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ELEVENTH YEAR. SATURDAY MORNING, JANUARY 18, 1890.---EIGHT PAGES. PRICE ONE CENT.

A TEMPLE OF FINANCE.

The New Building of The Canadian Bank of Commerce.

A TRIUMPH OF ARCHITECTURAL DESIGN

Built in Modernized Italian Renaissance Style--Description of the Structure--The Great Banking Hall and Vaults--Bank and Public Offices--Excellent Accommodation for Business Men--Complete Heating, Lighting and Ventillation Appliances--Rich Interior Decorations.

Nearly three years have elapsed since, at the command of commercial progress, the old Hay & Co. buildings on the corner of King and Jordon-streets were razed. The talent and labor of many artizans have been employed during these years in the construction of a better ornament for Toronto's chief thoroughfare, and it now stands complete in proportion, dignified and beautiful in design. The new Bank of Commerce building is, like the other great metropolitan structure being built on the opposite side of the street, an imposing feature of King-street, and it may be added without exaggeration, of Toronto itself. It attracts all eyes by its massiveness, and once the attention is fixed the spectator finds it a subject of charming study. Though minor details—such as polishing and general finishing—require to be attended to, the building is practically completed. The bank has moved into the new home it has provided for itself and thousands of citizens have during the past week visited it and have come away admiring what they have seen.

CHARACTER OF THE BUILDING.

A Modern Example of the Italian Renaissance Style.

Externally the building is artistically effective, its architectural composition, dignified symmetry between part and part, and its well-studied variation (clearly expressing the importance and purpose of the different apartments) stamping it as a structure of individuality. In point of style a departure has been made, it being a modern example of Renaissance Italian, so treated that each detail of sculptural decoration tells strongly against the carefully massed structure of the walls. Yet both so vary in the successive stories as to produce an effect of grandeur combined with repose.

The material used is brown sandstone, laid upon its natural bed, cut-bed finished, and relieved by chaste delicate ornamentation left from the chisel, an Italian treatment of red brick laid in red mortar is introduced. The tone color of the latter, with the natural copper color of the metal cornice work, effectively removes the monotony and sombreness of the deep brown-stone. The corners accentuated by a graceful tower, which seems to articulate the principal masses of the composition, and with the emphasized extreme angles breaks the facades into three unequal though symmetrical parts. This forms recessed centres on both fronts, imparting solidity and ennobling the relativeness of the stories without the aid of grand pilasters—a bold innovation, yet an observer of broad taste will find much to say in its favor.

At the west end of the King-street facade is the principal entrance to the bank proper, its dependencies, and the three upper stories filled with offices. At the extreme south end of the Jordan-street facade is another entrance, leading to the bank only. Emphasized with this entrance are the book vaults, five tiers high, most appropriately designed and highly increased in beauty when one sees that the chief modern need—light—has been met. These vaults are so conceived as to frankly express their purpose, boldly manifesting security, though the outer wall is pierced at intervals with grilled windows of moderate size. The chief entrance on King-street is extremely pronounced by reason of the air of breadth, size and dignity which prevails. A broad flight of black marble steps wainscotted with African colored marble, gives access to the main vestibule and elevator lobby, both effectively treated with art metal work, polished Numidian marble, and San Domingo molded and carved wood-work.

FEATURES OF THE INTERIOR.

The Great Banking Hall, Bank and Public Offices.

From the lobby of the main entrance a broad staircase of wrought and cast iron with black slate treads leads to the banking-hall floor. To the right is the tiering stairs leading to the upper storey offices and at the left a heavy carved door swings open and ushers the visitor into the great banking hall. It is magnificent. Lofty and of wide area, it produces a peculiarly pleasing effect on the imagination. It is fifty-eight feet long, fifty-three feet wide and the paneled ceiling hangs twenty-eight feet above the tiled floor. Ingenious trusswork supports the ceiling without the aid of a single column. The individuality which has been given this room is so thoroughly architectural in character that the rich materials employed,—San Domingo and Mexican mahogony in their unique carved moulded and paneled forms, together with appropriate colored decorations,—play a properly subordinate part in the noble impression it produces. It is without doubt the most successful banking hall in the Dominion and is said to be unsurpassed on this continent. It is lighted in day by fine, broad, lofty windows on the east side, and by other windows on the north, which transmit through alcoves communicating with the local manager's department and the savings department. Here, again, evidence of careful thought in arranging minor details is found. The rooms for the manager and sub-manager, the savings bank and stock transfer rooms, burglar-proof book and cash vaults, the Board-room and offices of the General Manager, assistant General Manager, the Inspector and head office staff, are all placed naturally while it is quite apparent that convenience is the outcome of all. The west side is effectively treated by recesses formed by a colonnade, arranged respectively for entrance, private stairway and bank's customers' desks for filling out cheques, etc. Over the same, and also on the north side, formed by the entresol story, is an arcaded passage-way, communicative with the general manager's department and Board-room en suite. Two colonnaded passage ways with slightly projecting balconies give the spectator a survey of the full splendour of the room.

