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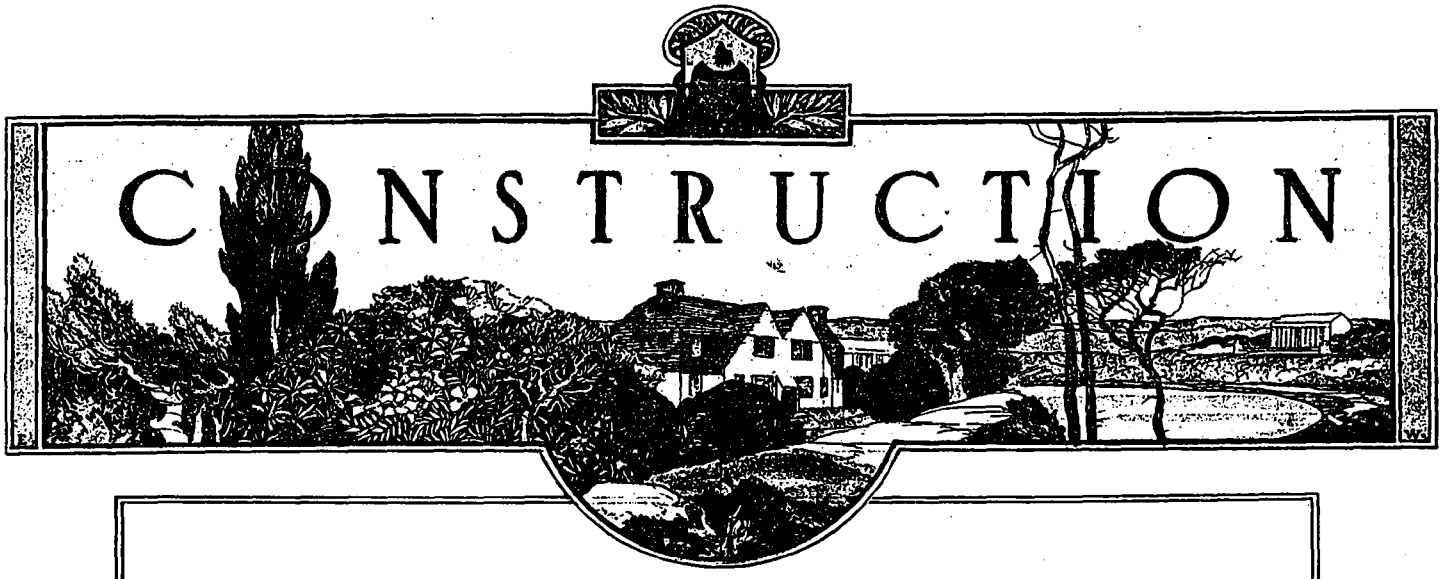

December, 1914 Vol. 7, No. 12

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Full Page Illustrations

H. GAGNIER, Limited, Publishers
GRAPHIC ARTS BLDG., TORONTO, CANADA
BRANCH OFFICES
MONTREAL NEW YORK

THE NEW DOMINION BANK BUILDING, TORONTO.

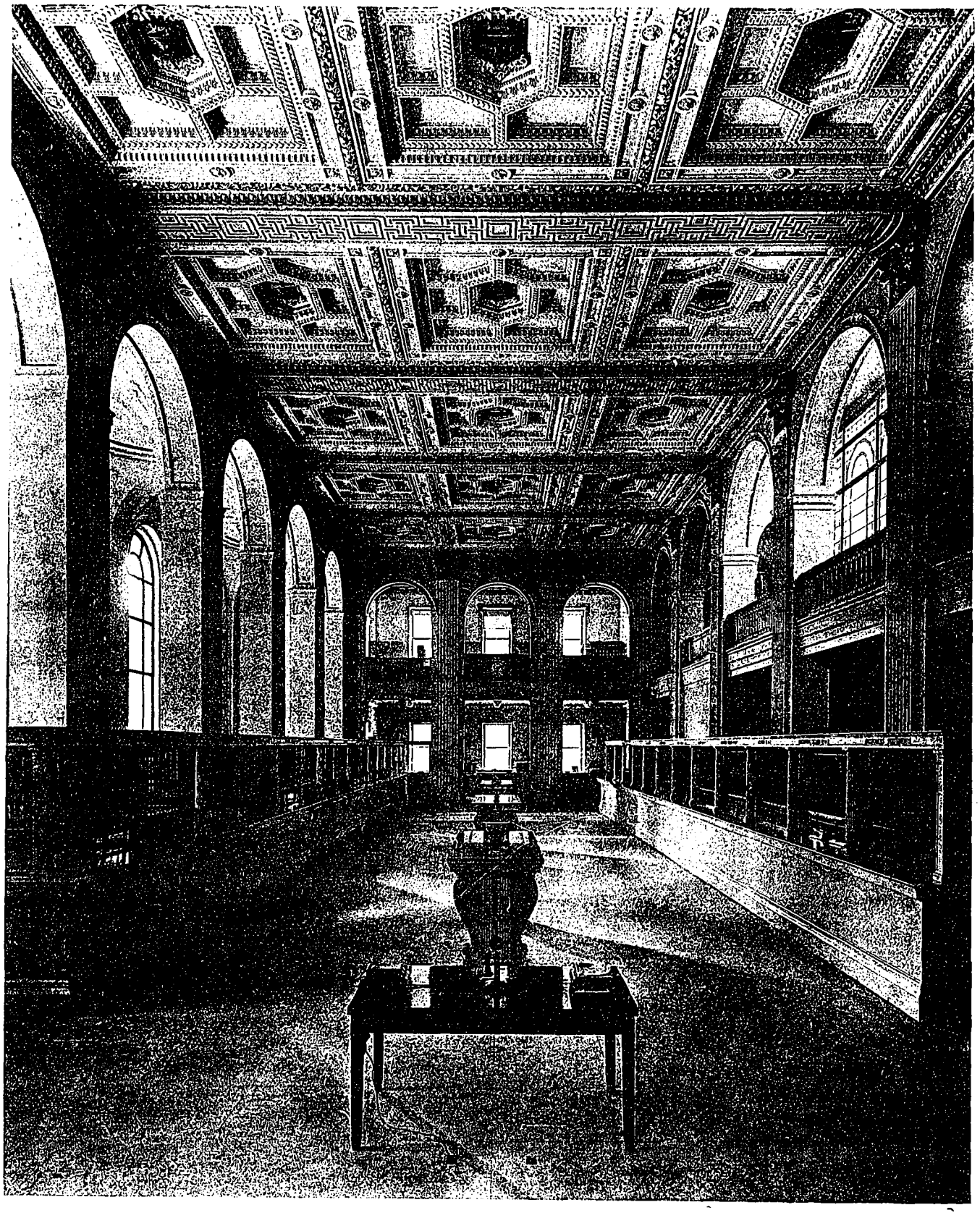
DARLING & PEARSON, ARCHITECTS.

The Dominion Bank building as an example of esthetic character and internal arrangement both in respect to allotment of space and kind of furnishings.

At the corner of King and Yonge streets, Toronto, three lofty edifices give expression to the marvelous advance made in twentieth century architecture. The Dominion Bank, the Canadian Pacific Railway Company, and the Royal Bank, all stand as living testimonials to the great commercialistic tendencies of the present age. To some they breathe the spirit of prophecy, foretelling the dire result which must come if we insist on letting the greed of gold continue its ruthless devastation of all the finer sensibilities of our true nature. To others they express the acme of all that can be summed up in the word success. More wonderful than the Pyramids of Egypt, more attractive than the Hanging Gardens of Babylon, more beautiful than the Parthenon at Athens—they seem to these people at least to combine the characteristics of all that counts in life. And while this small space contains three buildings of greater height within a limited area than any other city with the possible exception of New York; in spite of the prejudice which exists against the erection of skyscrapers in cities of unlimited area; and acknowledging the various arguments advanced as to congestion, sanitation, etc.; the consensus of opinion still holds favorable in regard to their esthetic character and structural attainment. In the Dominion Bank one other phase should be considered carefully, viz., the practical arrangement of the various floors—and the amount of study given to the equipment and furnishings. The vault, for instance, embodies features which are a guarantee in themselves of absolute protection; the lighting of the main banking room is as nearly perfect as the man of imagination might picture; the working desks and tables ingenious in every part and detail. In fact the whole structure throughout has been considered from one standpoint—the economic arrangement of space and labor. That the Dominion Bank building ranks among the finest institutions of its kind in America is unquestionable, and should be held in high esteem by the Canadian people. It is one more monument erected through the hearty co-operation of architects, engineers and contractors in an effort to reach a lofty degree of perfection. And by a proper appreciation of such work can we only hope to attain the highest state of excellence in the realm of architecture and give to our cities a stately, wholesome and dignified appearance along natural lines.

The present conditions and what our attitude should be on the basis of natural resources and our future relations to foreign as well as home consumption.

The draftsman finds himself without a position; the architect is compelled to cut his force in half and sometimes close his office temporarily; the contractors in turn find a dearth of building projects and practically suspend operations or continue to manufacture their goods on the basis of future possibilities; the client fearing an oncoming depression, refuses to continue the projects already started. What is the result? Business stagnation and cruel suffering among our people. The question naturally arises, under the existing circumstances should such conditions prevail. In making an analysis we must not forget the natural resources and inherent wealth of Canada. We have to bear in mind continually that our country is self-supporting. All of which reduces itself to one important fact, viz., that in the direst extreme we could not only exist within our own boundaries, but could also work out an economic solution which would enable this country at least to eliminate the causes of so much wanton destruction to the progress of civilization. Let us ask again, are our policies right and are we taking the true perspective? In view of past progress, our present development and future possibilities, should not the Government carry out all schemes of internal improvement contracted for, and in addition plan even greater projects for the benefit of our unemployed? Should not the corporations and institutions continue the work on buildings started but not completed? Surely so and for several reasons. In the first place we are not a poverty stricken nation. Again, we are one of the few countries which will receive thousands of immigrants immediately after the conclusion of the present war. We must open up new territories and make ample preparation for their coming. Our industries will be called upon to help meet the deficiencies of other nations for foreign as well as home consumption. The present time should be utilized in enlarging our existing factories and building new ones. It is our one great opportunity—are we broad enough to grasp it? Building material can be secured at an average reduction of twenty per cent. over the cost six months ago, while labor is begging employment at greatly reduced prices. It behooves us to arouse ourselves and get ready for the largest business boom ever experienced in the history of the world's progress; a boom which will make of Canada one of the great commercialistic centres.



MAIN BANKING ROOM,
DOMINION BANK BUILDING,
TORONTO, CANADA.

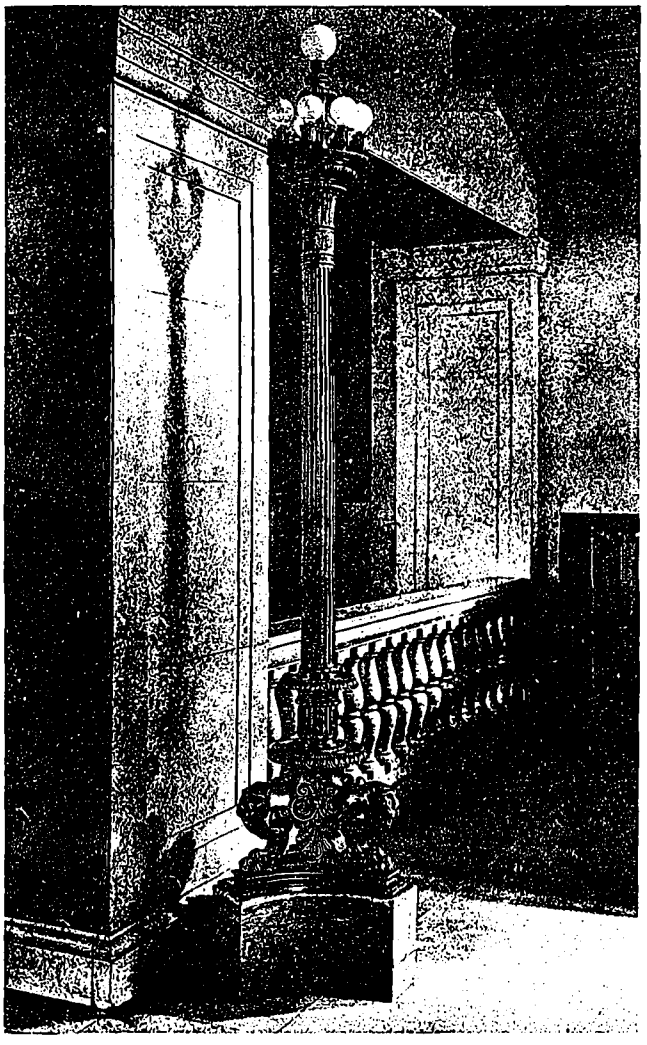
The Dominion Bank Building, Toronto

DARLING & PEARSON, Architects

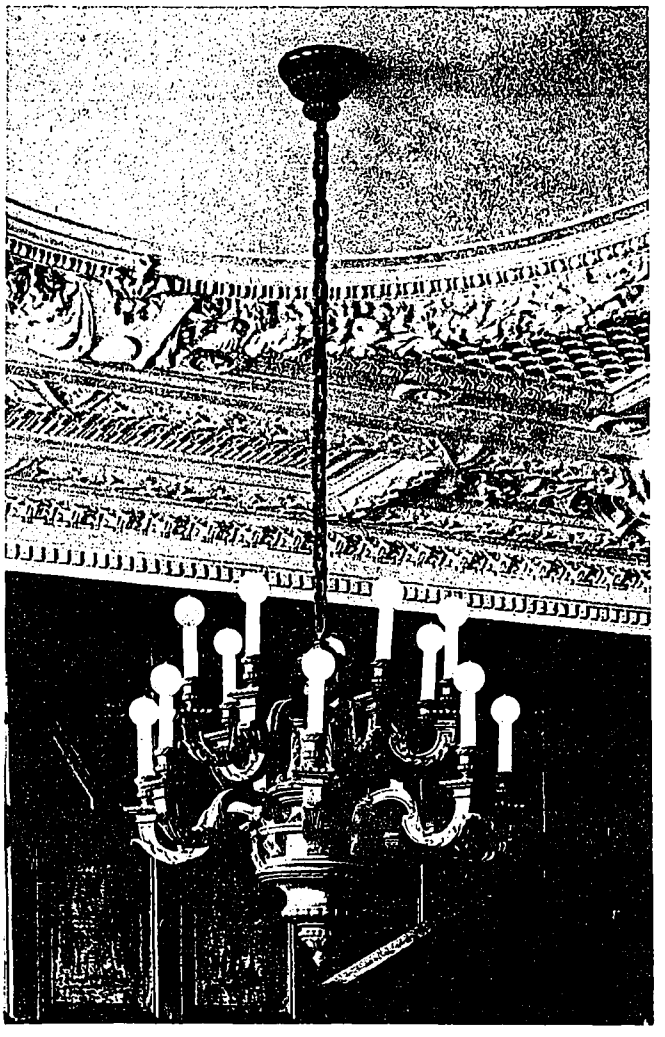
THE new Dominion Bank building, on the corner of Yonge and King streets, Toronto, comprises in itself the culmination of all the study which has been centered for years on our American-evolved skyscraper. One idea seems to have entered into the whole structure, even to the minutest detail—practicability. No phase of the work has been neglected, and as a natural result the structure presents a dignified and harmonious appearance, both upon the exterior and interior. At the same time the value of each official and employee's work has been taken into consideration, both in the careful evolving of the plan and the arrangement of the furnishings.

Rising one hundred and eighty-five feet above the ground, this structure is quite expressive of the original intentions for which it has been erected. The granite base comprises the ground and main floors; the large window treatment on the Yonge street facade indicating the banking room proper, while the lower row of openings express the location of the savings department. The smaller windows above the King street entrance designate a mezzanine floor directly over the main lobby. Seven stories devoted to office space comprise the shaft, while the arcade treatment at the top encloses the head office department of the institution.

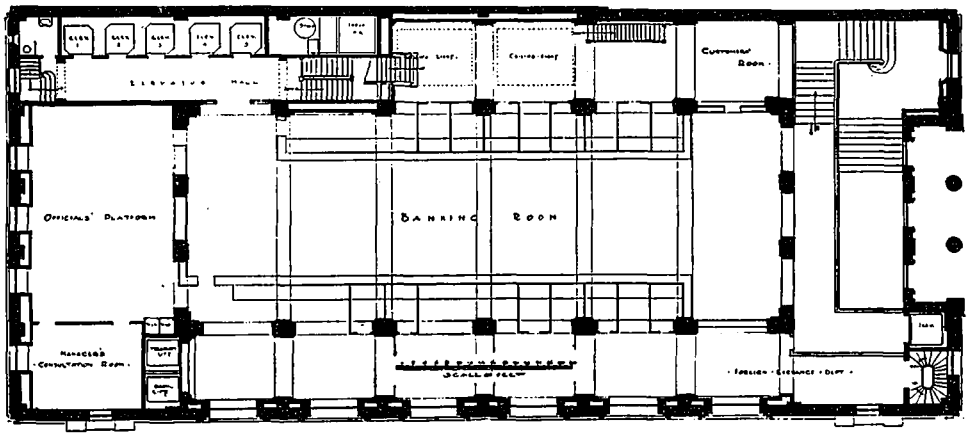
From the granite, extending fifty-two feet above the street level to the roof, the exterior is faced with glazed terra cotta, well executed and quite conformable to the style of Italian Renaissance as adhered to in the designing of this edifice. One feature which exemplifies the careful attention paid to the small details, which in turn produce the harmonious ensemble, is the method of treating the vertical lines of the shaft. Moulded as they are with no horizontal interruptions, and designed so that no vertical jointing becomes apparent, the result is not only ornate, but lends considerable solidity to the gen-



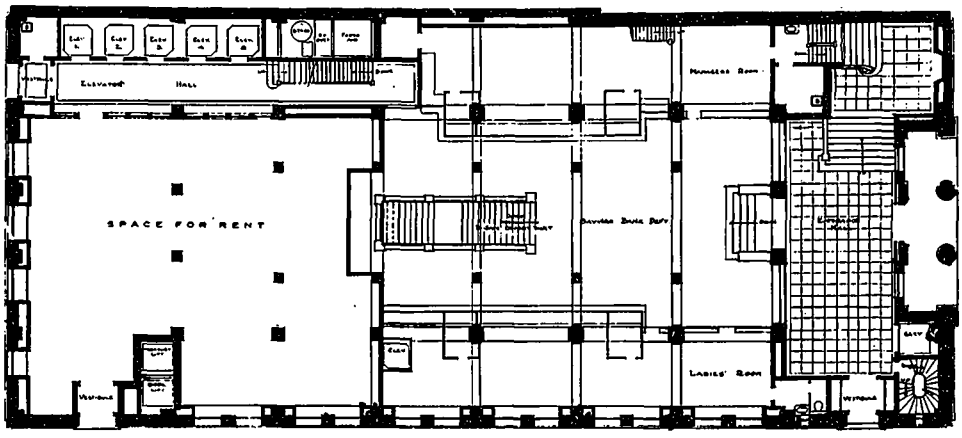
LAMP STANDARD IN MAIN LOBBY.



LIGHTING FIXTURE IN BOARD ROOM.



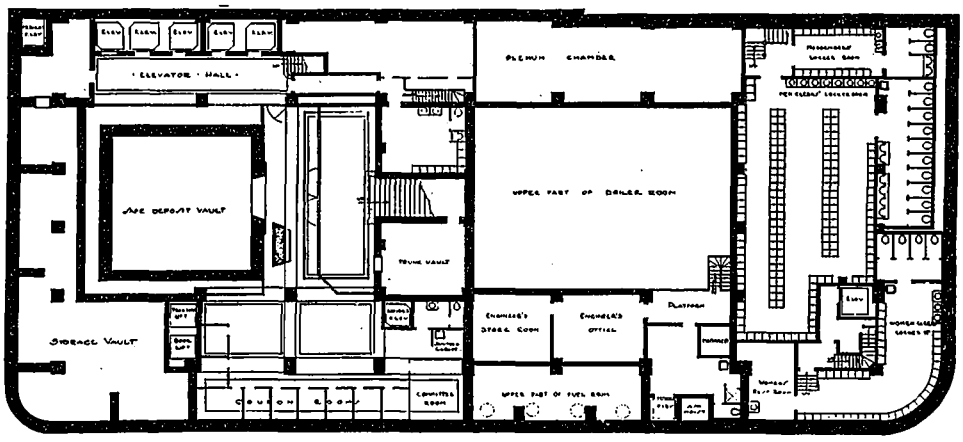
PLAN OF MAIN BANKING ROOM FLOOR.



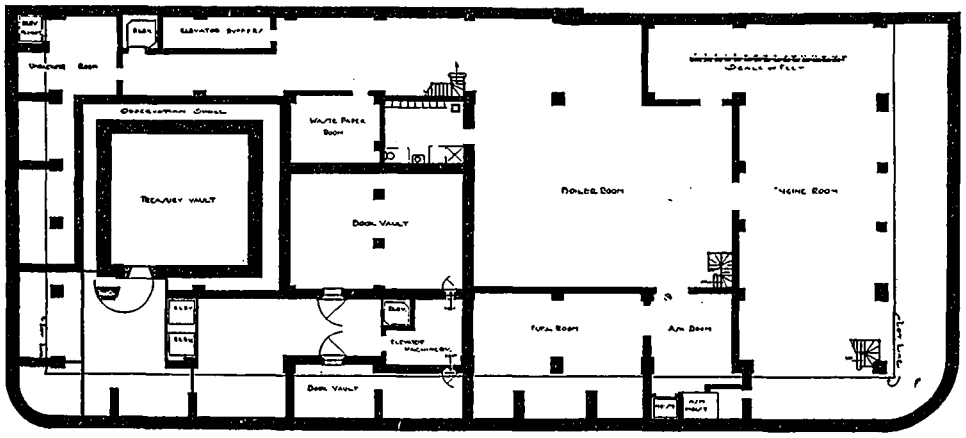
PLAN OF GROUND FLOOR AND SAVINGS DEPARTMENT.

PLANS OF DOMINION BANK BUILDING, TORONTO.

DARLING & PEARSON, ARCHITECTS.

