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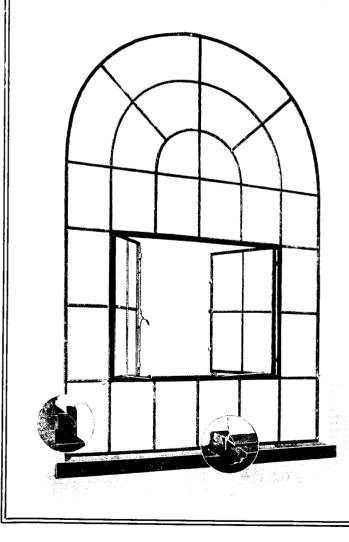
Saskatchewan Legislative Buildings, Regina.

E. & W. S. Maxwell, Architects.

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Windsor Station and Train Sheds Place Viger Hotel and Station Canada Cement Co.

Canada Cement Co.St. Lawrence Sugar RefineryReford BuildingCanadian Sugar RefinerySt. George's R.C. ClBelding, Pau' Corticelli Co.Park LafontaineDominion Box Co.C.P.R. Angus Shops

Alaska Feather and Down Co.

Imperial Theatre Princess Theatre Lindsay Building heds Post Office on Head Office, St. James St. Two Uptown Offices

Scroggie Building

Jacobs Building

Goodwins Limited

Reford BuildingG.T.R. Point St. Charles ShopsSt. George's R.C. ChurchMontreal City Filtration PlantPark LafontaineMontreal Water & Power Co.C.P.R. Angus ShopsDominion Glass CompanyDown Co.W.V. Dawson, St. Urbain St.

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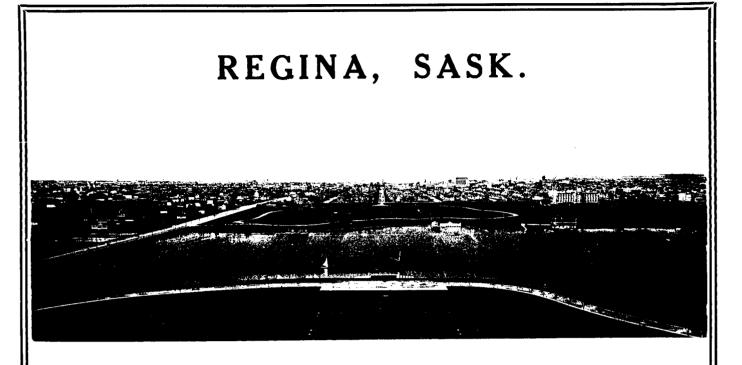
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Lieutenant-Governor's Residence, Toronto.

Designed by F. R. Heakes, Provincial Architect.

New Government House

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> OUR SAMPLE ROOM AFFORDS AN OPPORTUNITY TO CONVENIENTLY STUDY OUR VARIETY, AND GIVES A DEFINITE AND PRACTICAL IDEA OF JUST HOW THE DIFFERENT BRICKS APPEAR LAID UP IN THE WALL IN RELATION TO COLOR, TEXTURE AND BOND.

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Central Technical School, Toronto.

Ross & MacDonald, Architects.

Toronto's New Technical School

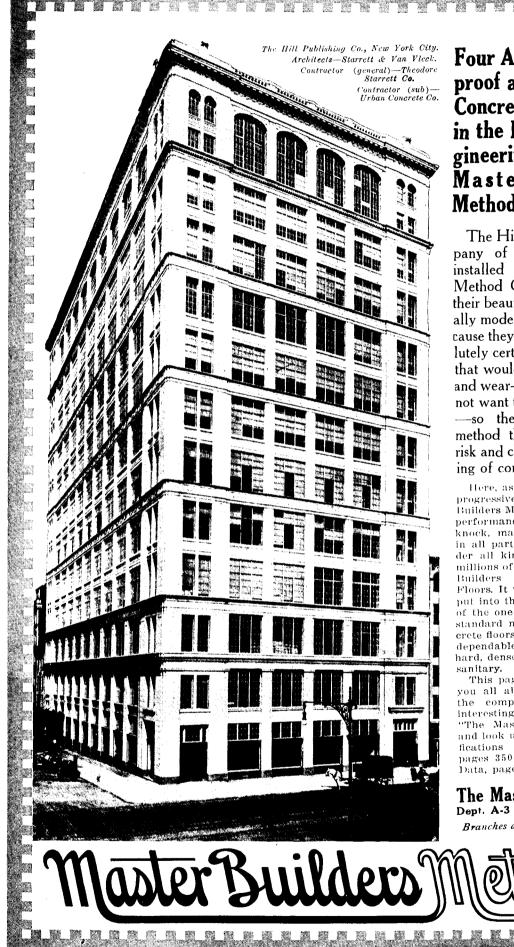
THIS building, which is shortly to be occupied, will quite compensate the city for any lack of facilities for technical education which might have existed heretofore. Further than this, it will give to the city a building which will readily rank with the best to be found in school architecture on this continent. Its designers, Messrs. Ross & MacDonald, have carefully studied their problem with a view to producing a building of pleasing architectural character, as well as a structure which constructively meets the highest principles of modern school design and equipment. In this undertaking Don Valley materials are used to the extent of 8,000,000 face brick, 1,500,000 enamelled brick, 650,000 common brick, 250,000 sq. ft. of porous terra cotta fireproofing, as well as different shapes of pressed brick for the interior walls.

The choice here, as has been the case with every important public building erected recently in Toronto, has been based solely on recognized merit as regards the quality of our products, and a fulfillment of all promises as relates to the matter of shipment and deliveries. Our policy in the beginning was to produce the best that could be produced in burnt clay products, and to adhere persistently to that policy throughout. As a result we have standardized the high grade brick and terra cotta industry in Canada, and architects, in the interest of their clients, and their own professional reputation as designers, discriminate in favor of Don Valley Products.

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This page is too small to tell you all about them. To learn the complete story—a mighty interesting one, too—write for "The Master Builders Primer" and look up our Standard Specifications in Sweet's Catalog, pages 350-351 and Specification Data, pages 96 and 97.

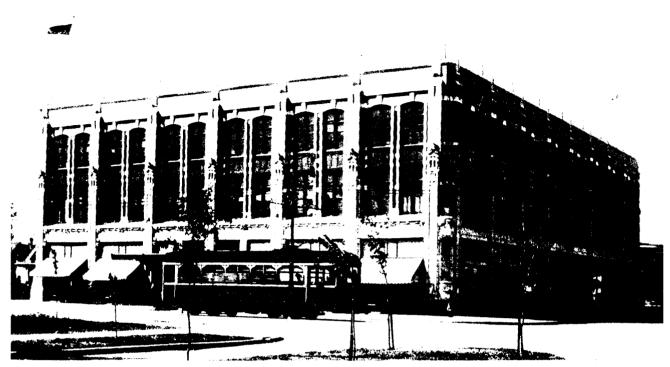
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For our part, while we are strong for the "Made in Canada" movement, we would not ask any member of the profession or the Allied Trades to purchase, use or specify Robertson's Fixtures, etc., merely because we are one of the few houses making such fixtures in Canada, but we *do* ask you to specify them if you are satisfied, in your own mind, that in facility of design, quality of material, and excellence of workmanship, Robertson's Fixtures are equal in quality and service, if not better, than the same lines at present being imported into the Dominion.

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SHERWOOD STORE, REGINA, SASKATCHEWAN, CANADA. David R. Brown & Hugh Vallance, Architects. First story elevation and all ornament of Atlantic Terra Cotta. — Granite color for the plain surfaces; colored inserts in the entablature.

Atlantic Terra Cotta



The accompanying illustrations show an appropriate use of Atlantic Terra Cotta on the building erected for the C. W. Sherwood Company, Limited. Further examples in Regina of Atlantic Terra Cotta can be seen in the Leader Building and the Saskatchewan Co-operative Elevator Company. The same material has been specified for the Grand Trunk Pacific Hotel.

May we show you how Atlantic Terra Cotta might be applied to your designs?

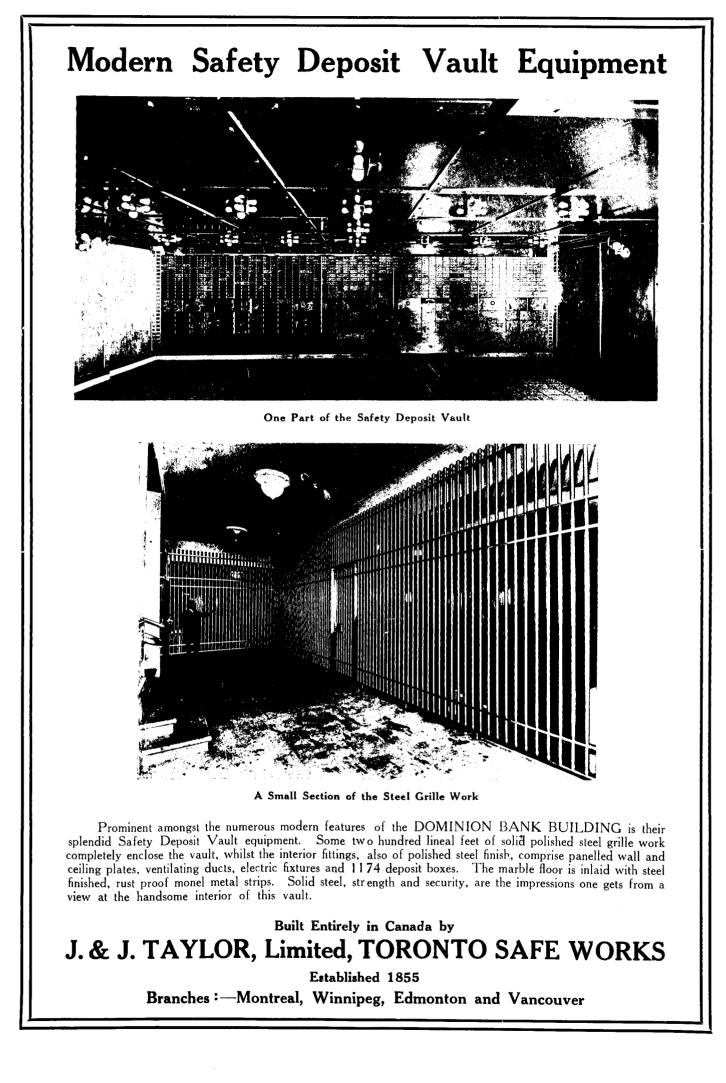
We should be very glad to send you the February number of "Atlantic Terra Cotta," the magazine we publish; it illustrates in detail the Whalen Building, Port Arthur; the Ranchmen's Club, Calgary, and the Methodist Book Room, Toronto.

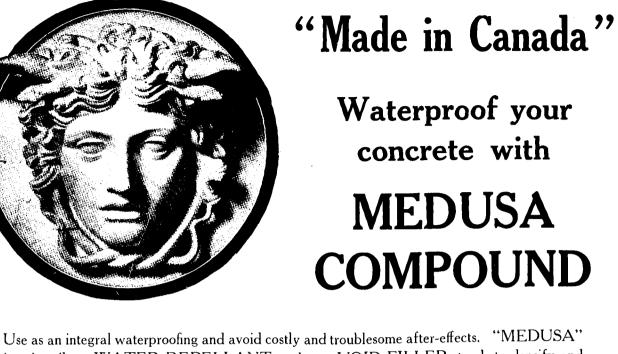
The December number illustrates the Inglis Shop, Winnipeg, and other interesting store fronts.

Atlantic Terra Cotta Company 1170 Broadway, New York

Montreal, Mr. David McGill, 320 Lagauchetiere St. Quebec, Mr. W. J. Banks, 17 St. James St. Toronto, Mr. H. D. Sutherland, Stair Building. Winnipeg, Waite-Fullerton Co., Builders' Exchange.







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May 3 - 1916

CONSTRUCTION CONSTRUCTION

January, 1915

Vol. 8, No. 1

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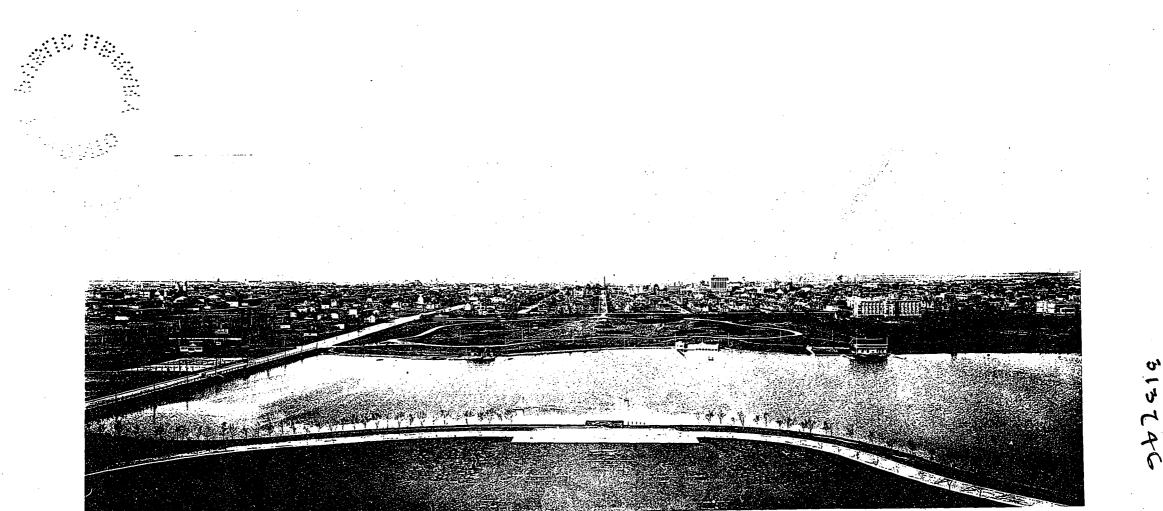
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BRANCH OFFICES

MONTREAL

NEW YORK



PANORAMA VIEW OF REGINA, TAKEN FROM THE TOP OF THE LEGISLATIVE AND EX-ECUTIVE BUILDING, ONE HUNDRED AND SEVENTY-EIGHT FEET FROM THE GROUND.

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The meaning of patriotism and its abuse by those who are financially successful—Inducements to investors by reductions in labor and building materials.

STUPENDOUS problems are confronting the Canadian people which must be analyzed by serious thought and meditation. To some the proper solution means the very existence of themselves and those who depend upon their efforts; to many the outcome involves the work of a lifetime and forebodes happiness or cruel misery to thousands; while among others it appeals to a selfish and unpatriotic nature. The last are those who have grown rich through the enslavage of large numbers and who horde their wealth instead of allowing it to be used naturally for the interests of mankind. One of the first steps is to arrive at a definite and correct understanding of patriotism. Does it belong to the man who donates hundreds of thousands of dollars to further the terrific slaughter of innocent men and increase the misery in the world a million fold; who, by so doing, must either shut down his factory or dismiss a certain percentage of his employees? Is it part of the person who bitterly arraigns all people who hold a view different to his own, urging their complete annihilation at any cost, thereby taxing the poor beyond endurance; while he, in giving his proportion, hardly feels the effect? Is it the noble sentiment behind legislative authority which countenances vast appropriations to be spent for military equipment when it turns around, at the same time, and takes the food from our own people by shutting down all Government improvements throughout the Dominion? To be sure there is a strong feeling towards patriotism in each instance, but not the broad grasp which lifts a Government and her people into an enviable place among the nations of the world. One's true devotion to his country, his people and himself is to act for the best interest of all concerned, whether it be to pour out his life's blood at the front or wage a bitter warfare at home in behalf of its very existence. And this cannot be accomplished by raising the cost of living, already beyond the limit of reason, or by certain successful merchants and business corporations curtailing expenditures to the detriment of their own success as well as increasing the hardships endured under present conditions. They should evince a steadfast faith in their country's future and proceed with the improvements already contemplated. Every inducement possible is offered for private as well as public projects. The Builders' Exchange in Montreal at a general meeting held on the twenty-third of December reduced the wages of building tradesmen from twenty to twenty-five per cent. for the maximum rate. With building materials twenty per cent. cheaper than the cost six months ago and labor cut to a corresponding figure, it should prove a boon to all investors.

Regina, her settlement and steady growth—Her progress along industrial lines as well as in architecture —Her development a promise for future attainments.

