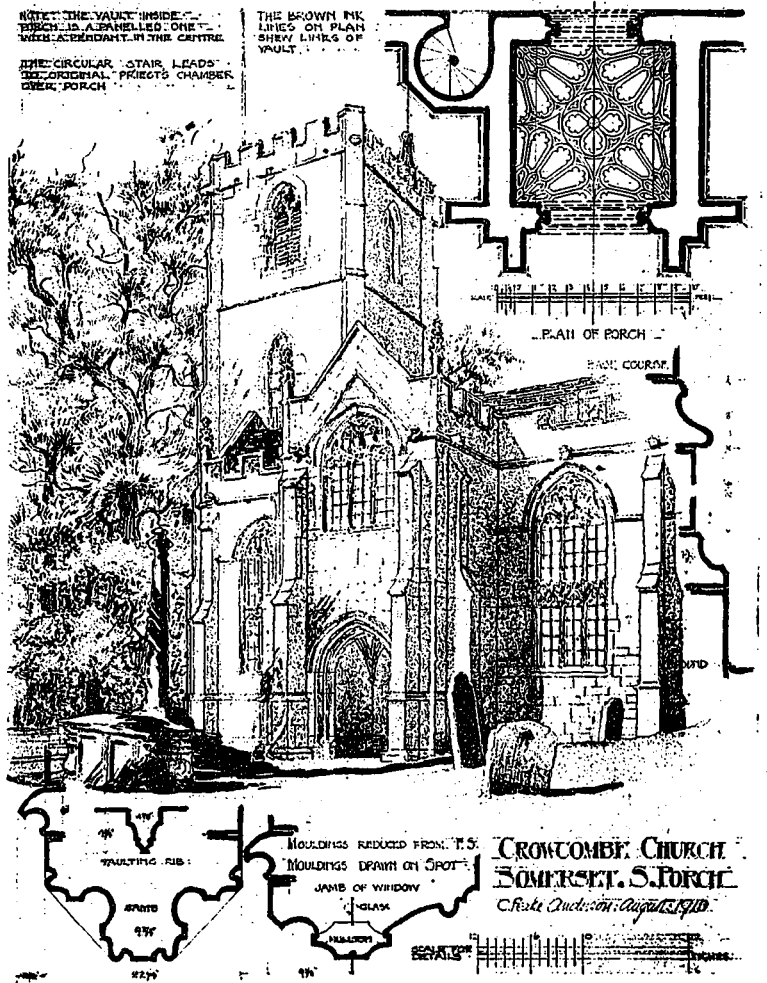
three graceful spires, the sculptured west front, and the large Lady Chapel. Owing, unfortunately, to its being fortified, the cathedral suffered much damage when besieged by the Roundheads during the Civil War. Windows and statues were broken, brass stripped from the tombs, registers burned, but the worst calamity was the destruction of the central tower. After the Restoration the cathedral was carefully repaired, greatly due to the efforts of good Bishop Hacket, who spent his time and money upon the work. The central spire was rebuilt by Wren.

* * *

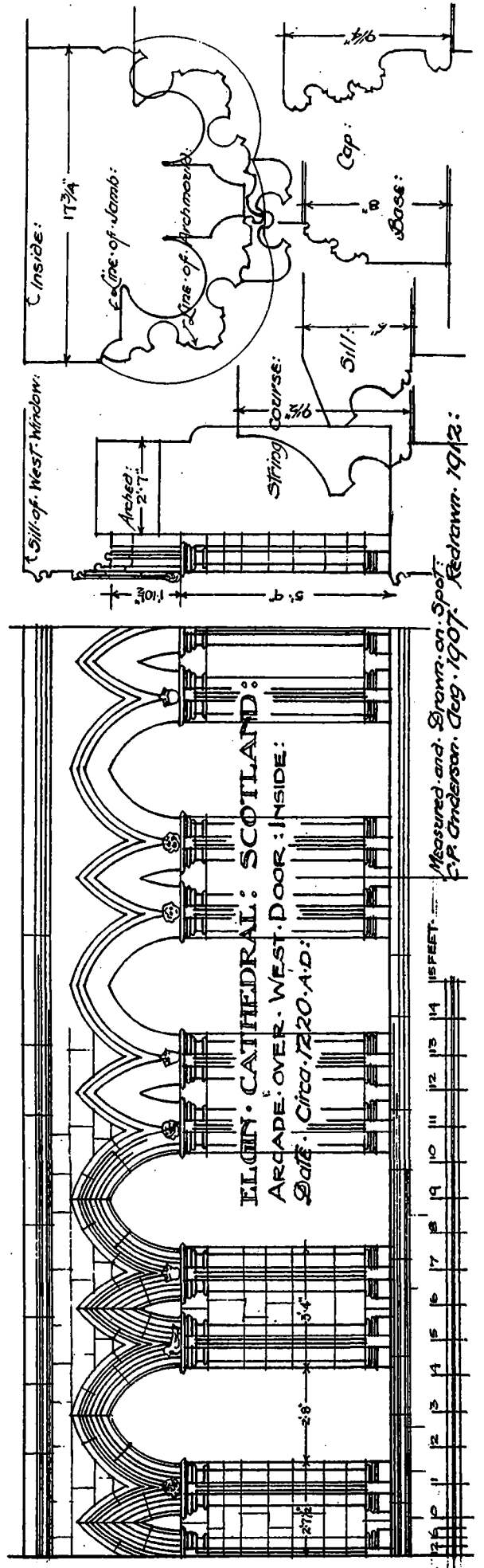
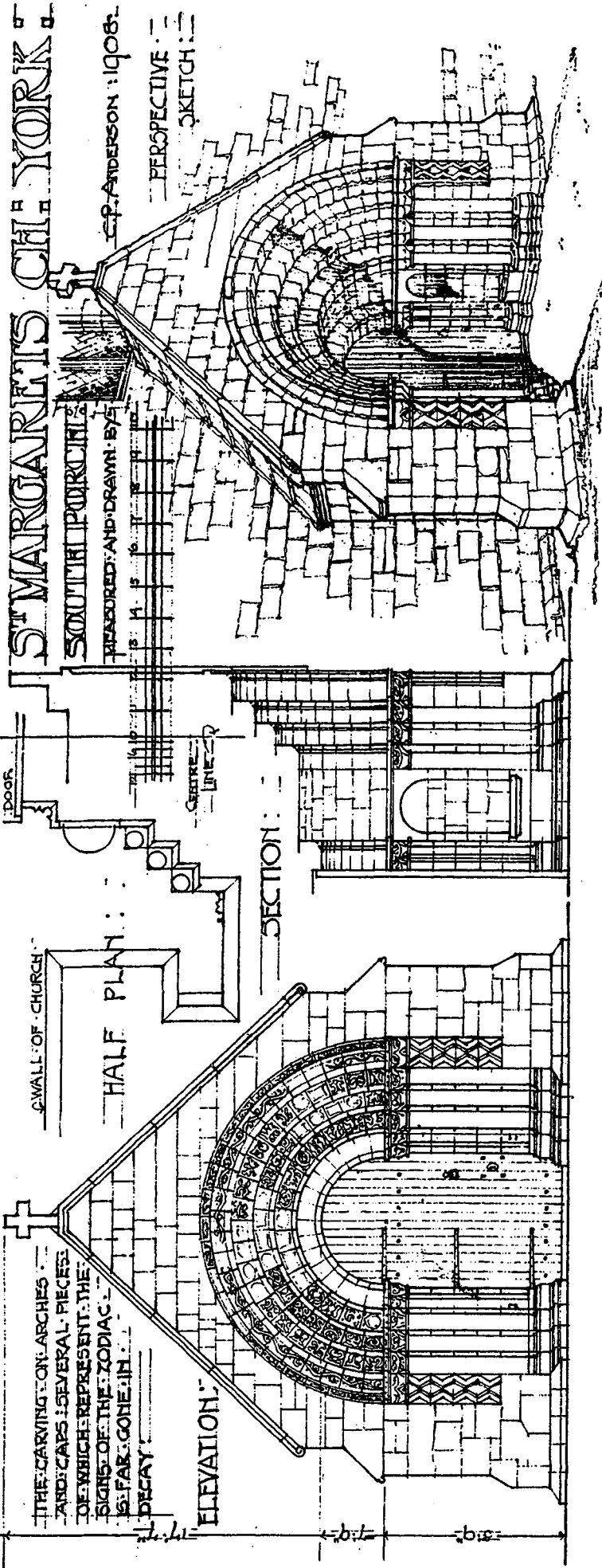
Wells is essentially an ecclesiastical town. It has no history of its own, no great family has ever lived there, and it has no manufactures—it has simply grown up round the cathedral. For these reasons the quiet little Somersetshire town has preserved much of its antiquity and fascination. The presence of the natural wells, which are still to be found in the gardens of the Bishop's Palace, probably induced King Ina in 704 to found a college of secular canons. Here a monastery grew, and subsequently became a bishop's see. John de Villula transferred his seat to Bath in (*circa*) 1092, and in 1139 the title was altered to Bishop of Bath and Wells. Wells is one of the smallest of the English cathedrals, and is in many ways the most beautiful. The clear space in front emphasizes the glorious way in which the three massive towers harmonize with the ruins of the Bishop's Palace, the remains of the Vicar's Close, and the chapter-house. The present building was commenced in 1121, but Bishop Joceline of Wells (1206-1242) rebuilt it from the middle of the choir to the west end. The Early English work shows considerable differences to that in Salisbury and Ely Cathedrals, being carried out by a local school of masons, who show considerable originality in design. The glory of Wells is centred in its west front. The deep buttresses on the towers cast shadows which only serve to show up the marvellous sculptured figures of saints and kings, which may represent a Te Deum in stone. The inside of the cathedral is remarkable for the inverted arches which were put in the chancel to support the towers. Bishop Becketington built the three arches to the close.—*G. Home.*

