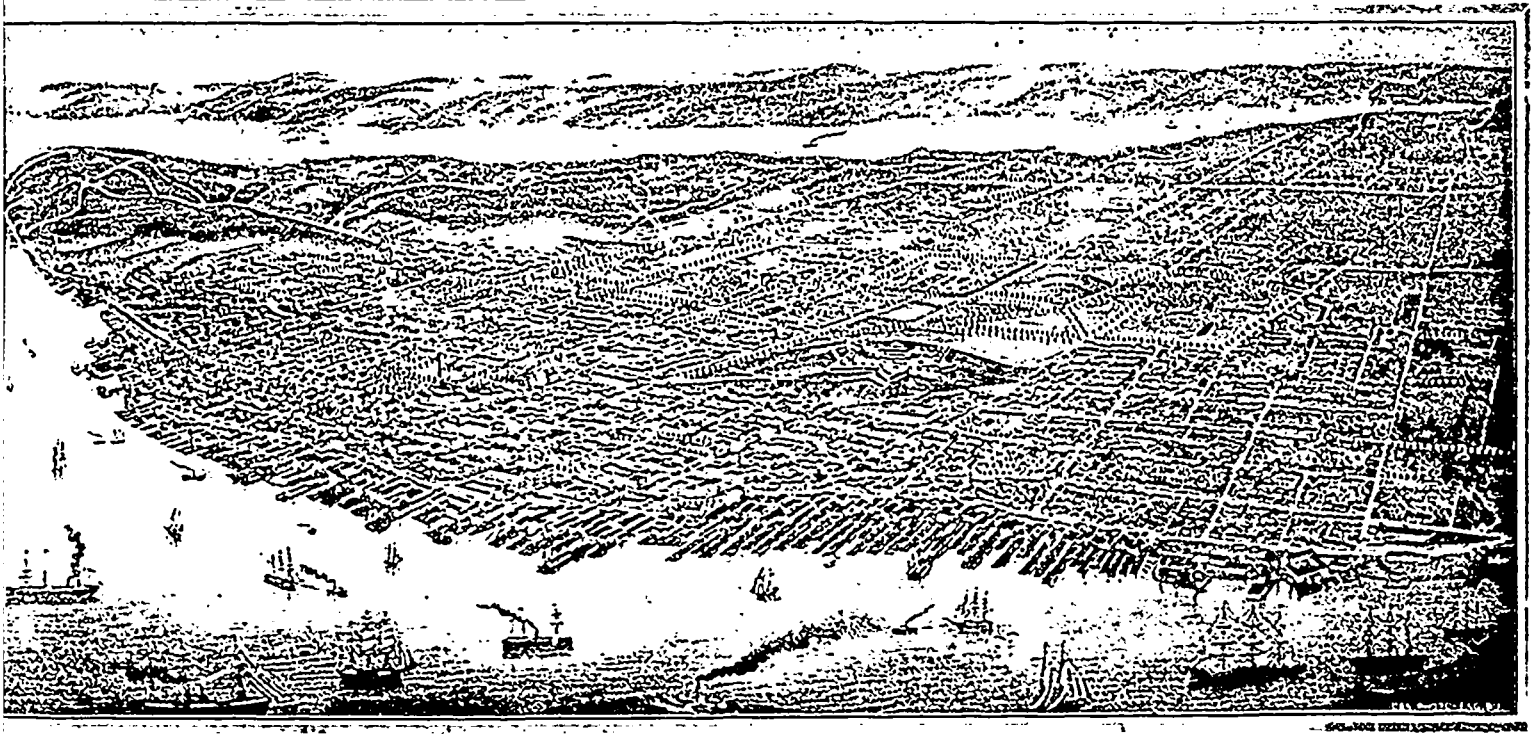


Special Supplement
the
INDUSTRIAL ADVOCATE

October 1899 Price 10 cents.

CABLE ADDRESS: SILVER, HALIFAX.
CODES: A. B. C 4TH EDITION.
LIEBER'S STANDARD.
SAMPER ESPANOLA, 2A EDICION.
PRIVATE CODES.

Halifax,

Nova Scotia,

is the best place in America to buy

Dry & Pickled Fish; Lumber, Potatoes, Hay

and other Agricultural produce. It is also a good market in which to sell

Molasses, Grocery Sugars & Fruits.

My business is an Export and Import Commission business, and having had considerable experience in both Canada and the West Indies, I know exactly what class of Goods is required in each market. Any orders which may be entrusted to me I will guarantee to fill according to the specifications of the sender. Consignments of West India products handled with despatch, and advances made when required.

H. R. SILVER,

Import and Export Commission Merchant.

SPECIALTIES:

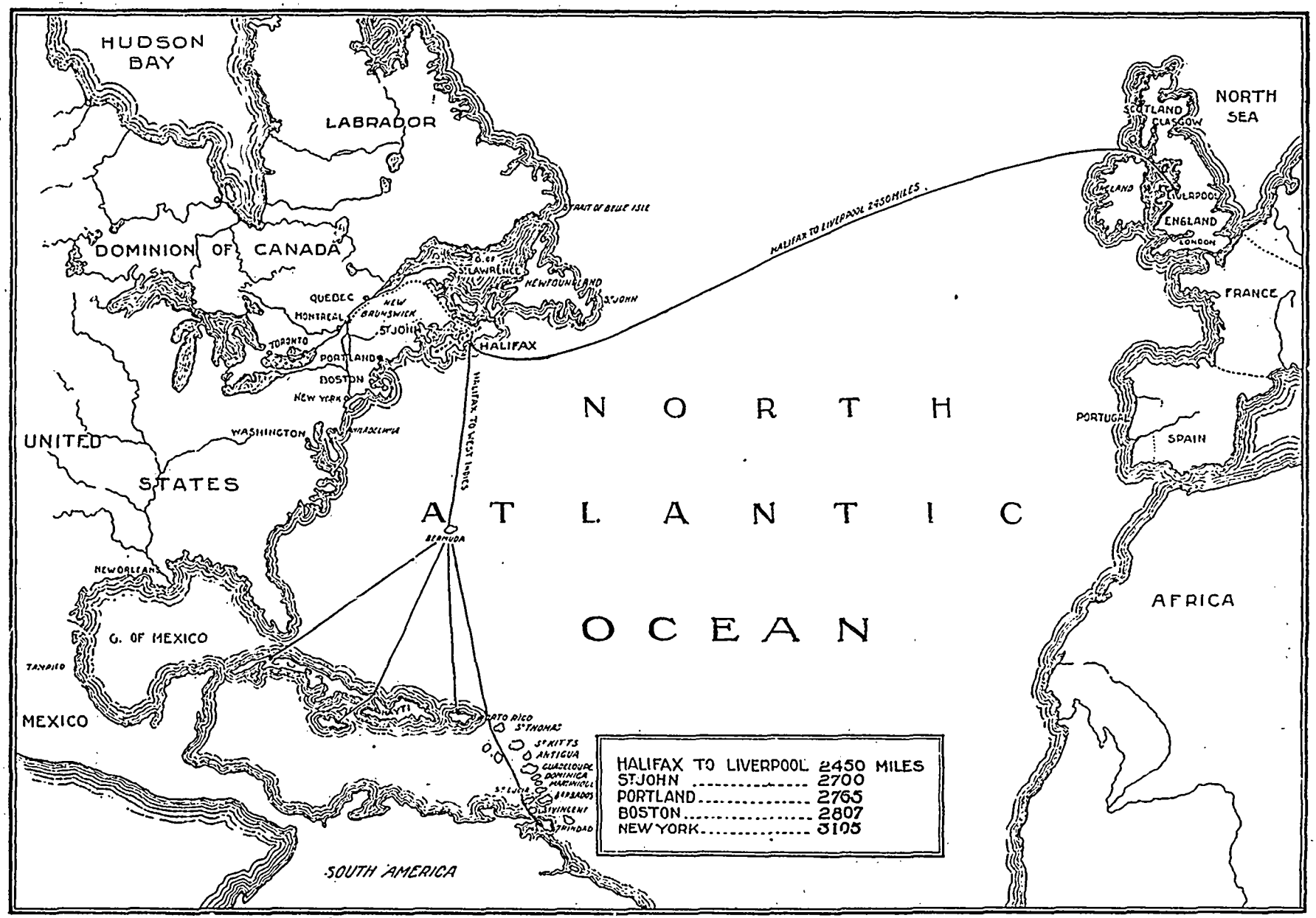
Fish, Potatoes, Hay, Flour, Beans, Peas, Sugar and Molasses.

OFFICE: PICKFORD & BLACK'S WHARF,

HALIFAX, N. S.

Table of Contents.

Index to Advertisers.


HUDSON BAY
LABRADOR
DOMINION OF CANADA
QUEBEC
MONTREAL
TORONTO
NEW BRUNSWICK
ST JOHN
HALIFAX
PORTLAND
BOSTON
NEW YORK
WASHINGTON
PHILADELPHIA
UNITED STATES
NEW ORLEANS
G. OF MEXICO
TAMPICO
MEXICO
BERMUDA
HALIFAX TO WEST INDIES
HALIFAX TO LIVERPOOL 2450 MILES
NEWFOUNDLAND
ST JOHN
STRAIT OF BELLE ISLE
G. OF ST LAWRENCE
NORTH ATLANTIC OCEAN
SCOTLAND
GLASGOW
NORTH SEA
ENGLAND
LIVERPOOL
LONDON
FRANCE
PORTUGAL
SPAIN
AFRICA
HAITI
PORTO RICO
ST THOMAS
ST KITTS
ANTIGUA
GUADELOUPE
DOMINICA
MARTINIQUE
BARBADOS
ST VINCENT
TRINIDAD
SOUTH AMERICA
HALIFAX TO LIVERPOOL 2450 MILES
ST JOHN 2700
PORTLAND 2765
BOSTON 2807
NEW YORK 3105

... THE ...

INDUSTRIAL ADVOCATE.

VOL. IV. HALIFAX, CANADA, OCTOBER, 1899. SUPPLEMENT.

THE INDUSTRIAL ADVOCATE.

THE MARITIME NEWSPAPER CO., LTD.

J. C. STEWART, - President and Managing Director.

Publishers of "THE INDUSTRIAL ADVOCATE" and "THE MARITIME MERCHANT."

OFFICES: BEDFORD CHAMBERS, HALIFAX, N. S.

Editors:— FRED. P. RONNAN. R. M. HATTIE.

THE specific purpose in view in the publication of *this special issue of the* INDUSTRIAL ADVOCATE is to place before persons interested a brief series of sketches relating to the position in the commercial world of the city of Halifax, Nova Scotia. For three years we have endeavored in the regular issues of this journal to set out in detail the many opportunities and advantages which not only the city of Halifax, but the province of Nova Scotia affords for the investment of capital in *manufacturing, mining and milling enterprises.* There never was a time before in the history of the world when the energies of the press have been more strongly devoted to the promotion and encouragement of all kinds of industrial activity. This is the age of advertising, and with the refinement of methods employed in pushing forward the claims of a given locality, it has come to pass that that form of publicity which describes in detail the resources of a district is best calculated not only to advance these interests, but those of outsiders who may be made acquainted with facts and conditions previously known.

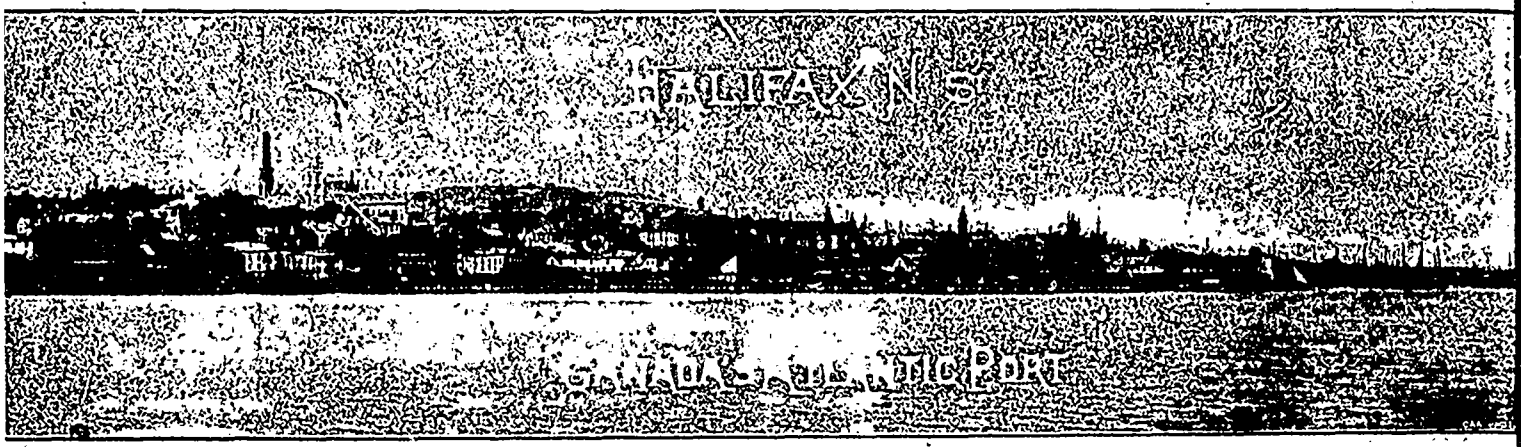
In the pages following we have endeavored to treat a number of subjects which have a direct bearing on the future of this city. Foreign shipping men are doubtless more familiar with the geographical location and facilities of the city on account of the position which we occupy as one of the chief ports on the Atlantic coast line; but this knowledge, we regret to say, does not extend to the hundreds of thousands of men engaged in various businesses throughout the civilized world, and to whom we hope, at least in a small measure, to afford some information concerning the place and its possibilities. This undertaking is a manifest duty which we owe to ourselves, and because of the strong competition of many other locations which are seeking to obtain trade advantages which may be deemed more rightfully ours. In the tone we have adopted in speaking of the several topics, we have endeavored to avoid anything approaching exaggeration, and have confined ourselves to straightforward business arguments which we feel should appeal strongly to every business man wherever located. It is our purpose to show that Halifax offers many advantages and inducements as a distributing point. This purpose of course confines us to a rigid statement of facts and figures, which we have taken particular pains to have as correct as possible. It is of course impossible within the limits of a publication of this size to fully cover the matters which are discussed. We can only emphasize the prominent points which go to make up the strong claims which this city has to be considered one of the most important locations in the new world. Our achievements in the past in the way of successful trade projects, have not been so great as to permit our losing sight of what the future holds in store for a city which occupies the position which we do; and as will be seen from the general tenor of our articles, our purpose is more in respect to future possibilities. Under appropriate headings we have selected such subjects as may closely relate to the well being of the city and province generally.

As a maritime port, our position in the Dominion of Canada is somewhat unique, and for that reason we wish to place before foreigners, in particular, the many reasons why their business *interests might be better served by establishing a connection in* which Halifax has some part. Every thinking person in Canada knows that there is an immense amount of room for the extension of our general trade relations with the outside world, and on that account that a port such as Halifax must occupy a prominent position in the handling of an increased volume of trade. As an integral portion of the British Empire, which is gradually being brought together more closely through the agency of improved transportation facilities, we feel that the port of Halifax occupies a strategic position which makes it the key to the command of the Atlantic. We have not endeavored *to consider the claims of Halifax in connection with its well-*known and appreciated position as a base for naval operations in time of war, although the connection between trade topics and the maintenance of England's supremacy on sea and land are two subjects closely interwoven and interdependent. The famous remark that "trade follows the flag" is an indication of this feeling.

The avowed purpose, then, of this number of the ADVOCATE is to point out in what respect we may endeavor to increase the commerce of this city. This is surely a laudable undertaking, and one in which we have much pleasure in acknowledging the *hearty support of the very best class of business men in Halifax* before whom we have submitted our proposition, and which now finds expression in the production which we lay before our readers. Questions of transportation which mean so much to the material progress of a locality are every day receiving the closest attention from our business men, and in a relatively short space of time we hope to see Halifax in the position which manifest destiny has marked out for it as the chief exporting point for all kinds of Canadian raw material and manufactured goods, as well as a distributing centre for a very much larger volume of imports and goods in transit. A book might easily be filled with detailed information of the various channels and avenues which are open to the aggressive capitalist in this city and province, in the development of mining for which the locality especially fits us; and if some of these openings have escape our attention in detail, it is rather due to the space at our disposal than any lack of their existence. As may be seen from the outline map directly opposite, we have indicated the valuable geographical position which Halifax occupies, and which should, and will, result in giving her a large proportion of the profitable ocean borne traffic between the old and new worlds.

The prevailing feeling with respect to our future operations is one of heart-felt optimism, and the fact that the entire civilized world is enjoying a measure of material prosperity exceeding that of previous years argues very strongly in favor of the claims of this city being recognized as the chief Atlantic terminus, one that will be sooner or later demonstrated satisfactorily. This issue of the ADVOCATE will be distributed over a very wide extent of territory, and on that account a very large edition has been printed, which will, we feel, result in an increased amount of interest in the city which only the other day celebrated its 150th anniversary. It is of course highly desirable that we should continue to impress upon our provincial readers the merits and advantages of this city as one of the chief *entrepots* on this continent; but it is doubly, nay, trebly, desirable that those firms and business houses of foreign origin should be made aware of the benefits which they may derive from having their goods handled through this port for distribution in Canada and elsewhere.

In short, Halifax wishes to enlarge her commerce in every possible way. This may be taken to be the chief end and aim of this publication, and by adhering to facts only in describing the progress of the locality do we hope to impress its importance upon those, To Whom These Presents Shall Come.



HALIFAX, the national Atlantic port of Canada, commands the most prominent position on the North Atlantic, and has one of the finest and safest harbors in the world. In latitude 44.39 north, longitude 63.35 west, this port is 2,450 miles west of Liverpool. Its advantages with respect to trans-Atlantic transportation are many. The advantage in point of nearness to British ports is that while near the great ocean lanes between New York and the old world, it is from one to two days nearer British ports than other ports on the North Atlantic. To this advantage must be added its unrivalled relations with the North American continent, its unusual accessibility at all times, night and day, the safety of navigation in its waters, the lowness of port charges, the despatch with which freights can be handled, and the various other incidentals strengthening her claims to be the premier Atlantic port of Canada, which will be dealt with in detail in these pages.

The Harbor "par excellence" of America.

It is the opinion of every navigator of wide experience who has visited the port of Halifax, that it must be ranked among a select few of the best harbors in the world. Out of the limited number of ports which are eminently desirable in every way, it is difficult, if not impossible, to find a better than Canada's National Atlantic Port; for while another may possess one point of superiority, Halifax posseses another that counterbalances it. While it is difficult to decide that Halifax has the *best* harbor in the world, no one cares to say that there is really a better. It is not too much to say that Halifax has one of the best harbors in the world, and Haligonians are satisfied to let it be known as such, not caring to boast that it is the best when they know that there are such noble ports as Sydney, N. S. W., to be ranked along with which is an honor for Halifax, while it is an equal honor for Sydney that her harbor should be ranked along with ours. This much can be said for Halifax: it is the harbor *par excellence* of America, a fact which every navigator will vouch for.

No better authority is to be had regarding a port's place among the ports of the world than that of experienced navigators. We do not need to go far for such opinions, for Captains are to be met frequently who, having visited this port, never fail in their enthusiasm to speak of it in the highest terms as a port of easy access and safe navigation, which can be entered or cleared without consulting the tide charts and unmindful of the time whether day or night.

What Leading Navigators Say.

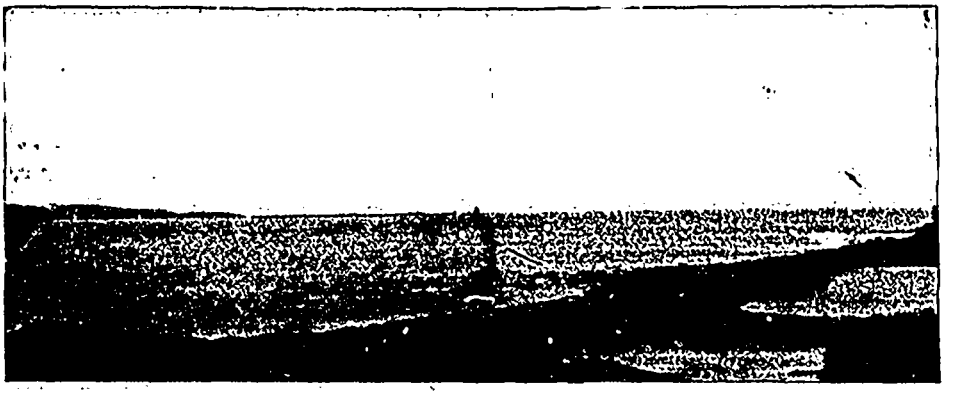
As long as Halifax harbor has been known, navigators of undoubted standing have proclaimed their confidence in it. Thus, going back to the day when Lord Cornwallis came to these shores and laid the foundations of a city yet to be one of the most renowned in the world, we find him adding to his report to the imperial government of the safe arrival of the expedition: "All the officers of the fleet report it the *best* harbor they have seen."

It might be claimed for Halifax, on the strength of the above evidence, that it is really the *best* harbor in the world. But Haligonians do not consider it necessary to claim that it is, knowing that the charts confirm all good things that can be said of it.

Later authorities as well as older support the claims we make for Halifax, and we find in the sailing directions, published by the Commissioner of the Admiralty — an authority that everyone will recognize—that Halifax is "one of the finest and safest harbors in the world, affording space and depth of water for a large number of vessels."

In all Canada there is not a better authority than Capt. W. H. Smith, R. N. R., formerly commander of the Allan line of steamers. Capt. Smith was a trusted officer of the Allan line, and in the capacity of Canadian Commissioner of Wrecks, still enjoys the esteem and confidence of the Canadian public, and particularly of his fraternity upon the seas. His decisions are always recognized as eminently just, and he is regarded as a high authority on matters pertaining to navigation. His estimate of the harbor of Halifax, published in an article in the Halifax *Morning Chronicle*, May 13, 1897, on various ports, both in our North Atlantic waters and in the old country, reads:

"One will seek in vain for a finer sheet of water or more



"There are no difficulties to be encountered on entering the harbor, there is no narrow, tortuous channel to be followed, cautiously, but a broadroadstead of three-quarters of a mile."

useful port than that of Halifax. There is no harbor even in the United States, which offers better facilities for shipping than it does, being accessible at all times and close to the open ocean. The harbor is extensive with deep water approaches, strongly marked by nature, and good and safe anchorage ground even outside of George's Island, with good shelter for vessels to the north of McNab's Island, between Ives' Knoll and Fort Clarence, in from 9 to 10 fathoms of water, muddy bottom From the Eastern Passage shore to the Halifax peninsula the distance is one and a half miles."