REGINA, "the city of beautiful homes," received the first settler in 1882, and in less than one-third of a century has grown into a city of 50,000 population. Located in the midst of a vast prairie land, she became the seat of Government for the North-West Territories in the spring of 1883, thus assuming an important position in the opening of a country which has steadily developed into one of the wealthiest parts of the British Empire. She was destined to be a great city and the predictions of her early administrators have been more than realized. The first street car service to be inaugurated was in 1911, which system includes at the present time some thirty miles of car lines with modern equipment. Like all progressive communities, the city has made ample preparation for all public utilities such as railways, electric light, waterworks, power and gas plants. Plans have been prepared for the proper adjustment of thoroughfares, disposition of public institutions, location of residential sections, and the arrangement of parks and playgrounds. As for the varied scenery and natural growth, the prairie land is woefully lacking, but Regina has overcome this to a great extent by means of an artificial lake located between the Executive and Legislative buildings and the city proper; by enriching sections like Victoria park with all kinds of shrubbery, and by the planting of trees in abundance. Not only have the esthetic features been considered, but the practical as well. A large territory has been set aside for the erection of warehouses and factories which is fast developing into one of the most important industrial centres of America. Twenty-two railway lines either radiate from the city or are in the nature of preparation, which makes her the logical centre of distribution for the vast territories with which she is surrounded. Millions of bushels of wheat keep this network of railways extremely busy every year and the coming season should be no exception, as more fall plowing was done last year than ever before in the history of the province. Architecturally, Regina has every reason to feel proud of her accomplishments along this line. There are no Parliament buildings more dignified or better adapted to the needs of legislative work than the Saskatchewan capital. The commercial structures are expressive of an upward tendency in pure design; the warehouses and factories reveal considerable thought and attention in their exterior appearance; the churches are indicative of edifices erected for the purpose of worship; the homes are everything the word implies. The past and present of Regina show a rapid and wholesome growth worthy of considerable commendation as well as emulation.



LEGISLATIVE AND EXECUTIVE BUILDINGS, REGINA, SASK.

EDWARD & W. S. MAXWELL, ARCHITECTS.



SCULPTURE PEDIMENT OVER MAIN ENTRANCE

Legislative and Executive Buildings, Regina

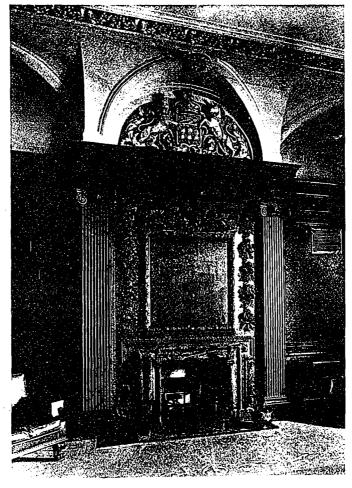
EDWARD & W. S. MAXWELL, Architects

THE wonderful growth of Canada is hardly realizable to those stay-at-home residents of the East, until, awakening from their lethargy, and undertaking a journey from coast to coast, it is brought home to them that in this wonderfully resourceful country of ours we are in the making of a nation, which to-morrow will be one of the great and powerful people of this

Saskatchewan was broached that account should be taken of those on the other side of the boundary line. Recent structures had been erected in Minnesota and other Western States that were of most creditable and monumental design, upon which the skill of the greatest architects of the neighboring Republic had been concentrated; and to a large extent without having to consider

earth, a people who occasionally are doing things on a big scale, and of a quality that will not only command the attention of the best art critics to-day —but for generations to come.

It is greatly to the credit of those in prominent places, who control these matters, that results are obtainable that will be appreciated for all time, and while such is not the case in all Canadian undertakings, it makes it all the more creditable that such can be done if only proceeded with in an intelligent and broadminded way. In such a spirit was conceived and executed the newly finished legislative and executive buildings for the Province Saskatchewan at of Regina.



DETAIL OF MANTEL IN COUNCIL ROOM.

With the natural intercourse in trade and social life that follows from two such contiguous countries as Western Canada and the States to the south of it, it was only natural that when the problem of new buildings for the Province of building has been erected practically without variation in any particular from the competition design.

The problem was a difficult one, inasmuch as the monumental nature of the structure demand-

hout having to consider the diminutive sums that are but too often the chief factors in deciding the scope of the structures undertaken on this side of the line.

It was but natural, therefore, that an international competition followed for the selection of the architects for Saskatchewan's buildings, the choice being confined to one American, one English and four Canadian firms, all chosen for their ability and standing in the profession. In making the award it was the good fortune to secure the services as judges of two leaders in their profession from the United States, in addition to one Canadian architect. The design of Messrs. Edward & W. S. Maxwell was unanimously awarded first place, and the È!:

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ed the employment of a construction and materials of the highest class. The climatic conditions demanded a convenient but compact structure, with the best available system of lighting and ventilation. Provision for very extensive future additions had also to be kept in view, that should, when executed, count as one pre-designed complete unit of satisfactory proportions and outline.

The aim has been to produce a dignified architectural monumental design that shall express the purpose of the building at a

glance, that shall fulfil its usefulness in the most direct manner consistent with economical planning, that shall provide well lighted and ventilated rooms, corridors and stairways, without resorting to courts, lightshafts or borrowed lights; to this end a rectangular building, with a central corridor on each floor and cross circulating corridors at the central portion, provided that due provision is made for the proper lighting of all communications. offers the most economical solution of the problem, and the one that is best suited to the

extremes of climatic conditions here encountered.

One approaches the building by a driveway off Albert street, skirting the short of the lake until the main avenue is reached, being the continuation of Smith street. This leads from the lake shore to the principal entrance. The first impression of the vista, terminated by the central feature of the front elevation crowned by the lofty, spacious and unique dome, is one that will lend dignity, solemnity and impressiveness to the expanse of facade that gradually unfolds as one nears the forecourt.

The main entrance is by a triple doorway, through a spa-

LEGISLATIVE AND EXECUTIVE BUILDING, REGINA, SASK.

SROUND FLOOR PLAN.

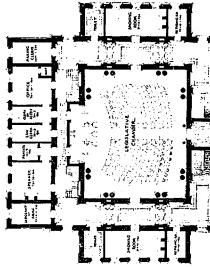
cious vestibule into the main entrance hall, treated in a dignified monumental manner. Directly across the hall is the staircase of honor for the use of the Executive and members, leading by two easy flights to the main or legislative floor. Flanking this staircase are four elevators, while adjacent hereto are two staircases for the use of the public. At each end of the building are provided entrances, stairways and elevators giving access to all floors.

At the head of the staircase of honor, which is of spacious proportions, with a lofty vaulted ceiling, one steps into the ante-room of the Legislative Chamber, situated be-



neath the dome, from which it receives its light, and on the major and minor axis of the building. To this room has been assigned an importance second only to that of the chamber itself, with its monumental treatment, spacious vertical and horizontal vistas.

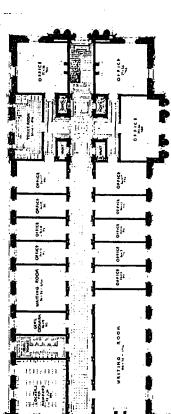
From here the Legislative Chamber is approached by a main central entrance, and by two flanking entrances, thus providing ample circulation during a crowded session. This room has been designed after making a careful study of the principal examples of successful rooms of a like

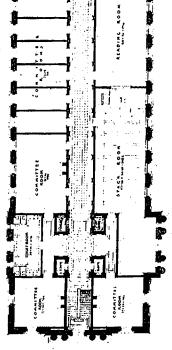


character, and it is believed will fulfil its functions in a manner capable of but slight improvement.

An unobstructed view of the Speaker's rostrum from every seat in the house is obtained, as well as from every seat in the public galleries, provided on three sides of the room. The speaker's and press galleries are likewise well situated behind and above the Speaker, and approached by two stairways off the rear corridor.

The question of galleries is usually the "bete noir" of architects in designing a legislative chamber; they

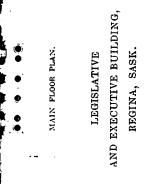




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either extend to undue proportions the size of the room, rendering it difficult to arrive at a satisfactory architectural solution; whilst if made to overhang into the room the view of the public and members is unduly restricted by the unsightly projections. In this design the usual objectionable form of galleries has been overcome by placing each one in a recess specially provided for it in the architectural treatment of the room, unnecessary size and consequent acoustic difficulties are thereby avoided.

It will be noted that from the point at which one enters the building by the main entrance vestibule, hall, staircase of honor and ante-room, a succession of monumental apartments are traversed, all leading directly to the Legislative Chamber, the room above all others for which this building has been erected. The rooms more immediately in connection with the chamber are conveniently



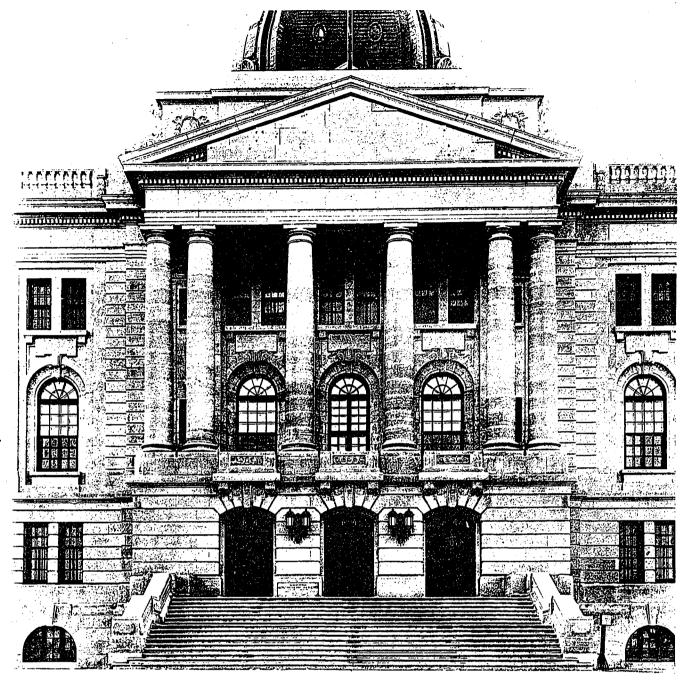
situated. The smoking rooms are directly across the corridors at the lateral entrance doors, with toilet rooms near by. The Speaker's apartments are immediately behind the chamber, with a private door from the rostrum. The clerk of the House, the office, sergeant-at-arms, law clerk and mail clerks are here located immediately at hand.

In a mezzanine over these apartments is provided a very spacious vault for the storage of records in connection with the transactions of the Legislative Chamber; this in addition to a vault in the office of the chamber. The Council room, Provincial Governor's and Premier's apartments have been placed in the place of honor at the centre of the building on this main floor, with the clerks' and business office near at hand. Members' coat rooms are convenient to but slightly isolated from the ante-



8

CONSTRUCTION



DETAIL OF MAIN ENTRANCE TO LEGISLATIVE AND EXECUTIVE BUILDING.

room. The reading room, stack room and comnrittee rooms occupy the available space in the east wing, while the west wing is devoted to the writing room, the twelve offices for members, the public waiting room, lavatories, etc. It will be noted that all the rooms on this floor, as well as all other floors, are so arranged that there is no waste nor dark corridors.

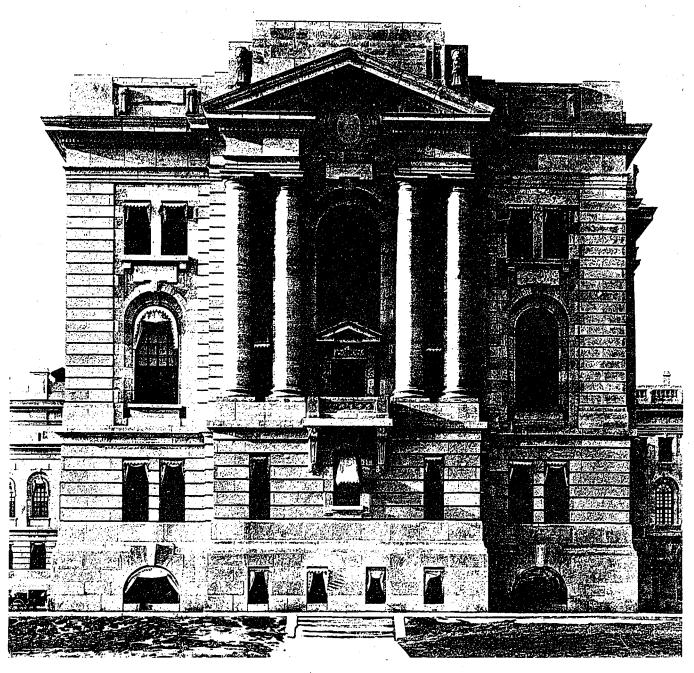
In order to provide for future growth it will be noted that extensions may be built at each end of the building, and extended in a southerly direction indefinitely, so as to give any desired amount of accommodation without interfering with the building as at present designed; in fact, the extended building will be as complete a unit as if designed and erected all at one time.

It will be noted that the reading and writing

rooms have been lighted from the north, which is important in a climate where the sunlight playing on the snow gives such an intense glare.

To the ground floor has been assigned the principal departments, viz: The Treasury, Public Works and Agriculture. The post office has been located at the main entrance. Ample male and female cloak rooms and lavatories and vault accommodation is provided, the latter as far as practicable opening off the rooms which they serve.

On the second floor is found the Attorney-General's Department, Departments of Education and Railways, the Provincial Secretary and Municipal Commissioners, while the draughting rooms in connection with the Chief Engineer's office of the Department of Public Works and the Department of Railways are located on the



DETAIL OF END PAVILION OF LEGISLATIVE AND EXECUTIVE BUILDING.

north side, where a suitable light is obtainable.

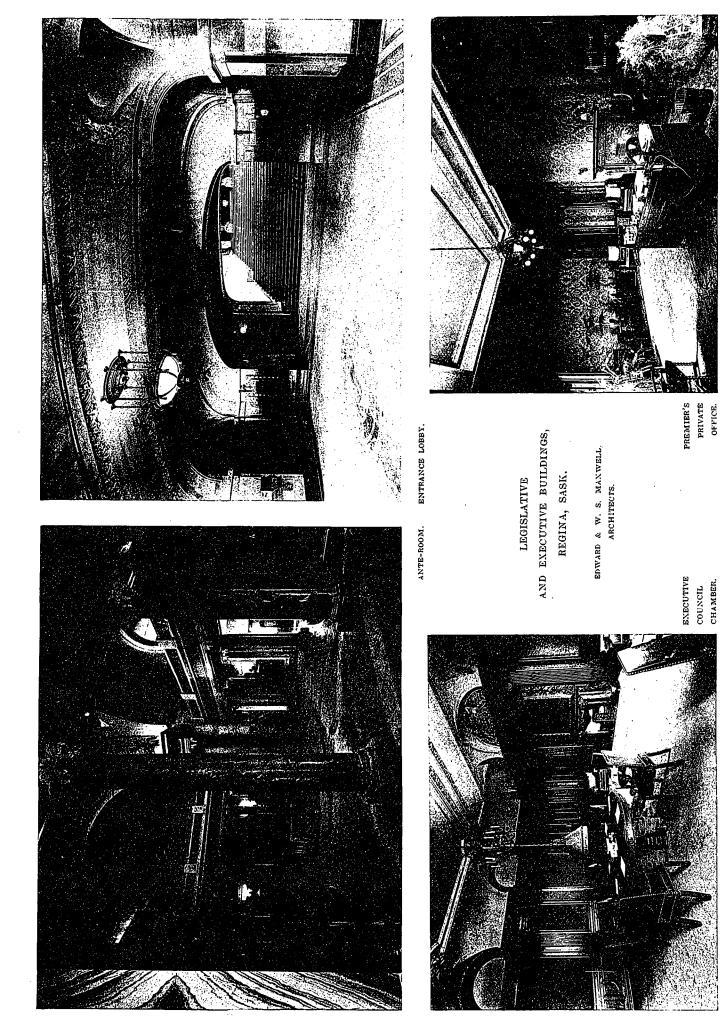
In the basement will be found the members' dining room, a smoking room, a private dining room and smoking room, the staff lunch room, with the kitchen department conveniently located to serve both dining and lunch rooms.

In addition to the elevator service for the members desiring to reach the dining room, two stairways for their exclusive use lead from near the Legislative Chamber direct to the dining and smoking rooms. A private stairway also leads from the stack room on the main floor direct to the newspaper files room in the basement.

The Government printer has been located in the west end of the basement, with a separate entrance door. The receiving, storing and distribution of supplies, etc., is thus facilitated. The balance of the basement is devoted to a storage chamber for each department, and for quarters for the janitor and engineer. The tunnel for the conveyance of heating pipes, wires, etc., from the power house to the building is so arragned that when the future additions are erected that the tunnel will be in the right relative position to serve them.

In designing the exterior of the building a free adaption of English Renaissance work has been employed, as being best suited to the requirements, and offering a logical, sensible and architecturally interesting solution of the problem that marks it unmistakably as representative of the British sovereignty under which the Province is governed.

The use of the light buff Tyndall stone is particularly happy when employed with discre-



tion in this style, and it is felt that no extended description of the facades is requisite. By careful study of the massing, fenestration, outline and detail, a building such as is herewith presented has proved to be all that could be desired to house the Legislature and Administration of what is destined to be one of the most important Provinces of the Dominion.

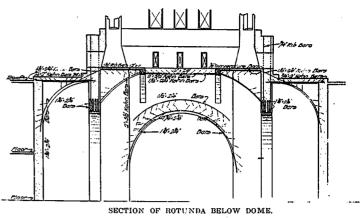
To this end, dignity, simplicity and purity of style has been combined with a monumental treatment of the best period of British architecture, to produce a building that it is believed. will serve its purpose in the best possible way *Construction*.