The General Manager's office is situated on the entresol floor, on the corner of King and Jordan-streets, and commands a good view of the busy thoroughfare below. Off this room is the General Manager's private room, and come in regular order westward the secretary's and clerk's room, the inspector's room and the Board room. They are all handsomely appointed but the latter particularly so. It is finished in black walnut, the heavy wainscott being elaborately carved. A German rug lies on the floor and a mantel of African marble gives a pleasing tone to the apartment. Turning at the corner and going south, the accountant's room is found, also further on, lavatories, etc.

The three upper flats of offices are bright, conveniently devised and airy. There are nine on the first flat, thirteen on the second and seven on the top, besides the caretaker's apartments. These, with the four in the basement, make thirty-two public offices in the building. The upper flats are all finished in white ash and cherry.

The elevator service is a feature of the building. There will be no necessity for pressing a button, and after waiting perhaps three or four minutes, of running upstairs. The two elevators will run on a regular time table, making the round trip each minute. One carriage will be always within a few seconds of the passenger and nearly always waiting for him.

WHERE THE TREASURE IS KEPT.

Massive Vaults which Set Burglars and Fire at Defiance.

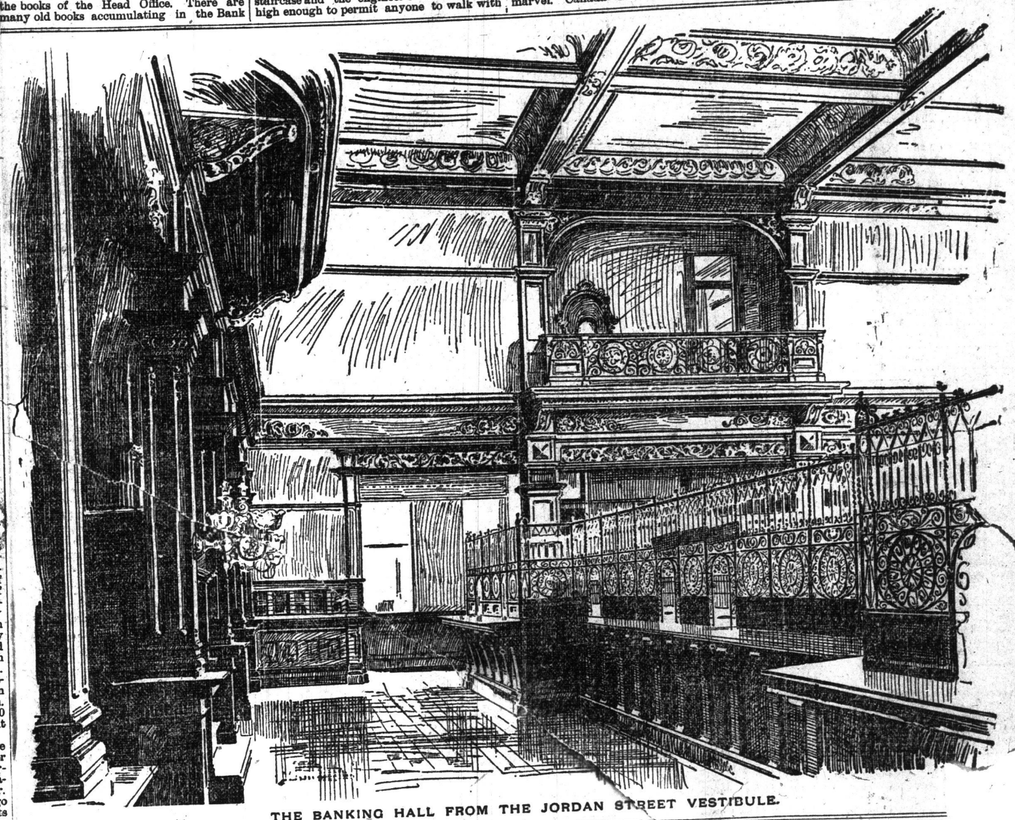
The banking hall with its rich decorations and classic elegance forms a feature of the building which attracts much interest, but that interest is divided evenly when the great vaults are viewed. Their size, massiveness and intricacy of the lock mechanism, attract not only interest, but create surprise and wonder in the minds of those who are allowed to see them.