Another authority of considerable note on such matters is Capt. J. Taylor Wood, a distinguished officer in the Confederate navy at the time of the American civil war. Capt. Wood will be remembered in connection with the thrilling "Tallahassee incident." This is what he says concerning the port:

"From an acquaintance with some of the best harbors in the word, such as Naples, San Francisco, Rio de Janeiro, I know of none that combines as many advantages as Halifax. The harbor opens directly on the Atlantic, is easy of access at all times, experiences comparatively small rise and fall of tide, is safe and commodious and of uniform depth—10 to 12 fathoms of water, with good holding ground; it is well buoyed and lighted, and has a pilot service of experienced men, who for twenty-five years have never had a craft in their charge take the bottom or meet with a mishap."

Such testimonies are very valuable and very convincing. It would be possible to give individual opinions of many captains, for the same have frequently been published and are perhaps known to many who read these pages. But what has been given above should be sufficient to confirm Halifax's claims to be one of the best harbors in the world.

* *

The Sentinel of the North Atlantic.

Much of what can be said regarding the superior nature of this port has been neatly summed up by the aforementioned authorities. But a little more may be said in detail on the points which have been taken up, and likewise something on others which have not been mentioned.

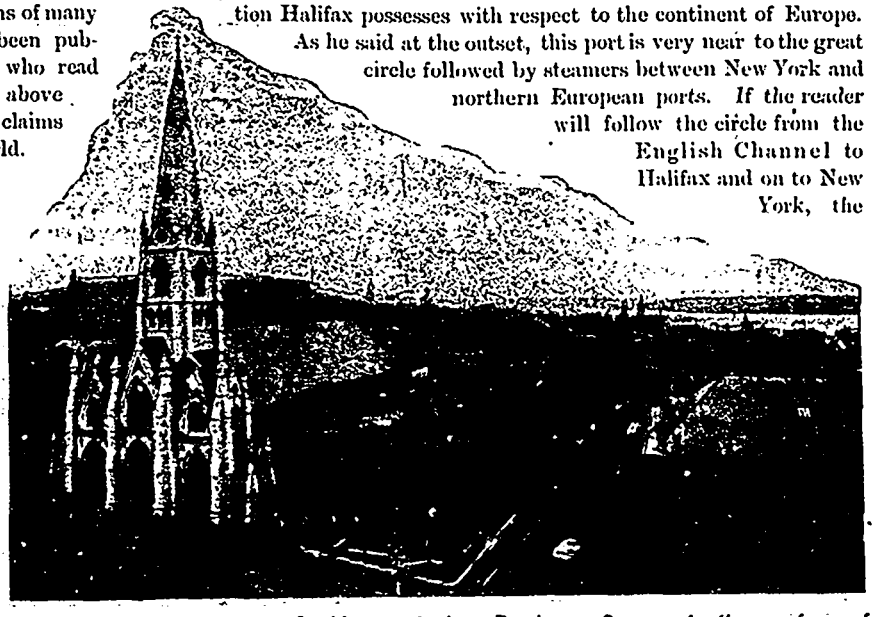
In the first instance it is worth noting for a moment or two the commanding nature of Halifax's geographical position. This was appreciated long before Halifax was founded, for in the brave days when England and France fought for supremacy on this continent, the latter used the harbor frequently both for purposes of war and commerce. And when England came, one of the chief incentives to forming a settlement on our shores was the very fact of the command which it would give of North Atlantic waters. The establishment of such elaborate fortifications and arsenals here, *further proves the appreciation* of the importance of Halifax by the imperial authorities, and the part Halifax has played in history-making *still further* proves it, when expeditions hence went forth to capture Louisburg and Quebec and forever end the possibility of French dominion in the new world; when fleets sailed out deep-laden with munitions of war for the occupation of Boston and New York during the war of the American revolution, and when Halifax was the base of the operations of the English fleet in the war of 1812.

Halifax has not been the scene of hostile demonstration for many a day, but thrilling events have oftentimes followed in the wake of the peaceful victories of science and industry. Thus, Halifax has awakened of a morning on many occasions to find in the kindly shelter of her harbor a noble merchantman that had met mishap on the high seas. If anyone were to ask why so many of the steamers disabled on the North Atlantic have found their way thither, there would be but one answer, and every captain would have it ready; and it would simply be that no port holds such a commanding position on the North Atlantic, and that it is just as natural that a ship disabled even hundreds of miles away should turn towards Halifax as it is that water should find its own level.

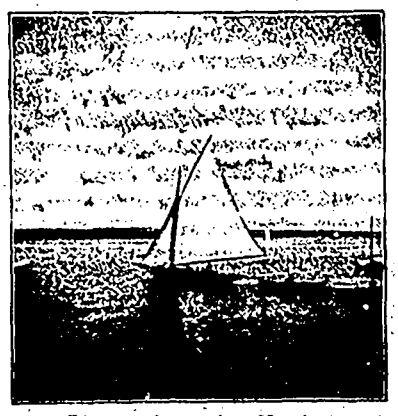
* *

The Relation of Halifax to the Continent of Europe.

If the reader will consult the map which forms the frontispiece of this supplement no argument will be necessary to show how advantageous a position Halifax possesses with respect to the continent of Europe. As he said at the outset, this port is very near to the great circle followed by steamers between New York and northern European ports. If the reader will follow the circle from the English Channel to Halifax and on to New York, the



Looking north along Barrington Street.—A glimpse of one of the finest harbors in the world in the distance.



proportion of the ocean journey cut off by making a terminus at Halifax will be seen at a glance. But that the actual difference may be better understood we present with the map a table of distances prepared by experts which presents the difference in distances between the ocean journey from Liverpool to Halifax and from Liverpool to other North American ports, and vice versa. The saving in distance is reinforced by the saving effected in being able to make the entire way across the ocean to and from Halifax at full speed; for within an hour after coming under Chebucto Head a steamer may be docked at her berth in Halifax, or within an hour after leaving her berth when outward bound, she may be on the bosom of the Atlantic shaping her course for any European port. There is no obstacle in the way, no treacherous coast must be followed cautiously, the open sea lies before the outward bound vessel and the safe approaches to Halifax before the inward, no capricious currents nor uncertain tides worry or delay, so that the best time can be made from port to port. This does not obtain in the case of vessels going west of Halifax and skirting the southern shore of the province, where many a wreck lies sunken and adds new dangers to the route; and furthermore, no port can be approached at such a high rate of speed, as in the case of New York, where steamers must slacken speed at Sandy Hook, and in the case of St. John and Portland, where the strong currents and more or less dangerous navigation in Bay of Fundy demand that steamers proceed cautiously. In the latter case the saving in time is so great that Halifax and Liverpool are 20 hours nearer one another than either St. John or Portland and Liverpool—a saving which amounts to 40 hours in a round trip, or one voyage in every twenty.

"Halifax Harbor, formerly called Chebucto Bay, extends sixteen miles in from the sea. It is one of the finest harbors in the world, is easy of access, and is admirably sheltered. The water is so deep that the largest ships can lie within a few feet of the shore, and the rise and fall of the tides are slight."—Johnson's Encyclopedia.

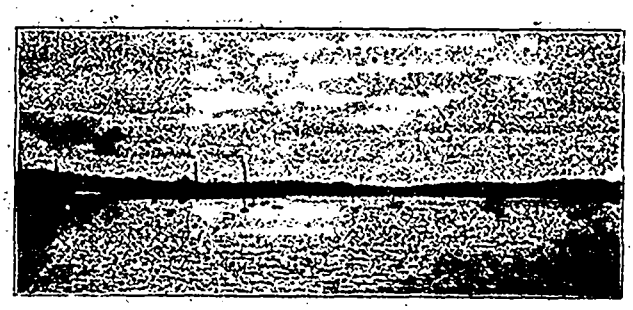
The Relation of Halifax to the North American Continent.

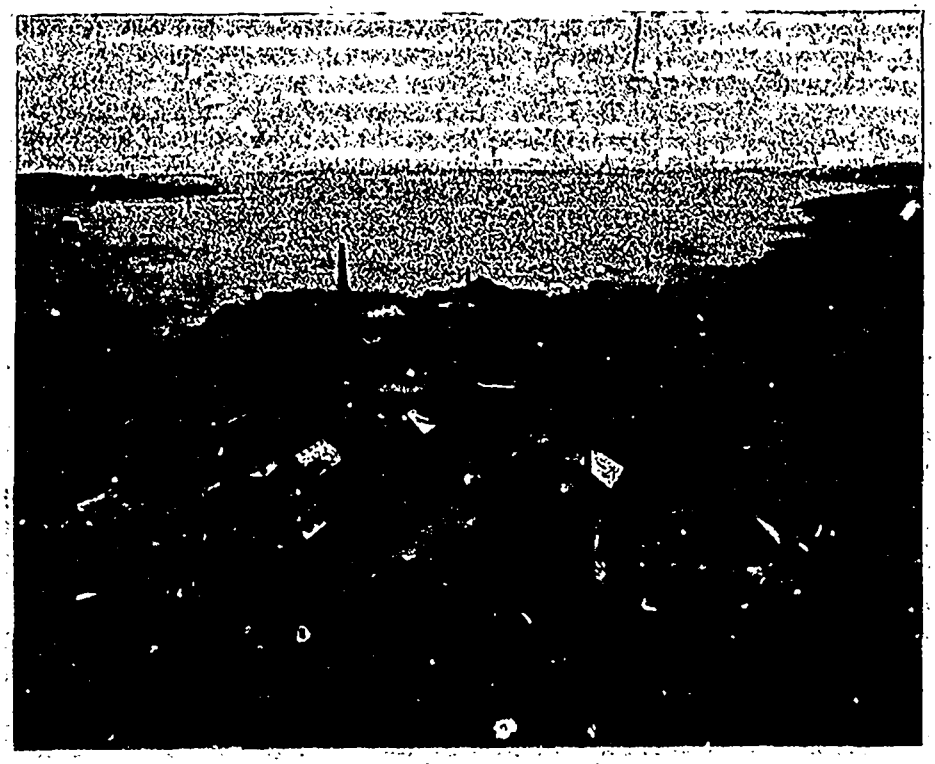
The relation of Halifax to the North American Continent is such that both passengers and freights can be put down in the chief centres of Canada and the United States with great satisfaction to all concerned. All this arises because of the splendid rail connection westward. Montreal is 837 miles away by the Intercolonial, which has one of the best road beds on the continent, and is constructed to admit of the highest possible speed.

The Intercolonial also has a branch to St. John, where sharp connections are made with American roads leading to Boston and New York. The Canadian Pacific Railway, the greatest Railway in the world, has access to Halifax via St. John, and also gives a very satisfactory service between this city and Montreal. From the latter point railways branch out in every direction, and he who examines the railway maps will observe that the route from Halifax to Chicago and the various centres along the upper courses of the Mississippi, is very direct. The Grand Trunk and Canadian Pacific Railways provide a very elaborate service all through Canada, thus keeping all parts of the country in constant touch with one another. These connections are especially valuable for the speedy handling of passenger traffic. They are obviously as valuable in the transportation of freight, but we will treat of this question further on, the chief purpose of this paragraph being to show the excellent position which Canada holds with respect to the continent of North America.

The important point to observe regarding this port is its accessibility. Vessels bound to Halifax from either east or west are guided by various marks known to all navigators as soon as they come in sight of the Nova Scotia coast. Chebucto Head is practically the harbor entrance, and when vessels come abreast of this they steer a straight course to Halifax, 16 miles distant. There are some well known rocks to be passed, but they are all well marked, and the channel is unimpeded and never narrower than three-quarters of a mile until Meagher's Beach light is passed, when it narrows to half

Halifax a Port Easy of Access at all Times.





"Its broad expanse, from the Atlantic—which can be seen from any part of the city elevated above the house-tops—to Bedford Basin, is always clear and open."

a mile, but immediately opens into the broad basin of the harbor proper, where there is bold water to the very shores not less than 11 fathoms—66 feet—in depth at dead low water. It will thus be seen that there are no difficulties to be encountered in entering the harbor. There is no narrow, tortuous channel to be followed cautiously, but a broad roadstead of three-quarters of a mile, up which a steamer may proceed at a high rate of speed with perfect safety. And, when once inside, the conditions are even more favorable—so favorable that the wheel might be trusted with impunity to a sailor altogether ignorant of the port and without the necessity of his consulting the chart. Furthermore, Halifax is not a tidal harbor and can be entered by night as easily as by day, so clear is the course and so well is it marked by lights.

* *

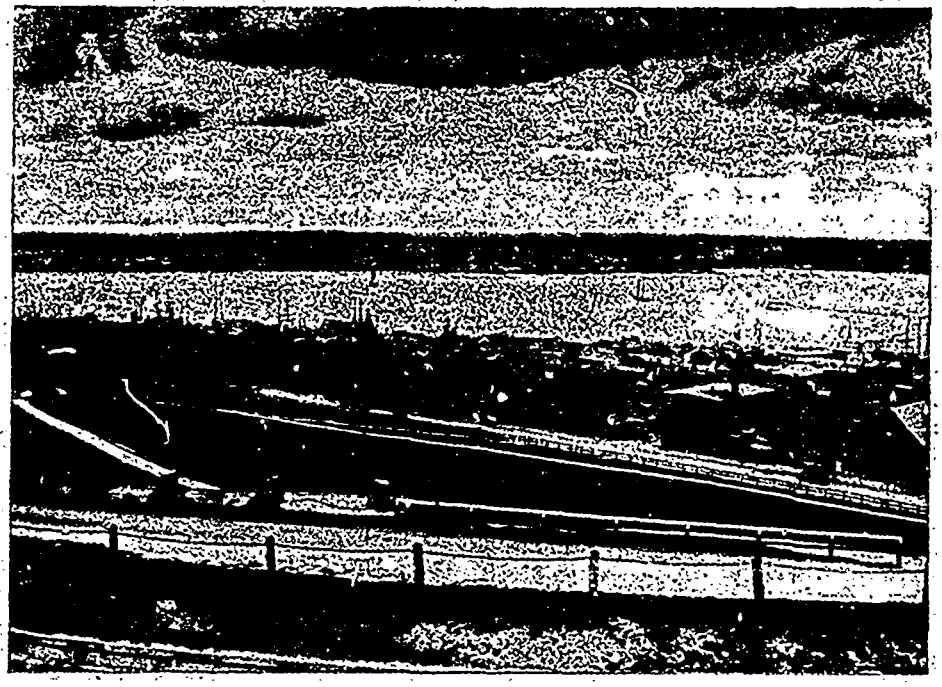
An Open Port all the Year Round.

Obstacles which in some instances stand in the way of easy and safe access to North Atlantic ports are fog, and—in winter months—ice. Fog visits every port on the North Atlantic with more or less frequency. It would therefore be altogether contrary to the nature of things if Halifax were never so visited. But we can say this, that Halifax is as free from it as any port on the North Atlantic, and the fog that does at times hang along the coast is not usually so *dense that a vessel cannot find her* way with considerable ease. When the fog is very dense, no Captain has any business to enter the safest harbor, it is his duty to wait outside until the fog lifts. Off Halifax there is an ample seaway in which a steamer can manoeuvre when fog seems to offer any obstacle to a safe entrance. With regard to ice, Halifax is an open port all the year round. Even during the coldest weather which visits us, our harbor is never frozen over, and its broad expanse from the Atlantic—which can be seen from any part of the city elevated above the house-tops—to Bedford Basin, is always clear and open.

* *

A Safe Harbor with Bold Water and Good Anchorage.

What has been said concerning accessibility of the port applies equally to the proposition of its safety. The anchorage is good, the bottom being muddy, and in the shelter of McNab's Island a vessel is safe from the severest south-east gale. It is a perfectly land-locked harbor, for all it is so easy of access, a very unusual combination of advantages. Freedom from rocks and shoals is characteristic of the harbor in a high degree, particularly in that portion where an incoming vessel would naturally find her course or look for anchorage. The vessel entering or clearing Halifax is free from all risks and delays arising from currents and tides or from crowded or narrow waters or from headlands or shoals. This is



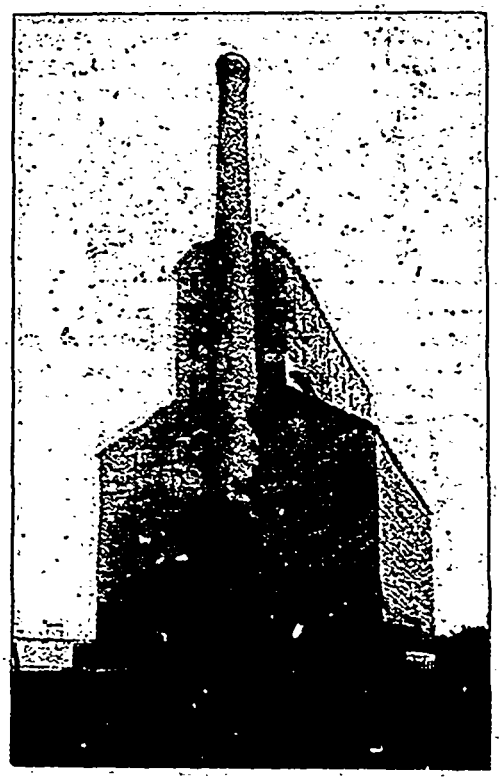
"In the broad basin of the harbor proper, where there is bold water to the very shores not less than 11 fathoms—66 feet—deep at dead low water."

an important point, for the paramount consideration with steamship owners is the safety of the ports at which it is designed their ships shall call. This is of great weight in determining the value of Halifax as a shipping port, and in the years to come will be the strongest argument in favor of making Halifax not only the winter port, but the terminus all the year round for the fast line of steamers between Canada and the old country.

* *

Extensive Terminals where Freights and Passengers Receive Quick Despatch.

The terminal facilities provided at Halifax by the Intercolonial Railway embody all the newest ideas in terminal arrangements. They consist of an elevator of 500,000 bushels capacity, two coal trestles, and some eight piers, four of which are used almost exclusively for steamship business. The largest of these is 650 feet in length and 160 feet in width and has on it a shed with 50,000 feet of floor space. Three of the other piers are over 500 feet in length, and on two of them are sheds of somewhat smaller capacity, but ample for the accommodation of smaller steamers, and such is the arrangement that ships can discharge cargo and take in grain or bunker coal at the same time or load cargo at one hatch while grain is going aboard at another or coal is being dumped into the bunkers.



The new Elevator of half a million bushels capacity, through which grain will soon be passing.

The largest steamer afloat can dock at any hour, day or night, and begin discharging or loading cargo as soon as her hatches are off. The great capacity of the sheds and the arrangement of the tracks enable the goods to be loaded into the cars almost as quickly as they can be discharged from the ship. As trains leave for the West as soon as loads are made up, and run through to Montreal in 48 hours or less, consignees in Quebec and Montreal can be in possession of their goods before they would be unloaded from the ship if she went to an American port to discharge, and those at points further West would have proportionate advantages. So well has this fact been recognized by fruit dealers in the larger cities that they insist on having their consignments sent via Halifax, which speaks volumes for the Halifax route.

While this is true of freights, it is doubly so of passengers, who landing at Halifax and taking the fast trains which leave for all points West as soon as the mails and baggage are transferred, are at Montreal, Toronto and points even further west before a ship of the same speed and leaving Europe at the same time could be in sight of the American coast. Even to-day passengers can be landed in Chicago in 50 hours from Halifax, and when with the advent of the fast line between Canada and the old country there come the improvements in our railway services which will inevitably follow, it will be possible to make a railway journey from Halifax to Chicago and all points in the United States in very much contracted time.

The terminals are at the disposal of the Dominion Atlantic Railway, which runs through the famed Annapolis Valley, a country which last season produced nearly half a million barrels of apples for export, and also of the various West India lines of steamers, which hitherto, owing to the difficulty in getting space in the European bound steamers, have been forced to refuse cargo offering at West India ports for Europe.

* *

Sources of the Great Quantities of Freight which will go to Europe via Halifax.

The Intercolonial Railway itself taps a large portion of the hay and lumber country of Nova Scotia, northern New Brunswick and Quebec, and at Montreal, 837 miles from Halifax, connect with the whole Grand Trunk system, which covers with a net-work of tracks the manufacturing and grain-producing portions of Ontario and reaches west to Chicago and other important United States points, and with the Canada Atlantic and Ottawa, Arnprior and Parry Sound Railway, which stretching through Northern Ontario to Parry Sound, taps there, by means of its steamers, the great grain countries of the North-West. It has also connection at St. John and St. Rosalie Junction with the Canadian Pacific, which likewise reaches all the important points in Ontario and extends to Manitoba, the North-West Territories and British Columbia.

In the past the exports from Halifax have consisted chiefly of apples, deals, match splints, box shooks, pulp, bark extract, West India goods, butter, cheese, salt meats, hay, cattle, flour and grain.

Of the latter, over a million and a quarter bushels, drawn from points on the Grand Trunk and Canadian Pacific Railway, were shipped in one season, before the burning of the old elevator, since which time the Ottawa, Arnprior and Parry Sound Railway elevators have been built at Montreal, with storage capacity for 3,000,000 bushels of grain for winter shipment, and the Intercolonial has been extended to Montreal, where large quantities of cheese and other goods accumulate in addition to wheat.

* *

The Port Charges at Halifax are Much Lower than at Competing Points.