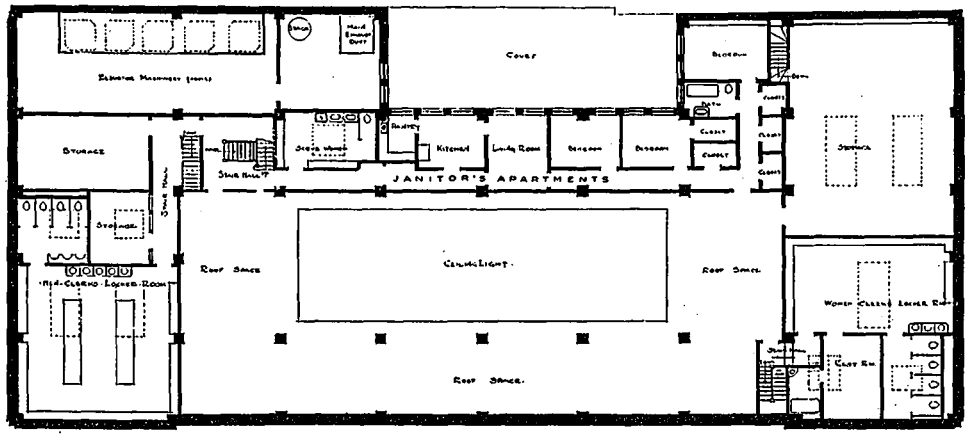


PLAN OF BASEMENT.

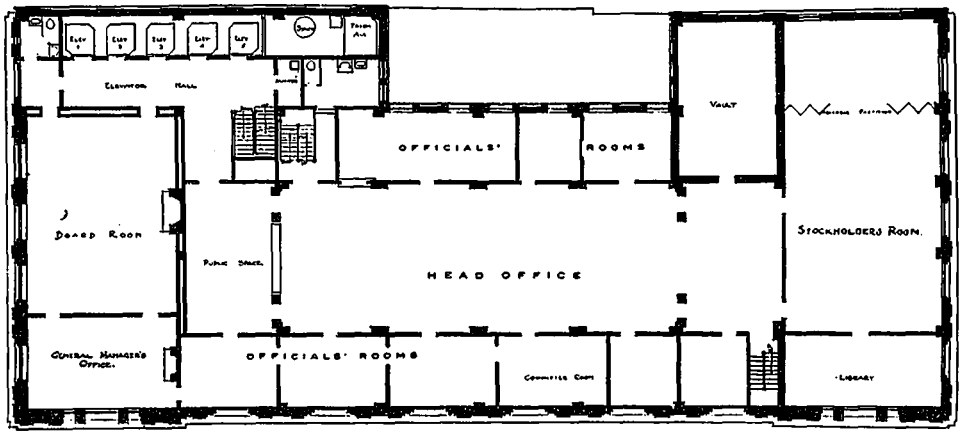


PLAN OF SUB-BASEMENT.

PLAN OF
ATTIC FLOOR.

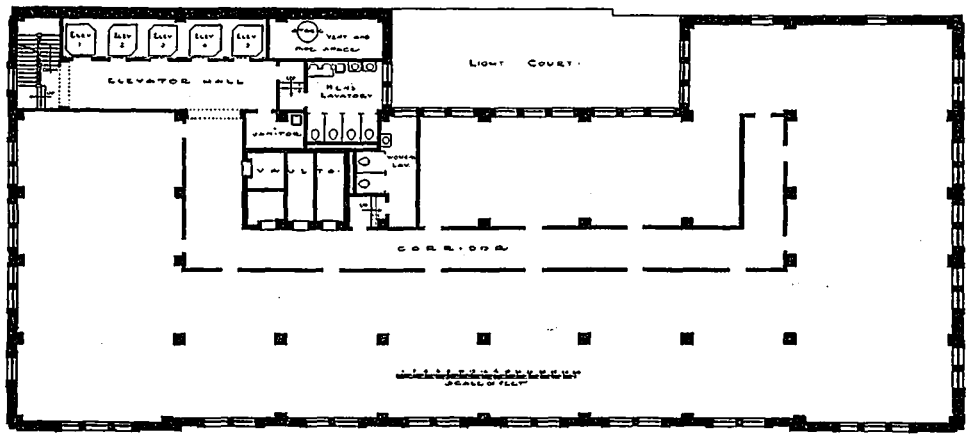


PLAN OF
NINTH FLOOR.

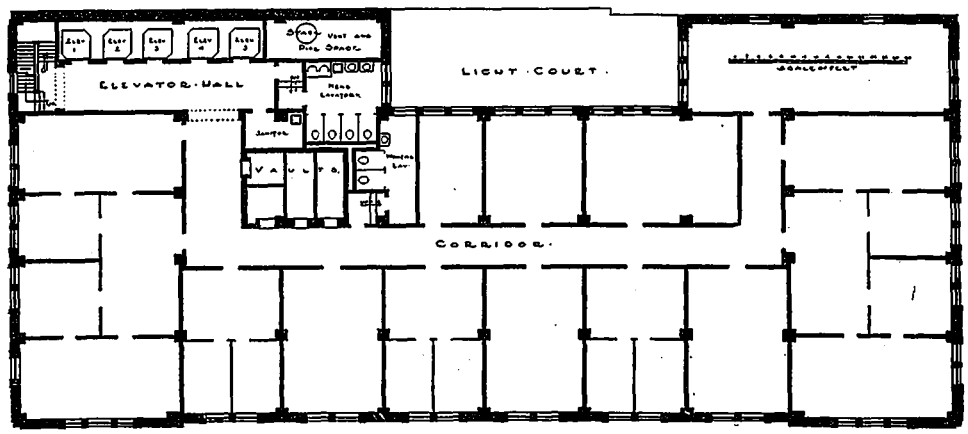


PLANS OF DOMINION
BANK BUILDING,
TORONTO.

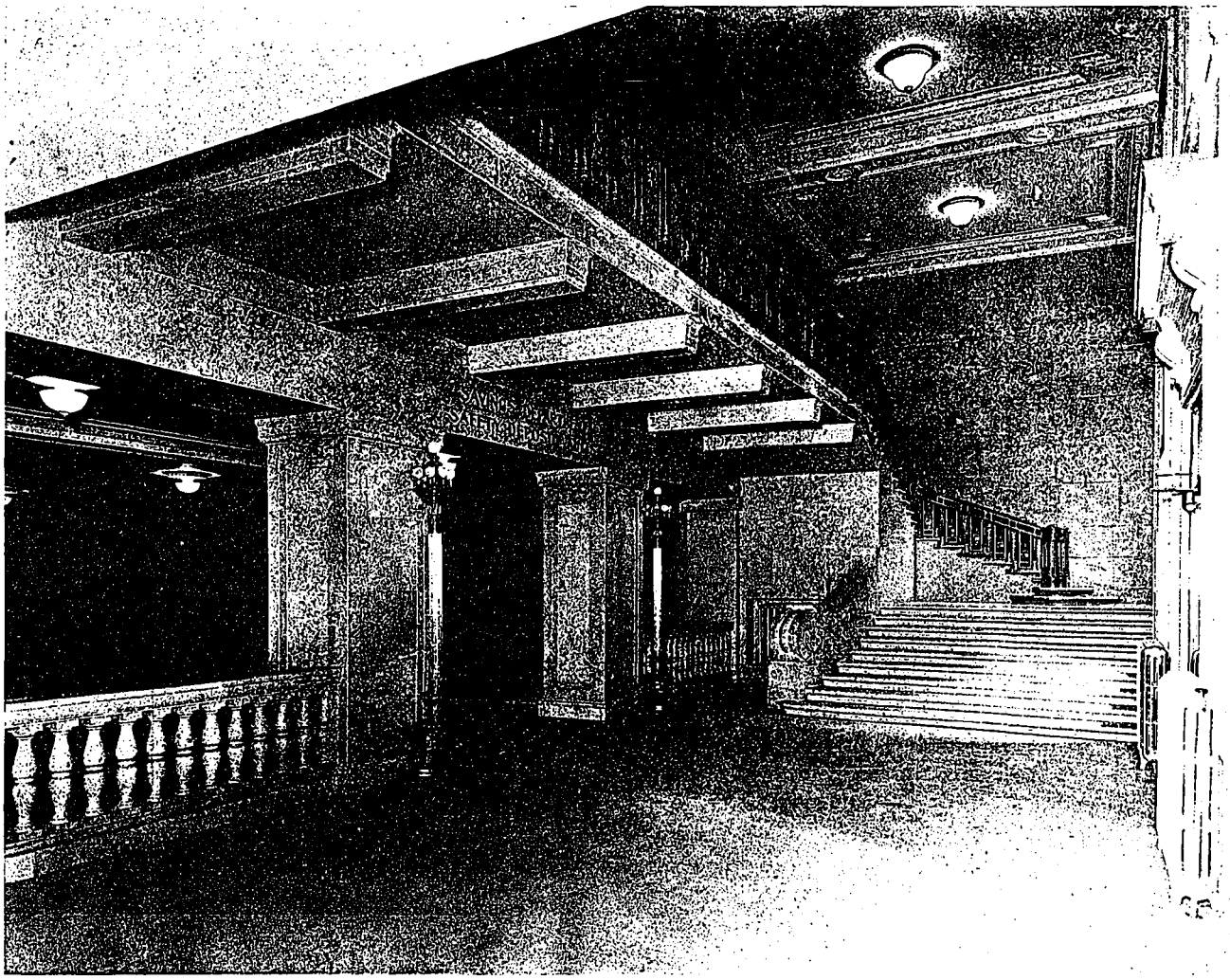
DARLING & PEARSON,
ARCHITECTS.



PLAN OF
TYPICAL FLOOR.



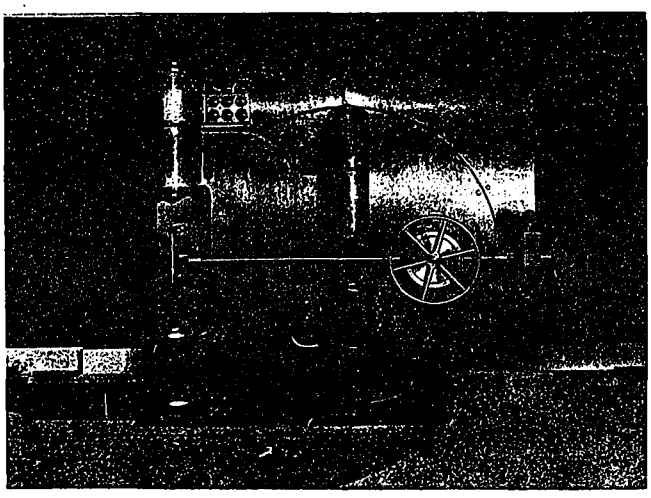
PLAN OF
THIRD FLOOR.

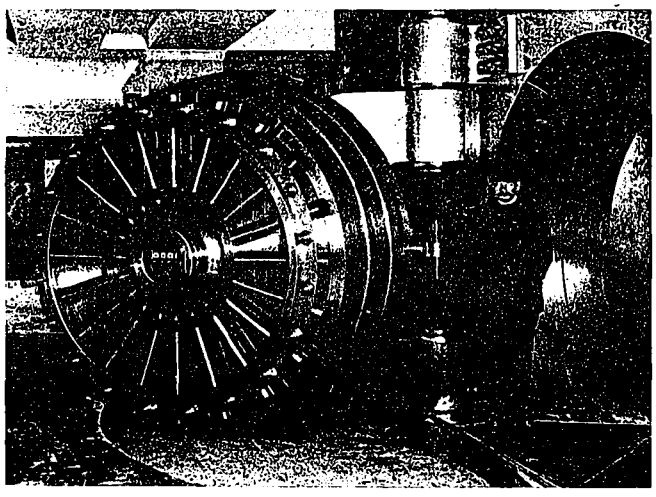


ENTRANCE HALL AND MAIN STAIRS.

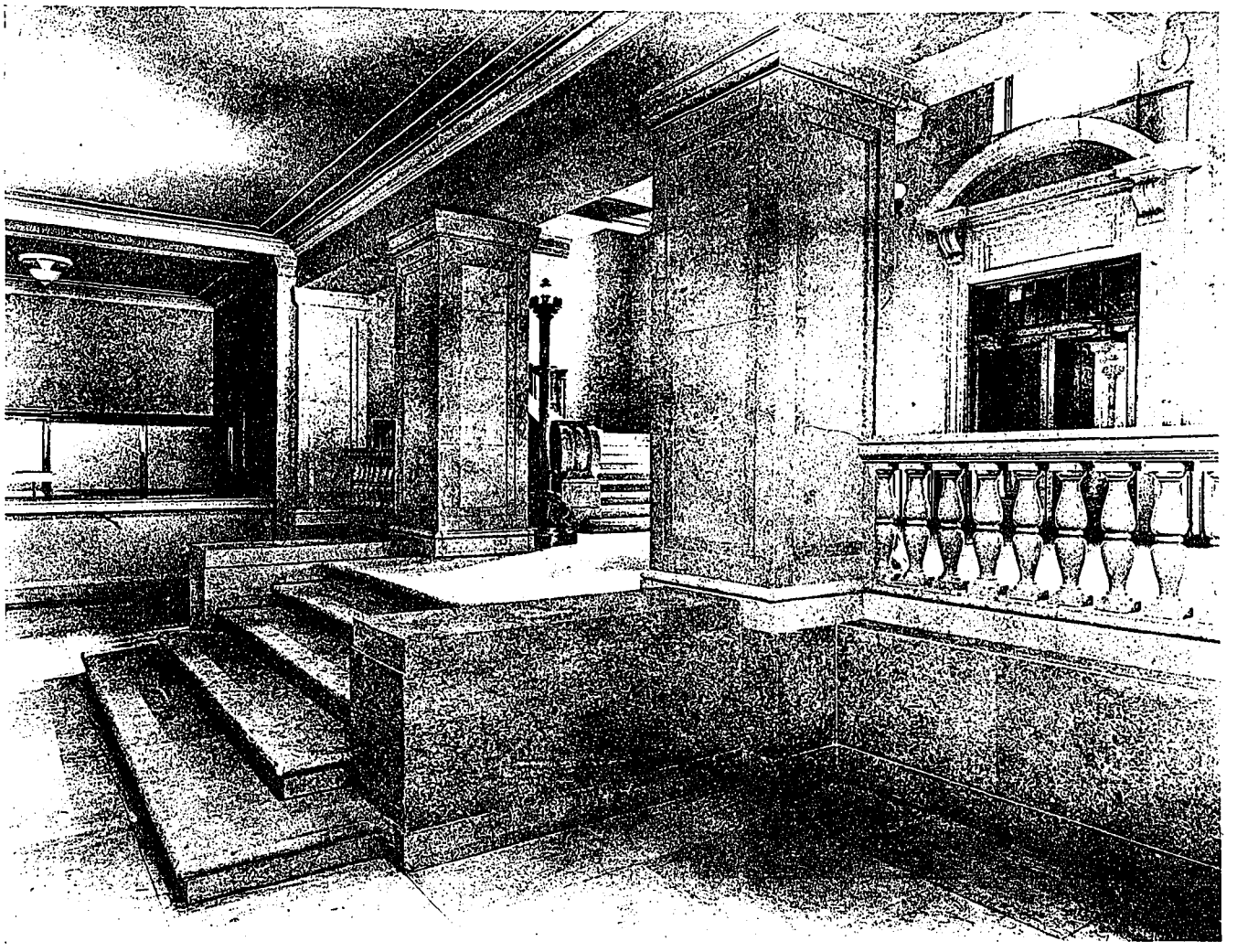
eral effect, each piece presenting in appearance a square tile.

The new building is erected on the site of the old bank occupied in 1879. Since that time additional adjoining properties have been acquired, so that the present lot extends one hundred and sixty-eight feet on Yonge street and seventy-five along King. On the twenty-fourth of March, 1913, the demolition of the old bank began, and on June first the new one was started, receiving some of its tenants by the first of July, 1914. The quiet, dignified design in granite merges happily into the more delicate and ornate work above, which in turn lends itself harmoniously to the graceful and elaborate arcade treatment at the top. With the three separate features of the commercial life within adequately expressed, the units lend themselves to a perfect ensemble, characteristic of the finest examples to be found in the business centres of the present age.





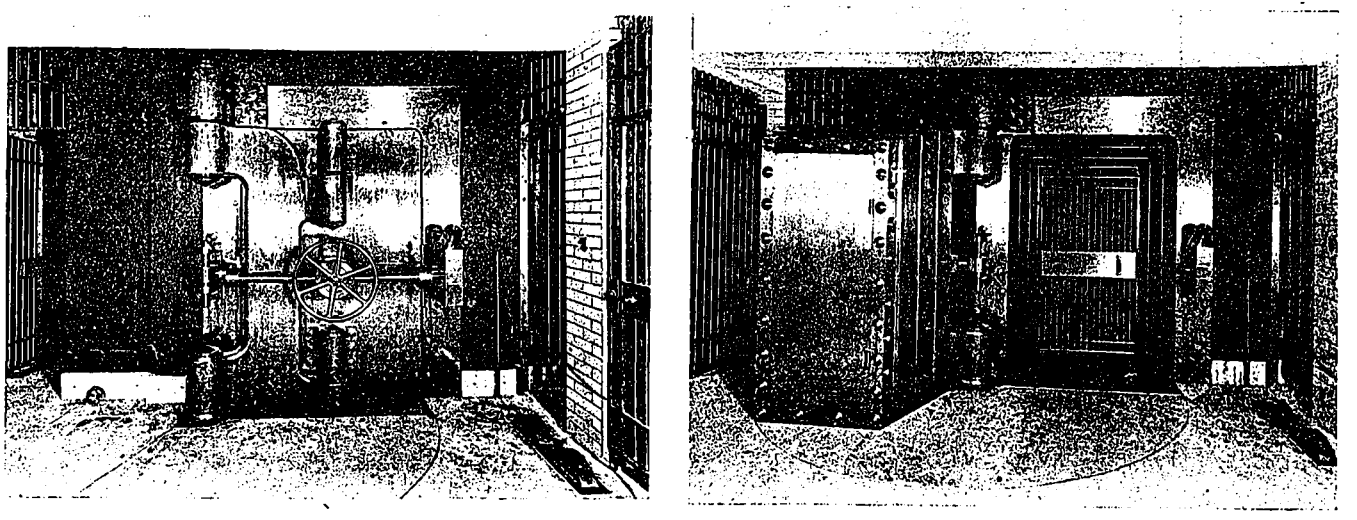
TWO VIEWS OF CIRCULAR DOOR TO SAFETY VAULT.



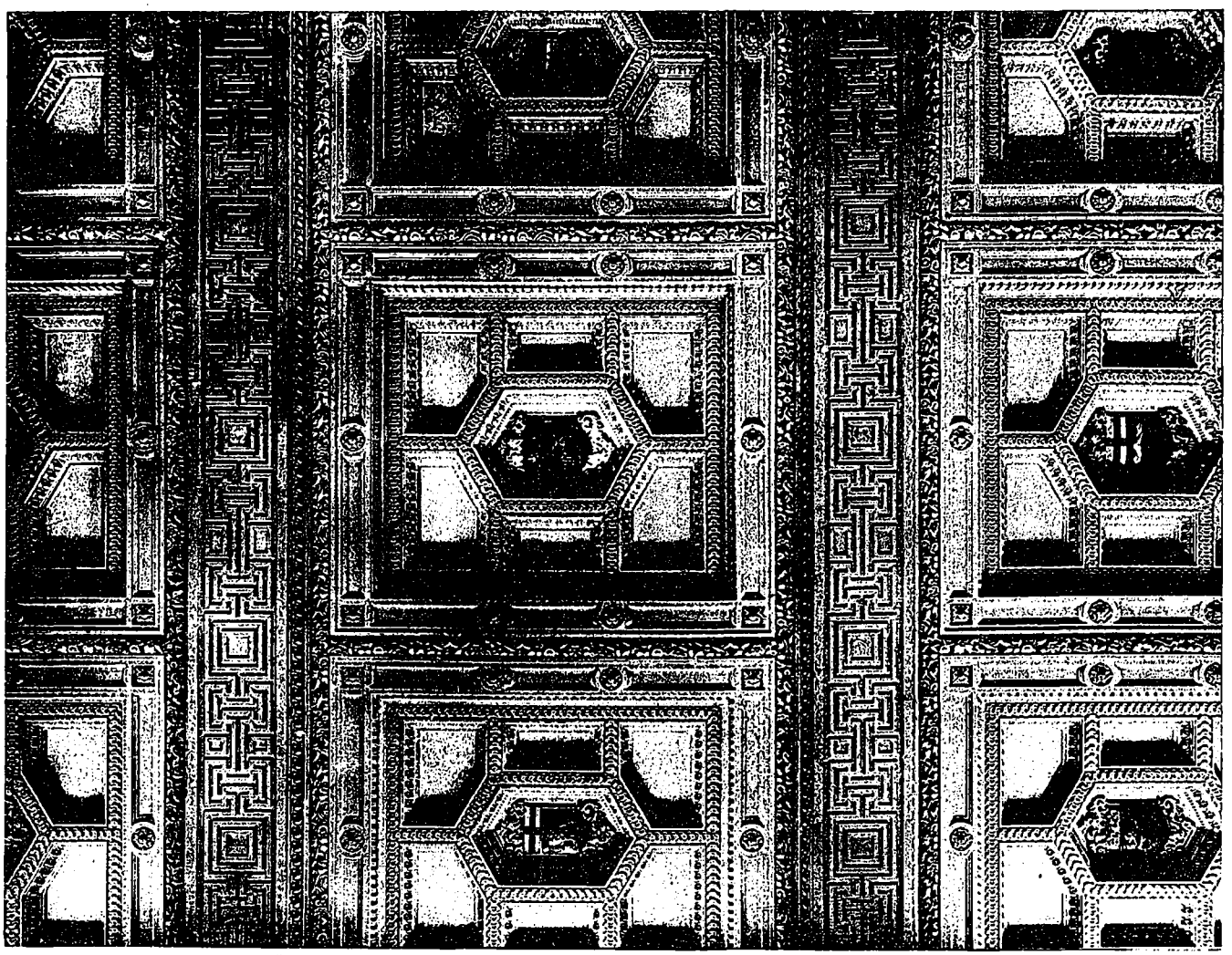
VIEW TOWARDS ENTRANCE HALL.

In addition to the entrance on King street there are two others on Yonge, one leading to the main hall, the other through a series of miscellaneous stores to the elevator lobby, which has its chief approach from Melinda street. The entrance doors leading to the main vestibule are of ornate cast bronze suspended upon heavy anti-friction hangers, and equipped with cylinder locks, master keyed like all other locks in the building. The inner doors to the entrance hall are also of cast bronze, with heavy polished brass pull-bars and glazing of special British plate glass.

