VOL. 6. NO. 3

MARCH, 1913

$3.00 per Year
35c. per Copy

CONSTRUCTION

A · JOURNAL · FOR · THE · ARCHITECTURAL ENGINEERING · AND · CONTRACTING INTERESTS · OF · CANADA

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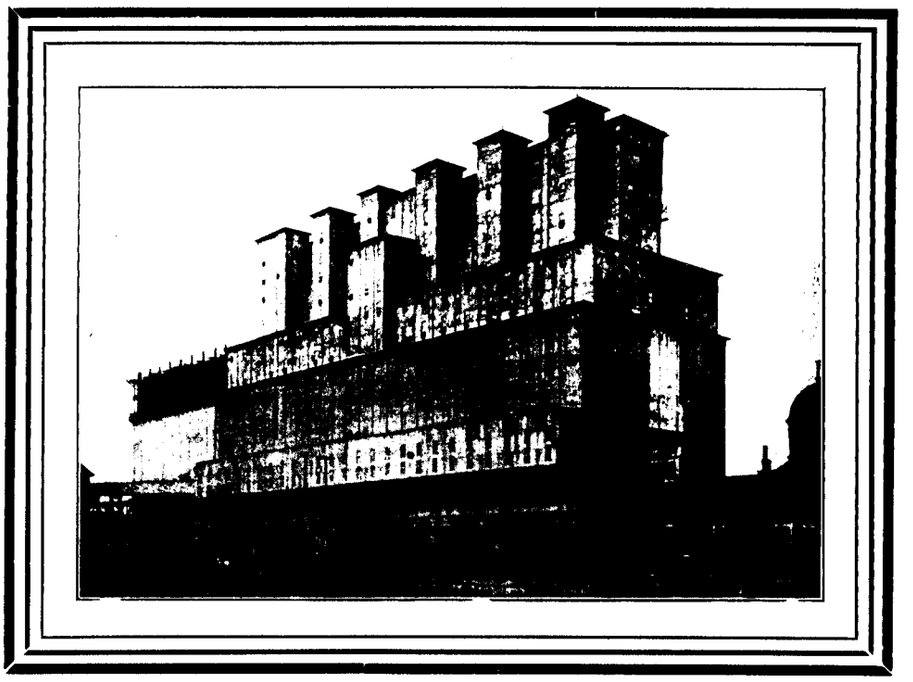

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It stands as one of the greatest monuments to Canadian progressiveness, and also to reinforced concrete, which material was used throughout.

Only a cement that fulfils the most exacting requirements could have satisfied the Montreal Harbor Commissioners for this great structure.

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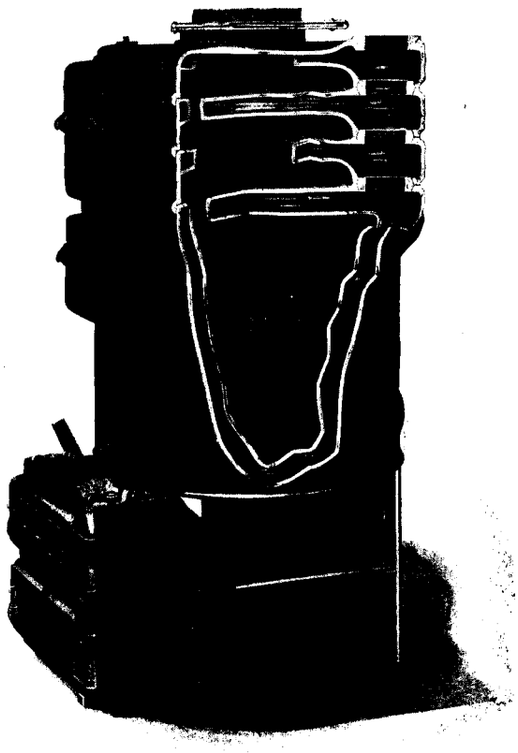

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THE SAFFORD BOILER grate has few parts about it.

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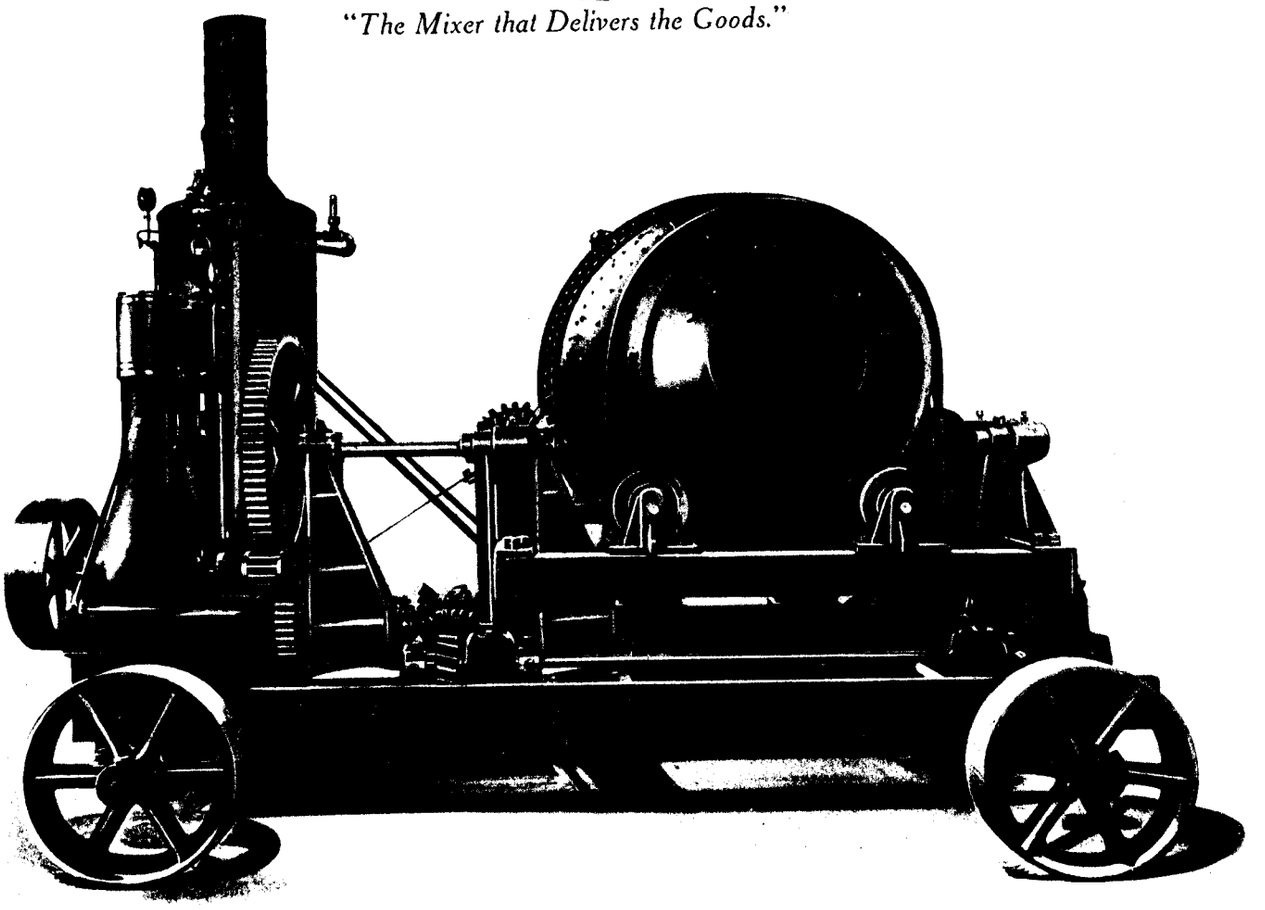

This is the Mixer for your 1913 Work

Builders and Contractors are looking forward to their biggest season's work this year. Already the permits issued constitute a record.

To figure as closely as the other fellow and still make good profit you will need a

WETTLAUFER HEART-SHAPED MIXER

During 1912 Contractors found that they could mix more concrete, better concrete, and mix it faster than with any other mixer; and that meant money in their pockets on every job.

This machine is the simplest mixer made and the most durable and practical. One man can run it. It delivers out the batch smoothly and evenly and it never goes wrong.

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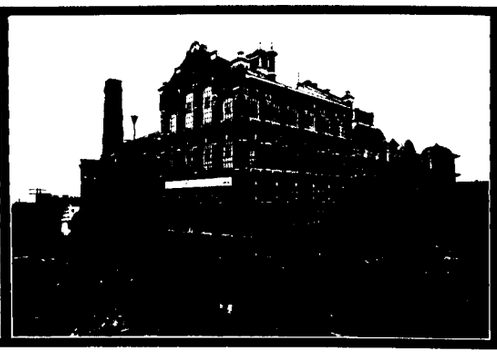

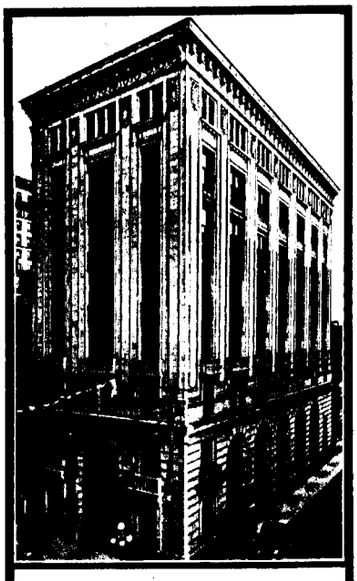

Don Valley Products have them for Building

THE accompanying illustrations give some idea of the variety and class of buildings in which Don Valley Products are used. These buildings, erected in Toronto within the last few years, comprise warehouses, factories, office and public buildings, banks, devotional and institutional buildings, residences, etc.

They are fine examples of modern building construction and show the confidence Canadian architects have in Don Valley Products when they specify them for their most important work.

The coming season will be one of unprecedented activity in the building trades in Toronto and its vicinity, and we are making preparations to supply a greatly increased demand for Don Valley Bricks and Porous Terra Cotta Fireproofing.

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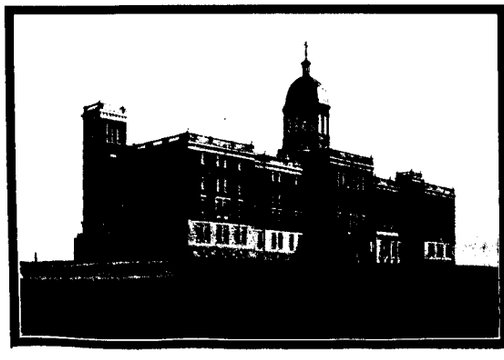
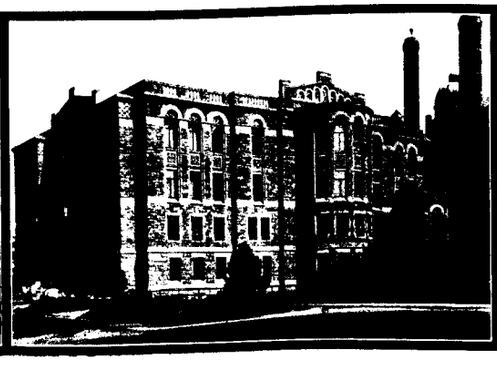
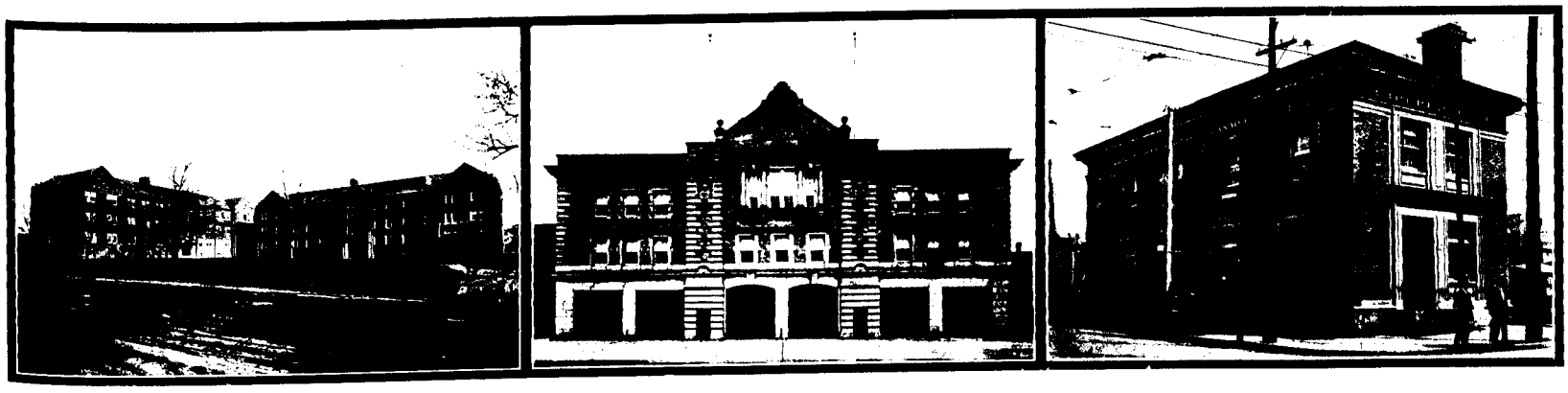




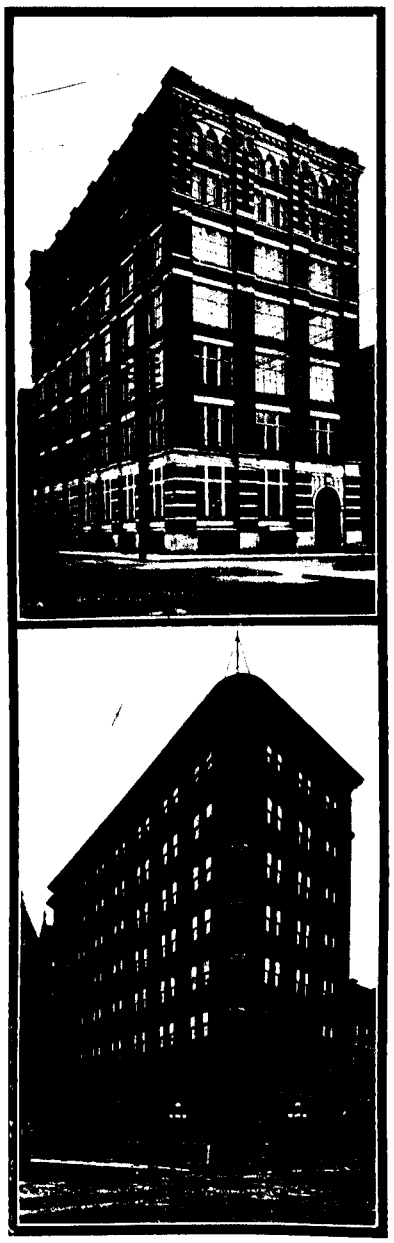


Qualities that Recommend
s of Every Class.

WHEN you specify Don Valley Bricks and Porous Terra Cotta Fireproofing, you safeguard your clients' interests in two important particulars. First: you guarantee that the quality of the building material used is of the highest order, and second: that it will be delivered on the job when it is needed.

Our plant has access to a supply of clay that has no superior for the making of clay products, and we manufacture on such a big scale that we can fill the largest orders promptly.

For your next building, make your specifications read: "Don Valley Bricks" or "Don Valley Porous Terra Cotta Fireproofing." Our bricks are manufactured in all the standard forms to suit every purpose, and our Porous Terra Cotta Fireproofing has been tested in many severe conflagrations and has proved that it has no superior for its purpose on the North American Continent.



BRICK WORKS

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TORONTO

"Standard Sanitary"

Porcelain Enameled Lavatories

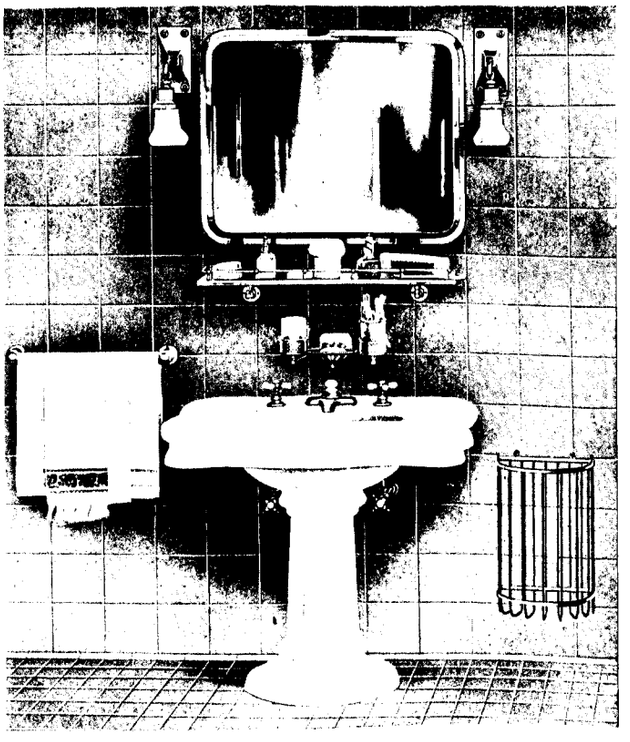

Plate P -3070 X

"Standard Sanitary" Porcelain Enameled "Dallas" Lavatory with Slab, Oval Bowl and rear Outlet and Apron all in one piece, supported on Porcelain Enameled Fluted Column Round Pedestal, fitted with P-10251 "Alton" Compression Combination Supply and Waste Fitting; ½ in. P-10427 Supply Pipe and 1½ in. P-10463 "P" Trap. Lavatory furnished enameled all over only.

THE "Standard Sanitary" line of porcelain enameled Lavatories comprises the largest assortment of designs on the market, all of which are of first quality of manufacture, highly sanitary and warranted against defects in material and workmanship.

Every genuine "Standard Sanitary" Lavatory bears the "Standard Sanitary" Green and Gold guarantee label. Without this label it is an inferior substitute and should be rejected.

For the convenience of architects, plumbers and prospective builders, we maintain Showrooms at Toronto and Hamilton, where "Standard Sanitary" Lavatories and plumbing fixtures for every requirement may be inspected and information regarding their efficiency and adaptability obtained.

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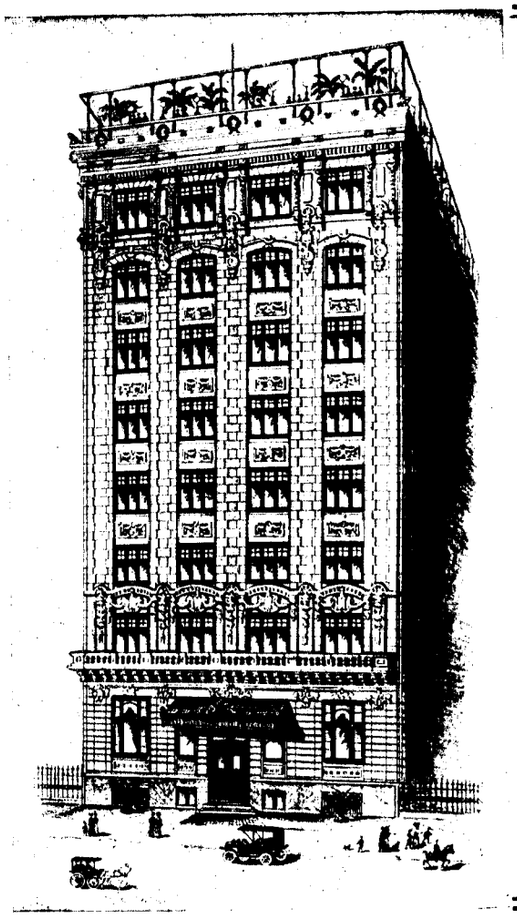

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Proprietor	O. N. Henault
Architect	C. A. Mitchell
Superintendent	J. E. E. Lyness
Cost - -	over $200,000

The Royal George Apartments will be, when completed, one of the finest buildings of its class in Canada.
In the matter of appointments no expense has been spared. A feature of the conveniences installed is the Northern-Electric Inter-phone that provides the tenants with the most modern system of inter-communication to be had.

Illustrated descriptive literature giving full information about Northern-Electric Inter-Phones will be sent you on request. Write our nearest branch house.

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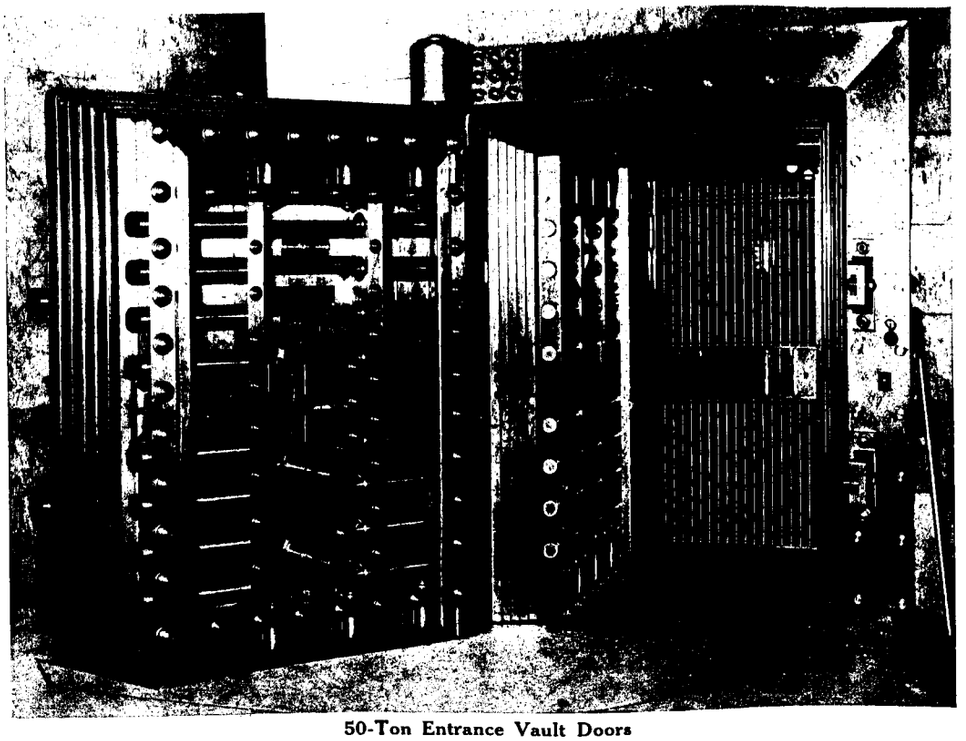

50-Ton Entrance Vault Doors

Two sets of these vault doors were recently installed for BANK OF MONTREAL and ROYAL TRUST CO., Winnipeg.

When completed, these were the heaviest vault doors on the continent.

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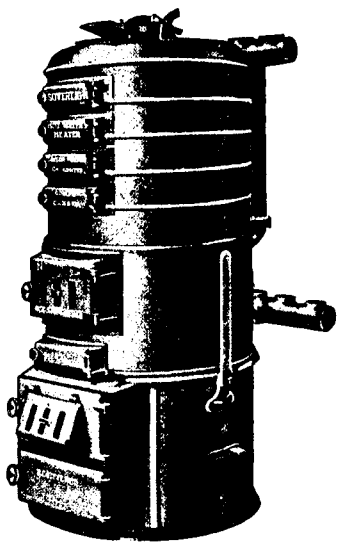
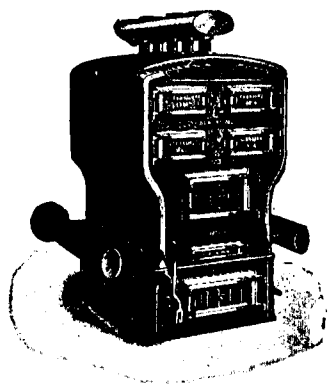
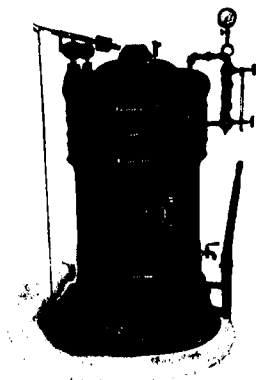
The Efficient Heating Family



"Sovereign"
Hot Water Boiler.



"Canadian"
Steam Boiler.



"Western Jr."
Low Pressure Steam.

THE "SOVEREIGN" Hot Water Boiler has all the improvements and new features that are necessary to make an efficient hot water boiler.

Larger First Section.

Deeper Corrugated Flared Fire Pot.

Bell Mouthed Flues.

Baffled Fire Travel.

Individual Clean-out Flue Doors.

Modern Rocking Grate.

Each of these points in construction improves the heating capacity of the Sovereign Hot Water Boiler, and reduces worry of excess furnace attention. Yet the "Sovereign" is the only boiler in which these combined features are to be found. In fact, the "Sovereign" is the original of the deeper fire pot and large first section boiler, and the only boiler having individual clean-out flue doors.

In some boilers you have an attempt to copy the larger first section, wherein the fire travel is straight, not baffled—a manifest fault in construction.

In another make of boiler you have the baffled fire travel with a shallow first section, also a fault that lessens heating capacity.

If you have studied the heating problem, you will know what it means to have all the "Sovereign" features. Each helps a little to make a hot water boiler a success. Assembled in the one boiler this would make it unusually efficient. The "Sovereign" is unusually efficient.

TAYLOR-FORBES Canadian Steam and Hot Water *Square Sectional Boilers* of *Header type construction* are of great efficiency for heating residences, schools, public buildings, etc., being made in five series, or width of grate, and listed in *twenty-eight capacities.*

All Canadian Steam and Water Boilers are connected with running thread locknut nipples and *equalizing headers.* The large variety of sizes offers a wide range of capacities suitable for heating all sizes of buildings and the given capacity can be increased at any time by adding additional sections.

The prominent feature of these boilers is the *drop tube construction,* which presents an immense amount of *self-cleaning fire surface* directly to the hottest portion of the fire.

The "Western Jr." is built to burn soft coal and it may be used either as a hot water or a low pressure steam boiler.

A large deep fire pot is a feature of the "Western Jr." It may be loaded up freely with coal and left alone without attention for hours and hours. This is a great advantage, for, with soft coal, or quick burning fuel, if the fire pot is not capacious the furnace will require constant attention.

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ALEXANDRA WARE

Standard Ideal Plumbing Fixtures in the West

Holly Lodge, Largest Apartment Block in Vancouver, B.C. Wright, Rushforth & Cahill, Architects; Barr & Anderson, Plumbers; Dalton Bros., Contractors. Equipped with Standard Ideal Plumbing Fixtures.

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PORT HOPE, CANADA

ALEXANDRA WARE

THESE buildings, recently constructed in the West, are among those in which Standard Ideal Plumbing and Bathroom Fixtures have been installed.

Being used for apartment house and hotel purposes, the quality of the plumbing ware is of first importance, for in buildings of this class it is often subjected to very severe usage and it must at all times give perfect service to the tenants.

The selection of Standard Ideal Ware is another proof of the high estimation in which it is held by Canadian Architects and Builders. Its splendid durability, fine appearance and mechanical excellence make it pre-eminently the plumbing ware for all purposes.

Caroline Court, Vancouver, B.C. J. P. Matheson & Son, Architects: Murray Bros., Plumbers; Dominion Construction Co., Contractors; Standard Ideal Plumbing Fixtures used.

Washington Court, Vancouver, B.C. J. F. Bird, Architect; W. S. Ramsay, Plumber: P. Agren, Contractor. Standard Ideal Plumbing Fixtures installed in this building.

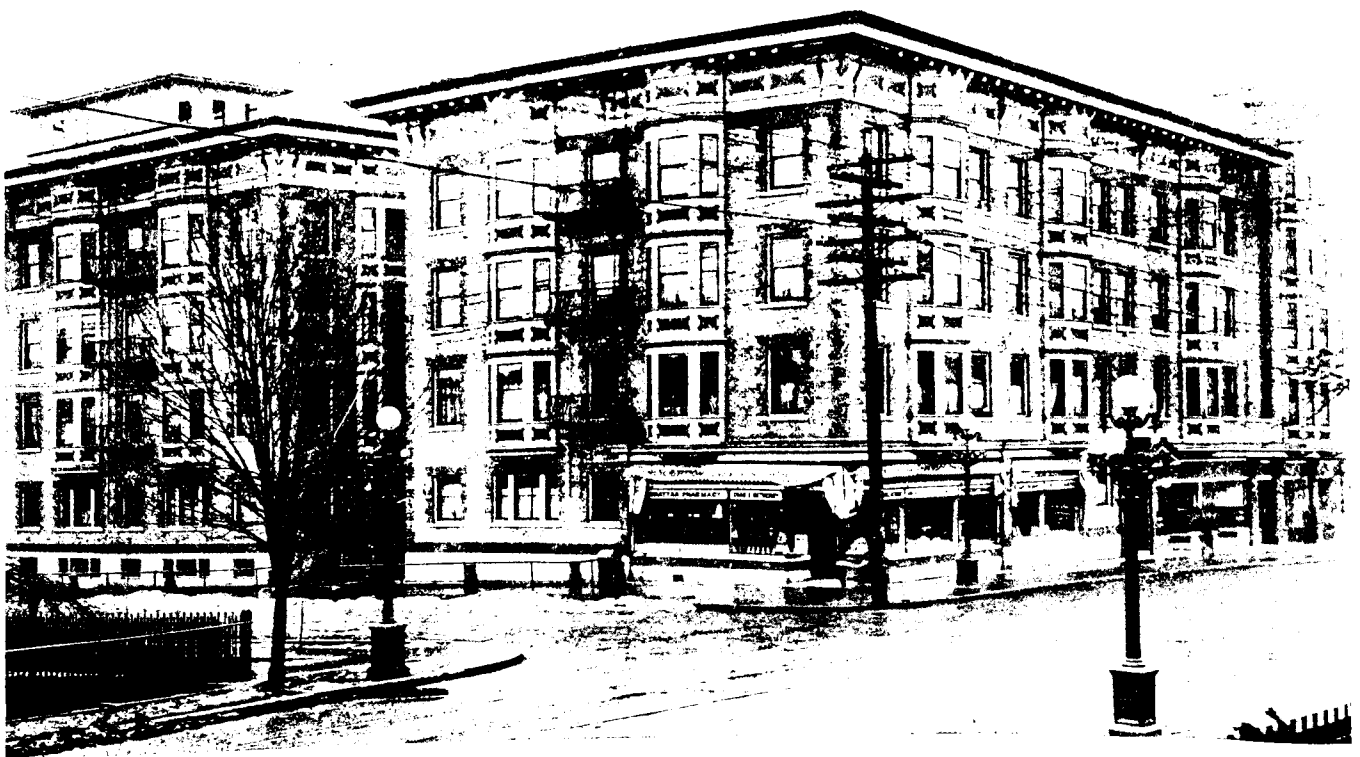
STANDARD IDEAL cast iron, porcelain enameled sanitary ware is made in Canada in the largest exclusive works of its kind under the British flag.

The enamel is applied by a special process that eliminates all danger of chipping, cracking or crazing, which gives to this ware its wonderful durability.

In its construction is embodied the results of extensive investigation and experiment in sanitary engineering, so that in the many forms in which it is made will be found adequate provision for supplying every need and convenience.

During the past few years thousands of buildings have been equipped with Standard Ideal Ware and the steadily increasing demand for it shows the great favor with which it has met.

Hotel Barron, Vancouver, B.C. T. A. Fee, Architect; Cunningham's Ltd., Plumbers; W. Hepburn, Contractor. Standard Ideal Plumbing Fixtures used.



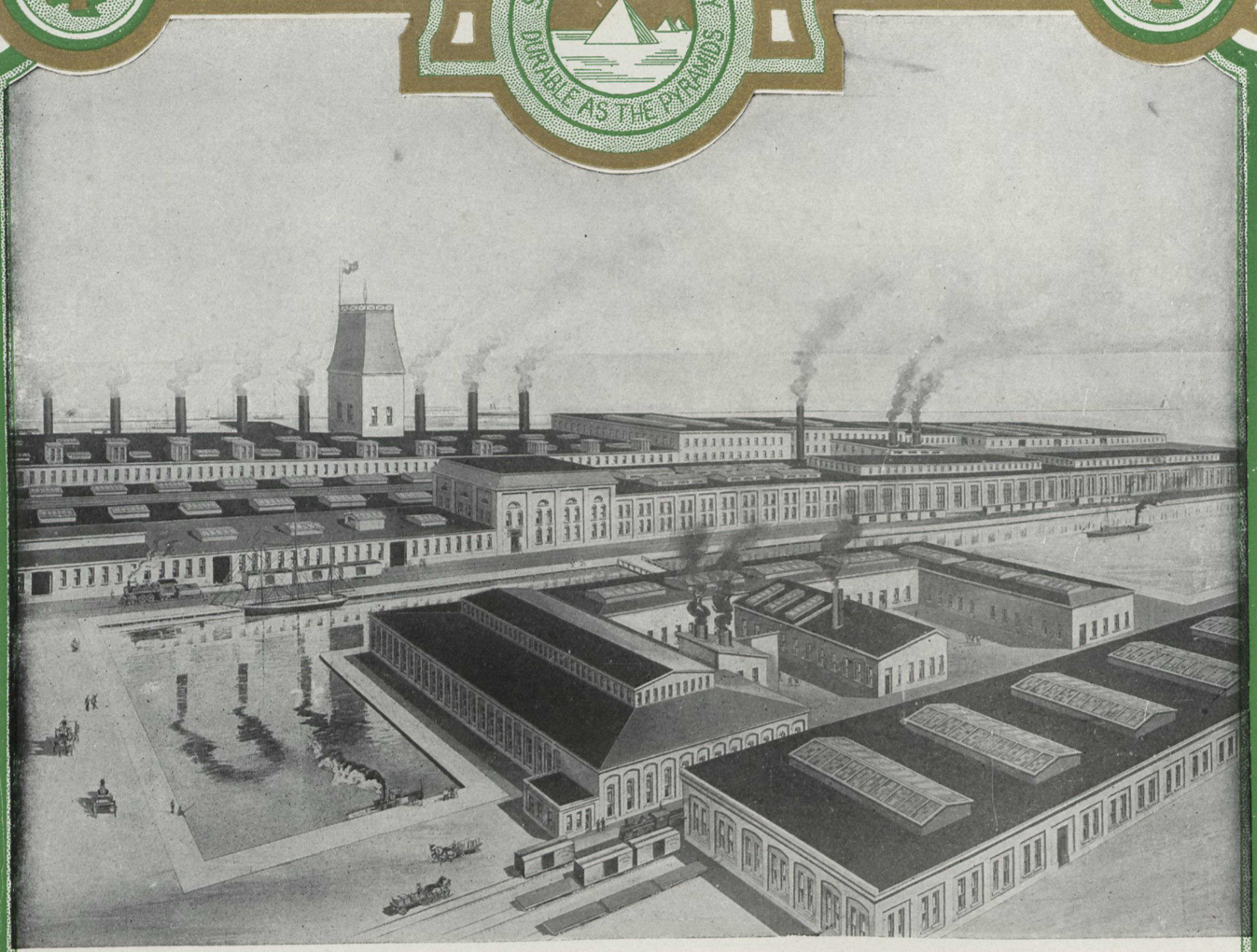
Manhattan Apartments, Vancouver, B.C. Parr & Fee, Architects: Barr & Anderson, Plumbers; W. L. Tait, Contractors. Standard Ideal Plumbing Fixtures used.