extreme external length of the cathedral is 524 ft. 6 in., the breadth across the transepts 250 ft., the height of the central tower 213 ft., and the height of the western towers 202 ft. The material is magnesian limestone. The cathedral occupies the site of the wooden church in which King Edwin was baptized by Paulinus (*g.v.*) on Easter Day 627. After his baptism, Edwin, according to Bede, began to construct "a large and more noble basilica of stone," but it was partly destroyed during the troubles which followed his death, and was repaired by Archbishop Wilfrid. The building suffered from fire in 741, and, after it had been repaired by Archbishop Albert, was described by Alcuin as "a most magnificent basilica." At the time of the Norman invasion the Saxon cathedral, with the library of Archbishop Egbert, perished in the fire by which the greater part of the city was destroyed, the only relic remaining being the central wall of the crypt. It was reconstructed by Archbishop Thomas of Bayeux (1070-1100); but of this building few portions remain. The apsidal choir and crypt were reconstructed by Archbishop Roger (1154-81), the S. transept by Archbishop Walter de Grey (1216-1255), and the N. transept and central tower by John Romanus, treasurer of the cathedral, (1228-56).

With the exception of the crypt, the transepts are the oldest portions of the building now re-



THE cathedral of St. Peter, at York, commonly known as the minster, has no superior in general dignity of form among English cathedrals. It is in the form of a Latin cross, consisting of nave with aisles, transepts, choir with aisles, a central tower, and two W. towers. The



NOTE: THE CHURCH WAS BUILT ABOUT 1240 A.D. PROBABLY BY THE BUILDERS OF YORK MINSTER. THE ROOF AND PARTS OF THE MASON WORK HAVE BEEN RESTORED.

SKELTON C.M.I. YORKSHIRE.
Measured and Drawn on Spot by C.P. Anderson.
September, 1908.

1/4 INCH SCALE FOR DETAILS:

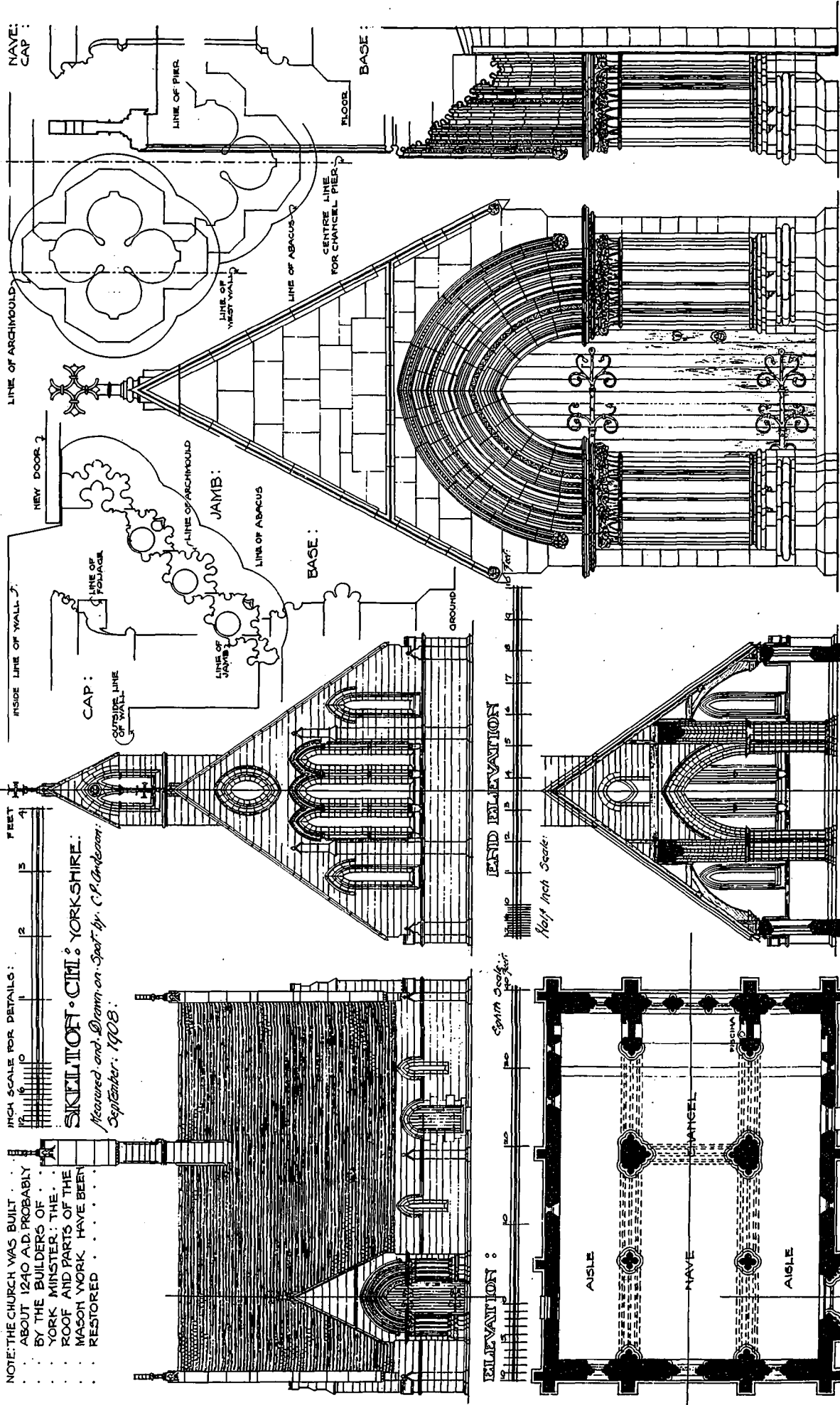
FEET

INSIDE LINE OF WALL

NEW DOOR

LINE OF ARCHMOULD

NAVE: CAP

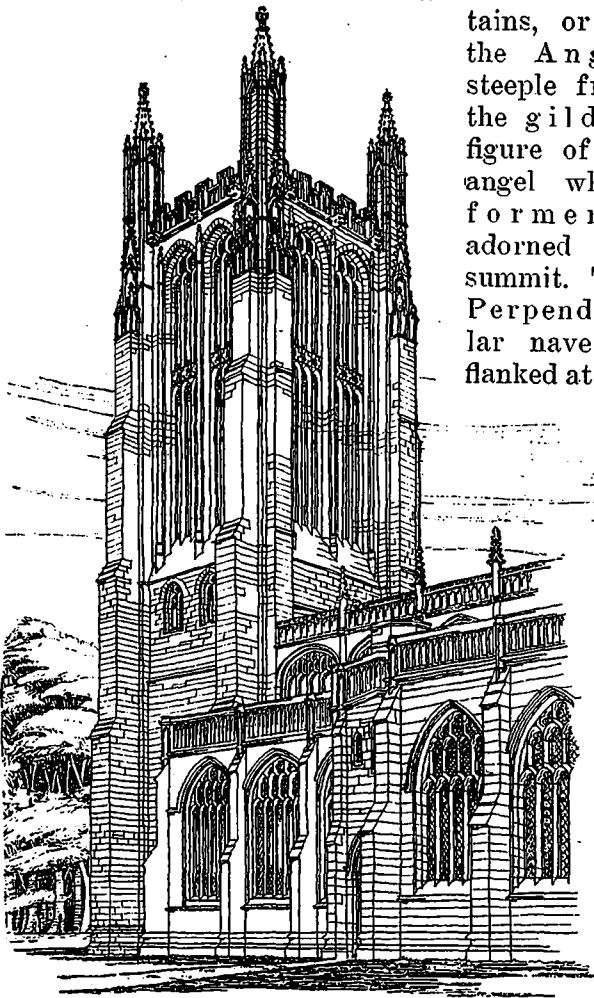


DETAILS OF SKELTON CHURCH, YORKSHIRE, ENGLAND.
MEASURED AND DRAWN BY C. PEAKE ANDERSON.

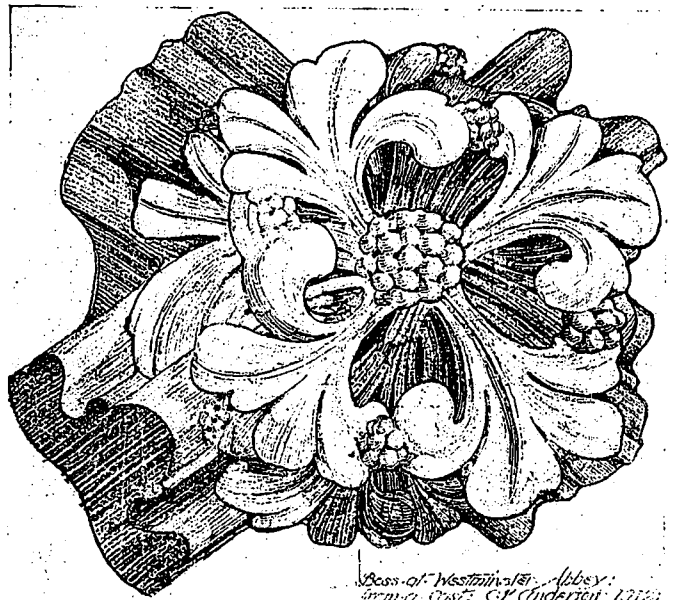
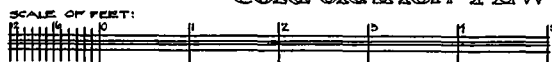
maining. They represent the Early English style at its best, and the view across the great transept is unsurpassed for architectural effect. The S. transept is the richest and most elaborate in its details, one of its principal features being the magnificent rose window; and the N. transept contains a series of beautiful lancet windows called the Five Sisters. The foundation of the new nave was laid by Archbishop Romanus (1286-96), son of the treasurer, the building of it being completed by Archbishop William de Melton about 1340. The chapter-house, a magnificent ornate building, was built during the same period. The W. front, consisting of a centre and two divisions corresponding with the nave and aisles, has been described as "more architecturally perfect as a composition than any other English cathedral," the great window above the door being considered by some superior to the famous E. window at Carlisle.

* * *

The perpendicular tower of Canterbury Cathedral is the most notable feature of the exterior. It rises in two storeys to a height of 235 ft. from the ground, and is known variously as Bell Harry tower from the great bell it contains, or as the Angel steeple from the gilded figure of an angel which formerly adorned the summit. The Perpendicular nave is flanked at the



SKETCH FROM S. E.



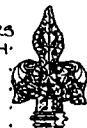
Boss of Westminster Abbey from a Boss C.P. Anderson 1911

DETAIL OF BOSS, WESTMINSTER ABBEY.

west front by towers, whose massive buttresses, rising in tiers, serve to enhance by contrast the beautiful effect of the unbroken straight lines of Bell Harry tower. The south-western of these towers is an original Perpendicular structure by Prior Goldstone, while the north-western was copied from it in 1834-1840, replacing a Norman tower which had carried a spire until 1705 and had become unsafe. The north-west and south-west transepts are included in Chilterden's Perpendicular reconstruction; but east of these earlier work is met with. The south-east transept exhibits Norman work; the projecting chapel east of this is known as Anselm's tower. The cathedral terminates eastward in a graceful apsidal form, with the final addition of the circular eastern chapel built by William the Englishman, and known as the Corona or Becket's Crown. St. Andrew's tower or chapel on the north side, corresponding to Anselm's on the south, is the work of Ernulf. From this point westward the various monastic buildings adjoin the cathedral on the north side, so that the south side is that from which the details of the exterior must be examined.

St. Cuthbert's Ch. Wells: Somerset: C.P. Anderson 1911

THE WOODWORK OF THE CHURCH APPEARS TO BE MODERN WITH THE EXCEPTION OF THE CORPORATION PEW WHICH IS OF OAK.



SIDE-ELEV:



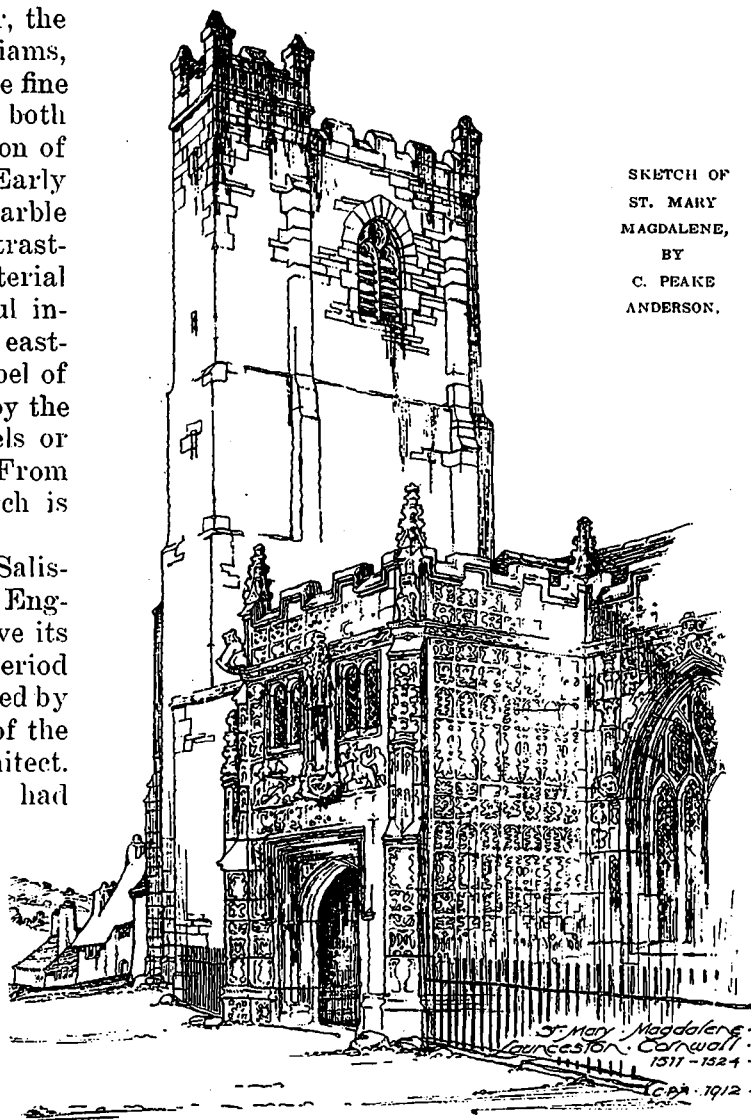
CORPORATION PEW

When the nave of the cathedral is entered, the complete separation of the interior into two main parts, not only owing to the distinction between the two main periods of building, but by an actual structural arrangement, is realized as an unusual