Once inside the main entrance the feeling of strength and ornate simplicity is felt. To the left is the approach from Yonge street, through a revolving door located directly inside of the bronze doors already mentioned, and which has been prevented from protruding into the lobby by furring the wall to the required depth. On the right is the main stairway leading to the

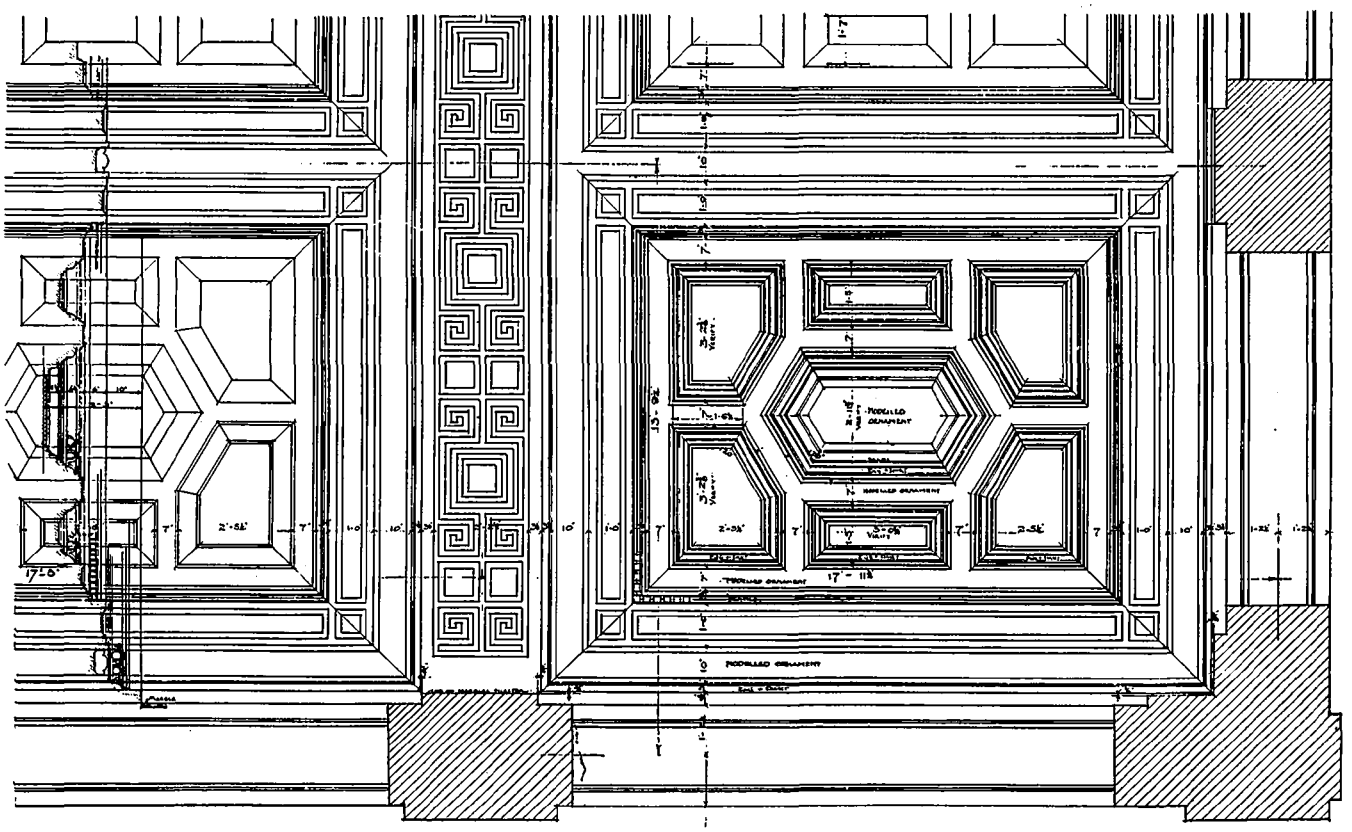


TWO VIEWS OF ENTRANCE DOOR TO TREASURY VAULT.



PLAN OF CEILING IN MAIN BANKING ROOM, DOMINION BANK BUILDING, TORONTO.

DARLING & PEARSON, ARCHITECTS.

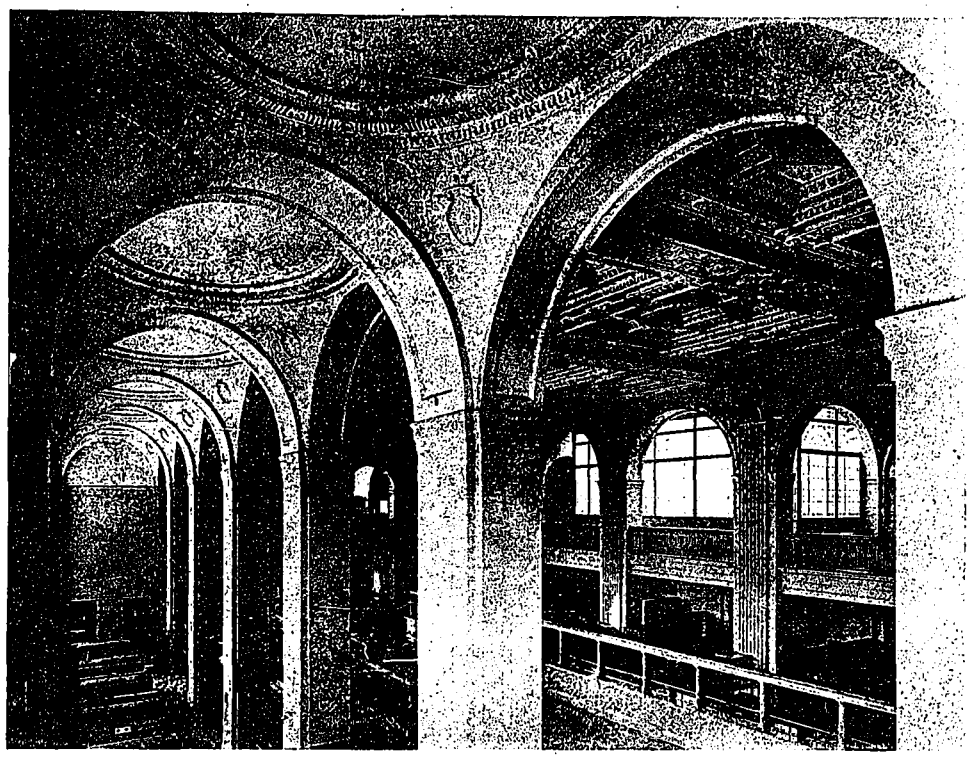


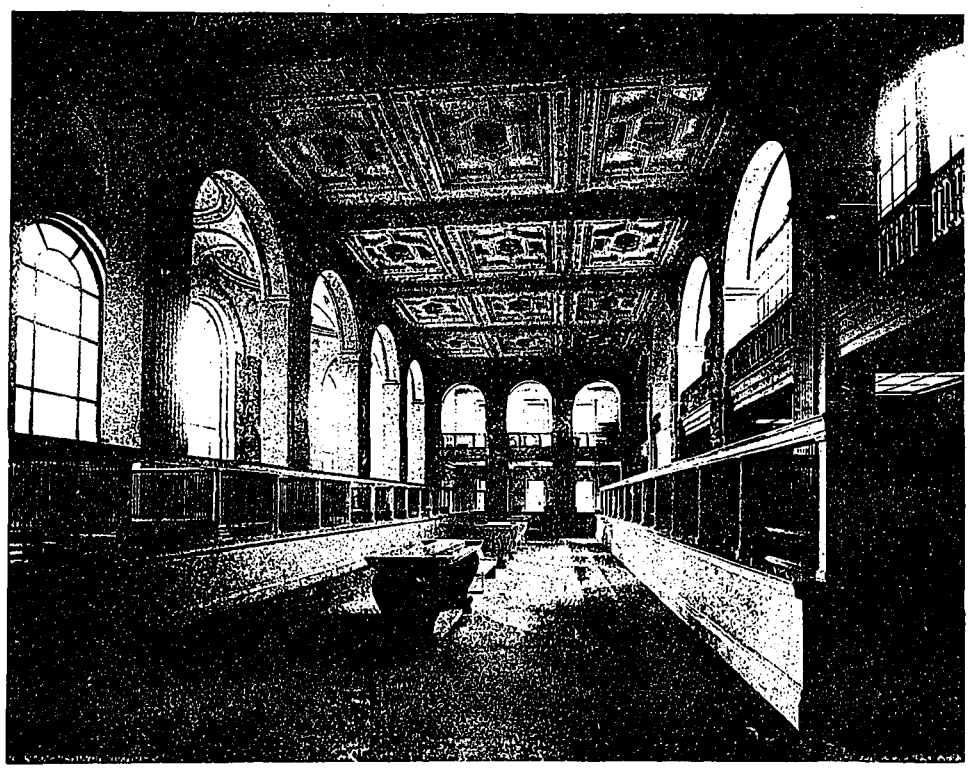
public banking room above, and straight ahead are five broad marble steps leading down to the savings department. The entrance hall, nineteen by sixty-four feet and twenty-six feet in height, is lined throughout with Tavernelle marble, which material is also used for the main stairs, the large banking room and the savings department.

Two bronze lamp standards, with frosted lights, mark the opening into the savings bank department. This room is practically a continuation of the entrance hall, extending back some seventy feet and leading directly to the vaults below by means of a broad marble stairway. The flooring here, as in the banking room above, consists of light gray Tennessee marble slabs thirty inches square, set within a reddish border. The artificial lighting is semi-direct, sixteen frosted glass bowls being hung from the centre of the ceiling panels.

At the top of the monumental marble and bronze stairway leading from the entrance hall is located the main banking room. Eighteen piers enclose the large public space, and counter screens, while the surrounding area is planned for the official and clerical forces of the local institution. The entire room, measuring one hundred and fifty-four feet long, sixty-eight wide, and thirty-three in height, is designed in Tavernelle marble of a greyish color, excepting the floors of Tennessee marble and the ceilings of hard plaster. Extending from pilaster to pilaster, the narrow way of the room, are beams with soffits designed in a classical fret, separating the ceiling into sections, which are in turn divided into three panels, practically square. A floral band encloses the various panels, in the centre of which are introduced in their natural heraldic colors the coat-of-arms of the nine Provinces.

In studying the ceiling of the main banking room the first impression comes from the brilliancy of the whole field, each detail expressing its true relation, although some thirty feet overhead. Then the fact becomes evident that there is nothing in the way of candelabra or chandeliers to mar the view. The colors of each coat-of-arms is sharp and clear, with their cor-



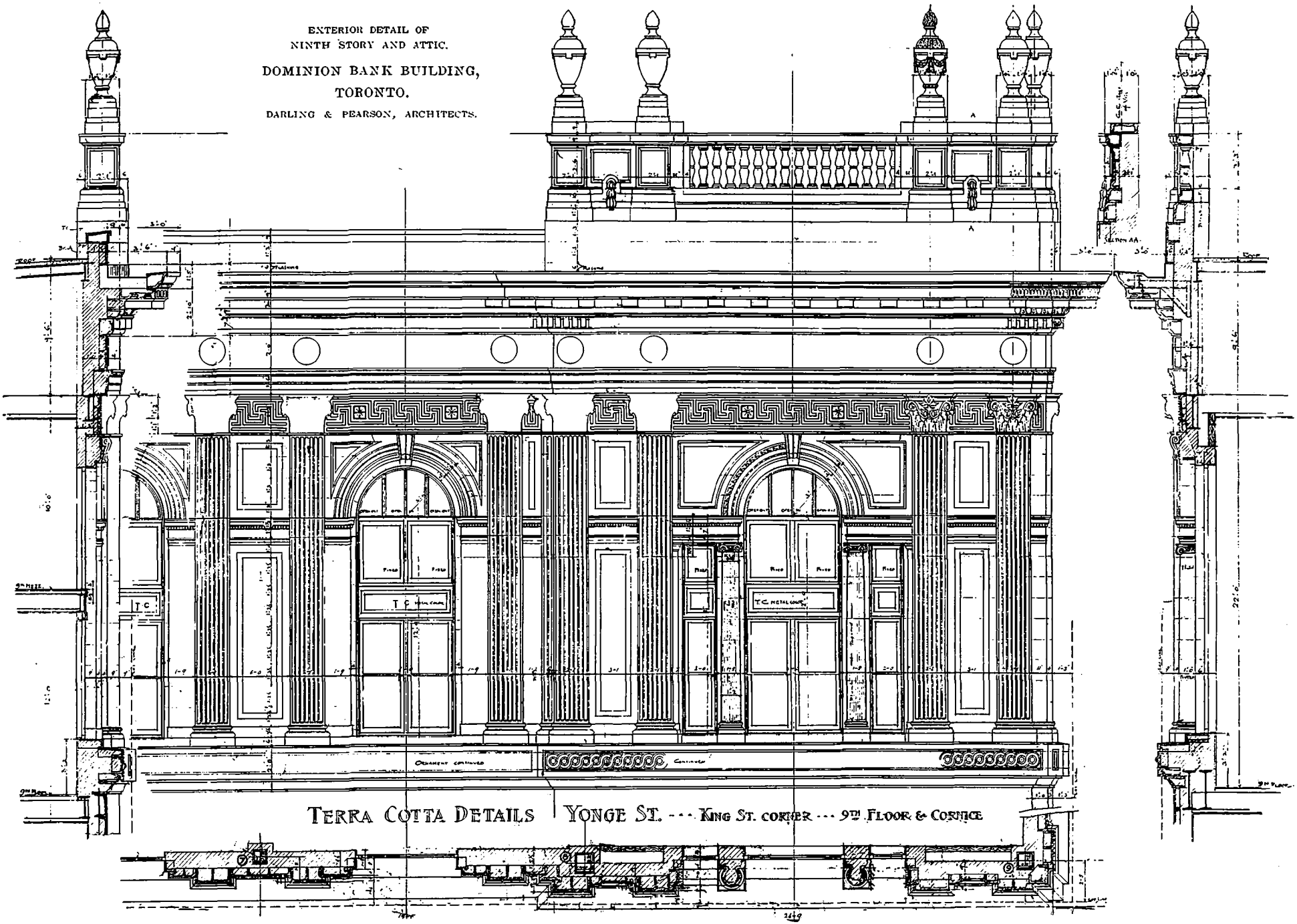


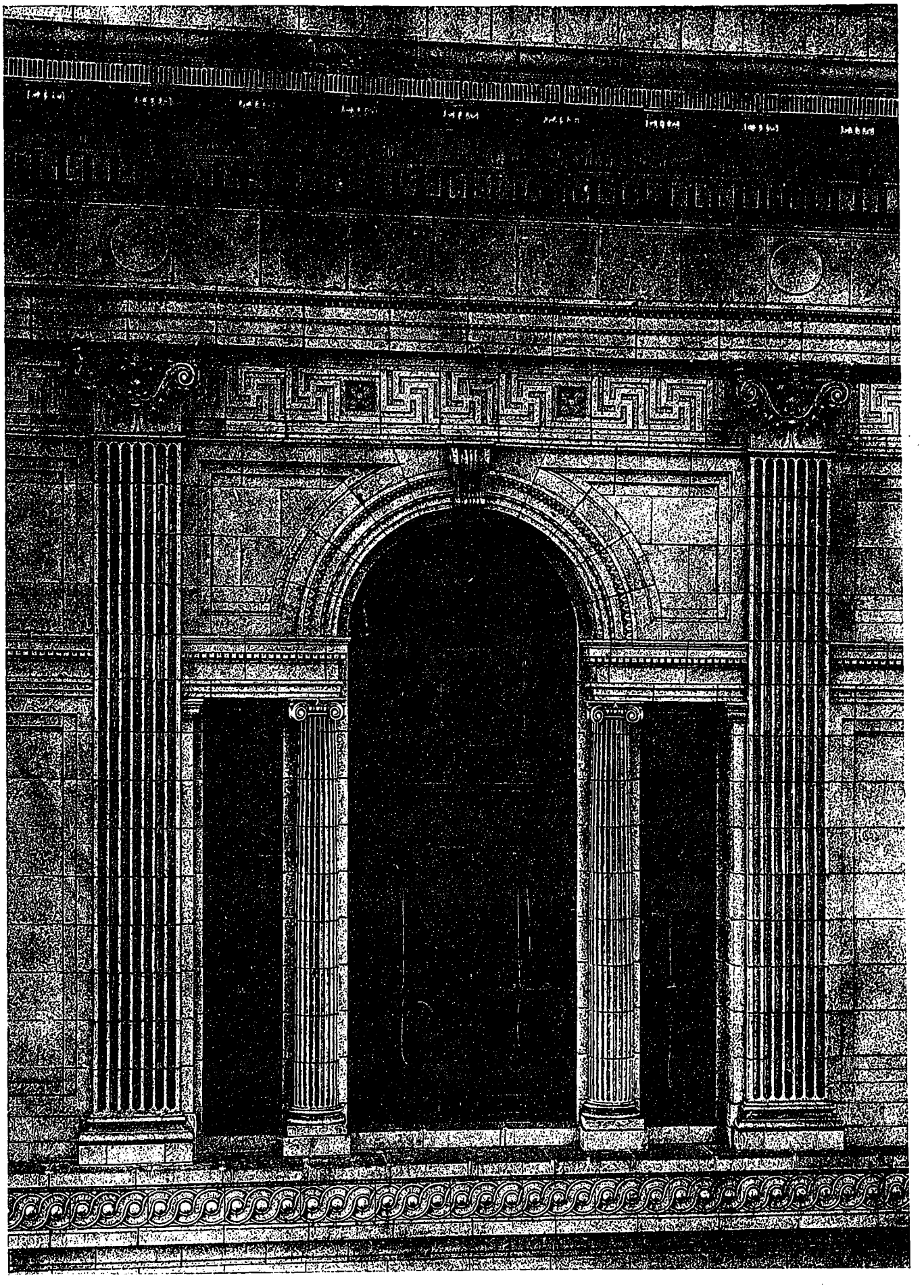
TWO VIEWS OF MAIN BANKING ROOM.

EXTERIOR DETAIL OF
NINTH STORY AND ATTIC.

DOMINION BANK BUILDING,
TORONTO.

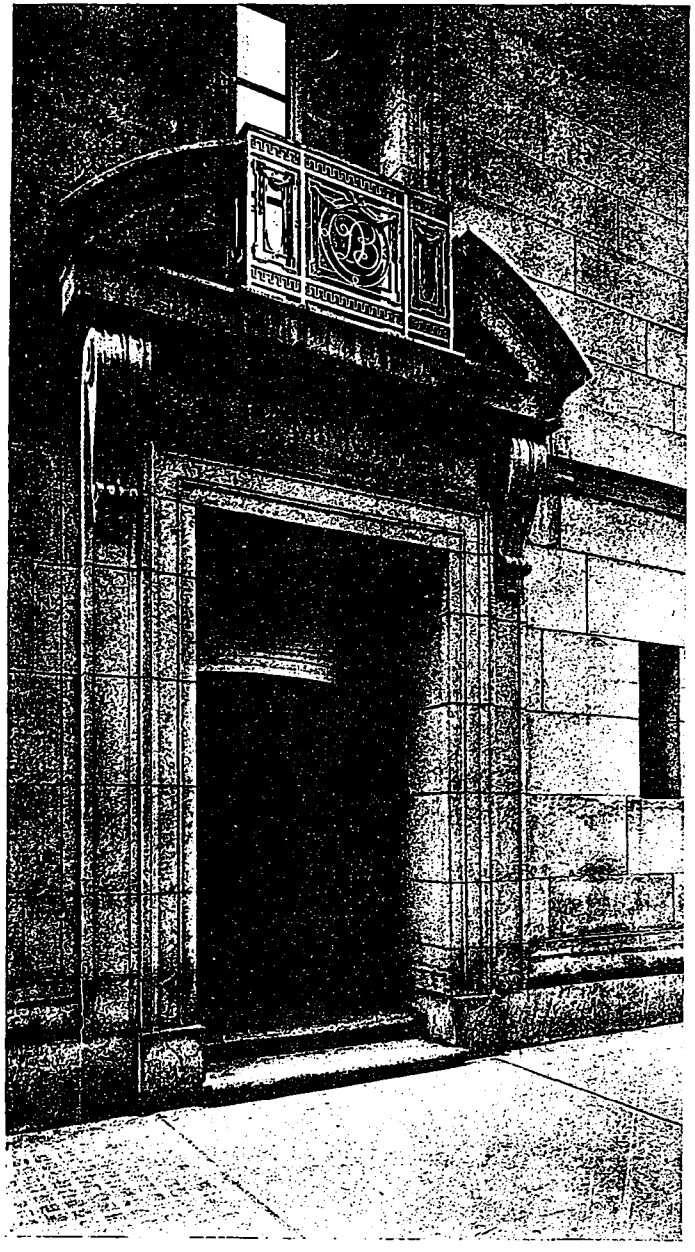
DARLING & PEARSON, ARCHITECTS.





DETAIL OF MAIN CORNICE AND NINTH STORY WINDOW.