ALEXANDRA WARE

REGISTERED TRADE MARK

SUPERIORITY PURITY

DURABLE AS THE PYRAMIDS



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The Largest Exclusive Cast Iron Porcelain Enameling Works under the British Flag.

500 HANDS EMPLOYED. CAPACITY 110 TONS OF IRON MELTED DAILY.

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ALEXANDRA WARE

CONSTRUCTION

VOL. V1 NO. 3

CONTENTS FOR MARCH, 1913

Full Page Illustrations

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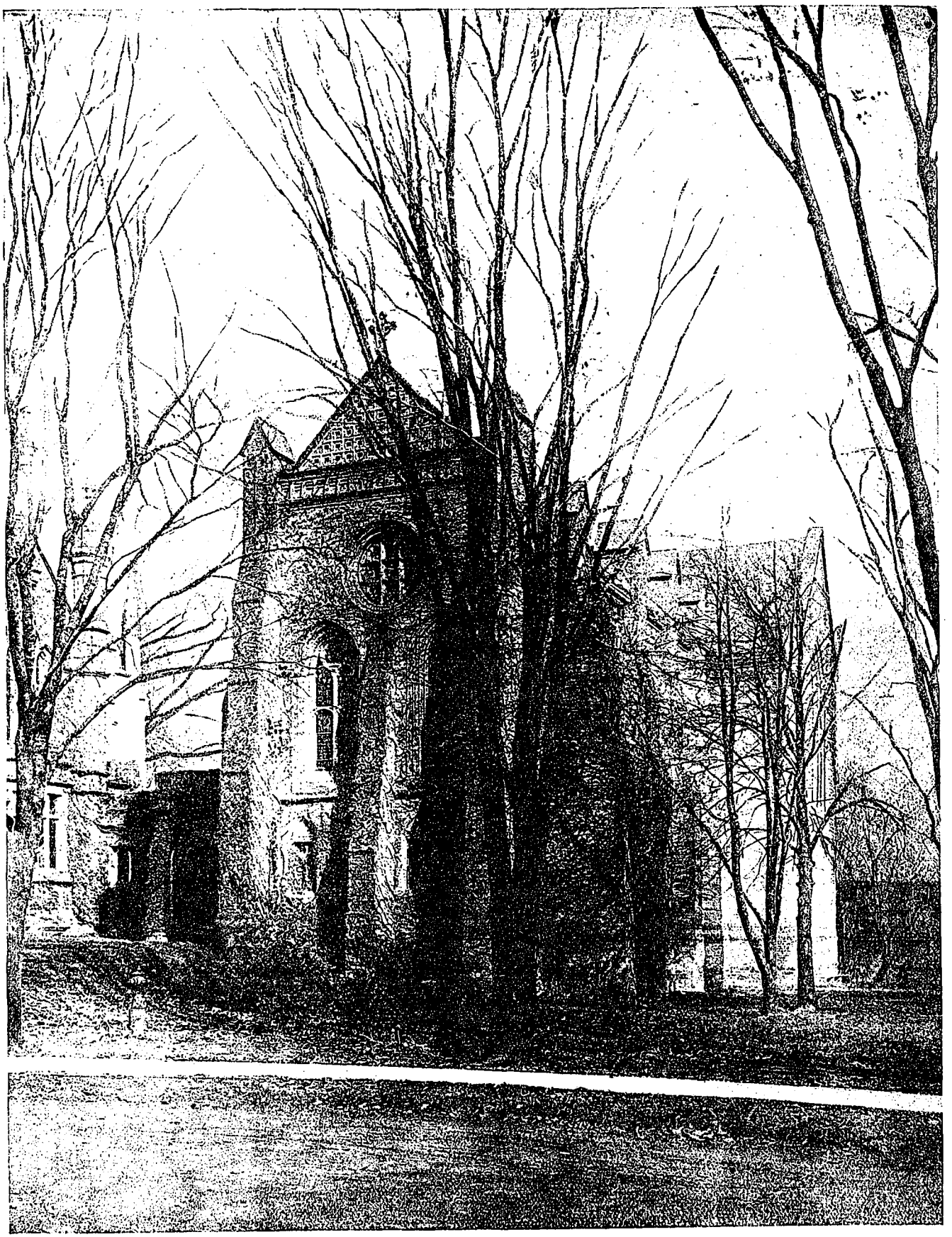
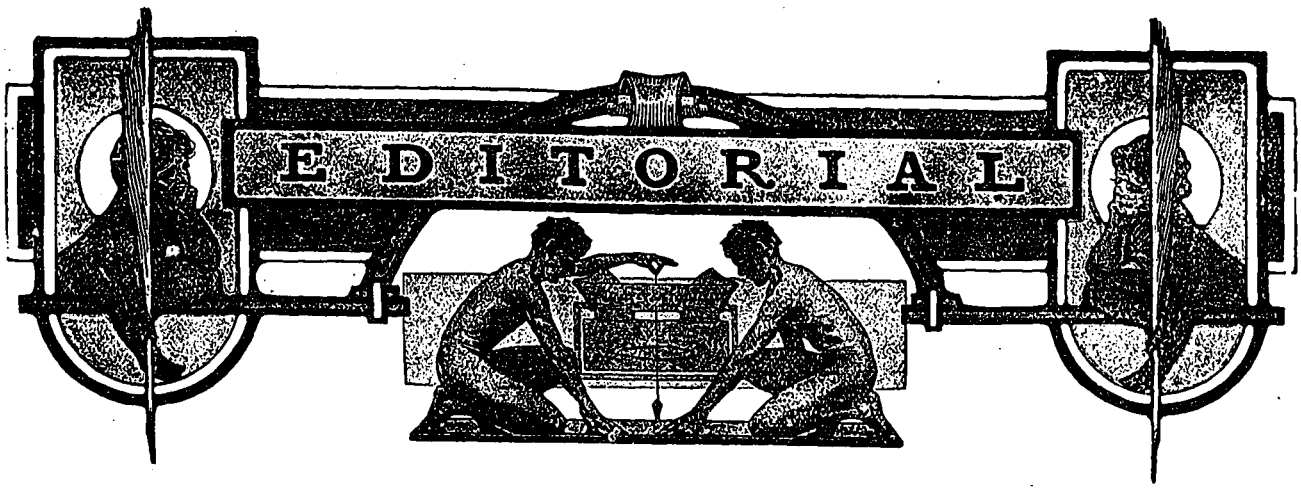


CHAPEL, TRINITY COLLEGE,
TORONTO, ONTARIO.

DARLING & PEARSON, ARCHITECTS.



¶ *Canada's need of large technical schools—Rapid strides in other countries reveal their keen insight into the essentials of sane progress.*

THE LAMENTABLE FACT in connection with the phenomenal record of the Dominion's progress is our inability to grasp the existing need of proper educational facilities. Grant that we have a number of excellent universities and are planning to erect another upon the western coast. Give due credit to the admirable work of the technical institutions in Nova Scotia, Winnipeg, and Toronto. Add to these the powerful influence of the high school. Still we are woefully lacking in facilities for industrial and technical training. In an inventive age which is fundamentally an epoch of skill in the furtherance of all branches of trade-work, the innate tendencies of the boys and girls should be allowed to grow. To do this they must absorb daily the rudiments that combine to make of their natural ability a progressive and successful termination. The thought that for one to be properly educated he must limit his efforts to a classical preparation is fast losing vogue. Education gives the power to grasp the problem, analyze the causes and results, and produce a thoughtful and forceful expression of its present and future possibilities. And while it is not necessary to attend the various colleges and schools to attain this, there is no denying the fact that such institutions are worthy factors in training our youth to think along lines most conducive to their own individual success. Up to the present the chief function of our high school has been to prepare for further work in a collegiate line, but now the thought is to centre these efforts in a direction most beneficial to the student's future work. The high schools and collegiates should enlarge still more their present scope on manual training and mechanical arts. New institutions must also be erected with the prime motive of training the young to grasp the fundamental principles of the various arts, enabling them to choose their future work knowingly and wisely. In doing this no detraction will be made from a sound literary training, and the boy and girl will be thoroughly imbued with the positive qualities essential to a mastery of the actual duties of life.

¶ *The tremendous handicap which confronts our draftsmen—The lack of a united effort to better conditions—Need of an awakening.*

IT IS LITTLE CREDIT to the patrons of architecture to have it said, "the architects have to rely upon the British Isles and the United States for skilled assistants." Such an emphatic statement emanating from one so well known in the architectural world of Canada is worthy of analysis. If the architecture of to-day is being done by Canadian architects there should be little reason for a dearth in local draftsmen. But the truth is only too evident and the conditions demand prompt attention. By examining the preparation afforded to foreign students the reason for their superiority is quite evident. They have at their command the proper facilities for advance study and criticism. When our best architects volunteer to devote an evening or two each week to atelier work; when we have sufficient travelling scholarships to benefit the large number of fellows eager to equip themselves to the best advantage; when we find in every city of prominence replicas of ancient art—then and not till then can we hope to successfully compete with the States and European countries. Each phase of this preparatory work is of vital importance and should be taken up by competent men through the proper channels. What could be of more lasting benefit to the progress of architecture than a series of casts properly housed and located in the different provinces? These collections could be purchased abroad for nominal sums from manufacturers who have a standing reputation for the quality and character of their work. Accessible to the student, and general public as well, there would soon develop a keen desire to emulate the purity, chasteness and freedom, so characteristic of the better architecture in the past. It would be hard to estimate the value of direct study from orders, various motives, and graphic expressions of past masters through a representative collection of the world's best work. These would furnish a grasp of the fundamental principles and enable the draftsmen to appreciate his first trip abroad and know what to study as well as how to grasp the big truths so often lost in the study of detail.

The skyscraper—Its merit is bitterly discussed in every city throughout the Dominion—Final action taken by Toronto City Council.

SHALL WE or shall we not change the character of our cities through the erection of skyscrapers? This question is a vital one and is being hotly discussed by the various members of the architectural and building associations as well as in the council chambers. In some localities where the tall building has already made its debut the problem is: Will we permit structures of over twenty stories? In other places it becomes a question of fixing a standard height which will adequately provide for all future contingencies.

Referring to the height of new buildings to be erected in Montreal, N. Cauchon is quoted as saying: "In Europe there are many cities in which the height of buildings is limited. The law in many cases in Europe is that no building may be any more than one and a half times as high as the street in front of it is wide. If this were introduced on Sparks street, it would limit the buildings to 99 feet high. There is no building on Sparks street yet that is very much more than this height, so that if it were introduced now, the ones already built would not have any advantage over the ones that would be built when the law became effective. It seems to me that this is high enough. The European cities, however, require that the light in the back be sufficient and the higher the building the more space must be allowed for sunlight for the windows facing the back. It is all a question of light. By the present artificial ventilation systems the offices on every floor secure good fresh air no matter how high the building may be, but the sunlight cannot be distributed by any such system. And sunlight is a necessity from a sanitary standpoint."

At a recent meeting held in Hamilton, Ont., Chief TenEyck spoke of the dangers ahead if some action were not taken in regard to tall structures. In closing Mr. TenEyck recommended that a by-law be passed restricting the height of buildings to not more than eight stories, or one hundred feet high. He considered any building higher than that a menace from a fire standpoint, as well as to the safety of the occupants in the upper stories in the event of a fire in same.

The resolution recently offered by G. T. Somers against the frequent disregard by the City Council of the by-law limiting the height of buildings in Toronto has been presented to the Council. It reads as follows: "The Council of the Board of Trade regrets exceedingly the frequent setting aside of the city by-law limiting the height of buildings in Toronto to ten stories, or one hundred and twenty-eight feet, and would strongly urge upon the city authorities the need for strict enforcement of such limitation, because, in the opinion of this Council, the steadily-increasing height of skyscrapers constitutes a serious menace to the public health, especially of those whose work must be done in the lower stories away from the sunlight; it also adds unnecessarily to the already great congestion in the narrow downtown streets and unduly concentrates land values at or near a few leading corners, this concentration of values, in turn, making necessary still higher structures to meet the increasing ground rents. It is further resolved that a committee of the Board of Trade Council be authorized to wait on the City Council."

The Municipal Improvement Association of Toronto at a special meeting passed the following resolution: "Resolved, that we (the Council of the Municipal Improvement Association) place ourselves on record in favor of limiting the height of the main portion of any building to twice the width of the street, but that we are not opposed to a portion of the building rising higher, providing that the upper stories above the main portion are set back sufficient distance to allow light and air to circulate freely; that a copy of this resolution shall be sent to the members of the City Council with a request that the opinions of all other municipal and ratepayers' associations should be secured before definite action is taken by the civic authorities; that this is a question which affects the health and other interests of the whole business community, and involves points on which the advice of town-planning transportation, and civic health experts might reasonably be sought."

The Civic Property Committee in Toronto, after a long debate, carried the following motion: "That in the district now served by the high-pressure system buildings may be erected to the height of 250 feet.

The above resolutions are indicative of the great divergence of opinion in regard to the tall building in Toronto. Many prominent organizations have acted upon the matter and tried to affect the final action of the City Council. The Civic Guild emphasized the fact that all newspapers with the exception of one advocate high buildings and credits the popular tendency towards sky-scrapers to the fact that they will make Toronto look metropolitan.

Mr. Lawson Purdy, president of the Department of Taxes and Assessments, New York City, severely arraigned the skyscraper before the Canadian Club and the City Council of Toronto. His services were evidently secured to influence the council in their final decision, but, like all other emphatic protests, failed in its mission. Mr. Purdy stated that the large majority of the 50,000 applications for reduction in assessment passed upon by his department were attributable to the cutting off of light and air by neighboring buildings. He claims that no recent tall building in New York is practical from an economic standpoint; that the appearance of the metropolis has been ruined; that the value of adjacent properties has been reduced, and that the health of the citizens is being impaired.

The "Imp of Perverse" has done its work. The City Council of Toronto passed the recommendation that the Guardian Realty Co. be permitted to erect a new 20-story building, 259 feet high, at the corner of King and Yonge streets.

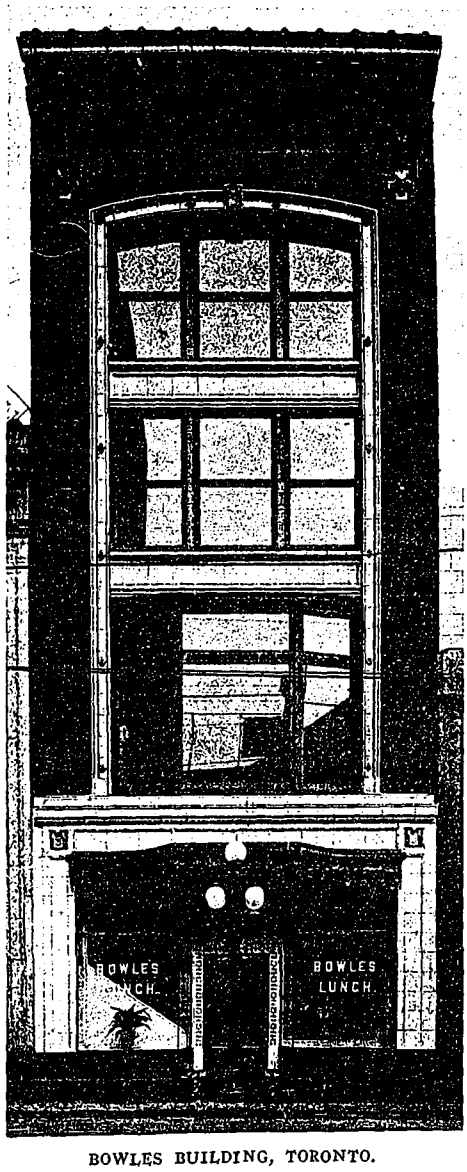
Recent Buildings, Toronto

"IN their appreciation of the value of the natural characteristics of wood, marble, stone, brick and terra cotta, in their subservience to some definite purpose in the mind of the architect, they suggest an evolution in building which does not at present exist in the Old Country." Such is the comment of a well known English artist on Canadian art. And it is an era of creation carrying into operation a marked trend towards a more artistic and practical architecture.

One of the phases of the much debated skyscraper question is its artistic merit. Some enthusiastic supporters of the tall building go so far as to claim that the low commercial structure cannot be made attractive. While their live interest in the subject is admirable, few will agree with them on this point. In every city a large number of structures ranging from five to ten stories in height are being erected which evidence the falsity of such an argument. They not only furnish the facilities by which active business concerns can economically handle their work, but also show a skill in designing which merits considerable encouragement.

Canadian architecture must stand for the highest perfection of building construction. The height or length of the structure itself is of little import so long as the artistic, practical and sanitary principles are maintained. The smallest building imaginable can be designed in beauty, harmony and proportion.

The accompanying illustrations take up examples in Toronto where the fundamental idea was to house the business concerns in an attractive manner. How successfully this has been done may be left to the reproductions and the reader's artistic taste. The limitations naturally met with have been studied and every utilitarian motive kept constantly in mind. A feature worthy of mention is the harmonious blending of the various materials which enter into the construction of the buildings. The change from stone to brick, or from marble to terra cotta, has been skillfully executed—resulting in expressions logically and esthetically.



BOWLES BUILDING, TORONTO.

A brief description of each building is given, stating the constructional features.

Bowles Building.—The exterior presents a very clean and attractive appearance in its treatment of old ivory matt glazed terra cotta with green and old rose decorations in conjunction with tapestry brick. The character of the interior is expressed by the general outward effect and furnishes a type of building both decorative in its motive and of a practical nature.

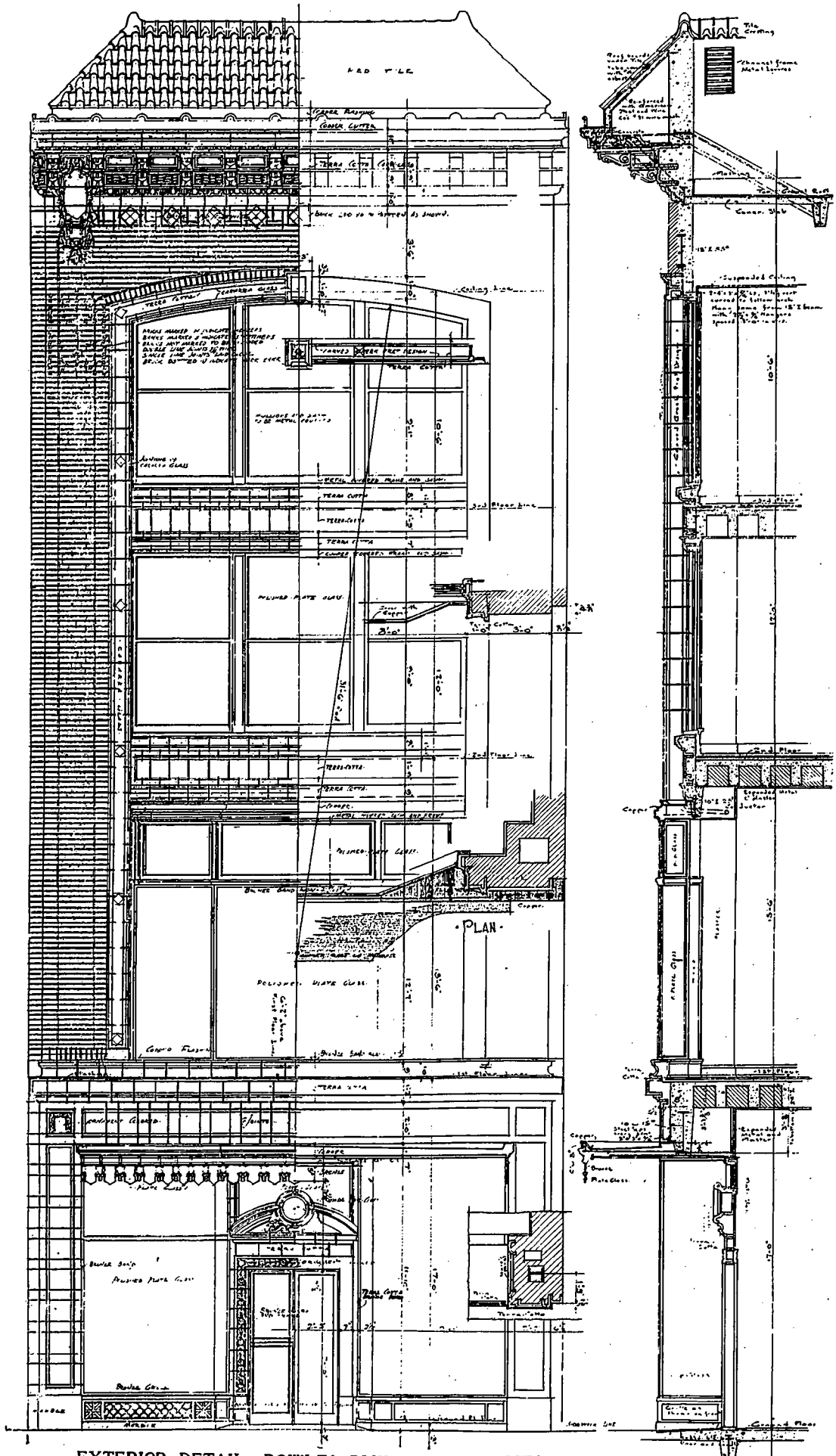
The restaurant is finished in an Italian marble wainscot ten feet high, with white glazed tile covering the remaining wall surfaces and cambered ceiling. The floor is also of tile, while the counters and serving table are of Italian marble and Carrarra glass.

Originally the third floor was designed for a store, but has been changed to a billiard parlor. Above the wainscot is a frieze of painted burlap with appropriate stenciled designs. In the basement is a second pool room, finished throughout with light fumed oak, which wood is also used in the pool tables and seats. The fireplace is constructed of tapestry brick; the floor of cork tiling.

The barber shop and lobby in the basement are treated with Italian marble and white tile, while the bake shop and work room are finished in white enameled brick. A complete ventilating system has been installed with an air washer for moistening and purifying the incoming air.

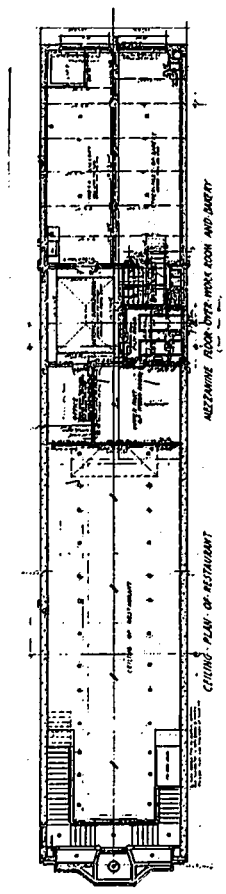
Reinforced concrete is used in the basement; brick in walls above grade line; reinforced concrete and hollow tile in all floors. The foundations are sunk thirty-two feet to solid rock. An approximate cost per cubic foot of the building is 40 cents.

Williams Building.—Rising ten stories above the ground, this building presents a unique solution to the tall, narrow business structure. Twenty-three feet six inches includes the entire width, while the heights of the various upper floors are ten feet eight inches in order to conform to the building law limiting the height to five times the width. The full depth is one hundred feet.

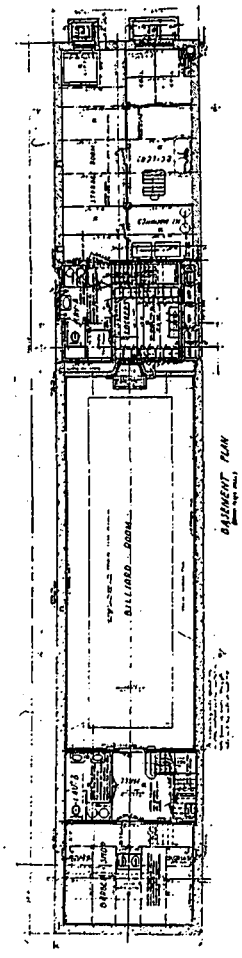


EXTERIOR DETAIL, BOWLES BUILDING, TORONTO.

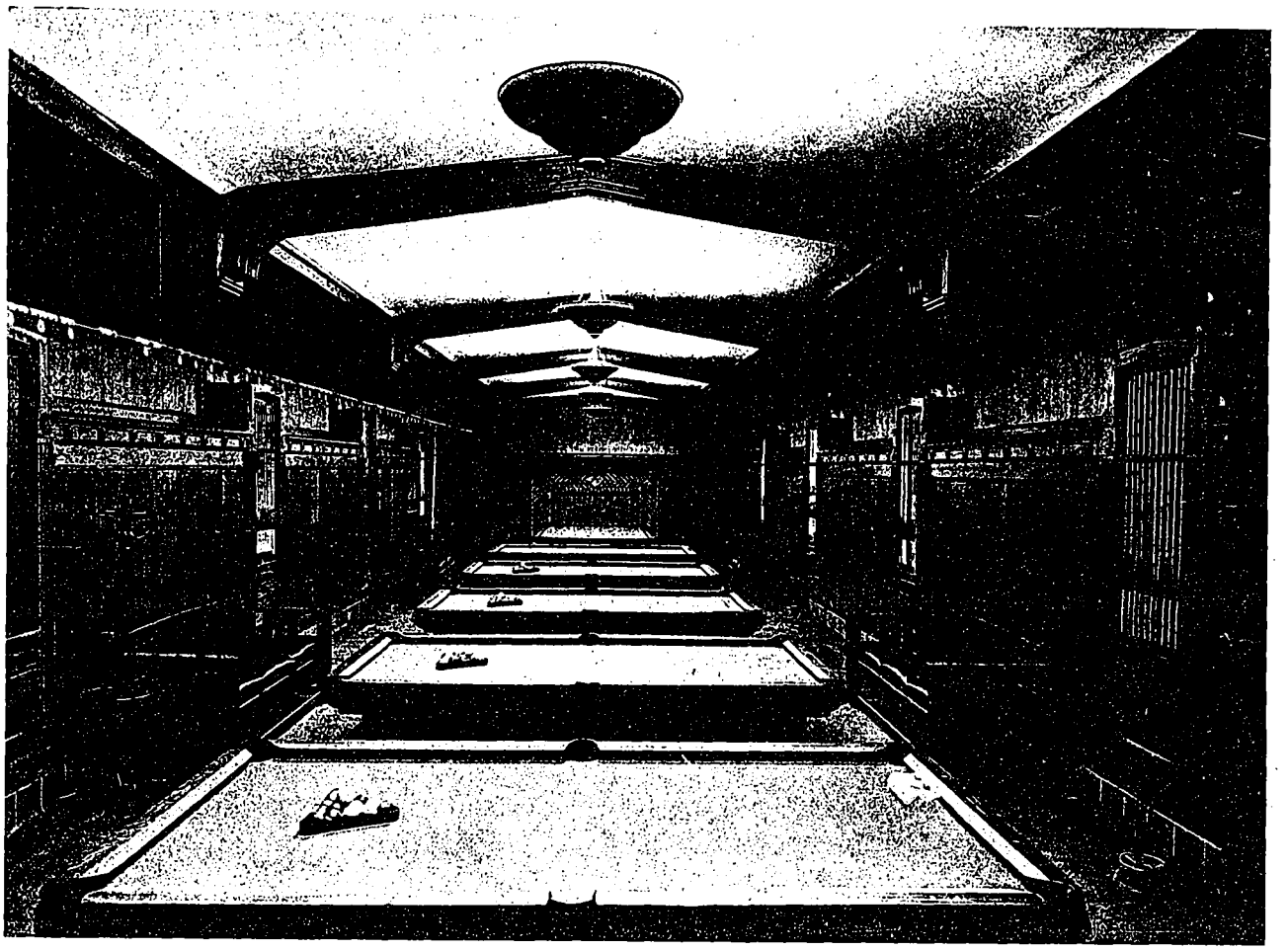
HARRIS & MERRITT AND H. E. HAND, ASSOCIATE ARCHITECTS.



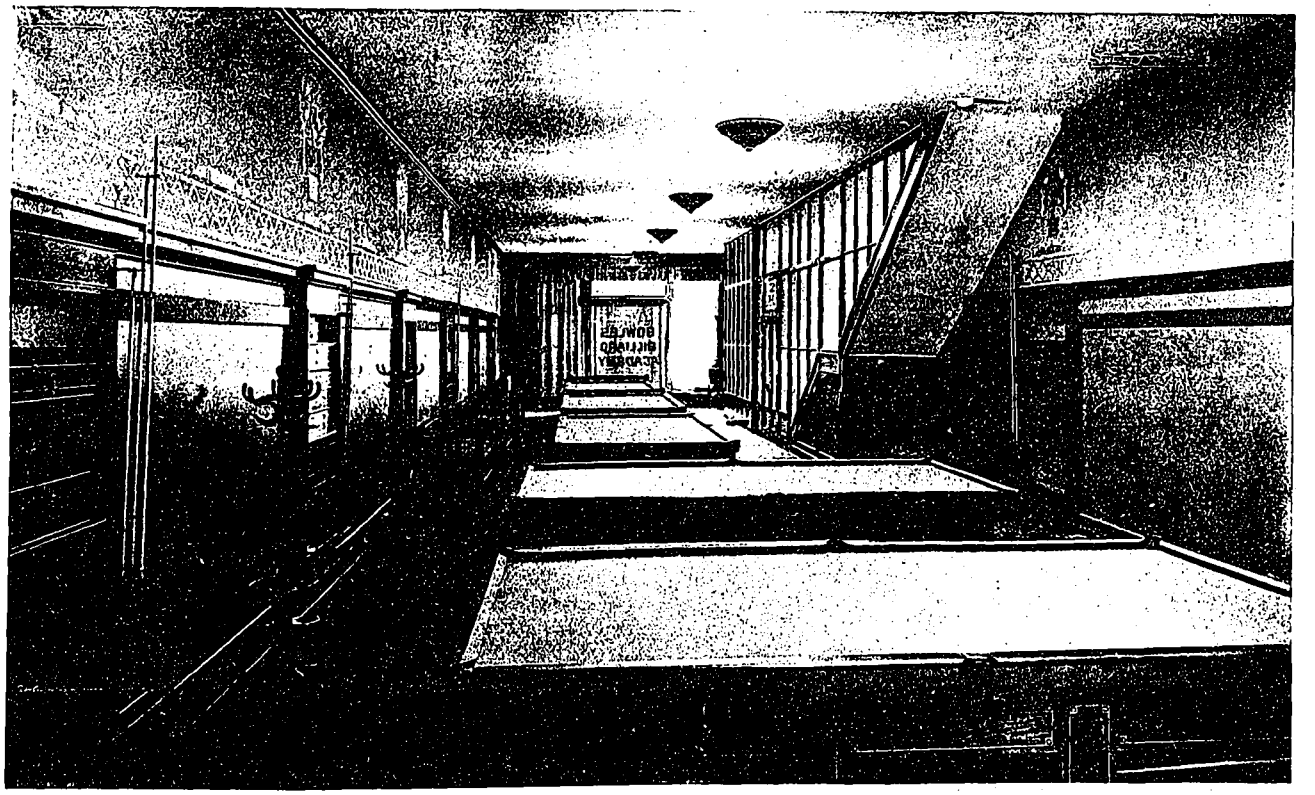
MEZZANINE PLAN.



BASEMENT PLAN.



POOL ROOM



BILLIARD PARLOR.

BOWLES BUILDING, TORONTO.