and, as it happens, a most impressive feature. In most English cathedrals the choir is separated from the nave by a screen; at Canterbury not only is this the case, but the separation is further marked by a broad flight of steps leading up to the screen, the choir floor (but not its roof) being much higher than that of the nave. Chillenden, in rebuilding the nave, retained only the lower parts of some of the early Norman walls of Lanfranc and the piers of the central tower arches. These piers were encased or altered on perpendicular lines. In the choir, the late twelfth-century work of the two Williams, the notable features are its great length, the fine ornamentation and the use of arches, both round and pointed, a remarkable illustration of the transition between the Norman and Early English styles; the prolific use of dark marble in the shafts and mouldings strongly contrasting with the light stone which is the material principally used; and, finally, the graceful in-curve of the main arcades and walls at the eastern end of the choir where it joins the chapel of the Trinity, an arrangement necessitated by the preservation of the earlier flanking chapels or towers of St. Anselm and St. Andrew. From the altar eastward the floor of the church is raised again above that of the choir.

The cathedral church of St. Mary at Salisbury is an unsurpassed example of Early English architecture, begun and completed, save its spire and a few details, within one brief period (1220-1266). There is a tradition, supported by probability, that Elias de Derham, canon of the cathedral (d. 1245), was the principal architect. He was at Salisbury in 1220-1229, and had previously taken part in the erection of the shrine of Thomas a Becket at Canterbury. The building is 473 ft. in extreme length, the length of the nave being 229 ft. 6 in., the choir 151 ft., and the lady chapel 68 ft. 6 in. The width of the nave is 82 ft., and the height 84 ft. The spire, the highest in England, measures 404 ft. (For plan, see "Architecture": (*Romanesque and Gothic in England.*) The cathedral, standing in a broad grassy close, consists of a nave of ten bays, with aisles and a lofty north porch, main transepts with eastern aisles, choir with aisles, lesser transepts, presbytery and lady chapel. The two upper storeys of the tower and the spire above are early Decorated. The west front, the last portion of the original building completed, bears in its rich ornamentation signs of the transition to the decorated style. The perfect uniformity of the building is no less remarkable within than without. The frequent use of Purbeck marble for shafts contrasts beautifully with the delicate grey free-stone which is the principal building material.

In the nave is a series of monuments of much interest, which were placed here by James Wyatt, who, in an unhappy restoration of the cathedral (1782-1791), destroyed many magnificent stained-glass windows which had escaped the Reformation, and also removed two perpendicular chapels and the detached belfry which stood to the northwest of the cathedral. One of the memorials is a small figure of a bishop in robes. This was long connected with the ceremony of the "boy bishop," which, as



SKETCH OF
ST. MARY
MAGDALENE,
BY
C. PEAKE
ANDERSON.

practised both here and elsewhere until its suppression by Queen Elizabeth, consisted in the election of a choir-boy as "bishop" during the period between St. Nicholas' and Holy Innocents' Days. The figure was supposed to represent a boy who died during his tenancy of the office. But such small figures occur elsewhere, and have been supposed to mark the separate burial-place of the heart. The lady chapel is the earliest part of the original building, as the west end is the latest. The cloisters, south of the church, were built directly after its completion.

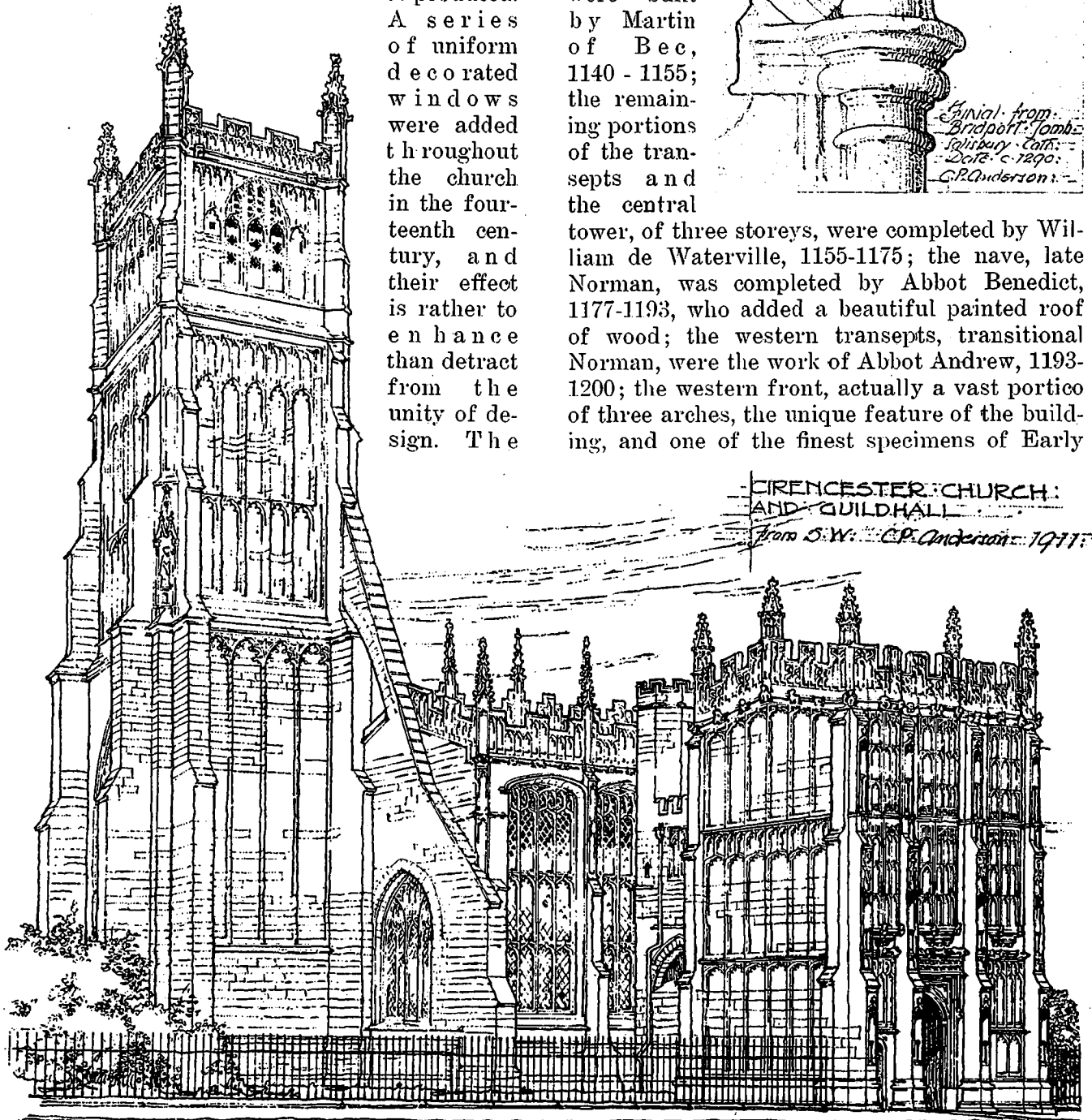
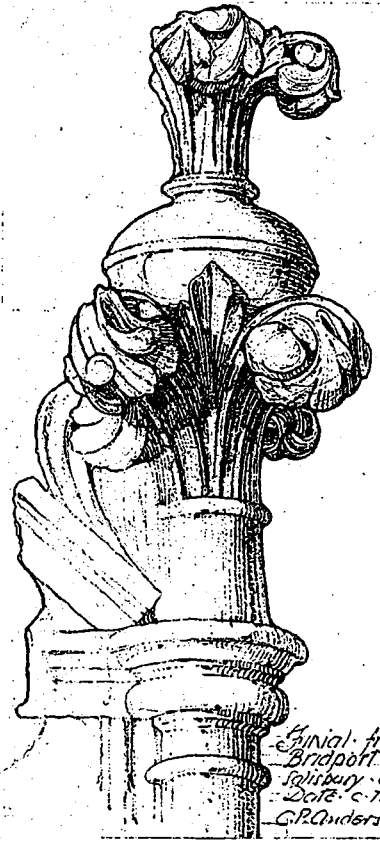
The cathedral of St. Peter at Peterborough is the third church that has occupied the site; the