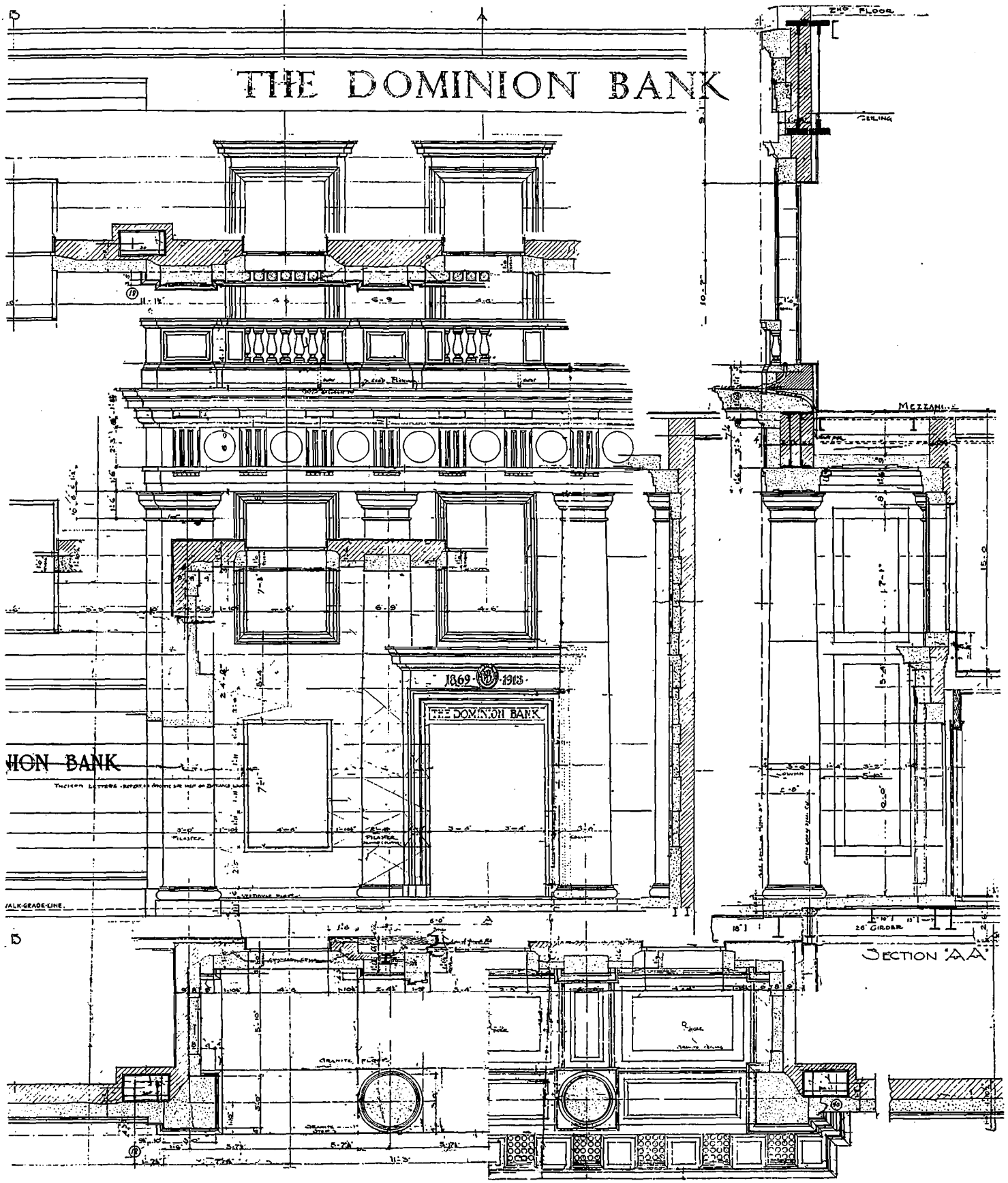
THE DOMINION BANK BUILDING, TORONTO.



YONGE STREET.

KING STREET.

TWO ENTRANCES TO THE NEW DOMINION BANK BUILDING, TORONTO.



DETAIL OF MAIN ENTRANCE.

THE DOMINION BANK BUILDING, TORONTO.

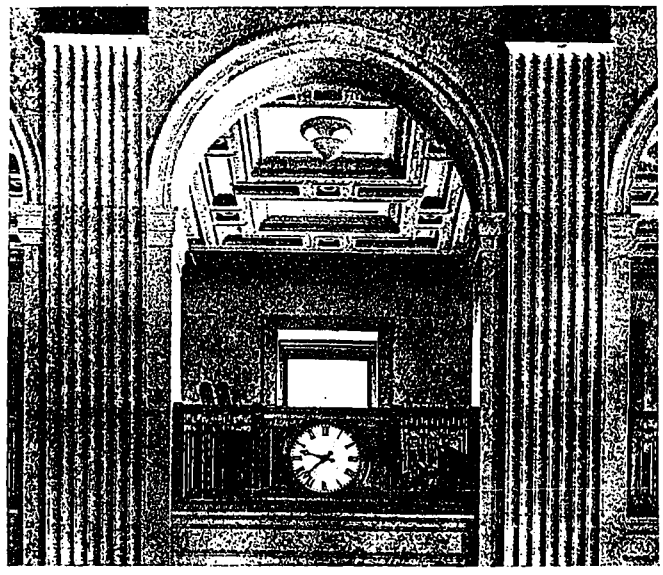
DARLING & PEARSON, ARCHITECTS.

ELEVATOR HALL ON MAIN FLOOR.

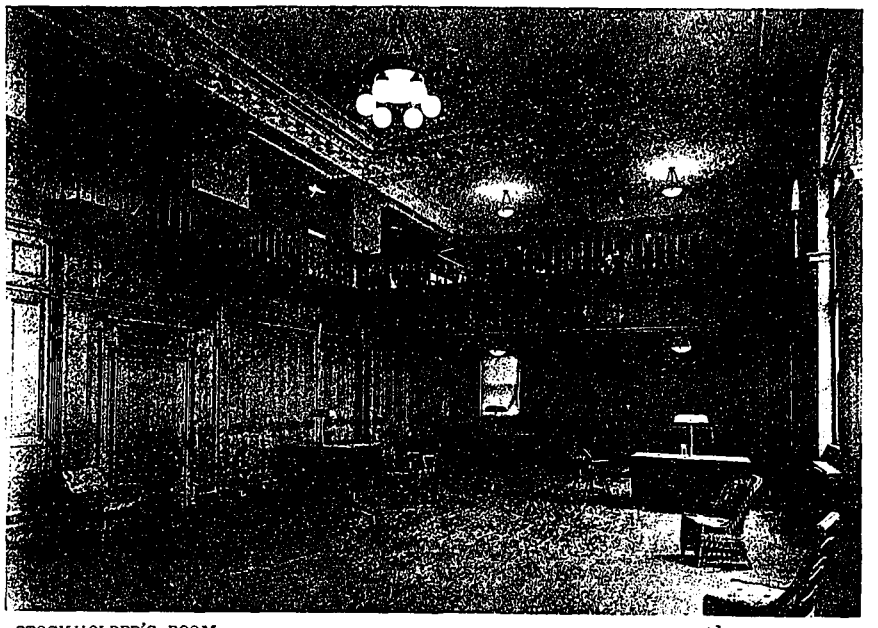
responding values maintained. There is no extreme glare, as from a multitude of lights hidden in the cornice treatment, but rather an even, mellow light. To the casual observer he would doubtless depart wondering how such a bright, soft illumination is possible without some visible source from which to emanate. Herein lies one of the many devices which attribute greatly to the utility and beauty of the bank. Hidden behind the cornice of the counter screens and running the full length of the room are two narrow stretches of ground glass, one on each side of the public space. Beneath the glass are approximately three hundred lights which reflect upward, sixty passing through a red shade and the remaining through a light green. The reds occur every so often and are proportional with the green, so as to draw out the true values of the corresponding colors in the ceiling.

To the left of the banking room is the aisle along Yonge street, which contains a series of pendentive domes finished in hard plaster of a rough surface and pointed a light cream to harmonize with the general tone of the main ceiling. Directly opposite, near the entrance, is provided a ladies' waiting room, with writing desks, magazine tables, chairs and Turkish rug. A mezzanine gallery for the accommodation of the staff who have no connection with the general public, extends around three sides of the central space, enclosed by a solid bronze railing of simple but effective design. At the ends are installed two ornate clocks, which belong to a system regulating every timepiece in the building. An elaborate and musical set of chimes is connected with the one at the north end announcing the time at each quarter.

At the south end of the banking room the officers' platform, with its Oriental Turkish rug, is closely allied to the consultation room for the manager, all treated in mahogany with ornate plaster ceiling. The floor of the large public space is laid in thirty-inch square marble tile; that of the clerks in the rear of the counters, in cork tiling. Three marble check tables are at the convenience of the patrons, and covered with thick transparent



DETAIL OF CLOCK IN MAIN BANKING ROOM.



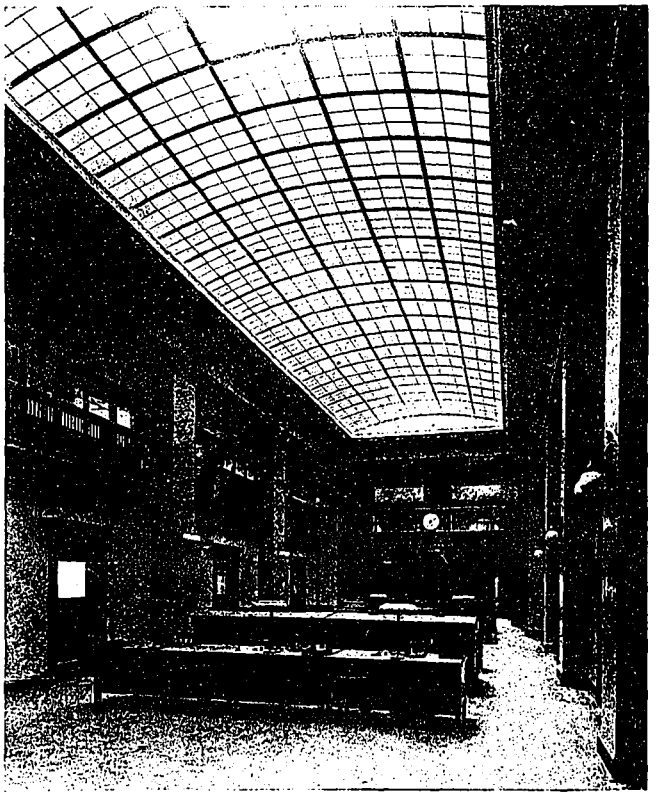
STOCKHOLDER'S ROOM.

glass, under which are spaces along the sides for deposit slips, blank checks, etc., separated by glass partitions. The finish on the counters and cages is of a dull cast bronze, the polished glass of best British make, excepting for the low railings, where chipped plate is preferable.

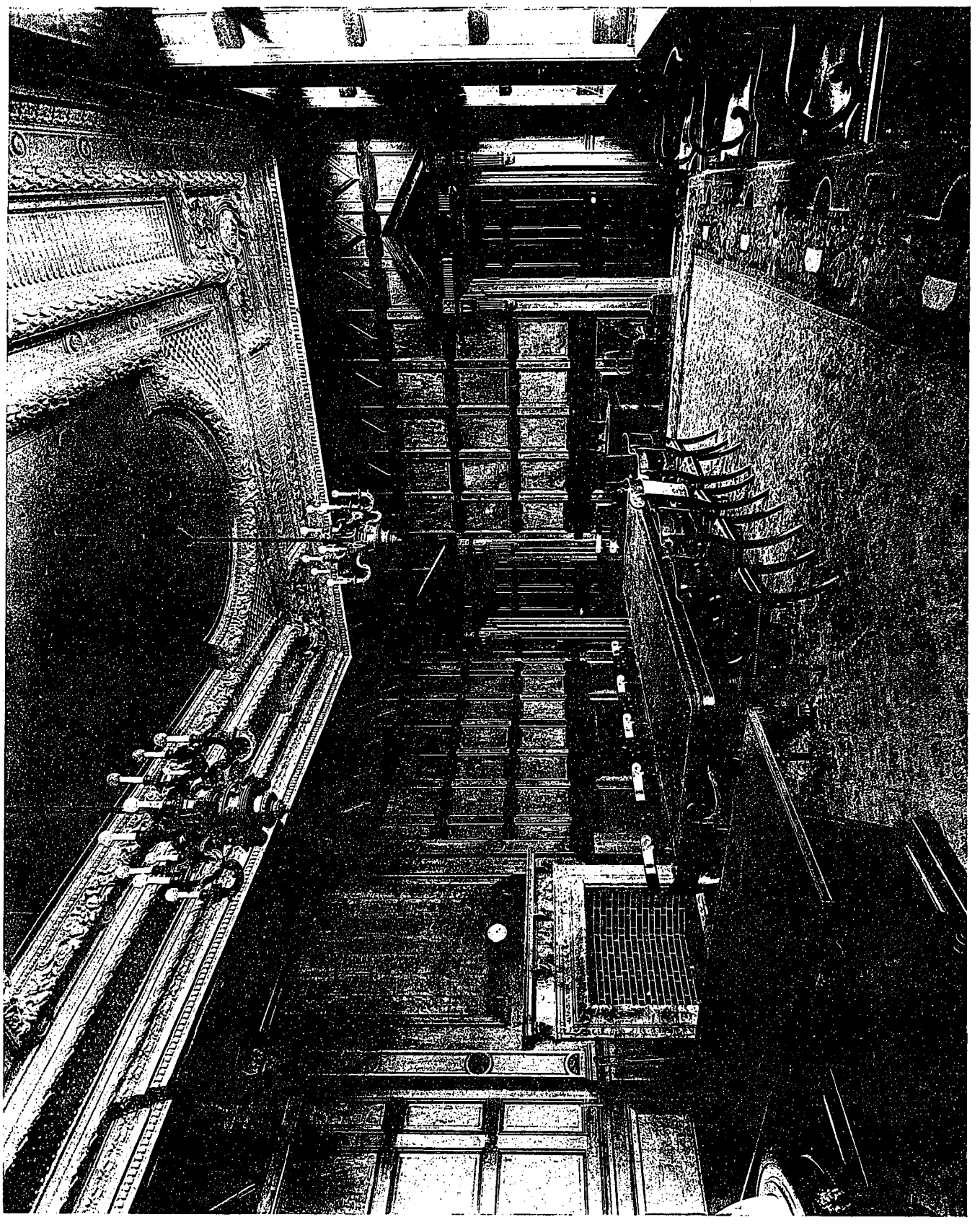
Of unusual interest are the desks and tables used throughout the banking quarters of the building. The tops consist of a three-eighths inch thickness of cork annealed to a resistence of three hundred pounds to the square inch. Thus, in case of a dinge it will gradually heal itself and assume the original surface. At the top of the desk are guard rails with sanitary coves and a dull bronze lighting fixture with sand-blasted finish. These are designed, the hood being supplied with reflectors set at various angles, so that the direction of light extends in a straight line to the edges of the table. In this way the clerk is protected from any direct illumination, since each reflector is treated separately to meet the existing needs, while the cork covering prevents reflection. In the tables accommodating the clerks connected with the bookkeeping staff a safe has been built in the end so that the clerk can keep all his records within constant reach, and at the same time be the custodian of his own books, which facilitates his work, especially in the evenings. The doors are made so as to swing back under the top projection of the desk, and far enough from the floor to prevent any embarrassment in moving about. All legs are equipped with a bronze shoe, so that no inflammable material comes in contact with the floor surface. Each teller is provided with a truck-safe, stationed in his private cage, which is easily handled and affords ample room wherein he may keep everything relative to his work. These safes are provided with two locks, and cannot be opened except by the teller and one other person, each having his own combination. At the close of banking hours these truck-safes are locked, taken to the large vault, from whence they are returned in the morning to the teller's cage. By virtue of this system protection is guaranteed to the teller against the inconvenience by disturbance or a loss by theft.

Two entrances, one on Yonge and the other on Melinda street, lead to the elevator hall. Here are located five passenger elevators, thoroughly described in the article on "The Mechanical Equipment." The hall on the ground and first floor is of imitation Caen stone, with marble stairs, while the corresponding space above has marble dado four and one-half feet high, hard plaster and marble tile floors, the stairs being of cast-iron with wood hand-rail. The entrance between the elevator hall and the banking room is through a bronze screen, the doors being equipped with floor checks, threshold strip, pivot hinges, cylinder lock master-keyed, plate glass and polished pull and protection bars.

All floors from the second to the eighth are divided into offices to suit the wishes of the tenants. The corridors are wide, protected by a marble wainscot having a broad strip for the cap and base with a very slight projection. The floors are of marble slabs eight by sixteen inches

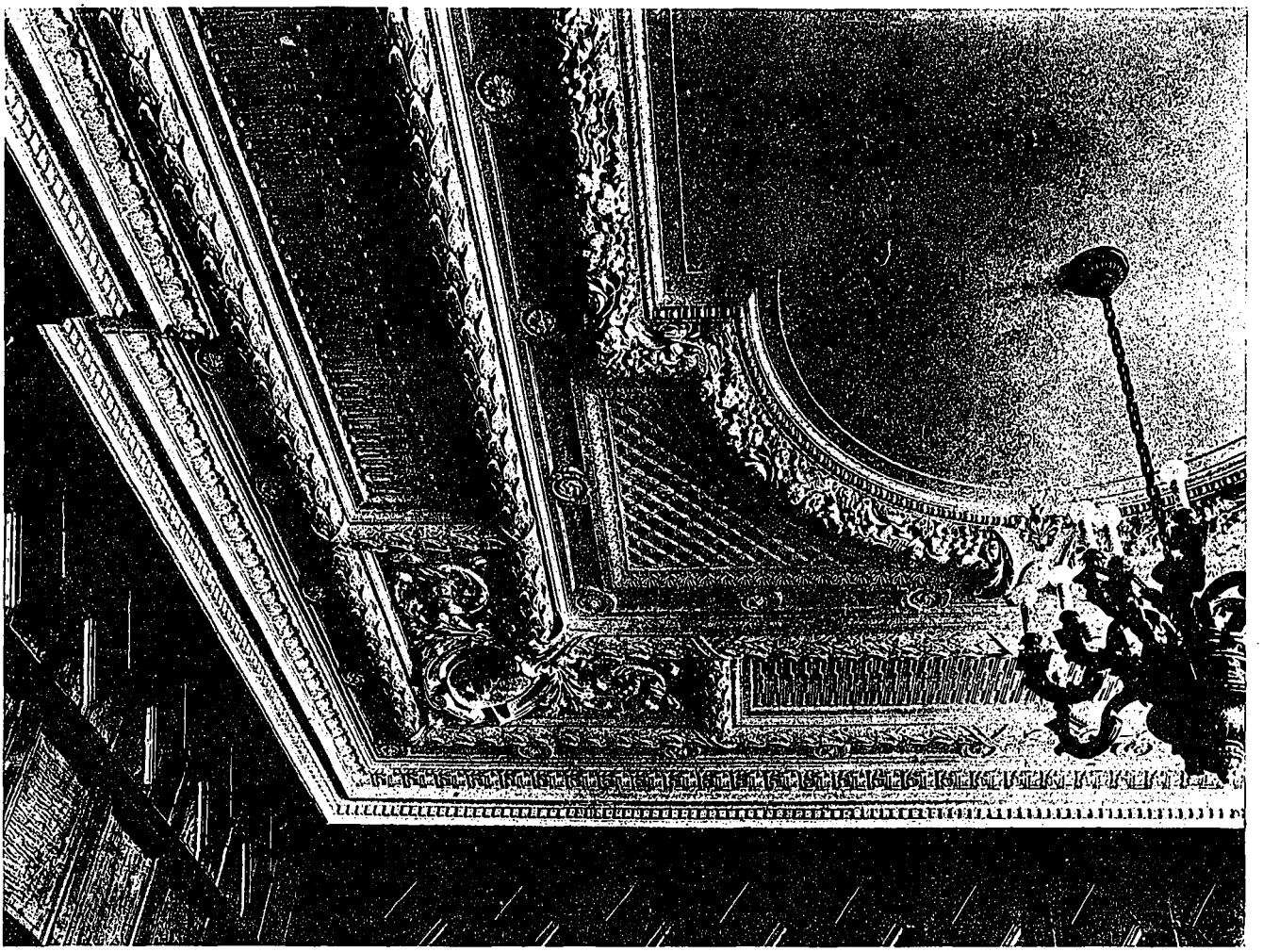


HEAD OFFICE ON NINTH FLOOR.



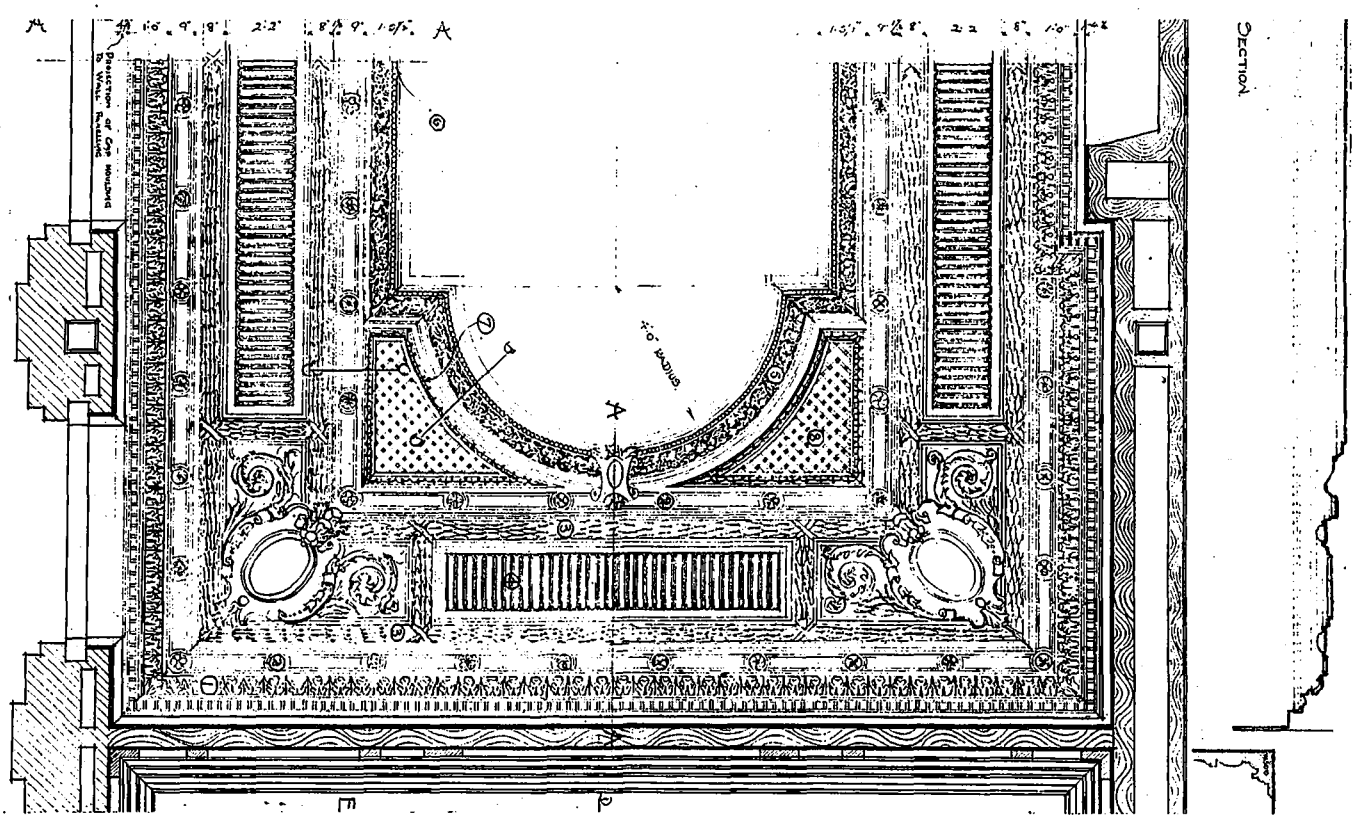
BOARD ROOM IN THE DOMINION BANK BUILDING, TORONTO, CAN.