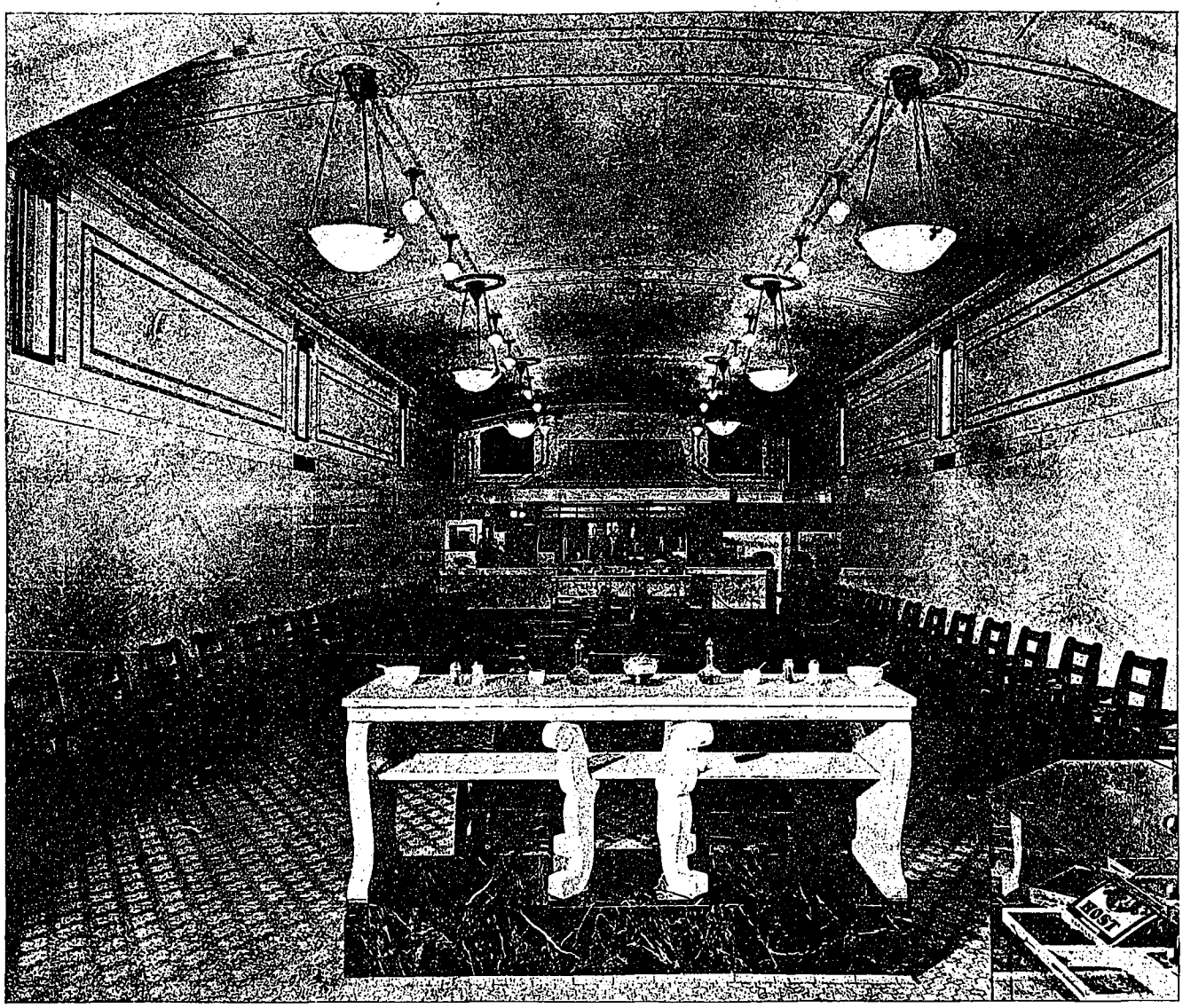
HARRIS & MERRITT AND H. E. HAND, ASSOCIATE ARCHITECTS.

The exterior presents a frame of light glazed terra cotta encasing a metal treatment of windows and cement advertising spandrels. The walls of concrete vary in width from twenty-two inches at the basement to fourteen at the top story. In order to economize space the building was designed as "skeleton construction," considering three feet of the wall as column and the adjoining three feet as spandrel treatment. In doing this the architects escaped the law demanding similar walls to be thirty-two inches at the first floor.

All floors are of reinforced concrete with a top covering of terrazzo, made to carry a live load of one hundred and twenty-five pounds per square foot. A wind pressure of thirty pounds has been allowed on wall surfaces. The footings extend forty feet below street level to rock bottom, with piers two feet three inches by four feet six inches for each column.

Macmillan Building.—Located on a street of churches, with shade trees, the design lends itself to the artistic nature of the surroundings, and at the same time maintains a proper feeling of the practical nature for which it was built. It consists of five stories with a high basement, the first treated in Ohio blue stone, the remaining portion in stone and cherry toned brick with white joints. Upon the interior the vestibule is of marble, the inner hall of red brick with mahogany finish.

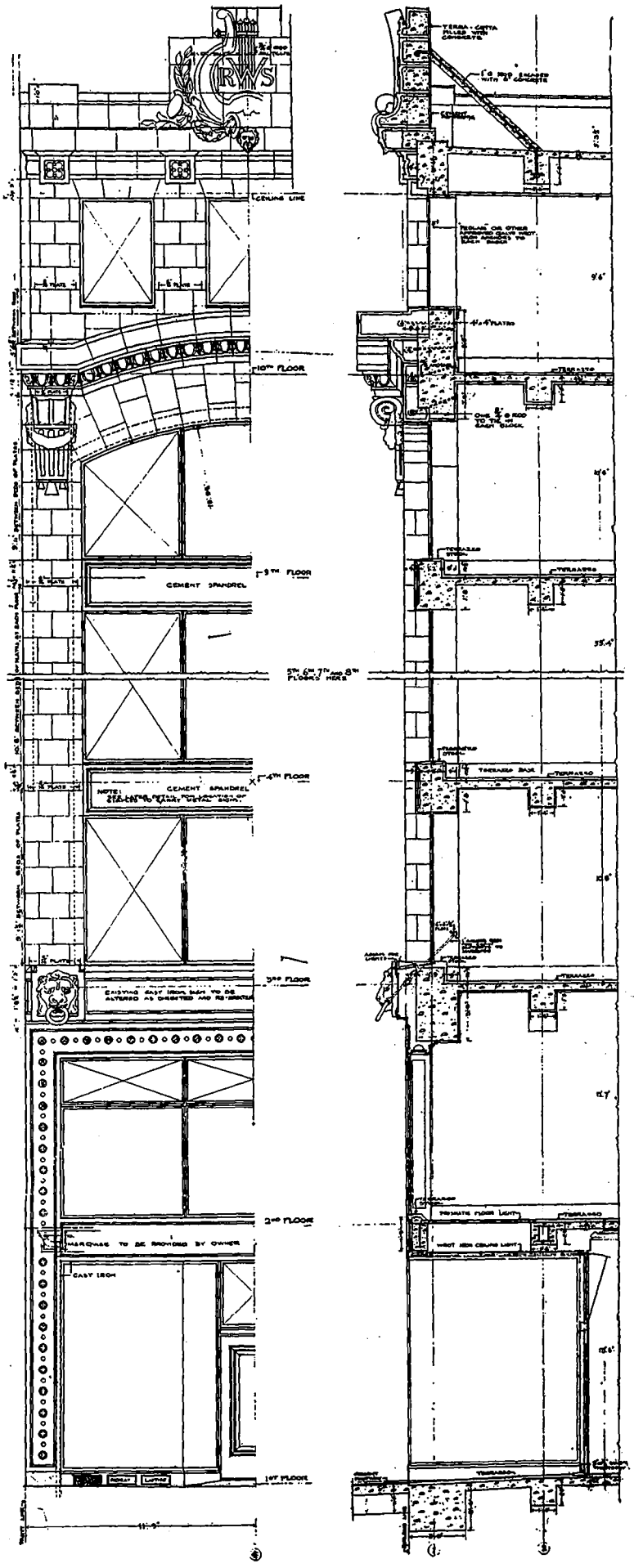
The building is planned so as to have unobstructed light on all four façades, arranged by reserving a certain portion of land on each side. Casement windows are employed in the front—all other windows having metal frames and sashes. The roof provides for a skylight of ample proportions. Mill construction is used throughout, the floors having four-inch Georgia pine and one-inch maple, with a safe load of 150 pounds.



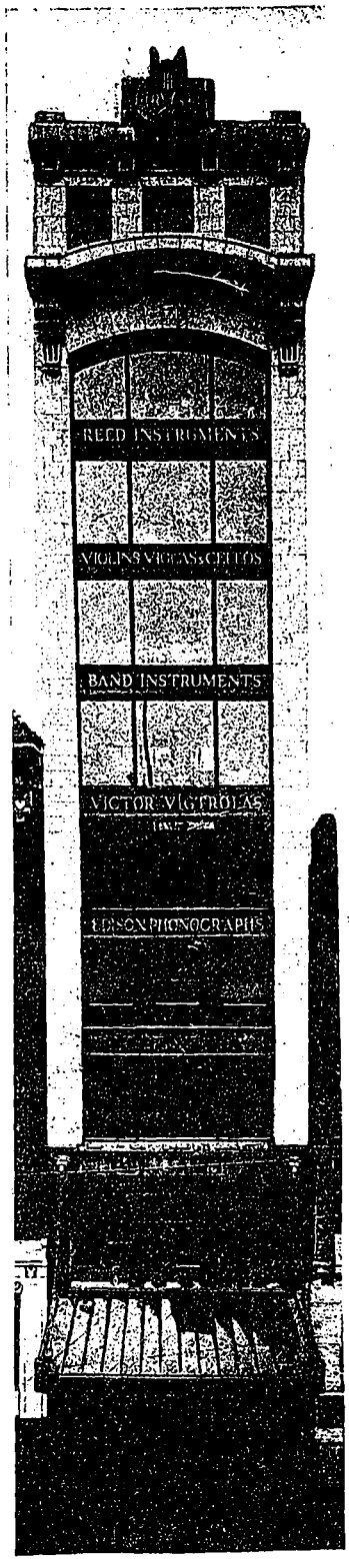
LUNCH ROOM, BOWLES BUILDING, TORONTO.

Special attention has been given to the shipping arrangements, all of which is handled from the freight elevator into a paved court. The heating is by steam, the boilers being located in an area built beneath a lane, separating this feature from the basement proper. Cost of structure, 11 cents per cubic foot.

Tremont House.—The exterior of the building is finished to the first floor in polished Crotch island



EXTERIOR DETAIL AND SECTION.

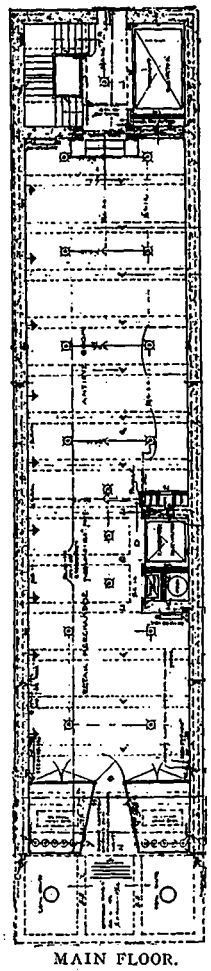


WILLIAMS BUILDING,

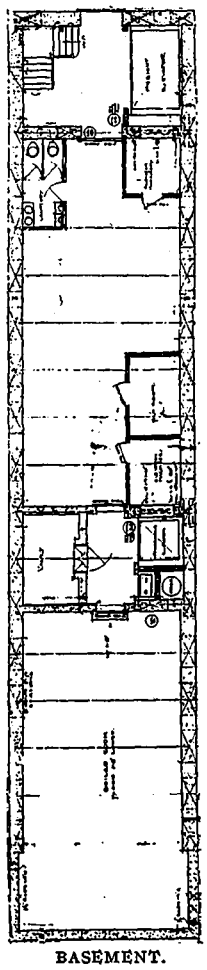
TORONTO, ONT.

CHAPMAN & McGIFFIN,

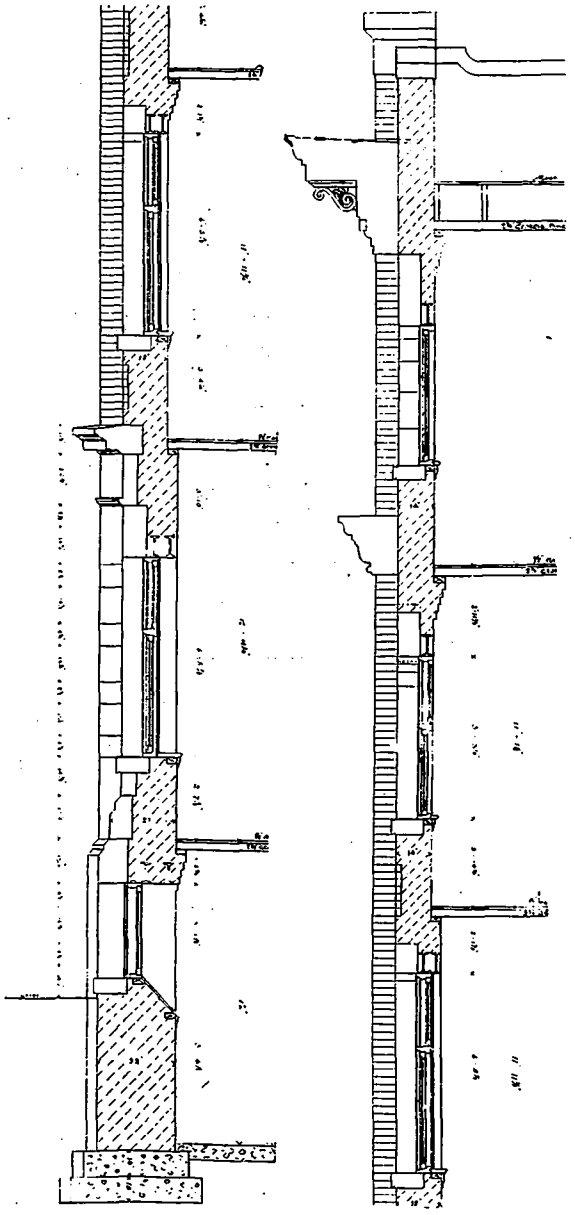
ARCHITECTS.



MAIN FLOOR.

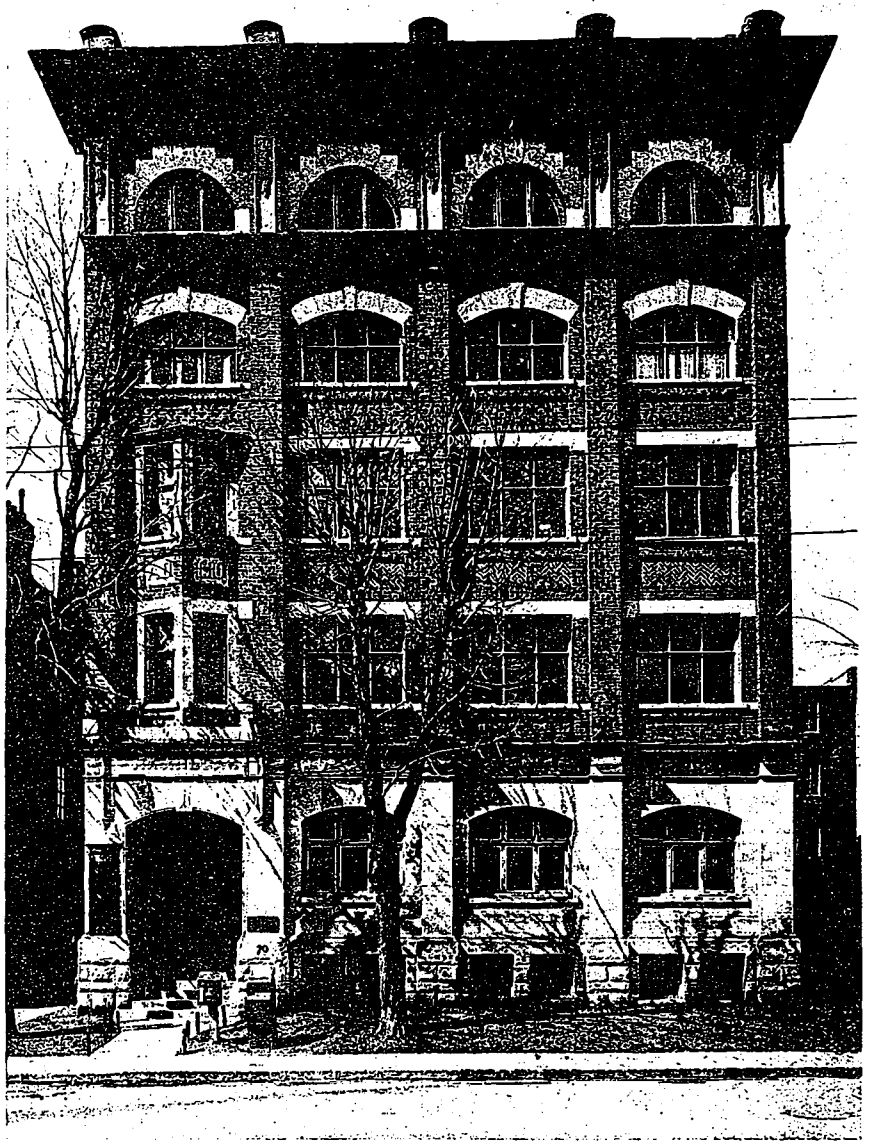


BASEMENT.



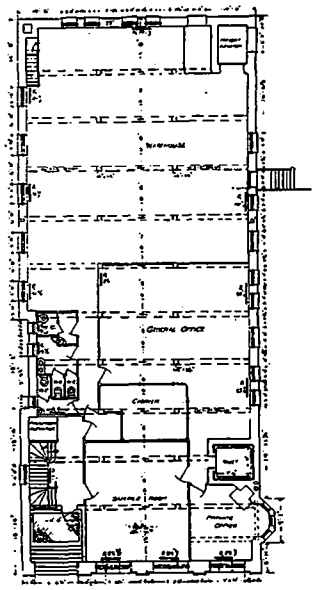
SECTIONAL DETAIL.

MAIN FACADE.

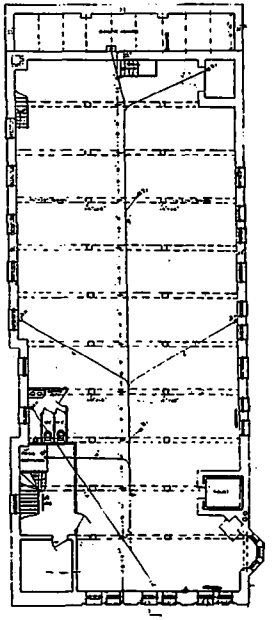


MACMILLAN BUILDING, TORONTO.

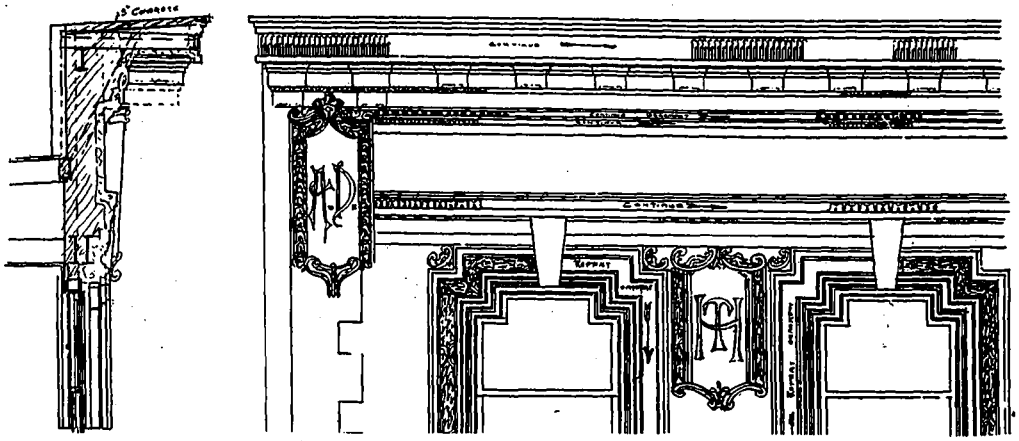
DENISON & STEPHENSON. ARCHITECTS.

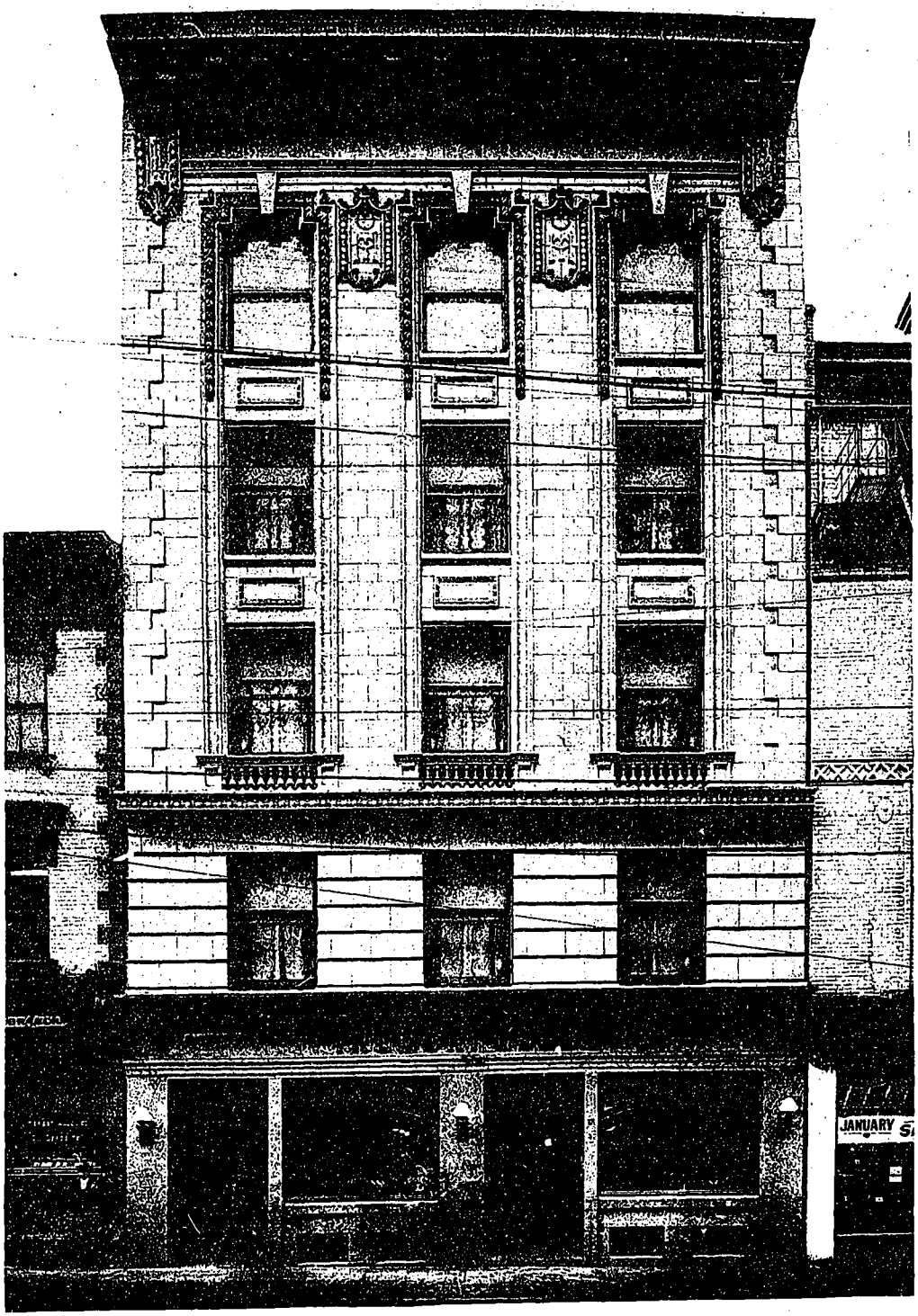


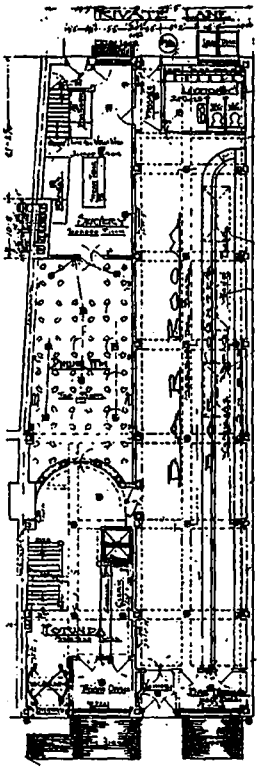
GROUND FLOOR PLAN.



BASEMENT PLAN.







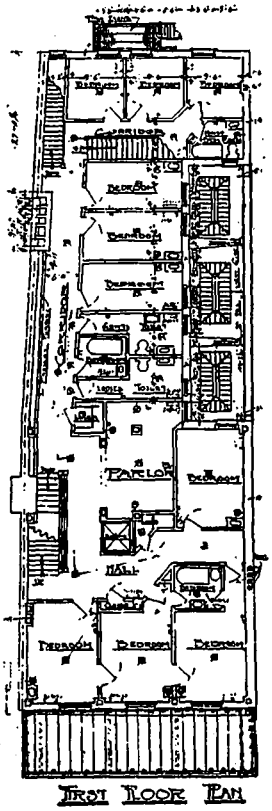
GROUND FLOOR PLAN

TREMONT HOUSE,

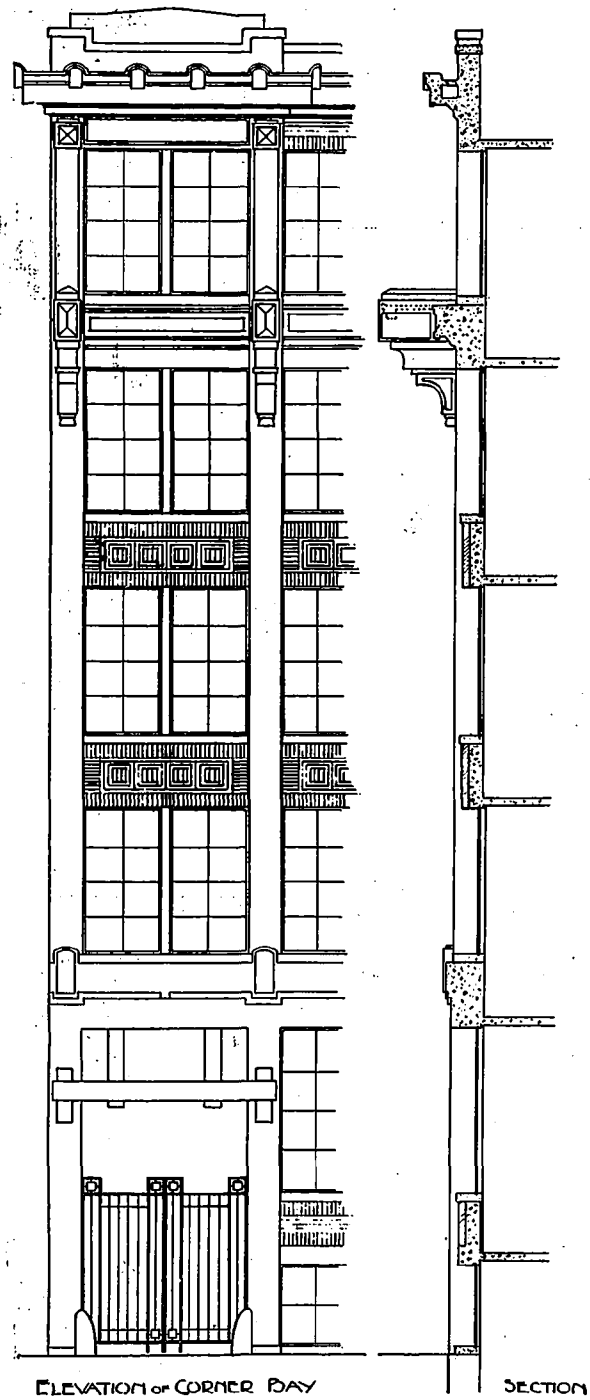
TORONTO.

J. WILSON GRAY,

ARCHITECT.

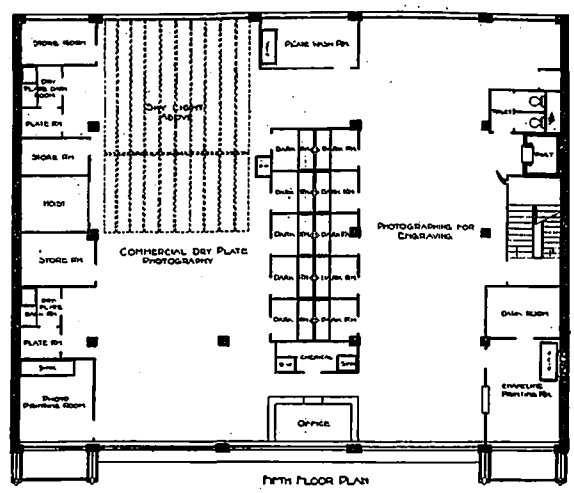


FIRST FLOOR PLAN

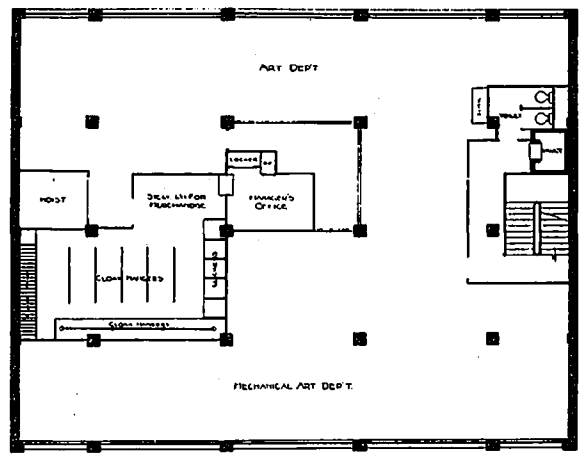


ELEVATION OF CORNER BAY

SECTION

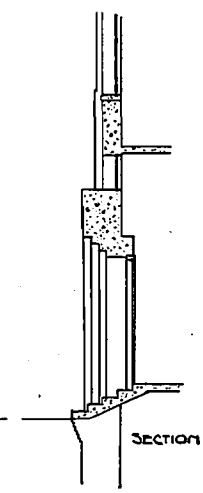


FIFTH FLOOR PLAN



THIRD FLOOR PLAN.

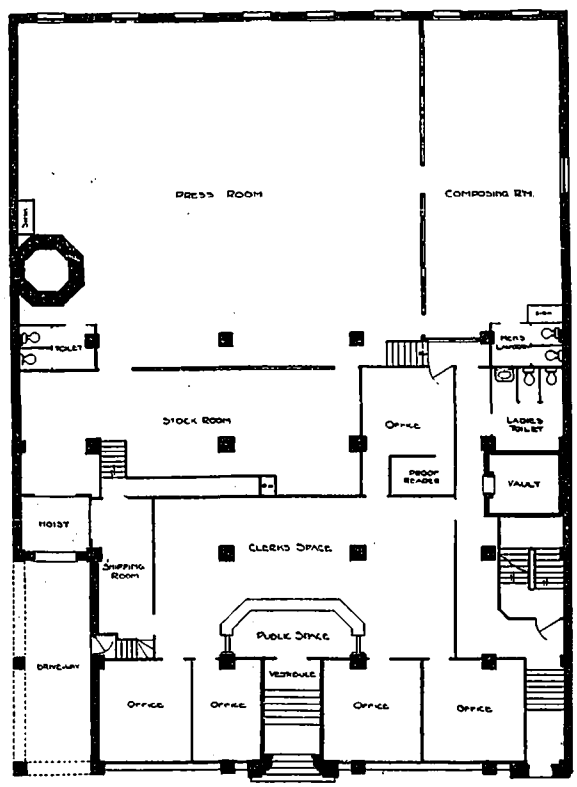
MAIN ENTRANCE



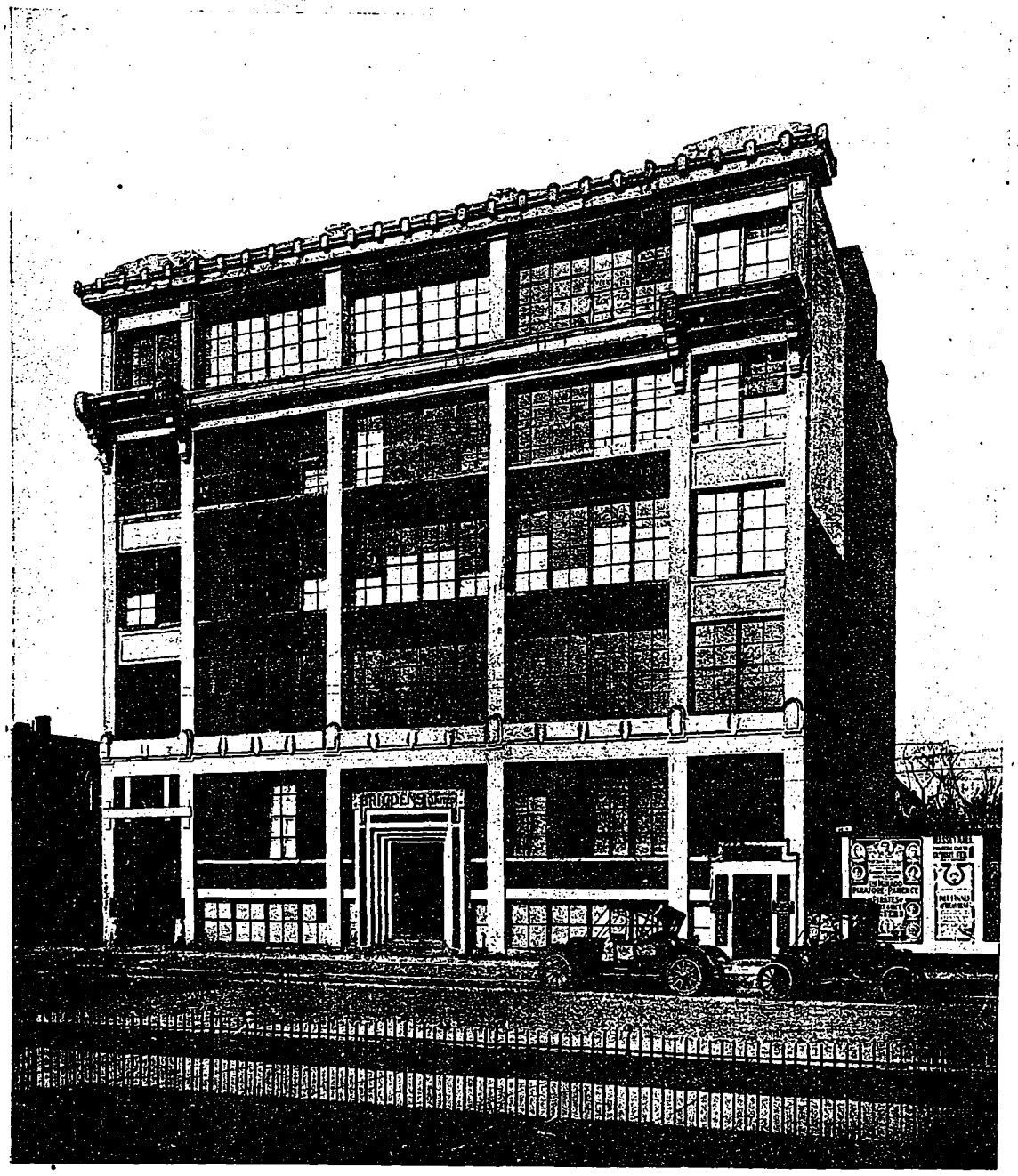
SECTION

BRIGDEN BUILDING, TORONTO.