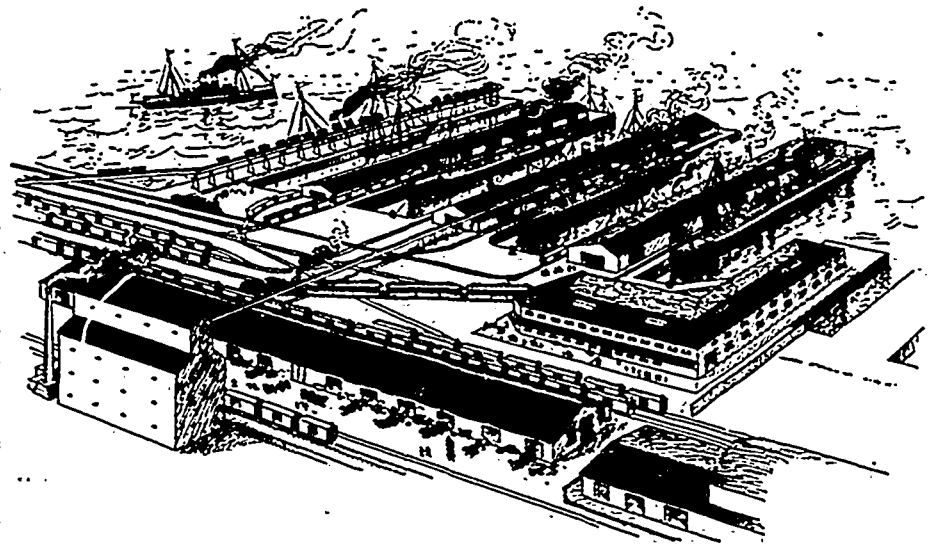
Labor is cheaper at Halifax than at any other North American port, dock laborers getting from 15 to 20 cents per hour. They are, moreover, of the best class, and strikes among them are unknown. It is probably due to this cause and the fact that the rise and fall of the tide are so slight as not to interfere with the handling of cargo, that Halifax has the enviable reputation it now holds for the expeditious discharging and loading of vessels. Ordinarily about 150 tons of cargo can be handled in an hour. In this respect Halifax is second to no port in North America. Her stevedores are experts and marine underwriters can testify that seldom, if ever, does a cargo packed at Halifax shift, even during the longest and stormiest voyage. It is not possible to find the superiors in America of the gangwaymen, headers and stowers of Halifax. For this reason steamers get the quickest dispatch on this side of the Atlantic at Halifax.

Dock labor is not the only port charge which is unusually low, for it is a fact that for every five dollars a vessel would disburse here she would spend seven dollars at competing points. For

instance, the pilotage at Halifax on a vessel of 1,000 tons nett in and out is $32.00, the scale running up to $47.00 for vessels of 3,000 tons. And at these rates thirty skilful navigators have during all the years of their experience guided a constantly growing tonnage into port without mishap of any kind.

Halifax Looks Forward to Increased Activity in Her Harbor.

With the terminal facilities now in her possession, Halifax looks forward to increased activity in her harbor. Private enterprise has further increased the efficiency of the port by enlarging the waterfront equipment, great improvements wrought by Furness, Withy & Co. in building an extensive pier to provide berths for their own steamers being an instance in point. These encourage us to believe that the port will grow steadily—an encouragement that is strengthened by the reports of great quantities of freight that will seek an outlet via Atlantic ports during the coming winter, and which by virtue of the fact that a uniform rate is charged on freights to all North Atlantic points from Montreal, will be largely sent thither. Before these pages are read it is probable that a large quantity of grain will have passed through the new elevator. Freights of various kinds will go forward from Halifax, because it will be impossible to handle all the freight offering at Montreal before the season closes. This activity will increase from year to year, for nothing else is possible but that Halifax must become the eastern entrepot of Canada, for many other steamship companies are looking thitherward.



"The terminal facilities provided at Halifax by the Intercolonial Railway embody all the newest ideas in terminal arrangements."

Admirable Facilities for Effecting Repairs to Disabled Steamers.

The facilities for effecting repairs have added not a little to the value and importance of the port. The largest dry dock on the American continent is one of the things of which Halifax can boast. It is a magnificent, granite-walled affair, capable of receiving a vessel of any size up to nearly 600 feet in length. Its dimensions are 600 feet by 89½ feet, with a depth of water on the sills at high water of 30 feet. Extended reference is made to it in another part of this supplement. Besides, there is a marine railway at Dartmouth, across the harbor, with three slips, on which it is possible to keep several small vessels undergoing repairs all at one time. The shops in connection with both of these are very extensive, and there are other shops in the city which are capable of doing marine work of the most complicated nature. The equipment in Halifax for repairing disabled craft is excellent, so that while the port has proved itself to be, on account of its position, the logical destination for vessels disabled even many hundreds of miles away on the North Atlantic, it has further proved itself to be the same by reason of its repairing equipment.

Importance of Halifax as a Point at which to Bunker Ocean-carriers.

By virtue of her position Halifax is an excellent place for bunkering. This matter is more elaborately dealt with in another article. Suffice it to say that some steamers en route to European from Southern ports are finding it very economical to reserve for cargo some of the space required for coal, and call at Halifax to replenish their bunkers. The Moor liners running between Gulf of Mexico ports and Great Britain, have done this very successfully. Coal can be put into the bunkers in Halifax as rapidly as it can be trimmed. No other port can do better than this. Neighborhood to the mines in Cumberland, Pictou and Cape Breton counties makes it possible to keep ample supplies of coal always on hand so that the coal merchants are ever ready to meet a steamer's needs. There are always large quantities of coal on hand, and it is impossible for supplies to run out, and even if they should, which is a very remote contingency indeed, the mines are so near at hand that supplies could be brought to the city within a very few hours. But so remote is the contingency of supplies running out that it is not worth considering, for the number of vessels in the coal-carrying trade is so great as to preclude its possibility. Such importance does Halifax possess as a bunkering port that during two months of last winter no less than 114 steamers bunkered in this harbor, some of which called especially for that purpose, having run out of coal while battling with wind and wave during the stormy weather which at that time prevailed on the North Atlantic. During coming years the port cannot fail to acquire greater importance.

The Tonnage of the Port is Second only to Montreal in Atlantic Canada.

Naturally such an important port as Halifax must witness the arrival and departure of a considerable tonnage during the course of a single year. We have no figures at hand for the year ending June 30, 1899, but the Trade and Navigation tables for the year ending June 30, 1898, the latest published, show that Halifax possesses the largest tonnage next to Montreal of any Atlantic port in Canada. Montreal being itself a very large centre, perhaps six times the size of Halifax, and being the centre of a much more populous and wealthy portion of the country, and as well being the natural shipping port of many American centres, might be expected to have a tonnage many times greater than Halifax. If Montreal were accessible in winter as in summer, its tonnage would doubtless be greater than it actually is; but making every allowance for that we think Halifax makes a very favorable comparison. The figures in the tables mentioned show the tonnage of the greatest Atlantic ports of Canada to be as follows:

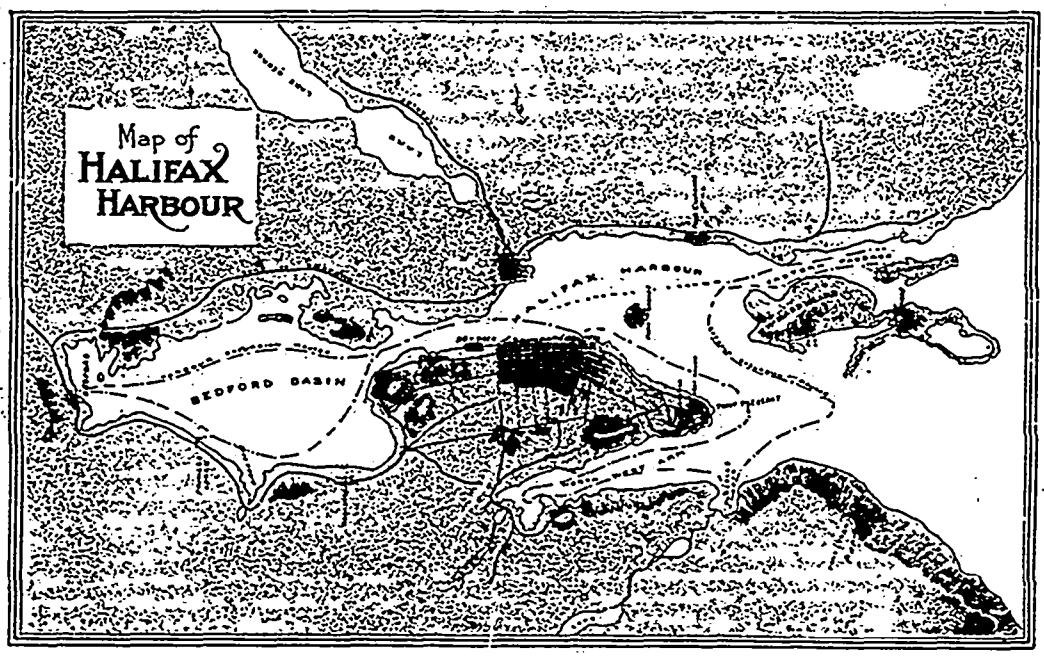
	Inward.		Outward.	
	Vessels.	Tons.	Vessels.	Tons.
Montreal.....	465	1,049,769	532	1,131,379
Halifax.....	934	629,416	1,005	610,062
Quebec.....	320	605,138	322	461,174
St. John.....1,332		540,926	1,306	456,239
Yarmouth.....	587	189,694	583	190,493
North Sydney ..	731	176,871	490	137,605

When the returns are available for the year ending June 30th, 1899, they will show a very marked increase so far as Halifax is concerned, for the activity in our harbor this year has been greater than it was during the year previous.

* *

Halifax and the Marine Underwriters at Lloyd's.

Halifax, in common with all other British North American ports, suffers great inconvenience on account of a very inconsiderate discrimination made against them by the marine underwriters at Lloyd's. The Halifax Board of Trade has made strong representations to Lloyd's regarding this matter, and it is hoped that the inconvenience will be removed. Halifax's claims to the most reasonable rates possible in marine insurance are very great. The safety and accessibility of the port, which we have treated of in detail, as well as the clearness of the course, are obviously strong arguments in favor of reducing the rates as far as this port is concerned. Furthermore, Lloyds seem to be inconsistent in granting reduced rates to vessels sailing to and from American ports, which must follow the same course as vessels bound to Halifax and encounter the greater dangers incident to a longer voyage, and particularly to that part of it west of Halifax where so many treacherous currents and other obstacles to safe navigation are to be encountered.



We think it only fair that rates on Halifax vessels should be at least equal to the rates charged to and from New York, Boston or Portland. Considering the greater safety of the Halifax route, we think it would not be showing favoritism to give Halifax the advantage of lower rates. So much for the discrimination against Halifax in favor of American ports. On the other hand, we find the marine underwriters discriminating slightly in favor of St. Lawrence ports against Halifax in face of the fact that while 29 steamers met either total or partial loss in the St. Lawrence River and Gulf last season and altogether 34 vessels were injured in some way owing to the dangers of navigation by that route, and while upwards of 30 have suffered the same fate during the season now rapidly nearing its close, the Halifax route has experienced but few disasters during a quarter of a century that may be laid to its charge. It would seem that the underwriters do not consult their own interests in the matter of discriminating against Halifax; for our Board of Trade has persistently enough brought the matter to their notice. We are hopeful of good results, and when they are achieved there will be an additional reason why the port of Halifax should be regarded as the port *par excellence* for trans-oceanic vessels to utilize.

* *

In consideration of the facts which have been brought out in these pages it must be obvious that Halifax is the only logical terminus for the fast Atlantic line of steamers which must shortly be put on between Canada and the old country, and which the people of Canada have been looking forward to for many years.

Halifax Must be the Western Terminus of the Canada-Atlantic Fast Line.

As we have shown, the course across the Atlantic to Halifax is perfectly clear and a steamer can sail at highest speed from the time she reaches the open ocean from British ports, until she comes within less than half an hour's sail of Halifax. We have also shown that the relations of Halifax to the North American continent are unsurpassed. It would be quite easy for a steamer sailing at the same speed as steamers now sail between Liverpool and New York to make Halifax in four days. From Halifax the time to the rest of the continent could be greatly reduced, so that it would be possible for a train to reach Montreal, Boston, or even New York under twenty-four hours, while the great centres of the Middle West and the West could also be brought within a comparatively short journey in point of time by making sharp connections with the fast trains which run between various important American centres. The advantage of this would not be a saving of time only, for it would cut off a large part of the ocean journey, which most people would desire, especially those who have not been much accustomed to travelling by water. Halifax is a better terminal point for a fast Atlantic line of steamers than any other we know of for these reason of nearness to the old country and close relationship with the North American continent. Another point which will weigh very strongly with the steamship owners who will put on this fast line of steamers will be the consideration of the safety of this port. Haligonians are not afraid that any other Atlantic port in Canada will be made the terminus of the fast line, and they are confident that Halifax will not be the winter port alone, but, as we have pointed out before, the port all the year round. For in the case of the St. Lawrence route, the dangers accompanying navigation in the waters of the gulf and river have been demonstrated by experience to be very great, and while it would be possible to navigate them at a low rate of speed with a certain amount of safety when the weather is propitious, it would not be possible to sail in the gulf and up the river at the high rate of speed required of trans Atlantic liners.

If a fast steamer is to make a port on the mainland of North America in the quickest possible time it cannot be a St. Lawrence port, but must be one that juts right out into the North Atlantic, and there is no port so favorably situated in this respect as Halifax. The possibility then of making fast time between the old world and the new via Halifax, the good connections that can be made by rail from Halifax westward, and the safety of Halifax as a terminal port for fast steamers, will weigh very strongly with the promoters of the fast line that is to be, who will furthermore consider Halifax as the best port for their purpose because of the ease with which a steamer can come up the harbor and dock at the railway terminus, and the despatch with which both passengers and freights can be transferred to the trains here. Moreover, they know that whatever charges are made at the port of Halifax will be smaller than at any other competing port, and that in the event of requiring repairs of any sort before starting on an eastward journey, they will be able to have them expeditiously done in Halifax. All these considerations and perhaps others which we have not mentioned will weigh very strongly with steamship companies now considering the feasibility of inaugurating a Fast Atlantic service.

Halifax as a Fish Market.

This port is the chief seat of the fishing industry in the Maritime Provinces.

EVER since the settlement of Halifax, its people have been identified with the great fishing industry, which has contributed to a greater extent than any other to their progress and prosperity, and still occupies a most important position amongst the various other industries which have since come into prominence.

In 1749, Cornwallis, and the settlers accompanying him, landed on the shores of Chebucto Bay to found the city of Halifax, the principal attraction for the expedition having been the rich fisheries, whose fame had long preceded it. That the reports had not been overdrawn is evident from the description given by Cornwallis soon after his arrival, for we find in his official correspondence the following:—"The coasts are as rich as they have ever been represented. We caught fish every day since we came, within fifty leagues of the coast. The harbor itself is full of fish of all kinds and all the officials agree that it is the finest harbor that they have ever seen."

The settlers seem to have lost no time in getting to work to prosecute the industry, as the catch during the first year amounted to 25,000 qtls. Its prominence as a leading industry continued and we find a large portion of the town officers in 1754 to comprise surveyors of pickled fish, cullers of dry fish, gaugers of oil, surveyors of hoops, casks, etc., all necessary for the proper supervision of the business.

During 1755 and 1756 the fisheries were neglected to a considerable extent, many of the settlers preferring to work on shore in connection with the large government works which were being carried on in the province. This state of affairs continued for a number of years, work on shore attracting more attention than the more toilsome and dangerous pursuit of fishing.

In 1783, great hopes were centred in the establishment of a new branch of the fishing industry. A number of whalers from Nantucket arrived with everything necessary to prosecute their industry under the British flag. They settled at Dartmouth and everything seemed favorable for a prosperous issue to their enterprise, but after a few years, they found that the British colonial regulations were opposed to their interests, and they were compelled to remove to Milford Haven in Great Britain, whence their industry could be carried on to better advantage. In 1786, two whalers returned to Halifax with 1,060 barrels oil, and 72 cwt. whale bone. In 1788, five vessels brought 1,600 bbls. oil, and a large quantity of whalebone, and in 1790 five vessels brought 1,200 bbls. oil, and a proportionate quantity of whale-bone.

In 1774, the fish trade with the West Indies commenced, from which period to the present day it has been carried on with vigor, having of course had its ups and downs like all other branches of business. This trade was confined to Halifax for many years, but as the out ports grew in importance, they also participated in it, and some of them have found it their chief source of wealth.

In 1788, a brig was launched to engage in the West India trade for Messrs. Goudge & Prior, prominent exporters of that day, this being the first vessel of that description built at the port of Halifax, and the pioneer of that magnificent fleet of clipper brigs, brigantines and schooners that became of such great importance and added so much to the trade of the city, but which, alas, in these latter days, have had to give way to the much less beautiful but more powerful and practical steamship.

The West India markets did not, however, by any means absorb the entire catch, large portions of which found markets in Europe, the United States, Brazil, Mauritius, etc., and these are still used to a greater or less extent.

A prominent business like this naturally resulted in the establishment of numerous business houses to handle it, many of which accumulated large fortunes in its direct prosecution, and many others participated in its benefits indirectly. Some of the descendants of the old established houses are still to be found carrying on the business, but a large proportion of those now engaged in it have sprung up in later years, and show no abatement in the vigor with which the business has been carried on for so long a period. It can safely be said that in no part of the Dominion of Canada, or in fact of the continent of America, is the fish business so thoroughly understood as it is in the City of Halifax, and in no other market is there to be found the same varied assortment of all descriptions of dry and pickled fish, and shell fish of all descriptions.

The prominence of the market naturally attracts attention throughout all portions of the provinces of Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland, the hardy toilers of the deep from all these quarters marketing their catch here to better advantage than they can elsewhere, and the close connection which Halifax enjoys by rail and steamship with every part of the world, permits shipments to be made at the shortest notice, and thereby renders Halifax a most desirable port for the purchase of supplies.

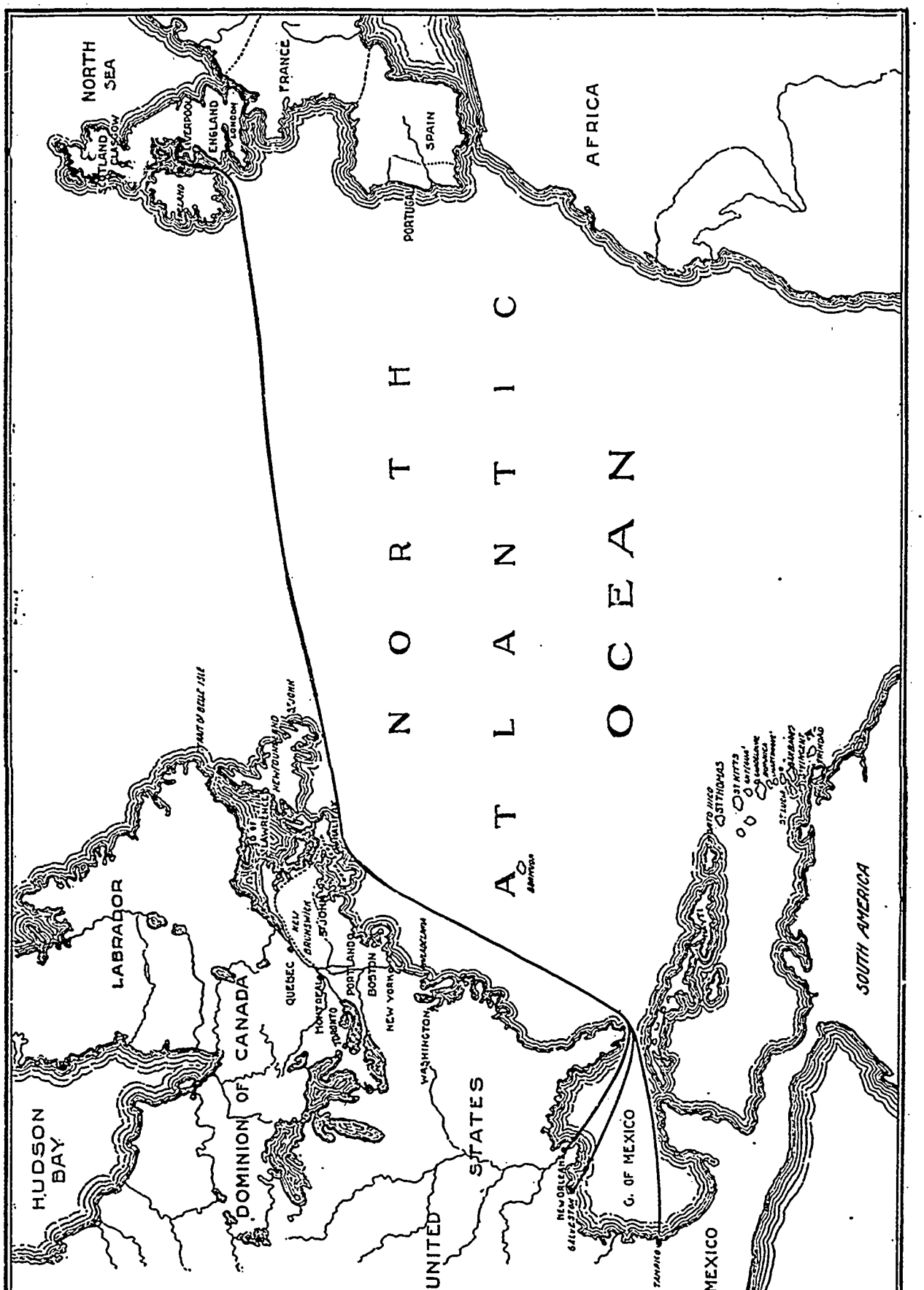
A large number of the fishermen of Nova Scotia obtain their outfits from Halifax merchants, payment for which is made in the products of the sea.

The fish business is understood thoroughly in Halifax, but not more thoroughly than is the business of catching fish by the fishermen along the Nova Scotian shores. The western counties, (particularly Lunenburg) are noted for their excellent fishermen. These men are the descendants of doughty Germans who settled that portion of the province almost a century and a half ago. The craft has been handed down from father to son for several generations. It is a law of nature that the traits of the parent are accentuated in the offspring, and thus it is that every succeeding generation of fishermen is better adapted for the business. They show no inclination the descendants of those Germans who settled there so long ago—to go away from home, but as soon as they have gathered together enough money, they purchase an interest in a sailing vessel. They are fishermen by instinct and improve upon their methods from generation to generation, and the fact that they have an owner's interest in the vessel in which they sail, causes them to take a deeper interest in their work and the success of the voyage.

The foregoing exhibits briefly some of the principal reasons why Halifax is "par excellence" the fish market of this continent, as, although the merchants of St. John's, Newfoundland, handle a larger quantity, the same variety cannot be obtained there. For a number of years many of the fishermen of the West Coast and other portions of Newfoundland have found it more to their advantage to sell their catch at Halifax than at the chief town of their own colony.

The Halifax market is particularly valuable to United States buyers, who are large distributors to various parts of the West Indies, South America, as well as through their own country. The close proximity of Halifax to the markets of Boston and New York enables orders to be shipped promptly and speedily by rail or vessel, so that they can be landed in those markets twenty-four to forty-eight hours after shipment, or can be forwarded to the distant West over the excellent railway systems of both countries.

The fresh fish business is being carried out most successfully from the Port of Halifax year by year. The demand throughout the *western part of our Dominion for salt water fish, not to mention* the great possibilities for this business in the western part of the United States, is being made to lead to an enormous increase, and with the system of refrigeration now existing on all properly equipped railroads, it only remains for our hardy fishermen to give greater attention to the prosecution of this enterprise to secure a profit for themselves as well as to confer a great boon on the multitude of consumers by giving them more of that brain-making fish diet with which we in these maritime provinces are so highly favored.