They are said to be the finest banking vaults in the Dominion of Canada. They are heavy and beautifully finished and are absolutely burglar-proof as well as fire-proof. The cash vault is the most perfect and most elaborate of all. The floor is of solid steel plates, as too are all the walls and the ceiling. The iron and steel plates which are used for flooring are laid on solid masonry, which is 25 feet deep and extends from the floor of the bank right down to the ground. Messrs. J. & J. Taylor, who built the vaults, told The World yesterday why this solid masonry was put in. When vaults were built of such heavy material that it became almost impossible to effect an entrance through the door, it became a common practice with burglars to burrow under the vaults. The man who undertakes to burrow under the Bank of Commerce money vault is going to be one of the sadder but wiser men after he has tried the operation.

The entire walls, floor and roof are protected by several thicknesses of heavy solid plates firmly secured to each other made proof against hardened steel drills, or shattering by heavy sledge hammers; and to prevent wedging or forcing apart, the corners are formed by bending the heavy plates of steel and iron, so as to form a solid corner without joint from floor to ceiling. The entrance is protected by steel door frames and doors weighing several tons on both inside and outside of the brick walls, and the space between forming a vestibule is protected the same as the steel walls of the vault. The heavy steel and iron entrance door is hardened and tempered to resist burglars' drills. The steel used is of special make so that after being chilled and tempered it cannot be shattered by hammers. The edges are formed in numerous rebates which prevent burglars' jimmies or wedges being used to force the doors, and are tongued and grooved to prevent frame and door from being forced apart. The door closes on to a specially constructed rubber tube packing forming an air tight joint to prevent the introduction of explosives by the use of an exhaust pump. The door is forced firmly into the jambs and against the rubber packing by a powerful eccentric lever on the outside, and an ingenious method of swinging the door on a massive crane hinge instead of on ordinary hinges, permits the door to move in a parallel direction into its place. The locking bolts, 24 in number and two inches in diameter, holding the door on all its edges, are made to revolve thus preventing their being cut off by saws or drills. The spindles and arbors operating these are a patented invention of J. & J. Taylor's and so constructed that they can neither be driven in, pulled out nor drilled. These doors are fitted with four burglar proof combination locks, each capable of over forty millions of changes of combination to prevent the possibility of picking the numbers, and a double chronometer time-lock, thus preventing robbery by violence to the custodian of the combination numbers, and effectually shutting out every one after banking hours. A strong grilled gate prevents any one from entering even during banking hours but those authorized. The chronometer locks on the safes are costly ones. Messrs, J. & J. Taylor put them on the safe doors at an expense of $400 each. The doors of the safe and vaults cost $3000 each and are not only works of beauty, but they are also ideals of massive strength.

The work on these vaults has been done in Toronto, and in it Messrs. Taylor have finished a work that will remain a perpetual mouument of their art. In conversation with a World reporter yesterday Mr. West of J. & J. Taylor told how 20 years ago his firm had built the vaults for the Bank of Commerce may rest assured no burglar will ever enter those vaults.

Besides the cash vault of the bank there are two other larger vaults, which are used for the reception and storage of bank books. One of these, alongside the cash vault, is used for the Toronto branch books. The other one is upstairs, off the general offices, and is used for books from other branches, and for the books of the Head Office. There are many old books accumulating in the Bank year after year. These all have to be kept safe from rust and fire, and it is necessary to have them stored in a good vault.



THE BANKING HALL FROM THE JORDAN STREET VESTIBULE.

HEAT, LIGHT AND AIR.

Cunning Devices in Heating and Ventilating Appliances.

The heating and ventilating apparatus is of the most elaborate description and is almost entirely self acting. It embodies three steam boilers, one steam engine, two steam pumps, one steam air propeller or exhaust fan, exhaust tanks, automatic valves, radiators for direct and indirect heating and the electrical and pneumatic apparatus.

A visit to the boiler and engine rooms shows a complicated network of pipes and machinery scientifically arranged and executed in the most skilful manner.