The buildings are of what is known as "skeleton" reinforced concrete construction; the structural portions, such as floor slabs, beams, girders and columns, are of concrete, and constitute a monolithic skeleton or supporting frame work. Consequently the buildings are thoroughly fireproof and of a very permanent nature. In order to obtain these results it was unnecessary to alter any of the architectural details, and the adaptability of these materials to structures in which the details are quite complicated, is very well shown in many portions of the buildings.

The main structure covers a large area and is supported on concrete piles, which extend up to and are incased in the footings of the walls and columns. The footings are all of mass concrete, while those under the dome, which have to support very heavy loads, are reinforced to insure a proper distribution of the loads, as well as to tie the footing together, thus preventing any spreading of the supporting piles. All column reinforcement is wired to dowels which are embedded in the footings.

The columns support reinforced concrete beams and girders, which in turn carry slabs reinforced with rib bars. Trussed bars are used in the beams and girders, while the columns are reinforced with rib bars laced together with The interior columns are so wire hooping. spaced as to be embedded in the partitions, while the exterior columns are encased in the stonework of the outer walls. Wherever possible the beams are constructed over partitions so that in most cases each room has an unbroken ceiling. The slabs are finished in most of the building with sleepers, on which is laid a hardwood floor; other portions receiving a concrete finish added directly to the slab and floated smooth. The stairways are of solid reinforced concrete, with concrete steps moulded in place

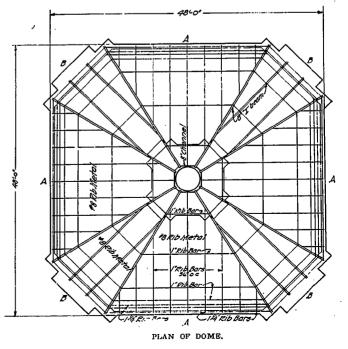
Structural steel trusses are used to support the ceiling of the assembly room, where the spans are unusually long. In the central portion of the building, from which the two main wings branch, a number of the beams are of structural steel. These are used to obtain the required headroom in places of large spans.



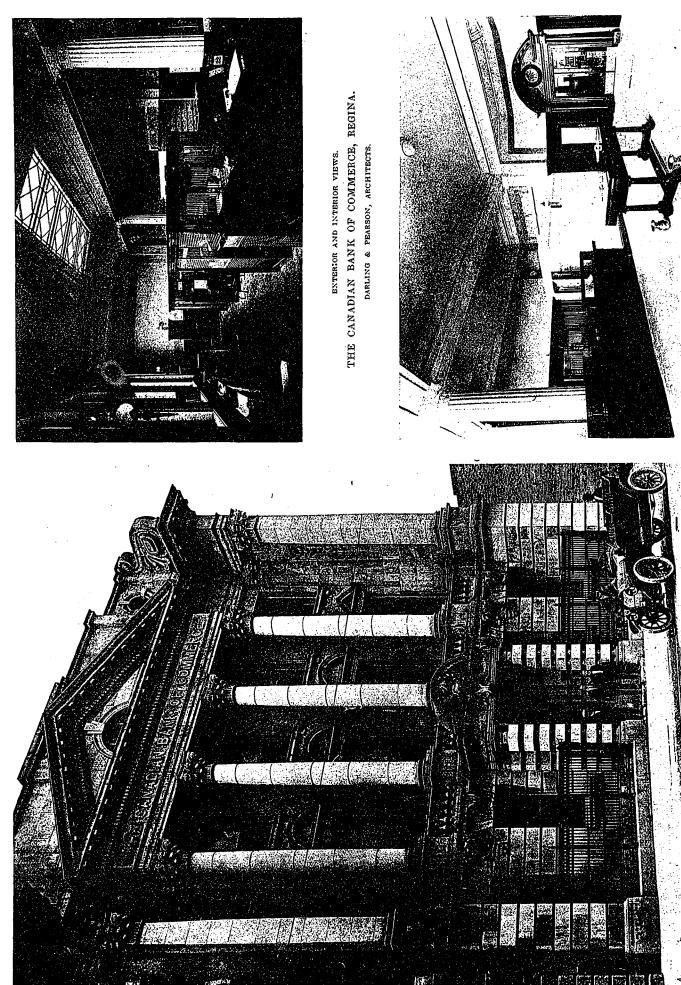
The galleries in the assembly room are of concrete slabs supported on steel beams.

The central tower, fifty feet square, is surmounted by a large octagonal dome whose sides are formed of intersecting horizontal cylindrical planes. The four main surfaces, parallel to the sides of the tower, are larger than those diagonal to these directions, which latter surfaces give the effect of bevelled corners. The dome is composed of reinforced concrete slabs six inches thick at the peak and twelve inches at the base. At every corner is a curved eight-inch I beam braced by an eight-inch channel. The slab reinforcement of the dome consists of rib metal in sheets and rib bars. The outward horizontal thrusts of the dome sides are distributed to the intersections by trussed bars, and the whole is tied in by horizontal rods. The four corners of the tower carrying the dome are of concrete. Around the inside of the tower, and at the main roof level, is a reinforced concrete gallery carried on arched brackets from the walls.

The power house is a considerable distance from the main building, the slabs, beams and interior columns being of concrete, while the exterior walls are of brick. The tunnel connecting this building with the main building is also of concrete construction.



C O N S T R '' C T I O N



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Public Buildings at Regina

W. G. VAN EGMOND

EIGHT years ago Regina had a population of only about six thousand, and practically no public buildings worthy of note, whereas today the population is well over forty thousand, and the many excellent and splendid public buildings are the surprise to all visitors to this city.

During this period of rapid development it is gratifying to note that these buildings have been well and carefully designed, and are of good construction, as it very often happens that under similar circumstances, owing to the pressing need for buildings, due to the rapid expansion, they are rushed up without due thought and consideration being given to them. Almost without exception the Regina buildings of a public character have been designed on good architectural lines, and the construction substantial and practically fireproof in every instance.

Regina, being the capital of the Province, is expected to set a standard for other centres, and to a certain extent the whole country is judged by the architectural development of this city. It is, therefore, fortunate that the first public buildings erected have been of such a high order.

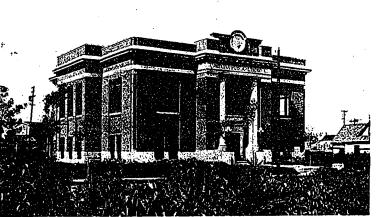
Regina is exceptionally favored in

being the political, financial, industrial and educational centre of the Province, thus necessitating a large number of important buildings. But it had many difficulties to overcome, in that being situated in the centre of a flat plain it had no natural advantages, and owing to the regrettable gridiron plan of streets it was almost impossible to secure desirable locations for building sites. This handicap has received the careful consideration of the authorities, and in place of a small creek running through the southern part of the city, with prairie on each side, we now have quite a large respectable artificial lake; the property to the south being developed into a magnificent government park, providing an ideal site for the stately Provincial Government buildings. Part of the land to the north has been utilized for an attractive and useful city park, and the remainder given over to sites for educational buildings, which have been wisely placed with their axes centering on streets leading down to the heart of the city, thus overcoming the difficulties of the faulty street planning to some extent.

The outstanding edifice of Regina is the Parliament Building, admirably situated as stated above, and also facing on one of the principal city streets. This building is the result of very carefully prepared conditions of a competition limited to seven competitors, who were

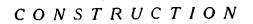
all paid for their services when entering the competition. Messrs. E. and W. S. Maxwell were the successful architects and have provided a building which ranks first among the government structures of Canada. The building is executed in buff Tyndall limeclassic stone, in Renaissance style. with a facade on broad and simple

lines, in keeping with the surroundings, and surmounted by a well-proportioned dome of stone and copper. The interior planning has been carried out in a practical manner, providing for the various departments of government, and only in the central portion has a monumental effect been attempted. The main entrance leads to a wide, spacious marble stairway, which deserves special mention, and this leads to the main rotunda under the domed ceiling. Continuing across the rotunda is found the Legislative



PUBLIC LIBRARY,

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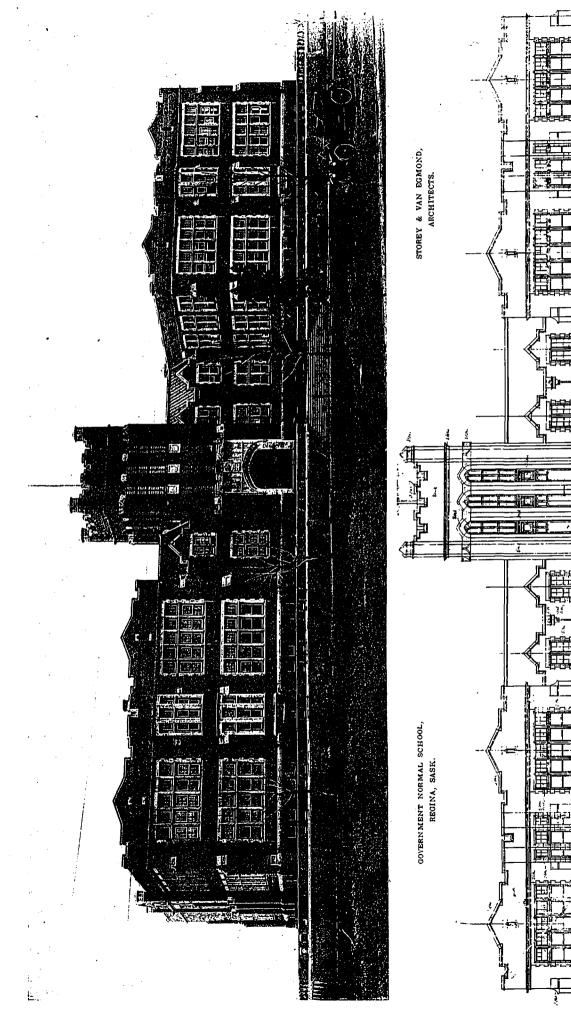
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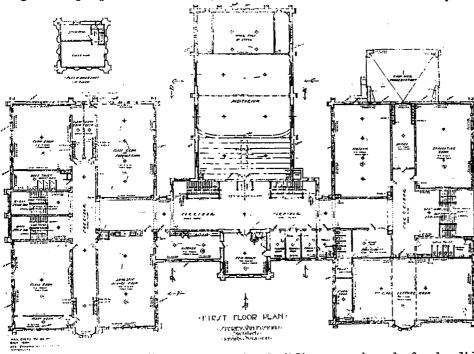
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Chamber, which has received very simple and effective treatment. The building is fireproof throughout of reinforced concrete, the shell of the dome being also in concrete. The finish is of marble and oak, floors of marble, terrazzo and maple, and the rotunda and entrance stairs executed in marble, a light buff color predominating. It is worthy of note that the furniture for this building was built in Regina by a local firm of craftsmen from the architects' details.

On the opposite side of the lake are situated the Government Normal School, the Regina College and St. Chad's College, all carried out in Gothic treatment, and making a fine group of educational buildings. The former is the largest educational building in Regina, and has just been completed at a cost of \$300,000. The exterior has been executed in red sand mould brick and stone, and the central feature is a large well-proportioned tower, which relieves



the otherwise low effect due to the building being only two stories in height. This principle of not more than two stories has been definitely adopted in this city for school buildings. The building is divided into three distinct sections; the right wing being the Normal School proper, and containing the necessary classrooms, library, museum, conservatory, plastic room, draughting room, manual training and domestic science rooms; the left wing is the Model School, or a complete public school, with classrooms, recreation rooms, assembly room, etc., and the central portion comprises the administration offices, teachers' rooms, dining room, main assembly room and gymnasium. Vacuum steamheating is provided from two large internally fired boilers, and ample ventilation is given with two large fans sending fresh air to all rooms.

The Regina College at the present time consists of only one large building, to which is now

being added a large wing and tower. This is the first building of a group of buildings which will ultimately be placed on this site. The build-

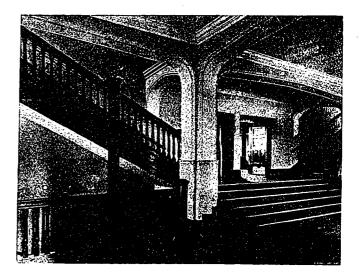
ing is fireproof throughout, finished in oak, and the exterior of dark brown paving brick and stone.

St. Chad's College has now three buildings on the site of many future buildings, which will include a

> LECTURE HALL, PLAN AND MAIN STAIRWAY. GOVERNMENT NORMAL SCHOOL.

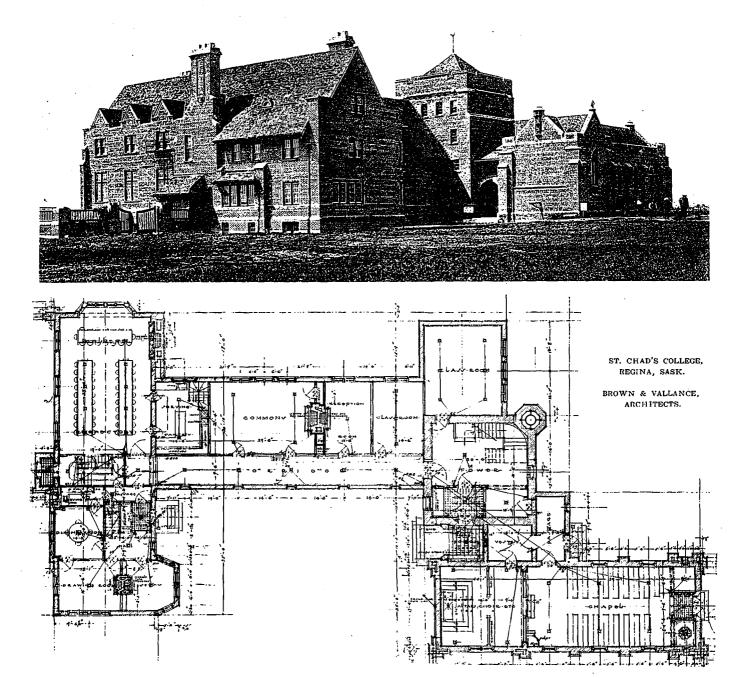
magnificent Anglican cathedral, forming the centre of a well laid out scheme. The buildings now erected are the clergy house, secretary's residence and an interesting college building, with a small

chapel of splendid design. These buildings are carried out in a very effective manner by the use of tapestry brick of a red and brown color,



laid with a heavy white struck joint and dark buff terra cotta of excellent detail.

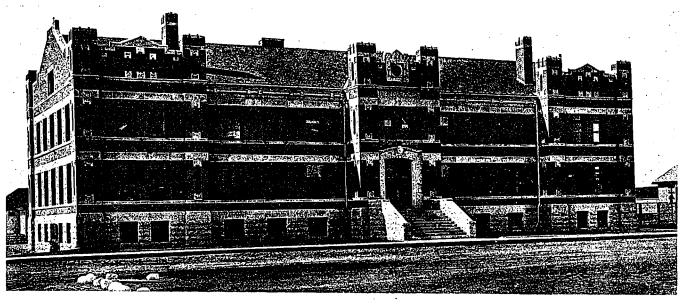
In close proximity to the above buildings is the Regina Collegiate Institute, which is a large building of classic design, and executed in a very effective buff brick, with heavy raked joints and white stone. This building is fireproof of reinforced concrete, with tile partitions, iron and slate stairs, terrazzo corridor floors, with enamelled brick wainscoting. There are twentyRegina, the most important being the Wetmore, Connaught, Benson and Strathcona, all of these being fireproof throughout. Not only has the absolute necessity of making schools fireproof been accepted, but the essentials of school hygiene have been carefully considered, and the result is that the schools of this city are superior to many found in the larger centres of Eastern Canada, both in plan and construction, and many features might be studied to good advan-



two classrooms, lighted from the left side of pupils only, a large assembly hall, recreation rooms, various laboratories, administration offices, library, and a large and well-appointed gymnasium. In this, as in all other school buildings in Regina, particular attention has been given to the heating and ventilation. The building cost \$200,000.

There are many excellent public schools in

tage by other municipalities. The Strathcona was the first fireproof school built by the Regina Public School Board, which construction has now been adopted for all like buildings in the city. The principle of only two stories was also adopted definitely in this school. The building was built in 1910 at a cost of \$70,000. The walls are of brick lined with tile, tile partitions, reinforced concrete floor construction. Corridors

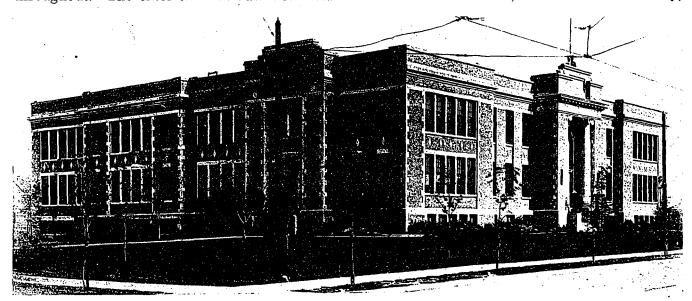


ROYAL NORTHWEST MOUNTED POLICE BARRACKS.