NORTH SEA
SCOTLAND
GLASGOW
ENGLAND
LIVERPOOL
LONDON
FRANCE
PORTUGAL
SPAIN
AFRICA
NORTH ATLANTIC OCEAN
HUDSON BAY
LABRADOR
DOMINION OF CANADA
QUEBEC
MONTREAL
TORONTO
OTTAWA
PORTLAND
BOSTON
NEW YORK
WASHINGTON
UNITED STATES
NEW ORLEANS
GALVESTON
G. OF MEXICO
TAMPICO
MEXICO
ST. THOMAS
ST. KITTS
SOUTH AMERICA

Halifax as a Coal-Bunkering Port

IT is hardly necessary to recall to our readers the fact that a very extensive trade is conducted between such ports as New Orleans, Galveston, Charleston, Savannah, Jacksonville, Mobile, Pensacola, and other points in the Gulf of Mexico and a large number of continental ports. Every year an immense number of steamships leave the first mentioned ports loaded with cargoes of cotton, grain, phosphates, pine lumber, pig iron, and kindred freights destined for consumption throughout Europe. This traffic continues all the year round without interruption, owing to the fact that the shipping and receiving ports are always open to navigation. The port of Halifax for a long time has been accustomed to doing a certain amount of the trade involved in supplying coals to vessels engaged in this traffic, but it is the desire of those engaged in the business that this channel of activity should be increased very materially. As many as from three to six steamships of modern capacity leave each of these southern ports every day for Europe and, on account of the distance between the two points it becomes necessary for them to replenish their coal bunkers at some point midway between the points of departure and their destinations. Newport News and Norfolk, Va., have all along enjoyed the benefit of this valuable trade but we see no reason why American ports should enjoy a monopoly of a business which is worth a great deal annually to the port which can secure it. A glance at the map opposite will show that it would be possible for steamships to call at Halifax for coal in preference to going to either one of the two American ports mentioned. From the southernmost extremity of Florida it is almost a straight course to Halifax and from thence across to the chief ports on the other side the course is subject to no deviation. As far as distance is concerned it is doubtful whether there is any time to be gained in choosing either Halifax as a calling port or Norfolk, Va., the one advantage which we claim for Halifax is, that steamers leaving southern Gulf ports with the intention of calling at Halifax will be enabled to carry from three to four hundred tons more cargo according to the tonnage of the steamer, than if bunkering is done at an American port. This we think to be sufficiently important to justify Halifax being chosen as the most suitable point at which to secure additional coal supplies. Without doubt we should long ere this have enjoyed a very much greater measure of activity in this direction were it not for the fact that the English underwriters, have so discriminated against Halifax that they have made it almost impossible for steamships to call for the purpose specified. They claim that the practice of steamships coming to a Canadian port means an added risk and therefore they have put in force a series of discriminatory insurance rates which practically operates to shut out these steamers. This in face of the fact that Halifax is the safest and easiest of access of any port on the Atlantic coast. In looking into the reason for the holding of such views regarding this port, it seems quite probable that Halifax, being the chief shipping port of the Maritime Provinces, all disasters which occur in shipping within telegraphic distance of the city are usually reported to foreign underwriters from this port. Every investigation held with respect to marine losses is also conducted here. Therefore it is not strange that insurance men in Great Britain and elsewhere should come to associate the port of Halifax with quite a number of marine casualties which occur in waters far removed indeed from this locality. This is the only way in which we can account for the prejudices which these underwriters have shown toward this port and others in the Maritime Provinces, and which have resulted in shutting us out from our legitimate share not only in the business of coal bunkering but also in many other avenues of trade which we should enjoy. It is claimed by men who know something of the circumstances, that American marine insurance men have been the prime movers in influencing insurance rates in this connection, and it is charged that they have done so in the interest of several of the American coaling ports.

We feel quite sure that if the many advantages which Halifax has to offer to the various steamship lines engaged in the traffic between Southern, British and Continental ports including the Mediterranean, as a suitable station for coal supplies were better known, we should have sufficient pressure brought to bear upon the insurance companies to compel them to raise the embargo which prevents these lines coming to Halifax for their coal. The relative proximity of our coal mines to such a port as Halifax makes it easy for us to have supplies of the fuel always on hand. We have four firms engaged in handling coal who make a speciality of supplying steamers with the best grade of steam coal and who have ample facilities for transferring such supplies in the most improved manner and with the greatest despatch. We could cite many instances of ships which have arrived here within the past year or two which have taken in their allotment of bunker coal in probably as quick time as is furnished anywhere. Already we have one or two lines of freight *steamers which have positively determined to make Halifax their* calling port in place of Newport News or Norfolk. This has been brought about mainly through the success which has attended the visit of one or two of the lines under stress of weather and who have been coaled at this port in such a manner as to call forth the commendation of the captains and owners.

Our Halifax Board of Trade has taken up the matter and made very strong representations to the English underwriters on the subject of the discriminatory insurance rates, and it is hoped that the combined action of this Board with others in the provinces will have the result expected and that provincial ports will be freed from a barrier which prevents them from reaping their legitimate reward as valuable ports of call between European and southern ports.

Coal prices at Halifax are as low as at any competing point; and while this is not one of the chief arguments in its favor, it is one that, combined with others, should be sufficient to justify us in looking forward to a very much larger volume of trade than we have enjoyed in the past. The important point that Halifax is easily entered by steamships of the greatest tonnage at all seasons of the year, is not the least factor in impressing our claims for consideration at the hands of steamship owners. There are probably no less than from fifteen hundred to two thousand steamships engaged in this trade and if we can secure a proportionate share of the coal bunkering business it will not only make the port better known but prove a valuable addition to our industrial activity. There is no case on record of a steamer from a southern port meeting with an accident while making Halifax for bunker coals. This is a fact that should afford sufficient evidence of the desirability of the port enjoying a share of this trade.

The appliances which are available at this port for the rapid coaling of steamships are quite sufficient to enable us to take care of all the tonnage which comes our way. There is always a stock of coal ready for immediate delivery, and the number of coastwise vessels and barges which are engaged in the freighting of coal to this port is large enough to preclude the possibility of our ever experiencing any want in this respect. As regards the speed at which we can handle bunker coal at this port, it is a matter of record and common knowledge among those engaged in the trade, that one ton per minute is about the average rate given to those ships which have already favored this port by calling here. We think this should be sufficiently rapid to meet the wishes of almost any captain or owner. We *trust some substantial move in the direction of lift*ing the insurance obstacles will be made, and if so Halifax will assuredly come in for her share of the bunker coal trade.

The quality of our Nova Scotia coals for steaming purposes is another point which we would urge upon those interested, and it has been demonstrated that they are equal to the products of any mine in the world.

Canada and the West Indies.

Trade Relations Between Them Should be Better.

THE events of late years have caused the various parts of the British Empire to draw closer to one another. The British sentiment all over the world is growing stronger and each portion of the Empire takes a more kindly and practical interest in the affairs of every other. Canada was the first to give expression to this stronger sentiment in practical measures, and since the day when the preferential tariff was brought down in the Canadian House of Commons the loyal spirit of all the other colonies towards the mother country and towards every individual part of the Empire, Canada among the rest, has been growing more and more conspicuous.

The people of Canada, therefore, like Britons elsewhere, exercise a lively and practical interest in her sister colonies. Canada is naturally interested in her own welfare, but that does not keep her from feeling happy over the successes that other British possessions have scored and regretful when the lines have fallen to them in unpleasant places.

With considerable anxiety the Canadian people have watched the results of the European bounty system as applied to beet culture in its effect upon the industry of the British West India islands. We have hoped for a remedy and have followed the efforts made in England and been exceedingly regretful that something more practical has not been done to relieve the situation which threatens to become intolerable if it has not become so already.

Naturally it is very difficult for the English government to solve the problem speedily. Far removed from the seat of the difficulty, it was necessary, in order to come to a correct understanding of it, to send a Royal Commission to enquire into it. But the report of that commission only seemed to leave them more perplexed than ever. Engrossed as they are at Downing street it is not surprising that even with all their strong desire to do so they have not yet arrived at a satisfactory solution of the difficulty.

While the British government wrestled with this problem Canada looked on, hopeful that the outcome would be encouraging. But when it became apparent that that government had not made any very great progress despite its desire and vigorous effort to do so, various Canadians began to bestow some thought upon it more than they had done, their fellow-interest prompting it, and the fact that we are in very intimate touch with the islands giving us some confidence in our ability to deal with it more successfully.

Canadian thought bent once upon the problem, we began to discuss wherein we could assist the West Indies by doing something to encourage more intimate trade relations with the islands. We sought to find out what the West Indies have to sell, what quantities they can produce and what proportions it would be possible for us to absorb. On the other hand we have also sought to discover if it would be possible for us to send to the West Indies, in exchange for their products, a greater proportion than we do of the things they import. The conclusions we have come to are, that, while we cannot undertake at present to absorb all the products of the West India islands, we can at least undertake to absorb a very large proportion, and there is no doubt but that as time increases we will be able to absorb more. We also have come to the conclusion that we can balance things by catering to many of the wants of our fellow Britons in those islands in greater degree than we have done.

It is not surprising that when beset with difficulties the islands should turn to the United States to see if perchance any relief might be forthcoming through closer trade relations with that great country. The results of that policy have been that treaties have been under negotiation for some time, though with what result we cannot say at this moment. But we think that the United States cannot, perhaps *will* not, give the islands the same consideration that Canada will. There is no doubt that Cuba, Porto Rico, Hawaii and the Philippines as well as the sub-tropical portion of the United States will claim so much off that government that the British West Indies will naturally not command the consideration that they might to-day. On the *other hand Canada is a rapidly growing country with no tropical* climate. What more natural then than the idea that perhaps the British West Indies might become the Canadian tropics?

When we speak of the British West Indies becoming the Canadian tropics we do not necessarily mean that Canada and those islands should form a federation. We must say, however, ever, that that idea has not been absent in the consideration of the question, and that it has occurred to us to be an eminently desirable thing. Some satisfactory reciprocal arrangement might be made. There may be many ways of bringing about the development of the West Indies by the development of trade between them and this country. But the uniting of the two countries seems to be the method *which in the end will prove* the most practicable.

Someone has suggested that Canada place countervailing duties on beet root sugar so as to admit of the extensive use of cane, which is one of the chief articles produced in the islands. No doubt the Canadian government would do it if it were of any use; but as a matter of fact it would not be, for the American refiners in order to obtain the rebate which their government grants on beet sugars for export wilfully label as beet sugar, sugars which they produce cheaply from American cane.

If the Canadian government were to put countervailing duties on beet, it would mean that our refiners would be compelled to go out of the business altogether, which would not tend to bring any relief to the producers of cane in the West Indies. Canada might cut off the duties on raw cane sugar, but that would mean the loss of a great amount of revenue, which would furthermore be simply an act of benevolence quite as insulting to the islands as disastrous to our own revenues.

While we hope that a satisfactory scheme for federation of the islands with Canada may be arrived at, along with a parallel scheme for local government such as the Canadian provinces enjoy, we do not purpose to discuss it here. The only thing we wish to point out is that there is room for expansion in the trade being carried on between Canada and the island, a fact which we think will be appreciated on a study of these statistics made up from the Canadian Trade and Commerce reports and the tables of Trade and Navigation:

Table showing the value of commodities imported into Canada from the British West Indies and British Guiana, and also the value of the same commodities that are imported from all countries.

Commodity.	Imports from British West Indies and British Guiana.	Imports from all countries.	
		Total.	For Home Consumption.
Asphalt	$ 1,248	$ 55,164	$ 55,164
Cocoa beans	17,293	63,822	63,822
Cocoanuts	19,932	27,991	27,976
Coffee	27,835	33,077	33,069
Flax, hemp, jute & manufactures of	9,953	1,439,619	1,419,069
Fruits	15,289	1,246,838	1,148,626
Molasses	287,539	590,416	559,732
Salt	19,759	34,184	32,792
Spirits—rum	14,170	91,041	28,032
Sugars	264,798	5,258,213	4,868,956
Tobaccos	4,838	1,063,403	482,793

The above are a few of the principal products which Canada imports from the West Indies. They all show possibilities of expansion. In fruits, molasses, sugars, spirits, coffee, cocoanuts, and cocoa beans Canada could take much more than she does, if some arrangement were brought about which would be an incentive to it, such as free trade between the islands and Canada. Some of the figures above may be a little misleading, such as flax, hemp, jute and manufactures of, as those figures include the finer manufactures in which the West Indies do not engage. The figures given for fruits represent the value of oranges, lemons, limes and bananas alone imported from the West Indies on the one hand and from all countries on the other.

Halifax's Banking Institutions.

IN this branch of business Halifax occupies a unique position, as being the only capital city in Canada, or probably on the continent of America, where neither a bank failure nor a serious run on any of its banking institutions has ever been known. This is something to be proud of, and demonstrates the safe and conservative methods adopted in the conduct and management of our financial institutions.

Up to the year 1825, every business man was his own banker, his office safe being the bank in which he deposited his specie which was the circulating medium, and his other valuables, paper money being comparatively unknown, and consisting merely of a small provincial issue, the few Bank of England notes occasionally met with, and shin-plasters, so called, issued by a few of the leading mercantile houses. The value of the circulating medium, consisting of doubloons, guineas, dollars and pounds, was determined from time to time at meetings of merchants, and transactions of all kinds were conducted largely on a cash basis, the purchaser carrying or sending by his clerk the bag of coin representing the amount of his purchase.

In 1801, Messrs. Brenton, Forsyth, Hutchinson, Hartshorne, Forman, Fraser and Beckwith, well known names in the history of our city, proposed the establishment of a joint stock bank, with a capital of £50,000, in shares of £100 each; but as they sought a monopoly of the business, the House of Assembly gave the project the three months hoist, and it was abandoned. In 1811, another proposal was made to establish a joint stock bank, and subscription books were opened at the office of Henry Yeomans, Insurance Broker, but the movement was apparently unsuccessful, as nothing more was heard of it.

The first issue of provincial notes was made at about the end of the eighteenth century, which was followed in 1812 by a further issue of twelve thousand pounds, and in 1819 by ten thousand pounds, with further increases at frequent intervals, as the necessities of the public works of the province demanded, the last issue made being for the payment of the construction of the present Post Office and Custom House building. In 1820 a number of the leading merchants issued shin-plasters, so called, of the denomination of 1/3, 2/6, and 5/, as also a large quantity of copper coin, but as some of them failed to redeem their paper in coin when called upon, the legislature put a stop to the issue of private notes of a smaller denomination than one pound, reserving that right to themselves.

In 1825, the following gentlemen founded a private bank, viz; Messrs. Cogswell, Pryor, Collins, Tobin, Clarke, Cunard, Allison and Black, which was known for many years as "Collins' Bank." They had no charter, their capital, note circulation, and liabilities to the public were unknown, but their bank became an important factor in, as well as a convenience to the mercantile community, and at once enjoyed the confidence of the public. After nearly half a century's existence as a private Banking House, it came under the requirements of the Dominion banking act, and as "The Halifax Banking Co.," a joint stock corporation, has become one of the prosperous institutions of Halifax, with branches not only throughout the province of Nova Scotia, but also through the neighboring provinces of New Brunswick and Quebec.

In 1832 the Bank of Nova Scotia was chartered as a joint stock bank, and at once became a formidable rival to the old "Collins Bank." Its progress and prosperity were very rapid, and notwithstanding some heavy losses during its long career, it has proved to be one of the most successful institutions in the Dominion, and under exceedingly able management; especially during the last quarter of a century, it has been brought to one of the proudest positions occupied by any banking institution in the Dominion, its reserve fund exceeding its capital by a considerable sum, and its ramifications extending from the Atlantic to the Pacific in the Dominion, and to various commercial centres in the neighboring republic, the West Indies and Newfoundland.

Next came the Union Bank of Halifax in 1857, and like its predecessors it has fulfilled its part, and done its duty to the City and Province generally. Its agencies extend in various directions throughout the province, and its position is one of soundness and progressiveness.

In 1864, a few of the leading merchants and capitalists of the city, comprising J W. Merkel, Hon. E Kenny, Jeremiah Northup, Wm. Cunard, John P. Mott, T. C. Kinnear, John Tobin and George P. Mitchell established a banking partnership called the Merchants' Bank. Like the old Collins' Bank its capital was unknown, but the means, high character and standing of its founders inspired the utmost confidence, and enabled it at once to enter upon a large and profitable business. After Confederation had taken place, its proprietors conformed to the banking act, and formed a joint stock bank under the name of the Merchants' Bank of Halifax, which has rivalled the Bank of Nova Scotia in its progress and prosperity, due to sound and conservative management, and is now a good second to that institution, its reserve fund having nearly climbed up to its capital and its branches extending throughout the length and breadth of the Dominion and the commercial centres of the United States, the West Indies and Newfoundland, and even thousands of miles away in the golden Klondike country. Halifax has good reason to be proud of the position attained by its two leading financial institutions, whose future prospects are of the brightest.

A number of merchants who were not taken into the Banking partnership which started the Merchants' Bank, formed shortly afterwards a joint stock company called the People's Bank of Halifax, which under good management, has conducted for a number of years a prosperous business, and like the other banks has not confined its attention to the city, but has extended its operations to various parts of the Province, New Brunswick and Quebec.

Besides the above there are several private banks owned by wealthy citizens, and two chartered banks not local enterprises, one of which, the Bank of British North America, is of English origin, and the other, the Bank of Montreal, is a branch of that Montreal financial institution which is the fourth largest of its kind in the world.

The foregoing exhibits a chapter of extraordinary success in banking operations of which any city might be proud. It is indicative at least of the fact that the merchants and business men of Halifax are enterprising and progressive and that they do their business in a business-like way. Halifax seems to have a genius for banking, and this genius has developed an instrument in our banks of great service in placing industrial enterprise on a firm footing. The Merchants' Bank of Halifax, for instance, last winter undertook to place a large block of stock in the immense iron and steel concern which is at present beginning operations at Sydney, Cape Breton. The Bank of Nova Scotia has given assistance to Halifax and other Canadian enterprises in Cuba and South America. The Union Bank of Halifax as bankers to the Nova Scotia Steel & Iron Co. of New Glasgow, N. S., has done great service to the province. All this goes to show that Halifax financiers are alert and that they have confidence in our own people.

Recently a new provincial loan was floated and a number of Halifax banks tendered for a portion of it successfully; and the fact that they did so convinced the financial houses of England that Nova Scotia banks had confidence in their own country, and that they were not afraid to risk an investment in it. In many other ways have the banks of Halifax proved themselves of great value to the city and province. But their enterprise has not been confined to the home fields alone, they have established agencies in the other provinces of the Dominion of Canada, from the Atlantic to the Pacific; no less than one hundred and twenty-five branch offices of the Halifax monetary institutions, being now in the field of active business between Halifax, N. S., and Victoria, B. C. and abroad.

The joint capitalization of the Halifax banks is $5,800,000, of which $5,500,000 is paid up.

Halifax as a Butter and Cheese Shipping Centre.

IN putting forward the claims of Halifax as a desirable centre in connection with the development of a large butter and cheese manufacturing industry in the Maritime Provinces, it is necessary to consider briefly the volume of improvement which has taken place in these departments during the past few years. Although creameries and cheese factories have multiplied amazingly in the Maritime Provinces during the past ten years, it must be remembered that in this connection we are still in our infancy. There was a time when a great deal of the butter and cheese consumed in Nova Scotia, New Brunswick and Prince Edward Island, was imported from Upper Canadian points, but this feature of the trade is now a thing of the past and we have taken our place as important producers. The one great point which is involved in discussing butter and cheese possibilities, is the vast field which is open in the Maritime Provinces for an extended range of these industries. By the progress that has been made in the past few years we are assured of what the future has in store for us. A country which aims to lead in the production of butter and cheese must be possessed of climatic conditions which include abundance of sweet grass, good water and cool nights. These three points are particular features of the agricultural districts of the Maritime Provinces and have more than anything else contributed to the accomplishment of a considerable measure of progress in butter and cheese making. *The effect of these weather conditions has been to* produce a butter, the consistency and flavor of which closely approaches the famed Danish butter which has obtained such a strong hold upon European markets. To give an idea of the amount of development that has taken place in a comparatively short space of time, we may cite the case of Prince Edward Island which has gone into butter and cheese making on a scale both practical and extensive. It is estimated that the exports of these during the present year from this small province will amount to $600,000. A few years ago the dealers there were importing butter from Canadian points of production. The Island being wholly an agricultural country, the progress which has taken place is more marked than in the other provinces, where other industries have divided the attention of the inhabitants. In New Brunswick for instance, lumbering is the important industry, but with the denudation of their vast forest areas it will be necessary for the farmers to utilize some of the land in the pasturage of vast herds of cows and from this it is expected that New Brunswick will, within a reasonable time, become an important source of butter and cheese production. In Nova Scotia, fishing, mining and lumbering have combined to affect the amount of development given to agricultural interests, but the necessity of cultivating to a greater degree our dairying industries has become apparent to the farmers of this province and to-day we are in a position to say that we have made a decided start in this valuable occupation. Now the point which we wish to emphasize in *connection with this topic, is that Halifax, by reason of its geo*graphical position should be the chief centre for the distribution of the combined dairy products of all three provinces, and in order to attain this result it is required that there should be established at Halifax an extensive depot for the receiving and storage of not only butter and cheese, but dressed poultry and other products from our agricultural districts. Until there is some such central station at which we may concentrate the production from each district, we are hardly in a position to handle the trade which the British and other markets offer to us. What we desire is that Halifax shall occupy in relation to the Maritime Provinces, the same position as Montreal holds with regard to the butter and cheese production of Ontario and Quebec. To do this it will be necessary to have cold storage facilities where these perishable goods may be stored until such time as they may be placed on the markets to the best advantage. Every year the consuming public, both at home and abroad is being educated to the use of higher grades of butter and cheese and it is in the development of these industries that we hope to attain undoubted success. Both the Dominion and Provincial governments have grappled with the question of aiding the agricultural districts of the Maritime Provinces in the production of these two articles and have, by means of subsidies and direct instruction from capable officials, made it possible this year for Nova Scotia to send her first important shipment of butter to Great Britain where it has met with satisfactory returns. It is considered by leading men who are closely in touch with this subject that in the production of these two articles in the future, there is to be found one of the most important natural industries of which the provinces are capable. Our provincial butter making establishments are as yet on too small a scale to enable them to make butter as economically as it should be produced. This is on account of the limited quantities which each of them turns out and which brings the cost to a higher figure than the conditions justify. It is a well known fact that a large creamery which makes the proper quality of butter can obtain a higher price for its output than a smaller establishment. This is because the quality is of a more uniform grade, and large quantities may be handled to better advantage than limited parcels which must be held for some time until enough is got together to make shipments. This *latter drawback of course causes delay, and delay affects the quality* of the output. If the capacity of our present creameries were increased three or four fold we would be able to say that the cost of production had been reduced considerably ; sufficient in fact to give them a greater hold on outside markets. Within the past few years quite a number of factories which hitherto were engaged in cheese making have devoted their attention to the manufacture of butter, and it may be said here that the industry of butter making is of much more value to an agricultural district than is cheese making. This is on account of the skim milk which is used in cheese making, but which in butter manufacture is utilized by being fed to stock to better advantage. A number of competent observers who have passed through the provinces and examined their possibilities with respect to an increased butter and cheese production, have given it as their opinion that no country is better fitted by natural conditions to become valuable producers of these classes of goods. These are not mere superficial critics but competent authorities who are thoroughly familiar with the circumstances which are necessary in the building up of the valuable sources of wealth and industry and their opinion must be regarded as possessing due weight in influencing the development of these wealth producers. By having at Halifax a central plant well equipped with cold storage facilities, we would be in a position to invite shipments on a large scale from every producing district in the three provinces. This would make Halifax the headquarters in receiving and exporting. We then *should have available quantities of butter and cheese to offer British* consumers and there would be more uniformity in price, grade and other features. In addition to this we would be in a position to require that suitable refrigerating accommodation be provided on steamers between Halifax and points in Great Britain, because we should have the volume of goods to ship and would have a right to be granted cold storage arrangements on steamers to many points other than now included in our steamship lines. At present we have only the London market, that being the one point in Great Britain to which we have these facilities. By extending our trade relations with Liverpool, Bristol, Manchester, and other consuming points in Great Britain, we would have a much better chance of obtaining better prices for the largely increased volume of butter and cheese which would, under these circumstances, naturally find their way to Halifax as a distributing centre.