The building is heated by direct and indirect steam, the direct radiators being specially cast with ornamentation to correspond with the general design of the interior finish. The heating is constructed so as to work by high or low pressure steam or by the use of the exhaust steam from the engines and pumps, the water of condensation from the low pressure pipes being returned to the high pressure boilers by the aid of a steam pump made to start and stop as required by an automatic pump governor. The outdoor air is drawn from an additional height of the building through a duct opening over 100 feet above the sidewalk level and after being cleansed is conveyed to a force fan chamber, slightly warmed, and is distributed at the rate of 15 cubic feet of fresh air per minute to the various parts of the building.

The fresh air branches to each heating stack are so arranged that the air passes either entirely through the stack and is heated or goes entirely up and directly through the vertical flues and enters the room at a temperature a little higher than the external atmosphere, or passes partly through the heating stack and partly directly up the vertical flue, thus entering the room at a medium temperature.

The temperature of the rooms is controlled by a cunning electric device. A themostat is placed in each apartment. To all appearances this instrument is a thermometer. The electric wires lead from this to the battery and the electro pneumatic valves at the air ducts. By means of the screw seen at the sides of the instrument the themostat is set at any desired temperature. When the apartment reaches this temperature the electric circuit is closed and by means of switch dampers in the air ducts operated by the electric valves, the air is passed around or partly around the radiators and enters the apartments at a lower temperature. When the temperature has fallen a degree or so the electric circuit will again be made and the air again passed through the heated radiators, thereby keeping up an even heat of any desired temperature.

An arrangement has also been made for the summer season whereby the air can be made to pass through coils filled with cold water and the apartments supplied with cool fresh air.

Messrs. Bennett & Wright, the well-known plumbers and heating engineers, were the contractors for the heating, ventilating and electrical apparatus, and their work should be seen by all parties interested in the heating and ventilating of buil lings.

The light fixtures were specially designed for this building, and are the first to combine gas and electricity, having the gas act a subordinate part. The design of the electroliers, which are liberally distributed thoughout the building, is very handsome. Bronze, oxydized silver and wrought iron are the materials used. Messrs. Bennett & Wright supplied them.

UNDER THE GROUND.

A Glimpse at the Ponderous Machinery Employed for Various Uses.

The lower basement of the new bank, 18 feet under the ground level, reminds one very much of the engine, boiler room and furnace room of a sea-going vessel. No one who chanced to visit this part of the building before going upstairs would for a moment believe there was a bank above except in connection with some extensive manufacturing establishment.

There are three large high pressure boilers side by side and from these power enough might be obtained to operate a foundry or a cotton mill. But except for one of the boilers, the intention is not to use them for power, although provision is made so that they could all be used for power in case of necessity. Two of the boilers are for heating purposes. They are connected with the steam pipes and radiators by patent attachments so that in case anything gets wrong or out of order with them the third boiler can be used, the one that is out of order being cut off and the others connected.

A large duplex Worthington pump supplies the water for the elevator service and the heating. There are also two Blake pumps for filling the heating boilers and a high speed Peerless engine for running the elevators. Adjacent to the boilers is a small automatic force pump, so connected with a condenser that the rebate water from the radiators is pumped back to the boilers again.

Engineer William G. Strathdee stalks proudly around his "charges," or rather he stoops around because the walks between the steircase and the engineer's room are not high enough to permit anyone to walk with his head in the air. Every possible bit of space is used. There is no "waste room," and the compactness with which the extensive boilers and machinery is put together is marvelous. There is every appliance for working with and every convenience in the shape of coal carriers, automatic valves and switches, etc. The boiler and engine room, like all the rest of the building, is lit by electricity and gas, the gas being made secondary to the incandescent light, so that in case there should anything happen to the electric light, the gas can be at once turned on. The engine room is automatically connected with the chief offices for communication.

There is no more complete or compact engine and boiler room in Canada than the one above referred to. While not built entirely "regardless of expense," the question of quality and utility has been made a chief consideration, with the result that no emergency can possibly arise to which the appliances will not be equal. There is ample storage space for coal and fuel and the fireman's work is rendered light by the peculiarly convenient method of arrangement. Just opposite each of the furnaces is a level pit for the coal required for a days burning, so that the stoker has only to shovel it into the furnace, the same as is done on board ship.

All the steam pipes and conducting pipes are isolated and buried, most of them being encased in mortar and brick. There can be no possible danger from fire—as a matter of fact there is nothing to burn, and although an explosion is the most remote possibility, even should there be one it need not hinder the work or stop the heating of the elevators.