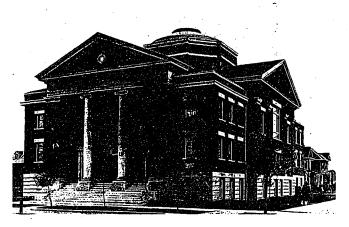
have terrazzo floors, with glazed tile wainscoting. There are sixteen classrooms, each having light from the left side of pupils only, while teachers' rooms, library, rest rooms, etc., are also provided. The basement was kept well out of the ground to give good light for manual training rooms and domestic science rooms, which are located here. There are also large play rooms, toilets, boiler room, fan room, and janitor's rooms in basement. The stairs throughout are of iron and slate. The teacners and public enter at the centre of the front facade, two entrances being provided for pupils on the opposite side; also direct entrances to play rooms from outside. The building is heated by a low pressure steam system, with return tubular boiler. A positive system of fan ventilation is provided to all rooms. Shower baths are provided for all pupils. An intercommunicating 'phone system and automatic programme clock system are installed throughout. The exterior is of dark red sand

mould brick, trimmed with buff Bedford stone.

Regina is well provided with churches, although, unfortunately, there are none designed on true Gothic principles, which is now being recognized as the only style for edifices of this kind. The principal churches are the Metropolitan, Knox, First Baptist, Westminster, St. Paul's, St. Mary's and the Catholic Cathedral. The latter is particularly worthy of note, and has recently been completed at a cost of \$200,-000. Two very high well-proportioned towers are flanking features to the main front, giving a good appearance, and denotes careful study by the architect. The material used is light cream brick, with white stone. The Westminster Church is a well-planned building in classic style, and built of buff brick, with gray terra cotta columns and cornices. The First Baptist. Metropolitan and Knox Churches were partially destroyed in the cyclone which visited Regina a few years ago, but have been rebuilt. They face on Victoria Park, in the centre of the city,



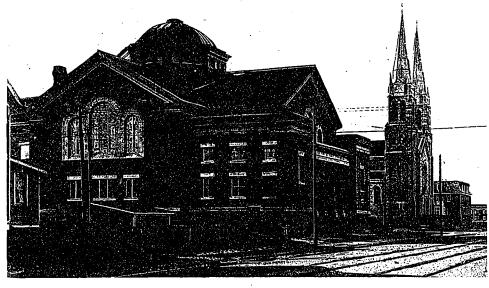
COLLEGIATE INSTITUTE.



BAPTIST CHURCH.

and form part of a splendid group of buildings surrounding this square.

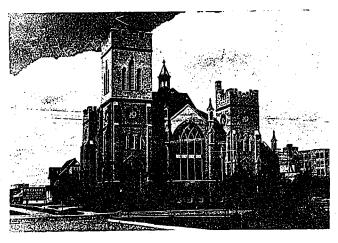
Also facing on Victoria Park are the Regina Public Library and the Provincial Land Titles Building, the latter being an absolutely fireproof building, designed on broad and massive lines, and built of dark brown paving brick and white Canadian marble. The library is a small fireproof building, but very attractive. The material of exterior walls is a dark buff brick, with cut stone trimmings, and the style is classic. A marble entrance and stairway lead to the main rotunda, which has been treated in a very effective manner, and from this rotunda access is gained to all other rooms, the plan being an



CENTRAL PRESBYTERIAN CHURCH.

ideal one, and was selected in competition.

Coming further down into the business centre of the city we find the Post Office and the City Hall. The Post Office is a large fireproof building in Tyndall limestone, the design being similar to other post offices designed by the Dominion Government architect, in classic style, with a heavy rusticated base and columns above. The City Hall is also fireproof and executed in red pressed brick and stone. This building cost



KNOX CHURCH.

\$200,000, but unfortunately is too small for present requirements, and a new and better building will soon be required, which, it is hoped, will be located on a more suitable site.

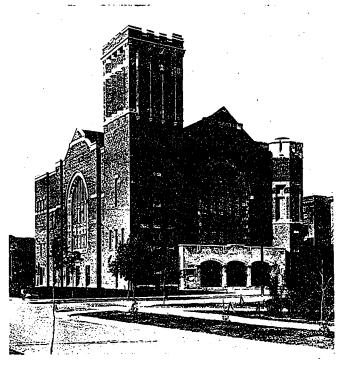
An important civic building is the recently completed Horse Show and Winter Fair Auditorium, which is one of the largest of its kind in Canada. The outside dimensions are 200 feet by 330 feet, and a large arena is provided 85 feet wide and 225 feet long, surrounded by a wide promenade and seating for over six thousand people. Lecture rooms, dining rooms, offices, cloak rooms, carriage rooms, hitching ring, stables, toilets and stabling for two hundred horses are also provided. The entire building

is steam-heated, including the large arena, and the total cost was \$130,000.

Another building deserving of mention is the new city power house, which has just been completed by the city at a cost of \$200,000, not including equipment. This building is situated on the shore of Wascana Lake, in a good residential district, but by careful designing and arrangement the building is an improvement to the neighborhood rather than a detriment. The exterior has received monumental treatment along massive

lines, with large dark brown paving brick and cut stone, and the building has proved a desirable acquisition to the group of large buildings along the water front. By the installation of the most modern equipment the smoke nuisance has been eliminated.

A short distance out from Regina the new Provincial jail is nearing completion at a cost of \$300,000. This is a fireproof building, and has been planned on the most modern lines, and



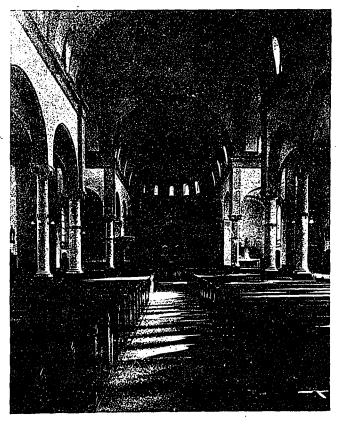
METROPOLITAN METHODIST CHURCH.

the exterior design, while denoting the purpose of the building, is attractive. There is provision for one hundred and fifty prisoners, but the administration department is large enough for double this number, and the plan provides for the addition of a future wing to double the accommodation.

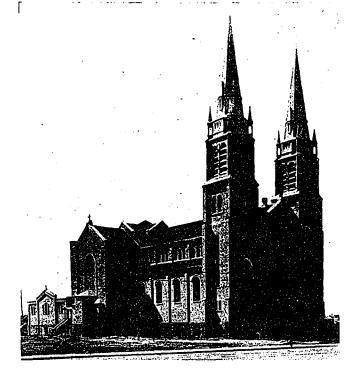
Regina has two large hospitals, the Regina General, built by the city at a cost of over \$100,000, to which is now being added a large

wing, a nurses' home and an isolation hospital, and the Grey Nuns' Hospital, built by the order of Grey Nuns.

The Bank of Ottawa, costing \$50,000.00, is of fireproof construction and heavy enough for three or four additional stories, which accounts for the adoption of brickwork above the cornice. The rest of the front is of buff Tyndall The building is stone. constructed with a reinforced concrete frame of concrete beams, columns and floors; exterior enclosing walls of brick and stone, partitions of tile. The entire ground floor is devoted to banking premises, with marble floors and marble wainscoting in



INTERIOR OF HOLY ROSARY CATHEDRAL.



HOLY ROSARY CATHEDRAL.

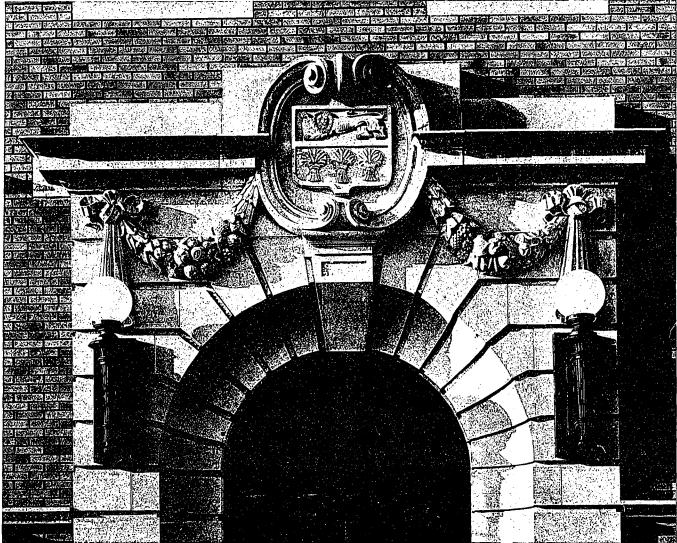
green and white. The stairs are of iron and marble, finish of oak. The first floor is occupied by the bank's solicitors and the upper floor is used as staff quarters.

The Credit Foncier building, costing \$45,-000.00, is of reinforced concrete construction with two street facades in buff Tyndall stone. On the ground floor are provided the offices of the owners, with separate corner entrance. Another entrance leads to the two upper floors,

> which are laid out for offices and living quarters. The building is finished in oak throughout, with iron and slate stairs, maple floors, and mosaic floors in public spaces.

The Albert Court Apartments was the first apartment building built in the city of Regina. It was erected in 1907 at a cost of about \$40,000.00. There are twelve large suites, each containing a drawingroom, dining room, two bedrooms, bathroom. kitchen. pantry, etc. Each suite opens to the rear on to a reinforced concrete balcony to which leads the tradesmen's stairs, which are of iron. There are two entrances, one for each

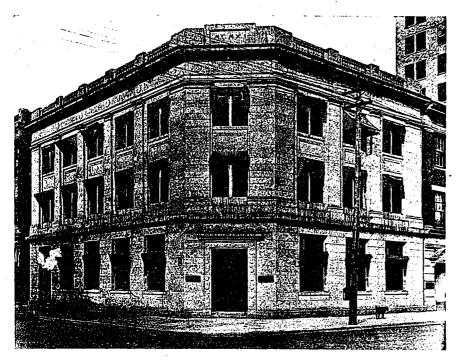




EXTERIOR VIEW AND ENTRANCE DETAIL.

TELEPHONE EXCHANGE.

STOREY & VAN EGMOND, ARCHITECTS.



CREDIT FONCIER.

STOREY & VAN EGMOND, ARCHITECTS.

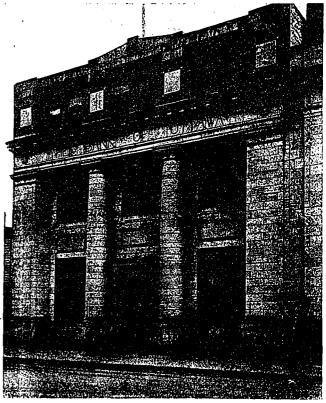
six suites. All finish throughout is of birch stained to represent mahogany, and floors are of maple. The walls are of brick and tile and finished on the outside with buff colored stucco plaster. All trimmings are of dark brown with the shingle roof in a warm red color. The base to the building is of red and black brick laid in Flemish bond, which harmonizes well with the buff walls and red roof. The Royal George Apartments was built at a cost of \$35,000.00 and contains twelve separate suites. There are six suites, each containing a drawing room, dining room, two bedrooms, kitchen, bathroom and maid's room. Three suites, each having drawing room, dining room, bedroom, kitchen and bathroom; three suites, each having a large living room with alcove bedroom, kitchen and bathroom. Each suite has a private hall giving direct access to all rooms. There are two fireproof stairs at the rear, with concrete balconies Many closets, cupboards and at each floor. other conveniences are provided. Apartment house telephones are installed in each suite with centrals in the vestibules and so arranged that the caretaker can be called from each suite. In the basement are located two laundries, store room for each suite, boiler room, and caretaker's The exterior is executed in a dark quarters. brown paving brick with Bedford stone trim-The Eddy Apartments is well laid out mings. on similar lines to the above, but the architect's details were not adhered to in the exterior design.

The McLaughlin garage is of ordinary warehouse construction, with solid brick walls, and cost about \$35,000.00. Half the building is two stories and full basement and the other half for garage purposes only one storey without base-

ment. The exterior is of dark red brick. The H. G. Smith warehouse is of first class slow-burning mill construction and cost \$50,000.00. All main girders and columns are of large dimensions and there are no joist or second-The floors are of ary beams. $2 \ge 6$ on edge well spiked together, covered with waterproof paper and finished with 1 x 2 maple flooring. All floors are scuppered one inch in twenty feet and graded to hoppers on each floor which are connected to drains. All stairs and elevators are enclosed with brick fire walls with automatic steel doors at all openings. All walls, ceilings, posts, etc., are whitewashed throughout, except in office part, where the walls are The exterior is of plastered. dark red brick and buff stone.

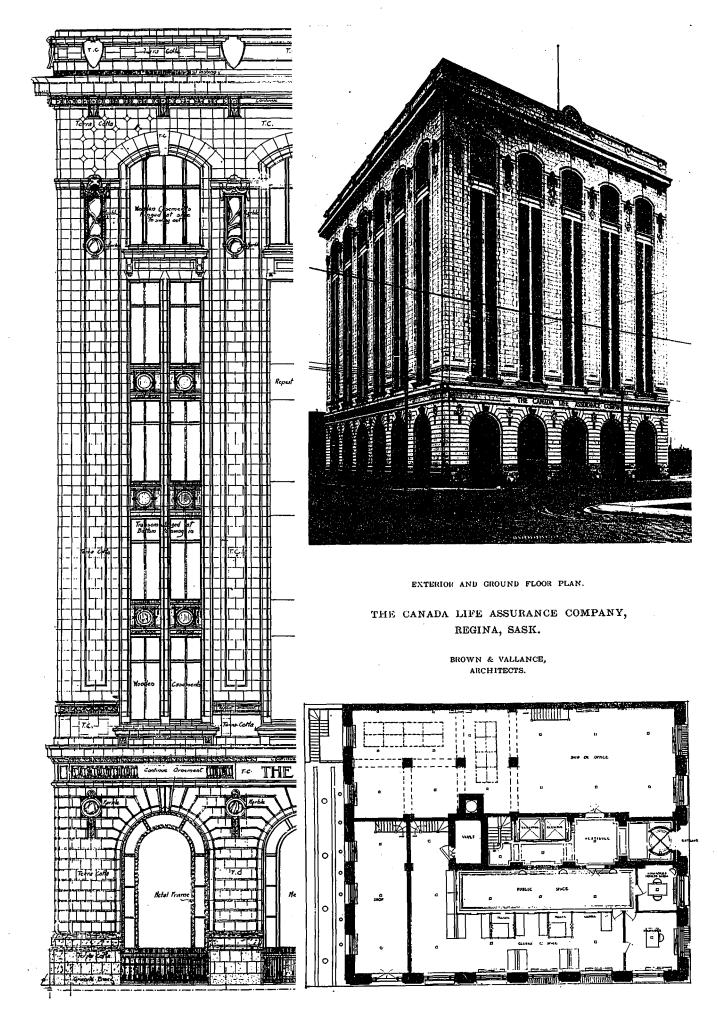
A large wing is now being added to the general hospital at a cost of \$150,000.00. This building is of fireproof construction throughout.

A description of Regina's public buildings would not be complete without some reference to the Royal North-West Mounted Police Barracks, where there are a number of large and interesting buildings. These surround the parade square and include the officers' quarters, Commissioner's and Assistant Commissioner's residences, drill hall, men's quarters, and a fine new building for officers recently completed.



THE BANK OF OTTAWA.

STOREY & VAN EGMOND, ARCHITECTS.



Residential Work of Regina

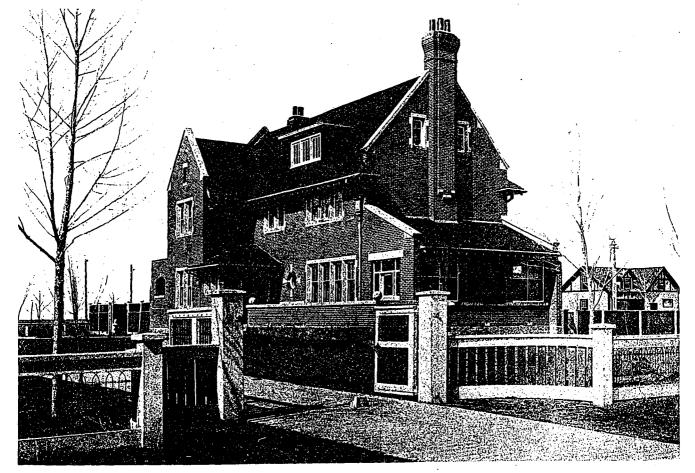
F. C. PICKWELL

N the hustle and bustle of Western business _ life the advantages of an artistic home are very often overlooked. In some cities, however, the Renaissance has become a reality through the enthusiasts of good architecture, and in the endeavor to grasp the true essentials in the matter of home building many artistic residences have been built. This is especially true in the case of Regina-the capital city of Saskatchewan. Several years ago a house costing \$15,000 was quite a novelty, only two or three having been erected by enterprising citizens. To-day, however, there are scores of houses costing \$15,-000 and upwards, some even providing the comforts which belong to the better class of building, ranging from \$35,000 upwards. The smaller dwelling usually takes the form of an artistic bungalow, and rows upon rows of such structures, costing anywhere from \$3,000 to \$10,000, are to be seen in the residential sections of the city. Regina has now become known as "a city of beautiful homes."