The Flour Exports of Halifax.

THE last half-dozen years have seen very important changes in the flour trade of the Maritime Provinces. A business which was then comparatively insignificant has grown to proportions that rank it among the largest in Canadian commerce, and to-day the flour exports from Halifax have quadrupled those of just a few years ago. The increase has, indeed, been almost phenomenal

The marketing of flour is a different process from that of other produce. With the same population, and the same degree of individual appetite, the demand remains also the same, and, as a rule, increase in the one goes only with an increase in the other. Thus, allowing for the additions to Canada's populations during these few years, the actual amount of flour consumed may be considered practically unchanged. The increasing surplus in Western wheat, and the increasing manufactures in the upper provinces, find outlet in foreign export. The increase in the export from Halifax is due to the fact that Nova Scotia's flour markets are now being supplied from Nova Scotia ports, instead of from American ports, as formerly. It is the story of how this change was brought about that explains the big figures of Halifax's business to-day.

Fifteen years ago the country merchant who wished to stock up in flour came to Halifax for his supplies. Then he changed his marketing to Boston, and until within five or six years he has been buying from dealers in the American hub. To a very small extent he is doing it still, but the increase of shipments to Halifax, year by year, show that the Nova Scotia-Boston flour trade has fallen to a mere shadow of what it once was. Quantities of American flour were formerly brought in, but now only Canadian flour comes to the provinces, be it from Canadian markets or from Boston. Western millers were in the habit for several years of storing their flour in Boston, in bond, and shipping to Nova Scotia as the demand called for. Sailing vessels from all along the shore did, for some eight or ten years, a thriving business in this way, carrying miscellaneous freights to Boston, and returning with Canadian flour, American-bought. Halifax dealers were completely handicapped, for with the superior advantages which had been given Boston in the way of railway freights, competition on equal grounds was out of the question. The American merchant could undersell him in his own market. So the trade went to Boston, and Halifax was for several years deprived of a business which was rightfully hers.

But there came a change. Influence was brought to bear upon the railway people, and intelligent representation of the case resulted, five years ago, in a decrease of the freight tariff to St. John, of from ten to thirteen cents per barrel. This had the effect of diverting the bulk of the trade of the Bay of Fundy ports to our sister city. Halifax, however, still remained unprovided for until in June, 1897, the freights to this port from western milling centres were reduced to a rate that is about ten cents a barrel more than to Boston. This timely change served to equalize the chances in favor of Halifax. The results were gradual. Many provincial merchants still maintained their relations with Boston dealers, but as the fact has become more apparent that Halifax is in this, as in all other respects, the natural shipping port for the province, the flour trade has been diverted into an all-Canadian channel, and the increase in flour tonnage carried to Halifax has been paralleled by a corresponding decrease in the shipments of Canadian flour to Boston. A small amount is still brought to this port from the United States as return cargoes for coasting vessels, but the annual total is not more than 20,000 barrels. By way of contrast with this meagre residue of a business that once was great, the following statistics will serve to show the proportions of the flour business that is controlled from Halifax. The figures as given in quarterly totals are the receipts for the twelve months of the respective years, and represent the carriage of the Intercolonial and Canadian Pacific railways to this port.

FLOUR RECEIPTS AT HALIFAX.

	1896-97	1897-98	1898-99
May, June, July	17,065	29,726	79,659
Aug., Sept., Oct.	42,560	51,017	89,613
Nov., Dec., Jan.	27,805	71,050	90,301
Feb., March, April	30,260	68,238	80,587
	117,690	220,031	340,160

It will thus be seen that in three years the business has trebled. Halifax now has the control of the flour trade, and provincial merchants are independent of the American market. So thorough has been the transformation in this particular that one or two Boston commission firms, which formerly sold immense quantities of flour direct from their own wharves, are now supplying their customers from Halifax. As already stated, however, there still remains a small amount of Boston business, and for this there are several reasons. Ontario millers who find themselves with an occasional over-stock can very conveniently store it in Boston. The railway carriage is less than to Halifax, and the freight rate correspondingly cheaper. Very frequently the consignment will be purchased by speculators, who hold it for the provincial trade. Failing such a sale as this the miller can store his flour for thirty days free, and for an extra thirty days for two cents per barrel. This very low rate of storage, with the quick transportation afforded by the short line railways, makes it possible for Boston to still hold a portion of the Canadian flour business, though lessening each year.

On the other hand, Halifax has advantages that are more than equal. The freight rate from the western milling centres is a few cents higher than to Boston, but the railway people give the shippers an export bounty, or a rebate on each barrel shipped, which more than offsets the difference in freight. The other strong point in favor of Halifax is that it is a water port in close touch with the local markets which form the ultimate destination of the flour. As the business and geographical centre of the coast country, Halifax offers the miller facilities which Boston cannot offer, and experience has shown that from the standpoint of business, as well as sentiment, the Canadian port is better than the American.

Of the 340,000 barrels of flour brought to Halifax in twelve months about 130,000 barrels are consumed in the city and Dartmouth. The balance is exported, chiefly by water, to the various markets along the coast and the surrounding country; to the West Indies, Newfoundland and Cape Breton. Vessels from all part of the province make Halifax a business port, and this fact, together with railway connection east and west, make it a distributing centre without a peer.

From the great western lakes, the centre of the wheat country, to the Atlantic coast is a long journey, and it is only by the co-operation of the railway managements that it has been possible to overcome the difficulties in the way of an all-Canadian route of shipment. As before stated, however, these difficulties have at last been conquered, and the above statistics tell the result.

Another large item in Halifax's exports is corn. The shipments in this commodity, via Halifax, have nearly doubled within the past twelve months, and the same remarkable increase, for much the same reasons, as in the case of flour applies equally to corn. The western millers are able to put their product on the sea-board with the least expense, and the greatest all-round convenience and profit, at Halifax, and steamships and sailing ships carry cargoes thence to the local markets. Flour, corn and unmilled grain will, in the future, to even greater extent than in the past, add big figures to Halifax's exports. The completion of the new elevator will afford facilities for wheat shipments which, in conjunction with our water advantages, will put Halifax easily at the head of Canadian shipping ports. A large part of Canada's grain crop will come this way, both manufactured and in its raw state.

Halifax as a Hardware Centre.

IT will be readily granted that that department of trade which is included in the classification of hardware, is as important a division of commerce as any that may be named, especially in a country which calls for so many forms of light and heavy hardware as is true of the various portions of the Maritime Provinces. Prior to 1867, when Nova Scotia, New Brunswick and Prince Edward Island were united in the bond of confederation with Canada, Halifax enjoyed the position of being practically the sole distributing point for the hardware trade of these three provinces. This was because of the fact that Halifax was the chief port which enjoyed regular communication with Great Britain by means of sailing packets. At that time there were no railroads to speak of intersecting the various territories, and the carriage of merchandise was done largely through means of transient coasting vessels which plied regularly between Halifax and the outlying ports of the Maritime Provinces. Halifax being located in the centre of this district, it was quite natural that country merchants should look to Halifax as a market for their produce, and in turn to purchase fresh supplies of all classes of goods necessary in their avocations. There were but three or four firms engaged in the wholesale hardware trade at that time, and nearly all their purchases were made in Great Britain in large quantities and brought out in sailing packets direct from London, Liverpool and Glasgow. No competition from any source then threatened the supremacy of Halifax as the chief distributing centre for hardware supplies. Three or four jobbing houses were then sufficient to handle all the goods required for consumption in the Maritime Provinces, and these firms were also largely interested in shipping and the supply of fishing outfits. For this reason their energies may be said to have been somewhat divided, and therefore it is not strange that a certain amount of laxity in watching the progress of their hardware trade should result in inviting competition from such ports as Montreal. Firms of that city, with commendable activity, began to send travellers throughout the Maritime Provinces after the union of the provinces, in the search for new business, and, we regret to say, they were in a very large measure successful in taking from our Halifax jobbers a considerable portion of the trade which they had previously enjoyed. Not only did they secure this business, but for a number of years they managed to keep it, and it was not until shipbuilding and the supplying of fishing outfits had declined to some extent, that our Halifax jobbers awakened to the necessity of meeting Canadian competition. In the early history of the hardware business in Halifax it was not customary to send out travelling salesmen, and we think this true of all branches of business, but the competition referred to had the effect of introducing the system of selling goods by means of travelling representatives, and it is owing to this feature of the trade that Halifax owes its recapture of the business which it had permitted to pass into other hands. In order to afford a fair indication of the volume and the value of the trade which Halifax handles each year in hardware, we may say that at present there are nine jobbing firms in the city who turn over an aggregate volume of two million dollars per annum. This quantity of goods is distributed to as far removed a point as that portion of New Brunswick bounded by the Strait of Northumberland. Of course the custom of importing direct by merchants in smaller towns of the province has been a feature which has militated against the progress of Halifax in controlling the entire trade, but on account of our commercial connection with the leading merchants of these various outports, the city of Halifax is enabled to maintai that position which is rightfully hers as the chief distributing centre for this class of goods. Montreal competition has been so successfully met, that, excepting in a few localities, to-day we may say that it is almost an unknown quantity. This is quite as it should be, because our city is so situated, geographically, as to take advantage of the low rates of freight by fortnightly steamers from Great Britain and New York, and semi-weekly from Boston, and we are therefore in a position to lay down goods at this point at as low a figure, if not lower, than any other port in Canada. We might except Montreal perhaps, during the summer months, which has the advantage of a large number of competing steamer lines from European points that bring hardware cargoes to that port and take out various grain cargoes and are thus enabled to carry goods at a lower rate. The same arguments which apply to Halifax as a distributing point for groceries and many other articles is also true in connection with its hardware trade. Whether we wish to ship east or west, by water, or inland by railway, we are not surpassed by any portion of Canada in the facilities which we have for placing our goods at the door of the consumer. Lines of subsidized steamers make regular sailings from Halifax to sea ports on the eastern and western coast of Nova Scotia, Prince Edward Island and Cape Breton, and inland, the Dominion Atlantic and Intercolonial Railways afford additional means for the distribution of goods throughout the farming, mining, fishing and fruit growing districts. Every year we are adding to our railway mileage in this province, and are opening up new and promising fields for the increase of general trade, and Halifax, as a natural consequence, reaps the advantage. And for these reasons we believe that Halifax will, as time passes, become more and more a valuable central point from which to send out parcels of hardware even to the far West. We cannot too strongly emphasize one point in connection with the past and present history of the hardware trade in this city, and this is the fact that nowhere is there a higher standard of integrity than among the hardware men of Halifax, and their business reputations among the manufacturers of Great Britain, and, in fact, the world, is excellent, and enables them to have the benefit of a favored treatment which is meted out to the best buyers in any country by firms who value the trade of such houses. The fact that we have employed by the nine firms doing business in Halifax, as many as twenty three travellers, is a capital indication that the Maritime Provinces, as a whole, are pretty thoroughly covered in the search for all available business.

No small sub-division of the hardware trade is that which is known under the head of mining supplies. Halifax is the central point for the distribution of this class of goods, and the volume of trade which is carried on in this line is quite extensive, when it is remembered that nearly fifty producing gold mines, and a dozen active collieries are located in the province, and each of these is a buyer annually of large bills of steel, dynamite, powder, tools and builders' hardware. This is not speaking of many other avenues in mineral development which call for more or less supplies of hardware, and which in every case is secured by Halifax. There is still a large field in the Maritime Provinces for the distribution of mining machinery, including drills, compressors, engines, boilers, stamp mills, etc., which English manufacturers appear to have overlooked, and it might be worth their while looking into the subject.

Halifax As A Grocery Centre.

IN approaching the consideration of a question which involves the position of Halifax as a distributing centre for staple and other grocery supplies, it appears to be the simpler plan of procedure to first reckon up the number of firms engaged in the wholesale grocery trade, and arrive at an approximate idea of their aggregate annual turn over. At the present time there may be said to be about twenty firms in the city of Halifax who are entitled to be considered wholesale grocers and to handle such goods as may be deemed to come under the classification which is announced in our heading. Of course exact figures of these businesses are not obtainable for obvious reasons, but a fairly safe and accurate estimate can be made which is sufficient for the purpose we have in view. After a careful comparison of these figures, we can arrive at the conclusion that the average annual value of groceries distributed by the above firms will aggregate about $7,500,000. Now it must be admitted that a city of, say, 40,000 inhabitants which distributes this large quantity of goods in the shape of groceries, is a community worth investigating and whose trade, in this respect at least, is of sufficient importance to warrant the fact being known throughout a wider radius of territory than is at present the case. In these days of relatively low prices, $7,500,000 represents a very large quantity of groceries. Of course such staples as tea, sugar, molasses and flour will absorb by far the larger proportion of this amount.

Taking tea for instance, it is not too much to average the per capita consumption of Nova Scotia at 5½ pounds annually, which on a population of 400,000 means roughly, two and a quarter million pounds of tea which is required for provincial use and the greater portion of which is distributed through Halifax. Besides the quantity required for home consumption, there is a very large volume which is distributed by Halifax dealers throughout many points outside of the province and which go to swell their total tea sales. The value of this staple handled by Halifax grocers will amount to roughly three-quarters of a million dollars.

Sugars are another important division of the grocery trade in Halifax and as we have here located two large refineries, it may be taken for granted that the distribution of this staple is one of the most important factors in this division of the commerce of Halifax. On account of our West India connections, and our position as a maritime port, cargoes of raw sugars are a very frequent item in the manifests of steamers arriving at this port, and from this fact it will be well understood the importance of this staple as a component part of the trade. We have shipped refined sugars from Halifax to points as far west as Chicago; not, of course, as a steady business, but frequent enough to occasion mention. The capacity of our two refineries is said to be 300,000 barrels per annum, two-thirds of which is distributed throughout the provinces of Ontario and Quebec.

The same is true of molasses, and Halifax may be considered as one of the chief centres for the handling of this valuable product of the West Indies. On account of our large fish export trade with the islands in the West Indies, a greater range of qualities and grades of molasses are to be had on the Halifax market than elsewhere and the city has achieved quite a reputation from the fact that the finest grades of this staple may be purchased here more cheaply than in any other market, even including the points of production. Our sailing vessels usually bring return freights of this commodity and are thus enabled to lay it down at the very lowest cost.

The flour trade of the city of Halifax is also a very important sub-division of the general wholesale business, and, while we grind in the city a small proportion of the flour used in the province, the bulk of our supplies are delivered direct from the Ontario mills in car load lots. Halifax, moreover, has gradually regained a goodly share of the export flour trade which was formerly handled through Boston.

There are many features which contribute towards making Halifax a desirable centre for the distribution of all kinds of grocery supplies, one of the most important being the large fleet of coasting vessels which make this city their chief port of call, bringing in cargoes of fish and lumber and carrying back at low rates of freight such supplies of groceries as are required by their respective neighborhoods. All along the eastern and western shores of Nova Scotia are distributed in this way a very large aggregate quantity of these goods. This fleet has been supplemented during late years by a number of steamers making regular trips for the same purpose. Railway communication is also another feature which aids Halifax in occupying her enviable position as the best distributing point in the province. The rates of freight on groceries from Halifax to other points in the province by railway are low by reason of the fact that the chief line is operated by the Dominion government. American railway freight rates are higher than ours, and we can therefore distribute our goods more cheaply. Fortunately the bulk of our staple lines of groceries is produced in Canada, and can be sold by Halifax jobbers at as low a figure as any in the trade. On teas and molasses, which are imported, we have every advantage as regards ocean freights, a point which will be recognized from a review of other portions of this journal where the subject is considered in detail. In addition to these reasons there is the further one that the dealers of Halifax are buyers of large bills of goods in primary markets, and on account of the extent of the Halifax market we have the advantage of being offered first choice and refusal of many desirable parcels of goods, and the competition naturally arising from these conditions permits Halifax wholesalers to buy at very close figures Outside of mere sentiment, and the latter is a powerful argument, there are a number of reasons why the grocery trade of a large part of the province is and should be centered in Halifax. The character of the men engaged in this branch of trade is of the highest, and they have established a reputation for probity and straightforward dealing that in themselves are assets of incalculable value. All the arguments we have advanced point to *but one conclusion, and that is, that the home buyer* is bound by every consideration of sentiment and his own material welfare where freights are equal, to do his trading with Halifax firms, who are all in a position to offer advantages worthy of consideration. As soon as a number of projected connecting lines of railway are completed in various parts of the province it will place Halifax even in a better position than now, to handle a larger volume of goods. There are several districts yet in the province which will in time be more closely settled by reason of the establishing of industrial activities, and all these circumstances will mean added trade in such lines as are considered in this article. Halifax is an important shipping point in supplying a considerable proportion of the goods consumed in the Islands of Cape Breton, Magdalen and Prince Edward, besides the valuable trade which is done with Newfoundland, and which is growing every year as the result of improved steamship connections between these points. The volume or value of foreign goods brought into Halifax yearly is no criterion or gauge by which to arrive at a fair estimate of the extent of our annual business. It is chiefly in our domestic or internal exchange of commodities in which this city shews up to the best advantage as a distributor of all kinds of groceries and food supplies.

Therefore in making our estimate seven and a half millions of dollars as the annual aggregate turn over of the several firms engaged in handling groceries in a wholesale way, we believe the figures are conservative and as correct as can be obtained from a careful canvas of persons who are in a position to furnish approximate information concerning the subject. The magnitude of this one branch of trade should in itself be one of the *strongest arguments it is possible to offer in favor of provincial* buyers coming to Halifax for their supplies.

Destiny of Halifax As a Milling Centre.

This City Must Become the Chief Milling Centre of Canada.

MORE than a century ago, when New York was still struggling to throw off the habiliments of a village and assume the status of a city, Boston and Halifax were the centres of civilization and of a considerable trade on this continent—Boston the heart of the Puritan element, and Halifax the seat of Imperialism as represented by the British army and navy. Halifax, even then, was quite a shipping and industrial centre, probably controlling more trade with the West Indies than any other city on the Atlantic seaboard of this continent.

Halifax a Shipping and Industrial Centre a Century Ago.

At that time there was no great reach of back country, there were but few towns and no cities, unless Montreal and Quebec could have been so classed. Even the rich lands of Ontario were quite undeveloped and the great Northwest a dreamland.

Occasionally part cargoes of wheat were imported here from Hungary, which mixed with our home-grown was milled for local consumption, and probably formed an occasional export to the West Indies.

In the process of time Virginia and other states in the Union began the cultivation of wheat on a somewhat extensive scale, and before the middle of the present century Baltimore flours were beginning to be sold quite largely on this market. As the American flours came in, the milling business here shewed symptoms of decline. Then reproduction of wheat from the same seed year after year finally brought on the weavel, which destroyed the crops; so our farmers abandoned the cultivation of wheat, and the millers, failing to keep up with the times in improved machinery, finally dropped out of the manufacture of flour altogether. Within the past few years we have renewed the cultivation of wheat in the Maritime Provinces, with a yield varying from 15 to 40 bushels per acre, according to the soil and climatic conditions.

Original Sources Of Our Wheat and Flour.

After confederation, in 1867, we began to substitute Canadian flours, chiefly ground in Ontario, for the American. The process of substitution was slow at first—prejudice had to be overcome—but eventually the Canadian flours superseded the American, and now it is generally conceded by the highest authorities that Canadian wheats, especially Manitobas, are equal, if not superior, to those of any other country in the world.

To-day We Use Wheat and Flour that is Produced in Canada.

Our great Northwest began its real development on the completion of the Canadian Pacific Railway in 1885. Prior to that time the production of wheat and other cereals as reliable crops seemed somewhat experimental. The question of frosts had a deterring effect for some years, but as the country became inhabited and cultivation of the land was improved and extended, frosts, so far as injury to the crops were concerned, seem to have almost disappeared, and it is now a well-established fact that we have a vast territory, ranging one thousand miles or more west and north-west of Winnipeg, capable of producing the finest wheat and best cereals with the highest average of production per acre to be found anywhere in the world. It is not improbable that 60,000,000 bushels of grain of all kinds are being harvested this year in Manitoba and the Northwest.

Canada's Great Northwest.

The Winnipeg Board of Trade, in their annual report last January, predicted that Manitoba and the Northwest would be producing 100,000,000 bushels of wheat within a few years, and there is little doubt but that that great territory will be capable of a production of at least 1,200,000,000 of grain, whenever it reaches its highest development

Producing Capacity of the Grain Country.