first, founded under Penda, king of the Mer-
cians, about 656, was entirely destroyed by the
Danes in 870, and the second, founded in King
Edgar's reign, was accidentally burnt in 1116.
The present building, founded in the following
year, was, inclusive of the west front, 120 years
in building, being consecrated on the 4th of Oc-
tober, 1237. It embraces in all, however, eight
periods of construction, and in no other build-
ing can the transition be better studied through
the various grades of Norman to Early English,
while the later addition is an admirable example
of Perpendicular.

The erection proceeded as usual from east to
west, and, while an increase in elegance and
elaboration is observable in the later parts, the
character of the earlier buildings was so care-
fully kept in mind that no sense of incongruity
is produced.

A series of uniform decorated windows were added throughout the church in the fourteenth century, and their effect is rather to enhance than detract from the unity of design. The

choir, early Norman, terminating in an apse, was founded in 1117 or 1118 by John de Sais or Sez, and dedicated in 1140 or 1143; the aisles of both transepts and the whole of the south transept were built by Martin of Bec, 1140 - 1155; the remaining portions of the transepts and the central tower, of three storeys, were completed by William de Waterville, 1155-1175; the nave, late Norman, was completed by Abbot Benedict, 1177-1193, who added a beautiful painted roof of wood; the western transepts, transitional Norman, were the work of Abbot Andrew, 1193-1200; the western front, actually a vast portico of three arches, the unique feature of the building, and one of the finest specimens of Early



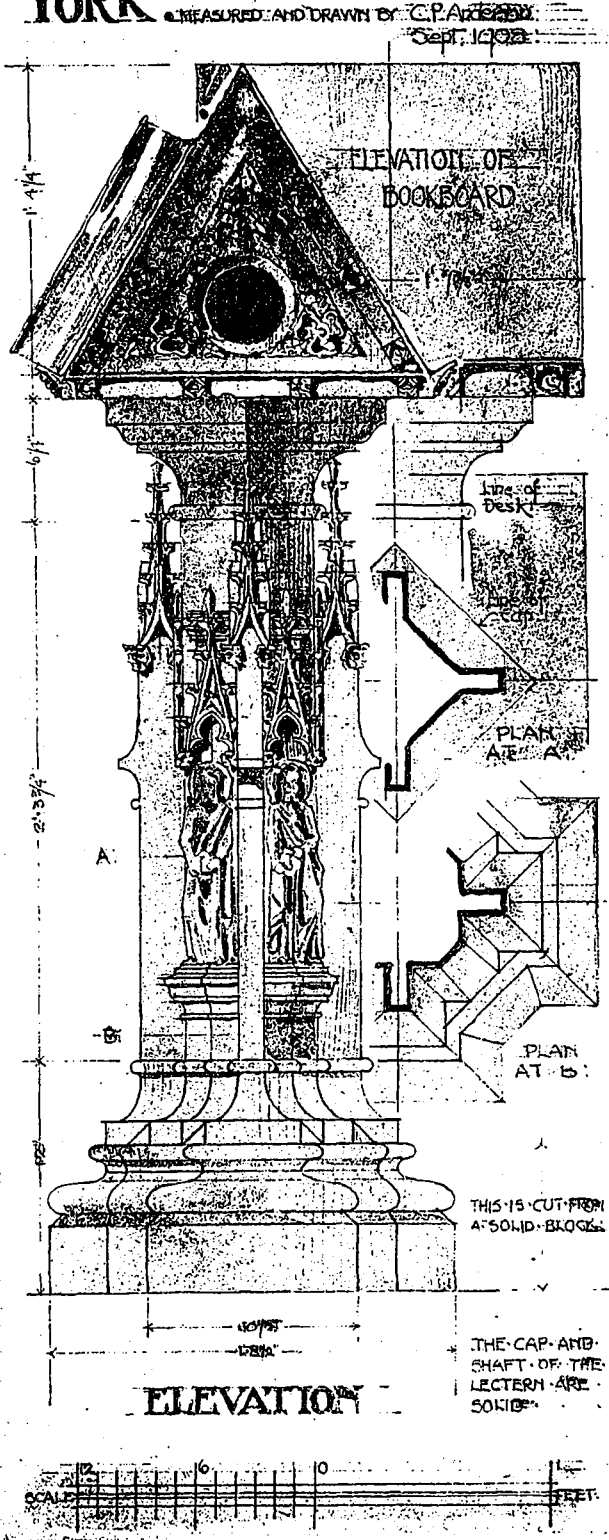
English extant, must have been built between 1200 and 1250, during which period there were several abbots; but there exists no record of its reconstruction. The lady chapel, built parallel with the choir by William Parys, prior, was consecrated in 1290; the bell-tower was erected by Abbot Richard between 1260 and 1274; the southwest spire, the pinnacles of the flanking tower of the west portal, and the enlargement of the windows of the nave and aisles were the work of Henry de Morcot in the beginning of the fourteenth century; the "new building" or eastern chapel in the perpendicular style, begun in 1438, was not completed till 1528. In 1541 the church was converted into a cathedral, the abbot being made the first bishop. The extreme length of the building is 471 ft., and of the nave 211 ft., the breadth of the west front being 156; the height of the central tower, as reconstructed in the fourteenth century, was 150, that of the spires and tower of the west front is 156 ft. In 1643 the building was defaced by the soldiers of Cromwell, who destroyed nearly all the brasses and monuments, burnt the ancient records, levelled the altar and screen, defaced the windows, and demolished the cloisters. To obtain materials for repairs the lady chapel was taken down. In the latter part of the eighteenth century the church was repaved. In 1831 a throne, stalls and choir-screen were erected and other restorations completed. On account of the insecure state of the central tower in 1883 it was taken down; and its reconstruction, exactly as it stood with the exception of the four corner turrets added early in the nineteenth century, was completed in 1886. The choir was reopened in 1889, after being closed for six years.

* * *

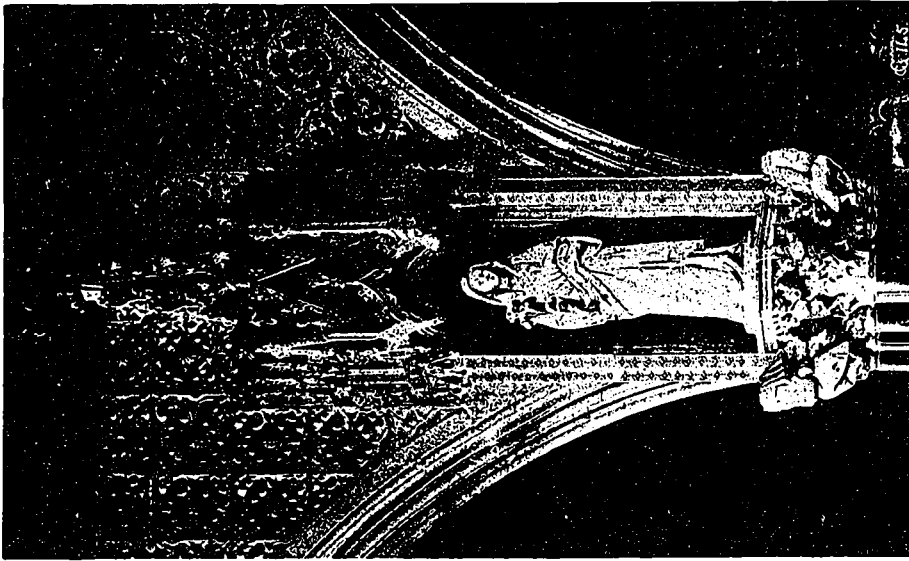
In 1895 the restoration of the west front and other parts was begun in the face of considerable adverse criticism; but the work was carried on with the utmost care. During the carrying out of this work many interesting discoveries were made, the most important being the site of the cruciform Saxon church, enclosed within a crypt under the south transept.