BOND & SMITH, ARCHITECTS.

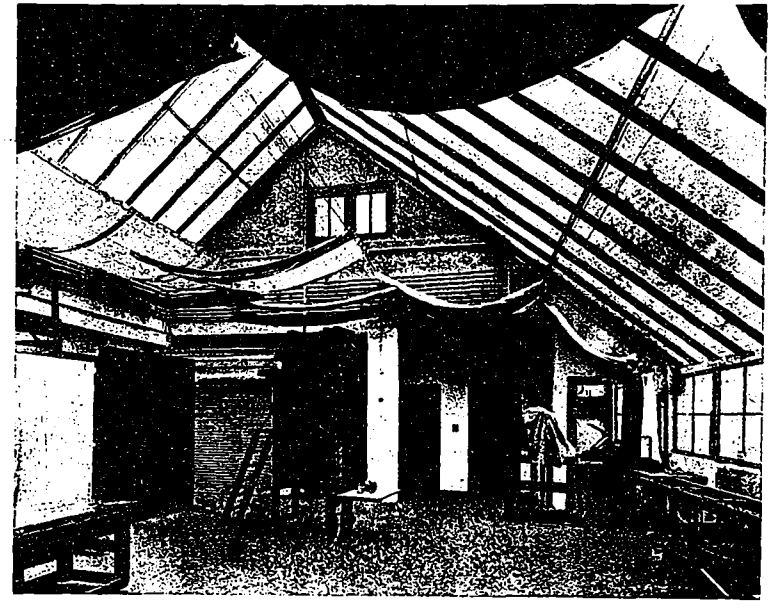


FIRST FLOOR PLAN



PRESS ROOM
PHOTOGRAPHIC ROOM,

BRIGDEN BUILDING, TORONTO.
BOND & SMITH, ARCHITECTS.



granite with white glazed terra cotta above. This structure is an excellent example of the economical arrangement so necessary in business sections. A glance at the first floor reveals a symmetrical division on one side of which is the office, dining room and servery, on the other a bar room extending the full depth.

The walls of the office are finished in Royal-vein white marble, with base and trimmings of Dominion blue and mahogany woodwork. In the dining room is a quartered oak treatment after Louis XVI. style. Mahogany is also employed in the barber shop, bar room and lavatories; quartered oak throughout the upper floors.

The building is of steel construction, brick walls, white glazed terra cotta used from top to bottom. terra cotta floors, and concrete roof. Total cost of structure alone, $100,000.

Brigden Building.—The entire structure is of reinforced concrete and brick, with concrete roof and floors, steel sash and fire doors. There are five stories in addition to the basement and a printing department built in the rear. The printing plant is 65 x 75 feet, divided into two sections by a glass partition. All lighting in this department comes from a skylight tipped to the east, giving an even distribution of light throughout the room.

One of the prominent features in the design is the lighting arrangement, the front and rear being practically one solid window. Whatever artificial lighting is necessary is by the indirect system, while the power is derived from individual motors attached to each piece of machinery.

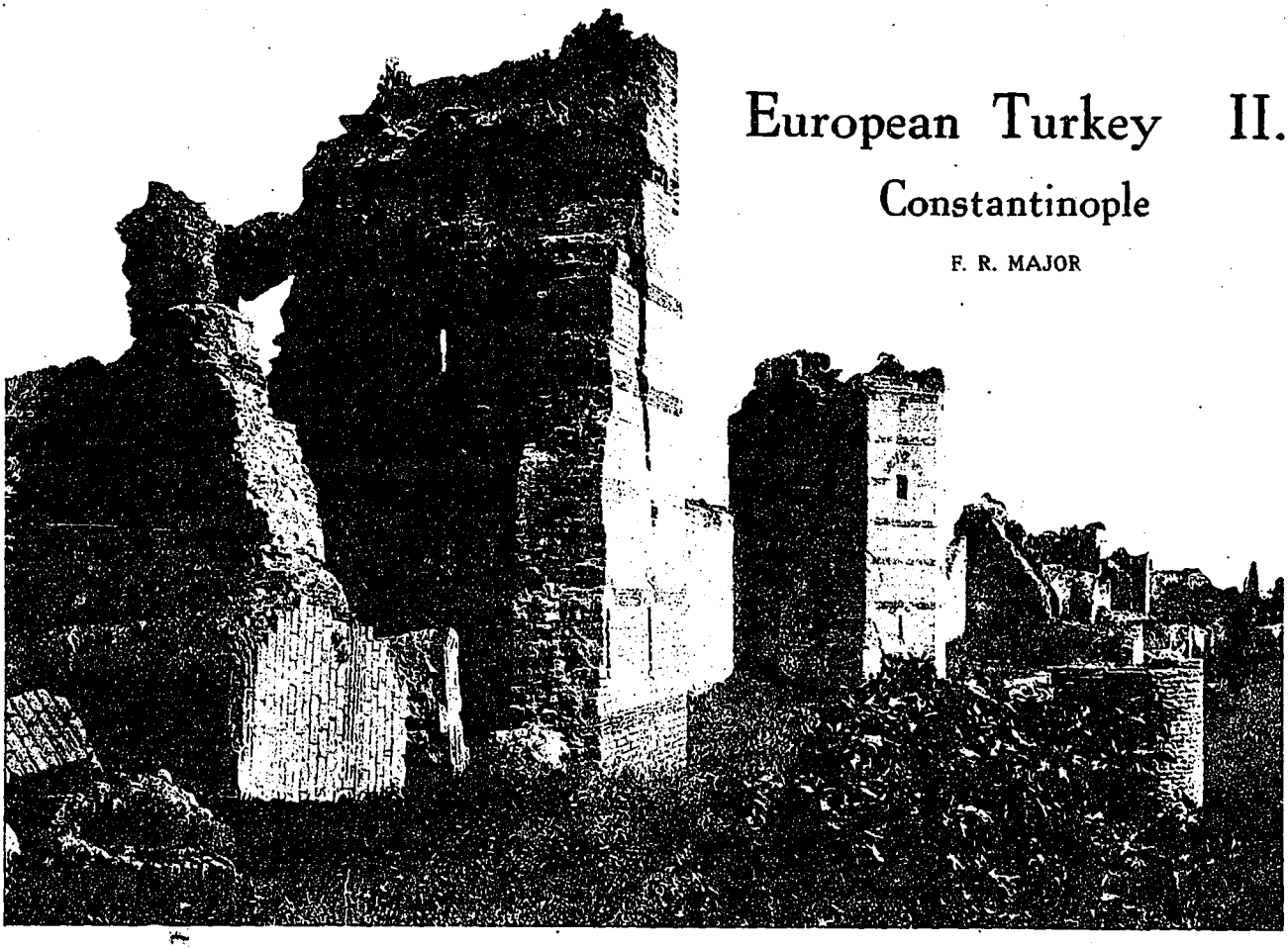
The exterior treatment consists of an outer coating of white portland cement and white silica sand rubbed down with a carborundum block. A little touch of color is introduced at the floor levels by means of panels in tapestry brick.

The building is fireproof throughout and heated by a vacuum steam system. The cost of building approximates 16 cents per cubic foot, which includes the special plumbing, acid sinks, etc.

The time has arrived when architects, engineers and builders must put forth an honest effort in complying with the universal demand for ornate structures. The client wishes it, the general appearance of the city demands it—so the profession should bend every effort to produce the desired result. The buildings shown herewith present an honest effort upon the part of the designer to raise the standard of commercial architecture in all its phases, and it is to be hoped that each one responsible for a continuation of the standard already set will hold themselves ready to instill into their work a character which will prove creditable to their profession.

Canada is growing rapidly and needs to consider carefully the type of edifices it is erecting. Every structure built or being built has an influence upon future development as well as standing for the best taste and skill of our architects and engineers. There is no need of adverse criticism for what has been done, but architecture must better itself and this can only be accomplished by insisting on pure design. The buildings shown herewith present an honest effort upon the part of the designer to raise the standard of commercial architecture in all its phases.

OFFICE, BRIGDEN BUILDING, TORONTO.



European Turkey II.

Constantinople

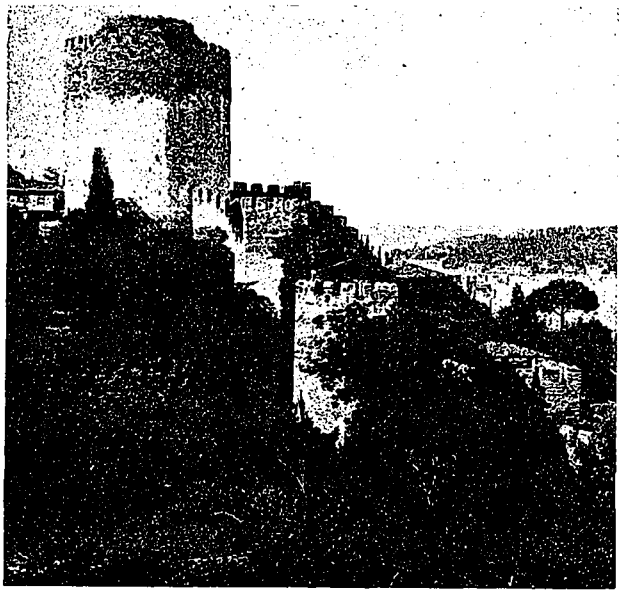
F. R. MAJOR

TO THE READER full of admiration for relics of strength and duration nothing will bring deeper pleasure than a visit to the old Theodosian wall depicted above. This barrier, which meant the preservation of the city for so many centuries, may even yet add one more victory to its slow ebbing life. Of one hundred and sixteen fighting towers, only half remain, and these are little more than illustrious ruins.

The crumbling walls were conceived by Constantine the Great. In 413 Anthemius, the Prefect and military reformer, finding the fortifications inadequate for the city's protection, erected the first great Theodosian rampart. It extended more than a mile beyond the wall already existing and prevailed against many savage onslaughts. After the disastrous effects of an earthquake which destroyed fifty-seven towers, the threatened attack by Attila, "Scourge of God," influenced the citizens to restore the walls. The remarkable undertaking was accomplished in sixty days. In succeeding years the work was enlarged to four successive lines of defence. The first part consisted of a moat sixty feet wide, backed by a solid stone breastwork for archers. Adjoining this was a forty-foot esplanade protected by a wall thirty feet high and seven feet thick containing loop-holes. This section was buttressed by one hundred towers thirty-five feet high. The inner and higher esplanade was sixty feet wide, with the first great wall rising some forty-five feet higher. With fifteen feet of solid thickness and protected by ninety-seven flanking towers sixty feet high, this wall reached to the Blackernae Hill, from which point a single wall extended to the Golden Horn.

To our mutual friend Mark Twain these walls mean nothing but useless enclosures to a city of little beauty and a people of filth and uncleanliness. To others they stand as monuments of a people whose bravery was their religion, whose character became known through illustrious works of art, and whose habits in their golden era could stand the light of publicity fully as well as ours in this braggadocio age. For eight centuries the city of Constantinople was guarded from attack and successfully withstood the terrific onslaughts of the savage Huns, Slavs and Saracens. We somehow feel that their great vitality will respond once more to the glorious height of their ancient victories.

From Justinian down to the sack and destruction of Constantinople—1204—the empire was continually engaged in warfare, endeavoring to hold itself together and at the same time prevent the Vandals, Goths, Saracens, Persians, Slavs and Russians from capturing the city. For centuries art received little encouragement on account of the continued struggle for existence. The strength of the Eastern Empire grew less and less through misgovernment. The capital itself was fast degenerating and regarded



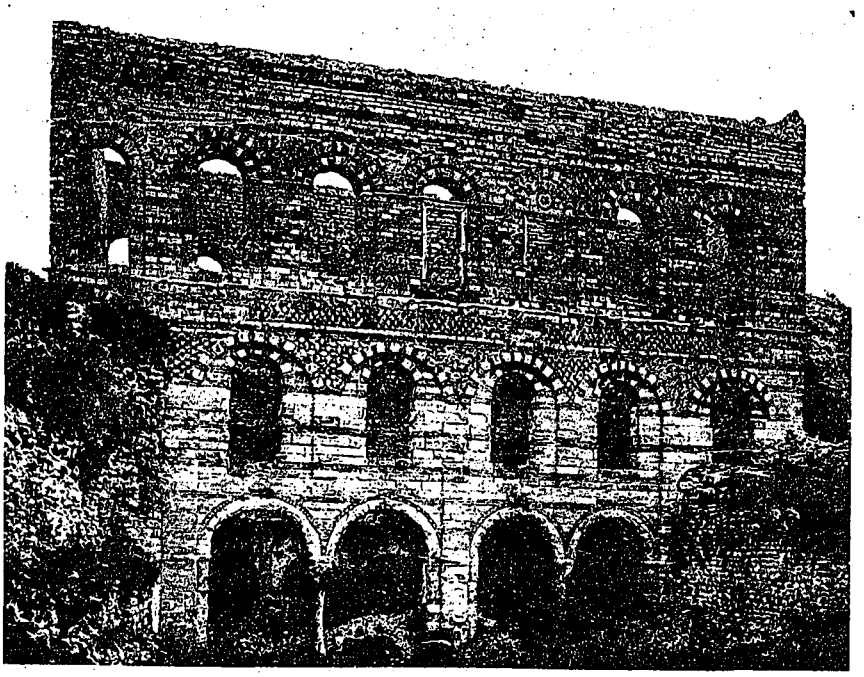
CASTLE OF ROUMELIA.

with little pride and affection. But all of this became changed. During the tenth, eleventh and twelfth centuries the splendor of Constantinople was beyond comprehension. Customs duties amounted to twenty thousand pieces of silver daily and the rulers accumulated large fortunes in spite of the maintenance of armies, cost of wars, building of the city, games for the populace, luxury of the court and expenditures on ecclesiastical edifices.

The imperial palace became more magnificent under each succeeding sovereign. Its gardens descended by many terraces to the shore of the sea, affording a suitable setting to its three stately domes. The roof of gilded brass was supported by pillars of Italian marble and walls incrusted with colored marble mixed with Oriental alabaster. The palace contained five churches, while "its endless courts, corridors and apartments, finished in mosaics composed of precious stones and marbles from all quarters of the globe, were spacious enough to contain the multitude of splendid paintings, statues, vases and magnificent trophies, of an inconceivable variety, which had been gathered from all the known countries of the globe."

The fivefold creed of Mohammedanism—confession of the unity of God; prayers at stated times; almsgiving; observance of the fast of Ramazan; the festival of Mecca—brought about a great change in ecclesiastical architecture. Besides appropriating for their own use the large number of Christian churches already existing, they erected hundreds of mosques, many of which were structures of great magnificence. Of the churches erected before the Justinian age, only one example remains. St. John Studios, built in 463 A.D., is a three aisled basilica having an over all dimension of 125 by 85 feet. The gallery is supported by a range of classical columns, while the upper portion of the church consists of a series of arches with little resemblance to the classical features below.

ST. IRENE, AN OLD METROPOLITAN CHURCH.



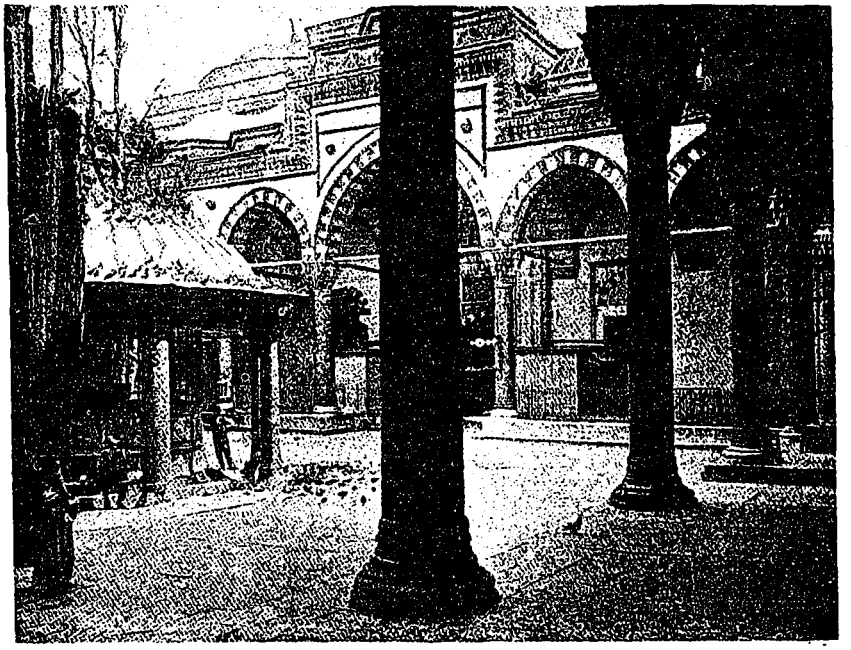
PALACE OF THE BLACKERNAE.

During the Justinian age places of worship sprang up in all quarters of the metropolis, but were gradually lost on account of the combustible materials entering into their construction. The Church of Sergius and Bacchus remains, however, due to the elimination of wood, etc., and furnishes an example of considerable merit both in its design and proportional qualities.

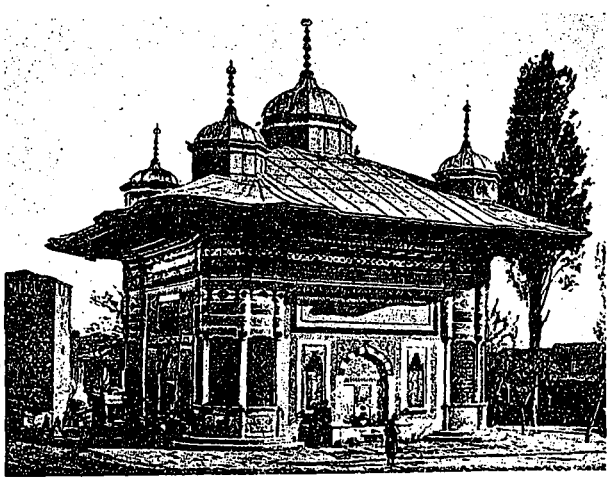
Santa Irene, formerly the metropolitan church, has been converted into a Turkish armory. This building was rebuilt in its present state by Leo the Isaurian, 718 A.D., and furnishes the first complete form of introducing the dome lighting by means of a perpendicular drum. Probably the finest example of a small church is that of Theotokos, 37 by 45 feet. It is the most com-

plete structure of its kind, possessing many details of great beauty and perfection.

The remarkable rise of the Ottoman Turks is augmented by the fact that they were little more than wandering pastoral tribes at the beginning of the thirteenth century. From central Asia they migrated into Asia Minor during the following century and encroached upon the territories of Bulgaria and Servia under the leadership of Murad I., 1359-1389. Henceforth all attempts to besiege Constantinople were fruitless until Mohammed II., 1451-1481, became ruler for the third time. Secretive, ambitious, crafty, and wide awake was Mohammed. When asked as to his plan of attack, he answered, "If a hair of my beard knew, I would pluck it out and burn it." He aspired to the domains of western Rome long before he felt certain of possessing their eastern territories; he tactfully held aloof the Hungarians and other powerful nations by peaceful



PIGEON COURT, MOSQUE OF SULTAN BAYEZID.



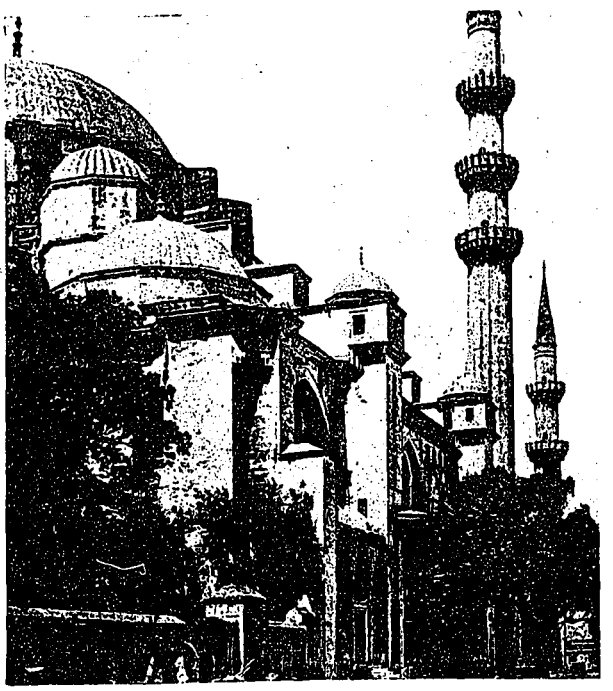
FOUNTAIN OF SULTAN AHMED III.

negotiations; he was the first man to prove the efficiency of cannon against the fortified city. It might be of interest to note that the guns used in this attack threw stones weighing twelve hundred pounds.

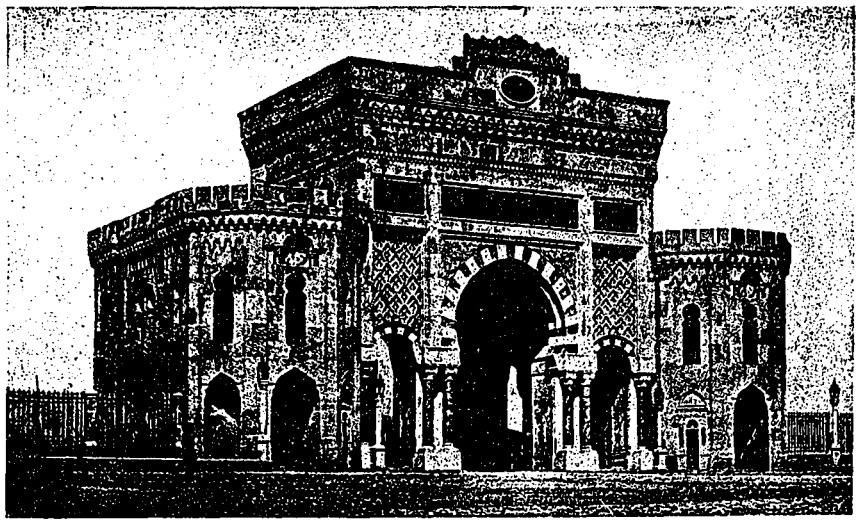
What a marked contrast between the besieged and the besieger. Mohammed in making his speech before the final assault swore "by God, by the four thousand prophets, by Mohammed, by the soul of his father and by his children," that the soldiers should have the city for three days in which to pillage, destroy and kill. On the other hand, Emperor Constantine and the people marched in solemn procession to S. Sophia and here the emperor bade his people fight as became the descendants of the heroes of Greece and Rome. This was the last Christian service in the historic church called Hagio Sophia.

As a result of this siege the wealth of the richest capital in the world was looted; the city was depopulated, thousands being killed and some fifty thousand reduced to slavery. Then the organizing genius of Mohammed stood out. He offered free homes to all former inhabitants who would return; he transplanted colonies from the neighboring islands; he cemented the good will of his officers by distributing among them the wives and daughters of the nobles of the empire. He recaptured Servia and Bosnia, annexed Asiatic domains, established a suzerainty over Crimea and placed the Ægean islands under his rule.

Mohammed II., in beginning the conquest of Constantinople, erected the castle of Roumelia, the walls of which were thirty feet in thickness and



DETAIL, MOSQUE OF SULEIMAN THE MAGNIFICENT.



GATE OF SERAS KIERAT.

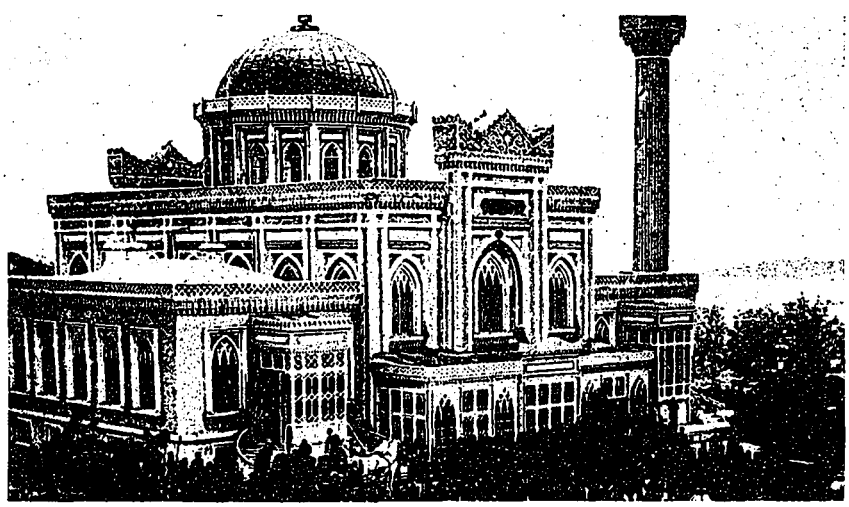
Between Mohammed II. and Suleiman the Great, 1520-1566, ruled two sultans noted for their civic improvements. Bayezid II. erected the Mosque of the Pigeons, so named from the existing legend that in the course of building an old woman brought the sultan a pair of pigeons as her free-will offering. The kindness of such gratitude brought forth the decree that the pigeons and their offspring should be regarded as sacred. The court has a charming portico with marble pointed arches in red and white supported by monolith columns, ten of which are verd antique, four of jasper and six of granite. Selim I. proved to be one of the greatest Ottoman rulers, annexing Persia, Syria and Egypt to his domains, and bringing the sacred banner and relics of the prophets from Cairo to S. Sophia.

contained altars, pillars, etc., of Christian churches. On extended ground which was christened Seraglio Point he built his famous palace of Cheregan, and surrounded the much mutilated S. Sophia with groves, fountains, etc. His greatest glory in the field of art was his magnificent mosque erected by the great Greek architect Christodoulos. Unfortunately this structure has lost its original character. Within the mosque are the tombs of the emperor and his family, without are the signs of what must have been the resultant of a deep thinker and humane character—eight academies, a bath, hospital, diet-house and caravansary. The tomb of Mohammed II. occupies a position in the turbeh of Sultan Ahmed and is surrounded by a mother-of-pearl railing at the head of which hangs his enormous turban.

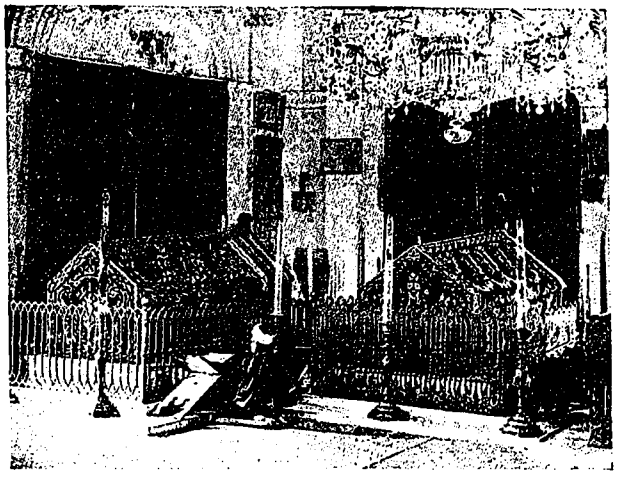
DETAIL, MOSQUE OF SULEIMAN THE MAGNIFICENT.

Suleiman the Great, 1520-1556, has given to posterity a regime of splendor surpassing in many ways the Justinian ers. Constantinople was not only embellished, but nearly every city in the empire felt the influence of his artistic temperament. The great aqueduct and arsenal of the capital were paralleled by the restoration of the aqueducts of Mecca and the construction of the Tschekmedji bridge.

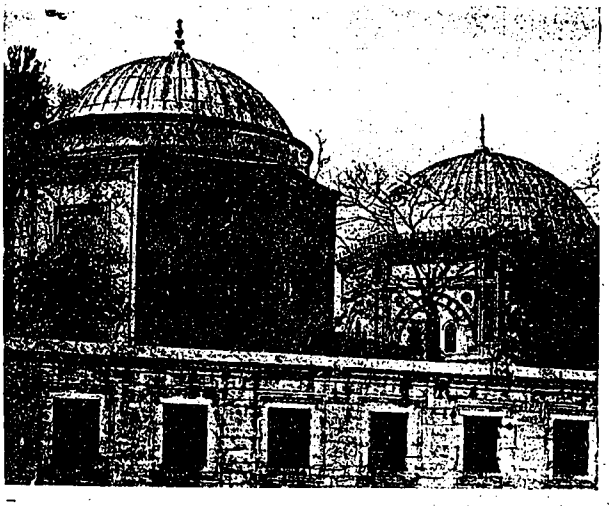
The Suleimanyeh is the most artistic mosque in Constantinople. The building still maintains its original character both as to the constructive features as well as the treatment of its detail. The mosque was designed by Sinan, the most celebrated Otto-



THE SELAMLIK.

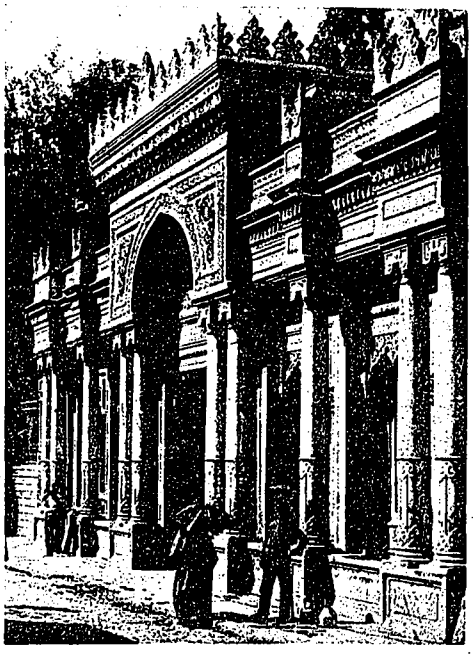


TOMBS OF MAHMUD II. AND ABDUL AZIZ.



TOMBS OF SULTAN SULEIMAN AND SULTANA ROXALANA.

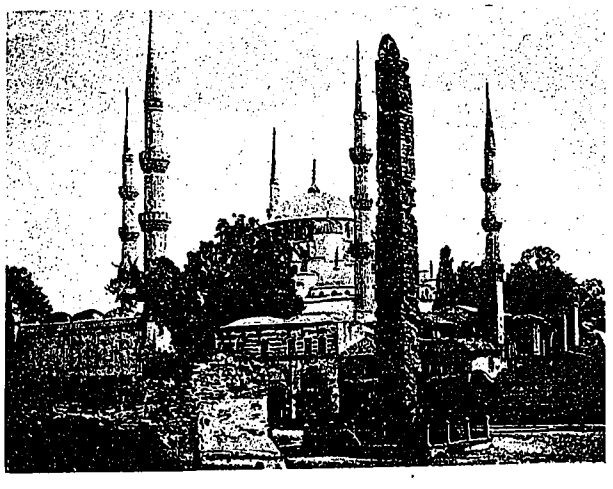
man architect, and comprised a court, fountains, colonnades, twenty-three small domes and four exquisite minarets with accompanying galleries. In plan the main structure covers practically fifty thousand square feet with a forecourt 150 by 190 feet surrounded by an arcade. The dome, 86 feet inside diameter and 156 feet in height, rests on four monolithic columns of ancient fame. Upon the interior are splendid examples of colored glass from the manufactory of Ibrahim, painted in a design with the name of God set in an appropriate bevy of flowers. The screen of windows under the great lateral arches of the dome are borne by monolithic shafts of porphyry, 28 feet in height, with base and capital of 35 feet. The mosque with its forecourt is surrounded by a still larger court having ten gates and arranged in conjunction with four academies, three schools, a hospital, kitchen for feeding the poor, school of medicine, library and a house of refuge for strangers. It is surely a pity that such a monumental structure should suffer from the quality of materials with which it is constructed. The walls are covered with stucco, the dome with lead, and the masonry abutments with metal.