This Northwest wheat is partially used for home consumption throughout the eastern provinces and partially for export to foreign countries. The great problem is, the transportation of these grains from the centres of production in the Northwest, to the centres of consumption throughout eastern Canada, Great Britain and the continent of Europe. To divert this trade from the American routes via Buffalo and New York, the Canadian government has been engaged for the past few years enlarging the inland waterways, thus supplementing the great railway systems of Canada in getting forward these north-western products.

Transportation of Grain via Canada's Canal System.

As our system of canals has a great advantage in reduced mileage as compared with the Erie system of New York, having but 56 miles between Buffalo and Montreal as against 350 miles between Buffalo and Troy, and as our canals when completed this year, will have five times the capacity of the American route, the problem of future shipments down the Great Lakes and the St. Lawrence River to the ocean is not a doubtful one; the natural advantages of the Canadian system over that of the American, solves it. Even the highest authorities in the United States are forced to concede this.

When the Montreal, Ottawa and Georgian Bay system, a shorter route to the head of the lakes, is added to the St. Lawrence route, we shall have two incomparable systems of inland waterways on a direct air line from the ocean to the head of the lakes, 650 miles nearer Liverpool, G. B., than it is from the head of the lakes to Liverpool via New York. Add to these water-ways east of Fort William (at the head of Lake Superior) the possibility of continuing the development of inland navigation from Fort William west to Winnipeg, thence tapping all the numerous tributaries of the interior by river and lake, almost to the foot of the Rockies, and reaching out north-west through the mouth of the McKenzie River to the Arctic Ocean, thus constituting the most wonderful system of inland navigation to be found anywhere in the world. The measure of this great possibility may be better

The Possibilities of Inland Navigation in Canada.

understood when we state that it is practicable to-day to enter the mouth of the St. Lawrence River and pass out at the mouth of the McKenzie River, a distance of 8,000 miles, with but 150 miles of portages.

* *

As the inland navigation of over 2,000 miles, from the mouth of the St. Lawrence to the head of Lake Superior, particularly the upper stretches beyond Quebec, can be conducted at an infinately less cost by using propellors with barges in tow, than by sending up expensive ocean-going ships, it is our contention that propellers, not two large for the canals, with barges in tow, capable of carrying 200,000 bushels of cargo at a time, can pass down from the head of the Great Lakes to Quebec, Sydney, Cape Breton, or Halifax, Nova Scotia, at a much less cost than by sending up ocean ships even to Montreal.

Economy of Carrying Grain to the Seaboard.

* *

Quebec or Sydney, if the harbors were open all the year round, would be first-class milling centres, especially for the export of flour to Great Britain and the Continent. Halifax has an advantage over both these ports in that her harbor is open all the yeau round. She has an especial advantage over Sydney, in that she is a large distributing centre for local and coast-wise trade in the province of Nova Scotia and for export trade to the West Indies. Besides, whatever facilities are afforded at present for export to Great Britain, are located here rather than at Sydney.

Halifax as a Milling Centre for Export Trade.

* *

The question may be asked, Why not export flour from the head of the lakes to the foreign markets, instead of bringing the wheat as far east as Halifax, milling it here, and exporting the product other than that required by the local trade?

One reason is that the cost of exporting flour is very much greater than that of exporting wheat. This objection might apply to exporting flour from Halifax, but we are 3,000 miles nearer Liverpool, G. B., than are the wheat-growing centres of this continent.

This question of difference in cost of carriage between wheat and flour is being dealt with at the present time in the United States. An appeal was made by the Millers' Association of the United States to the Inter-State Commission, for relief. That commission has just reported and there is no prospect of settlement in sight.

Four Reasons for Milling in Halifax Instead of in Other Centres.

Another reason is that wheat can be carried here in barges towed by loaded propellers, which cannot be done without a great deal of risk in crossing the Atlantic.

A third reason is that wheat can be milled on this continent at a very much less cost than in London, Liverpool or any other of the great British centres. A large mill, with all its equipments and requirements, would need from a half acre to an acre of land, which in the heart of London or Liverpool would cost an enormous sum of money; and if mills were located 20 or 30 miles out of these great cities, the cost of getting the product into the central markets would be greater than to ship it from New York or Halifax direct.

Still another reason is that the average time that it takes flour from Minneapolis or other western centres to reach the British and Continental markets is about 70 days, and in the fluctuations of the market this detention and the additional freight over wheat are considered serious drawbacks in the United States on the export of their flours. We might just say that the export of American flours last year was something like 16,000,000 barrels.

We saw a statement recently from a number of corn factors in Great Britain to the effect that if the difference in the freight between wheat and flour could be adjusted and greater expedition given to the shipments of flour, the milling business of Great Britain would disappear altogether. Assuming that our facilities for shipping the milled products were comparable to those of New York, we could place our goods on the British markets within 15 or 20 days of receiving orders.

A Further Support of the Milling Cause in Halifax.

Again, the question may be asked: Why, then, should not New York be a great milling centre? The same answer may be given with reference to New York that we applied to London or Liverpool, with this seeming difference against New York, that the transfer charges on wheat at New York from railway or canal boats reaches 1½ cents per bushel. New York has a milling capacity at the present time of 11,000 barrels per day.

* *

In face of all the facts that we have stated, the situation of Halifax, lying at the eastern terminus of the great internal waterway system, being 2,260 miles east of Fort William and 2,459 miles west of Liverpool, G. B., everything seems to point in the direction of her becoming in the near future one of the chief milling centres of Canada, for export trade in flour and other milled products. Our facilities for communication with the heart of the great Empire are gradually being improved. We are completing a public elevator here of 500,000 bushels capacity, and we are looking forward to conducting a larger portion of the export trade of Canada. Our exports of fruit and other maritime products are greatly increasing; the aggregate of all these will lead to additional shipping facilities from this port. We are doubling our present West India service, making it fortnightly instead of monthly. Nothing can prevent Halifax, situated as she is, from realizing the advantages to be derived from the increased facilities for the transportation of the products of our great north-western country by the waterways in summer and the railways in winter. She has the location for converting raw materials into finished products for local consumption or export; and amongst such industries as might be profitably developed, milling, in our opinion, stands pre-eminently in the front rank.

Everything Points to Halifax Becoming the Chief Milling Centre of Canada.

* *

On other pages we have articles dealing with two of the milling concerns already operating in Halifax. They are not the only ones, but are practically the largest and most representative we have. But the lesson they teach us is that the milling business in such a centre as this is an exceedingly profitable one. Nowadays competition is very keen and in most branches of human activity it is found that things can only be carried on profitably that are carried on on a very large scale. Hence, when we find that comparatively small mills are conducting a profitable milling business, we not unnaturally arrive at the conclusion that there is demonstrated to be something more than usually favorable to the milling business in the conditions which here exist. And it seems like a reasonable enough proposition after such a conclusion that milling on an extensive scale here must open up a particularly inviting field for investment. There is a large local field to supply in the first instance, and this location for an export business can not be surpassed. Surely under such circumstances the establishment of a milling industry on a large scale may not be an impossible development of the near future.

One of the Near Future Possibilities. An Outlook.

The Mineral Resources of Nova Scotia.

If there is one avenue of development more important than another in which the future of the province of Nova Scotia is wrapped up, it is the problem of how the full advantage may be taken of its magnificent mineral possibilities. In entering upon the consideration of such a matter, we are struck by the comparatively slow growth of practical utilization of the immense ore bodies which lie scattered throughout the length and breadth of the province. It may be truly said, without exaggeration, that no country of its size in the world has been dowered with such bountiful wealth in the shape of undeveloped mineral resources. The geological structure of the province has been examined in the past by the most proficient men well acquainted with their subjects, and there has been an unanimity of opinion with regard to the future which is open to the grasp of progressive enterprise on an extensive scale.

If the boundless wealth which lies dormant for want of proper development, were situated in older countries, such a reference as this would be unnecessary and our tone instead of partaking of the nature of a suggestion, would be exultant, for then we should take pride in dilating upon the material prosperity that had been derived from the prosecution of a much vaster measure of development.

HON. GEO. H. MURRAY,
Premier of Nova Scotia.

The particular position which the mineral industry of a country occupies in relation to its general prosperity, is a very important one, for what is derived in the prosecution of this industry is at once added to the wealth of the country engaged in it. It has been said by political economists, times without number, that the farmer ultimately shoulders the burden of supporting all the inhabitants of the world, and it cannot but be admitted that the axiom has in it a large portion of truth, but it is manifestly impossible that the farmer alone and the industry which he represents, is capable of bearing such a heavy and constantly increasing burden. We must look therefore to other sources in order to learn wherein he is helped in this highly necessary work. In the development of the country's mineral resources, we find at least in a measure, some further explanation of how a country becomes prosperous.

Our purpose, therefor, in the following pages, is to briefly outline the progress which has been made in this province in carrying on the highly important work of turning into cash or its equivalent the mineral products with which we have been so fortunately favored. For convenience in considering the subject, we shall divide the article into appropriate sections, covering the chief minerals and metals which have contributed to make this province known to *some extent throughout* the world.

We take up the subject of Gold Mining not because it is the most important division of our mineral industry,

Gold Mining.

but because it is the one which appeals most forcibly to the reader.

Gold in its natural state is without doubt the most attractive of all metals, and hence its occurrence in Nova Scotia is the theme of many learned dissertations from the pens of leading geologists. We all know that it is the most widely diffused metal in the world, and that there are few countries in which its presence has not been demonstrated.

The process required to recover gold from its original location is relatively simple, and for that reason it will continue to attract the attention of mankind whatever may be his position. For nearly forty years the so-called auriferous belt which stretches along the Atlantic coast of this province for the distance of some 260 miles, has been the scene of a large measure of activity on the part of local and foreign enterprise. This belt

varies in width from 10 to 75 miles, and while it has not been found to possess continuous gold deposits, its value has yet to be demonstrated by a very much increased measure of prospecting operations.

In endeavoring to arrive at an estimate of the extent of this field of gold bearing possibilities, it has been assumed that the entire districts combined are equal to an area of about 6500 square miles. Now, this it must be admitted, is a relatively large and promising field to which to look forward with respect to future operations, but it must be remembered that this area is to some extent broken up by masses of granite and other rocks which up to the present time cannot be looked upon as possessing gold bearing characteristics. Deducting these barren masses, we may assume as correct that there is an area equal to about 3000 square miles in this province, which is more or less auriferous. Another important point in connection with the extent of our gold mining possibilities, is the fact that the thickness of the strata which is looked upon as bearing gold values, varies from 2800 to 11,000 feet. So much as regards the known extent of our gold bearing measures.

HON. C. E. CHURCH
Commissioner of Works and Mines

Turning to the question of what has been done in the past, we find upon record that during the forty years in which gold mining has been conducted in this province, namely, from 1862 to the present time, there has been extracted in bullion the fairly satisfactory amount of $13,500,000 that is valuing the gold at $19. per ounce, which may be taken to represent the average worth of our retorted metal. This value has necessitated the crushing of over one million tons of material and which therefore gives us the all around average of our precious ore deposits at about $13.50 per ton, which it must be admitted is sufficient to give us high hopes with regard to the future. This result has been obtained by the employment of systems of mining practice which leave considerable room for improvement. We cannot conscientiously say that the mining and milling practice in this country has yet reached the acme of perfection, and on that account therefore, our forecast of what the future may have in store for us in the way of increased development, is very greatly strengthened.

The future of successful gold mining in this country may be considered under a number of sub-headings, among which we may enumerate, 1st,

The Development on an Extensive Scale, of Low Grade Ores.

This we believe covers one of the most important facts in connection with the placing of gold mining in this province, on its proper and legitimate footing. In the past those who have devoted their attention to mining here, have confined their operations to thin irregular veins and lodes carrying high values. Most of the gold reported in our statement above, has been derived from these rich and somewhat uncertain deposits. It is a matter of common knowledge, at least among mining men, that the winning of gold from such formations, is of a most expensive character, and hence although the yield may oftentimes average very high, yet the cost of securing such returns, is proportionately as high.

During the past three or four years in the history of this industry, more attention has been attracted to the exploitation of low grade bodies, with the result that where the average number of stamps to each mill in former days was in the vicinity of five, it is now nearer twenty. This means, of course, that we are increasing our crushing facilities in order that we may handle economically a very much greater volume of material This naturally involves the proposition and necessity of greatly reduced milling costs, and along this line we are making a fair measure of progress.

The largest stamp mill in this province at the present time is one of sixty (60) stamps, but we believe it is only a matter of a few years until the sixty stamp mill will be rather the rule than the exception. A largestamp-mill means as a matter of course, a very much reduced milling cost, and this figure has in one instance in this province been brought down to as low a point as one dollar per ton. Now it is a pretty poor grade of gold bearing ore that will not permit of treatment when the cost of mining and milling can be figured on a basis of about $1.50 or $2.00 per ton, therefore in the face of this fact we can see no room for anything but a magnificent measure of development in every district, of the wide belts of ore-bodies which are so numerous throughout our province. We cannot go into this aspect of the question as fully as we would like, but we wish to assure our readers of the extreme importance of the subject, upon which, in a great measure, our mining future must depend.

2nd. Another and equally as important a question for our consideration is the mining of gold at greater depths than has hitherto been the rule.

The deepest gold mine in the province of Nova Scotia to day does not exceed about 800 feet vertically At this depth gold was secured in paying quantities in the mine referred to. The greater number of workings in this province, however, do not exceed 300 feet in depth. On this point, therefore, we are disposed to attach very much importance and in our opinion, the efforts of those who have been connected in the past with our mining industry, cannot be looked upon as of a very serious

character. As a matter of fact deep mining for gold in Nova Scotia is as yet practically unknown, for we cannot consider an average of 250 feet from the surface to be other than a mere *prospecting shaft.*

It may be argued that there is no evidence that we have ore of any value at greater depths than have been demonstrated by past mining operations, but to this we would reply that with an average thickness of strata in the vicinity of 7000 to 8000 feet, there is every reason to believe that gold values are contained down to the extreme level of the formation. It must be remembered that the ore formation of this province differs from that of many western gold deposits, inasmuch as where they have irregular ore bodies located among varying and diverse walls, we have in Nova Scotia more or less regular lodes which extend with considerable regularity throughout entire districts; besides our deposits originally have been bedded and therefore possess a continuity and regularity not possessed by the majority of western mines. Many arguments could be adduced in support of the necessity for mining at greater depths in this province than we have already done, but it is impossible in a review of this kind to even outline the strength of the proposition that deep mining in Nova Scotia is among the main features which will place this industry where its importance deserves.

3rd. So far, our remarks have been with especial reference to the handling of what is termed free milling Ores: that is to say, ores which do not possess the admixture of other minerals and elements by which the process of amalgamation would be interferred with. The bulk of the mining operations conducted in this province during the past forty years, has been confined to the free milling grade of ores and comparatively little attention has been devoted to the treatment of what may be roughly classed as the smelting propositions.

While it is safe to assume that the bulk of our gold deposits is of a free milling character, yet we have not sufficient knowledge concerning the extent of our complex ores to warrant us in stating it as an undisputed fact. We believe that there are many deposits in this province in which the gold values are found to be in chemical combination with many baser metals such as are found in many western mining localities. It is notorious that a great deal of the wealth produced by such states as Colorado is derived from the treatment of complex ores which necessitate the employment of smelting facilities in order to recover their values. This is a point in the future development of our mining industry which in our opinion calls for much attention, for we do not believe that our progress in this connection will depend upon the prosecution of our free milling gold properties. It is in the combination of the two classes of practice by which we hope to see Nova Scotia placed in her proper position as a leading producer of the precious metal.

Up to the present time, no other serious efforts have been made to test the values which are contained in a number of ore deposits of varying character, but it is encouraging to observe that renewed attention is being directed towards the subject, and we have no doubt good results will follow as a matter of course.

EDWIN GILPIN, Jr. M. A., F. R. S.
Dep Com. Works and Mines

4th. Another promising field in connection with the industry is that of Alluvial mining, and while some measure of development has taken place in this division, we look for a much larger *volume of activity as soon as the localities which are claimed to* possess such deposits have been properly explored and tested. We have no reason to suppose that alluvial operations in this province will ever reach anything approaching the extent or importance of quartz mining, but it will serve as a contributary source of wealth to many localities which are at present among the least of our producers.

In summing up the many advantages which this province offers to capable enterprise in the gold mining industry, we could mention a number of circumstances which combine to make the business one that should be profitable in every way. Labor — one of the most important features in undertakings of this nature, is abundant and cheap; not, however, of the cheapness which means inferiority in either brains or muscular power. The average gold miner in Nova Scotia is thoroughly acquainted with his work, and *possesses, very often,* a natural knowledge of geological conditions which is extremely useful in his many operations. The price involved in hiring such men will bear most favorable comparison with any other gold field in the world wherever self-respecting labor is employed. Fuel, another important item in the cost of mining is very easily obtained at a low figure, owing to the proximity of the many gold districts to extensive wooded localities, and the comparative cheapness of coal. Looked upon in the light of a purely business proposition, gold mining in this country offers one of the most promising avenues for the employment of capital of which we are aware.

The relatively restricted measure of development of the industry in *this country is due rather to the lim*ited operations of local men who have barely had the necessary capital at their back to conduct their mining ventures on a proper scale, and the result has been that after reaching a comparatively slight depth, they have been compelled either to shut down or tranfer their property to some one financially more capable of carrying on their development. Some complaints have been made by British and American capitalists who have invested in this industry in the province of Nova Scotia in the past; but when we come to examine into the causes for such views, in nearly all cases we find that whatever failures have occurred in this connection, have been largely due to mismanagement and extravagance on the part of those who have been sent out to represent their principals. For instance, it has been customary for foreign investors in our mineral bearing properties *to ignore entirely the* knowledge gained by our local men, and to depend mainly upon their own preconceived opinions and methods of work. Expert geological knowledge of course is not to be expected from men who have no means of acquiring it, save from every day experience in handling ore, but we do not think it is right to pass over as entirely worthless, the practical points which every miner in this province is more or less familiar with. The future of mining in this country depends greatly upon companies securing large tracts of gold bearing land, and so combining

their mining and milling expenses as to reduce the cost to as low a figure as possible. This means the employment of large capital, but will have the effect of shutting out the small local speculator who has practically no permanent interest in the larger subject of the complete development of our mineral industry.

The province of Nova Scotia is very liberal in its treatment of mining operators, and the terms on which leases of gold bearing areas are secured, are well calculated to produce the most beneficial results. The size of areas granted in this province by the Crown, measures 250 feet by 150 feet and can be leased for a period of years for $2 an area and an annual rental of 50 cents.

The royalty on gold extracted is 2 per cent. on the retorted value. Generally speaking the conditions as regards the occupation of mineral lands are very simple and easily understood. The province of Nova Scotia publishes from time to time various pamphlets covering its mineral industries, and these are forwarded, gratis, to any enquirer who is interested. The chief districts in which gold occurs have been the subject of an exhaustive study on the part of experts sent by the Dominion government, and they have embodied their labors in the form of a series of maps, both descriptive and sectional, which completely exhibit the geological structure and the general location of the veins and lodes. These maps may be obtained at nominal figures and are very useful in pointing out to all interested, the chief characteristics of our gold bearing rocks. The production of gold for the year ended September 30th, 1898, amounted to over 31,000 ounces, which is the largest production in the history of the country.

* *

Iron Development.

Of all the metals which enter into the requirements of mankind, iron in its various forms will ever remain the most necessary and useful. Into every avenue of activity this metal is introduced and at the present time it is the subject of a very great measure of attention, not only in this country but in all civilized portions of the world. We are at this moment in the midst of a cycle which calls for an enormously increased quantity of this particular metal. The substitution of iron and steel in all sorts of structures, has been very rapid during the past decade and the demand thus caused is sufficient to make those interested seek far and wide for available sources of raw material. For a long time, the condition of the iron trade has in every country been looked upon as a fair criterion by which to measure the country's prosperity; and judging by this standard, the unheard of advance which has taken place in iron products during the past eighteen months equalling something like 120 per cent., we can only conclude that the world at large is enjoying a high tide of material success. That a country admittedly so rich in mineral bearing ores as Nova Scotia, should contain workable iron deposits of considerable extent and variety, is not at all strange. Evidences of the existence of this metal in almost every district in Nova Scotia and Cape Breton are not wanting.

So far back as 1835 a well-known geologist, Dr. Gessner, who had examined the iron deposits of this province, when writing the results of his researches, deplored the fact that we would for a long time continue to import iron, while the hills were known to contain abundant and rich ores. The difficulty has been in the past that our development in iron ore production has been very limited, and outside of three or four known deposits which have been worked with more or less success, we really know very little of our capabilities in this respect. It is not the ADVOCATE'S desire to use extravagant language in referring to our mineral resources, more especially where there is the absence of accurate data upon which to base positive statements. Indications at many points in the province, are that we have quite a large number of promising iron deposits, but their exploitation has been delayed for many reasons. First of all it takes a large amount of capital to open up and prove the prospective value of a tract of land containing iron, and when even so proved, at considerable expense, it is necessary that it should be placed in a location favorable to economical shipping or failing that, the erection of large and extensive plants must be undertaken in order to turn the discovery to good advantage.

The bulk of the development which has been carried on in this province in the past has been in the vicinity of Londonderry, which lies at the southern base of the Cobequid range of mountains in the northern part of Nova Scotia. At this place, in a more or less intermittent manner, iron has been mined, smelted and fashioned into such forms as are usually given to cast iron. It is not easy to procure reliable statistics of the quantity, in tons, which has been produced at the Londonderry workings. At Nictaux, in the north-western portion of Nova Scotia, in the county of Annapolis, there are known to be fairly valuable deposits of this ore, but the same problem of nearness to shipping facilities which hampers Londonderry has interfered with its successful development on as large a scale as we would wish to be in a position to chronicle.

At Bridgeville, in Pictou county, a considerable amount of iron has been mined and treated at the works of the company established there within recent years. A most important and peculiar fact in connection with the known deposits of iron ore in this province is that they are found in close proximity to extensive coal fields. From this circumstance it was hoped that long ere this, development on a most remarkable scale would have been attempted. Not only is coal found so closely beside the iron ore, but there is also found, quite as near, the necessary flux in the shape of bodies of limestone, thus giving us the very essential elements for reducing the ore into the actual ingot of metal. It is too soon yet to say what may be expected in the future development of our iron deposits, for we have not begun to investigate the likely localities with sufficient attention and with the necessary appliances. It is manifestly to our interests that we should endeavor to locate and work all such native deposits as we may become acquainted with.