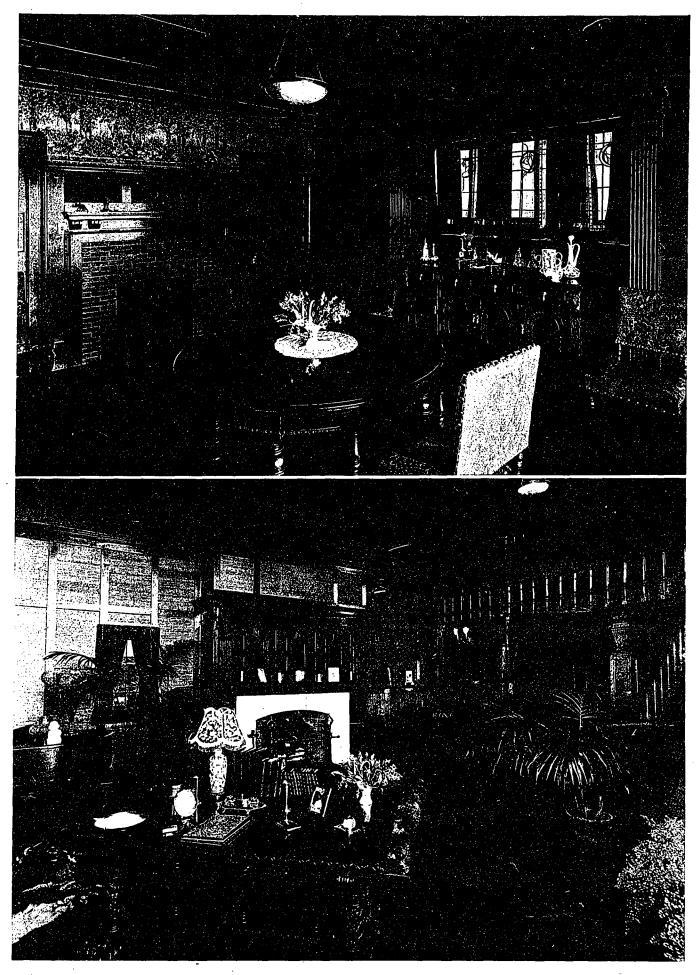
Overlooking the Parliament buildings and the extensive park laid out to the south are the homes of W. H. A. Hill, E. D. McCallum and H. M. McCallum. The Hill house, located on Albert street, consists of brick with stone trimmings, lending an artistic touch to certain features of the various facades. The walls are of solid brick, lined with hollow brick and double strapping. Upon the interior is a spacious billiard room in the attic, with fireplace ingle and alcove for card tables; also a living room panelled with oak to within twenty inches of the ceiling. The cost approximated \$18,000.

E. D. McCallum's house, like the one just described, exemplifies the rapid progress made in this phase of architecture. Built upon new land, which in a few years will be attractively surrounded by foliage, it augurs well for the artistic development of this residential district. The first storey is constructed of stone, metal casement and leaded glass in the bay window. Erected in 1912 it cost in the neighborhood of \$30,000.

W. G. Van Egmond's residence was erected several years ago at a cost of \$6,000. It is built around a fireplace and gives the effect of a much larger house. The large living room with alcove fireplace and the dining-room are



W. H. A. HILL'S RESIDENCE.



DINING ROOM AND LIVING HALL.

E. D. MCCALLUM'S RESIDENCE, REGINA.

F. CHAPMAN CLEMESHA, ARCHITECT.



E. D. MCCALLUM'S RESIDENCE.

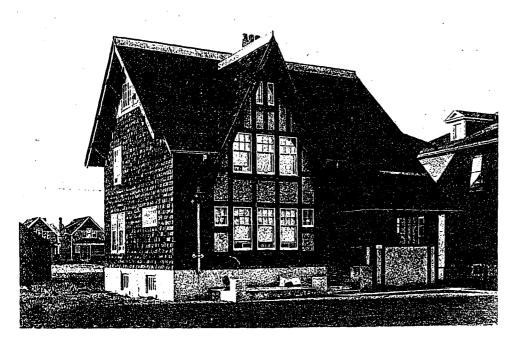
practically one, being divided by a large movable screen decorated the same as the walls of the rooms. The living room is stippled in a dark brown and red with stencil panels in gold and blue, the ceiling beamed simply in one direction with a gold band around panels of a buff color. The dining room to plate rail is of delft blue with green and rose stencilling, while the walls above and ceiling are in a light buff. The kitchen is connected to dining room by a service pantry and separated from reception hall by a smaller hall from which stairs lead to basement and side entrance. On the first floor are four bedrooms and bathroom, while in the attic are a billiard room and maids' room. The walls throughout are finished in a putty stucco finish, tinted or painted. The woodwork on ground floor, except kitchen, is antique brown, all woodwork in bedrooms and kitchen being in white, and all floors throughout of maple. The heating system is hot water. The exterior is executed with shingle walls and a certain amount of half timber work; the walls being stained dark brown, the roof a dark red, cornice of half timber work, etc., stained green, and stucco plaster a light buff.

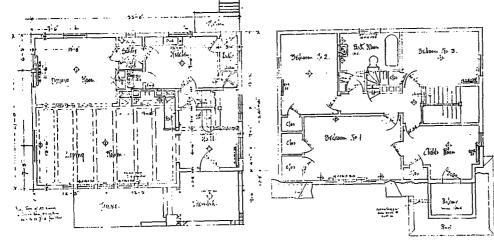
The residence of H. N. McCallum, also situated on Albert street, is one of the most recent additions to Regina's high class homes. The first storey is of brick construction, the second of roughcast with wood panelling and overhanging eaves. A very spacious verandah assists in making this home a very attractive one. The cost of this house approximated \$25,000.



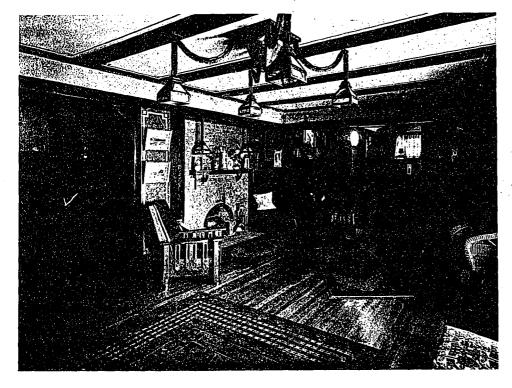
J. M. YOUNG'S BUNGALOW.

F. CHAPMAN CLEMESHA, ARCHITECT.





EXTERIOR ELEVATION, PLANS AND LIVING ROOM. W. G. VAN EGMOND'S RESIDENCE. STOREY & VAN EGMOND, ARCHITECTS.



The home of L. V. Kerr has attracted considerable attention by reason of its unique architecture. One of the main features is the large square tower which extends up several stories. A spacious sun porch and parlor has been built around the front portion of the house. The stables, coachman's quarters and garage are all built in connection with the house, forming a sort of "L" on the property measuring eighty-one by one hundred and twenty-five feet. Finished within in oak, the house, including garage, cost \$30,000.

TOWN PLANNING W. A. Begg

It is indisputable that a beautiful and efficient city is not an accident, but a reflection of the life of the people. Town planning should be comprehensive and orderly with the aim that the future city might be a fitting expression of the progress of the citizens in a noble pursuit of social, industrial and architectural achievements. The street planning was the first consideration in city planning and the possibility of success in the other problems, such as parks and public buildings, was largely dependent upon the way the streets were laid out.

In most countries there are cities where scientific city planning has been part of the municipal routine for years, and is regarded as a necessarily continuous function. In Germany, up to 40 per cent. of any area can be taken for streets and other public purposes, and it is generally recognized that it is for the good of the community. It is not done hastily or secretly, but the proposed plans are exhibited in the city hall before they are finally authorized.

In town planning, the first essential is a thorough knowledge of the site, information of the water supply and the drainage possibilities; also some knowledge of the existing highways. A suburb would have to be dealt with in the same way and a study of the town or city it adjoins will be essential. Then the city planner has to consider the lines of communication from point to point and the multiplication of these lines which determine the street plan. Out of the efforts to combine formality there has grown distinguishable types commonly known as the gridiron, or American plan, the radial, or circulating boulevards, the diagonal, superimposed on the gridiron, and the recent German type of extreme informality which is an imitation of mediæval town plans.

The gridiron plan was also to be found in the remains of Roman colonies. Pompeii was laid out on this plan, and the city

of Turin, in Italy, and Chester, in England, owe their rectangular street plan to Roman origin. Its use in Canada is probably due to the simplicity, to the lack of understanding of town planning and to the subdivision of land for speculative purposes. This style of plan is also defective from its montony and impossibility to secure quietness in the residential quarters. The chief defect in the diagonal style of town plan-

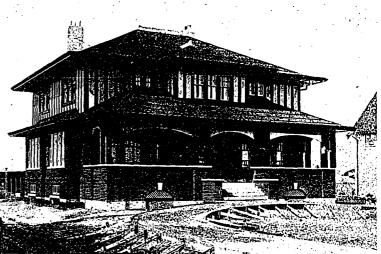
ning, as in Washington and Philadelphia, lies in the numerous angular corners caused by introduction of the diagonal.

The radial system was developed principally in Germany and was brought about by the encircling walls and fortifications. This is beginning to have an influence on American town planners who are endeavoring to link up the large parks and encircling boulevards. Boston and Chicago show examples of the application of this idea to American city plans.

Many old cities have a cathedral or fortress which is the central point of interest in a modern city; this centre might well be the city hall, or, in a capital city, the government buildings. Having decided on the chief centre it might well be made the focus of two or three main radials —through it is not advisable that many streets, and, therefore, much traffic should

circulate round an important building as suggested. Rough land close to a city, such as the valley of a stream, is suitable for park areas, and river and lake fronts should be bordered by wide thoroughfares. Low lying land should be secured for industrial sites, and the workingman's residential areas should be separated from the industrial site by a strip of park which would provide for the worker and his family.

Small community centres and playgrounds should be provided at about one-half mile distances as statistics show that small children will



H. M. MCCALLUM'S RESIDENCE.

STOREY & VAN EGMOND, ARCHITECTS.

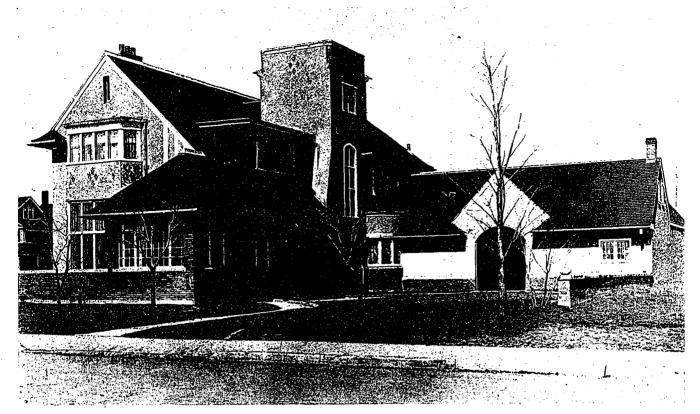
not go beyond that distance to play. They should also be located off the main streets of traffic.

The width of streets is a very important matter, and the proper method to determine the width between property lines is an estimation of its greatest traffic requirements. In the planning of a new town this is impossible to foresee, but it should be good practice to adopt a



EXAMPLE OF REGINA RESIDENCE.

width consistent with the most optimistic growth. The general adoption in Canada of a limit of sixty-six feet in least width has undoubtedly been a good thing, and it is also fortunate that there has been no limit placed on how wide a street might be. The result is that

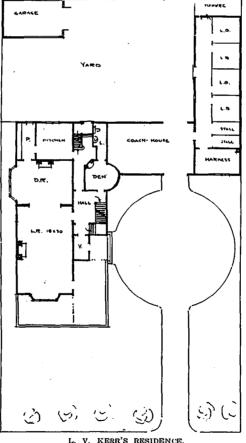


all cities and railroad towns have at least one street from eighty to one hundred feet wide.

With regard to the improvement of Western cities, little can be done in the way of town planning until the municipal authorities acquire wider powers than they possess at present. No other question has so important a bearing on the future of street planning. The English movement began in 1904 and at that time there was a general demand that the municipal authorities be given the necessary town planning powers. It was not, however, until five years later that the legislation was passed by Parliament. A modified form of this Act has been adopted by New Brunswick and Alberta and its provisions are becoming pretty generally known throughout Canada.

Main thoroughfares should be from ninety to one hundred

feet wide, secondary thoroughfares seventy to ninety feet, and local streets forty-eight to sixtysix feet in width. The Engineering Society should give the subject of such classification some study with a view of establishing suitable standards for municipal or provincial adoption. It was upon the treatment of street junctions



CLEMESHA & PORTNALL, ARCHITECTS.

that much of the effect of the city will depend. Sufficient space should be allowed and for aesthetic appearances a certain formality should enter into the design. Many streets centering on one point are not desirable. The main thoroughfares should not lead into one without giving the latter extra width for a distance to enable the traffic gradually to unite or separate.

Dr. W. W. Andrews led the discussion which took place after the reading of this paper before the Engineering Society of Regina, and pointed out that city planning was for the purpose of conserving the lives of the citizens through the convenience of streets and beauty of parks and in other ways. Life interests should always be kept in the forefront of any city ideals. He suggested that the city should have an artistic committee with power to veto the erec-

tion of any structure injuring the park view or street line. He spoke of the diagonal street plan which might be carried out in the future planning of Regina, referring to Victoria park as the future civic centre and to a diagonal street through Lakeview to join the road leading to Moose Jaw, and another leading to Toy Hill.



W HEN Regina was but in her infancy, her future was predicted, and by none other than Nicholas Flood Davin, one of the best parliamentary speakers, representing the prairies in the Federal House at that time. How well Davin's prophecy has been fulfilled can be seen upon careful study of the progress made in this prairie city. Situated in the very heart of the grain producing province of the Dominion, Regina has rapidly become known as a point of

distribution, not only for farm implements, but for other necessities, such as foods, clothing, etc. The transcontinental railways selected the city for a great future; the early councillors who directed her destinies had similar optimistic views, carefully directing the growth and future possibilities.

Early in her history, Regina was favored with a far-seeing set of councillors. Not only was property set aside for parks, in sections which at that time seemed for beyond any possibility of settlement, but also a section comprising 640 acres was provided for warehouse and factory sites. On this property has grown and is still growing, one of the most notable industrial centres to be found

in Canada. No smoky factories nor noisy warehouses decorate Regina's residential and business section, consequently the streets are clean in both parts, and while only a start has been made in the way of improvement, the appearance of public thoroughfares is quite artistic. VIEW FROM VICTORIA PARK.

The very latest ideas in town planning have been brought into use. The paved streets are of regulation width. The city has legislated against building structures closer to the street line than twenty-five feet, and maintains a boulevard on the inside of the sidewalk, approximately twenty feet in width. This practically means that the lawns in front of the residences are forty-five feet in depth.

> Thousands of trees, especially suited to the prairie climatic conditions, have been planted out in the parks and on the streets of Regina, and are now beginning to materially add to the general appearance. In order to make this work more extensive the city established a nursery and greenhouse. In the nursery at the present time are one million trees in the process of cultivation. As soon as they are of the required standard they will be planted along the streets or in some of the parks. In the work of beautifying the city the merchants at large have joined, one firm recently giving five thousand large sized trees to school children for planting.

In the very extensive development which has been

taking place at Regina, it will be seen that the beautifying of the city has not been disregarded, but on the contrary has been given every possible attention. At the present time the civic fathers have Professor Mawson, a noted expert on town planning, working on a scheme whereby

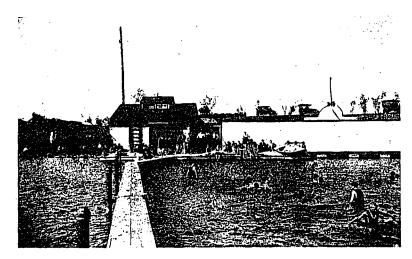
POST OFFICE.



SCARTH STREET.

the beauty of the city will be greatly enhanced. In conjunction with Provincial Government, it is expected that a system of parks linked up with suitable boulevards and driveways will be provided.

This capital city of Saskatchewan has also become known as a point of distribution, twelve railway lines radiating from the city at the present time; and when all of the branch lines, for which bonds have been guaranteed by the Provincial Government, have been completed there will be twenty-two lines radiating from Regina. At the period when the railway companies accepted Regina as the logical centre of

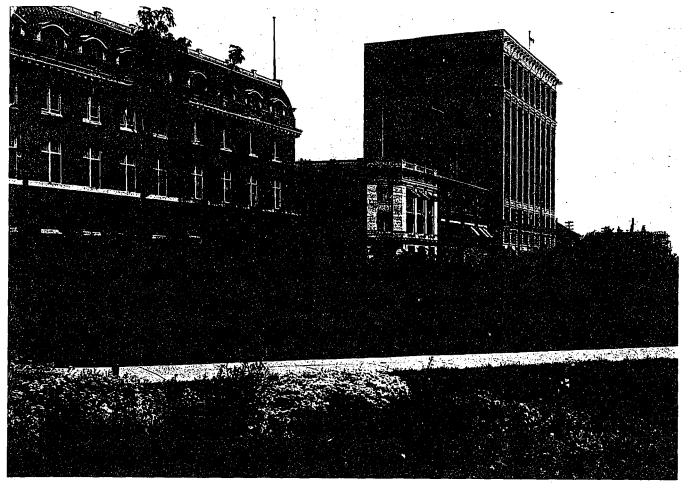


BATHING PLACE.

distribution for Saskatchewan and laid their plans accordingly, the implement companies, too, felt the advantage of locating in the city. In the model warehouse and manufacturing centre planned by the city councillors years ago are now housed thirty-one warehouses, from where twenty-five million dollars' worth of business was handled in 1912, making the city by far the largest point of distribution for farm implements in the world. This district is immediately across the tracks from the main business section, within three minutes' walk, and served by spur tracks from the three transcontinental railway lines.