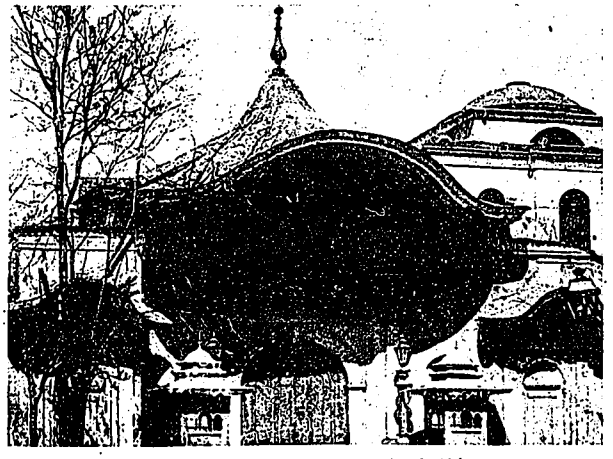
ENTRANCE TO VALIDE MOSQUE.

The tomb of Suleiman is pleasing and artistic; octagonal in shape, with a fluted roof. Too small to be grand, it is of unusual merit and contains exquisite marble of various colors carefully elaborated. Upon the interior walls are painted designs of delicate lace-like arabesques. The costly decorations of the biers, mother-of-pearl work, shawls, turbans and aigrettes to be found in his resting place are only symbolical of his work and its accomplishments. What greater homage could be paid so great an empire builder?

The "turbeh" of Mahmud II. is perhaps the most splendid as well as the last tomb erected for a sultan. Built of white marble, it presents an interesting study with the gilt grated windows, while the cupola



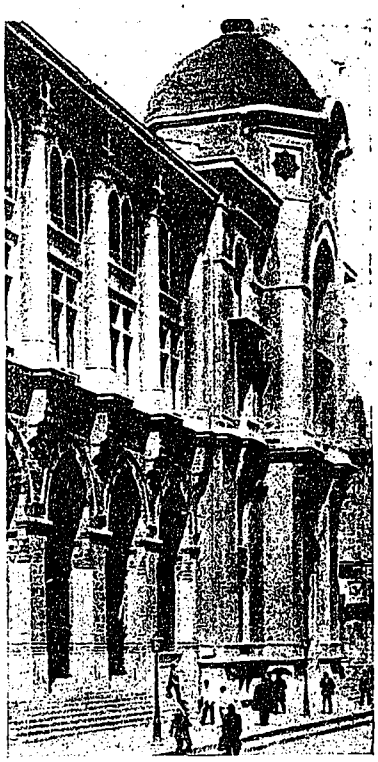
THE MOSQUE OF SULTAN AHMED.



DETAIL, THE SUBLIME PORTE.

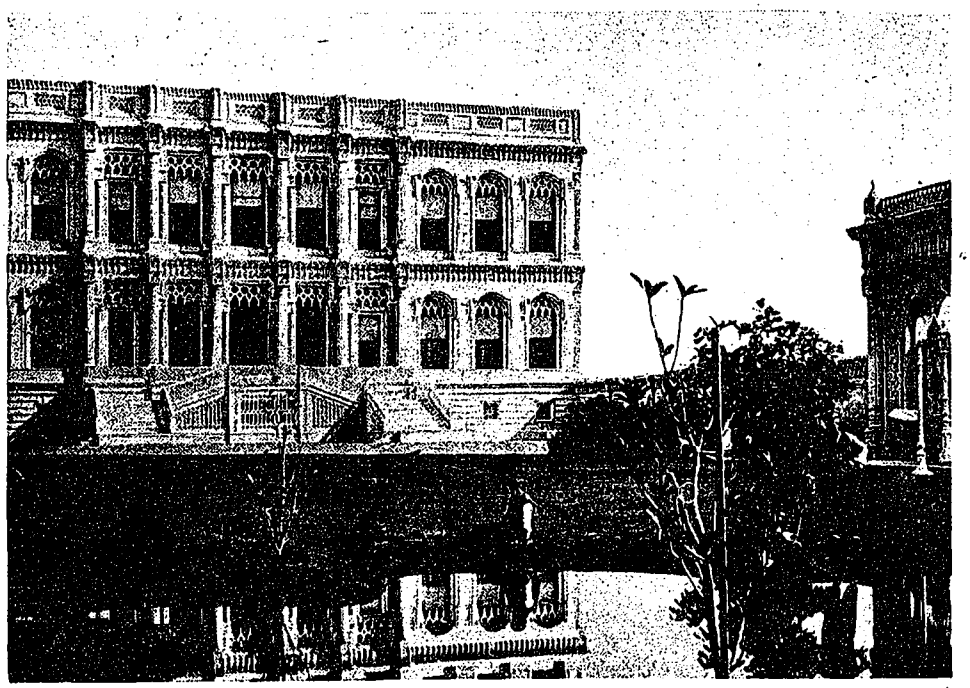
is just as attractive with its stalactites of gold and delicate cornices. The biers themselves are covered with richly embroidered velvet and protected by means of railings designed in mother-of-pearl.

Unquestionably the mosque next in importance to that of the Suleimanyeh is the one erected by Sultan Ahmed I., 1608. Not willing to limit his ambition to the usual number of minarets of two or four, Ahmed insisted on having six, but was forced to discontinue his work on the ground of sacrilege. It seems that the sacred temple at Mecca possessed a like number and naturally the sultan was committing a crime which even his unlimited power could not carry through. History tells us that he completed the six minarets after he added the seventh to the mosque at Mecca. The plan measures 235 by 210 feet. The great criticism to this work is the mechanical arrangement, the plan being square and the design upon all sides practically alike. The redeeming qualities are the six minarets and the effect of the smaller domes and semi-domes leading up to the centre in an imposing manner. Quite impressive also is the fine interior, with its stone roof supported by four large fluted piers.



ENTRANCE TO POST OFFICE.

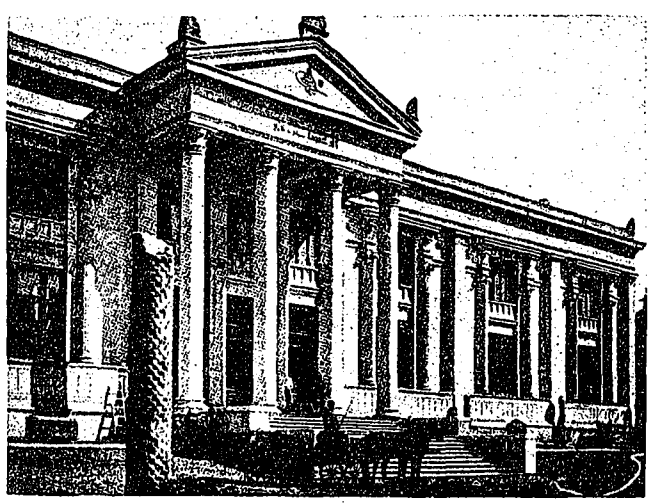
Hundreds of fountains are to be found in Constantinople. This is due to the prominent part water plays in the religious life of the Turk. In addition to the fountains in every mosque there are a large number of public drinking places, the most beautiful of which is that of Sultan Ahmed III. The exterior decorations are in arabesque and gold, while the interior consists of a dead gold with pencillings, traceries and panels of roses and stars delicately carved.



PALACE OF TCHERAGAN—NEW PARLIAMENT HOUSE.

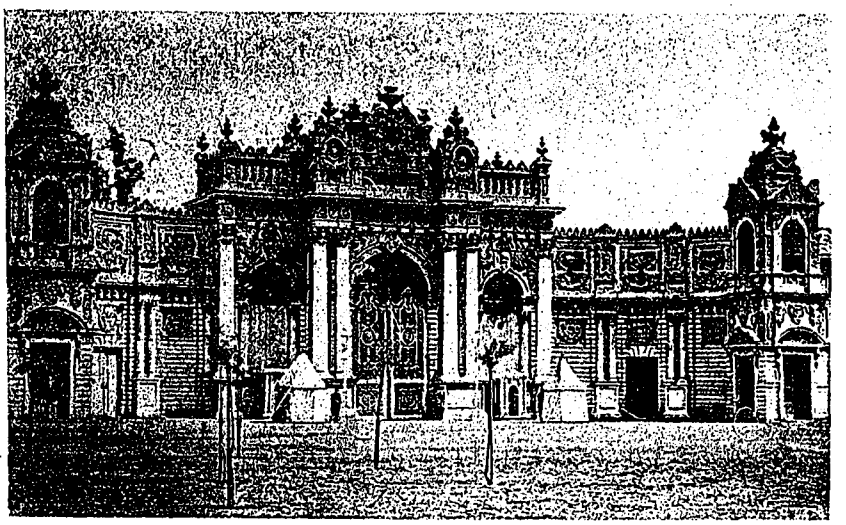
"La Sublime Porte"—the lofty gate—is the title given to the Sultan's Government from their extreme fondness for gateways and their skill in erecting them, both as to numbers and artistic merit. The variegated marble gate of Seras Kievat is exceptionally rich in ornamentation. Another monumental entrance flanked by fountains and marble pillars leads to the Sublime Porte, a large modern palace in the Italian style.

Many and varied are the palaces of Constantinople. The favorite residence of the Commenian emperors was the palace of the Blackernae, the ruins of which are quite picturesque. The Seraglio is of the greatest interest and consists of a community of buildings decorated in various tiles, arabesques, bronze, ivory, mother-of-pearl, and gold. At the occupation of Constantinople the Turkish conqueror



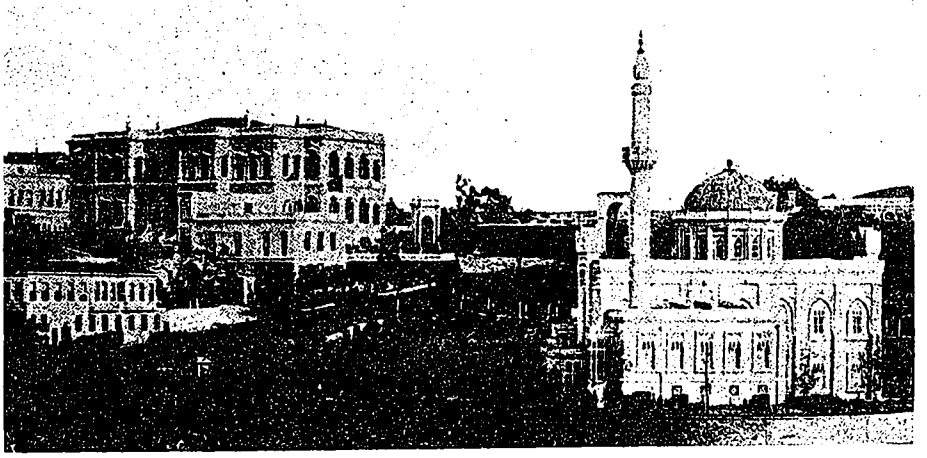
IMPERIAL MUSEUM AT STAMBOUL.

occupied the old palace. The new one was started in 1468 and became the home of the sultans for three centuries. A battlemented wall of square towers separates it from Stambul, enclosing terraces of beautiful gardens. Next to the Seraglio in importance is the Dolma Baghtcheh, with its picturesque setting enclosed by two richly decorated gates. It lies north of the Golden Horn and presents a varied architecture which detracts from the general appearance. The interior is finished in carved doors of mahogany; gorgeously frescoed Parian marble bathrooms; malachite fireplaces; mirrors one hundred feet square; costly bronzes, etc.

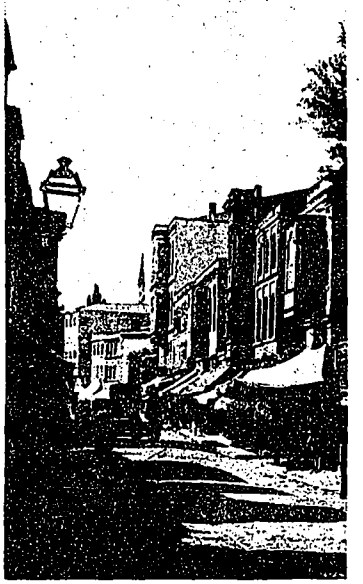


DOMA BOGHTCHEN—THE SULTAN'S PALACE.

Just beyond is the palace of Beylerbey, erected in 1865. Upon the interior of this marble structure is one great hall of columns with a decorative marble staircase. Numerous gardens and kiosks surround the palace which gives approach to the Bosphorus by means of marble steps and quay.



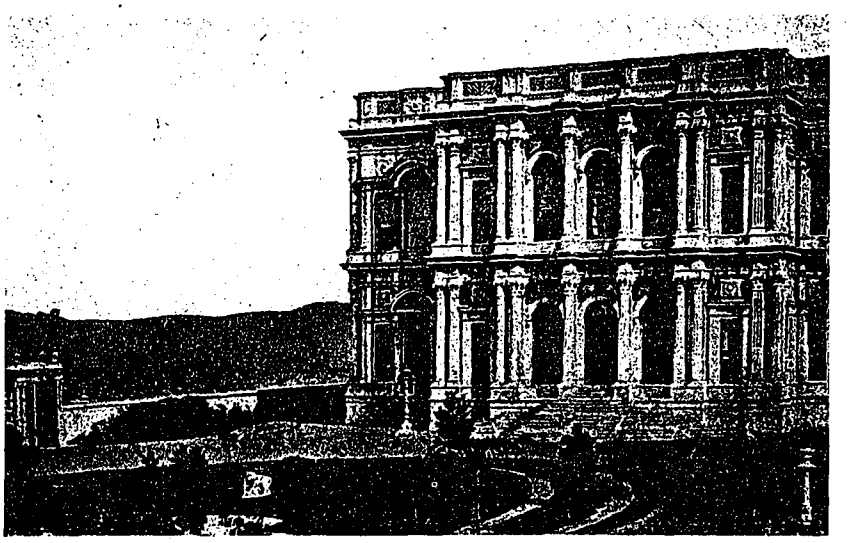
YILDIZ KIOSK AND MAMIDIEH JAM MOSQUE.



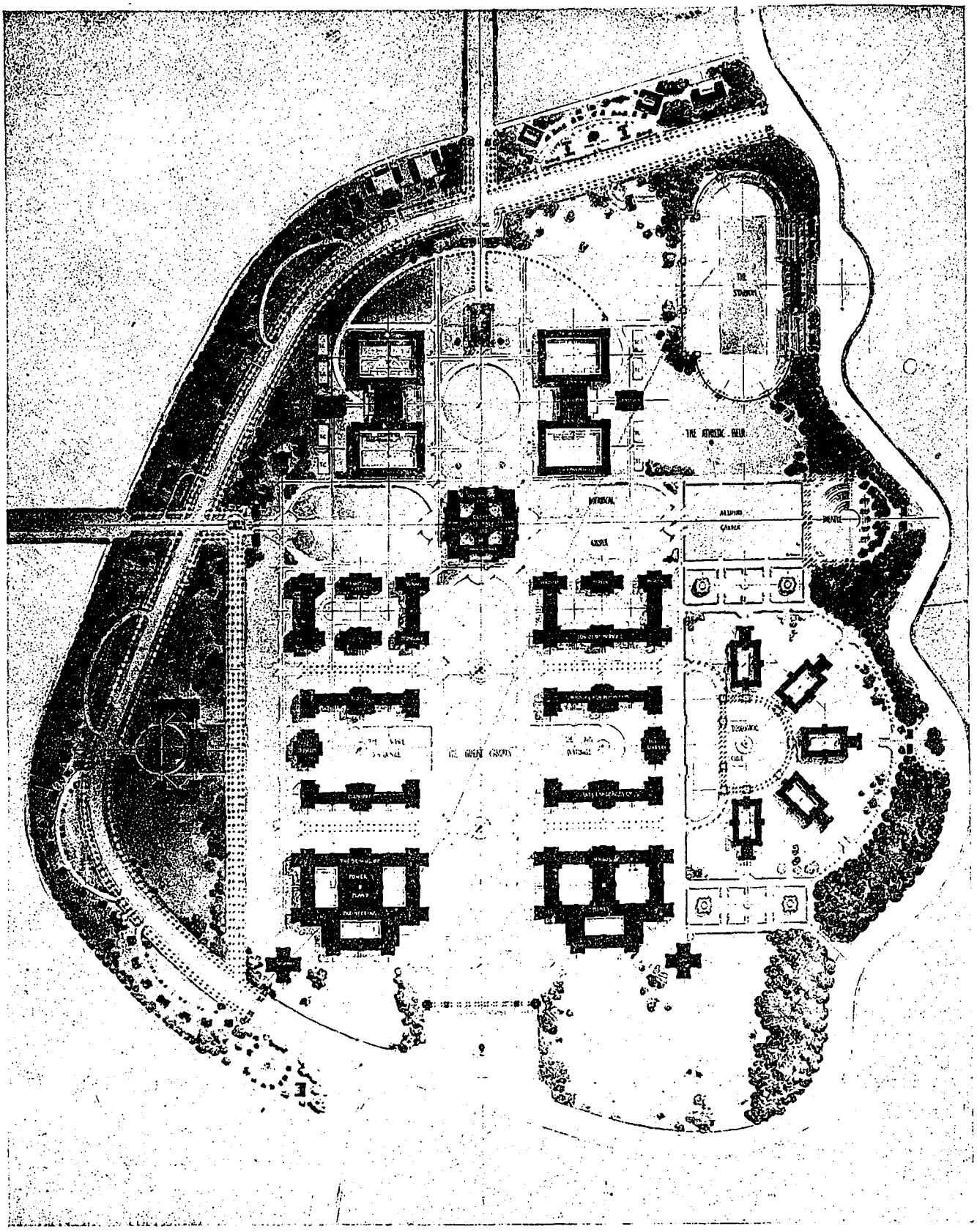
TYPICAL STREET SCENE.

The palace of Tcheragan cost $30,000,000 and is built with the best of marble. We are left, however, to dream of its sumptuous interior as nothing remains of the decorations and furnishings which cost millions. Erected by the Sultan Abdul-Aziz, according to Edmondo de Amicis, it reminded one of the Alhambra, barren and endless are the rooms, and nothing to evidence its former beauty but the charming vistas over the water. A palace but not a palace is the Yildiz Kiosk—built and rebuilt for the past thirty years—it resembles a veritable city.

Little can be said of the modern architecture, one or two views being shown to illustrate its character. Many of the more recent mosques have features of architectural interest and picture to us in a realistic manner their religious nature.



PALACE OF BEYLERBEY.



BLOCK PLAN. COMPETITION FOR UNIVERSITY BUILDINGS, PROVINCE OF BRITISH COLUMBIA.

FIRST PRIZE DESIGN BY SHARPE & THOMPSON, ARCHITECTS.

Key to plan:—Surrounding and facing the great campus are seven groups. Beginning at left is the engineering school with the philosophy building near by; second group, science quadrangle composed of physics, museum and chemistry; third group, agriculture, finance, arts and pedagogy; building at end of campus for the administration; fifth group, dentistry, medicine and pharmacy; sixth group, arts quadrangle composed of biology, library and languages; seventh group is the school of mines with the law department near by. To the right of the arts quadrangle is the theological group of five buildings. To the left of the science quadrangle is the women's college. In the rear of the administration building are two large dormitories facing a central square with the chapel at the end. The students' club lies to left of dormitory group and the gymnasium to the right. Public gardens, faculty accommodations, men's club, etc., are placed along the driveway to the left of the general scheme. On the right is Marine Drive, skirting the edge of the cliff.

New University Buildings, Province of British Columbia

C. H. BOYLES

THE LARGE NUMBER of competitive designs submitted for the proposed University buildings at Point Grey, Vancouver, reveal the capabilities of Canadian architects to handle comprehensively problems of this nature. Each scheme is highly commendable and the only regret lies in the fact that space will not permit of showing other plans in addition to the winners. The completed work will call for an expenditure of $10,000,000.

It is a worthy tribute to the advanced standard of architecture that the nineteen plans submitted drew forth the unstinted praise of the assessors. The committee of award consisted of the Minister of Education, Hon. Dr. H. E. Young; F. L. Carter-Cotton, Chancellor of the University; W. Douglas Caroe, of London, England; A. Arthur Cox, of Vancouver, and Samuel Maclure of Victoria, distinguished members of the architectural profession, co-operating with and assisted by the Provincial Minister of Public Works, Hon. Thomas Taylor.

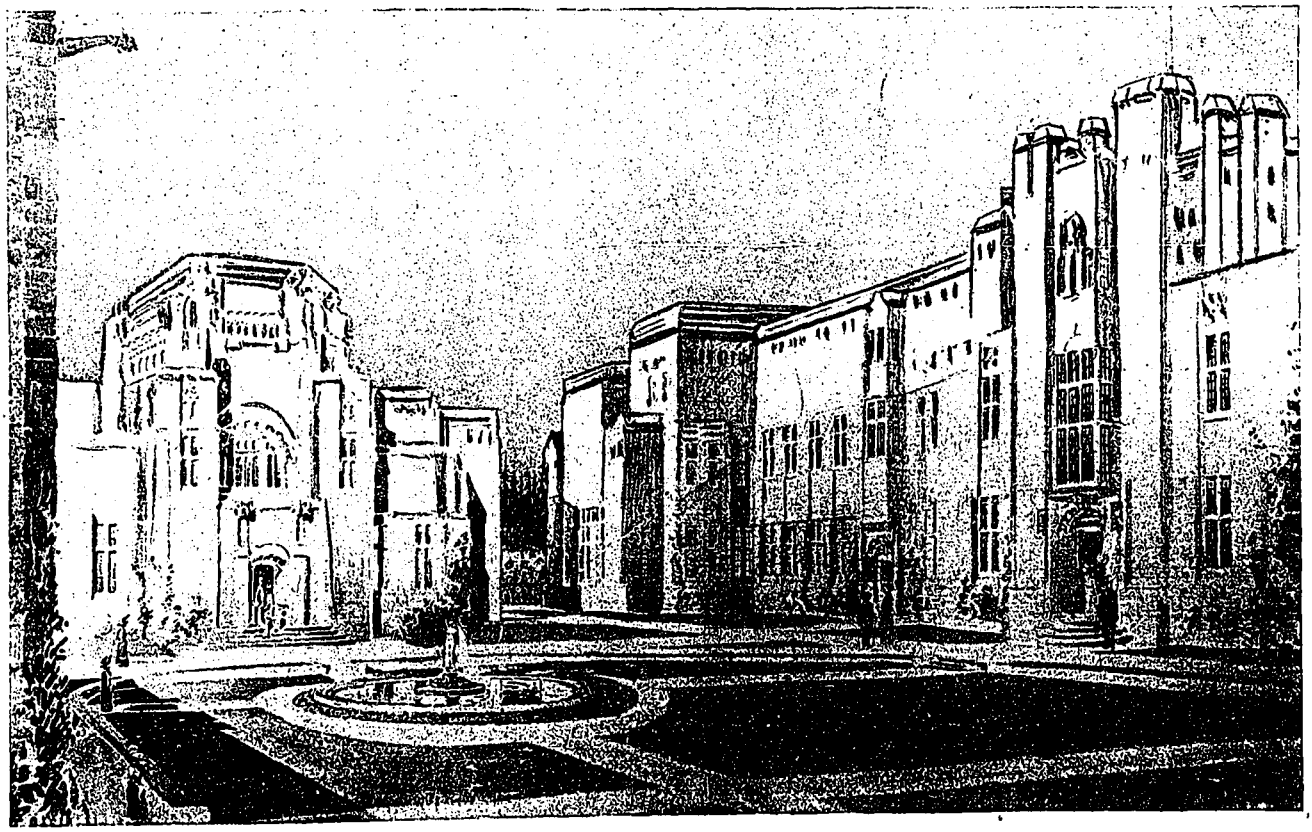
The committee in making its report spoke of the marked influence for good upon busy centres which the establishment of universities exercise. In reaching a decision they weighed the importance of the design in its relation to the site, inasmuch as it will remain a standard of the present architectural taste in British Columbia for years to come. They allowed no consideration to enter into their final choice other than the merits of the design.

The programme in dealing with the site laid particular stress on the excellent views it commanded and advised the competitors to keep this fact constantly in mind. The committee felt that the proper vistas had been laid down upon the site-plan, which gave in full measure the levels and gradients. In justice to the architects not receiving prizes, it may be gratifying for them to know that several of the most elaborate drawings submitted received an H. C. through their failure to grasp the essentials of the treatment desired.

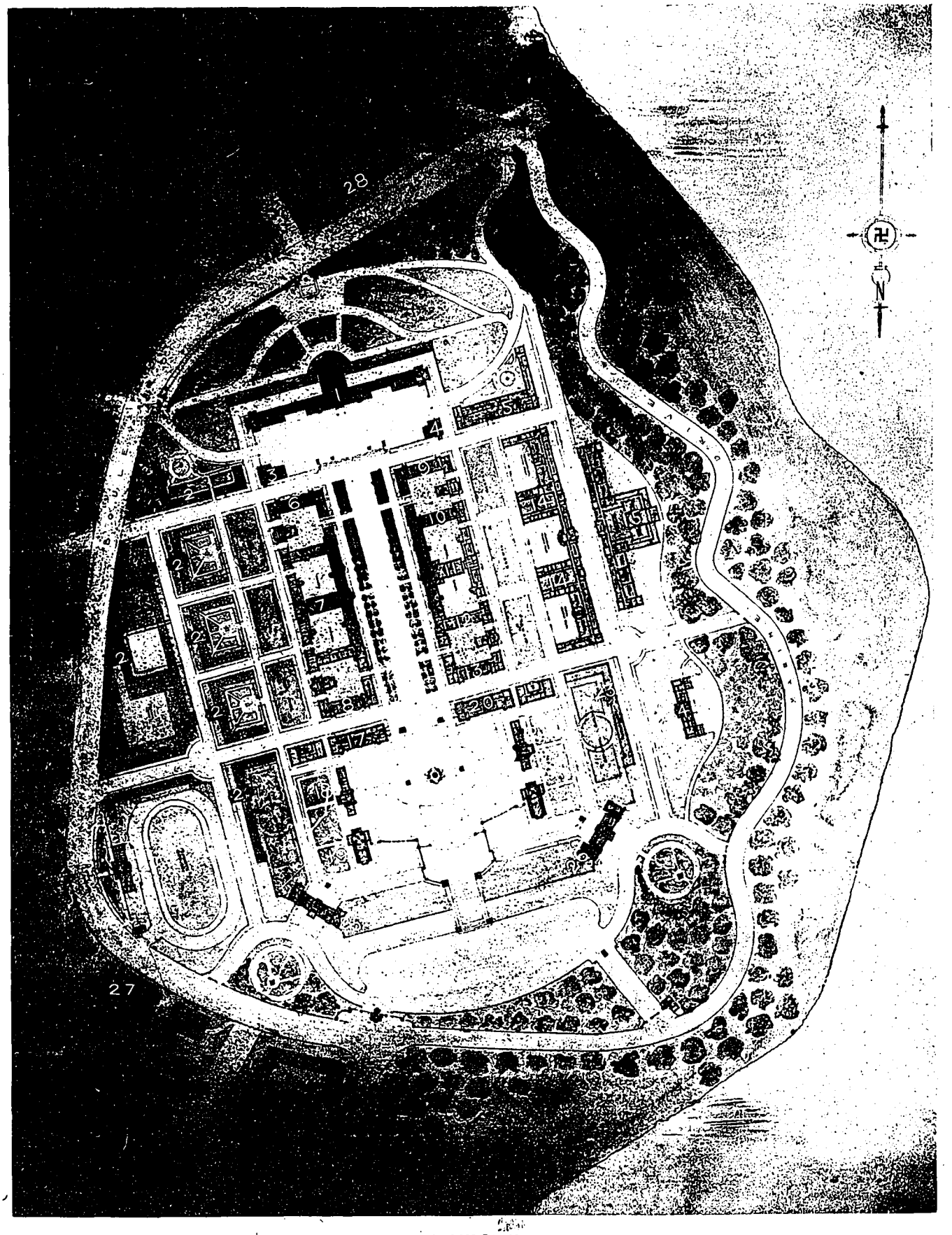
Among other features which influenced the final decision of the jury was the suggestion that one of the three distinctive styles—late Tudor, Elizabethan, or Scotch Baronial—should permeate the whole design. One competitor was thrown out by producing a classical scheme of grandiose and palatial character.

The reason for the choice of Sharpe & Thompson is given in the words of the report:

"After mature deliberation, we conclude that No. XVI. has best succeeded in laying down a well devised and workable plan suitable to the site. There is much to be said in commendation of the straightforward and direct scheme which the author has devised. The buildings fit themselves naturally and in a simple and well-balanced manner upon the site, and culminate in the dominating block of the administrative group, which forms a feature seen from all points of the compass.



VIEW OF THE GREAT CAMPUS. SHARPE & THOMPSON, ARCHITECTS.



BLOCK PLAN.

COMPETITION FOR UNIVERSITY BUILDINGS, PROVINCE OF BRITISH COLUMBIA.

SECOND PRIZE DESIGN BY DOUGLAS SCOTT BOW, ARCHITECT.

Key to Plan.- 1, Administration. Chapel and Assembly Halls; 2. Dormitories; 3. Students' Club; 4. Faculty Club; 5, Naval Architecture; 6, Pedagogy and Philosophy; 7. Theology; 8, Fine Arts and Law; 9, Pharmacy and Dentistry; 10, Physiology; 11, Anatomy; 12 Surgery and Hospital; 13, Finance; 14, Mining; 15, Engineering; 16, Gymnasium; 17, Chemistry; 18, Medicine; 19, Museum; 20 and 21, Arts; 22, Library; 23, Conservatory; 24, Power House: 25, Physics; 26, Agriculture; 27, Women's College; 28, Faculty Residences.

Second Prize Design.—The committee of award in presenting their report placed Douglas Scott Bow second and gave the following reason: "We think that No. XVIII. deserves to be placed second in order of merit. This scheme is also well laid out on the site, but has defects, to which we refer more particularly in our detailed remarks. The requirements generally are not so successfully met in some particulars, although in others there are effective points The style adopted is Scotch Baronial, without some of its defects, but in other respects the treatment is somewhat hard and mechanical, and the author has missed some of the opportunities which the style affords in dealing sympathetically with the materials of stone and rough cast adopted by him. There is, however, a distinctive character of unity and some dignity in the whole architectural scheme. The estimate of cost is satisfactorily stated."

Mr. Bow, in presenting his report, states that the site has been carefully studied and the natural contours of the land govern the general lay-out of the buildings. The ground rising gently from north to south along the line of vista is taken as the main axis of the scheme. The athletic fields are excavated, the terracing for spectators being on solid ground, while the excavated earth will go to maintain the general level along the main central avenue. Otherwise the natural surface will remain unaltered.

The buildings presently proposed are shown where they can be erected almost entirely on the natural surface of the ground, which enables them to be placed where they will of themselves look like a finished unit; where their working arrangements will in no sense be impaired by future building operations; and which permits of the more uneven portions of the site being made up at the present time so that they will become eventually suitable for building purposes.

The Marine Drive in considered as forming the main approach, and at its juncture with the University Boulevard at the north end, is placed the grand entrance. A broad flight of steps, architecturally treated, approach a spacious and monumental forecourt intended to accommodate such social functions as alumni gatherings, etc.

A broad central avenue planted with trees is entered from the forecourt and terminates at the Administrative Terrace, with the administrative buildings and lofty tower forming the culminating and central point of interest in the scheme. The natural rise of the ground introduces flights of steps which tend to enhance the dominating effect of the administrative group. As a result the view from the south is vastly improved and a promenade or balustraded terrace is planned with staircase towers furnishing access to the gardens. The gardens are informal, to furnish a marked contrast to the severe lines of the main scheme.

There are two important entrances to the Administration Terrace which pass through the gardens, convenient for general purposes as well as for access to the assembly halls by the public. Separate entrances from the University Boulevard are shown in connection with the athletic field and the women's club.

Point Grey Boulevard, North and South Boulevards, where they enter University Boulevard, are designed to centre on the points of motif of the buildings closing the vistas along these routes, while the quieter streets to the city are concentrated on the two students' entrances which give access to the main cross arteries.

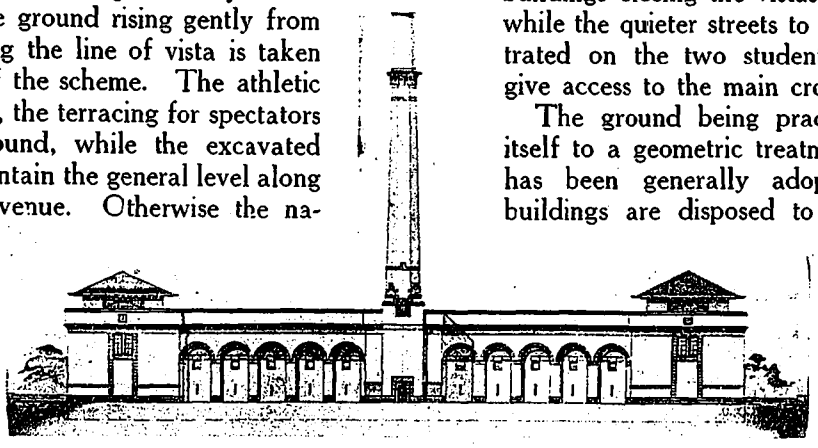
The ground being practically level, lends itself to a geometric treatment, and while this has been generally adopted, the outlying buildings are disposed to artistically emphasize the irregular rounded outline of the site.

The general requirements are carefully adhered to and the various buildings planned to coincide. The cost of the proposed structures will be, when fully equipped, $1,400,000. The style is Scotch Baronial, and will be built of brick and rough cast with stone trimmings and slate roofs. This style seems most in keeping with the surrounds and lends itself to a broad, simple and inexpensive treatment.