At the present time iron and iron manufacturing have become one of the most important topics in this province, not, however, we regret, because we are promised a large share of activity in mining our native ores, but on account of the fact that Sydney, in Cape Breton, at the extreme eastern end of Nova Scotia, has been chosen as the site of an extensive iron smelting industry. It is contemplated in this project to utilize imported ores, which are to be derived mainly from Newfoundland. While we cannot help but express our best wishes for the success of this undertaking, we could have wished that the projected operations involved the smelting of our native ores. It is a beginning however, that will make towards a closer examination of our own deposits, and which may in time be depended upon to furnish a full quota of the raw material required. There is no doubt whatever that although Newfoundland ores may be brought to this country at a relatively low cost, self interest will prompt the proprietors of the new iron smelting industry in Cape Breton to look about them for nearer sources of supply. It would take us too far a field to attempt even briefly to summarise the effect which a moderate amount of iron development would mean for this province. The subsidiary questions involved include the establishment of expensive rolling mills, ship building and kindred divisions of the iron industry, and although we may hope very confidently for what may take place in the future, we are constrained to be moderate in our language when we remember the comparatively limited amount

of development which has taken place in the treatment of our native iron ores. In concluding our remarks regarding the future of the iron industry in this province, we would say that in our opinion it affords quite as wide and attractive a field for the employment of capital and knowledge, as any one of our natural mineral resources; and at the present time when the product has appreciated in the markets of the world to such a remarkable extent, and when the entire body of consumers are crying out for greater supplies of manufactured iron and steel, we think no more appropriate time for the undertaking of such projects could be named.

No words can be too strong in impressing upon our readers, wherever they may be, the importance, not only to Nova Scotia in particular, but to the British Empire to which we are proud to claim allegiance, of the highly satisfactory measure of success which has attended the development of our coal mining industry. This is the one great avenue of employment which has as much as any other contributed to the welfare of this province during the past one hundred years. More revenue is derived in royalties from this source than any one other division of our native industrial life. On it depends to a considerable extent the means of furnishing education to the province at large. Our roads are maintained by its assistance. Were it not for the royalties derived from the prosecution of coal mining, this country would experience annually a very serious deficit. Our coal fields are more widely known throughout the world than any one other of our native industries, and this has arisen not only from the extent of our development, but is also due to the very high qualities which have made our coals famous among consumers of fuel the world over. The deposits of coal in this country extend over quite a range of territory, and are but in their infancy as regards the full measure of exploitation. We are gradually extending our markets, and have for many years supplied the consumers of Canada with a large proportion of their coals. As is generally known, these deposits are of a bituminous character, rich in heat-producing and illuminating values; so rich indeed have they been proven in gas-making qualities that preparations are going on at the present time to utilize our Cape Breton coal in the lighting of a large number of towns in New England, including the city of Boston.

Coal Mining Development in Nova Scotia.

The industry of coal mining in this province is an old and firmly-established one, dating back over a century. The work has been in charge of well-equipped incorporated companies, mostly of British origin, who have worked the deposits by the most satisfactory methods. The chief feature in connection with late developments in this department of provincial activity is the introduction of American capital in large amounts and which has resulted in a vastly increased extent of development, which is steadily placing the industry in the first rank of importance. During the past few years the total quantity of coal raised annually has been in the vicinity of two and a quarter million of long tons, and with the closing of the present year it is expected that the production will have reached the highest point ever attained. It will be readily seen by the most casual reader that the mining of this vast quantity every year means a large amount of industrial activity; and it is not strange that the Island of Cape Breton, in which the most valuable coal deposits are located, should come to be looked upon as one of the most promising and important portions of a province naturally rich in every form of mineral wealth. Considering the value of our coal mining industry as a field for the employment of labor, it will be easily seen that a body of men, which number over 7,000 wage-earners engaged steadily, is an important factor in the material prosperity of a province. If we take the ten leading manufacturing industries in the province and compare the number of men employed with the number engaged in coal mining we will find that there are twice as many employed in the last named business as in the ten chief enterprises. There is annually paid in wages the relatively large sum of $2,500,000 in our coal mining operations, and as this amount may be said to be distributed over the entire province, it can be well understood how such an industry stands in relation to the progress and trade of a central point like Halifax, which secures much of the business which arises from the operation of the valuable coal areas in the province.

At the present time there is said to be upwards of twenty-five millions of dollars invested in coal mining in this country and the extent of our deposits is so great as to make it certain that we shall enjoy a very much larger volume of activity in the future than we have had in the past. Besides the ground already opened up, there are extensive areas of coal bearing territory which are as yet untouched and this fact in itself is a very important feature in considering our future possibilities

In the foregoing necessarily brief review of our mining possibilities, we have made no mention of the valuable copper deposits which we are pleased to number among our varied mineral resources. As many as half a dozen counties in this Province have been proven to contain workable deposits of this metal, and at the present time operations are under way in Cape Breton and Nova Scotia to place copper mining on a practical basis. The evidence so far gathered as to the distribution of copper confirms the belief that it is of very frequent occurrence over a wide range of territory and within a few years we expect to number it among our regular products.

Antimony is another metal which is found in several localities which in the past have been developed on a more or less extensive scale. At present we are mining only limited quantities of the metal, but as in copper, preparations are going forward to reopen a number of promising workings which have been neglected during the past few years.

Manganese is still another valuable member in our varied programme of mineral riches and whilst the average quantity mined from year to year does not exceed about 100 tons, we have much pleasure in stating that there is the same activity in making arrangements for an increased measure of development in this metal, as in the other minerals referred to above.

Lead mining has not yet attained any position in the mineral development of the province, but there is a promising field for it in the working of quite a large number of Galena deposits which have been opened up during recent years, in Cape Breton and Nova Scotia, and which are but awaiting the institution of proper plants for their treatment to become valuable contributors to our wealth.

In addition to these already named, there are various beds and deposits of the more uncommon minerals and ores, including Tungsten, Mica, Barytes, Gypsum, Tripolite, Marble, Platinum, Arsenic, Graphite and many others which it is impossible to more than mention in passing.

The outlook for mineral development was never brighter in Nova Scotia and the result of the present optimistic interest on the part of outside capital is bound to prove of untold value to all persons who are serious enough to appreciate the fact that in these resources lies our future greatness.

To attempt to describe in detail any one of the above subjects would require more space than we have at our disposal, but it is sufficient to state that in all the minerals which have been noticed in this article, a more or less amount of development has taken place. The chief want of Nova Scotia is the necessary capital to invest in these deposits and bring them to a stage of progress which will make them direct sources of wealth and important avenues for the employment of surplus labor.

Halifax as a Milling Centre.

R. J. Matheson's Acadia Mill, an Illustration of the Value of a Good Site.

IT is not very many years ago since it was confidently asserted that flour could not be ground in this province to compete with flour ground near the centres of wheat production and imported. Yet we have a few pioneer millers to-day and hope that before many years more have added themselves to the years of history that Halifax will be the seat of larger industries of the same sort. Indeed the very men who are demonstrating the feasibility of flour milling here are likely to be the men who will show us these large undertakings in the years to come.

A few years ago Mr. R. J. Matheson purchased a property at Mill Cove, Darmouth - a populous and energetic town on the side of Halifax harbor opposite the city - and there commenced to build up a milling business. The building was an abandoned saw mill which had seen service when logs were available in larger quantities in that vicinity than they are now, and there, after altering and enlarging the building, he installed a thoroughly up-to-date plant, in all its details as good as any of its size in operation. The capacity was 50 barrels of flour and 200 barrels of corn meal a day. This was too large at the time; the venture was new and there was that preconceived idea of its doom to failure that made it difficult to find a market for all the mill was able to turn out. But it was a good mill, Mr. Matheson understood how to manage it economically, and was able before many months to find plenty of consumers for its products. To-day the mill is not large enough, for it is running to its full capacity all the time and Mr. Matheson is frequently compelled to refuse orders for speedy delivery on account of the work which he has ahead.

It is an indisputable fact that there is no better place for a milling industry than the shores of Halifax Harbor. We say "the shores of Halifax Harbor," because one of the most essential points about a flour mill is its neighborhood to easy means of shipping. It is one of the reasons why Mr. Matheson has been so successful, that while turning out a good product, he is so situated that whether he receives his grain by rail or by water, he can receive it into his granary without going to the expense of carting. So, also, when he wishes to ship the flour and meal he has ground, all he must do is to roll the barrels on board a vessel or car, for he has a wharf with deep water on one side of his mill and a railway siding on the other.

Of course situation is a great factor in any industry, but it tells more in this than in many others—iron manufacturing for instance. It is probable that a ton of iron and a ton of milled grain would represent a cash value very nearly equal. But when it comes to transporting these products, the iron can be handled much more expeditiously on account of its smaller bulk; and for the same reason it is much easier to store away a given weight of iron than an equal weight of flour or meal. But in the case of iron manufacturing, nearness to shipping facilities is most desirable. The fewer the operations necessary to get the iron to its market the better the chance for successful competition. This principle is recognized in the case of a product which can be handled as easily, probably, as any other we know of. That being the case, the need of neighborhood to transportation facilities in milling must be vastly more imperative, and even under the very best of conditions there must be something in favor of iron in transportation as against flour or meal.

As we have said, Mr. Matheson's success is due to this fact in some measure at least. If the mill were situated away from the waterfront and away from the railway, it would be necessary to make use of teams to transport the raw material thither and to cart back the finished product. This expense is obviated in Mr. Matheson's case. His corn and wheat come chiefly by water, but it matters not if they come by rail, for it is just as economical to unload a car as it is to unload a vessel. In this way he is able to make his prices very fine. There are few millers so situated that they can reduce the cost of milling to such an extent and enjoy such a margin to come and go on.

When Mr. Matheson commenced operations in Dartmouth, he did so, as we pointed out above, with the best machinery at his command. During the past ten years what improvements have been made in milling machinery have not been important enough to be called revolutionary. Indeed, except in a few details, there is not much difference between the best machinery made for milling purposes to-day and the best of that type which was just coming into general use ten years ago. As Mr. Matheson's mill is not nearly a decade old, it is still up-to-date, particularly as every new idea of any consequence has been followed up by him and applied as far as permissible in his mill. The process throughout is the roller process, both for flour and meal. The sifting system is something entirely new in this part of the country, being the gyrator system, by means of which the quality of the product is least impaired. This system of sifting is coming into general use in Ontario and has been adopted by all the best mills, such, for instance, as the Kent mills, whose products are so well known for their excellence. But though so generally adopted and applied in Ontario, not many millers have taken up with it in the Maritime Provinces, where for so long milling has practically been at a standstill. Among the few who have, Mr. Matheson is one, a fact which explains the excellency of the output of his Acadia mill, and, along with excellency of that mill's location, accounts for the fact that he so speedily got in touch with and has so persistently maintained his connection with the trade of the province.

The market in which the products of Acadia mill are sold comprise the entire Province of Nova Scotia. We referred to the location of the mill as being peculiarly advantageous as a point from which to ship its products. Anyone who knows the map of Nova Scotia knows that it is conspicuous for its numerous harbors. These harbors are the sites of towns or villages which are the centres of large populations, and by shipping direct from the mills to these points the flour and meal are soon in the hands of consumers. Thus when an order comes from Sydney for a number of barrels of flour or meal, perhaps orders from a number of points along the same shore are already in hand, and if the aggregate is large enough to make a vessel load, a vessel is chartered and despatched to the several points along the coast. Or perhaps there is a vessel or steamer sailing at a convenient time for those places, in which case the craft can either call at the wharf or the goods may be lightered at small cost to it. In the case of more urgent orders, the railway is at hand and a car can be quickly loaded and despatched. The railway can always do for inland points what water routes cannot do. The facilities offered by both are so excellent that the products of the mill have found their way all along the Nova Scotia coast, east and west, and throughout the important centres via the railways which lead out of Halifax.

Another point about this mill is worthy of notice. We have mentioned its advantageous situation; it may not be out of place even in this article to remark that it commands a view of one of the most beautiful of those snatches of scenery for the number and variety of which the environments of Halifax are noted. The wooded hills which rise high above Mill Cove and among which cluster some of the most homelike and ideal residences in the province, present a scene on which the eye can long dwell with pleasure. In spring the fresh foliage gives glad promise of a grateful summer, and in autumn the mingled tints proclaim a solemn prophesy that impresses itself one knows not how or why. It is a delightful spot this, where the artist might busy his pencil or the poet catch inspiration for a song. Rude and ugly and inartistic is a factory at the best, for however beautiful it may be architecturally, it presents a seamy side somewhere, and this reflection may suggest a regret that a factory should exist in such neighborly contact with one of nature's beauty spots; but that thought is chased away by the reflection that the neighborhood of nature in one of her best moods exerts an influence upon those within the factory walls that works for good, to what extent who can estimate?

Halifax as a Summer Resort.

DURING recent years considerable attention has been drawn to the attractions of Halifax for summer visitors, and this publicity has resulted in a yearly increasing influx of tourists from Western Canada and the New England States. It is quite natural that the climate of Halifax, in its latitude and maritime situation, should be more agreeable during the summer months than that of the more inland and southern cities; and that it is so is evidenced by the annual return of old friends whose encomiums encourage a steadily growing patronage.

Most of the advertising efforts of the Tourist Associations and kindred institutions have been restricted to Canada and the United States, but if the attention of the people of the West India Islands were drawn to it they would recognize in it a most desirable resort in which to escape the discomforts of a tropical or semi-tropical summer. All the islands of the group are brought into close connection with Halifax by the services of the Beta and the Duart and Taymouth Castles, whose excellent accommodations and moderate rates render them a most agreeable and expeditious mode of travel. Communication is also to be had via New York for the more ambitious tourists.

For the accommodation of visitors Halifax is fairly well supplied with hotels. The leading houses are situated in the business portion of the city, and are run on the American plan, at rates ranging from $2.00 to $3.50 per day. The Halifax is the leading hotel, with accommodation for about 350 guests, and is closely followed by the Queen, immediately adjoining, and numerous other excellent houses. There are also several private hotels and boarding houses for the entertainment of permanent and transient guests, and those who propose an extended stay cannot do better than to locate at one of the latter, where excellent board and lodging may be had at from $5.00 to $6.00 per week up.

The temperature of Halifax is very equable, averaging from 70 to 80 degrees Fah., with an occasional run up to 90, but even when the mercury rises highest the prevailing westerly breeze moderates the heat, and one suffers no inconvenience.

The sport-hunting visitor may make Halifax the centre from which to radiate innumerable expeditions. A dozen different bicycle rides to points of interest may be taken, varying in length from five to thirty miles, over roads which, although undulating and sometimes hilly, are for the most part good, and passing through scenery of the most varied and beautiful character, and among the land marks of historical and present interest.

Numerous lakes in the neighborhood of the City abound in trout, which, though somewhat small, afford good sport, and short journeys by rail or coach, varying from twenty to thirty miles, are rewarded by excellent fares of salmon, sea and brook trout, bass and greyling. Expeditions to more obscure points might result in still greater success. There are no preserves in the province.

Deep sea fishing is ever at hand in the Harbor, Bedford Basin and the North West Arm for those who desire brisk sport with the minimum of trouble.

The Game Laws of Nova Scotia are rigidly enforced, thus ensuring an abundance of game during the open season. Woodcock, partridge, snipe, rabbits and raccoon predominate, and foxes are met more rarely. Till October 1st, 1901, however, partridge shooting is prohibited.

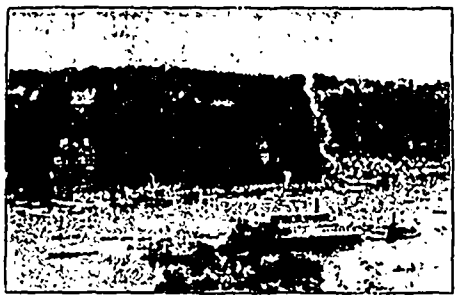
As a yachtman's paradise, Halifax is unrivalled. The local organization, the Royal Nova Scotia Yacht Squadron, is a thriving institution, holding weekly races for valuable trophies, in which the greatest interest is taken. Their yachts are unexcelled in their class, and there are infinite possibilities for cruises of all kinds upon the surrounding waters. The harbour, famous as one of the finest in the world, affords an expanse measuring ten miles in length and a mile on width, and is ably supplemented by the magnificent expanse of Bedford Basin, six miles by three, and the North-West Arm, three miles by three-quarters, while beyond all is the broad Atlantic, with shores indented with picturesque coves, and charming fishing hamlets nestled thereabout.

"Miles of excellent road wind through the park—a paradise of bicyclists."

For those more domestically inclined there are also unlimited attractions. The people have gained an enviable reputation for hospitality, and during the summer season social life in Halifax is especially animated.

As a naval and military station the city occupies a unique position in Canada, and the forts and ships are the objects of much interest to the stranger, while the Sunday morning church parade of the troops, and the reviews, shamfights, mobilizations and tournaments are among Halifax's most brilliant features. Needless to say the presence of so large a body of men has a considerable effect upon the social life of the town, and the officers and men in both services and all ranks are most popular entertainers and most welcome guests at all functions in their respective grades.

In any description of Halifax her great natural beauties should not escape mention. The Harbor, Bedford Basin and the North West Arm have already been referred to, the latter two being especially pretty; the basin in its mangnificent expanse and wooded

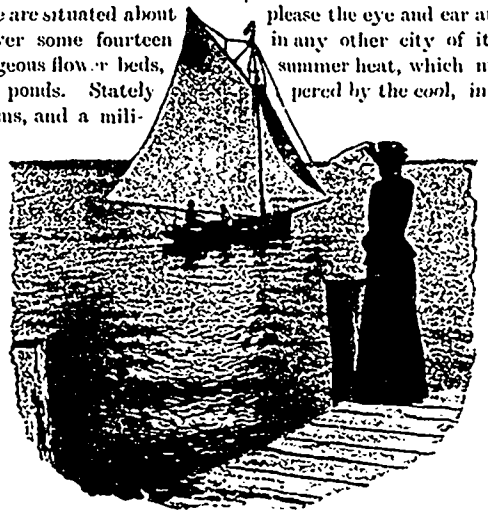


shores; and the Arm, the southern boundary of the peninsula on which the city is situated, for its placid coves, reflecting the surrounding verdure, and the general beauty of its surroundings. On the southern extremity of the peninsula is Point Pleasant Park, an immense pleasure ground of about 200 acres, remaining for the most part in its natural state. It is leased by the city from the imperial authorities, who retain it for purposes of defence. Evidences of its present occupation by the military are seen in the forts and batteries which abound, commanding the shores of the arm and harbor, and the Martello Tower and various mounds show traces of an older school in the art of defence.

Miles of excellent roads wind through the enchanting surroundings and scenery of the park—a paradise of bicyclists and lovers of the noble horse, as well as those who go afoot.

Many as the virtues of the Park are, the citizens of Halifax take greater pride in the Public Gardens. These are situated about the centre of the city proper, and cover some fourteen acres, most artistically laid out with gorgeous flower beds, velvety lawns, trickling brooks and placid ponds. Stately fountains throw out their sparkling streams, and a military band discourses stately music of a high order from the magnificent band stand on Saturday afternoons. These attractions are all free to the public, as are also the semi-weekly band concerts at Greenbank, just within the park.

Lovers of athletic sports will find the Wanderers' grounds unexcelled for beauty and equipment, and during the season contests of all kinds are carried on, tennis and cricket being the most popular in summer, varied by foot and bicycle races and other individual competitions.



"As a yachtsman's paradise, Halifax is unrivalled."

The people of Halifax are hospitable. Never a visitor leaves Halifax who has come in contact with its citizens who does not carry away pleasant remembrances of kindly treatment at their hands. The average Haligonian is a man who, while he believes in attending to his business, is nevertheless careful to see that he pays due attention to relaxation of mind and body. Accordingly he is a member of some "out-door" organization—an athletic club, a yacht club, a tennis or quoit club, or something of that nature,—and whenever an opportunity offers he leaves his business for a while and forgetting it for the time, clears the cobwebs from his brain in the invigorating Halifax air, and returns to his work a better business man and does his work more thoroughly than if he were at it all the time. It is not only the business man, but every man who has access to some means of recreation, and to which he can and does introduce the strangers he meets. The business man from abroad who is introduced to a Halifax business man in the morning, probably goes with the latter late in the afternoon for a sail on the harbor, a game of tennis on some private lawn—of which there are many,—a little hurling of the quoit with some of the choice spirits who haunt Studley on a Saturday afternoon, or to engage in one or other of the various other relaxations whereby the men of Halifax renew their youth and keep ever fresh for the work in which they engage. The professional man, the working man,—whoever visits Halifax with an introduction to someone here, is sure to find companionship and entertainment agreeable to him. The hospitality of the Haligonian will make his heart glad and he will leave with a keen desire to again visit the old garrison city by the sea.

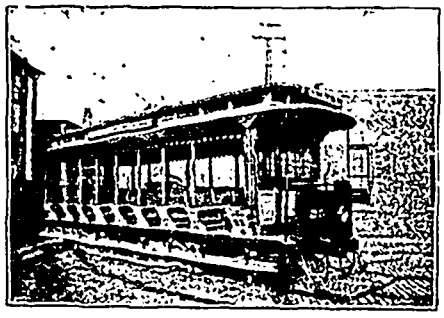
A visitor who comes to a friend or comes with an introduction to a friend's friend, will probably have to submit to a programme something like this: There will be excursions to Cow Bay Beach or to some of the other points where the city can be left behind and the enjoyment indulged in to heart's content of outdoor viands and salt water bathing. There will be boating parties in the evenings. There will be sailing parties when the wind is good. There will be tramps to the rocking stone through the picturesque Jollimore Village and one of the pleasantest woodland rambles to be found anywhere, or along the rugged shore where the waves rolling in from the broad Atlantic pound never-ceasingly against the rocks. There will be countless events of a variety as bewildering as pleasing, in all of which the visitor will find himself or herself participating. A whole summer could be spent in Halifax and there would never fail to be something of new interest to delight the visitor. Halifax people are whole souled people, and delight in their city and its divertions, and not only delight in them, but delight in making strangers feel the same strong enthusiasm for them that they have themselves.

No one, we have said, has visited Halifax and departed without regret. Enthusiasm for the city as a place wherein to spend a month or a lifetime is awakened naturally, for there is more to please the eye and ear and administer to the finer sense of man than in any other city of its size probably in the whole world. The summer heat, which makes so many cities unendurable, is tempered by the cool, invigorating salt sea breezes from the broad Atlantic, which fill the frame with vigor as one rides or wheels or walks along the well maintained roads and paths of the city's environments. Nature is always at her best in Halifax. The wild, woodland scenery and the cultivated park or garden, are alike beautiful, and the longer one dwells upon them the more does their beauty appeal to the eye.