The church of St. Mary and St. German at Selby, belonged to a Benedictine abbey founded under a grant from William the Conqueror in 1069 and raised to the dignity of a mitred abbey by Pope Alexander II. The monastic buildings have practically disappeared, but the church was a splendid building of various dates from Norman to Decorated, the choir and Lady chapel representing the later period. The nave passes from Norman to Early English in the course of its eight bays from east to west and also from the arcade through the triforium to the clerestory. About midnight of the 19th-20th of October 1906, a fire broke out in the Latham chapel adjoining the north choir aisle, in which

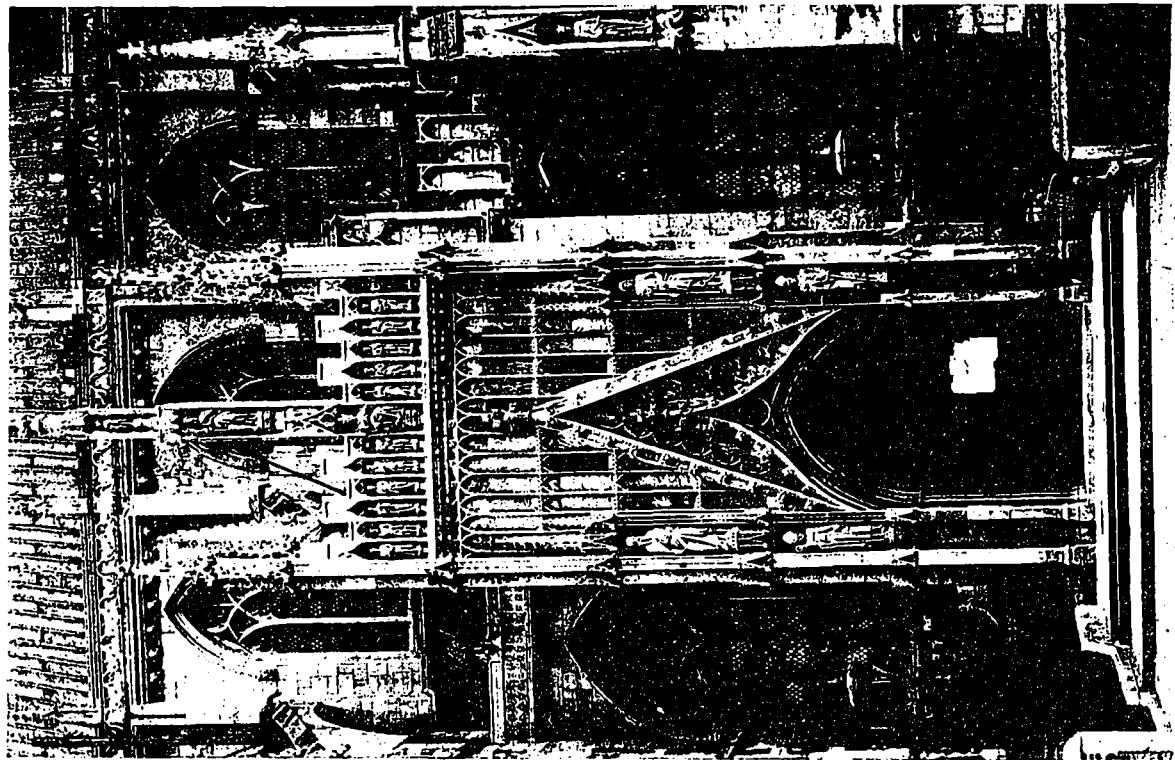
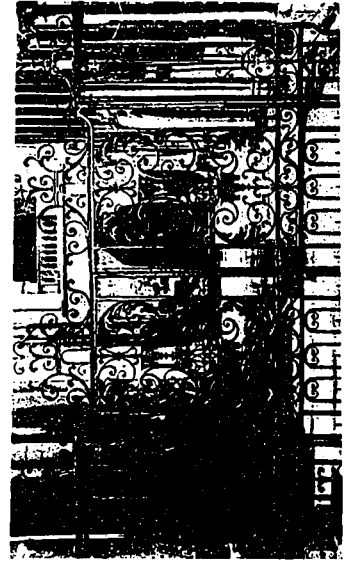
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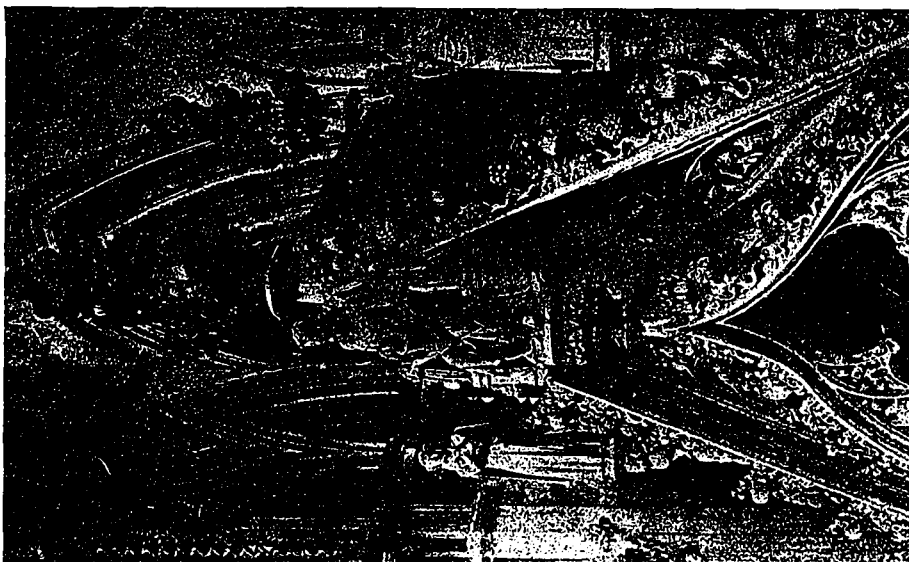
a new organ had recently been erected, and soon involved the whole building. Especially serious damage was done in the immediate neighborhood of the chapel, the oak-groined roof and rich fittings of the choir were wholly destroyed, but the finely moulded arches and the magnificent tracery of the east window survived in great part.—*Encyclopedia Britannica.*



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CONTRIBUTIONS.—The Editor will be glad to consider contributions dealing with matters of general interest to the readers of this Journal. When payment is desired, this fact should be stated. We are always glad to receive the loan of photographs and plans of interesting Canadian work. The originals will be carefully preserved and duly returned.

Entered as Second Class Matter in the Post Office at Toronto, Canada.

Vol. VIII Toronto, May, 1915 No. 5

H. P. KNOWLES, architect, announces the removal of his offices to Vanderbilt Concourse Building, 52 Vanderbilt avenue, at 45th street, New York City.

* * *

A NEW architectural firm is Hynes, Feldman & Watson, 105 Bond street, Toronto. Members of the partnership are J. P. Hynes, for the past several years located at 199 Yonge street; I. Feldman, lately practising at 44 Adelaide street west, and A. E. Watson, until recently with John M. Lyle, architect.