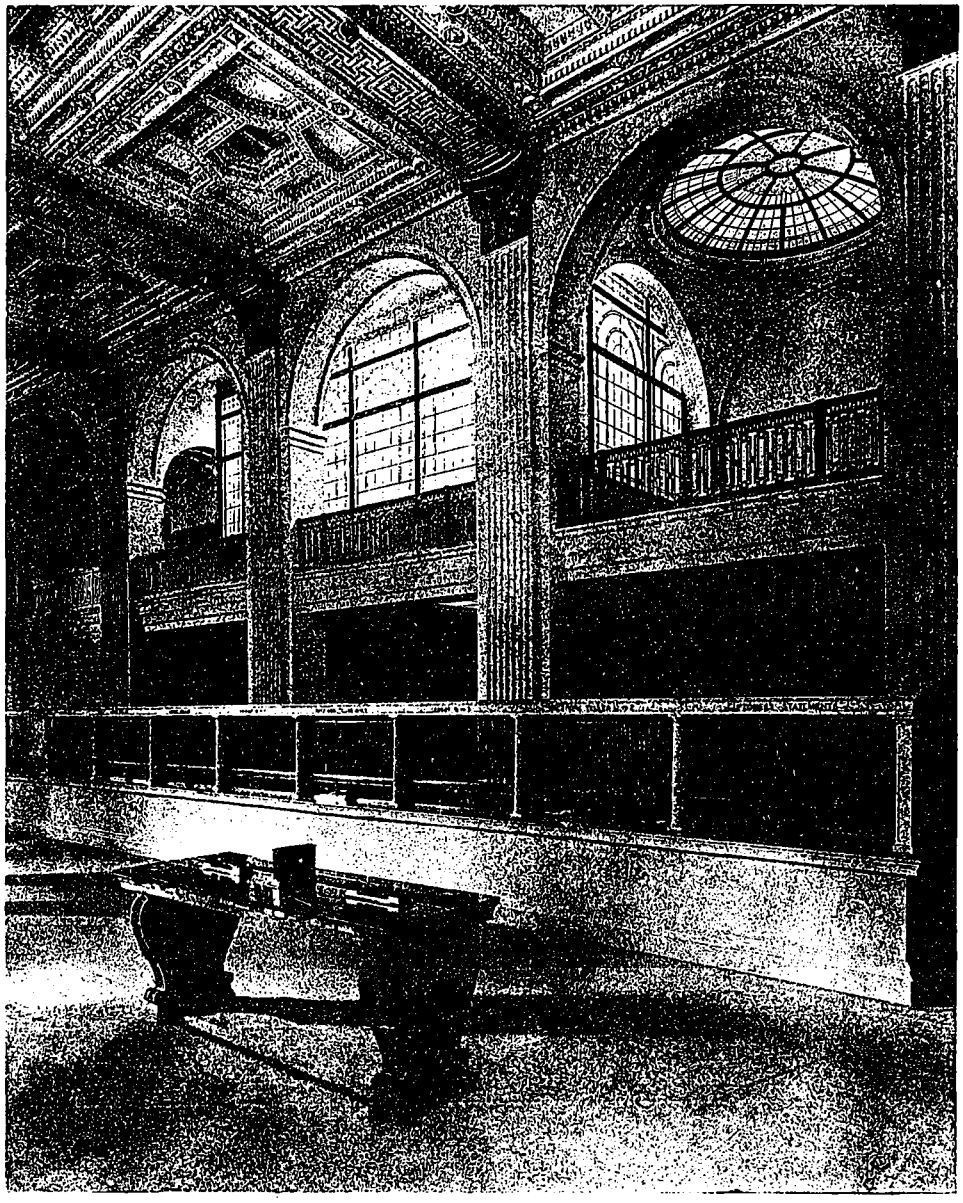
DARLING & PEARSON, ARCHITECTS.



PLAN OF CEILING IN BOARD ROOM, DOMINION BANK BUILDING, TORONTO.

DARLING & PEARSON, ARCHITECTS.

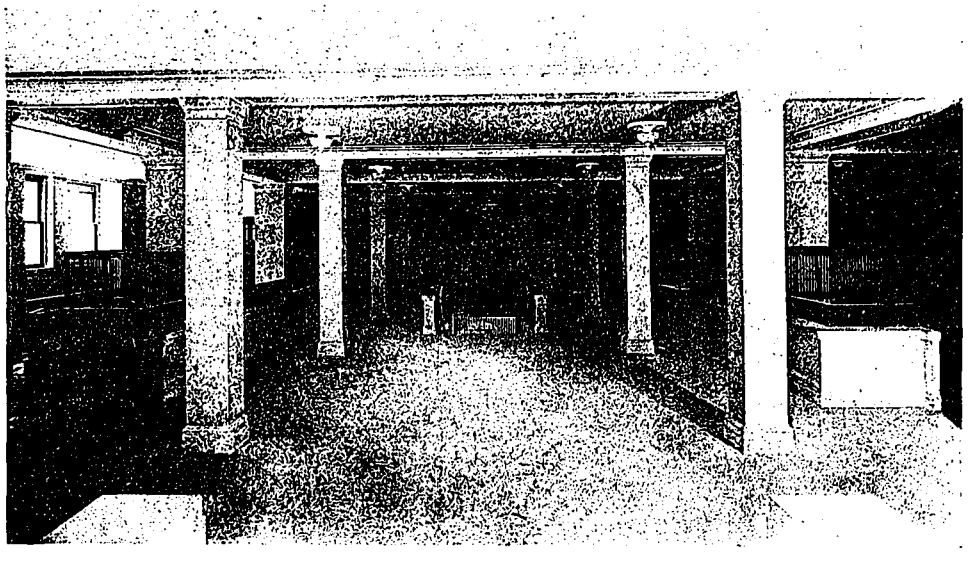




DETAIL OF MAIN BANKING ROOM.

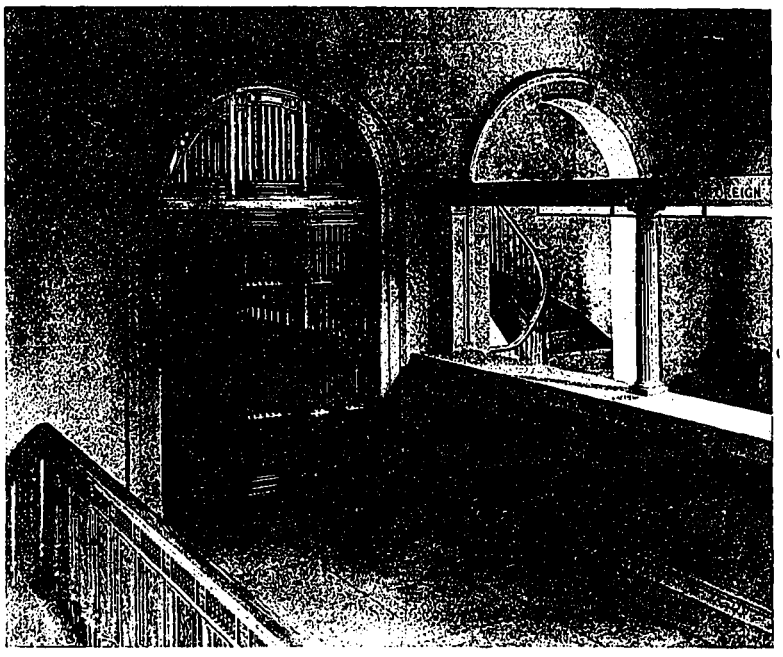
in size; the walls and ceilings of cream tinted plaster; the doors and trim of hollow metal. A battery of four fireproof vaults are located on each floor for the benefit of the people renting space. The offices have inner doors of mahogany, each provided with a bronze ventilating grille in the lower panel. A noted feature of the construction is found in the windows, each one of which unlocks out of its frame by means of a simple mechanism and permits of thorough cleaning from within the building.

The head office of the Dominion Bank is found on the ninth floor. Here is transacted all the business of the institution in relation to its branches scattered throughout the Dominion. Leading from the elevator hall is a large public space constituting one end of the head office and situated under the mezzanine gallery running around the large lofty room some twenty-two feet high. This main office measures seventy by twenty-eight feet; has all woodwork, including pilasters, door trims, and furniture in fumed oak; lighting fixtures finished in a dull bronze; and floors in squares of cork. Overhead is one long double skylight covering practically the whole room, with cold rolled copper containing corrugated wired glass amply protected by mineral wool. The walls are finished in plaster, painted a light shade of green and brought into harmony with the whole color effect; the skylight being also tinted in a pale greenish hue. On the mezzanine floor is located the stenographical department, directly under which are private offices extending along both sides.



SAVINGS BANK DEPARTMENT.

The private offices are fitted up with every convenience, having seamless imported Wilton rugs either of a Kurdistan, Kirmanshah or a Feraghan design, with colors varying from old rose, deep reds and grey to bright yellows and terra cotta. All pieces of furni-



DETAIL OF FIRST MEZZANINE FLOOR.

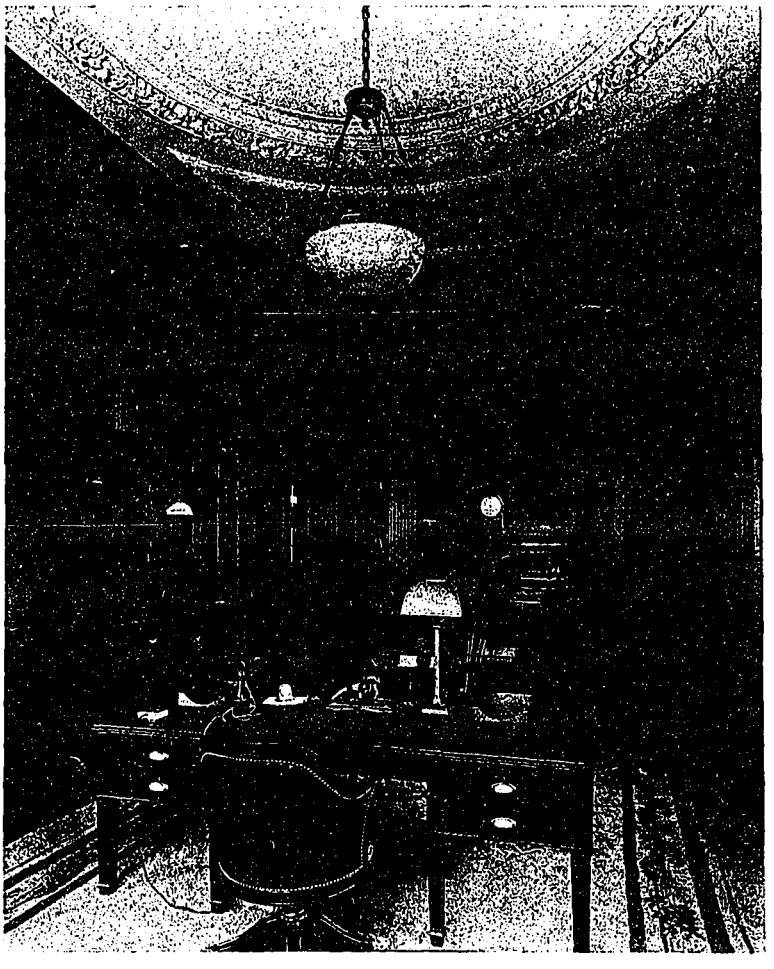
ture in each office, including desk, clothes press, filing case and drawers, possess the same style of lock, so that one key opens the complete outfit. At the side of the desk is a small plate with a very slight projection which eliminates the general push button and permits the concealment of all wires. In place of the large annunciating outfits used for messenger service, etc., are small compact cases one foot square, having forty-five small lights and a place beneath for the name of the person whom the flash represents.

On this floor is built a vault for the protection of all records in connection with the various branch offices. Along the walls are steel files with shelves adjustable every inch and partitions which can be placed to suit any required division of spacing. The ventilating door is connected to the main door by a solid rod so that it is impossible to leave the one open when the other is closed. Another room is arranged as a drafting department to take care of minor work in connection with the building.

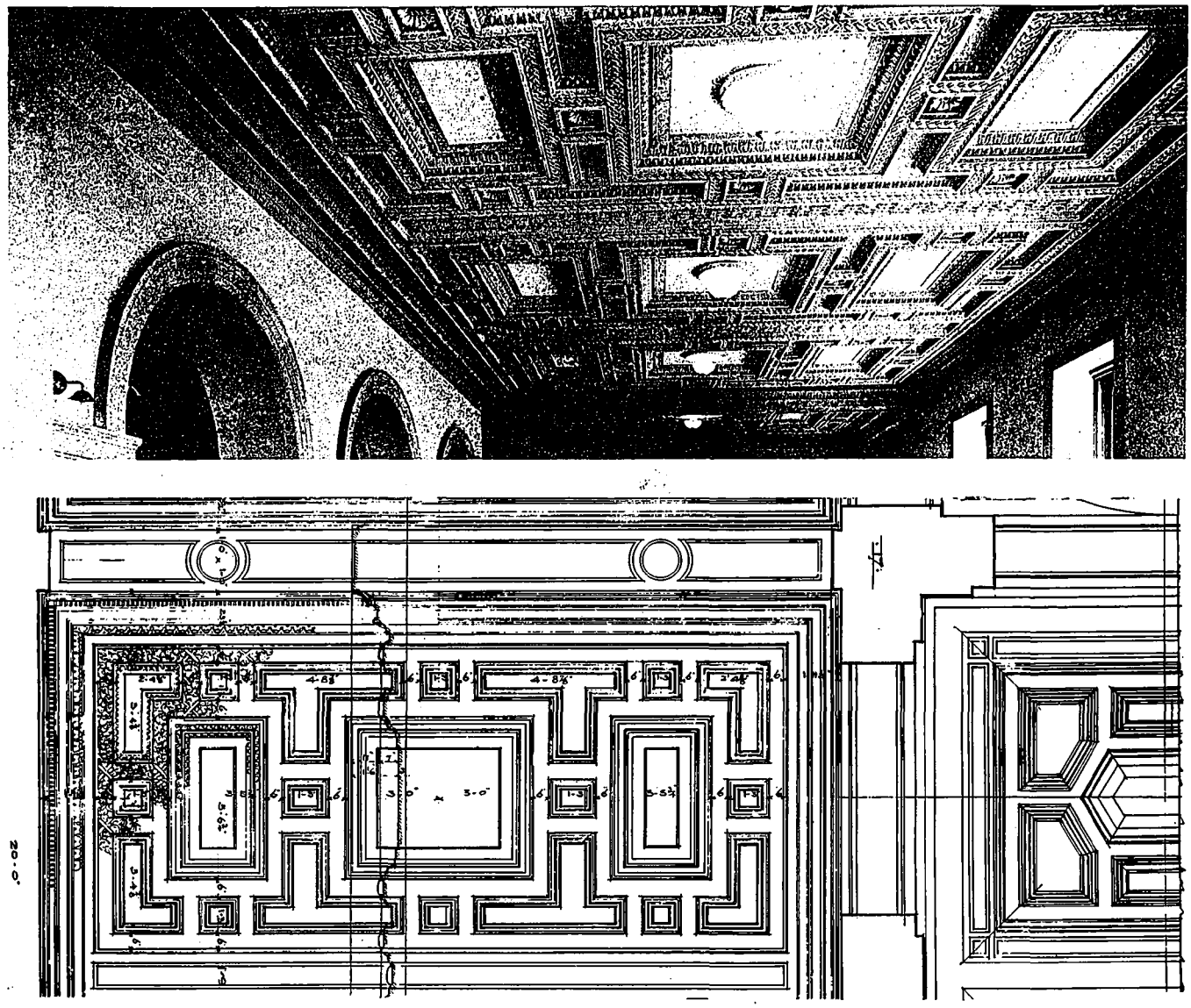
At the north end of the head office is planned the stockholders' room, with wood panelling to the top of the mezzanine balustrade enclosing it on three sides. A large central lighting fixture hangs suspended by a dull bronze chain, equipped with one central bowl and six globes encircling it. One side of the room opens into a library, the other into a room fitted up for the use of out of town guests.

The southern portion of the ninth floor is devoted to the general manager, board room and elevator hall. Entering the general manager's suite either from the board room or public space, we find his private quarters richly decorated in walnut woodwork and florid tapestry of dull warm colors. The mantel carries out the general effect with its black and white marble; while the lighting fixtures of dull bronze wall brackets and frosted chandelier are also expressive of the quiet and dignified treatment throughout. Another of the bank's ingenious devices should be observed in connection with the manager's office. An interior telephone system has been installed which connects all departments. The manager, by pressing down a series of levers built into his desk, can communicate with all the heads of departments at one time. This action is taken without the use of a receiver by means of two large openings above the row of levers; and should he desire not to have the conversation overheard by others in the room, he uses the receiver, which in turn disconnects the open annunciator.

Adjoining the manager's room is the board room, the most elaborately designed part of the bank. The walls are panelled to the ceiling in natural walnut; the hardwood floor is covered with a heavy hand tufted Donegal rug with a

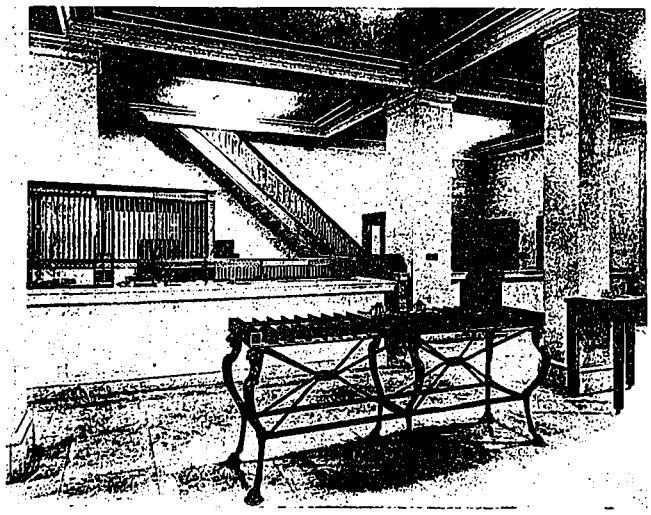


GENERAL MANAGER'S OFFICE.



DETAIL OF MEZZANINE CEILING, NORTH AND SOUTH ENDS OF BANKING ROOM.

blue centre and three-foot border of patterned design in browns, greys and greens. At either end are two doorways with delicately carved consoles supporting pediments; while in the centre of one side is an attractive fireplace of purplish grey Formosa marble with a tapestry brick lining and hearth of square tiling. The ceiling consists of an elaborate design after the Renaissance period, lending a striking effect to the tout ensemble. All the relief work leads from the acanthus scroll in each corner up to the inside border of sharply cut flowers, fruit and



DETAIL IN SAVINGS BANK DEPARTMENT.

OFFICIALS' PLATFORM ON MAIN FLOOR.

vegetables, enclosing a plain field utilized for the hanging of two unusually well moulded lighting fixtures, each possessing fourteen candle lights. A large table occupies the central part of the room with the top finished in a deep green leather; the chairs also being upholstered in the same material.

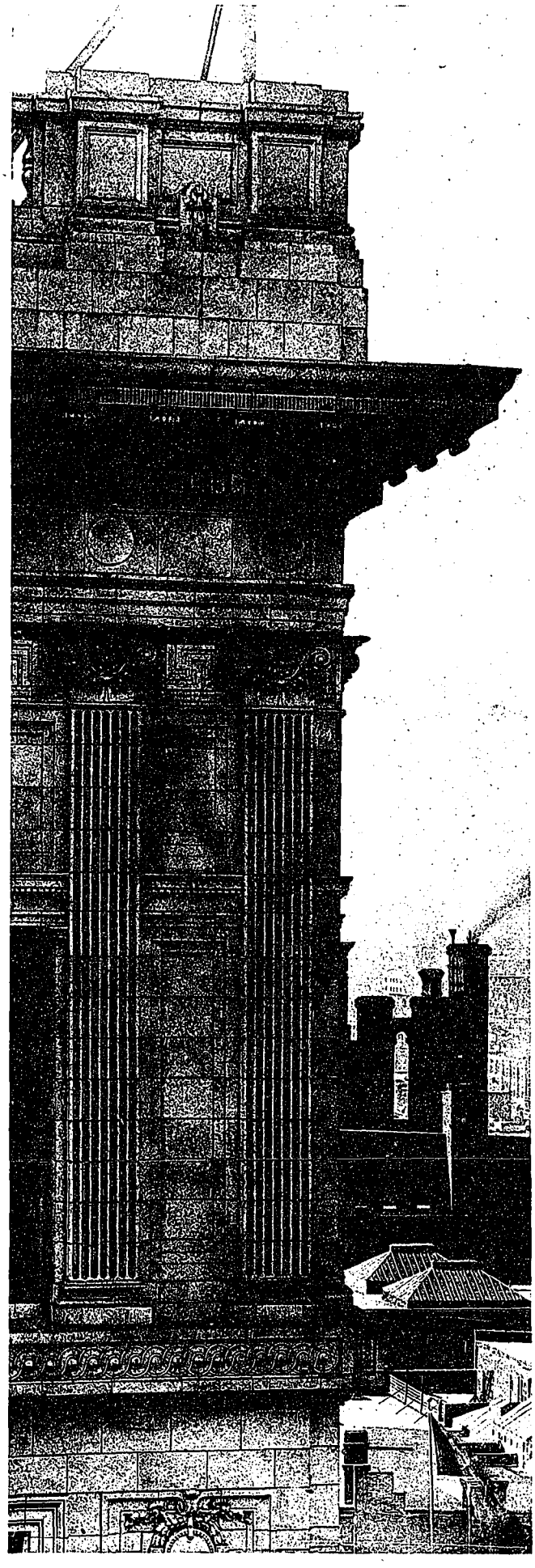
The Vaults.

To the visitor a very attractive feature of the building is the great vault which is the largest as well as the best equipped in Canada. The approach is by the broad marble stairway leading from the savings bank department down to the public space separated from the vault lobby by a massive steel grille with bars one and one-half inches thick, spaced four inches on centres, and reaching from the floor to ceiling. The vault is erected entirely separate from the building construction; approximately thirty-three feet square by twenty-five feet high; divided into two stories, the upper or safe deposit vault, the lower or treasury vault.

Surrounding the vault is a patrol passage three feet in width. At the corners are placed heavy silvered glass mirrors, full depth, and set at such an angle as to permit of free observation on all sides; while similar arrangements have been made above and below, so that no exposed surface escapes the attention of the guard. Lights with silvered reflectors are arranged by means of removable parts so that the entire length of the observation space is well illuminated. Even the bottom of the vault is constructed in such a manner as to remove all possibility of tunneling. Upon the solid rock-bed eighteen-inch steel beams encased in concrete form a series of piers which support the vault and at the same time permit an unobstructed view of all open space beneath.