> From point of population, the growth has been rapid and substantial. With this has come a uniform increase in general business and extensive improvements, so that at the present time Regina may rightfully claim to be a city of permanency. This fact is all the more readily understood when the bank clearings for 1913 are taken into consideration and a comparison made with the figures for 1912. It will be seen that in practically every instance the weekly showings for 1913 presented a substantial increase over the figures for the corresponding periods of the year before, despite the financial stringency.

The population of Regina in 1902 was

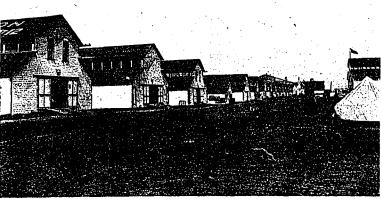


Y. M. C. A., CREDIT FONCIER BUILDING AND ALDON BLOCK.

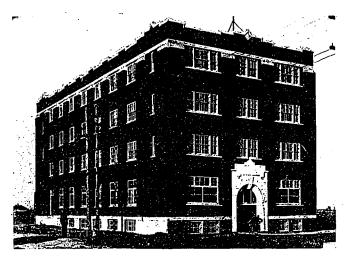
approximately 2,700. To-day it is estimated at 50,000, an increase of over 47,000 in ten years. The Dominion census showed 30,210 in 1911, which was a gain of practically 13,000 over the previous year, and allowing only 10,000 during the past two years, it will be seen that the estimate of the population at the present time is not out of the way, and is based on the growth in other lines. The number of houses constructed during the past year would also carry out this deduction. With the growth in population has come enhanced property values. The assessment figures show the extent of the increase, and if carefully studied will prove that the per capita wealth to-day is greater by far than that of ten years ago. The assessment figures are as follows: 1902, \$1,062,628; 1909, \$11,714,685; 1910, \$13,066,398;

1911, \$34,840,733; 1912, \$70,000,008. Despite the rapid growth and the heavy improvement works made necessary, Regina has been able to keep the tax rate extremely low, the rate for 1913 being fourteen mills on the dollar, including not only the general rate, but also the collegiate, library and public school rates. That it has been possible to do this is partly due to the fact that early in its career the aldermen provided for municipal ownership of certain utilities. This policy has been carried out

by the city council, and it is likely that a still further venture will be attempted in the near future. The city now owns a street railway, an electric light and power plant, and a waterworks system, all of which pay substantial returns after the deduction of all charges. This surplus revenue has resulted in a low tax rate. In delving into municipal ownership, however, the city had to be careful of its borrowing power. Property owned by the city both in the warehouse section and in the residential districts was sold and the proceeds devoted towards the furtherance of the municipal ownership policy. In this way the borrowing power was conserved. The city owns all told several million dollars' worth of pro-



MUNICIPAL STOCKYARDS.



W. C. DOWNING FACTORY.

perty that could be utilized for such purposes.

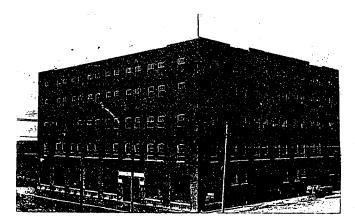
Situated in the heart of the Saskatchewan wheat belt, Regina has become a recognized grain centre. Millions of bushels of wheat pass through the city yearly on the way to market. The various railway lines all serve as feeders, and have considerable difficulty in getting the grain out of the country. The production of

wheat from the small portion of land that is under cultivation in the province will reach the total of at least 118,000,-000 bushels, while the grain output will be 270,000,000 bushels. With the rapid settlement in the province, it is only natural to expect that the centres of life such as Regina will add greatly to their population.

As a city to live in, Regina has many inducements. The streets are nicely laid out, the lawns and boulevards well kept, and various forms of amusement provided. Aquatic sports, tennis, and golf

all have their usual quota of followers. The other games, such as rugby and baseball, are popular, as well as the winter sports, skating, ice-boating and tobogganing.

The first settlers of Regina arrived in May, 1882, and subsequently a canvas town sprang up where the trestle bridge carries the main track of the C.P.R. across Wascana Creek, about a

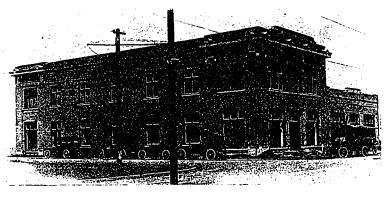


JOHN DEERE PLOW CO.

mile west of the centre of the city. The selection of the townsite was arranged jointly by the Government and the C.P.R. Co. Early in 1883 an officer of the North-West Mounted Police was sent to select a suitable place for the headquarters of the force, which had previously been in Winnipeg. On his return the lands at present occupied by the barracks were selected.

At this time an agreement had been completed between the Dominion Government and the railway company to enter into partnership regarding certain townsites, one of which was to be the seat of government for the North-West Territories. Four sections were selected and subsequently vested in Messrs. Osler, Scarth, Smith and Angus, trustees, to administer, and divide the net proceeds between the Dominion Government and the railway company. The name "Regina" was conferred on this townsite by the Governor-General, Lord Lorne, who had been requested to select a name for the future capital.

The arrangement for the control of the townsite by the trustees was terminated by Order in Council of 29th December, 1900, and by further Order in Council of 6th April, 1903, the

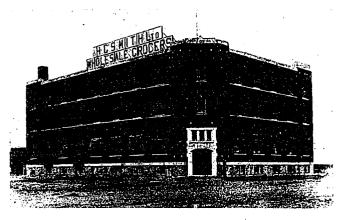


MCLAUGHLIN CARRIAGE CO.

granting to the municipality of the lots in the townsite which had reverted to the Crown, was authorized. By Order in Council, 27th Marci., 1883, the town of Regina was declared to be the seat of Government of the North-West Territories in place of Battleford.

The first school was opened in the town in the spring of 1883; the first Dominion Lands Office, a low frame building, was brought up on a flat car from Troy (afterwards called Qu'Appelle) and was placed at the corner of Broad street and Victoria avenue. In April, 1883, a public meeting was held to discuss the matter of the site of the proposed post office, the site finally selected being on Victoria avenue.

On 13th May, 1883, Lieutenant-Governor and Mrs. Dewdney arrived to take up their residence in Regina. On July 1, 1883, the city was made a money order point. Lots on South Railway street changed hands at \$800 to \$1,000 each. A public meeting and a citizen's committee was formed to carry on the business of the town. Mr. John Secord, barrister, was appointed sec-

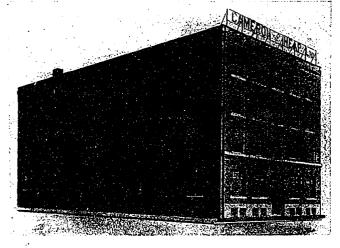


H. G. SMITH WAREHOUSE.

retary. Sub-committees were appointed on finance, sanitation, fire and water and miscellaneous affairs. A committee was also appointed to draft a charter of incorporation, and the Finance Committee were instructed to collect two thousand dollars by public subscription for public works.

Elections for the North-West Council were held in August, 1883. Mr. Wm. White was selected for the Regina District. The Fifth Council of the North-West Territories was opened by Lieutenant-Governor Dewdney on August 22, 1883. A bill entitled "An Ordinance Respecting Municipalities" was introduced in the North-West Council on September 12, 1883, and a public meeting of citizens was called to discuss the matter of incorporation.

In October, 1883, a lot on Eleventh avenue near Rose street was sold for \$275. At this



CAMERON & HEAP, LIMITED.

time farm lands in the vicinity of the city were worth about \$5 per acre.

On Monday, October 8th, the Civic Council met and took final steps to comply with the ordinance to provide municipal government. The Government Buildings, Council Chambers and Indian Office on Dewdney street were completed in October. The first telephones privately owned were introduced into the town at this time. Up to December, 1883, Regina had two chartered banks, the Bank of Montreal and the Merchants Bank.

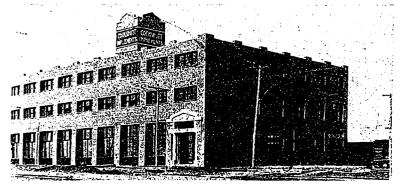
Nominations for the first municipal elections took place on January 3, 1884. Two hundred and thirteen votes were polled. Mr. D. L. Scott, now Judge of the Supreme Court of Alberta, was the first mayor.

DEVELOPMENT IN REGINA

Malcolm Ross

W HILE numerous cities on the continent have been and are busy preparing plans at great expense, for schemes of general improvement, Regina, partly by foresight and design, and partly by good fortune, now holds a bet-

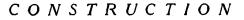
ter position in regard to certain features of civic organization, than many of the other cities will when their schemes are worked out. This is especially true in regard to the economical arrangements for the transportation and distribution of goods. Distribution must necessarily commence at the railroads. The arrangement in Regina has been based on the establishment of warehouses and factories in an area so arranged that each is directly served by a spur track. The tracks are so arranged that cars may be reserved and delivered directly to the various railroads. A freight exchange or transfer yard

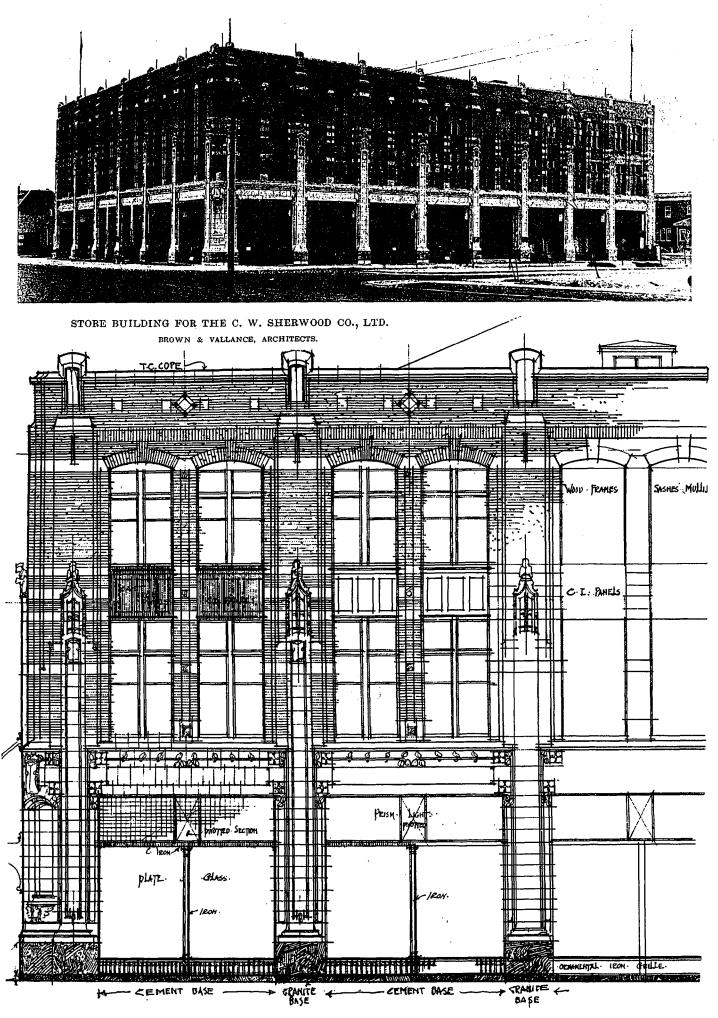


COCKSHUTT PLOW CO.'S WAREHOUSE.

outside the city will doubtless be taken into consideration before long, in connection with which will come the re-arrangement of some of the railroad entrances to the city, which, if left permanently, would entail much expense for subways, and interference with the transit facilities of the city generally.

Warehouse Rearrangement.—These are especially valuable in a distributing centre, obviating as it does all cartage from cars to warehouse and again from warehouse to cars. The effect on the congestion at the freight sheds, which existed up to two years ago, has been remark-

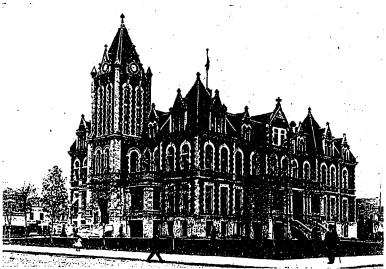




able. At that time drays had to wait from an hour to an hour and a half to get to the unloading doors. To-day there is not such delay, which means waste of time and money to the shippers and the public.

The wholesale and manufacturing district is

distinctly separated from the business and retail district by the main line of the Canadian Pacific and the Canadian Northern Railway. There is no unnecessary trucking entailed as in cities where the wholesale houses are often some distance from the freight yards, often outside of the city, and separated to the extent of a half a mile or more from the retail sec-



CITY HALL

tion. The retail section is advantageously placed in relation to the residential districts.

Fortunately the Province has a progressive Government and the Bureau of Surveys has drawn up a scheme providing for diagonal or radiating road allowances which covers the districts for which sub-division plans have not yet been registered, and there can be little doubt that it is only a matter of time and public appreciation of their economic possibilities before these roads will be continued as far as practicable toward the centre of the city.

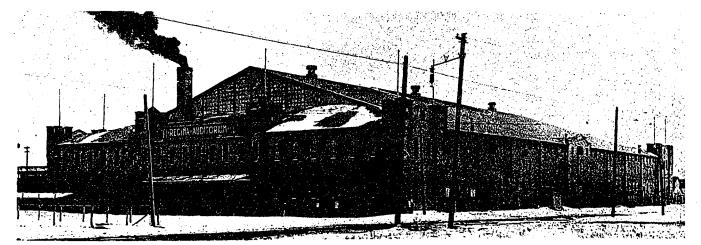
Sanitary Features.—The important sanitary features of water supply and sewage disposal have been arranged, as the foundation of a comprehensive scheme which can be extended to provide for the requirements of the city for a considerable number of years to come. The water supply is of unusual importance. It is secured from underground springs and is practically removed from any possibility of contamination.

Social Progress.—In regard to the social features of town planning, not much has as yet been done. There is a definitely expressed desire from all quarters for more public recreation

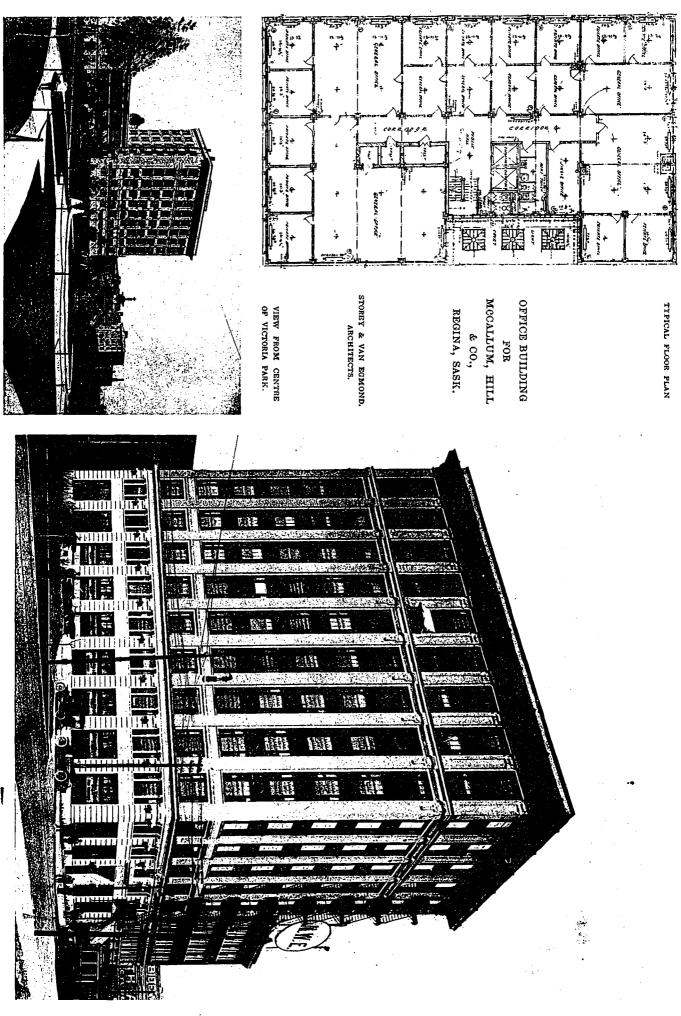
grounds and buildings, quite apart from ornamental parks. The housing and living conditions of the people who are unable, for various reasons, to keep them up to the standards known to be necessary for the welfare of the community, are being discussed. The application of the single tax system of taxation, which is being gradually introduced, it is be-

lieved, will go a long way toward improving conditions for a certain class. How far it will benefit the poorest and transient classes is yet to be seen.