* * *

THE annual meeting of the Toronto chapter of the Ontario Association of Architects was held in the association rooms, 94 King street west, on Tuesday, May 4th. The report of the secretary-treasurer revealed a very satisfactory condition of affairs, there being at the present time a membership of 75. The officers elected for the year are, Ralph K. Shepard, 43 Scott street, chairman, and Isadore Feldman, 105 Bond street, secretary-treasurer.

THE Board of Trade at Kamloops passed a by-law recently voting the sum of \$85,000 for the completion of the Hydro-Electric system, upon which half a million dollars has already been expended. This equips the city with a splendid power plant, and means another link in its chain of progress.

* * *

BRITISH COLUMBIA mills are now tendering on one of the largest lumber contracts ever opened for world-wide competition. Through the British Government the Chamber of Deputies of France is asking for a supply of 500,000,000 feet of lumber to be used in the construction of 100,000 two-roomed houses. These small homes are to house the section of France's population which has lost its all through the ravages of war. It would not be surprising if one of the British Columbia mills secured the contract. This would be one of the greatest booms the lumber-cutting plants of this province had ever received. Owing to the fact that the French Government will want the lumber as early as possible, it will most likely mean that the firm which secures the contract will have to let sub-contracts.

* * *

"KNOW Canada! make Canada known!" is a striking sentence in the war year edition for 1915 of that popular booklet, "5,000 Facts About Canada," compiled by Frank Yeigh, of Toronto, who knows Canada as probably few Canadians do. Fifty chapters are devoted to such subjects as agriculture, area, banking, census, immigration, mining, manufacturing, trade, etc., and a page of Canadian war facts show how up-to-date it is. Sketch maps are included of the Dominion in 1867 and 1915. Copies may be had from progressive newsdealers, or by sending 25c. to the Canadian Facts Publishing Co., 588 Huron street, Toronto, Canada.

* * *

AT the recent gathering of the Alberta Association of Architects, held at Edmonton, the retiring president, James Henderson, spoke feelingly of the men who have volunteered for active service, and congratulated the profession on the large number it had contributed to the cause. The following officers were elected for the ensuing year: President, J. J. O'Gara, Calgary; Hon. President, Jas. Henderson, Edmonton; First Vice-President, R. P. Blakey, Edmonton; Second Vice-President, G. H. MacDonald, Edmonton; Hon. Secretary, W. G. Blakey, Edmonton; Hon. Treasurer, W. D. Cromarty, Edmonton; Council, G. Fordyce, Calgary; R. W. Lines, Edmonton; R. P. Barnes, Edmonton; C. L. Gibbs, Edmonton; C. S. Burgess, Edmonton; Representative on University Senate Jas. Henderson, Edmonton.

AN interesting pamphlet has just been issued on the J-M Keystone Hair Insulator, by the H. W. Johns-Manville Company. It states clearly the qualities for which it merits consideration and presents various buildings wherein this material has been used. Several drawings illustrate the method of applying the insulator to side walls and floors, together with a description in each case.

* * *

THE new factory for the Lord & Burnham Company, Ltd., of Canada at St. Catharines, Ont., consists of woodworking, ironworking and erection shops in conjunction with a boiler room and other necessary divisions. The buildings, 225 by 275 feet, are of steel construction with concrete foundations, brick walls and steel trussed roof holding glass or concrete with patent roofing compound. The shops are equipped with a sprinkler system and heated by means of overhead coils. Two sidings have been arranged, the first to accommodate the incoming freight on one side of the factory, the second to handle all outgoing products. These buildings, together with the other factories at Irvington, N.Y., and Des Plaines, Ill., cover twelve acres of floor space.

* * *

A COMMISSION of French architects, comprising building experts from the cities and towns destroyed by Germans, some of which, such as Rheims, Arras, Senlis and Roye, are called "the assassinated towns," have already drawn up plans for rebuilding on a larger and better scale. In Rheims, for instance, an area of fifteen hectares will be entirely newly outlined; also in the town of Chermont in the Argonne, where six new streets and three hundred houses will be constructed, a vast amount of building material, machines and implements for municipal reconstruction on the best possible hygienic practical basis will, in the opinion of leading French architects, soon be required. A large portion of what is needed will be sought in the United States. The outlook in Northern France and Belgium is for enormous building activity in the future.

* * *

THE following letter, received from W. H. C. Mussen, President of the Mussens Limited, Montreal, is given in full in order that the company may explain their present status and future aims:

To Whom it may Concern: We have much pleasure in notifying you that Mr. John J. Robson, Chartered Accountant, of Montreal, who was recently appointed Provisional Liquidator, has, by order of the Court, been appointed per-

manent liquidator to this company. The Court has also granted our application to be allowed to continue the business for a period of six months. We take this opportunity of notifying you of these facts and advising you that we feel able to demonstrate to our creditors that we will succeed in the efforts which will be put forward to reduce our stock, collect our open accounts and materially reduce overhead charges, with a view to getting into a position to reorganize and continue in business.

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We conclude by asking our principals to continue the support which has been so freely given us in the past, and we ask our customers to give us an opportunity of supplying them with any material which they may require. All inquiries will be promptly attended to and orders will be filled without delay.