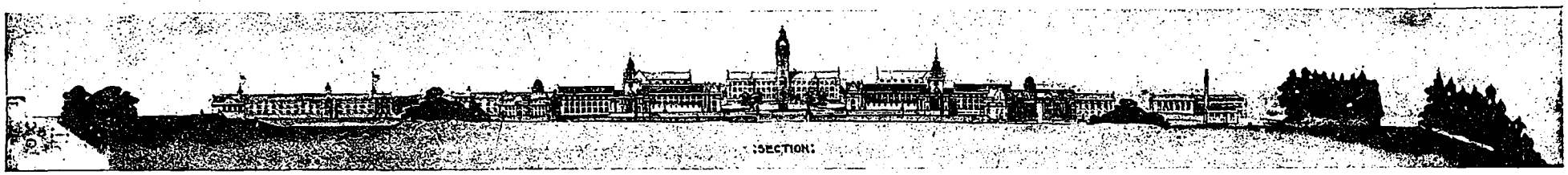
The main effect is produced by the long lines of the parapet and the dramatic concentration of the motifs and ornament at the central points of interest, and by emphasizing the forecourt, central avenue, and administration.

The various groups of buildings will have a gently varied skyline and simple detail.

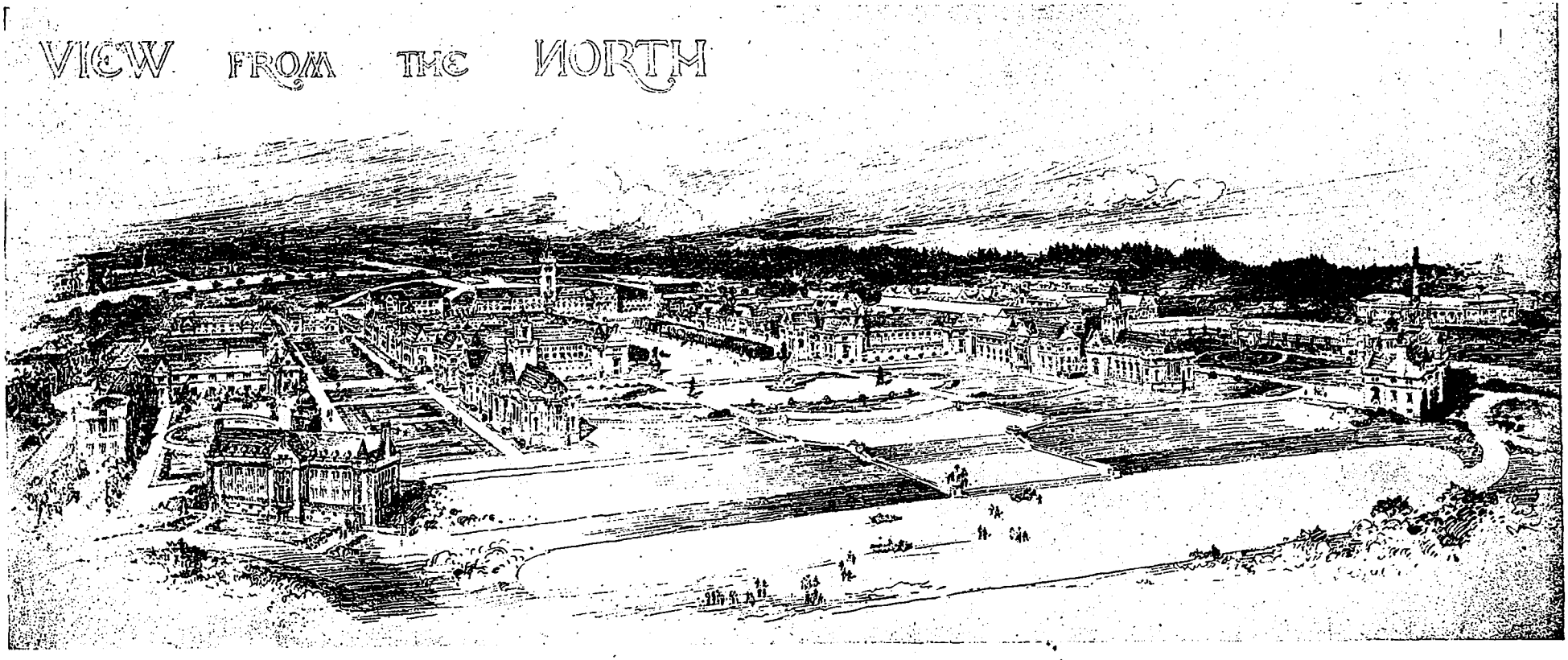
The main motive of the design is to centre on the richer buildings, such as the library and museum, with their towers, and on the administration tower, visible both from the city and the sea, and which will be shown with a Scotch crown.



CHEMISTRY DEPARTMENT. POWER HOUSE AGRICULTURE DEPARTMENT.

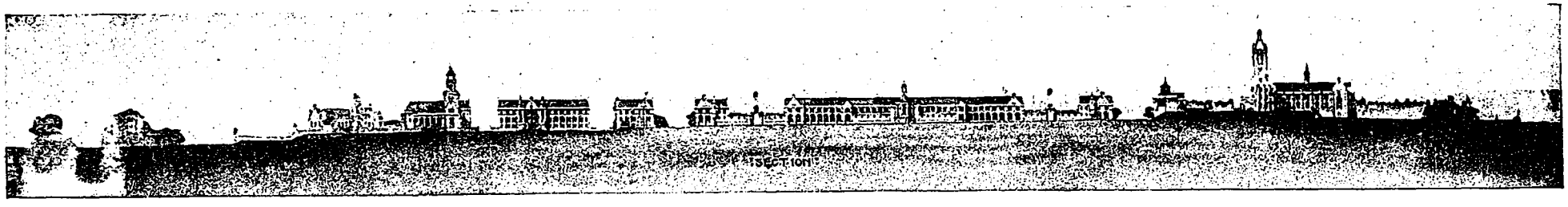


VIEW FROM THE NORTH



PERSPECTIVE. COMPETITION FOR UNIVERSITY BUILDINGS, PROVINCE OF BRITISH COLUMBIA. NORTH VIEW.

SECOND PRIZE DESIGN BY DOUGLAS SCOTT BOW, ARCHITECT.



Third Prize Design.—The assessors in awarding third place to Philip J. Turner, said: We place No. XIX. third in order of merit. Mr. Turner's grasp of the conditions are taken from his report: The opportunity of initiating a scheme for a university such as contemplated is of such a rarity and affords such scope that every effort should be made to design a plan worthy of the magnificent subject, expressive of its purpose, and not merely an architectural composition. As laid down, the main prospect from ships entering the harbor, and from the principal land approach, embraces the great lawn placed axially on the main vista, flanked and framed by two avenues lined on both sides with the principal university buildings gradually rising in gradient, and converging, thereby increasing the perspective of the culminating group, which comprises the Administrative Block, Library, and Museum, the whole expressive of one great idea, on simple lines easy of comprehension, convenient of arrangement and a landmark for all time.

In presenting this scheme for consideration by your assessor the following points are considered of special importance, and in fact constitute the basis of the argument from which the plan was evolved: (1) Selection of main axis for the whole scheme; (2) that the scheme should generally represent a university rather than an architectural composition; (3) that there should be a convenient grouping of the various sections without undue crowding or prevention of possible future extension; (4) that the purpose of the several sections should be clearly defined; (5) that the grouping of inter-departmental blocks be concentrated in their allocation, with subdivision in each department by means of isolated staircases and sanitary annexes, thereby facilitating extension as required; (6) that the lay-out should be adapted to the contours of the ground with a view to incorporate the natural beauty of the site with the scheme as a whole; (7) easy gradients of roads.

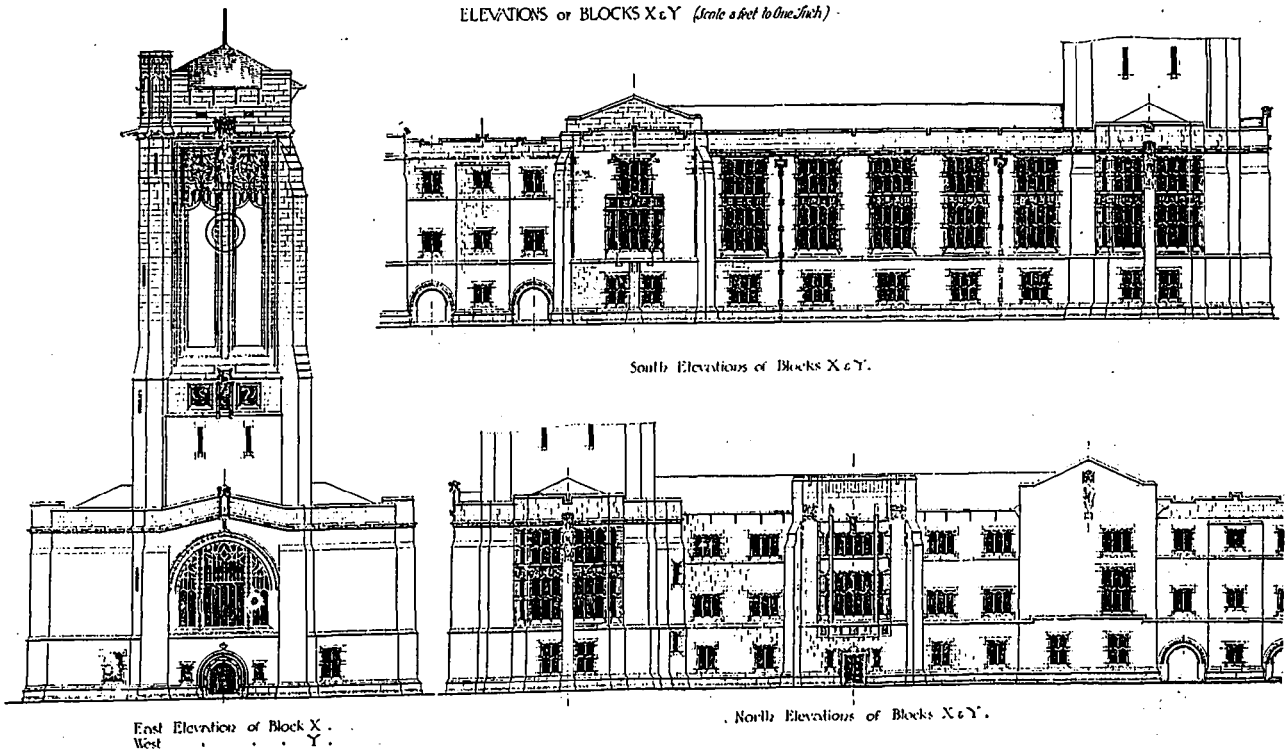
In conclusion the following points are invited particular attention to: (1) That the great lawn axial on main vista from the sea and main approach with the east and west avenues and formal gardens off same on either side culminate in the administrative buildings and Theological Square on the highest portion of the site; (2) that the main axis of the medicine group is north and south; (3) that the gymnasiu mand athletic ground is isolated, yet still in touch; (4) that the sanitary blocks and staircases are detached from the buildings on a definite scheme of arrangement to be followed throughout.

In planning the buildings authorized to be erected simplicity of arrangement has been the key-note, bearing in mind the purposes for which the buildings have to be used. The dormitory buildings have been planned in isolated blocks arranged in the form of a quadrangle on the principle of the Universities of Oxford and Cambridge with detached commons. The lavatories and baths for each house are arranged in the basement.

The power house authorized for the buildings to be erected has not been drawn to 1-16th scale, as it is felt that it being placed in the centre of the future engineering building it would be a better arrangement to have a temporary structure to accommodate the plant required and to house the temporary engineering shops of the School of Engineering until this block has been authorized.

The architectural treatment of the buildings shewn is in the characteristic English traditional form of building developed from the old universities and public schools.

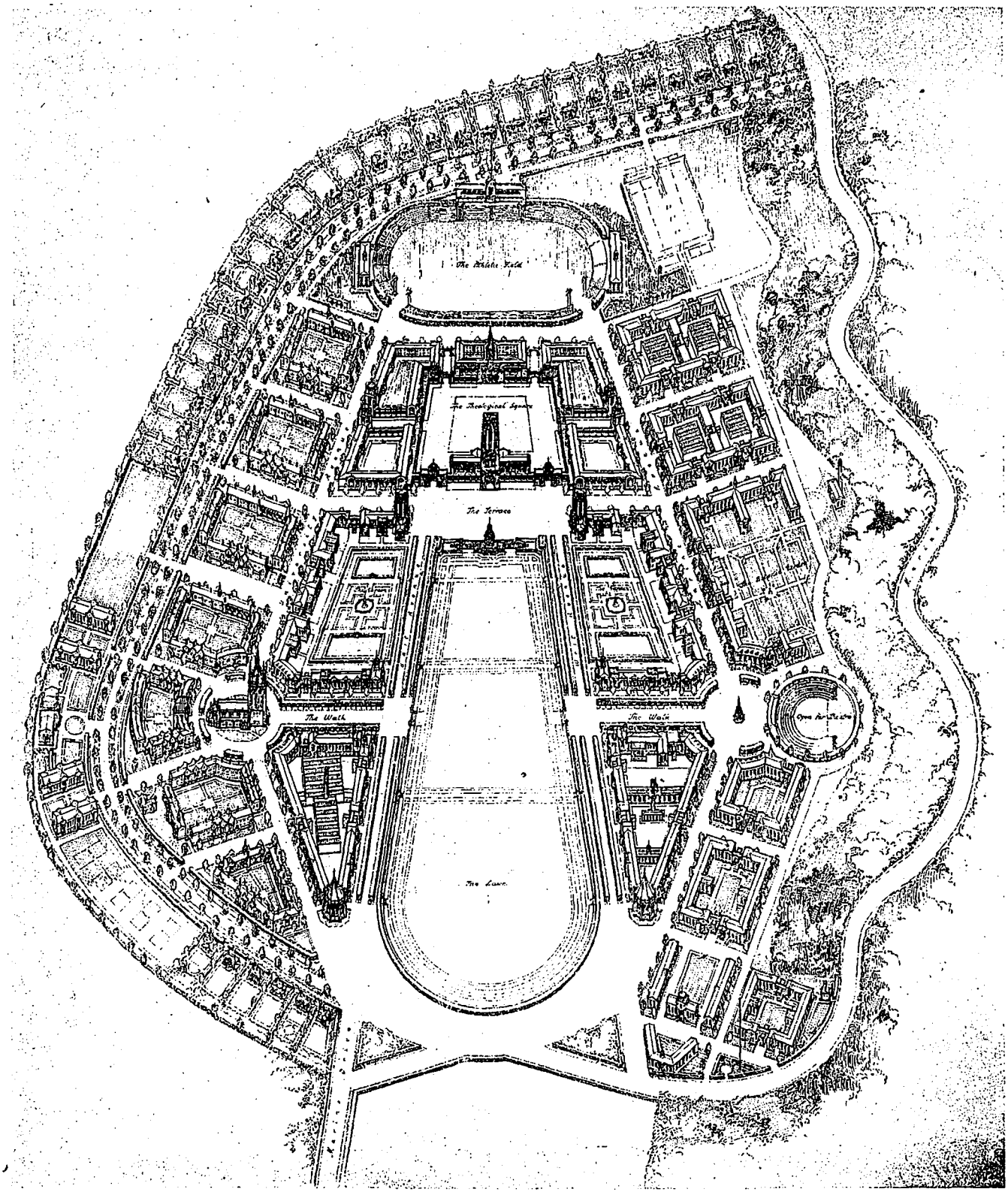
ELEVATIONS OF BLOCKS X & Y *(Scale 1 feet to One Inch)*



South Elevations of Blocks X & Y.

East Elevation of Block X.
West " " " Y.

North Elevations of Blocks X & Y.

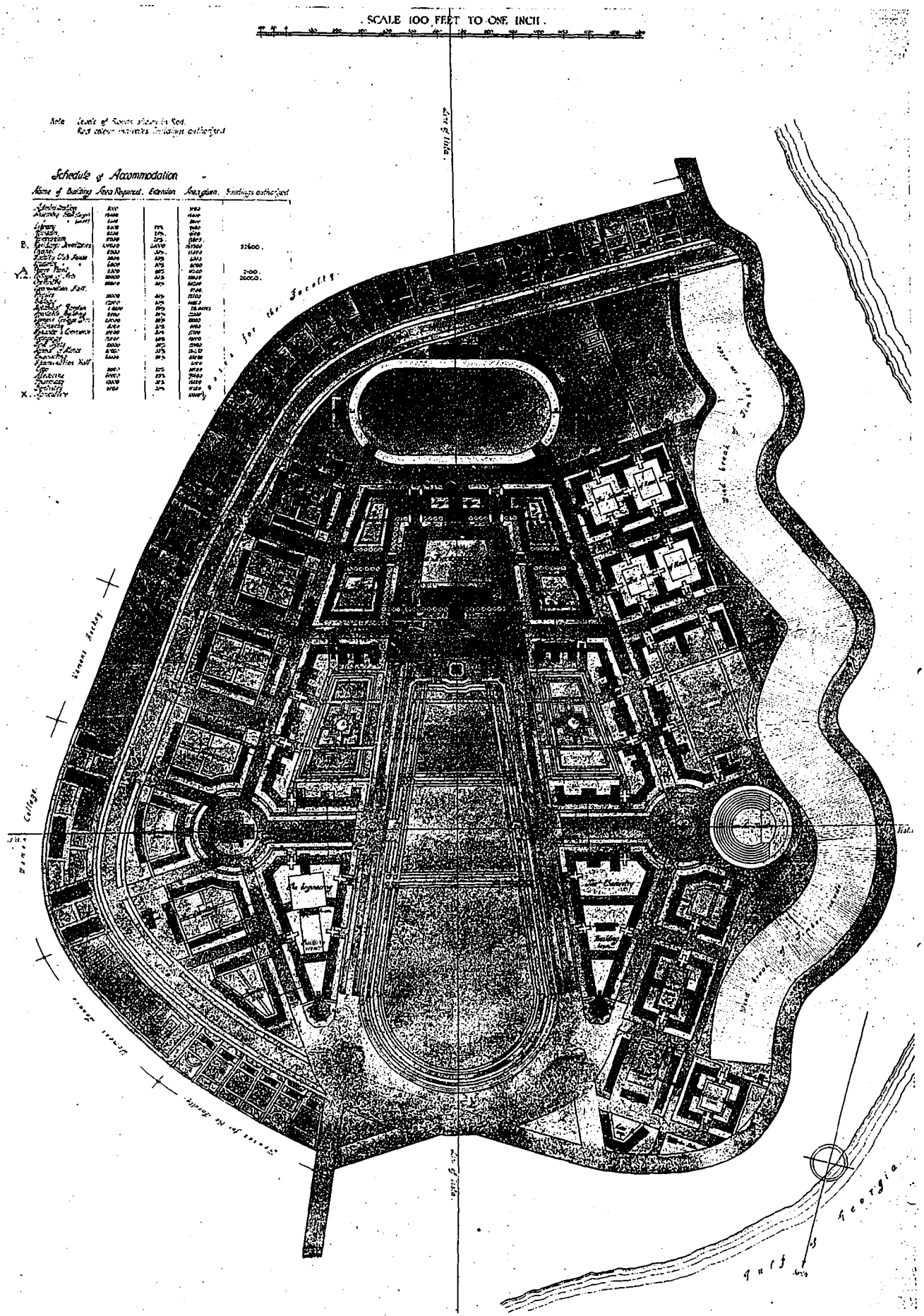


PERSPECTIVE.

COMPETITION FOR UNIVERSITY BUILDINGS, PROVINCE OF BRITISH COLUMBIA.

THIRD PRIZE DESIGN BY PHILIP J. TURNER, ARCHITECT.

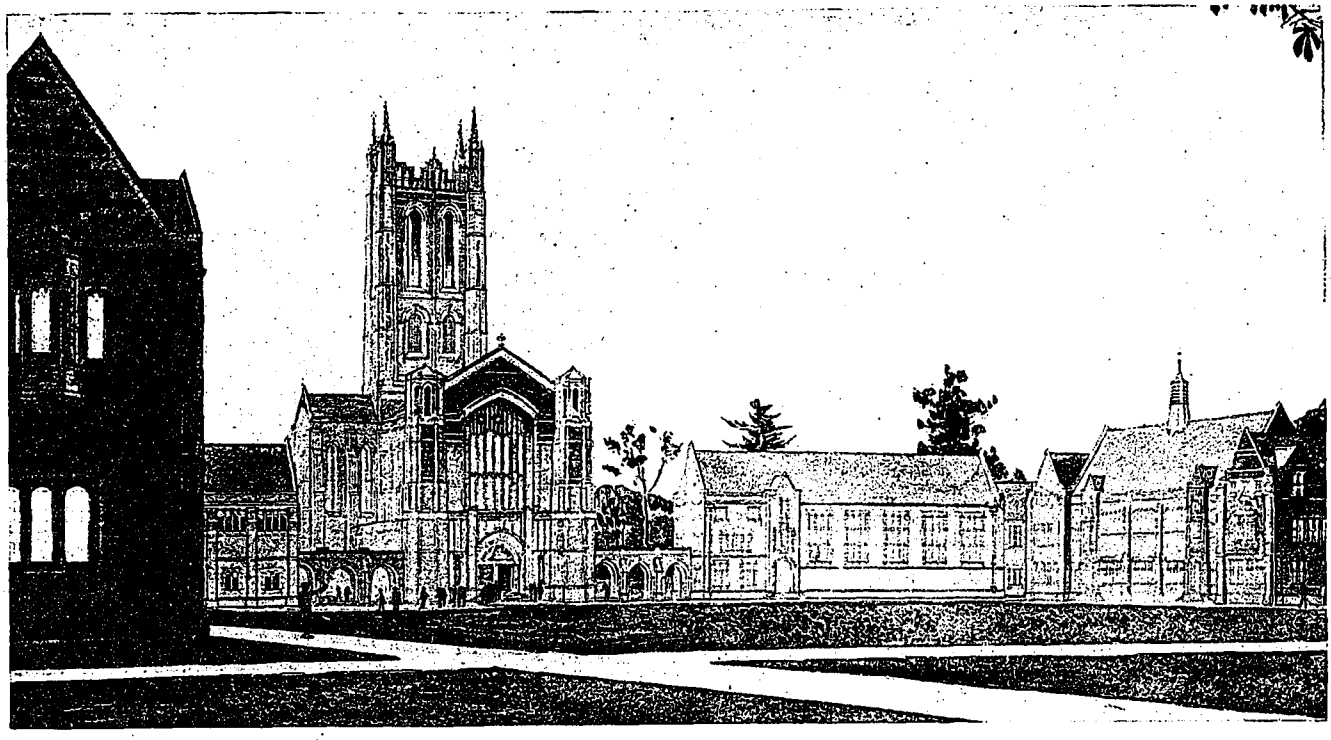
Key to Plan and Perspective:—Facing the lawn and terrace is the Administrative Building with the library and museum on either side forming the Northern Enclosure of the Theological square. The remaining sides of the Square beginning on the East are occupied by the Methodist, Presbyterian, Anglican, Roman Catholic and Baptist Colleges, following in consecutive order. To the left of the central portion called "The Lawn," and facing East Avenue are two groups, the first one consisting of the Engineering department, the second pertaining to Arts and Science. To the right of the open centre are the Chemistry and Philosophical groups, outside of which are the Medical, Botanical and School of Mines. The Medical department occupies the territory North of the open air theatre, while the Botanical and School of Mines lie between the theatre and the athletic field. Facing University Avenue and extending from the Northern end of campus to the athletic field are a series of dormitory buildings. The Chapel to the left forms a balance to the open air theatre. Accommodations for Faculty houses and Women's College lie to the east.



BLOCK PLAN.

COMPETITION FOR UNIVERSITY BUILDINGS, PROVINCE OF BRITISH COLUMBIA.

THIRD PRIZE DESIGN BY PHILIP J. TURNER, ARCHITECT.



VIEW FROM NORTH-EAST, SHOWING CHAPEL, LIBRARY, ETC.

Fourth Prize Design.—The committee gave the fourth place to Symons & Rae for the following reason: "We place No. XX. fourth in order of merit, on the ground that the author has shown in his detail an appreciation of collegiate work of quiet character."

In brief the conditions of the programme as analyzed by Messrs. Symons & Rae and incorporated in their report, indicate that the lines marked vista should be made the principal thoroughfares and that the important buildings should be grouped along these lines. Another conclusion is that there should be open views from the grounds along the vista lines. With these fundamental principles in mind particular attention has been paid to the general effect of the buildings from the ground.

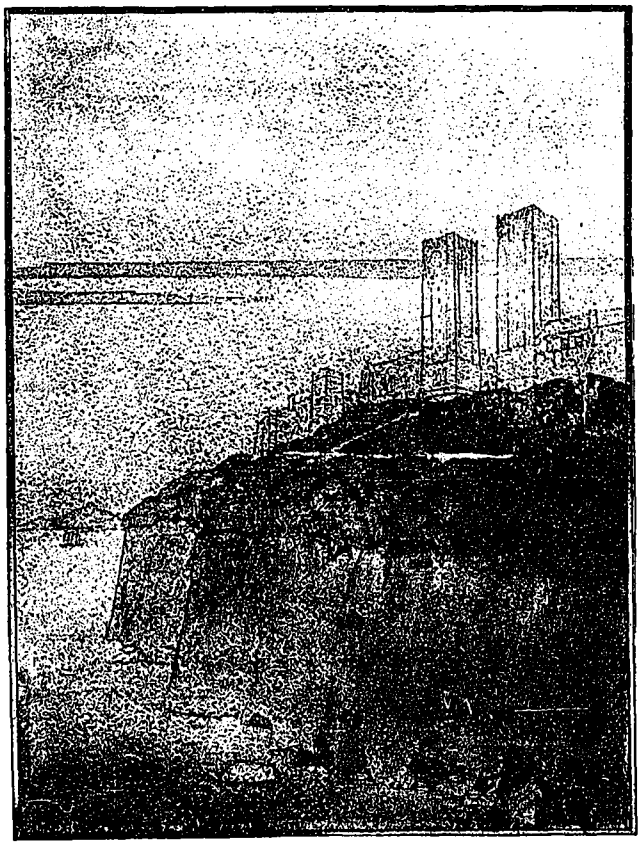
A second scheme was presented which preserves the same vista lines but considers the effective placing of the buildings as viewed from the water approach and the Marine Drive. Accordingly the westerly portion of the ground is utilized for the important structures.

Particular attention is called to the fact that in one plan the power house is located on the cliff. From the economical viewpoint this is of advantage as coal and supplies may be brought direct by water.

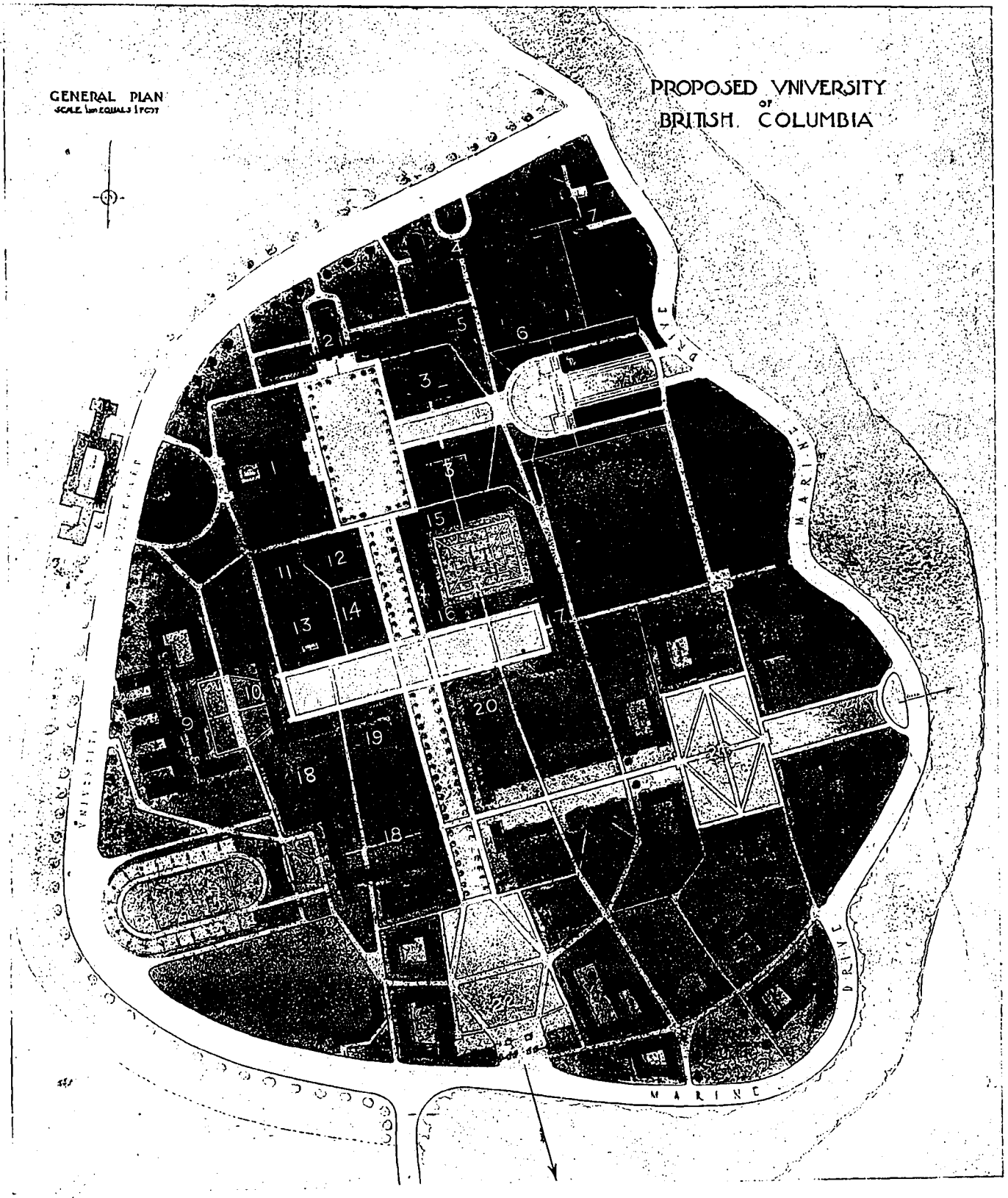
The entry system has been adopted for the dormitory groups in that it is more suitable for male students than the corridor plan. By such an arrangement connections between the various entries are made in the basement only. Each entry or group of six double suites is supplied with one toilet-and-bathroom.

The design suggests the use of red brick and stone for the erection of the principal buildings, but in case variety is desired plaster on brick may be employed with stone dressings. The latter style is to finish some of the less monumental structures.

Thinking it may prove of interest, we are showing in this number several pages of university plans from work being done in the States. Several illustrate new schemes, while others depict a transformation of the old campus grounds.



COLLEGE OF ARTS AND DORMITORY FROM THE SOUTH-WEST.



BLOCK PLAN.

COMPETITION FOR UNIVERSITY BUILDINGS, PROVINCE OF BRITISH COLUMBIA.

FOURTH PRIZE DESIGN BY SYMONS & RAE, ARCHITECTS.

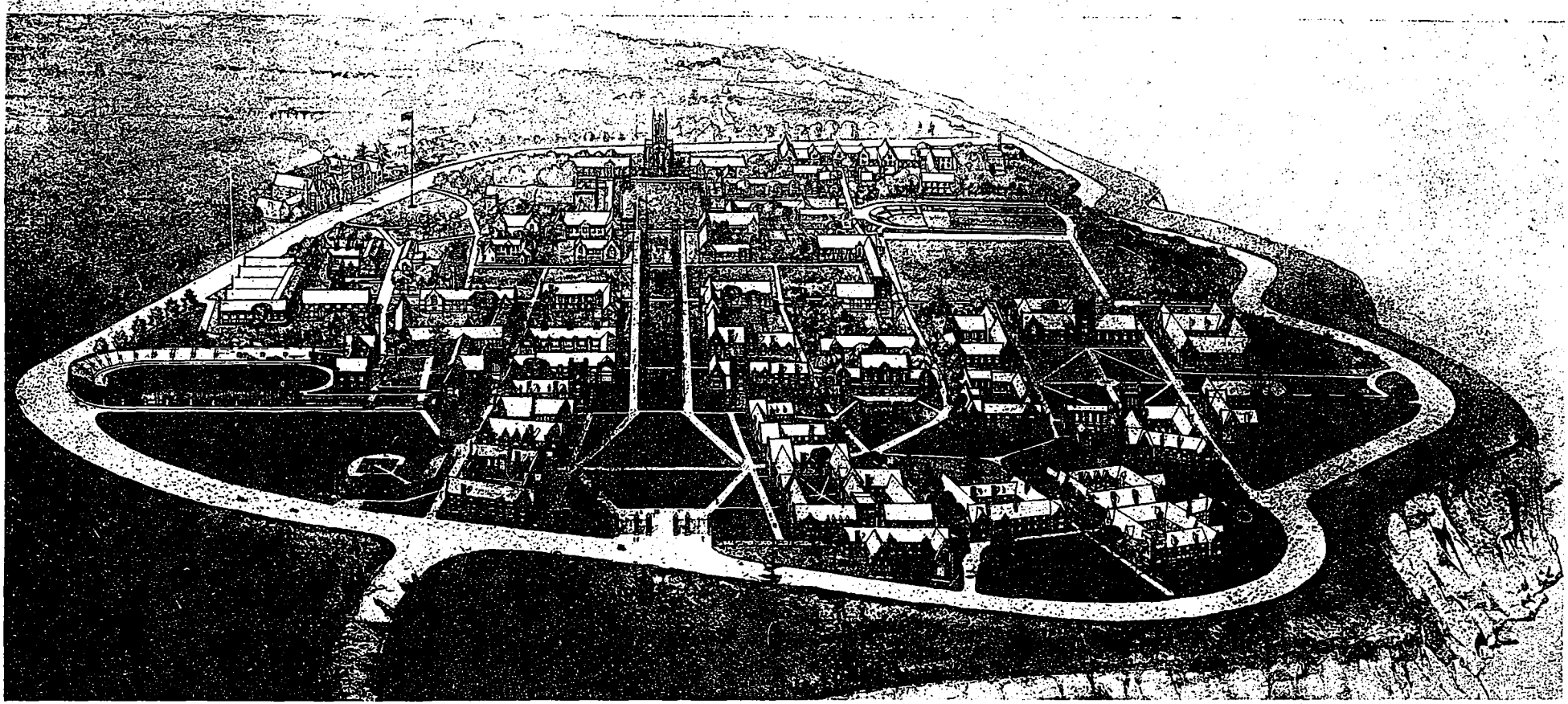
Key to Plan.—1, Administration and Assembly Halls; 2, Library, Chapel and Museum; 3, College of Arts; 4, Medical group; 5, Pharmacy; 6, Dentistry; 7, Power House; 8, Women's College; 9, School of Mines; 10, Chemistry; 11, Faculty Club; 12, Law; 13, Agriculture; 14, Finance; 15, Fine Arts; 16, Biology; 17, Philosophy; 18, Engineering School; 19, Physics; 20, Pedagogy; 21, Theology Buildings surrounding square; 22, Dormitories surrounding square and located to west of it. University Boulevard and marine drive enclose the general scheme.