Directly over the observation tunnels just mentioned is a twenty-eight inch floor construction consisting of reinforced concrete, closely staggered iron grillage, two and one-half inch steel lining, and tile laid upon a cement base. The walls also are similar in thickness to the floor, built up of two and one-half inches of shock and drill-proof steel surrounded by two feet of rock concrete. This concrete is made impervious to fire, shocks and acid applications by having two rows of heavy steel beams embedded within. The entire outside surface of laminated lining is waterproofed by two layers of heavy tar paper with applications of hot tar on both sides.

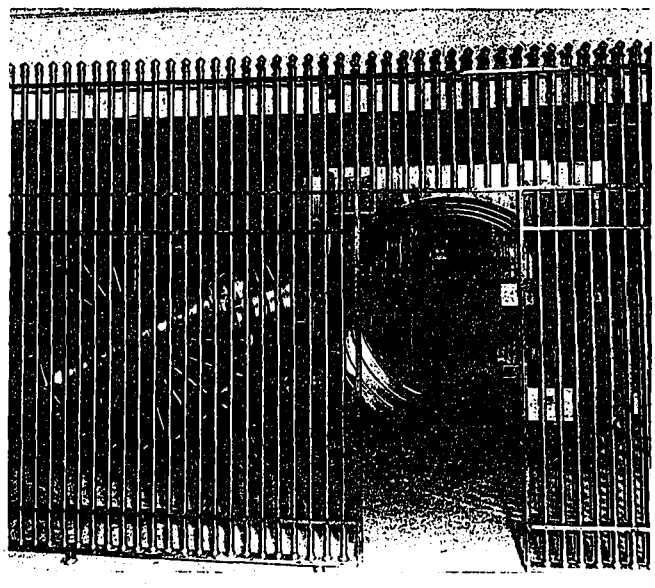
To enter the safe deposit vault it is necessary to pass through one of the largest and heaviest doors ever built. It is circular in shape, two and one-half feet thick, weighs more than thirty tons, and has a clear opening of seven feet six inches in diameter. The door guarding the treasury vault below is of the same thickness



DETAIL OF CORNICE.

and construction, but rectangular in shape. The doors are of composite construction, the outer half formed of low steel castings containing ten inches of concrete; interlaced refractory steel members one and one-half inches in diameter, four inches on centres; and a cutter burner proof metallic section. The inner half is built up of seven parts each of two inch thickness firmly welded together; three layers of five-ply chrome steel plates; four layers of low steel, and solid cast steel bolt frames. With the exception of two narrow rebates, there is no short stepping and no customary tongues and grooves.

A feature of unusual interest is the locating of the combination locks and bolt-throwing mechanism on the door jambs and the time locks upon the doors proper. Such an arrangement necessitates the putting of holes through both the jamb and the door in order to reach the dogging devices in burglar operations and provides doors solid and without spindle holes. All locks and bolt-throwing mechanism are covered with heavy steel plates. The combination dial is in the shape of a steel cylinder disappearing angle-wise in the top of the front pressure housings. The front end is provided with an oval glass window, behind which appears an electrically illuminated dial with two revolving pointers which are connected with operating knobs located on the side of the housing, used to set the combinations of the locks. The device is not only one of convenience, as the cylinder is located upon a normal line of vision, but absolutely prevents any unauthorized observation of the setting up of the combination numbers.



STEEL GRILLE IN FRONT OF SAFETY VAULT.

The doors are hung upon massive steel crane hinges provided with ball and roller bearings and so carefully balanced that they are easily manipulated. They are steam tight and locked with a train of twenty holding bolts, four and one-half inches in diameter. The bolt work is

INTERIOR OF SAFETY DEPOSIT VAULT.

covered with sections of French plate glass, at the centre of which is a circular glass door fifteen inches in diameter. The outside ring of glass is one piece without radial frames, set with a grey invisible packing.

A special foundation of concrete has been set in front of the entrances for the support of the mechanism, whereby sections of the floor are dropped by the use of a hand lever to permit the opening and closing of the doors and then raised and locked in position to complete the floor levels.

Electric protection has been installed so that in case any attempt has been made to drill through the walls or doors, or should the doors be opened in any unauthorized way, three large gongs sound an alarm, one being located upon the exterior and two upon the interior.

The safety deposit vault is equipped with more than a thousand boxes of various sizes, finished in polished steel, locked with the latest interchangeable key locks, and provided with an enamelled bond drawer. The vault has a polished steel grille and gate located directly within the main vault entrance. The floor is tiled with marble slabs, the joints being "struck" with monel metal bars; the walls and ceilings are panelled with steel plates and bars; the lighting is furnished by a double system of electric equipment so arranged that the vault cannot be thrown into darkness by anyone except the proper officials.

Within the vault is a telephone which allows a means of outside communication by any person accidentally locked in at night time. If such an accident should occur the prisoner will find a pair of lights burning and a card of instructions advising whom to call and how to release the time lock devices, after which the combinations can be operated. Large volumes of fresh air is constantly delivered into the vault, the circulation of which is augmented by fans.

Mechanical Equipment, Dominion Bank Building

MELVERN F. THOMAS, M. M. E.

THIS installation was designed to meet the complex requirements of a modern office building, including within its walls the home of a large banking institution.

The boiler and engine rooms occupy the north end of the second basement, which is about 28 feet below the level of the street. The rooms are large and allow ample space for inspecting and operating the equipment in a satisfactory manner. The boiler room has a plain concrete floor, with ceiling and walls plastered and painted, and the engine room has a tile floor and enamel brick walls.

The steam generating plant has a rated capacity of 558 horse-power, and consists of three equal units of the Erie City vertical water-tube type of boiler. The Government inspectors allow a working pressure of 160 lbs. per square inch, but the plant is operated at a pressure of 125 lbs. Fig. I gives a view of the front of the boiler room, and shows the stokers, the coal hoppers and chutes, the ash trolley, and the boilers in the background.

These boilers consist of two horizontal drums, connected by vertical water tubes, and the design and construction give good circulation and allow easy access to all surfaces for cleaning, both interior and exterior. Tile baffles are arranged so that the gases from the furnace must pass successively over three groups of tubes before reaching the outlet to the chimney. The feed water and blow down pipes are connected to the bottom drum, and the steam pipe and safety valves are connected to the upper one. The boilers and stokers are enclosed in brick, and the entire setting covered with a 3-16 inch steel casing.

The boilers are equipped with chain grate stokers, which consume the cheapest grades of bituminous coal screenings without producing smoke. The arch over the fire near the front is very low, and this portion of the furnace acts as a gas retort by distilling off the gases and making coke. The arch over the back of the furnace is high and gives a large combustion chamber, into which the gases flow and burn, while the coke is slowly carried into this part of the furnace and also consumed. The depth of the fire upon the grate is regulated by a hand operated gate, and the rate of travel of the grate is regu-

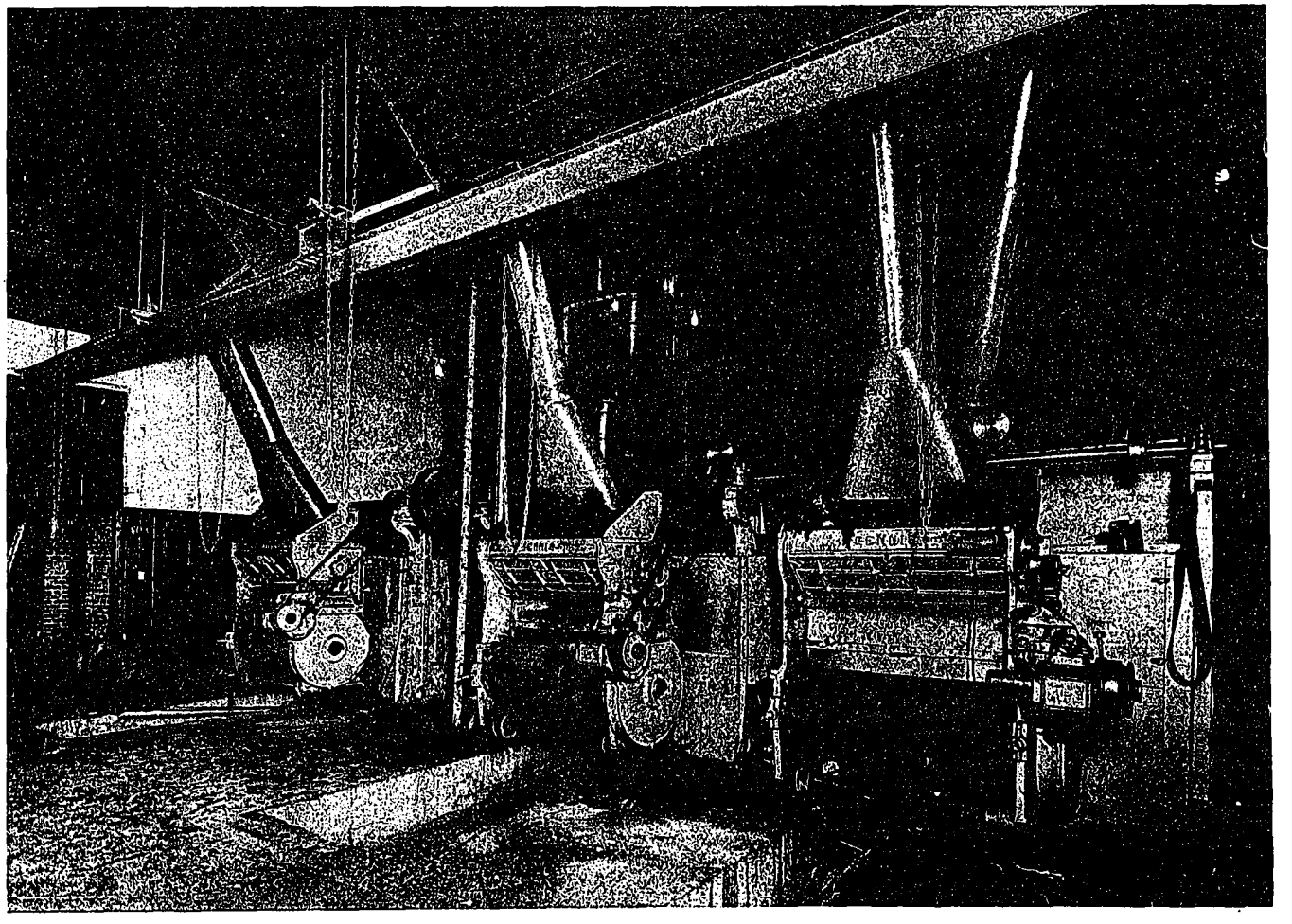


FIGURE 1. VIEW OF BOILER ROOM.

lated by shifting gears. These gears are entirely enclosed and run in oil. Dampers are provided to cut off the air from the back section of the grate, and thus prevent the loss due to a heavy excess of air passing through the back of the grate when operating on a small load.

Two small steam engines are provided to operate the stokers. One of them is a reserve.

Draft is supplied by a steel chimney extending up through the building to a height of about 225 feet above the furnace grates. The boilers are connected to the chimney by a steel flue, and both chimney and flue are lined with vitrified asbestos, which reduces the radiation to a minimum. An automatic hydraulic damper regulator controls the main damper in the flue, and reduces the draft on the furnaces when the steam pressure rises above 125 lbs. per square inch, and makes the full draft effective when the steam pressure is reduced.

A coal bin having a capacity of over four hundred tons is located near the boiler room, and coal is delivered into it through four openings in the Yonge street sidewalk. A complete coal handling equipment is provided to reclaim the coal from the bottom of the bin and deliver it to steel hoppers having a capacity of eighteen tons located above the furnaces, as shown in Fig. I. From the hoppers the coal flows by gravity down chutes to the furnaces. This conveying equipment is operated by a 10 h.p. motor.

The ashes and refuse from the furnaces are dumped into small steel cars and handled by a chain hoist and trolley to the ash room. A chain bucket elevator in the ash room is arranged so that it may be raised through doors in the sidewalk and discharge the ashes directly into wagons on the street.

Steam from the boilers flows into a high pressure header located above the boilers, and is controlled and distributed to the several services by valves and branches connected to this header. Extra heavy triple duty steam valves are flanged directly to the boilers, and will automatically close in the event of a failure of either a boiler or any of the large piping connected to the main steam header. All the piping and

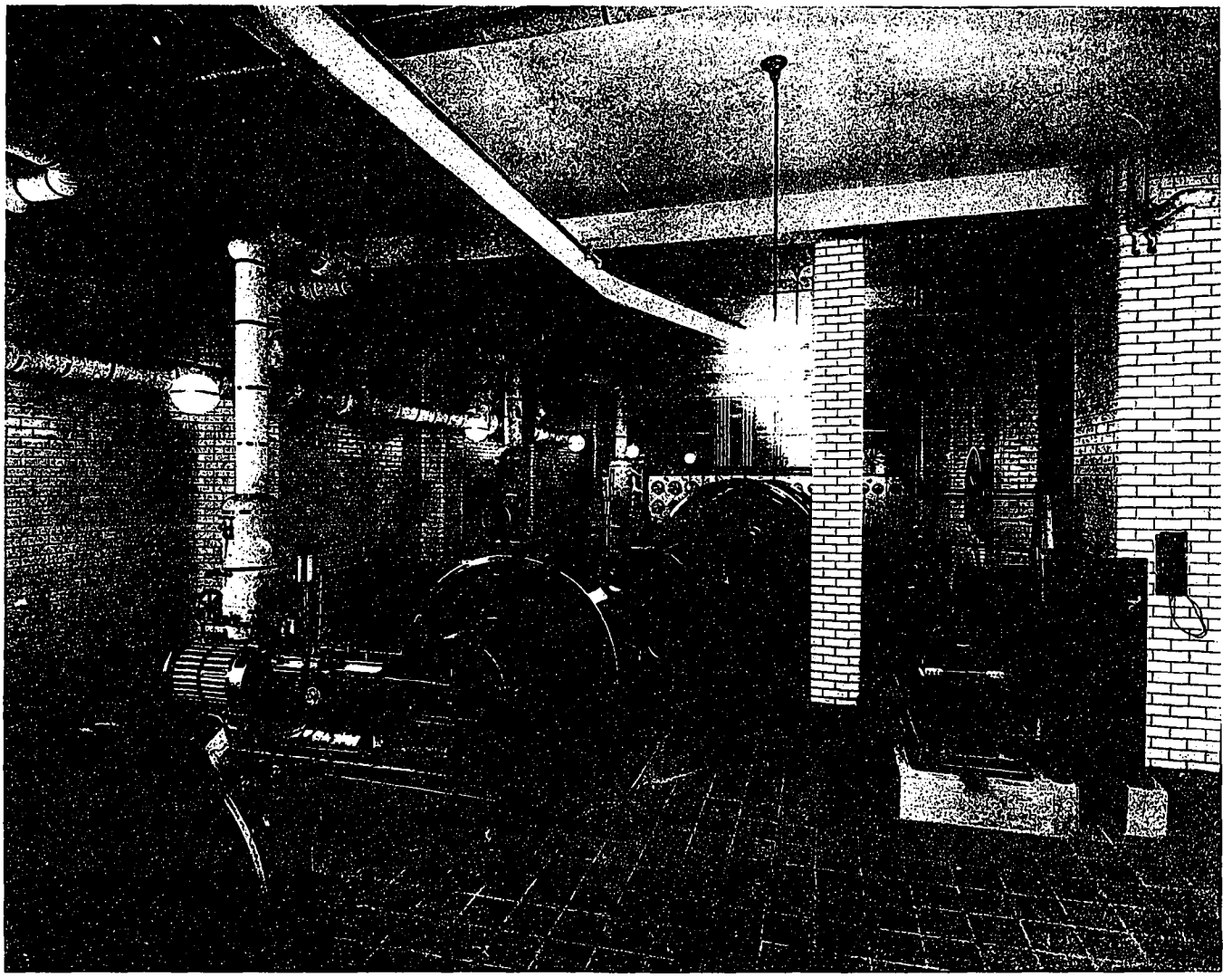


FIGURE II. VIEW OF ENGINE ROOM.

valves handling high pressure steam are extra heavy. Two branches supply the steam header in the engine room, and valves are provided to cut off a part of the plant in case of accident.

The electric generating plant has a rated capacity of 497 K.W., and consists of two 186 K.W., one 75 K.W. and one 50 K.W. units. Fig. II. shows a view of part of the engine room. The generators are compound wound, have interpoles, and are of the three-wire direct current, 115-230 volt type, with static balancers capable of compensating for a 25 per cent. unbalance of the load. These machines are designed to carry full load continuously with a temperature rise not to exceed 35 deg. C., to carry 50 per cent. overload safely for two hours, and to withstand a momentary overload of 100 per cent. Heavy duty non-condensing engines are direct connected to these generators, and the large units operate at 200 R.P.M. and the small ones at 275 and 290 R.P.M. One of the large units is operated during the day shift, and furnishes current for power, including the elevators and for lighting.

Low tension current for the operation of the fire alarm, the emergency vault lights, and all the call bells in the building is furnished by two direct current motor-generator sets, each having a capacity of 50 amperes at 20 volt. There are also two storage batteries, each having a capacity of 200 ampere hours on the eight-hour rating, which are operated in conjunction with the motor-generator.

Fig. III. shows the main switchboard located in the engine room. The pressure gauge panel is mounted as an extension of the switchboard. The entire board is constructed of white Italian marble two inches thick, and is 21 feet long by 7 1-2 feet high. The equipment of the board contains all necessary instruments, and switches to control the generating equipment and the distribution of the current to the various service panels throughout the building. The power circuits distribute 230 volt current to panel boards, from which branches extend to the motors operating the various services. The lighting is operated upon a three-wire system from the switchboard to the distribution panels, where the branch circuits are balanced between the neutral bus bar and the positive and the negative buses.

There are 31 motors, having an aggregate of 528 horse-power, in the building, and there are about 1,400 lighting outlets including the receptacles in the base boards. All of the wiring for lighting and power, and the greater part of the low tension and telephone circuits are enclosed in steel conduits, in accordance with the Underwriters' rules for the highest class of construction.

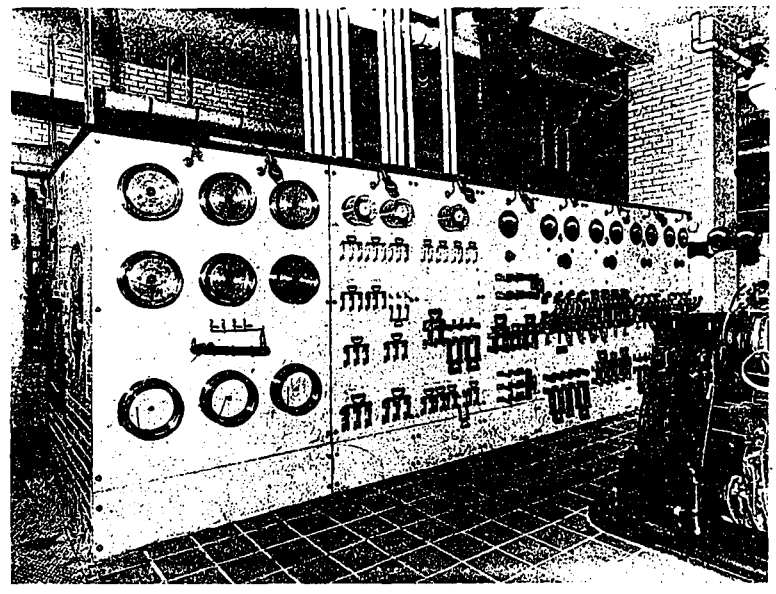


FIGURE III. MAIN SWITCHBOARD.

Steam for heating is distributed through an overhead system, consisting of mains in the attic and risers in the walls of the building. All of the building except the savings department on the ground floor and the main banking room is heated by 17,000 square feet of direct steam radiation, operated on a vacuum system. All offices have the temperature automatically controlled by vapor disc thermostats located upon interior walls or columns and operating the diaphram steam inlet valves on the radiators. The drain connection to each radiator is equipped with a vapor disc type of thermostatic trap, which allows all water and air to escape to the return piping, but holds all the steam back in the radiator.