THE MEN WHO BUILT THE BANK.

A Word About the Contractors And The Fine Work They Did.

The building as it stands is a flattering commentary on the Toronto trades. Genuineness, completeness and artistic finish mark the whole structure.

Messrs. Brown & Love, who did the stonework, completed their contract in a most thorough manner. The work is pronounced by competent critics to be fully equal to that done on the Vanderbilt mansion in New York.

Mr. John Fletcher did most of the woodwork, and in handling that part of the construction, displayed his art conspicuously. Mr. Fletcher, it may be remarked, has acted in a similar capacity with Mr. Waite, the architect, in the construction of several of the leading buildings in Toronto and Montreal.

Messrs. Bennett and Wright have complied closely with the specifications and have put in a heating, lighting and ventilation service which merits for them the praise and thanksgiving of everybody in the building, from the general manager down. The detailed description of this servce elsewhere will be read with interest.

Messrs. Wagner, Zeidler & Co., who by the way are the proprietors of the Dominion Show Case Works, were given the contract for interior art wood-work of the banking hall and adjacent room about the first of March last year. The time to get out such an elaborate piece of work was short, but their finely equipped cabinet shops were able to do it, and not only to do it, but to do it in the most finished manner. Mexican and San Domingo mahogany were especially imported for the work and these materials were within a few months converted into what the people now gaze at in the interior of the bank. Mr. Johnston, the head foreman, who did the overseeing, and who had to see that every piece was accurately made and placed in position, is one of the few men who can handle such an extensive and intricate piece of work. He is entitled to great credit.

Messrs. J. & J. Taylor, the well-known safe manufacturers, supplied the vaults, and the work they did is nothing short of a marvel. Canada has something to feel proud of when such work can be accomplished within her borders. It certainly cannot be surpassed on the Continent.

Messrs. Rice Lewis & Son, supplied the hardware, locks, hinges, etc. These are all handsome, of antique copper ornamented with oxydized silver.

The Rathbun Company, of Deseronto, supplied the porous terra cotta.

Messrs. Holbrook & Mollington, supplied the ornamental fire-places and put in the tile floors. The tiles for use in this work were imported from Shropshire, England, and 400 square yards are used. They also did the stone carving. The same firm did the carving on the Ottawa Parliament buildings and are doing similar work on the Ontario Parliament buildings.

The well known firm of Douglass Bros. executed the copper cornice work. It is the first of the kind introduced in the city, and as pioneers in it, Messrs. Douglass have made a very fine showing. The work was done with their steam driven machinery at their factory on Adelaide-street. It reflects great credit on the firm.

HISTORY OF THE IDEA.

Circumstances Which Led to the Large Outlay of Money.

The "Mr. Wakefield" is as strong in people now-a-days as when Dickens lived. People of a curious turn of mind are always on the hunt for *motives*, and when these citizens look on the big brown stone building they ask "What did the bank spend all this money for?" The World is satisfying curiosity every day, and to set the hearts of the good curious citizens at rest will to-day tell just how it all came about.

About four years ago the increasing business both in the Toronto office and the branches began to outgrow the building accommodation. The banking room was only about 20 feet wide though 80 feet long, and in these narrow limits, office room subtracted, between 100 and 200 people crowded to do business every afternoon between 2 and 3.30 o'clock. As time advanced the crowding became greater and it was next to impossible to ventilate the place properly. Besides this, the general manager's department from the increasing number of branches, was constantly taking on additional clerks, and these had to find somewhere to work. It at last became emphatically apparent that a larger building was necessary. The enlargement of the old building was proposed, but when the plan was considered it was plain that such a project could not be carried into effect. The bank, owing to the nature of its business, could not occupy temporary premises while the work was going on. There was only one thing left to do—the construction of a new building.