COMPETITION FOR UNIVERSITY BUILDINGS, PROVINCE OF BRITISH COLUMBIA.

FOURTH PRIZE DESIGN, BY SYMONS & RAE, ARCHITECTS.

PERSPECTIVE.

NORTH ELEVATION OF DORMITORY GROUP.



CONSTRUCTION

A · JOURNAL · FOR · THE · ARCHITECTURAL ENGINEERING · AND · CONTRACTING INTERESTS · OF · CANADA

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H. GAGNIER, LIMITED, PUBLISHERS
Corner Richmond and Sheppard Streets,
Toronto, - - Canada

BRANCH OFFICES:
MONTREAL—171 St. James Street
WINNIPEG, MAN.—13 Royal Bank Building
LONDON, ENG.—17 Cockspur St., S.W.
CHICAGO—People's Gas Building
NEW YORK—156 5th Avenue

CORRESPONDENCE—All correspondence should be addressed to "CONSTRUCTION." Corner Richmond and Sheppard Streets, Toronto, Canada.

SUBSCRIPTIONS—Canada and Great Britain, $3.00 per annum. United States, the Continent and all Postal Union countries, $4.00 per annum, in advance. Single copies, 35c.

ADVERTISEMENTS—Changes of, or new advertisements must reach the Head Office not later than the first of the month preceding publication, to ensure insertion. Mailing date is on the tenth of each month. Advertising rates on application.

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. 6 Toronto, March, 1913 No. 3

CURRENT TOPICS

TWO COMPETENT architectural draftsmen are wanted by Stewart & Witten, architects, Hamilton, Ont. Kindly state experience and salary.

* * *

MODERN SHOW CASE lighting is receiving more and more attention from the merchants as a wholesome means of advertising. William S. Kilmer gives the following points as essentials for the progressive business man: First, the system must give an illumination in the interior of the case which is approximately double that of the general illumination of the store interior; second, the light must be of such a quantity and quality that the goods are shown in their true color and style; third, the interior temperature of the case must not be raised to any appreciable extent, and any increase, however small, must be evenly distributed, as a glass case which is warm in spots is very liable to crack with the first cold draft which strikes the exterior; fourth, the unit of light must be neat and inconspicuous, and permit an easy and thorough cleaning of the case; fifth, general efficiency.

Canadian Architecture*

THE PAPER read before the Royal Institute of British Architects, London, January 20, by F. S. Baker, F.R.I.B.A., was listened to with unusual interest. The members were agreeably surprised at the rapid progress of architecture as depicted by the speaker. Mr. Baker gave his subject life in showing the various types of commercial and domestic buildings by means of lantern slides and photographs. It has given us a better value of the artistic character which is permeating every branch of construction throughout the Provinces, and we feel that the basic principles of true art are being applied in a thoroughly wholesome and practical manner.

The former part of Mr. Baker's address dealt with the general conditions which surround the architectural profession in Canada. The following extracts, taken from the paper, may be of interest to the readers of "Construction" as a summary of many phases already appreciated, but which may never have been considered in their vital importance to the future development of the Dominion's commercial growth.

After an expression of appreciation for the honor bestowed upon him by the Institute, Mr. Baker said: As in England, the system of "pupilage," but without fees, is the most common commencement for the would-be architect. In four of the Provinces—Quebec, Manitoba, Saskatchewan, and Alberta—the title architect is protected by law, and no one may call himself an architect unless he has complied with the law, and qualified by passing certain examinations prescribed by the Act. A fifth Province—Ontario—also has an Act, but, owing to the insertion of the word "Registered" before "architect" by the Government of the day, it has no effect, and anyone who pleases may call himself "architect." The remaining Provinces are all organizing with a view to obtaining legislation similar to that in force in the four Provinces above named. In all of these four Provinces the degree of Associate R.I.B.A. is accepted as a satisfactory qualification for admission to membership at present, and here I may say that the Royal Institute of British Architects is held in very high esteem throughout the Dominion. The universities of these Provinces, including Ontario, have special courses in architecture, and issue degrees.

Owing to the fact that in Canada the builder takes out his own quantities, drawings have to be made very complete, and this has tended to raise the quality of draughtsmanship throughout the country, and, incidentally, gives the student a chance to learn details of the work which an English student does not come in contact with. If this can be said in favor of the lack of quantities, the opposite must be said in the difficulties occasioned the practising architect in dealing with builders, owing to the lack of the system in vogue in England.

At present there are no travelling scholarships in

*From our London correspondent.

architecture, and the necessity for these is becoming more and more apparent. Private "ateliers," in which practising architects of the younger school mostly are patrons, are available for the students in many of the large towns during the winter.

It has been said that "the next fifty years will decide the character and type of Canadian architecture," but, having regard to the extreme youth of the country, such an event would seem to be most unfortunate, and I for one would like to feel that the students of fifty years hence will have something to strive for in creating a greater excellence than the art will then have reached in Canada. It should be said, however, that the Classic orders are fairly well understood, the value of proportion appreciated, and the application of ornament and mouldings handled in a conservative way.

Mr. Baker showed how the extreme changes in the climatical conditions necessitate careful precautions in all branches of the building trades. In referring to the natural products, the vast resources of the Provinces were brought vividly to our attention and considerable emphasis was laid on the fact that Canada would soon be able to supply all her needs in this direction. The reference to marbles, stones, etc., was as follows:

Splendid marbles are now procurable suitable for almost any purpose, and I will not be surprised if when these quarries are fully opened marbles will be found which equal any which have been produced on the continent of Europe. In the eastern part of the country very fine granite is obtained, and also in Central Ontario. Good limestones are quarried in the Eastern Provinces, and throughout Ontario, and the West in many parts.

The Portland cement produced in Canada is excellent; everywhere fine grit sand is obtainable, and good limes are burnt in nearly all districts. Canadian bricks are well known for their excellence, but the production of terra-cotta, other than hollow blocks, for fireproof construction work, is limited. Steel sections are rolled from Canadian ore in nearly all the large centres. Castings in metal of good quality are easily obtainable. Canadian woods are well known; white pine, red pine, and spruce, white and red oak, birch, maple, walnut, cherry, butternut, white-wood, and cedar are the commonest varieties. Wood of all kinds is becoming more and more difficult to obtain, and the price is advancing, with the result that what is known as "fireproof construction" is becoming more and more popular. Sheet metal, galvanized iron, and copper are almost entirely imported. Sheet lead is, of course, scarcely used for flashing purposes, owing to the large range of temperature which prevails. Paints and oils are produced on a large scale, and of excellent quality, but the high grades of glass are as yet mostly imported. Sanitary pipes and fittings, as well as fixtures, are manufactured, but a large quantity is also imported. Gas and electric pipe, fittings, and fixtures, with all kinds of glassware, are made in most localities.

Considerable interest was shown to Mr. Baker's answer of the article on "Imperialism and Architecture."* He referred to the statement that U.S. American "ideals and methods of expression" are being appropriated by Canadians and granted that the Canadian architects have been experimenting along U.S. American lines in the designs of all classes of buildings. Mr. Baker qualified this point with the following comment: "I can say definitely, however, that American ideals and methods of expression are not being adopted any more than those of any other country, except in so far as they apply more conveniently to conditions in Canada. In the matter of design, I believe I am right in saying that the British influence is much the strongest one affecting Canadian architects, who, generally speaking, are strong Imperialists." As for the fact that "in Vancouver, Toronto and Montreal, the largest and handsomest buildings are the works of American architects" it was forcibly denied. The statement brought forth the following comment: "I know of only two large buildings in Montreal which have been erected in the last twenty years under U.S. American architects. In Toronto, strange as it may seem, the Anglican Cathedral of St. Alban is the only building I know of which is in the hands of a U.S. American architect. Winnipeg has one bank and one railway terminal designed by New York architects. Vancouver may have a building which has been designed by a U.S. American architect, but I am not aware of its identity. There is no reciprocity between the architects of the United States and Canada, and both are subjected to practically prohibitive Customs tariffs. In the above I do not include architects who have permanent offices in Canada as well as in New York; but if they were included, and I say it with all modesty, the works of Canadian architects far away surpass those few buildings which have been erected by foreign architects. Canadian statesmen, benefiting by past experiences of Great Britain and other nations, have taken precautions which make it practically impossible for foreigners to exploit the opportunities which Canada presents in any way except that which will most benefit Canada. Thus it is that many manufacturers of building materials residing in foreign countries and wishing to avail themselves of the Canadian market have found it desirable to establish a factory in Canada."

Reference was then made to the work already done in the field of architecture. Among other notable structures were described the Federal Government Buildings at Ottawa, and those which house the Legislatures in each Province; the Provincial buildings at Victoria, city halls, post offices, court houses, public libraries, hospitals, art galleries, churches, etc.

The following types of buildings were then taken up, which demonstrate clearly the rapid progress that is being made in the various phases of commercial life.

*Printed in "Construction," November, 1912.

Canadian shops are, generally speaking, of a fairly high class, and show a good deal of skill in their planning and arrangement. In contra-distinction to the English custom, the authorities in Canada permit huge shops to be erected as one room to each floor, and the effect of this in the large stores, with their wealth of stock, is bewildering. The newest of these shops are, of course, of fireproof construction, and are fitted with automatic sprinkler installations, and every other known precaution against fire is taken.

The wholesale warehouse is a very distinct type of building, and is usually a fine structure. Lately these have been built of fireproof construction, reinforced concrete, or steel frame with tile or concrete casing. Most of them are fitted with automatic sprinkler installations and every other known method of preventing fire. In this way the cost of insurance on buildings and their contents has been reduced to a nominal sum, even in the most congested districts of the large cities.

Perhaps the most ornamental buildings throughout Canada are the banks and their branches. There are some thirty chartered banks in Canada, and many of these have upwards of 300 branches each. The designing of these banks has brought out perhaps more good architecture than any other type of building in the country, as so much work of a high class is involved.

The author also referred to Canadian office buildings, railway stations, hotels, houses, theatres, educational buildings, and dwellings of the people. The dwellings of the people are most creditable. Although Canada is a wood country, wooden houses do not predominate; they are mostly of brick or stucco. Many of those which are apparently brick have a wood frame, with a brick veneering of the thickness of half a brick, and this type of house is a wholesome and satisfactory one.

This report would not be complete without the valuable discussions entered into by the members present which are presented herewith, in which a high Imperial note is evidenced.

The President, Mr. Reginald Blomfield, A.R.A., said they had had a most vivid and interesting paper from Mr. Baker, and were fortunate in having present two distinguished gentlemen whom he would call upon to propose and second a vote of thanks. One was Mr. Herbert Baker, who had a brilliant reputation in South Africa in virtue of his distinguished work, and who had also had the courage and the generosity to establish a Studentship at the British School at Rome for the future South African architect. They had also with them Mr. J. G. Colmer, a very distinguished Canadian, who had done a great deal for Canada in this country. He would therefore call upon Mr. Herbert Baker to propose a vote of thanks, and Mr. Colmer to second it.

Mr. Herbert Baker (F.) replied that it had given him very great pleasure to be present to hear the most interesting lecture just delivered to them, as well as to propose a vote of thanks to his namesake from across the seas. Mr. Baker had shown most ably how very progressive Canadians were in their architecture. But this was only to be expected by those who knew how very up-to-date, energetic and progressive Canadians were, and how they had as their immediate neighbors the most energetic of all nations, who had shown, particularly in their architecture, such Titanic powers. But he was glad to hear from Mr. Baker that the Canadians had no more intention of being swallowed by these Titanic neighbors in their architecture than in their nationality. He was one of those who thought that the principle "Art for Art's sake" was a very dangerous one; it might take them along the "primrose path of dalliance," but would not carry them far up the "steep and thorny road to heaven." And that heaven or ideal before them was to interpret or give expression to the highest national feelings of their race and nationality. And if Imperial Federation should ever become a real fact—and Canada had recently shown by her great gift of Dreadnoughts how very earnestly she was striving to this end—then architects all over the Empire must be prepared by study to give expression to those ideals. If they were to have the same unity in their architecture as they hoped soon to have in their federation of nations, it did not mean that either in politics or in architecture they must give up their separate national individuality; indeed that would be quite impossible. Climatic reasons alone forbade. He did not think that it was generally sufficiently realized in this northern climate how great the effect of climate was upon architecture. He did not think that sufficient importance had been given to it in the text-books. They knew the saying of Italians that "only dogs and Englishmen walk in the sun." He thought that in the books one reads on architecture the authors had not got beyond "the walking in the sun" stage; they looked upon the sun as simply a thing of enjoyment, and did not realize that most southern nations had worshipped the mid-day sun as an evil deity. When one lived and worked under a semi-tropical sun one realized the dominant influences it had had upon architecture. To his mind, Gothic architecture was not developed so much as text-books made out through the special characteristics or the "crusading spirit" of northern nations, although these no doubt had a large effect, but also entirely by the demand for letting sun and warmth into buildings. So that the effect of climate, particularly in the southern dominions—perhaps less in Canada—together with the special needs and individuality of the people, would give a distinctness and individuality to its architecture. The question was how best to get this Imperial unity and spirit into our architecture. He thought it could be done largely in two ways; first, through their Mother Institute, which had come to be the real mother to nurture all its children; and, secondly, through the British School at Rome. He should like Mr. Baker to take back to Canada an

idea of the value of that school. Some four or five architectural students from South Africa had been receiving the advice and hospitality of the school. Any British subject who was a genuine student of art could be made a member of the school, but although there had been four or five South African students there, there had been no Canadians; and he hoped Mr. Baker would take back this fact and explain it to his brother-architects in Canada. The best way was to get at the students, and he should like to see scholars from all parts of the Empire coming to study in Europe—they must often come to the Old World—under the direction of the Mother Institute and of the allied British Schools at Rome and Athens. And it would be good for all architects, young and old, to pay a pilgrimage every few years to St. Paul's, and then to the Pantheon, to stand under those majestic domes, so as to adjust their sense of scale. He hoped, therefore, that Mr. Baker would take back this message, and that in a few years they should hear of Canada making a present to the Mother Country of three fine young architectural student Dreadnoughts!

Mr. J. G. Colmer, C.M.G., in seconding the vote of thanks, said he had no hesitation in expressing his satisfaction at the piece of work which had been presented to them that evening by Mr. Baker. It gave a very admirable illustration of what architecture had done and was doing in Canada, and he believed it would give as much satisfaction in Canada as it had done in that room. Canada, it was true, was a very young country, but, as they had seen in Mr. Baker's illustrations, Canada had reason to be proud of its buildings. No one could go there and travel from east to west without being impressed with the character of the buildings, both public and private; they would be found to compare favorably with the buildings in towns and cities of similar size whether in the United States or in the United Kingdom, and that was saying a great deal for a country whose history was so recent as that of the Canadian Dominion. Mr. Baker had spoken of the opportunities for architects in Canada. That was a matter about which he had had some experience; he had known many young architects go from this country with letters of introduction, who had seemed to fall on their feet at once, and had not been long in making reputations for themselves and in making money, which was sometimes more favorably regarded even than reputation. What he liked in Canada was that there was no professional jealousy there. If a young architect went there he was welcomed, and given every assistance, counsel, and advice, and was regarded as an additional factor in helping the building-up of the country of which the Canadians were so proud. Mr. Baker had mentioned the absence of art galleries. That, unfortunately, was true, but in a young and vigorous community like Canada, where they were busily engaged in making money and developing their country, they had not so much time to devote to what they regarded as luxuries as people in older countries. But they had art galleries, and Mr. Baker would confirm him, that both in Montreal and Toronto, as well as in some of the other cities, there were magnificent collections of pictures held by private persons. Many masterpieces were now in Canada; and he should like to think that those pictures, being there, would not only remain there, but would increase in numbers, and that they would form by-and-by a splendid nucleus for a great art collection in Canada.

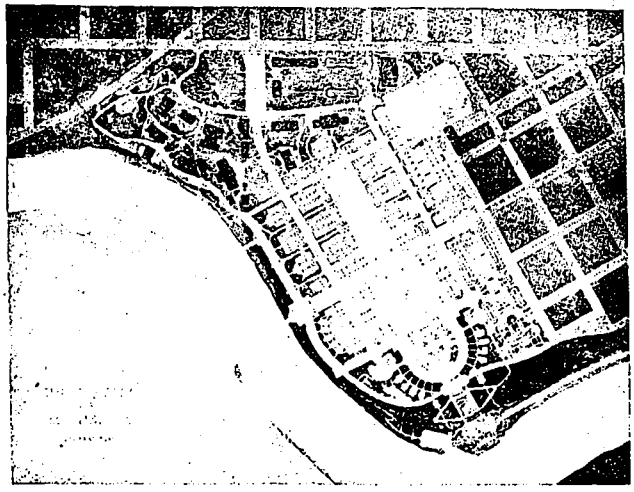
Mr. T. H. Mawson (Hon. A.): In the matter of work I may claim to be as much Canadian as an Englishman. I am, therefore, delighted to meet Mr. Baker on this side of the Atlantic, for I know from personal experience what a salutory influence his work, his enthusiasm, and, may I add, his personal charm exercise over the architecture of Canada. Great art, it is said, is only possible when great ideas are patent and the prevailing atmosphere. Our lecturer is a man of great ideas, and for this reason I regret that his overmastering modesty has led him to withhold views of his own work. Canada is truly a country of pulsating energy where men of vision, the true pioneers, are ever building castles in the air, whilst others are laying broad foundations upon which these dreams, materialized, may firmly and safely rest. Do you remember that fervently eloquent address which Mr. Forbes Robertson delivered some time ago before the London Society in which he mentioned the Artist Cardinal who had told him that Greece developed her highest forms of architecture in her colonies? History, he said, promised to repeat itself in *our* colonies. I think Mr. Robertson's statement was meant as a warning and yet as a hope. So far as Canada is concerned, there is great hope, but I am bound to confess that I detected in Mr. Baker's address a disturbing element when he spoke of preference for English ideals. I wonder if to-day, or the English traditions we so easily laid I misunderstood him? Does he mean the ideals of aside? I am sure that every Imperialist (if he be also a patriot) would desire, above all things, that Canadian architects should go for their inspiration to that which exhibits the most consummate skill in its planning, the most scientific form of construction, the ripest scholarship, and the highest imaginative qualities rythmically expressed. These are qualities which are not necessarily and wholly British possessions. Canadian architects are to be trusted, however, for every office of recognized standing possesses its well-selected and well-ordered library, housed in a separate room, which is the common room for principals and staff. Any office which centres round so much learning is sure to turn out excellent and inspiring work. Speaking as an onlooker and without that wide experience possessed by Mr. Baker, I should have thought the influence of the McKim and the Ecole des Beaux-Arts traditions were stronger than he seems to admit, and that the work of American architects, including the large number of railway stations designed by New York architects, and also the Gothic work of Cram and Ferguson, especially in the cathedrals at Halifax, Nova Scotia,

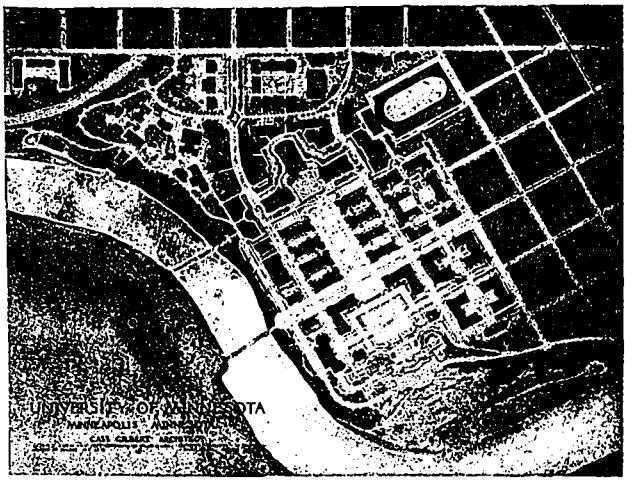
and at Toronto, were also strong influences. I admit, however, that it was a perfect joy to me to see our Collegiate Gothic handled in such a masterly way by firms like Sproatt & Rolph, of Toronto, and Brown & Vallance, of Montreal, in the Universities of Toronto and Saskatoon. Also to see the fine work of the brothers Maxwell at the Regina Parliament Buildings, and the fine domestic work being done by Mr. Baker himself and others, like Mr. Meredith of Ottawa, and Mr. McClure of Victoria, and our friend Mr. Lawrence Gotch in Calgary. Mr. Baker and I are mutual admirers of the strongest of all influences now operating in Canada. I mean the work of that delightful man and great artist, Mr. Frank Darling, of Toronto, one of whose banks has been shown on the screen and met with your applause. It is by work of this high excellence that Canadian architects are wresting commissions from American competitors; and, may I add, it is by ability to do equally good work that young English architects will find a foothold in the Dominion of Canada. Just one word about the craftsmanship of Canada. I do not know any country where one can see such perfectly beautiful brickwork or where patent stone is treated in such an honest and inoffensive way. Woodwork is most excellent; half-timber work, however, has never seemed to me to reach the quality of English work, but this is probably more the fault of the architect than the craftsman. I think metal casements are rapidly coming into use in Canada; in fact I know of one firm alone who have paid an English firm $78,000 for casements alone during the last three years. Westmoreland slate is beginning to be used and should eventually oust the American slates. Much of the metal-work is charming, both in design and craftsmanship; sanitary fittings, central heating and vacuum cleaners, and every domestic labor-saving appliance has reached a higher degree of excellence than at home. Garden design, "the greater perfection," as Lord Bacon says, is little understood; but now that Canada has grown "to the age of civility and elegance," the art of garden-making will soon take its place and give the ideal setting to many truly ideal homes. Mr. Baker says that everywhere in Canada great interest is being taken in city planning. I, together with my friends Mr. Unwin and Mr. Vivian, have had some little share in fomenting an anxiety for civic betterment, and I am, therefore, delighted to be able to confirm this statement; and let me say in this connection that the Dominion owes a great debt in this matter to the influence and active support given to the movement by the late Governor-General, Earl Grey. They are also most fortunate in having in H.R.H. Field-Marshal the Duke of Connaught another Governor-General who is deeply interested in city planning and everything which has to do with the development of a national and characteristic architecture. May I, in conclusion, suggest that this Institute might organize a trip to Canada? They would find true British hospitality and much to encourage them. In short, the trip would prove the most perfect mental tonic.

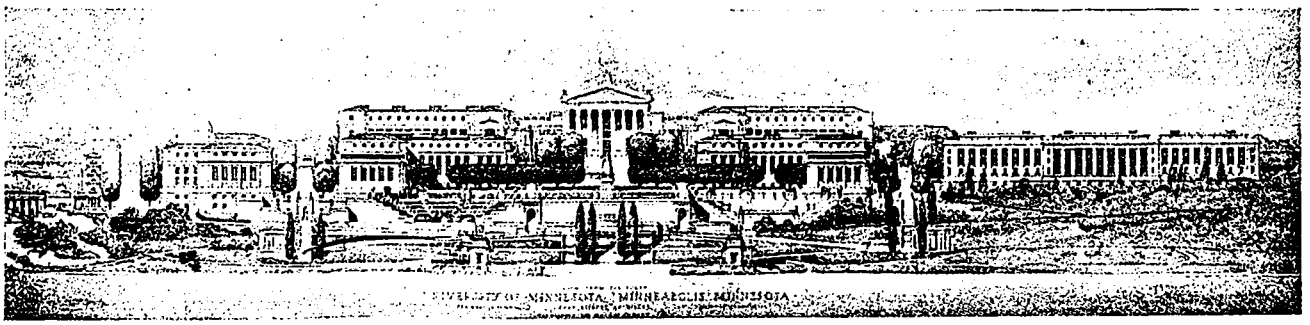
The President said they had had a most interesting paper from Mr. Baker, and were very grateful to him for having crossed the Atlantic to tell them about the architecture of their kinsmen beyond the seas. It was clear from his account of what was being done in Canada that their colleagues there were addressing themselves to the problem of architecture in a very practical and strenuous spirit; they were going into the essentials of the matter. In their banks, their public buildings, their hospitals, they were determined to have something which would answer the purpose, and that, after all, was what architects had to strive for, whether in the old countries or in the new. He gathered from what Mr. Mawson had said that Mr Baker was himself responsible for some beautiful buildings which his modesty prevented him from showing illustrations of. There was of course a point at which such a country as Canada, with all its splendid promises, must be, to use a vulgar phrase, "hung up" because it had not the tradition of architecture, and it was there that we of the Old Country might be able to help. Of course, we ourselves were rather like the Prodigal Son; we had had not only one tradition, but several, and we have squandered them all. And now our business was to build up this tradition of architecture. But even though we were prodigals and bankrupts, and several other things, we could not escape the consciousness of a great historic past in architecture. It was in that consciousness that the hope of the future of architecture in this country rested; and he was sanguine enough to think that that hope was not without foundation. Mr. Baker had said many things which they had listened to with great interest, and some which they all welcomed very heartily. He told them —and Mr. Herbert Baker of South Africa had confirmed him on the point—that their Institute was regarded with very high esteem, and even affection, in those two great countries, Canada and South Africa. That was very welcome to them, because the Institute had to weather many storms, and might have to weather many more; but this loyalty of far-away countries, from those who were gone from them and were practising architecture across the seas, was one of the most encouraging things he knew. Mr. Baker also told them that in his opinion the most predominant influence in Canadian architecture was the British influence. That, again, was very encouraging. It was very significant that both Mr. Baker and Mr. Nobbs, the Professor of McGill University, should have urged the same appeal for some collections of replicas and reproductions of the best work that had been done in this country in the past, something such as they had in the Trocadero in Paris of the great French works. That was a very important appeal. We had the Architectural Museum at Tufton street, but every one would admit that that was inadequate, and he

thought we should do what we could in our own way to help this appeal. Mr. Herbert Baker had pointed out the splendid patriotism and genuine feeling in Canada with regard to the Mother Country. This was more than we thought possible a few years back, but now it was a magnificent fact, and they should do what they could to help in this matter, and he hoped the appeal would not pass unheeded at Whitehall. They had heard Mr. Baker throw out certain speculations as to the future of Canadian architecture during the next twenty years. He regretted to say that he differed from one of the speakers; he did not think the path indicated by that speaker was one he should hope to see in the future architecture of one great member of this Empire. He thought the neighbors of the great Dominion had possibly over-reached themselves, and had fallen a little too impetuously into the net of modern French architecture, because, he need hardly point out, modern French architecture was not the same thing as old French architecture. It was a very different thing, although he should be the last to disparage the work of his colleagues and friends across the Channel, some of whom did splendid work. But the modern vernacular of French architecture was not a thing to be adopted as the basis of a great tradition. They hoped that the future architecture of Canada would be founded upon an old tradition; whether French or English was for their colleagues in Canada to determine. If they followed those lines, he did not think they would have any difficulty, with their great ability and force of character and splendid possibilities, in establishing a great tradition of architecture. He did not doubt that that tradition would be perfectly elastic and adaptable to all the requirements of modern civilization. And he would draw Mr. Baker's attention once more, as Mr. Herbert Baker had done, to the Imperial aspect of the case—viz., to the new British School at Rome. It was one of the most important departures in architectural tuition in the last fifty years, because if properly handled much might come out of it, and they should hope to see some brilliant young Canadians at work there.

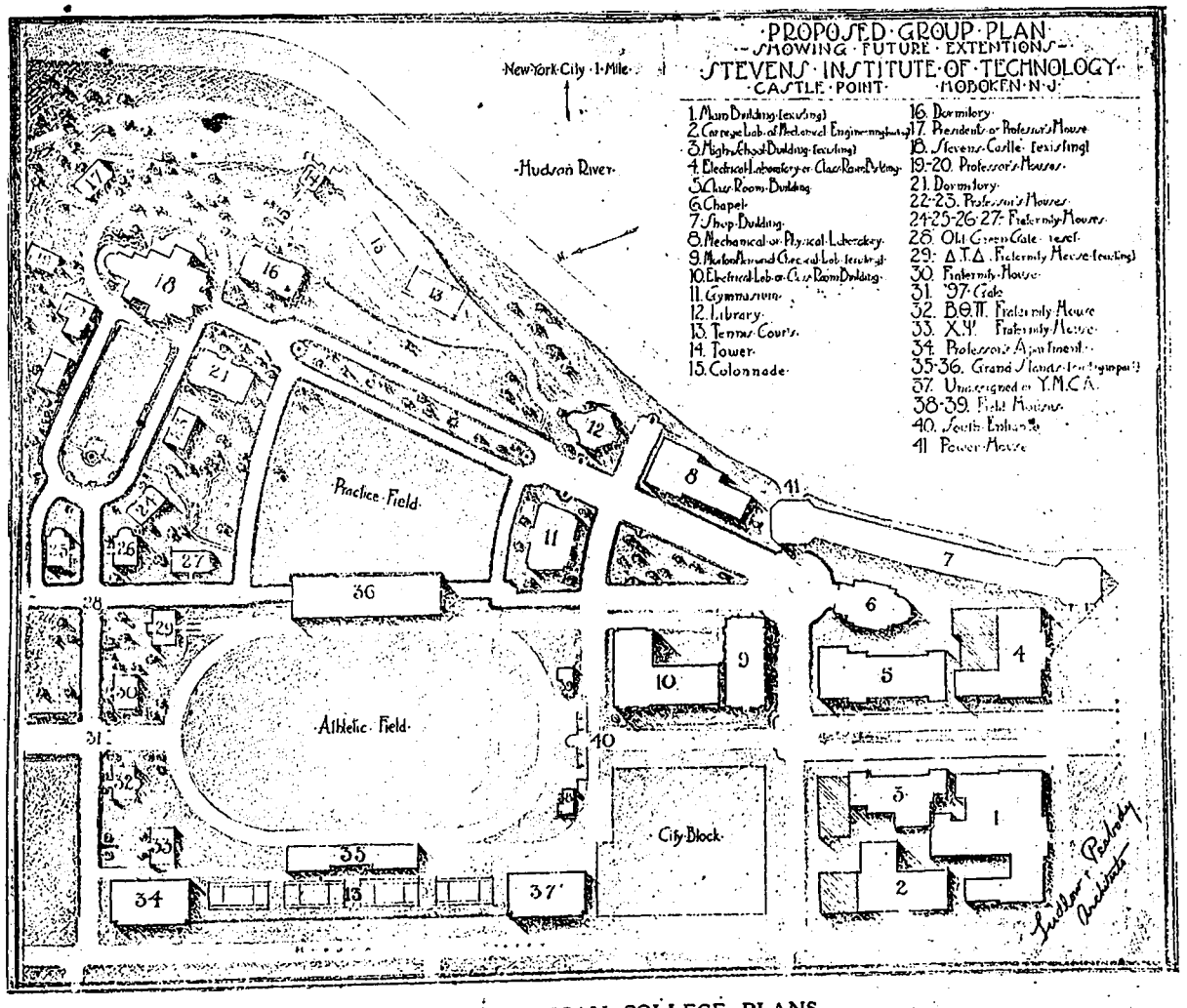
Mr. F. S. Baker, in reply, said: I thank you for Canada and for myself for the kind and hearty reception which you have given my paper. If I have been able to tell you anything about the country which is so far away from you, and which probably thinks more about you at home here than you have time to think of it, I shall feel very glad. I commend it to your study, because it is a large district, and there is no doubt its development will go along the lines that the people who go to live there outline for it. It has been most interesting for me to-night to meet Mr. Herbert Baker from South Africa. I am sorry I cannot claim him as a kinsman, but I feel very proud that a man of the name of Baker should be such a distinguished gentleman. He comes direct from Rome, where he has been closely in touch with the new British School of Architecture, and I shall certainly make it my duty, on going back to Canada, to bring full particulars of the scholarships and the opportunities presented by that school to the members and students of the profession in Canada. You must realize that our students are few in number, and are not well off; and it is not easy for them to contemplate the spending of a few years in Rome. Most of them are boys who are making their own way, and are not the sons of rich men. I am afraid the sons of rich men in Canada look for some easier work. What Mr. Baker said about climatic conditions is true. It would be absurd, for instance, to see a delicate Spanish cornice hanging with great icicles or piled up with snow; and there are many things possible in Spain and South Africa which would not be possible in Canada. And I think that is what most impressed Mr. Richardson after his studies in France and Spain, namely, the necessity of using materials in America in a way suitable to the climate. That is why we have those unusual works which were designed by him. Mr. Mawson spoke of the McKim, Meade & White office and its effect on Canadians. But whilst the highest tribute must be paid to them individually and as a firm for the wonderful buildings which they have produced, there is not in Canada a feeling that the school of McKim, Meade & White is an altogether desirable one. There is certainly there—and our president's remarks have brought it to my attention—very clearly the desire to follow the tradition that goes back beyond any result which McKim, Meade & White have attained. There is arising now in Canada a collegiate Gothic architecture—and there are some photographs amongst those I brought over which show its commencement, and I hope indicate a good future for it—which undoubtedly is based upon the sound tradition of perhaps the best period of English architecture. I think many Canadians accept the idea that not only in architecture, but in almost everything, England has experimented, and finally arrived at a conclusion which might be called a conservative conclusion, and having tried all, has adopted that which seemed best to her. We have undoubtedly some good private art collections, but they are not available for the student, and I do not hesitate to say that adequate buildings will be forthcoming when the collections can be obtained. I think we have to look to England for assistance in obtaining those collections. The Ecole des Beaux-Arts has been spoken of to-night as if Canadians were strongly influenced by it. I think it is largely owing to the work of Professor Nobbs that that school, the excellence of which is universally accepted, is not held in higher esteem in Canada in its results than is the sound training obtainable in England. It is recognized that whilst the old French work was magnificent, the modern French work is not so much to be admired, nor are, in my humble opinion, the modern French methods of draughtsmanship. Something straightforward, something plain and useful and sensible, is what the Canadian is always looking for. If he can get the direct result in a direct way, that will convey without loss of art the correct idea to his critic, that is what he wants.