Aesthetic Features.-In aesthetic possibilities, Regina is especially fortunate. Large open spaces have been reserved by the Dominion and Provincial Governments, some of which have since been turned over to the city. The largest of these adjoins the Legislative Buildings grounds, and with a good sized area of water and trees affords opportunity for the grouping of four public buildings with beautiful surroundings. Seeing the possible advantages to the whole province of this area, and the influence that could be exerted in shaping the standards of the growing cities and towns of the province by its means, the Government has secured the advice and services of a distinguished authority on town planning, landscape and architecture.



AUDITORIUM FOR WINTER FAIR AND HOCKEY.



ELEVATION FACING VICTORIA PARK.



Regina --- Parks and Playgrounds

HIS WORSHIP MAYOR MARTIN

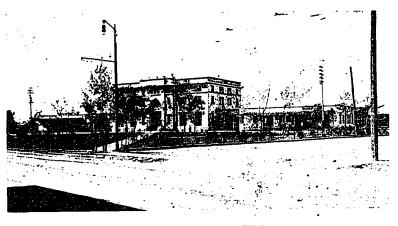
HAT is being done by Western cities to improve the beauty features is little realized by the outside world. Regina is the capital city of Saskatchewan, and has been particularly active in the way of setting out trees, providing parks and other places of beauty and recreation. Thousands of trees are planted yearly, and in this way the barren prairie on which she was built has been converted into a settlement in which may be seen an abundance of green. As a city of parks, Regina has become noted; over two hundred and fifty-seven acres of land having been set aside and converted into beautiful districts. The largest individual park is the Wascana, which has an area of forty-seven acres, situated on Wascana Lake. It is interesting to note that this body of water is what might be termed an artificially created lake, situated well inside the limits of the city, and created by damming the river. To the north of the lake is situated the artistic creation, and immediately adjoining is the main residential section. To the south of the lake is located the Saskatchewan Parliament buildings and grounds, costing over \$2,500,000, and considered to be the finest example of their kind in Canada. Surrounding the Parliament Buildings are also innumerable costly residences.

One feature of Regina's park development is Victoria Park, which is situated within two blocks of the City Hall. This plot is laid out in an ornamental scheme, an artistic fountain having been placed in the centre, while shrubbery and flowers are used to good advantage in beautifying it. There are other parks which have been improved considerably during the past few years.

In the way of athletic parks, Dominion Park is probably the most important, the area being about eight acres. It is located in the centre of the warehouse district and affords exceptional advantages to men employed in this section as well as to the athletic and sporting element of the public generally.

While plenty of provision has been made for athletic parks to accommodate the "grown ups," still the city is working on a scheme of park development for children which will provide for the needs of many years to come. It was only a few years ago that recreation spaces for children were first started, and a Children's Playground Association was organized in Regina. The City Act made no provision, however, for a grant to any such organization. The City Council were of one mind with regard to the expenditure; accordingly it was decided that the Parks Committee spend the necessary amount of money in having equipment for play grounds installed in one of the city's parks and at several of the schools. This resulted in more than a mere grant of money, the Playground Association receiving the co-operation of the five aldermen who were members of the Parks Committee. The first year's work was more or less experimental, but the results were satisfactory, which gave an added impetus to the movement. At the present time the city has a playground on almost every school ground in the city, and still reserves the large park set aside several years ago for playgrounds.

The city has now gone one step further and provided a skating rink on each of the school grounds in the city. The caretaker attends to the flooding of the rink and its proper maintenance, besides acting as a sort of supervisor. In this connection it might be stated that all of Regina's playgrounds are properly supervised. The playground movement may now be said to

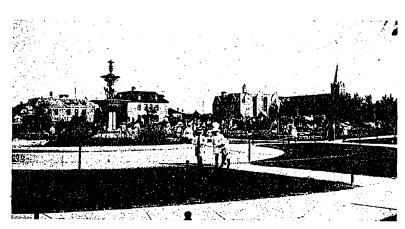


PARK AT UNION STATION.

have passed the experimental stage, and become a fully developed civic undertaking.

One feature of Regina's development has been the following out of town planning lines; not only have parks been provided for with diagonal streets running through them, building lines established and numerous other features carried out as far as the retail and residential section of the city is concerned, but also the industrial district has been developed.

Before the most ambitious citizens had begun to think of Regina as a city of fifty thousand souls, large tracts of lands had been set aside by the townsite trustees to be used as parks, exhibition grounds, market place, etc. Included in these various areas reserved was a section of land, adjoining the main line of the Canadian Pacific Railway. As is well known, towns usually start to grow from the first railway line that passes through them, and in this respect Regina is no different from the others. The city has grown both north and south from the railway line, so that it is practically in the centre of the city. The section of land adjoining the railway on the north was kept for civic purposes. As the city began to assume more metropolitan ways, however, the council took its first step in the way of town planning. A large area was reserved for industrial purposes. Later the Grand Trunk Pacific and the Canadian Northern Railways constructed lines in

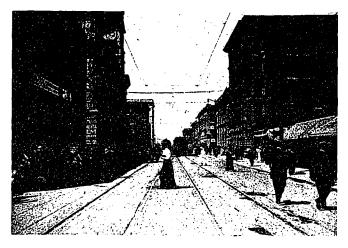


VICTORIA PARK. .

such a manner as to almost surround this tract of land, giving access to every section of the district to each of the three railways, which have also constructed spur tracts to serve individual sites as the demand arose.

It is in this area that is located what has been termed the most economical industrial section in Canada. Sites have been sold at a nominal price in order to keep industrial concerns together, and although a fair amount of property has been sacrificed for industrial purposes, there is still considerable land retained.

Thirty-six factories and over two hundred and fifty wholesale houses have been erected, and the amount of business handled by the implement warehouses at Regina alone during the year 1912 amounted to over \$25,000,000. The city for several years past has had the honor of being rated as the largest point of distributing of farm implements in the world, and her prestige



ELEVENTH AVENUE.

in this regard is being added to year by year. One of the most recent additions to factories has been the W. G. Downing Company's fine building. This structure was erected on Fifth avenue, immediately west of Broad street, four stories in height with basement, and of brick construction.

> The railways and the railway lines directly connected with this "town planned industrial district" are: Canadian Pacific Railway, Canadian Northern Railway, Grand Trunk Pacific Railway, Great Northern Railway, Minneapolis and St. Louis Railway.

With the completion of lines for which bonds have been guaranteed by the Saskatchewan Government, there will be twenty-two railway lines radiating from Regina. The importance of Regina as a railway centre to the Grand Trunk Pacific Railway may be recognized when it is stated that this company is erecting a twelve-story hotel at the present time, to cost over a million; also a station, power house, laundry and train sheds costing approximately another million dollars.

The city authorities co-operate to every possible extent in making it profitable for industries located at Regina. When Regina first began to assure an industrial standing there were no spur track facilities, and all goods had to be loaded at the freight sheds. This caused a congestion at the freight sheds, teams being kept standing for a considerable time before being allowed to pull up to the un-

loading doors. There was a consequent excessive cartage charge. The system of spur tracks throughout the warehouse and factory district now makes it possible for each individual concern to load cars at their own factories, and by reason of the arrangement of the tracks, much

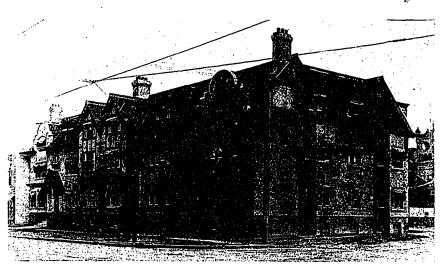


ROYAL GEORCE APARTMENTS.

of the inconvenience of the inter-switching is done away with. The City Council has under consideration a still further improvement which will mean much to the shippers. It is suggested that the spur track system be electrified, and whatever transferring or placing that may be re-

quired done by electric street cars operated under the Regina Municipal Street Railway Department. By this arrangement special attention will be paid to such interswitching as is necessary at a nominal cost, and unnecessary delay will be avoided.

The new provincial jail at present consists of the main cell block, 60 by 200 feet, and administrative building 50 by 80 feet, with kitchen and chapel block about 40 feet square. The building is three storeys in height and of brick, stone and reinforced con-



ALBERT COURT APARTMENTS.

crete construction, being fireproof throughout. The plans make provision for another block of similar dimensions, but it will not be built until needed.

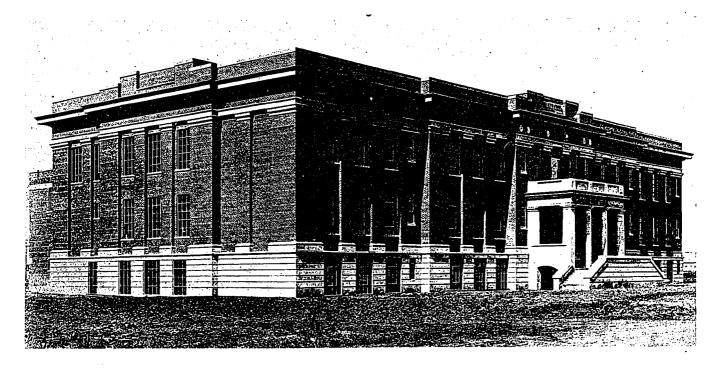
Regina's scheme to solve the assessment problem for 1915 has met with very favorable comment, and from inquiries which have been made it is likely that other cities will take similar steps. The Regina scheme aims to secure valuations from the ratepayers and strike an equitable assessment on that basis. This step seems necessary owing to the fact that properties are not as realizable now as during the earlier part of the year.

The daylight saving scheme, which was given a practical test in Regina during the past summer, has proved more than satisfactory. The fact that the Chicago Chamber of Commerce executive of twenty-four business men voted unanimously in favor of the scheme speaks volumes for it and shows that Regina is not alone in this movement.

The convention, held at Regina recently, to further the aims of the closer community settlement scheme, was a decided success, the city hall auditorium being packed to capacity by delegates from all parts of Canada. Some very influential business men addressed the gathering.



EDDY APARTMENTS.



Connaught School, Regina

J. H. PUNTIN, Architect

NHE accompanying drawings and photographs illustrate the first of a series of three school buildings designed and erected during the years 1912, 1913 and 1914 for the Regina Public School Board, Province of Saskatchewan.

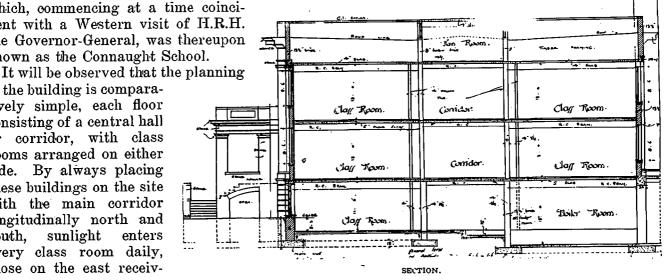
The schools of the city existing prior to the above date were mostly 8 and 12-room buildings, but the rapid increase in school population during 1911 and succeeding years demanded a larger type. After some months spent in travel, extending westward to the Pacific Coast, southward as far as Los Angeles, and through the Middle Western States, undertaken for the purpose of collecting information on the spot as to the result of recent developments in planning and equipping school buildings, Mr. Puntin recommended the adoption of the type treatment first exemplified in the building shown, which, commencing at a time coinci-

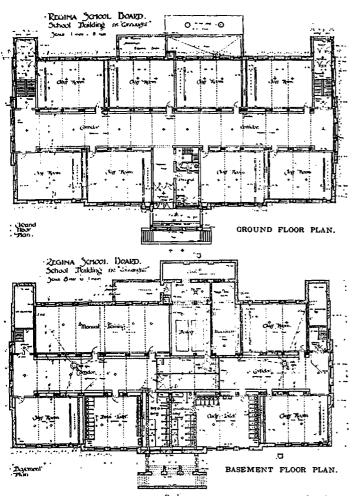
dent with a Western visit of H.R.H. the Governor-General, was thereupon known as the Connaught School.

of the building is comparatively simple, each floor consisting of a central hall corridor, with class or rooms arranged on either side. By always placing these buildings on the site with the main corridor longitudinally north and sunlight enters south. every class room daily, those on the east receiving morning sun, and those on the west the afternoon sun, while none of the rooms are exposed to the glare of southern exposure, which on the prairie is particularly trying in summer.

Another point may be noted regarding the position of main staircases, which are kept clear of the main corridor and separated from same by screen doorways glazed with wired clear plate glass. Noise of stair traffic is thus confined to the stair halls, cold is excluded, while at the same time perfect supervision is main-The carrying of main corridor, 18 tained. feet wide, clear to outer walls of building without obstruction, enables same to be well illuminated by direct lighting, so that the scholars may be lined up and drilled in the halls without difficulty.

It will be observed, doubtless, that the





class rooms do not conform to 32 x 24 feet dimensions usually adopted in the States, but are generally 26 feet wide, and in certain senior class rooms 28 feet wide. The latter dimensions were adopted at the suggestion of educational advisers, who preferred to teach a class seven desks wide and six rows deep to a room narrower, having desks arranged six wide and seven deep. From the constructional standpoint, of course, the narrower standard has de-

cided advantages, both on beam spans and loading, while as regards lighting the wider room requires special care on window dimensions and treatment.

Construction is fireproof throughout, reinforced concrete floor slabs carried on concrete piers at corridor and on walls at outer bearing. Interior partitions are of hollow tile throughout, and owing to the massed array of air ducts are doubled

with a space of some 20 to 24 inches between the two lines of tile. By this means the class room is rendered soundproof, and wall surfaces kept unbroken, while in each class room a large stationary cupboard was enabled to be set back in duct space, thus taking no further projection into the room.

Owing to severe weather conditions prevailing during certain periods of the year in the West, the windows are double. The outer sash are of steel, divided into comparatively small lights, to minimize cost of repairs due to glass breakage, and having a portion, casement hung, opening outward. Inner sash are of wood set in wood linings and removable if required.

Class room floors are maple, dressed off, but not oiled, on 4×3 inch fir sleepers, embedded in cinder concrete on the floor slab. Owing to rapid construction the architect had waterproof roofing felt laid over the sleepers and cinder "fill" before laying maple, with the result that the latter has retained its even jointing. Corridor and staircase floors are in marble terrazzo, laid in panel effect to prevent irregular cracking.

The toilet rooms are provided in basement, being of generous dimensions, having shower and plunge baths adjoining. Walls and ceilings are white enamelled on cement, with white tile dado. Floors are of asphalt, which, although open to the objection of its somewhat dull color, proved so successful that all corridor floors and staircases in following school buildings were finished with this material. Partitions are of Vermont marble. Doors of toilet compartments are hung on spring hinges to open inward, so that when unoccupied the door stands back or wide open, by which means the teacher's inspection is facilitated and occupied compartments noted at a glance.

In accordance with the recommendations of Meyer J. Sturm, of Chicago, who was consulted on this question, plenum fans with air intake are placed in the machinery room of basement, with thermostatic and humidity controls working automatically on steam coils and washing screens. In fan room on roof, exhaust fans working at a slightly accelerated velocity, so as to slightly decrease air pressure in the building, remove foul air and discharge above roof line.



DETAIL OF MAIN FACADE.

Each class room has a duplicate set of inlets and exhausts, viz.: two sets of inlets and two sets of outlets, controlled by dampers and connected by means of galvanized air ducts with the fans. Corridors are equipped with plenum system only in order to minimize drafts, while toilet rooms vice versa are on exhaust system. By means of venting the closet bowls in toilet rooms with vents connected to duct space in rear, and in turn exhausting latter to roof fan, the toilet rooms have proved singularly free from odor.

The heating is accomplished by two 100 h.-p. boilers, operated at low pressure and assisted by complete vacuum system, with fittings throughout. Direct radiation is provided in each class room, automatically controlled by thermostats operating on air pressure valves.

Intercommunicating telephones connect each room with principal's office, while in each class room and corridor electric clocks, with programme attachment on the "Standard" system, keep synchronized time.

While desiring to provide good material and sound construction throughout, economy was kept in the foreground as an important factor in the design. The elevation treatment and interior finish are ornately simple, while the importance of providing special ventilating and sanitary equipment of superior quality and design caused the latter features to be grouped under a separate contract. Contract figure for all trades, excepting plumbing, heating and ventilating, amounted to \$136,231; the other trades \$31,860, making a total of \$168,091, working out at a factor of 23.6 cents a cubic foot.