Two 8 and 12 x 12 inch vacuum pumps, shown

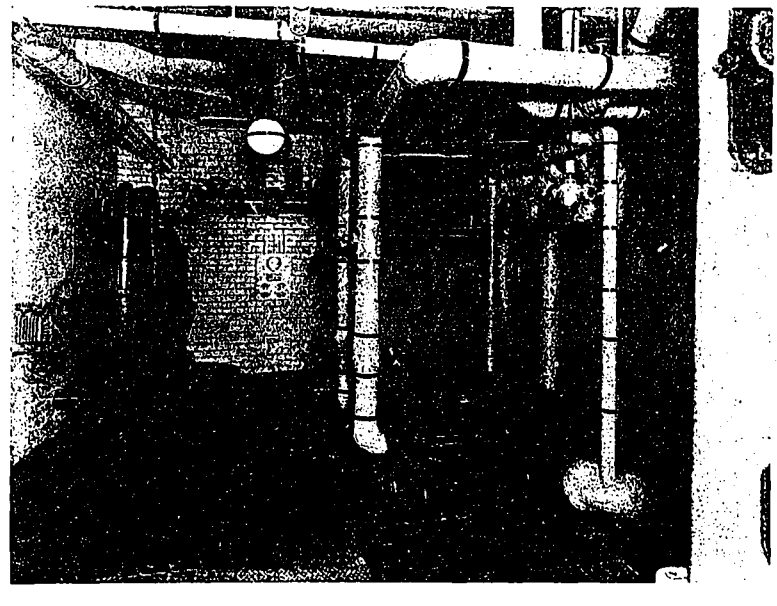
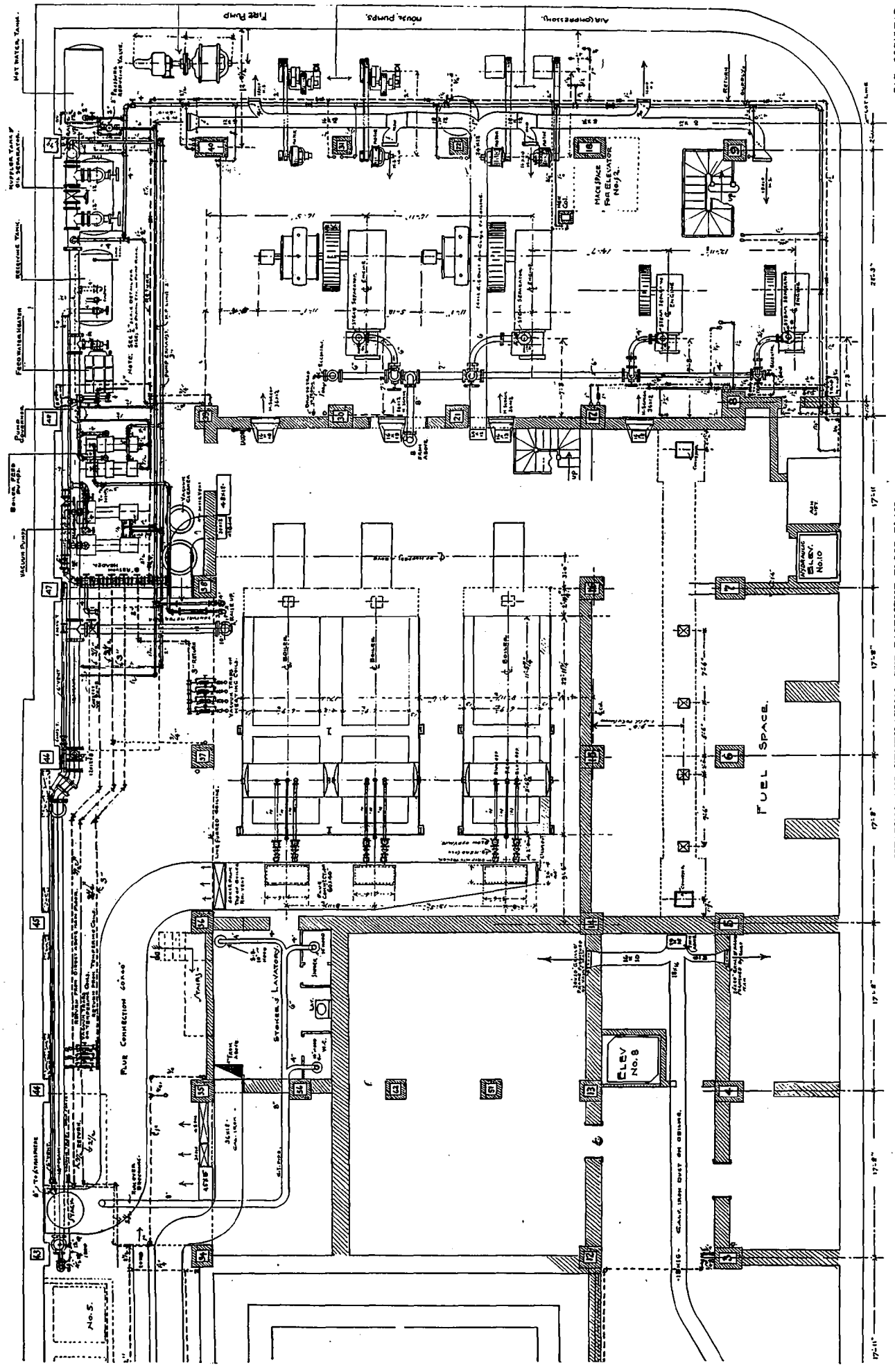


FIGURE IV. VACUUM CLEANER, BOILER FEED AND HOUSE PUMP.



HEATING AND VENTILATION, SUB-BASEMENT FLOOR PLAN.

DOMINION BANK BUILDING, TORONTO.

DARLING & PEARSON, ARCHITECTS.

JAS. MCALEAR, CONSULTING ENGINEER.

in Fig. IV, return all condensation to the receiving tank or to the feed water heater.

The savings department and main floor are heated by warm air, which is brought down from the court and passed successively through the tempering heater, which raises the temperature to 60 deg. F. through the air washes, which removes all dust and odors and partially controls the humidity, and to a fan which forces it through a by-pass into the tempered air chamber or through the reheater, which raise the temperature to 80 or 100°, as required to heat the rooms, and into the hot air chamber. From the air chambers galvanized iron ducts lead to the rooms, and mixing dampers under the control of thermostats in the rooms give the necessary amount of hot and tempered air to maintain the desired temperature. The combined heating surface of the tempering heater and the reheater amounts to 5,100 square feet.

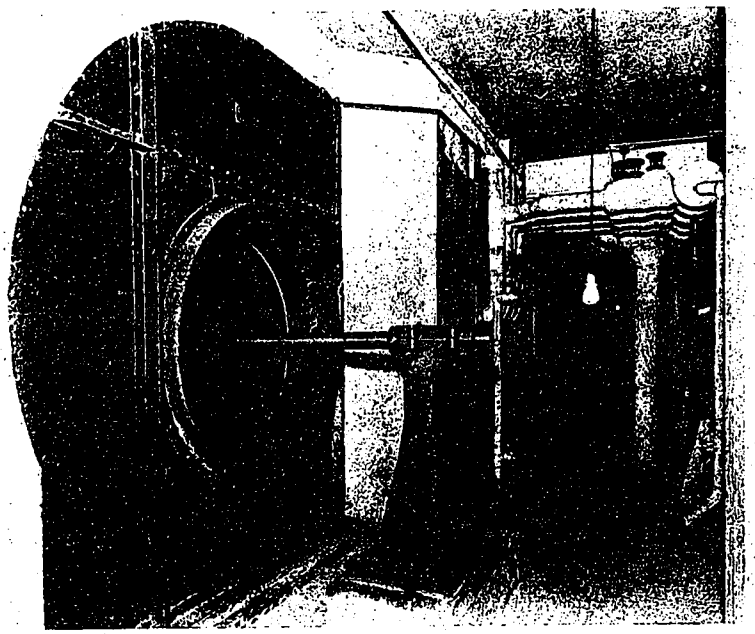


FIGURE V. VENTILATING AIR PASSAGE.

Fig. V shows the passage from the air washer to the main fresh air fan. This fan has a capacity of 45,000 cubic feet of air per minute and the air washer and tempering heater have capacities of 60,000 cubic feet per minute. They also supply air for the engine and boiler room. The fan supplying air to these rooms has a capacity of 20,000 cubic feet of air per minute.

Air is exhausted from the basement, the savings department, the main banking room, from the kitchen and dining-rooms and from all the toilet rooms by five exhaust fans having an aggregate capacity of 68,000 cubic feet of air per minute.

The fans are all operated by 230 volt direct current motors equipped with compound controllers to give 50 per cent. reduction in speed or to increase the speed 25 per cent. above the normal. Fig. VI shows two small exhaust fans used to remove air from the kitchen and from a toilet room in the attic.

A supply of compressed air for operating the elevator gates, for the sewage ejectors, for operating the temperature controlling equipment, and for blowing out armatures, is furnished by two 100 ft. capacity compressors belted to 15 h.p. motors. The distance between centres of belt pulleys on these drives is only four feet, but a swinging arm gravity idler pulley gives the desired arc of contact for the belt upon the motor pulley and entirely eliminates the unsteady operation of belts driving such machines as compressors.

The air from the compressor is discharged into a storage tank and automatic controllers start and stop the motors and maintain a pressure between forty and fifty pounds per square inch.

Provision is made for vacuum cleaning throughout the entire building. The machine, shown in Fig. IV, consists of a multistage centrifugal turbine exhauster direct connected to a 15 h.p. vertical shaft motor. This equipment operates at a speed of 3,400 r.p.m., produces a vacuum equivalent to five to six inches of mercury column, and has a capacity of six sweepers, each exhausting one hundred cubic feet per minute. Mains and risers extend from the machine to the inlet valves, which are distributed three on each floor of the building. With the machine operating at the rated capacity and fifty feet of hose a vacuum equivalent to two to three inches of mercury column is obtained when the tool is in service.

A pneumatic tube system is provided to transmit messages between the offices of the bank.

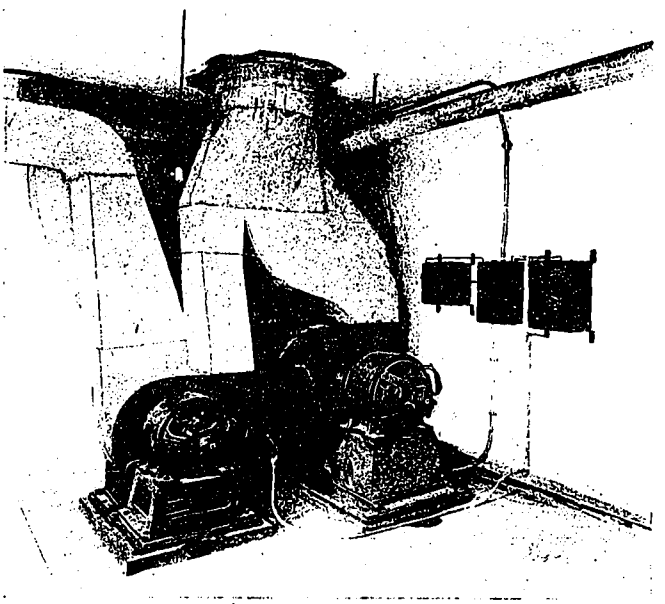


FIGURE VI. SMALL EXHAUST FANS.

A blower and an exhauster supply power for transmitting carriers. Both machines consist of single stage centrifugal fans direct connected to 10 h.p. motors and operate at 3,500 r.p.m. against a difference in pressure of about one pound per square inch. These machines are shown in Fig. VII. The carriers for this system are fourteen inches long and the tube in which they travel has three by six inch oval section. The air valves used to operate the system for dispatching the carriers are operated by solenoids controlled by push button switches. There are two central stations, one on the tenth floor and the other in the sub-basement, through which the carriers are dispatched.

A two-ton ammonia compressor belted to a 5 h.p. motor furnishes refrigeration for cooling boxes in the kitchen on the eighth floor, in the janitor's quarters, in the attic and in a florist's shop on the ground floor. Ammonia is piped direct to the boxes and refrigeration is accomplished by cooling and congealing coils and brine tanks. The refrigerating machine and the condenser are shown in the long sub-basement corridor, Fig. VII.

FIGURE VII. PNEUMATIC TUBE AND REFRIGERATING MACHINERY.

Schedule of Toilet Fixtures.

	W.C.'s	Lavs.	Urinals.	Slop-sinks.
Sub-basement	2	2	2	1
Basement	22	17	8	5
Ground floor	..	1	..	1
Main floor	1	1	..	2
Mezzanine floor ...	..	..	..	1
Second to seventh, inclusive, each ..	5	3	2	2
Eighth floor	14	17	8	2
Ninth floor	2	3	2	1
Ninth mezzanine ..	..	..	..	1
Attic	2	3	..	1
Total	73	62	37	27

There are 30 toilet rooms in the building, all equipped with the best quality vitreous china and porcelain fixtures with full nickel-plated fittings. The aggregate list of fixtures is 73 water closets, 37 urinals, 62 lavatories, 27 slop sinks, 2 shower baths and 2 bath tubs. Galvanized iron piping is used for all soil and waste lines, and for the rain water leaders. The drainage from the basement and sub-basement flows into two 150-gallon pneumatic ejectors, which operate automatically and discharge the waste material into the sewer. A supply of compressed air for operating this equipment is furnished by a compressor plant described in another part of this article. The sewage from the other parts of the building and the rain water from the roof are discharged directly into the sewers by gravity.

A large storage hot water tank containing a steam coil under thermastatic control is located in the sub-basement, as shown in Fig. VII., and flow and return circulating pipe supply hot water to all the toilet rooms.

All water supplied to the building passes through a mechanical sand filter, and into the building distribution piping, or into the cold water storage tank located in a pent house on the roof. Two 5 x 8 inch triplex pumps operated by 15 h.-p. motors are provided to elevate water to the house tank should the city pressure not be sufficient. This pumping equipment is shown in Fig. VIII.

The seepage water, the blow down from the boilers, the discharge from traps and other waste water is collected in a sump pit below the sub-basement floor, from which it is pumped to the sewers. For this purpose there is provided one 7 1-2 x 5 x 6 inch duplex steam pump, and two 3-inch vertical shaft centrifugal pumps, direct connected to 5 h.-p. motors. The centrifugal pumps are automatically controlled by floats in the pits, which start and stop the motors as the water rises and falls. This equipment is shown in Fig. IX.

The building is equipped with an electric fire alarm system, with stations on all floors, and an alarm gong and annunciator in the engine room. There are fire mains and stand pipes extending through the building, and hose and connections

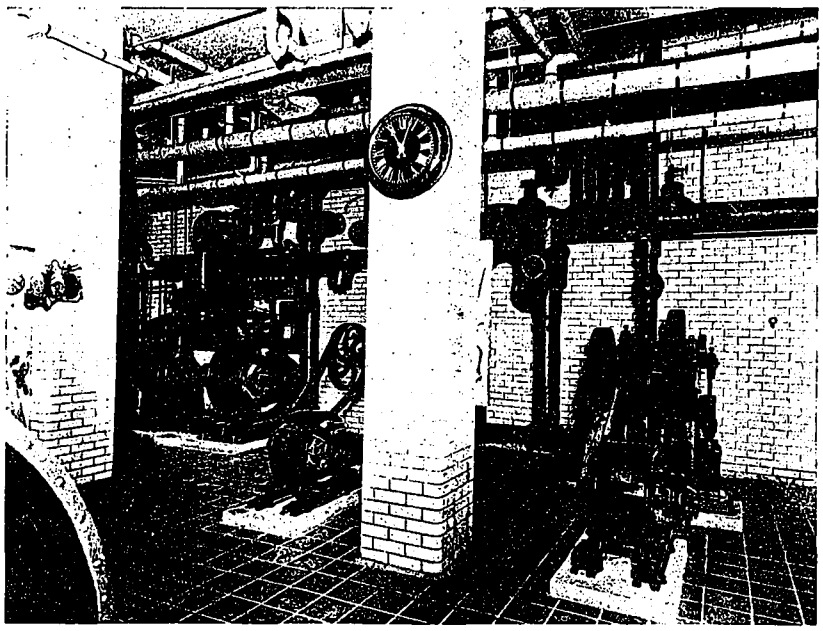


FIGURE VIII. FIRE PUMP AND HOUSE PUMPS.

located upon all floors. A fire pump consisting of a three-stage centrifugal turbine type pump direct connected to a 100 h.-p. motor is located in the engine room, as shown in Fig. VIII. This equipment has a capacity of 750 gallons per minute, and may be put into operation on a moment's notice.

Fig. X shows a part of the kitchen located on the eighth floor, near the three dining rooms where lunches are served to the officers and clerks of the bank. The equipment of the kitchen consists of a combination range and broiler, a steam table, tea and coffee urns and all necessary serving tables, sinks, etc. A large refrigerator opens into the kitchen.

The elevator equipment of the building consists of five high-speed passenger cars, which serve the office part of the building; one slow-speed car serving the main floor from the King street entrance, and three private push-button cars used by the bank in connection with the banking rooms and vault.

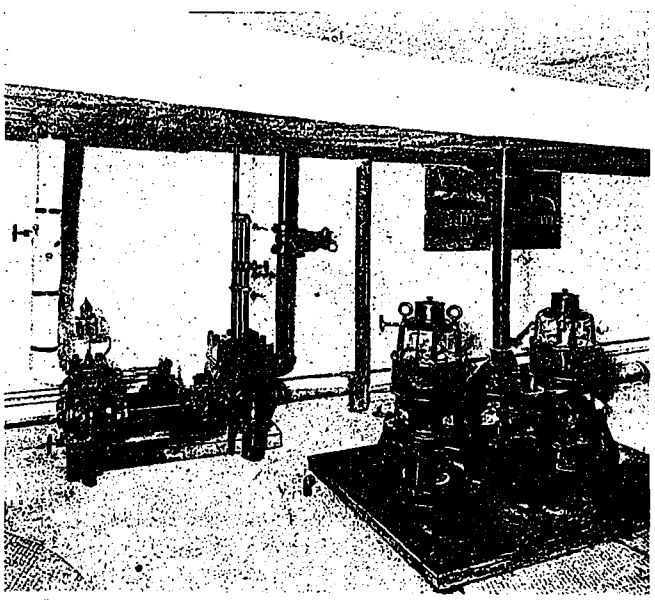


FIGURE IX. SUMP PUMPING EQUIPMENT.

The equipment is of the most modern type, the five main passenger elevators being of the gearless traction type, four of which operate from basement to the ninth mezzanine floor, a distance of 170 feet, and the fifth extending to the sub-basement landing, a total of 184 feet. These elevators have a normal capacity of 2,500 pounds, and travel at a speed of 500 to 550 feet per minute, while the number 2 car is arranged for a safe lifting load of 5,000 pounds at slow speed. These cars are arranged for 1:1 roping, which is the safest, simplest and most efficient method that has been devised for handling high-speed passenger elevators.

The electric traction elevator derives its name from the fact that motion is obtained by means of the traction existing between the driving sheave and the hoisting cables, from one end of which is suspended the car and at the other end the counterweight. Sufficient tractive effort is attained by introducing an idler sheave, which allows a complete loop around the driving sheave, and the resulting service is entirely satisfactory. The machine itself consists essentially of a motor, a traction driving sheave and a magnetically released spring applied brake, all compactly grouped and mounted on a continuous heavy iron bedplate. A slow speed, shunt-wound motor, designed especially for the service, is employed, which has a very high efficiency. The armature shaft, which is of high tensile steel, serves merely as a support for the load, and on it are mounted the brake pulley and driving sheave. The direct drive and consequent elimination of all intermediate gearing between the motor and driving member results in a machine of very high efficiency and absolutely prevents any possibility of vibration or noise which might perhaps occur from the imperfect wearing of a system of gears.

The controller used with these elevators is designed in connection with the motor, and embodies the latest improved application of electro magnet switches, and is actuated by a master switch in the car, giving starting, accelerating, retarding and stopping effects.

Fig. XI. shows the elevator pent house, where the machines operating the five passenger cars are located.

Cams are provided in the hatchway that open contacts one after the other as the car approaches the limits of travel. This feature is entirely independent of the operator in the car, and is effective to stop the car even though the operating devices be left in the full speed posi-

tion. There are also the usual safety devices, including speed governors, wedge clamp safety device for gripping the rails in case of the car attaining excessive speed, and potential switches, and also the loss of tractive effort, due to decrease in the tension of the cables by either the car or the counterweight striking the oil buffers, a condition peculiar to this method of roping.

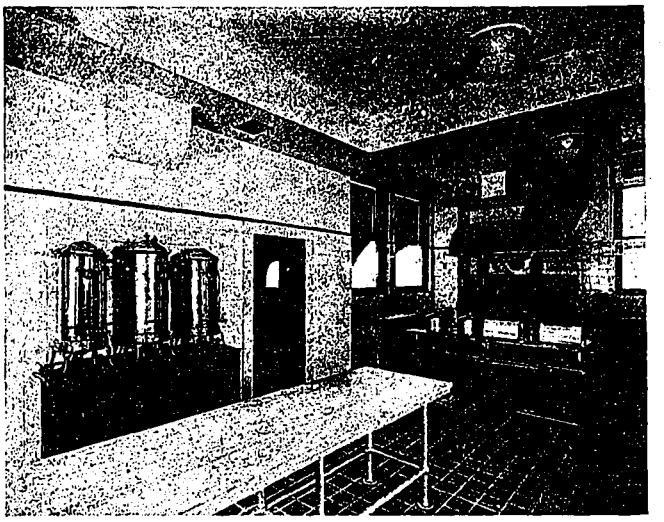


FIGURE X. KITCHEN.

A further feature of security is provided in the oil cushion buffers, which are placed in the hoistway, one under the car and one under the counterweight, and are arranged to bring either the car or the counterweight to a positive stop without injury to passenger.

Additional safety for the travelling public is provided in connection with the elevator hatchway enclosure fronts by making the doors flush with the inside of the walls of the hatchway, to prevent the possibility of clothing catching and causing an accident.

The enclosure doors are operated by pneumatic devices controlled from an attachment in the car, by means of which the doors can be opened or closed by the pressure on a foot button in the floor of the car. Interlocks are also provided, which make it impossible to start the car while any enclosure door is open.

The signal system provided is the very latest type of flashlight signal, both for the operator and the passenger. The passenger pushes a button and one of the signal lanterns in the hall indicates which car will arrive first going in the direction he desires to proceed, and also notifies the elevator operator to stop.

Mechanical dial indicators have been provided at the ground floor, together with a starter's signal to permit the hall man to regulate the movement of the elevators.

Each car is provided with an illuminated threshold, which calls the attention of the passenger to the position of the elevator platform in relation to the floor landing.

The elevator at the King street entrance is of the drum type machine, serving from basement to main floor a travel of 24 ft., having a capacity of 2,500 pounds, and travelling at a speed of 100 ft. per minute. This elevator is for the convenience of the bank customers who desire to ascend from the vestibule landing to the main banking room. This car is equipped with all the usual safety devices installed in connection with modern high grade apparatus of this type, and is provided with an illuminated threshold and pneumatically operated doors.

There are three private automatic push button passenger elevators installed for the use of the bank employees, two of them serving from the sub-basement vault level to the main mezzanine level, a travel of 56 ft., and the third serving from the sub-basement vault level to the ground floor level, a travel of 25 ft. 6 in. These cars have a capacity of 2,000 pounds, and travel at a speed of 100 ft. per minute, and are used for the purpose of inter-communication between the various bank floors, and for the conveyance of the portable money safes and book buggies between the vaults, and tellers' cages and ledgerkeepers' desks.

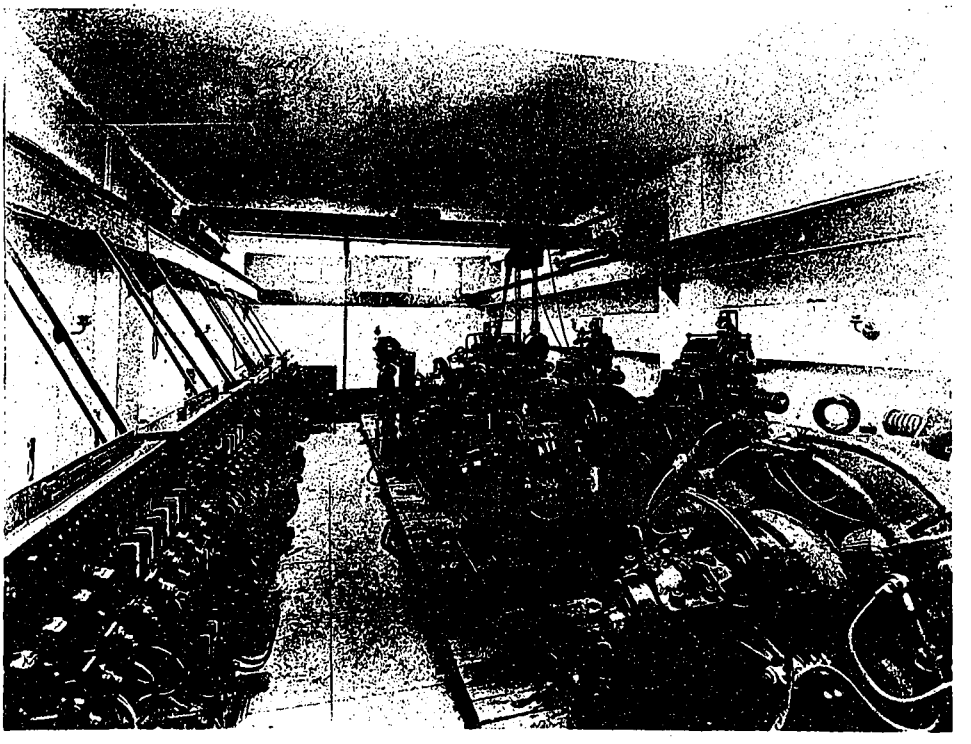


FIGURE XI. ELEVATOR MACHINERY.