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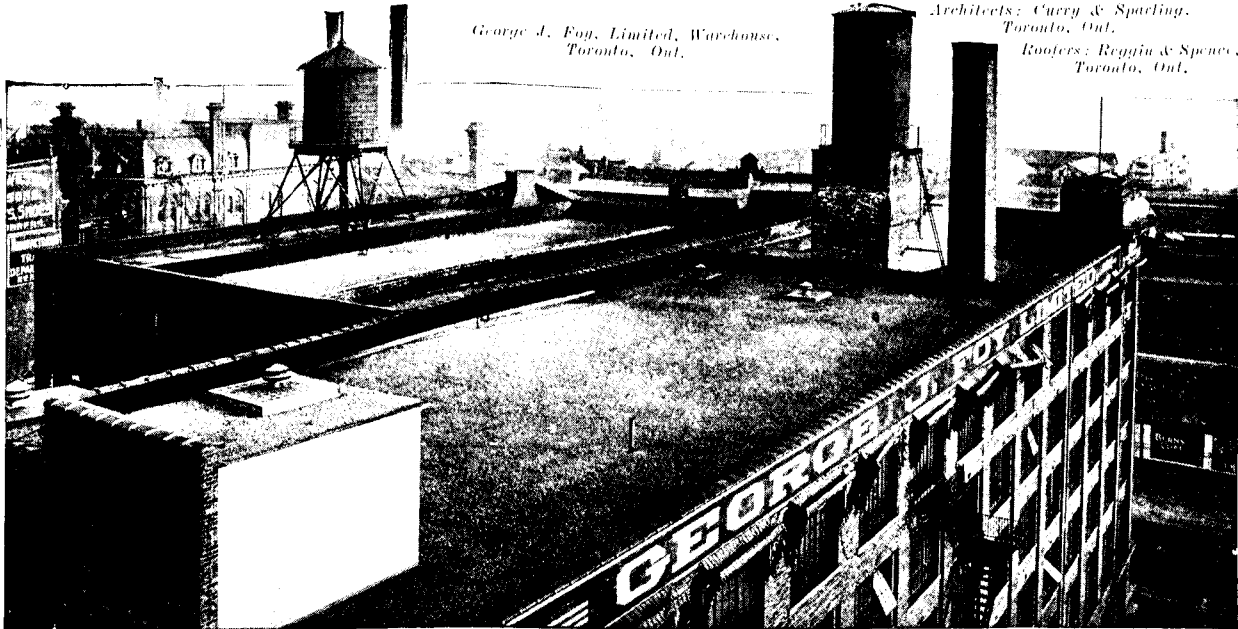
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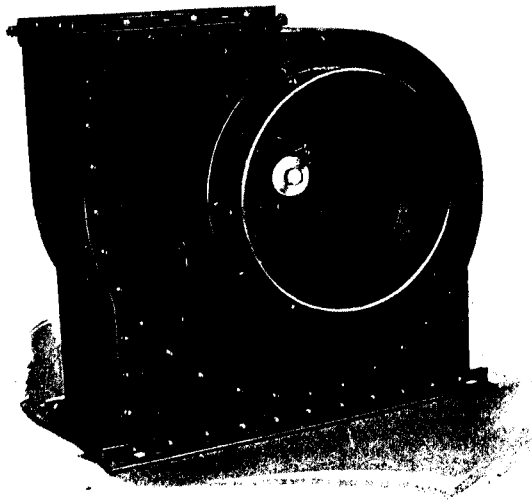
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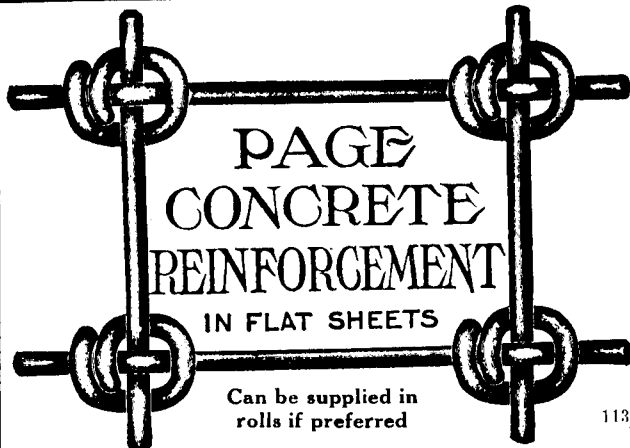
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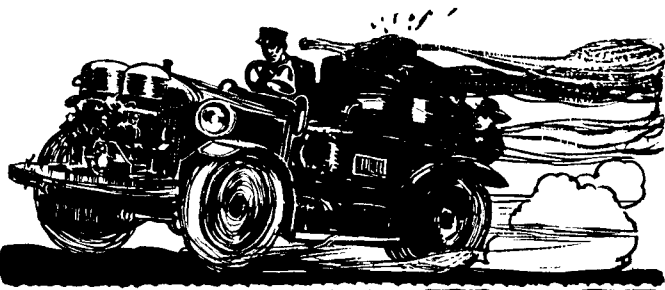
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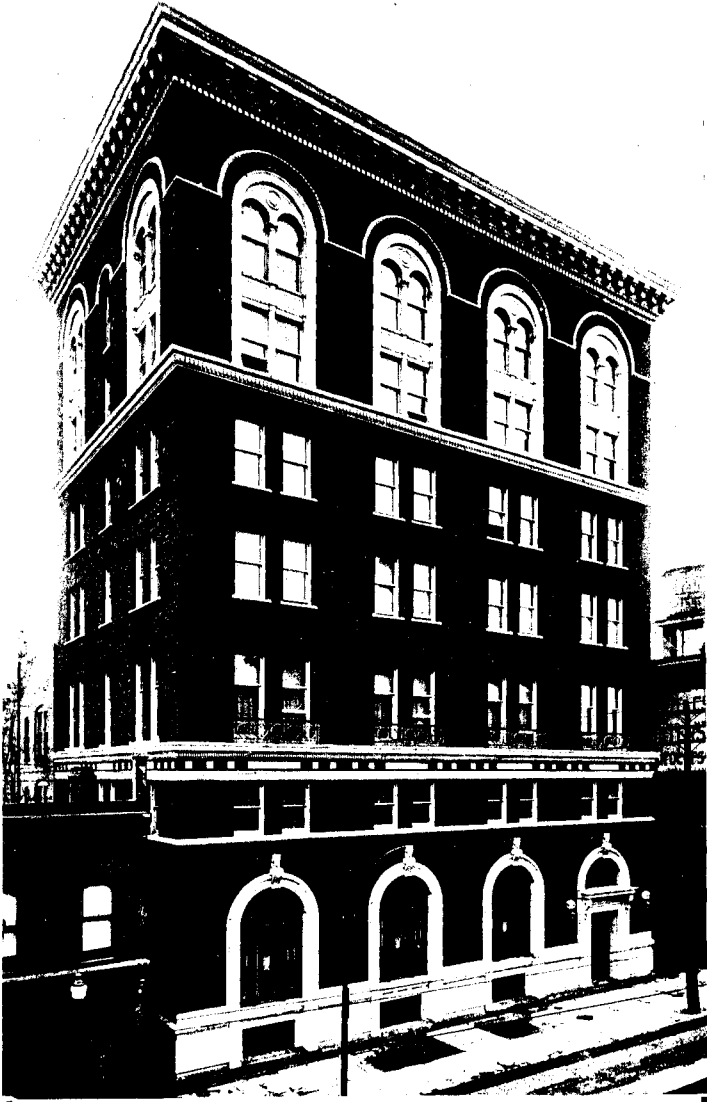
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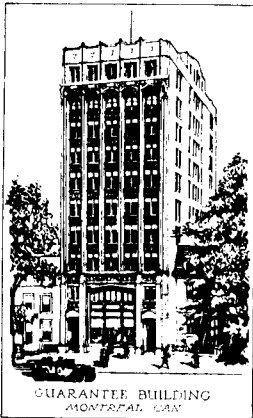
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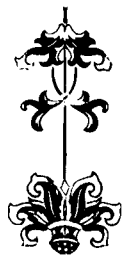
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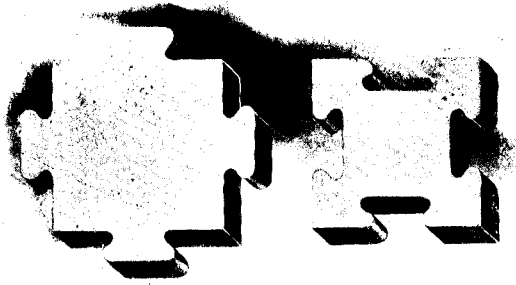
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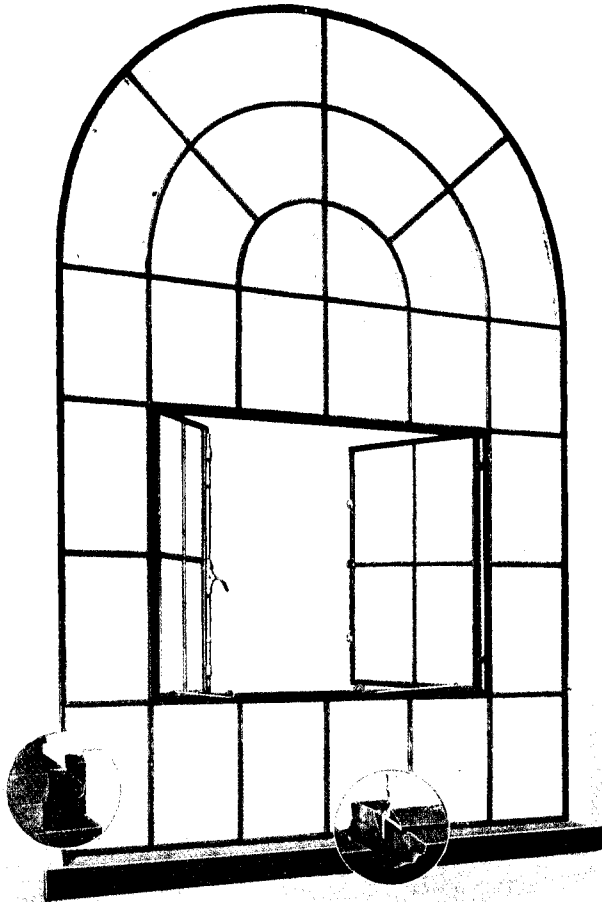
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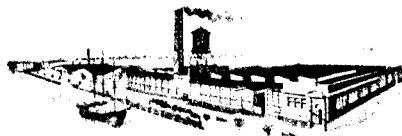
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