* * *

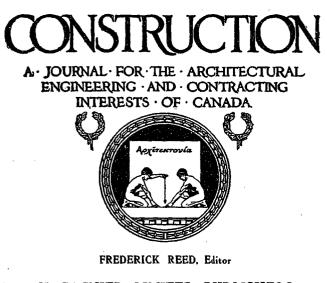
IN referring to the town planning in Regina, Malcolm Ross cites the Government as having secured the services of a man who has had a wide practical experience of such work in Great Britain, in several European countries and North America, so that it is reasonably certain if the plans submitted are fully carried out, that the results will show a combination of the high idealism evident in many American schemes modified by the practical expressions of such systems in older countries. The plan provides sites for handsome monumental buildings to be used for public and institutional purposes and also includes an area which it is proposed to develop as a residential district. In connection with this regulations have been prepared which will guarantee to the residents the continuance of good conditions and surroundings, and which will make it impossible for one resident to build or construct his buildings in such a way as to be a detriment to his neighbors. On this property the twenty-five foot frontage lot will be unknown, and areas up to two acres in extent will be available for homes so that opportunity will be afforded for the ambitious designer of domestic architecture.

In architectural features, Regina, for a city of its size, is very fortunate, for not only are there many well designed buildings, but opportunity has been found for placing them so as to form terminal features, and at the present time the view down several of the streets is completed by a costly building of excellent design. The general impression of the architecture seen on the residential streets is pleasing and the increasing use of brick and roughcast or pebble dash is giving an atmosphere of stability not usual nor expected in Western cities.

For a general town planning scheme, beyond what has already been done along this line with such excellent results, Regina offers an exceptional opportunity. The topographical features necessitate no costly engineering construction, such as is entailed in hilly and rocky country, and with the exception of a possible widening of portions of certain streets and the opening of a few diagonal streets, very little expenditure, beyond that normally required for city extension work, will be necessary.

* * *

ONE of the most disastrous fires that ever occurred in a manufacturing plant destroyed recently a part of the Edison works at West Orange, N.J. The fire broke out about 5.30 o'clock and before morning half of the plant was in ruins, involving a very great loss. The burning of this plant at once became a subject of widespread interest in engineering and insurance circles, as it involved the behavior of several types of buildings under unusual stress, including structures of reinforced concrete. The contents were of the most inflammable and heat-creating types, including wood used in the manufacture of cabinets, celluloid for films and wax for phonograph records, chemical supplies and other material of highly inflammable character. The burning of these materials subjected the buildings to the most intense heat. The floors in some of the concrete buildings were covered with wood, supported on wooden sleepers imbedded in the concrete, and here and there strips of wood had been imbedded in the concrete columns. So hot was the fire that not only were these wooden floors entirely consumed, but no evidence of the sleepers or strips remain other than the grooves in the concrete and the nails which held the floor down. The concrete slabs must have been red hot to consume the wooden sleepers in this way, and this fact is substantiated by actual observation during the process of the conflagration. In spite of this heat the concrete slabs in almost all cases are in perfect condition. In addition to floors of wood, the window frames were also of wood and the windows of plain glass. On every floor to which the flames gained access and ignited the contents, the latter was entirely consumed. Only the fire-resisting properties of the concrete floors saved part of the contents of the concrete buildings. Furthermore, had the concrete floors been unable to withstand the heat, there would undoubtedly have occurred an entire collapse of the buildings.



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Vol.VIII Toronto, January, 1915 No.1

TRADE NOTES

THE ENGINEER who is called upon to carry out work in Canada during the winter finds that the methods of construction which were satisfactory in the summer will need considerable modification to suit winter conditions. Concrete work, especially the lighter forms of reinforced concrete used in building construction, needs greater care and supervision. As a result of considerable experience gained during the last few years, it can be said that the freezing of concrete will not damage it if it has first had a chance to set under favorable conditions for about two days. The effect of the freezing is simply to delay the process of hardening, which will again proceed under suitable conditions, and will eventually attain its full strength. If concrete is frozen before it has commenced to set, it will not be injured if precautions are taken to prevent it from freezing again after it thaws until it is sufficiently hardened to withstand the effects of subsequent freezings. It is alternate freezing and thawing during the process of setting that causes the damage. To meet the foregoing conditions, when carrying out concrete work in winter, it is necessary to devise means of mixing the concrete with materials freed of frost, placing it in the forms before it has commenced to freeze, and then protecting it and keeping it warm for about two days. After that it may be allowed to freeze without fear of its being damaged. In the case of concrete-inmass of large bulk it is unnecessary to apply external heat, as the large body of concrete will generate sufficient heat during the process of hardening to enable the mass to set; all that will be necessary is to protect the outside of the concrete so as to keep the heat in. This can best be done by covering the concrete with clean straw. For light sections of concrete, such as reinforced concrete, poured at a temperature not below 22 deg. Fahr., some engineers allow salt to be used in a proportion not exceeding ten per cent. There are many arguments for and against its use. The author prefers not to use it, except in marine works when the concrete is mixed with sea-water and the salt is admitted in that form. He has found that, instead of using salt, good results will be obtained for temperatures that do not fall below 22 deg. Fahr. by heating the water with a steam hose taken from the mixer boiler, and when necessary placing a few coke or wood fires on the heaps of sand and crushed stone, the usual precautions being taken to protect the concrete when in the forms, as described later. For lower temperatures than those referred to above, greater precautions must be taken to heat the ingredients by means of steam coils or radiators. The concrete having been mixed, and the portion of the work to be carried out decided upon, the floor immediately below it should be partitioned off with tarpaulins, and coke stoves arranged under the floor-slab, allowing about one stove to every eight hundred square feet of floor space. All loose dirt and snow must be removed from the forms with brooms, and a steam hose should be applied to remove all ice and frost, the steam playing continuously over the forms in advance of the concrete, thus warming them in readiness for the concrete. The concrete should be poured quickly and continuously, and as each section is completed a tarpaulin may be drawn over it, supported on wooden strips about six inches above the surface of the concrete. In most cases this protection will be sufficient, but during very cold weather it will sometimes be found neces-

sarv to form a sort of tent over the floor, in which extra stoves are placed to protect the workmen and the upper surfaces of the concrete. Great care must be taken to have the fires kept burning continuously for two days, after which the concrete may be allowed to freeze without fear. The work must be examined from time to time until it is found to be hardened sufficiently. During summer working the author has allowed the supports from the under side of slabs to be removed in four days, but on other occasions four weeks have not been found to be too long. There are many examples of concrete works which have stood the test of time without showing any signs of being affected by frost; but, on the other hand, a few cases have been reported of very serious corrosion due to the action of frost, such as bridge piers and reinforced concrete piles. Judging from the information available at present, concrete exposed in air in a dry locality need not be affected by frost any more than good building stone, and probably it will stand much better. Concrete always submerged under water is protected and need cause no anxiety. But concrete alternately wetted and frozen must be protected from frost. On work which is being carried out at Halifax, Mr. John Kennedy, M. Inst. C.E., is protecting the concrete piles between high and low water with a covering of wood about two inches in thickness, which it is hoped will prevent the action of frost.-Written by John Hammersley-Heenan, A.M.I.C.E., for Engineering.

THE LATEST bulletin received from the Herbert Morris Crane & Hoist Co., Ltd., illustrates the Morris worm-gear chain-blocks. Capable of lifting various weights, the problem of setting machines on their foundation, or hoisting same for repairs is readily solved. One diagram presents a block of only one-quarter ton capacity as compared with one with a hoisting credit of sixty tons. This is the largest standard chain-block made and stands a regular test of ninety tons, or fifty per cent. more than specified.

THE PIPE insulation contract for the new Utah State Capitol at Salt Lake City, R. K. A. Kletting, architect, and Jas. C. Stewart Co., contractors, was recently awarded to the H. W. Johns-Manville Company. The high pressure pipes will be covered with J-M asbestos-sponge felted pipe covering, a product made up of laminations of felt composed of asbestos and finely ground sponge. The heating pipes will be covered with J-M asbestocel pipe covering, which is built up on the arch principle. Sealed air channels run around the pipe instead of parallel with it, thus preventing the circulation of air and consequent heat radiation. IN the erection of the Legislative and Executive Buildings at Regina the Kahn system was employed throughout in the reinforced concrete work, while the design was based on unit stresses as specified by the architects. All reinforcing steel was supplied by the Trussed Concrete Steel Co. of Canada, Limited.

*

TO CONSTRUCTION: In reference to "Standardization of Advertising Matter," the Council of the Saskatchewan Association of Architects, at their meeting on December 9th, passed a resolution endorsing the recommendations made by the American Institute asking advertisers to adopt standard sizes. The sizes mentioned in your article of the November issue are approved by this Association, and we would ask you to take any step that you think proper to bring these motions to the notice of advertisers.—F. Chapman Clemesha, Secretary-Treasurer.

THE refrigeration installations in the Sherwood store, Government buildings and Governor's residence were supplied by the Linde Canadian Refrigeration Company. The plant in the Sherwood store was installed for the purpose of cooling two showcases made of glass with four thicknesses, and six storage rooms, including a fur space. The entire cooling section has a total length of thirty-nine feet, breadth of twenty-three and height of thirteen. In addition to the above is an ice cream cabinet, all of which spaces are on the second floor. The work is accomplished by means of an ammonia compressor installed in the basement, which cools the brine circulated through the coils in the various rooms. The plant in the Government buildings is the same type of machine and arranged similarly to that in the Sherwood store. The spaces cooled are four rooms, in which perishable foodstuffs, used in connection with the luncheon rooms, are kept and stored, the ice cream freezers and cabinets being also cooled, etc., by the same machine. In the Governor's house is installed a small Co-2 machine.

* * *

AN ANNOUNCEMENT.

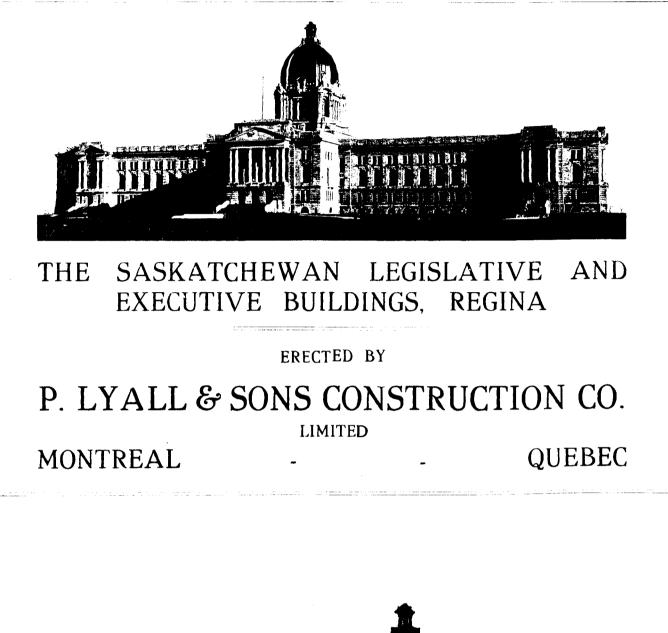
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Bank of Commerce, Waterloo, Cnt., Dominion Realty Co., Architects.

Molsons Bank, Waterloo, Ont., Langley & How-land, Architects.

1. O. F. Orphanage, Oakville, Ont., G. N. Moles-worth, Architect.

Standard Bank, Whitby, Ont., Power & Son. Architects.

Standrad Bank, Ailsa Cralg, Ont., Power & Son, Architects.

Standard Bank, Blenheim, Ont., Power & Son. Architects.

Imperial Bank, Thorold, Ont., A. E. Nicholson, Architect.

First Church of Christ (Scientist), Toronto, J. J. Bennon, Architect, Chicago.
Sherman Theatre, Hamilton, Ornament, Stewart & Witton, Architects.

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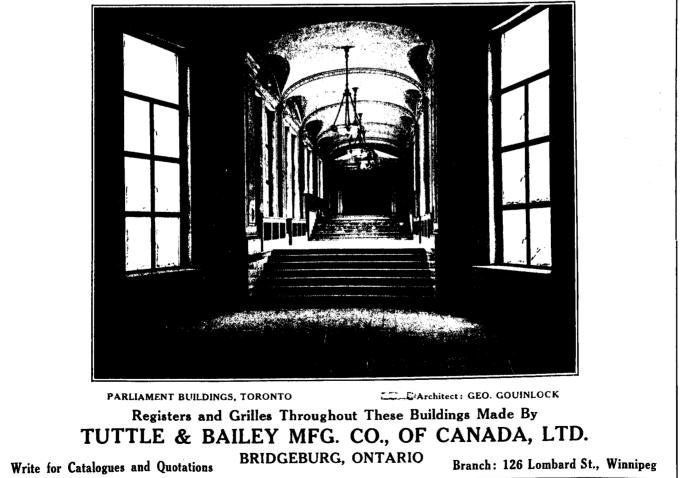
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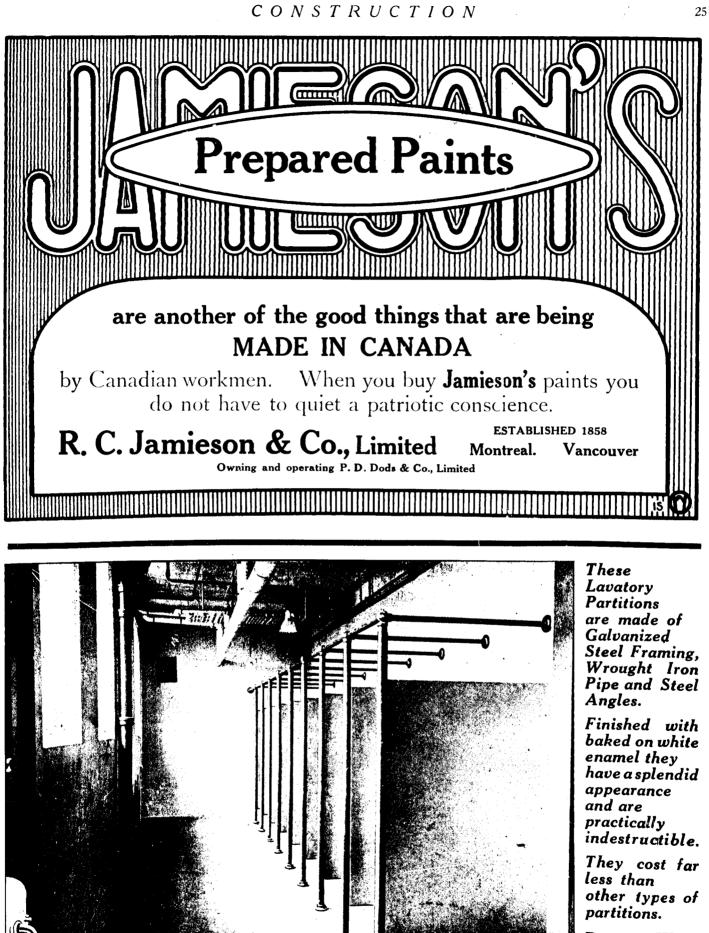
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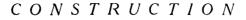




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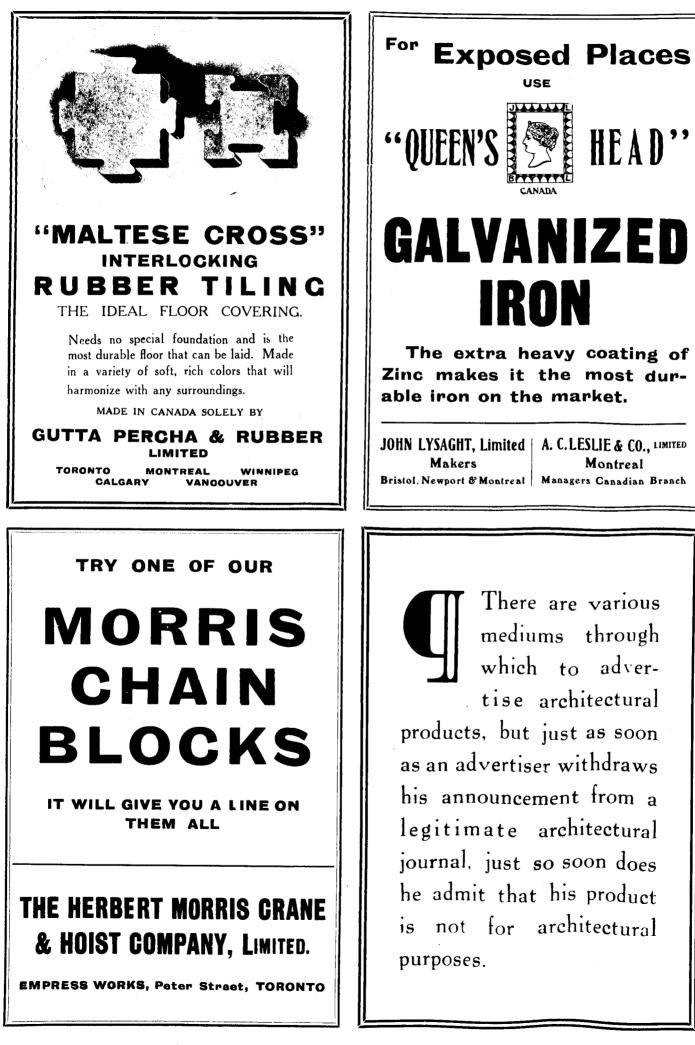
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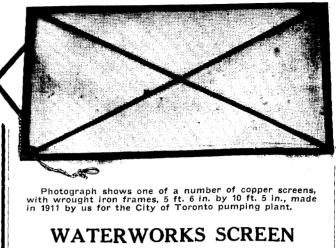
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