These three elevators are equipped with the usual safety devices, and are arranged for automatic push button control, being designed, as their name implies, for use without a regular operator in attendance, their movements being controlled by the passengers or by those who desire their service. At each floor is located a button similar in appearance to the ordinary call bell, which is momentarily pressed by the person wishing the car, and if unoccupied it will start from whatever point it last stopped, come to the proper floor, stop and unlock the door. All doors, excepting the one opposite to which the car stops, are automatically locked. A stop button is provided in case a passenger desires to change the original destination of the elevator after having pressed the button to despatch him to a certain floor.

There are also two sidewalk lifts, serving from 4 ft. above the sidewalk level to the subbasement landing, a distance of 32 ft., one being located on Melinda street, having a capacity of 3,000 pounds, and the other on Yonge street, having a capacity of 1,500 pounds. These machines are both of the hydraulic plunger type, operated from city water pressure, the Melinda street elevator being used principally for incoming or outgoing supplies of the accounting department of the bank, and the Yonge street elevator in connection with the engine and boiler room requirements.

Contractors.

The finished structure, to be successful, must satisfy the critical eye of the contractor, not only in a practical manner but esthetically as well. It is not enough for the manufacturer to see his work represented in the buildings which indicate the wealth and prosperity of a community; he demands in addition the most careful workmanship and pleasing results. In connection with the Dominion Bank, illustrated herewith, we must commend heartily the following companies who have helped to furnish Toronto with a building second to none on the American continent: Canadian Stewart Company, general contractors; Alabastine Hardmortar, Ltd., partition blocks and hard wall plaster; Wm. Bradley & Sons, marble work; Canadian Ice Machine Co., Ltd., refrigeration plant; Canadian H. W. Johns-Manville Co., Ltd., indirect lighting system; W. G. Cornell Co., plumbing; R. C. Dancy, ornamental plaster work; Gent & Co., clocks, installed by Wm. Ashall; Goldie & McCulloch Co., Ltd., book vaults; Gurney Foundry Co., kitchen equipment; W. J. Hynes, Ltd., decorative plaster relief ornament; McDonald & Willson, Ltd., lighting fixtures; W. J. McGuire, Ltd., vacuum system and power plant; Northwestern Terra Cotta Company, terra cotta; A. B. Ormsby Co., Ltd., revolving doors, metal doors and trim, fireproof windows; Otis-Fensom Elevator Co., Ltd., elevators; Reliance Ball Bearing Door Hanger Co., door hangers; Sheldons Ltd., ventilating fans; J. & J. Taylor, Ltd., vault equipment; Toronto Plate Glass Co., window glass.

* * *

AT the annual general meeting of the Saskatchewan Association of Architects held in Saskatoon recently, the following officers were elected: President, W. G. Van Egmond, Regina; vice-presidents, A. G. Creighton of Prince Albert and D. Webster of Saskatoon; secretary-treasurer, F. Chapman Clemesha, Regina; Professor Greig, Saskatoon; R. M. Thompson, Saskatoon; R. G. Bunyard, Moose Jaw; examination board: A. R. Greig, Saskatoon, chairman; R. M. Thompson, Saskatoon; H. Cooper, Saskatoon; F. C. Clemesha, Regina; T. Brammal Daniel, Saskatoon, Secretary.

Mr. Van Egmond in presenting the president's address spoke of the accomplishments of the Association, referring to the improvement of conditions, regulating public competitions. In commenting on the building prospects, he said: "We are looking forward with confidence to a successful termination of the war and ultimately even greater prosperity in the future than we have enjoyed in the past. And while mentioning the war, I want to ask you, gentlemen, to do our share as an Association, and at this meeting vote a substantial donation to the Canadian Patriotic Fund." The suggestion was followed by subscribing $100 to this fund.

After a discussion of the architectural library —during which a list of desirable books was presented, the meeting authorized the Council to spend $600 for that purpose.

* * *

ARCHITEC-TONICS, the Tales of Tom Thumtack, Architect, is the title of an unusually interesting book published by Wm. T. Comstock Company, New York City. This is the first time that architects can claim to have recognized literature in the field of fiction. We have stories about millionaires, manufacturers, all kinds of business men, farmers, and quite a little about engineers, but never a word about an architect. Here it is and it is presented with all the taste that an architect is supposed to have. The book consists of a series of tales about his experiences, telling his views of life in little stories, about the things which happen when buildings are built, lived in and torn down, the tales of the office and the architect's views of the client. There is humor and fun and pathos. They are little tales from real life and they are told briskly and with lightheartedness. Nothing since the days of Cruikshank has equalled the cleverness of the illustrative sketches. The book contains one hundred illustrations and cost $1.50 net.

House on Sherbrooke Street, Montreal

PHILIP J. TURNER, Architect

THE considerations which determine the form and plan of a town house are not necessarily the same as those which suggest the form of a country residence. The plan of a town house is concentrated, and its elevation should be of a stately character.

"When we now look at any piece of architecture, external or internal," a recent writer has said, "our first thought is not of the school to which it must be accredited; we do not say, 'Gothic, bah! a classic ah!' but rather, 'Has it an air of completeness, repose, fitness; is there anything which were better extracted, or is there need of anything to fill out the meaning?' "

Is there any garish or crude color effect, any staring self-asserting pattern, any incongruity of line or form, or is all so tempered that the first and lasting impression is of the ample fulfilment of a purpose well-defined and discriminating? Should there be distracting elements, style will not help us to forget and forgive; at best we assume an air of indifference and seek oblivion. The essence of all good work, then, must be harmony in form and color, in the whole and in every detail; a counsel of perfection, perhaps, unattainable it may be, but none the less sought after.

The house which forms the subject of this article faces on Sherbrooke street, at the corner of Elm avenue, on the lower level of Westmount, and stands on one of the few vacant building sites in that popular district. It was erected two years ago for Mrs. John Archibald.

The exterior walls are of rubbed ashlar, the stone used being a sandstone from the quarries at Nova Scotia. The stone is olive in color, and has only been on the market for a comparatively short period, but both as regards the qualities of strength and appearance it is one of the best Canadian sandstones available at the present time.

The exterior mouldings have been kept somewhat delicate in treatment, owing to the fine nature of the material. In the upper portion of the building the stone courses are arranged with alternate broad and narrow bands. The stone base, cornice and steps are of fine bush-hammered grey Montreal limestone, and the basement walls themselves are faced with squared rough-face rubble work. The roofs are covered with unfading American green slates and copper.

There are features in any plan which at first glance may be open to criticism. In this house, as is many others, the architect is often tied by special requirements of his client, and his own ideas and opinions of what is correct and proper in the general arrangement of the house have to yield to his client's views. How far an architect should give way on details which he is convinced would not meet with the good opinion of the public generally is a question not to be discussed in an article like the present.

It is becoming almost a vital point, if not a dictate of common sense, that the finishing and furnishing of the house must be considered with

DETAIL OF MAIN STAIRS.

DINING ROOM.

the house itself, not in the scrappy fashion which has so long prevailed in the indiscriminate throwing together of odds and ends without anything in common, a companionship of incompatibles.

In the furnishing of a house, the placing of pictures, the selection of carpets and rugs, the architect should be called in to give his advice if the interior is to be artistically a success, but such a procedure, from the writer's experience, seems to be the exception rather than the rule with the majority of clients. With many houses, alas, thoughtfully planned and carefully detailed interiors have been spoilt on account of the furnishings being out of keeping in style with the general character of the house.

ENTRANCE HALL.

The entrance vestibule of the Archibald residence is panelled in wood to a height of 7 ft. 6 in., with a marble mosaic floor, and door leading to the library. The main vestibule doors to the hall have glass panels formed into special geometrical pattern in lead cames, the glass used being of the various white varieties of Venetian, muffled and cathedral. The hall and staircase are also panelled; the whole of the woodwork here is of American whitewood stained to a dark brown color, with the exception of the treads of the stairs and floor, which are of oak. The staircase, which is one of the features of the interior, has an arcade of three arches on the ground floor hall. The centre arch being the

DRAWING ROOM.

wider of the three forms the entrance to the stairs, one of the side arches giving access to the corridor to the dining-room, and the other encloses a seat by the side of the hall fireplace.

The termination of the stair balustrades is formed by special carved trusses. No radiators are visible in the hall, these being concealed under the stairs landing, and also under the seats adjoining the fireplace. The staircase window and hall windows have similar obscure white glasses as those in the vestibule doors, and are worked to the architect's designs in geometrical patterns. All the lights of the staircase window are fitted with metal casements; in the centre of which is the crest of the owner, with the motto, *Palma non sine pulvere* introduced. A coat room is provided next the stairs, this being so constructed that the space can be converted into a staircase at a later date, and thus give access to a billiard room in the basement.

On the left of the entrance is a large single sliding door opening into the large drawing-room, finished in dull white with an oak floor and two mantelpieces. These have crystallized tiles of golden shade around the fireplace openings. A division in the room is suggested by two columns and pilasters of yellow marble. The plastered ceiling and cornice were specially modelled, while the electric light fixtures are of silver, with gold opalescent glass shades.

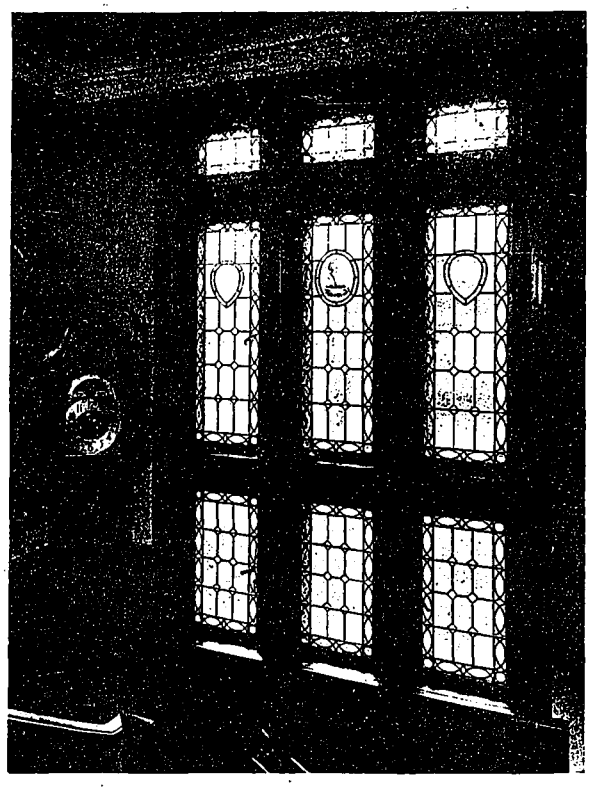
The dining-room is panelled up to door height

DRAWING ROOM.

in oak, with oak beams and cornice. The panels are of one height, those in the doors being bevelled and raised with an enrichment on the molding. On opposite corners of this room are china cupboards with lead-glazed panels in the door. The lower part of one of these cupboards and the window seat enclose the radiators.

The serving pantry, with fittings all of cottonwood, is conveniently situated to the kitchen, dining and breakfast room.

The first floor hall is finished in American whitewood. At the head of the stairs is a large cedar cupboard, with the owner's bedroom to the right. Leading from this room is a large gallery. The bathroom is tiled throughout, and the linen room is fitted up with fronts to the various compartments which fall down, while the lower divisions are equipped with drawers.

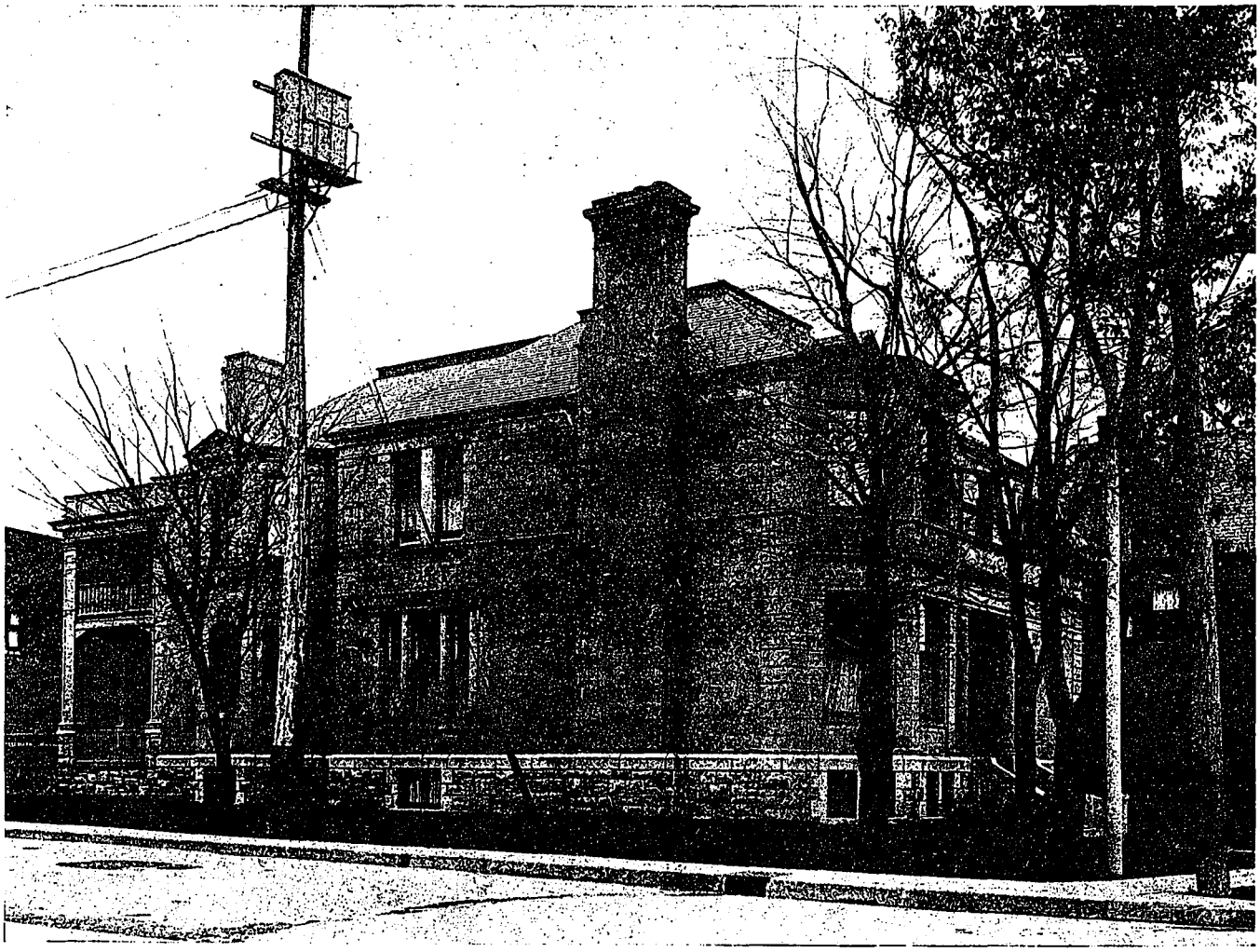


STAIRCASE WINDOW.

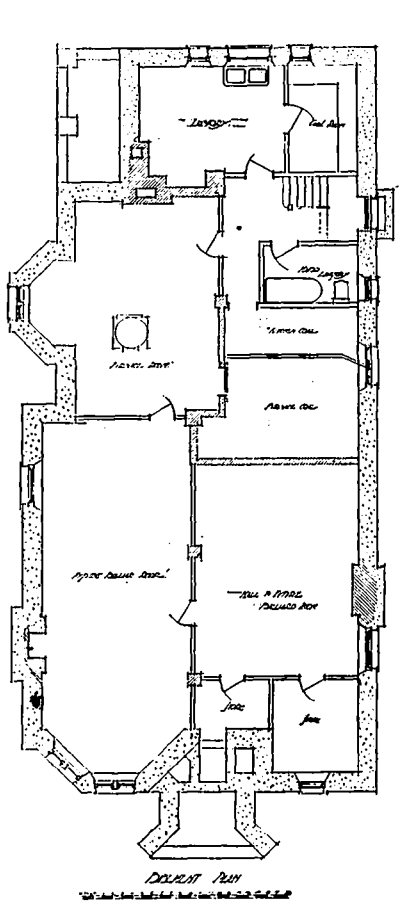
The maids' rooms are placed at the back of the house, as shown on the plans.

The house, the contracts for which amounted to $27,000, is fitted with a vacuum cleaning apparatus and other modern conveniences.

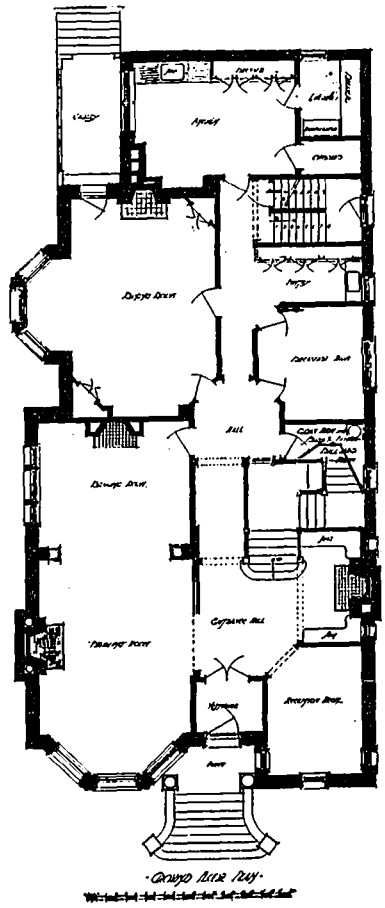
In this house, as in all types of buildings, the expense should not be the ruling factor. Quality is one's first consideration both upon the exterior and the interior. When we have succeeded in designing a front of character it is just as essential to put forward our best efforts to plan the interior with as much esthetic value, since the real home is within. In so doing we raise the standard of architecture in all residential work.



EXTERIOR VIEW OF HOUSE ON SHERBROOKE STREET, MONTREAL.



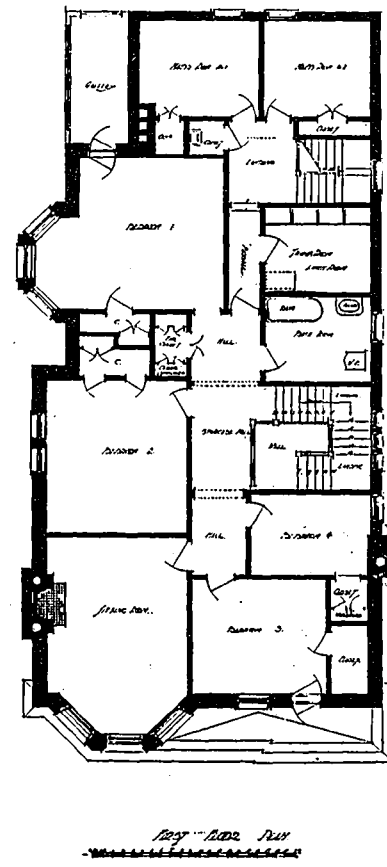
BASEMENT PLAN



GROUND FLOOR PLAN

HOUSE ON SHERBROOKE STREET, MONTREAL, QUE.

PHILIP J. TURNER, ARCHITECT.



FIRST FLOOR PLAN

CONSTRUCTION

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

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Vol. VII Toronto, December, 1914 No. 12

TRADE NOTES

HAROLD S. CAPLAN, 75 Macdonell avenue, desires catalogues, price lists and samples from manufacturers of building materials and supplies.

* * *

M. BEATTY & SONS, LTD., have opened a Toronto district office in the Goodyear Building, 154 Simcoe street. This company was formerly represented by H. W. Petrie, Ltd., but henceforth will be under the direction of K. M. McKee. Mr. McKee, formerly of Welland, is a man of considerable experience and no doubt will become a potent factor in the future success of the firm's well prepared campaign for the coming year.

MESSRS. SMYTH & RYAN, Builders' supply dealers, 1327 Bloor street west, have been appointed distributors for "Medusa" waterproofing in Toronto and surrounding districts. It is a wholesome sign when large concerns like the Stinson-Reeb Builders' Supply Co., Ltd., who analyze the future situation so thoroughly, are constantly adding to their already efficient corps of workers. It is a precedent worthy of emulation.

* * *

THE Page Wire Fence Company at Walkerville report a large and increasing demand for their concrete reinforcement in flat sheets for use on municipal work. This material is unique in that it is put up in flat sheets, cut any desired length or width; lays flat without being weighted down, which makes it impossible for the concrete to buckle when setting. It is used not only in buildings and bridges, but is also finding considerable favor for road pavements. Many carloads have been used for this purpose in Sandwich, Windsor, Walkerville, Oakville, Aylmer, and other points in Ontario, as well as in the Province of Quebec. Samples are gladly sent on request.

* * *

SINCE its erection in 1910, the Amasa Stone Memorial Chapel of Adelbert College has proved to be unsatisfactory acoustically. The general shape of the building, which is one of the Western Reserve University group in Cleveland, Ohio, is a long and narrow rectangle 140 feet by 30 feet, and experiments showed the difficulty to be due to general reverberation. After repeated experiments from which Prof. F. P. Whitman showed that, for all practical purposes, the sounding board was useless, the H. W. Johns-Manville Co. was then asked to undertake the correction of the chapel by its system based on the scientific researches of Prof. Wallace C. Sabine of Harvard University. J-M acoustical treatment was supplied to the ceiling, panels and upper walls, and resulted in the elimination of all the acoustical defects.

* * *

CONSTRUCTION

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ILLUSTRATIONS—*Continued.*

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