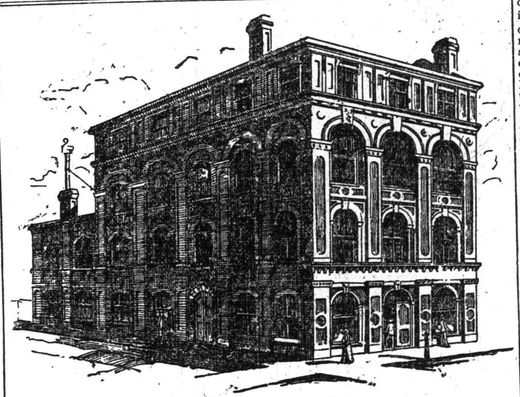
Mr. Richard A. Waite, the eminent Buffalo architect was sent for and consultations followed. Every important detail about the enterprise was discussed. First of all, the building must be fire proof. Then, as to the style, the American idea was adopted in preference to the English. In England it is held that isolation of a bank building renders it more secure; in the United States the opinion prevails that community of interest tends more strongly to that result. For instance, if a bank have tenants who are all anxious for thorough security a system of police protection can be carried into effect which, from expense, would be almost impossible in the other case. In addition to tending more to security the building where community of interest is developed has other important advantages. The main advantage in the present case is, that the bank has a rent roll of $20,000, where other bank buildings in Montreal, for instance, costing quite as much as the Commerce building, have no revenue whatever.

It was decided then to have a fire-proof bank and public office building. Mr. Waite was retained and, after considering the desires of the bank officials, matured a design which met with the utmost satisfaction. Every requirement was met, and as the careful observer goes over the building he cannot fail to be struck with the many examp[illegible] tect's genius. It is really a [illegible] very best products of archite[illegible] be seen on the continent. Th[illegible] all is that the structure cost [illegible] cent. above the original amou[illegible] the bank.

Having increased room the ba[illegible] a new department. The want o[illegible] department has long been felt, bu[illegible] of lack of facilities it was no[illegible] inaugurate it before. People [illegible] posit in amounts as low as $1 and [illegible] on them. The department is fitte[illegible] the view of accommodating tho[illegible] private accounts to keep and [illegible] care to mingle in the throng [illegible] hall. Ladies, esp[illegible] rangement comfo[illegible]

Among those [illegible] Messrs. Alexand[illegible] ers; The Safety [illegible] housing Co.; [illegible] stock brokers; [illegible] graph Company [illegible] Alexander & King[illegible] are being taken as fast as finished.

VIEW OF THE BANK BUILDING SHOWING BOTH FACADES.



THE OLD BANK BUILDING.

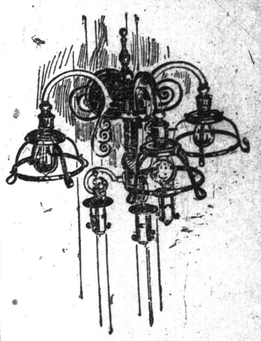
HISTORY OF THE BANK.

Founded in Ontario Interests—Its Remarkable Growth.

The Canadian Bank of Commerce had an origin similar to that of many great enterprises of the present day—it grew out of circumstances. In 1867 the Bank of Montreal, in pursuance of a conservative policy, issued orders for the shortening of credits. The new measures created no little disturbance among business men, but, though a strong effort was made to effect a reversal of the order, they continued what was begun. Hon. Wm. McMaster, then a local director of the bank, shortly after severed his connection with it and was soon followed by Mr. Archibald Greer, the local manager. The failure of the Bank of Upper Canada a short time before these events, together with this disaffection, created an opportunity for the establishment of a new bank. The Hon. Wm. McMaster was the leading figure in promoting the enterprise. Stock books were opened and placed in the hands of the old Scotch firm of brokers, Blaikie & Anderson, assisted by [illegible] D. Brown. The capital stock, fixed [illegible] 000 was [illegible] scribed without [illegible] and organization was comp[illegible] was composed as follows:

President—Hon. Wm. McMaster.
Vice-President—H. S. Howland.
Cashier—Archibald Greer.
Directors—Hon. Wm. McMaster, H. S. Howland, Wm. Alexander, John Macdonald, Wm. Elliot, John Taylor, and T. Sutherland Stayner.

From the first, down to the present, the institution has had the service of the best business men in the province as directors. It will be seen that the original directorate had on it, among other prominent men, Mr. H. S. Howland, now president of the Imperial Bank. A little later on the directorate had the service of Mr. James Austin, also now a bank president—of the Dominion Bank. Hon. Adam Hope, Robert Wilkes, T. C. Street, F. W. Cumberland and James Michie were also directors in the early years of the bank.



A WALL ELECTROLIER.

The first branch was established in London, Ont. A bank, to be called the Bank of London, was in process of organization, when the Bank of Commerce acquired the charter and opened instead a branch of the Toronto institution. Mr. H. S. Strathy, now general manager of the Traders' Bank, was installed as local manager. Business grew steadily, branch banks were established in leading centres, and at the end of the first year the