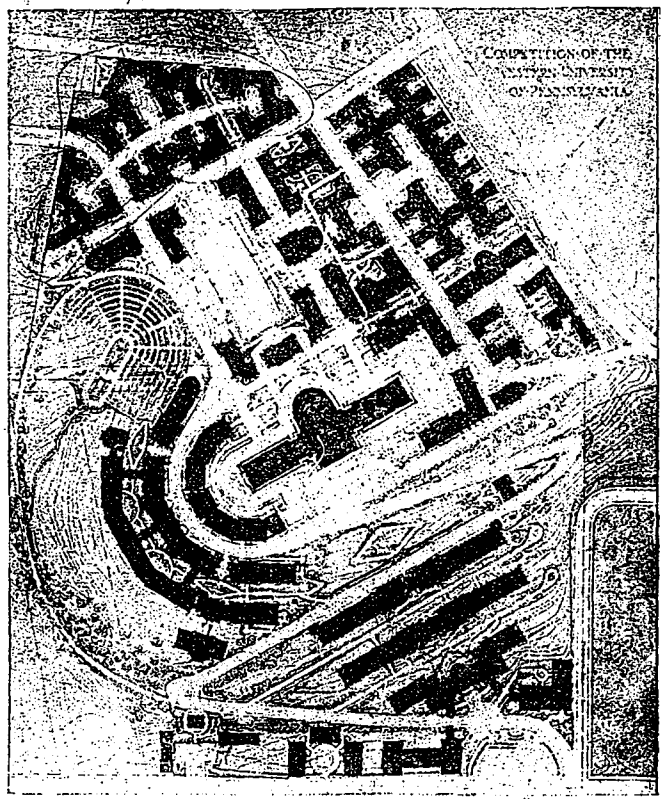




UNIVERSITY OF MINNESOTA, MINNEAPOLIS, MINN. CASS GILBERT, ARCHITECT.

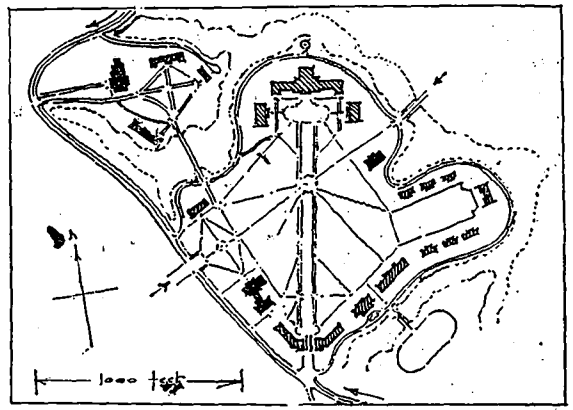


RECENT AMERICAN COLLEGE PLANS. (From the Brickbuilder.)

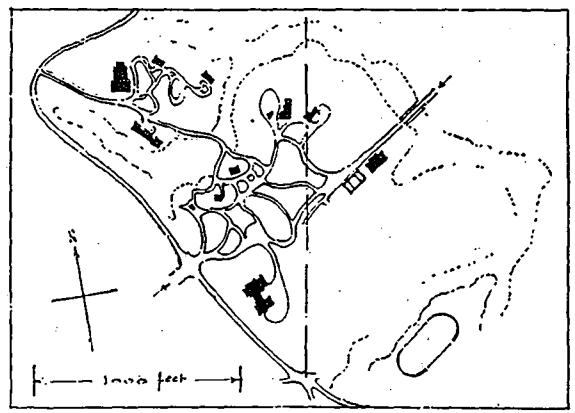


WESTERN UNIVERSITY OF PENNSYLVANIA, PITTSBURGH.

PALMER & HORNBOSTLE, ARCHITECTS.



PLAN OF EXISTING BUILDINGS.



PROPOSED PLAN.

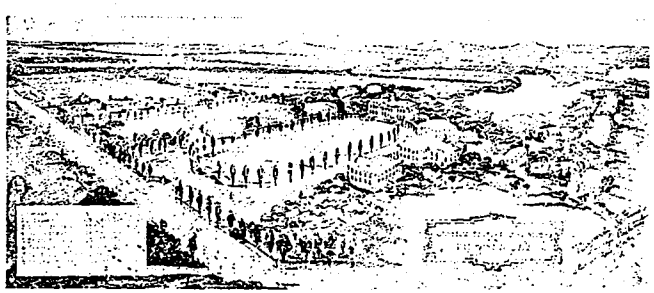
LAKE FOREST UNIVERSITY, ILLINOIS.

MORRIS & MANNING, ARCHITECTS.

PRINCETON UNIVERSITY, PRINCETON, N.J.

RALPH ADAMS CRAM, ARCHITECT.

Future buildings dark, showing development on original central axis, with groups and quadrangles to right and left. An irregular campus with present lines of circulation retained.

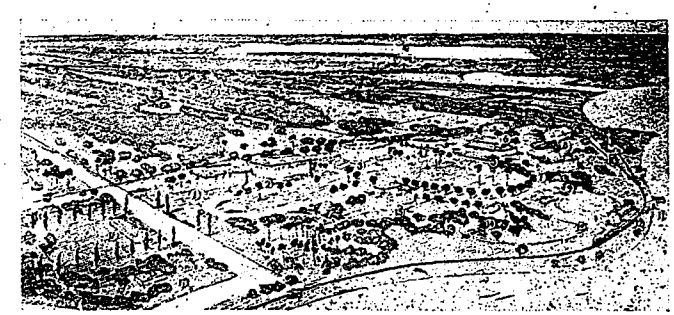


PIEDMONT COLLEGE, DEMOREST, GA.

BEVERLY S. KING, ARCHITECT.

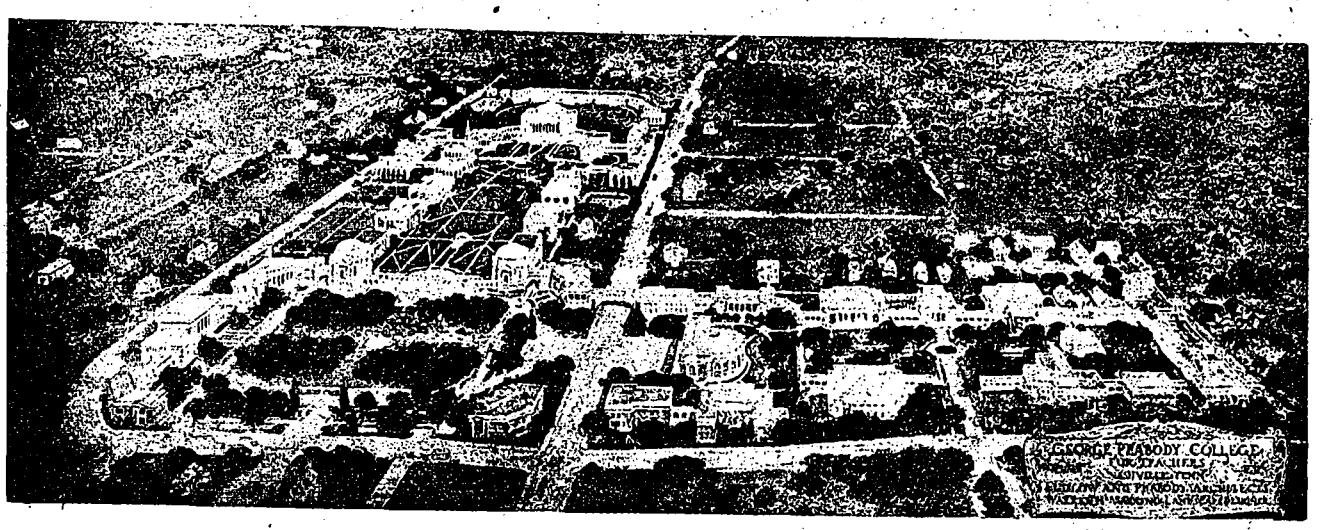
RECENT AMERICAN GROUP PLANS.

(From The Brickbuilder.)



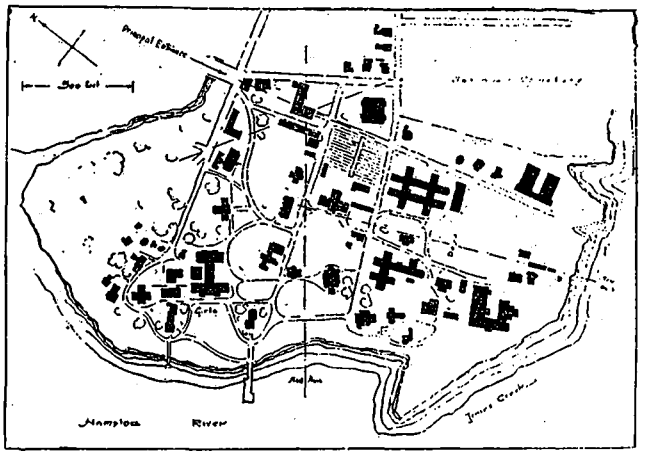
ROLLINS COLLEGE, WINTER PARK, FLORIDA.

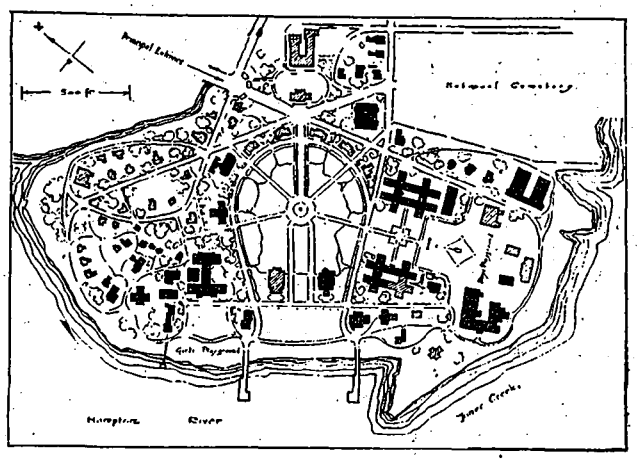
WHITFIELD & KING, ARCHITECTS.



GEORGE PEABODY COLLEGE, NASHVILLE, TENN.

LUDLOW & PEABODY, ARCHITECTS.

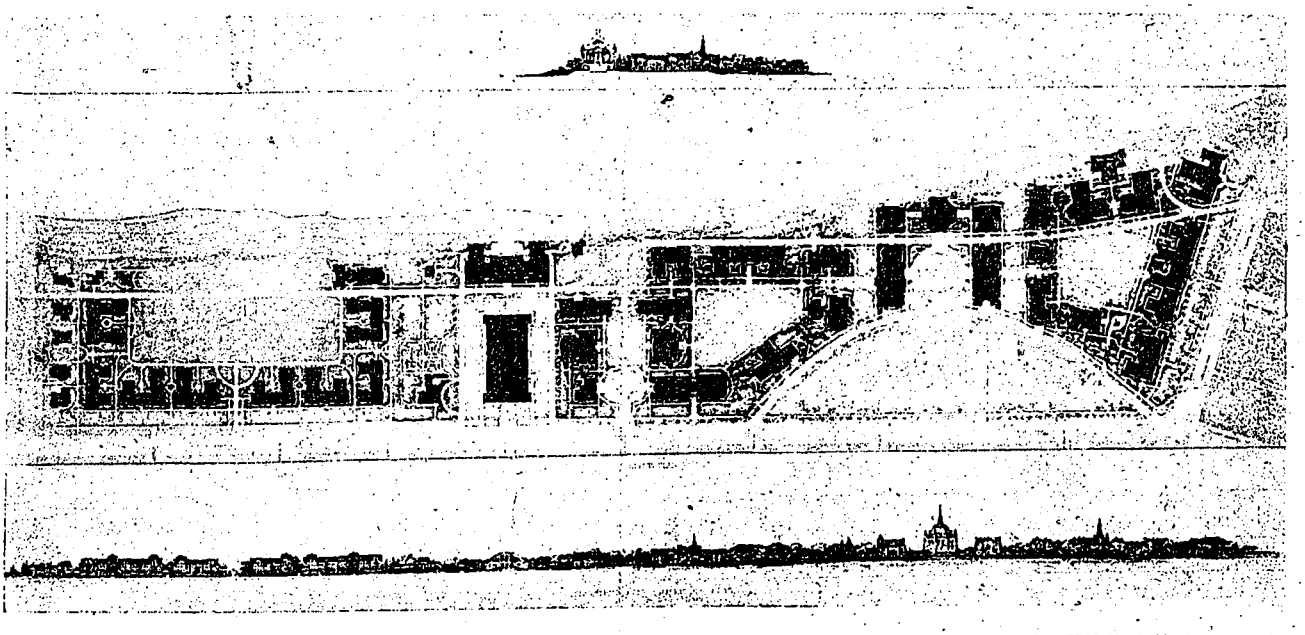




PLAN OF EXISTING BUILDINGS. HAMPTON INSTITUTE, GEORGIA. PROPOSED ALTERATION.

CHARLES S. PEABODY, ARCHITECT.

Plans in solid black of proposed alteration to remain. Those hatched indicate future development.



(From The Brickbuilder.) NORTHWESTERN UNIVERSITY, SHORE OF LAKE MICHIGAN. PALMER, HORNBOSTLE & JONES, ARCHITECTS.

RECENT AMERICAN COLLEGE PLANS.

R. A. PAUL, C.E., of Toronto University, has been appointed manager of the Frid-Lewis Company's office at Saskatoon. Mr. Paul enters upon his new work with considerable experience, having been associated with the Everett Clark Co., of Chicago.

* * *

THE NEW SCHEDULE of fees for building permits at Regina have practically paid one-half the expenses of the building department. Up to July of last year a flat rate of fifty cents was charged for every permit. Since then the amount is based on the cost of the completed work: fifty cents for buildings costing $500 up to two dollars for a $5,000 structure, with ten cents added for every additional $1,000.

* * *

H. W. JOHNS-MANVILLE CO. announce the appointment of Mr. C. L. Wheeler as traveling representative in their Atlanta territory. Mr. Wheeler is an electrical engineer of practical experience and formerly covered the Southern States for various large electrical and jobbing concerns. He will devote his attention to the well-known electrical products of the Company, particularly "Noark" fuses, service boxes and protective devices, electric railway supplies, J-M fibre conduit, vulcabeston and other molded insulations, J-M electrotherm heating pad, Frink and J-M Linolite lighting systems, etc.

* * *

AT THE ANNUAL convention of the American Association of Manufacturers of Sand-Lime Products, held recently in Toronto, the following officers were elected: President, S. O. Goho, Harrisburg, Pa.; vice-president, F. B. Allan, Toronto; secretary, W. G. Plummer, jun., Buffalo; treasurer, John L. Jackson, Saginaw, Mich., and an executive of five officers representing the various divisions of the association: Canadian, G. Sylvester, Calgary; Western, E. G. Chapman, Minneapolis; Eastern, W. M. Birchfield, Rochester; Central, L. W. Penfield, Willoughby, Ohio; and Southern, H. H. Tift, Tifton, Ga.

* * *

THE RECENT CONVENTION of the Brandram-Henderson Company at Halifax was the most successful conference yet held between the heads of the firm and the travelling salesmen. The purpose of the gathering was more than realized. The views of the travelling men, together with the imported ideas of the firm, helped to unite the various forces which are already a unit in their organization. In addition to the banquet at the Halifax hotel the men were tendered a theatre party at the Academy of Music. Such conferences augur well for the well directed plans of the company and should prove a big incentive to the managers and salesmen alike.

THE VAST NUMBER of large commercial buildings contemplated for the coming year predicts unusual activity in all branches of building trades. Last year proved a record breaker, but from present indications every Canadian city will eclipse all former prosperity. Vancouver, in addition to completing the Vancouver Hotel, the new C.P.R. station and office buildings, will erect two first-class theatres costing $1,000,000, several factories approximately $100,000 each, swimming baths worth $125,000, new schools to the amount of $275,000. Winnipeg will have a new twelve-story office building to cost $900,000, new school buildings totaling a sum of $1,000,000, a Presbyterian church amounting to $175,000, and a steam heating plant for $4,000,000. Montreal will spend $4,000,000 for the amusement park on Back River, and a new building for the Sun Life worth $1,300,000. Toronto is to have the largest religious publishing house in the world in the new Methodist Book Room $1,000,000 structure, in addition to the twenty-story edifice for the new Royal Bank, which will reach the height of 250 feet and be the tallest building in Canada. Ottawa has a number of commercial structures in prospect, as well as a new Customs building, and a possibility of a competition being held for the Departmental buildings, besides important civic improvements. Victoria has contracts for several new office buildings averaging one-half a million, school buildings amounting to $260,000, and several large residences. Calgary will construct a number of large warehouses, a $500,000 theatre, filtration plant, water tower, office structures, etc., and witness the rebuilding of the meat packing plant recently destroyed by fire. Saskatoon has plans prepared for office buildings to house Isbester & Pretty, C. N. Express and Telegraph Co., G. W. Furniture Co., Sons of England lodge, and the Studebaker Co., a new $500,000 post-office, $90,000 concert hall, hospital, Catholic church, apartments averaging $75,000, and a concrete bridge costing $343,000.

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Metal Shingle and Siding Co.
Noble, Clarence W.
Steel & Radiation, Ltd.
Pedlar People, The.
Trussed Concrete Steel Co.

Conduits.
Conduits Co., Ltd.
Pedlar People, The.

Contractors' Machinery.
Canadian Fairbanks-Morse Co.
Mussens Limited.

Contractors' Supplies.
Dartnell, E. F. Ltd.
Greening Wire Co., Ltd.
Mussens Limited.
Stinson-Reeb Builders' Supply Co.

Cork Board.
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Corner Beads.
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Pedlar People, The.
Steel and Radiation, Ltd.

Cranes.
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Dominion Bridge Co., Ltd.
International Marine Signal Co.
Mussens Limited.

Crushed Stone.
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Roman Stone Co., Ltd.

Damp Proofing.
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Pinchin, Johnson Co.

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Goldie & McCulloch Co., Ltd.
Taylor, J. & J.

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Drills (Brick and Stone).
Mussens Limited.

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Sheldons Limited.

Dumb Waiters.
Otis-Fensom Elevator Co.
Turnbull Elevator Co.

Electro-Plating.
Dennis Wire and Iron Works.

Electric Wire and Cables.
Greening Wire Co., Ltd.
Robertson Co., James B.

Elevators (Passenger and Freight).
Otis-Fensom Elevator Co.
Turnbull Elevator Co.
The John McDougall Caledonian Iron Works, Ltd.

Elevator Enclosures.
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Dennis Wire and Iron Works.
Greening Wire Co.
Meadows, Geo. B. Co., Ltd.
Otis-Fensom Elevator Co.

Enamels.
Ault & Wiborg Co.
Berry Bros.
Canadian Bitumastic Enamels Co.
Imperial Varnish & Color Co.
International Varnish Co.
Moore, Benjamin Co.

Engines.
Canadian Fairbanks-Morse Co.
Goldie & McCulloch Co., Ltd.
Mussens Limited.
Sheldons Limited.
The John McDougall Caledonian Iron Works, Ltd.

Engineers' Supplies.
Canadian Fairbanks-Morse Co.
Kerr Engine Co.
Mussens Limited.
Robertson Co., James B.
Sheldons Limited.
Steel and Radiation.

Exhaust Fans.
Sheldons Limited.

Expanded Metal.
Galt Art Metal Co.
Leslie & Co., A. C., Ltd.
Metal Shingle and Siding Co.
Noble, Clarence W.
Pedlar People, The.
Steel and Radiation, Ltd.
Stinson-Reeb Builders' Supply Co.

Expansion Bolts.
Star Expansion Bolt Co.

Fire Brick.
Dartnell, E. F.
Stinson-Reeb Builders' Supply Co.

Fire Sprinklers.
General Fire Equipment Co.
McGuire, W. J.
Vogel Co. of Canada, Ltd.

Fire Extinguishers.
Canadian Johns-Manville Co.
General Fire Equipment Co.
Ormsby, A. B., Ltd.
Vogel Co. of Canada, Ltd.

Fire Escapes.
Canada Foundry Co.
Dennis Wire and Iron Works.
Meadows, Geo. B. Co., Ltd.
Reid & Brown.

Fireplace Goods.
Carter & Co., Ltd.
Dennis Wire and Iron Works.
Murray-Kay Co., Ltd.

Fire Proofing.
Canadian Johns-Manville Co.
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Pedlar People, The.
Steel and Radiation, Ltd.
Trussed Concrete Steel Co.

Fireproof Steel Doors.
Dennis Wire and Iron Works.
Metal Shingle and Siding Co.
Mussens Limited.
Ormsby, A. B., Ltd.
Pedlar People, The.
Steel and Radiation.
Stinson-Reeb Builders' Supply Co.

Fireproof Windows.
Galt Art Metal Co.
Hobbs Mfg. Co.
Metal Shingle and Siding Co.
Ormsby, A. B., Ltd.
Pedlar People, The.
Stinson-Reeb Builders' Supply Co.

Flooring.
Bird, F. W. & Son.
Seaman-Kent Co.

Furnaces and Ranges.
Clare Bros., Ltd.
Pease Foundry Co., Ltd.
Steel and Radiation, Ltd.
Taylor-Forbes Co., Ltd.

Galvanized Iron Works.
Metal Shingle and Siding Co.
Ormsby, A. B., Ltd.
Pedlar People, The.
Sheldons Limited.

Galvanized Iron.
Leslie & Co., A. C.
Metal Shingle and Siding Co.

Glass.
Consolidated Plate Glass Co.
Hobbs Mfg. Co.
Toronto Plate Glass Co.

Grille Works.
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Meadows, Geo. B. Co., Ltd.
Steel and Radiation, Ltd.
Taylor, J. & J.

Hangers.
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Hardware.
Canadian Yale & Towne, Ltd.
Taylor-Forbes Co., Ltd.

Hardwood Flooring.
Canadian Fairbanks-Morse Co.

Heating Apparatus.
Clare Bros., Ltd.
Dominion Radiator Co.
Dunham, C. A. Co.
Goldie & McCulloch Co., Ltd.
Kerr Engine Co.
Pease Foundry Co., Ltd.
Sheldons Limited.
Steel and Radiation, Ltd.
Taylor-Forbes Co., Ltd.

Heating Engineers and Contractors.
Sheldons Limited.

Hoisting Machinery.
Mussens Limited.
Otis-Fensom Elevator Co.

Hinges.
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Hydrants.
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Hydraulic Machinery.
The John McDougall Caledonian Iron Works, Ltd.

Iron Doors and Shutters.
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Taylor, J. & J.

Iron Stairs.
Canada Foundry Co.
Dennis Wire and Iron Works.
Meadows, Geo. B. Co., Ltd.

Iron Supplies.
Kerr Engine Co.

Installation.
Bird, F. W. & Son.
Canadian Johns-Manville Co.
Kent Co., Ltd.

Interior Woodwork.
Blonde Lumber Co.
Seaman-Kent Co.

Jail Cells and Gates.
Dennis Wire and Iron Works.
Goldie & McCulloch Co., Ltd.
Taylor, J. & J.

Joist Hangers.
Taylor-Forbes Co., Ltd.
Trussed Concrete Steel Co.

Lamp Standards.
Canada Foundry Co.
Canadian Tungsten Lamp Co.
Dennis Wire and Iron Works.
Seaman-Kent Co.

Lath (Metal).
Galt Art Metal Co.
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Laundry Tubs.
Toronto Laundry Machinery Co.

Leaded Glass.
Hobbs Mfg. Co.

Marble.
Dartnell, E. F.
Dominion Marble Co., Ltd.
Hoidge Marble Co., Ltd.
Missisquoi Marble Co.
Robertson Co., James B.

Metallic Sash.
Hobbs Mfg. Co.
Metal Shingle and Siding Co.
Steel and Radiation, Ltd.

Metal Shingles.
Galt Art Metal Co.
Pedlar People, The.

Metal Store Fronts.
Dartnell, E. F.
Dennis Wire and Iron Works.
Hobbs Mfg. Co.
Metal Shingle and Siding Co.

Metal Walls and Ceilings.
Metal Shingle and Siding Co.
Noble, Clarence W.
Ormsby, A. B., Ltd.
Pedlar People, The.

Municipal Supplies.
Mussens Limited.

Non-Conducting Coverings.
Ault & Wiborg.
Canadian Johns-Manville Co.

Ornamental Iron Work.
Canada Foundry Co.
Dennis Wire and Iron Works.
Meadows, Geo. B. Co., Ltd.
Steel and Radiation, Ltd.
Turnbull Elevator Co.

Packing (Steam).
Canadian Johns-Manville Co.

Packing.
Canadian Fairbanks-Morse Co.
Gutta Percha and Rubber Co.

Paints (Steel and Iron).
Brandram-Henderson Co.
Canadian Bitumastic Enamels Co.
Dartnell, E. F.
Imperial Varnish & Color Co.
International Varnish Co.
Pinchin, Johnson Co.

Paints and Stains.
Berry Bros., Ltd.
Brandram-Henderson Co.
Canadian Bitumastic Enamels Co.
Dartnell, E. F.
Imperial Varnish & Color Co.
International Varnish Co.
Pinchin, Johnson Co.
Robertson, James B.

Perforated Steel.
Greening Wire Co., Ltd.

Pipe Covering.
Canadian Johns-Manville Co.

Pasters.
Brandram-Henderson Co.
Canadian Johns-Manville Co.
Hynes, W. J.

Plaster Corner Beads.
Metal Shingle and Siding Co.
Pedlar People, The.

Plate and Window Glass.
Consolidated Glass Co.
Hobbs Mfg. Co.
Toronto Plate Glass Co.

Plumbers' Brass Goods.
Canadian Fairbanks-Morse Co.
Robertson Co., James B.
Standard Ideal Co., Ltd.
Steel and Radiation, Ltd.

Plumbing Fixtures.
Robertson Co., James B.
Standard Ideal Co.
Standard Sanitary Co.

Pneumatic Tools.
Mussens Limited.

Porcelain Enamel Baths.
Robertson Co., James B.
Standard Ideal Co., Ltd.
Standard Sanitary Co.

Pumps.
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Radiators.
Dominion Radiator, Ltd.
Steel and Radiation, Ltd.
Taylor-Forbes, Ltd.

Refrigerating Machinery.
Linde British Refrigeration Co., Ltd.

Refrigerator Insulation.
Bird, F. W. & Son.
Canadian Johns-Manville Co.
Metal Shingle and Siding Co.

Radiator Valves.
Kerr Engine Co.
Steel and Radiation Co., Ltd.

Reinforced Concrete.
Metal Shingle and Siding Co.
Noble, Clarence W.
Pedlar People, The.
Steel and Radiation, Ltd.
Trussed Concrete Steel Co.

Relief Decoration.
Hynes, W. J.

Roofing Paper.
Canadian Johns-Manville C.o
Bird, F. W. & Son.
Pedlar People, The.
Metal Shingle and Siding Co.

Roofing.
Asbestos Mfg. Co.
Bird, F. W. & Son.
Canadian Johns-Manville Co.
Metal Shingle and Siding Co.
Patterson Mfg. Co.

Roofing (Slate).
Ormsby, A. B., Ltd.

Roofing (Tile).
Dartnell, E. F.
Metal Shingle and Siding Co.
Pedlar People, The.

Rubber Tiling.
Gutta Percha and Rubber Co.

Safes (Fireproof and Bankers').
Canadian Fairbanks-Morse Co.
Goldie & McCulloch Co., Ltd.
Taylor, J. & J.

Sanitary Plumbing Appliances.
Robertson Co., James B.
Standard Ideal Co., Ltd.
Standard Sanitary Co.

Sand Screens.
Steel and Radiation, Ltd.
Greening Wire Co.

Screens.
Watson-Smith Co., Ltd.

Shafting, Pulleys and Hangers.
Canadian Fairbanks-Morse Co.
Goldie & McCulloch Co., Ltd.

Sheet Metal.
Leslie, A. C.
Metal Shingle and Siding Co.

Sheet Metal Workers.
Galt Art Metal Co.
Metal Shingle and Siding Co.
Ormsby, A. B., Ltd.
Pedlar People, The.
Sheldons Limited.

Shingle Stains.
International Varnish Co.
Pinchin, Johnson Co.
Robertson Co., James B.

Sidewalks, Doors and Grates.
Dennis Wire and Iron Works.

Sidewalk Lifts.
Otis-Fensom Elevator Co.

Sidewalk Prisms.
Hobbs Mfg. Co.

Slate.
Robertson Co., James B.

Stable Fittings.
Dennis Wire and Iron Works.

Staff and Stucco Work.
Canadian Johns-Manville Co.
Hynes, W. J.

Steam Appliances.
Canadian Fairbanks-Morse Co.
Kerr Engine Co.
Sheldons Limited.
Steel and Radiation, Ldt.
Taylor-Forbes Co., Ltd.

Steam and Hot Water Heating.
Dominion Radiator Co., Ltd.
Dunham, C. A. Co.
Sheldons Limited.
Steel and Radiation, Ltd.
Taylor-Forbes Co., Ltd.

Steam Turbines.
The John McDougall Caledonian Iron Works, Ltd.

Steel Casements.
Steel and Radiation, Ltd.

Steel Concrete Construction.
Noble, Clarence W.
Pedlar People, The.
Steel and Radiation, Ltd.
Trussed Concrete Steel Co.

Steel Doors.
Dennis Wire and Iron Works.
Mussens Limited.
Ormsby, A. B., Ltd.
Pedlar People, The.

Structural Iron Contractors.
Canada Foundry Co.
Dennis Wire and Iron Works.
Dominion Bridge Co.
Hamilton Bridge Co.
Reid & Brown.
Structural Steel Co., Ltd.
Toronto Iron Works.

Structural Steel.
Canada Foundry Co.
Dennis Wire and Iron Works.
Dominion Bridge Co.
Hamilton Bridge Co.
Mussens Limited.
Reid & Brown.
Sheldons Limited.
Structural Steel Co., Ltd.

Tanks.
The John McDougall Caledonian Iron Works, Ltd.

Telephone Systems.
Northern Electric & Mfg. Co.

Terra Cotta Fireproofing.
Carter & Co., Ltd.
Dartnell, E. F.
Don Valley Brick Works.
Missisquoi Marble Co.

Tile (Floor and Wall).
Carter & Co., Ltd.
Dartnell ,E. F.
Don Valley Brick Works.

Vacuum Heating System.
Dunham, C. A. Co.

Varnishes.
Ault & Wiborg Co.
Berry Bros., Ltd.
Brandram-Henderson Co.
Imperial Varnish & Color Co.
International Varnish Co.
Pinchin, Johnson Co.

Vaults and Vault Doors (Fireproof and Bankers').
Goldie & McCulloch, Ltd.
Taylor, J. & J

Valves.
Canadian Fairbanks-Morse Co.
Dunham, C. A. Co.
Kerr Engine Co.
Robertson Co., James B.
Steel and Radiation, Ltd.
Taylor-Forbes Co.

Ventilators.
Metal Shingle and Siding Co.
Sheldons Limited.

Wall Finishes.
Berry Bros.
Brandram-Henderson Co.
Dartnell, E. F.
Imperial Paint and Color Co.
International Varnish Co.
Pinchin, Johnson Co.

Wall Hangers.
Taylor-Forbes Co.

Waterproofing.
Ault & Wiborg Co.
Bird, F. W. & Son.
Canadian Johns-Manville Co.
Dartnell, E. F.
Kerr Engine Co.
Mussens Limited.
Pinchin, Johnson Co.
Stinson-Reeb Blrs. Supply Co.

Waterworks Supplies.
Mussens Limited.
Robertson Co., James B.
Standard Ideal Co., Ltd.

Wheelbarrows.
Mussens Lmiited.

White Lead, Putty and Oils.
Brandram-Henderson C.o
International Varnish Co.
Pinchin, Johnson Co.

Window Guards.
Dennis Wire and Iron Works.
Greening Wire Co.
Steel and Radiation, Ltd.

Wire Rope and Fittings.
Greening Wire Co., Ltd.
Mussens Limited.
Otis-Fensom Elevator Co.

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