When summer is gone and the autumn months come upon the world, nature is none the less beautiful. Then the sad-seeming atmosphere of fall, and the bright tints in the forest, prevail upon the mind and fill it with a sort of sweet sadness—a joy in the beauty that is present and a regret at the passing of the season when there is the least restraint upon us.

A writer could dwell long upon the climate and out-door attractions of Halifax and still leave volumes to be written. But there are other attractions. The Province Building, a quaint and stately example of an older architecture, contains many a fine portrait done by famous artists, of former sovereigns of Britain, and governors and soldiers. The City Hall, with its handsome cases of native birds possesses an interest for everyone who would know what winged tribes our forests protect and what birds flit along the shores of sea and lake. In the government building is a museum where many relics of olden days are still preserved and where the visitor may spend many a spare hour with pleasure and profit.

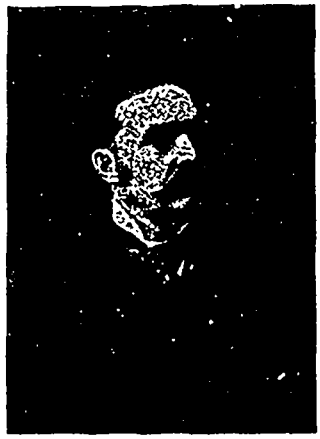
An article of this length cannot pretend to cover all the features of summer entertainment provided; suffice it to say that nothing is lacking for the enjoyment of visitors, as is testified by all who have once made a stay with us.



Rapid Transit on the Streets of Halifax.

IT has been the experience wherever electric power has supplanted the horse on the street railway that the change has been to the distinct advantage of the community. So it has been in Halifax. Out in the suburbs and in the hitherto thinly settled portions, people are now erecting homes for themselves where it is possible at a small cost to have plenty of yard room and lots of fresh air; because electric trams pass near their doors several times every hour of the day, and provide a rapid and satisfactory means for the head of the house to get to and from his business in the heart of the city. Down to the business portions the trade of the outskirts is being brought more and more each year, and business is being centralized where the people can buy to better advantage, and with better satisfaction, which is possible because the trams provide a convenient means for the shopper who lives in the extreme corners of the city, to get into the large and handsome stores and their wealth of pretty things. And for this reason the business and residential parts of Halifax are being more and more divorced and the tendency which a few years ago was becoming quite remarkable, to mix places of business with residences on the residential streets, is thus receiving a check. A thoroughly well equipped and modern street railway system is a great boon to a city, for it means the development of the outlying portions, it is an assistant in the matter of beautification, and a great convenience to the citizens.

Halifax is in the happy position of having a street railway service that is thoroughly modern, and which besides being profitable to its owners has been decidedly profitable to the city.



B. F. PEARSON, ESQ.
Secretary Halifax Electric Tramway Co. Limited.

It has been profitable to its owners because it has made business for itself. People who formerly would rather walk than wait on the slow horse cars now ride on the electric trams. The rapid transit provided thereby is, furthermore, an attraction to those who seldom patronized the horse cars anyway. They save time and they save labor to those who use them, both of which things the average man values, and as the idea makes its way each year, the traffic of the road grows and the revenues increase. And the electric tramway has been profitable to the city, for its operations return a certain revenue to it. Property has become more valuable, so that indirectly also the city treasury derives revenue on account of it; while anyone who appreciates the value of a convenience will realize in how far the new system has increased the material prosperity of many. The electric tramway is both a mark of progress and an impulse to it.

HON. D. MACKEEN.
President Halifax Electric Tramway Co. Limited.

The company which operates this tramway is of recent formation and practically the work of a man than whom few cities the size of Halifax possess a more progressive. His hand can be traced not only in home industries, but even in large industries in far away lands. One such man as Mr. B. F. Pearson, whose picture we present herewith, and who is secretary of the company, is sufficient alone to give a city a title to progressiveness, and it does not seem like exaggeration to say that he is one of the builders of Nova Scotia and of Halifax. It was in 1895 that this captain of industry commenced to make his influence felt in Halifax. A few years before he was one of the chief factors in the development of coal mining in Cape Breton county, which was practically the beginning of his career of successful promoting. By interesting Mr. H. M. Whitney, a wealthy capitalist, with whom he co-operated in the work that brought the great Dominion Coal Co. into existence, Mr. Pearson succeeded in making a move towards substituting for the unsatisfactory tram service that then existed, the highly developed one with which the city is blessed to-day. There were some people who would have been afraid of the venture had others than Messrs Pearson and Whitney been the leaders of it, but the public was satisfied that they meant business and capital was readily procured; it was not many months thereafter before a company was organized and incorporated and ready for operations.

The first president of the Halifax Electric Tramway Co. was Mr. Whitney. Those who acted with him were Hon. Senator MacKeen, and Mr. J. Y. Payzant, as Vice-Presidents, and Mr. Pearson as Secretary. Under the direction of these gentlemen, along with Messrs W. B. Ross, Michael Dwyer, Thos. Fysche, Adam Burns, of Halifax; Mr. Jas. Ross, Montreal; Dr. Haley, Windsor, N. S., and Mr. F. S. Pearson, New York, the first

F. A. HUNTRESS, ESQ.
Manager Halifax Electric Tramway Co, Limited.

steps were taken in the development of a competent street railway. As soon as matters could be conveniently arranged they took over the Halifax street railway Co's. plant and rights and the plant and all other assets of the Halifax Illuminating and Motor Co., the company that then shared with the Halifax Gaslight Co. the business of keeping the city out of darkness after nightfall. The new company immediately had the old rails torn up and a road put down that was even more substantial than a railway for transportation across country. The amount of energy displayed in getting the road completed was phenomenal. Right in the heart of winter their men carried on the work of equipping it as expeditiously as men ever did a similar work anywhere. The old electric station was enlarged, modern machinery put in, and everything necessary done to enable the company to perform its duty towards the public well.

Inside of a few months after operations were commenced, electric cars were running on the streets of Halifax. It is a great credit to the company, to Halifax and to the manufacturers, that the rolling stock is as fine as is used in any similar service anywhere in the world. It is not too much to say that it is very much superior to that used in many larger cities. Another thing that is distinctly to the credit of the company and adds to the reputation of Halifax, is the fact that although so many passengers have been carried and the cars run with such speed, there has been but a single fatal accident in the history of the road, and the number of casualties has been wonderfully small. Every device has been adopted for the safety of passenger and pedestrian. This is one feature of the street railway service Halifax has enjoyed since 1896.

The entire road that exists to-day was not operated when the first electric car was put on. As a matter of fact the service has since been greatly extended and along many portions of the route double tracks have been laid. We have altogether ten miles of streets along which run the electric cars, and a large percentage of that mileage is double tracked; and where it is not there is a frequent service of turn-outs to facilitate travel. Ten miles of streets may be taken to represent the mileage of road operated, on which 14 cars are kept constantly running from 6 o'clock one morning until 1 o'clock the next, Sundays included. The entire equipment of cars numbers 38. Sixty-five motormen and conductors are employed, and including the men that work about the car sheds and in the power station there are 124 men on the pay roll, among whom is distributed monthly in pay $5,200.

As an indication of the progress the road has made in the matter of handling traffic and in its earning capacity it is only necessary to note that while in the 11 months of 1896, during which the road was in operation,—which year was that of the last summer carnival—1,256,183 passsengers were conveyed over the road, while in 1897 the number increased to 2,334,900 and in 1898 to 2,419,368. The number of passengers carried so far this year is 1,681,573, against 1,509,213 during the same period last year, which, in order to indicate the true progress of the company must be considered along with the fact that it shows an increase in traffic of over 172,000 in eight months against an increase for the same months last year of 22,000, and of 84,000 in the 12 months. This increase has been caused by the issuance of tickets at reduced rates. The car mileage in 1898 was 593,608 against 505,017 in 1897.

As stated before, the company took over the plant of the Halifax Illuminating and Motor Company. At that time there was another concern in the electric lighting business, for the Halifax Gas Light Co. did electric as well as gas lighting. But when the People's Heat and Light Co. concerning which industry an article appears on another page took over the Halifax Gas Light Co. they sold the electric plant to the Halifax Electric Tramway Co., But none of the old machinery is used. The entire plant is new and of the best type. It comprises: 5 Robb engines made in Amherst, near Halifax, 2 of which are direct belted to 250 k. w. alternators, 2 direct belted to 500 V. railway generators and 1 to two 150 k. w. alternating machines. There are also two high speed engines for arc lights. The number of lights include the equivalent of 16,219 16 candle power lamps, against 13,581 in use last year, and 293 are lights. Besides supplying power for lighting the company's electricity is used in many factories, such as Clayton & Sons, to run machinery. The gross earnings of the lighting and power apparatus show a healthy increase.

Offices and Sheds of the Halifax Electric Tramway Company, Ltd

The common stock of the company amounts to $800,000 and the five per cent. bonds to $600,000. The total operating expenses last year were fifty-nine per cent. of the earnings, four quarterly dividends of 1½% were paid and a balance carried forward to profit and loss account. While the management has been able to increase the revenues it has also been able reduce the running expenses. The statistical showing is excellent.

The officers now directing the affairs of the company are. Hon. D. MacKeen, president; Messrs. J. Y. Payzant and W. B. Ross, vice-presidents; Mr. B. F. Pearson, secretary; Dr. Allen Haley, Messrs. Frank Paul and Abner Kingman, directors; Mr. F. A. Huntress, manager.

Rope and Twine Manufacturing.

A History of the Works owned and operated by the Consumers' Cordage Company, Limited.

SOME thirty years ago the shipbuilding industry in the maritime provinces of Nova Scotia, New Brunswick and Prince Edward Island had assumed large proportions, wooden sailing vessels of large size which took an important part in the ocean carriage of the world were built all around our shores, and it was to supply the cordage to equip these vessels that the rope works, now operated by The Consumers' Cordage Company, Ltd., were built as a private enterprise in 1869.

These works are now most extensive, occupying ten acres of land and comprising some thirteen buildings. The original establishment consisted of the rope walk, upwards of 1,200 feet from end to end and probably the longest building in the provinces; the three story brick building and the tarring house. The rope walk to-day is the same as at the beginning; it is capable of turning out ten tons of rope per day and is equipped with machinery of the most approved type on which cables of the largest size are made. The other buildings which have been added from time to time are built of wood and are one story only.

The machinery throughout the works is up to date in every respect, a portion having been recently built in the company's own machine shop, while the greater part is of English and American origin and designed especially for the manufacture of cordage and twine from Manila, Sisal, New Zealand and Mauritius fibres, Russian hemp and Jute.

The machinery required to handle successfully all these fibres so as to produce the best results in the finished work is very varied, and as these fibres are all very long and strong, this machinery has to be large and heavy and the wear and tear in consequence is very severe. New machines are continually being invented which have to be purchased to keep abreast of the times, all of which tends to make the equipment and maintenence of this plant a very costly matter.

The present efficiency is due to years of persistent effort on the part of the management, who have let no opportunities slip and who have spared no expense to improve their manufacture and to increase their output to meet the varied demand

For several years the Maritime Provinces continued to add more and more ships to their large fleet of sailing vessels, until toward the end of the seventies sailing vessels began to feel most severely the competition from the iron steamers which were being turned out from the Clyde, and very soon the building of wooden ships was to all intents and purposes abandoned, so that to-day these most desirable orders for large shrouds and hawsers are few and far between.

In spite of this shortcoming the business of this concern, with some ups and downs, has steadily increased.

In the earlier years the fishing industry was a small one, but it has now assumed large proportions and the fishing fleet which fits out every year for the Bank fisheries, for the Labrador, for the Gulf of St. Lawrence and for the shores round the three provinces, takes a large amount of rope. Most of this rope is small in size, but as the number of vessels is large, and all draw their supplies for outfits as well as for refitting from the home market, the annual demand is a large one.

Besides the small rope for the running rigging and warps, each vessel fishing on the Grand Banks carries about 240 fathoms of tarred manila cable to which to ride when at anchor. These cables are also made at the rope works in any size required, generally 9 to 10.

Another industry which from small beginnings has assumed large proportions during the lifetime of this concern is the lobster fishery, now taking annually thousands of coils of still smaller rope and a large quantity of specially made lobster marline for the manufacture of the netting for the lobster traps.

Although the rope works owe much to the ship-building and the fisheries, these industries have been most materially assisted by having such a concern at their door, ready at all times on the shortest notice to make all lengths and sizes and descriptions of cordage required.

A vessel losing her cable on the Banks is able to run into Halifax and have a new cable made, probably 240 fathoms of 9 or 10, in a few hours, thus enabling the vessel to get to sea again the same day; or, if a short piece only is required to splice on to the broken one, this can be made the proper length without loss of time or waste of material Had the fishermen to wait for a week, as would probably be the case, to get this cable from some large centre, the loss would be a most serious one, or were the dealers to hold these cables in stock they would have to charge a large price even for full lengths, and when short pieces were wanted they would in many instances have to sell the nearest lengths they had, which would be very costly and inconvenient. Many other instances of the same kind could be pointed out.

One of the most important products of late years is the binder twine. Some twenty years ago when the automatic binder machine was invented and a demand created for suitable twine to bind the sheaves of grain as they were cut and before they were dropped on the field, these rope works were among the first on the continent to seize the opportunity and commence making twine for the harvesters.

The demand at first was very small, as the new machine was more or less of an experiment, but gradually as the advantages of the binder were recognized, its use became general among the farmers of Ontario, and the demand for the twine grew larger year by year.

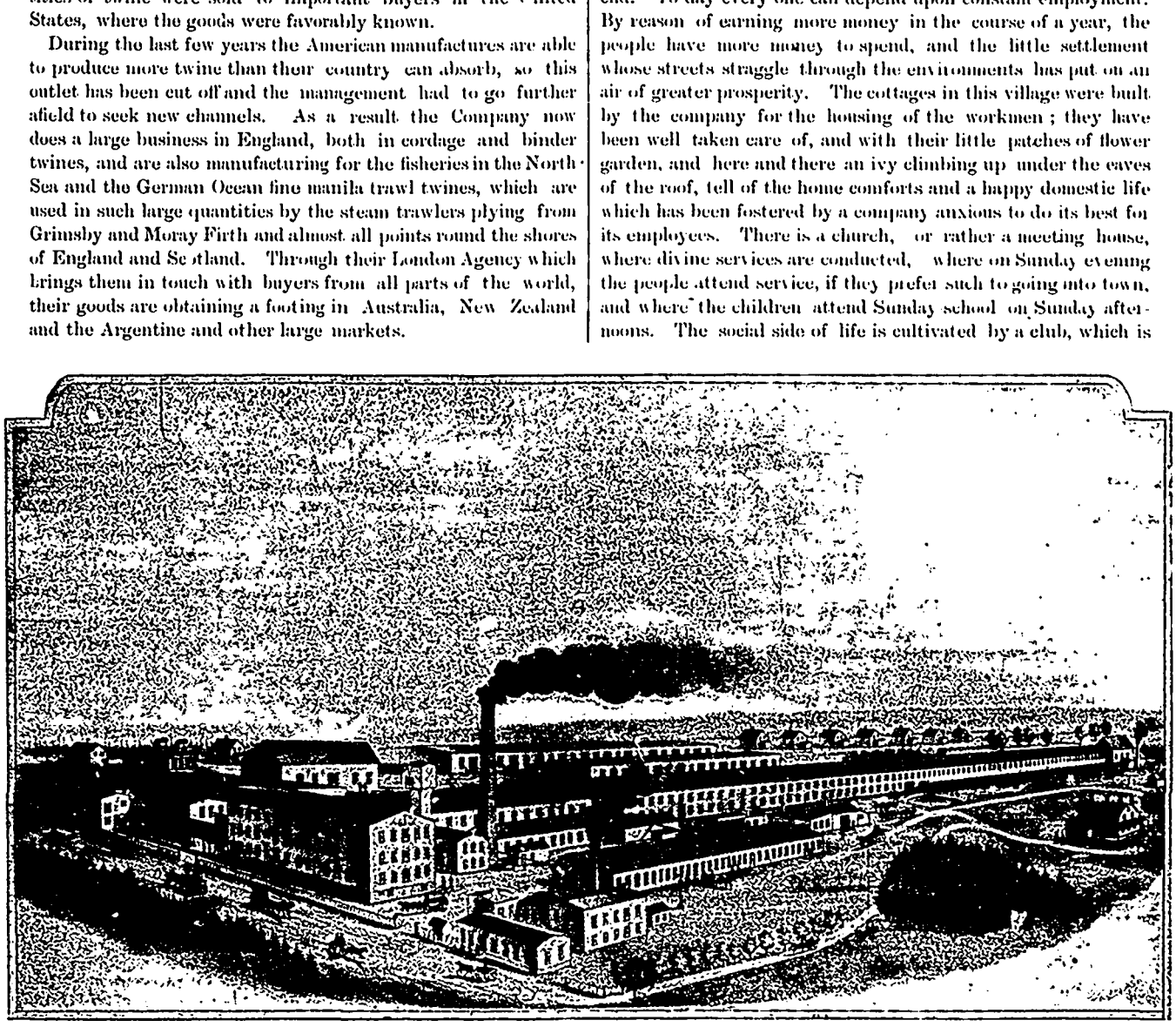
To meet this new demand the binder twine factory was built in 1883 and equipped with the newest machinery for making this harvest twine, thus putting the concern in a position to supply the large demand which was growing up in the province of Ontario. This trade continued growing until the Ontario farmers were all well supplied with harvesters and by that time Manitoba was opened up as an important wheat country, and binder twine from this mill which had made such an enviable reputation in Ontario gradually found its way across the continent as far west as the Rocky Mountains and north to the new wheat lands of Edmonton and Alberta.

While supplying the home demand the company have always

looked abroad for new fields for their manufactures, and in the earlier years of the binder twine industry, before the capacity of the American mills was so great as it is at present, large quantities of twine were sold to important buyers in the United States, where the goods were favorably known.

During the last few years the American manufactures are able to produce more twine than their country can absorb, so this outlet has been cut off and the management had to go further afield to seek new channels. As a result the Company now does a large business in England, both in cordage and binder twines, and are also manufacturing for the fisheries in the North Sea and the German Ocean fine manila trawl twines, which are used in such large quantities by the steam trawlers plying from Grimsby and Moray Firth and almost all points round the shores of England and Scotland. Through their London Agency which brings them in touch with buyers from all parts of the world, their goods are obtaining a footing in Australia, New Zealand and the Argentine and other large markets.

as well as by day. Many years ago there were frequently long periods of time when but a percentage of the hands could be kept employed right along from the beginning of the year to the end. To day every one can depend upon constant employment. By reason of earning more money in the course of a year, the people have more money to spend, and the little settlement whose streets straggle through the environments has put on an air of greater prosperity. The cottages in this village were built by the company for the housing of the workmen; they have been well taken care of, and with their little patches of flower garden, and here and there an ivy climbing up under the eaves of the roof, tell of the home comforts and a happy domestic life which has been fostered by a company anxious to do its best for its employees. There is a church, or rather a meeting house, where divine services are conducted, where on Sunday evening the people attend service, if they prefer such to going into town, and where the children attend Sunday school on Sunday afternoons. The social side of life is cultivated by a club, which is



"These works are now most extensive, occupying ten acres of ground and comprising some thirteen buildings."

As employers of labor the company take an important place in the community, finding occupation for from two hundred and fifty to three hundred hands.

The output during the present season has been very much in excess of last year. The company could most easily supply the total requirements of Canada, and judging from the favorable reports received from abroad the management have every reason to hope that the demand during next season will equal, if not surpass, the present year.

The quality of their goods so well known at home stands them in good stead in these distant fields and makes it very easy to hold a connection that is once opened. The larger buyers are very conservative and will not take any chances on qualities when shipping to distant markets.

The people who find employment in the works to-day find more steady employment than they used to. The factory has been so busy of late that work has had to be carried on by night

under the auspices of the wealthy residents of the locality, and in whose club house the youth and beauty of the place frequently meet to ease the anguish of the torturing hours when winter evenings are long.

Out-door life is enjoyed by the people too; they have their athletic club, and send their representatives to compete in regattas, when they surely win.

It is quite an ideal workingman's village, continually growing more desirable as the prosperity of its inhabitants increases.

The Consumers' Cordage company and their predecessors who first owned the ropeworks have thus done a great deal for the locality in which the works are placed and for the province besides. They have given employment to an industrious portion of our population who have in turn helped to build up the community and make it prosperous. The works have also meant a great deal to our fisheries and to all other consumers of rope in the province who have been able to get exactly what they need for their various purposes, while many other departments of provincial activity have been promoted to a considerable extent.

SOME INDUSTRIES That are wanted in Halifax.

ONE of the most interesting and important phases in connection with the future of Halifax is that which involves its possibilities as a centre for extensive and varied industrial undertakings. There is some difference of opinion as to the advantages which this city has to offer to manufacturing enterprises; but when we come to examine objections at close range we find them to be of such a character as to *mean no* obstacle to the aggressive capitalist who is prepared to overcome the same difficulties as exist in other localities. The question of power is naturally the first and most important one about which to obtain satisfactory information. As is pointed out in other references throughout this number, we are relatively but a short distance removed from immense deposits of coal, which can be transported to Halifax at very low rates of freight by water carriage, and in addition to this nearness of fuel supplies, we have several sources of available water power which can be utilized in the furnishing of the necessary force required to drive extensive plants of varied character.

We all know that to-day competition in the application of *machinery* is very great, and is confined chiefly to the comparative values of steam-driving power as against that furnished by natural forces from large bodies of dammed reservoirs. We believe that fully a third of the machinery in the province to-day is revolved through the agency of water power, and there still remains much to be done in utilizing to the full those which are still available for *this purpose*. Supplies of raw material of all kinds may be landed at Halifax cheaper than at any other point in the province for the reasons which are outlined in our articles which cover the nearness of the city to primary markets. We have, therefore, the two most important factors in the promotion of a large volume of manufacturing enterprises ready at hand, and it is for us to endeavor to *sketch out* such industries of this kind that we think would be of value to the city and its inhabitants, as a whole, as well as of profitable results to the capitalist who would engage in the same.

It is true that one of the chief features in industrial life during recent years has been the removal of manufacturing plants from city districts to country locations, and the labor question may be said to be chiefly responsible for this tendency. This may be true of large and extensively populated cities where the various *bodies* of organized labor at times threaten the successful prosecution of industrial development by reason of extensive strikes and differences as to wages; but we are far removed from this condition on account of the comparatively limited population which finds its home in this city. Coming down to concrete facts, we think that one of the *most promising* industries which may be undertaken at such a point as Halifax would be the establishing, on a large scale, of pulp and paper mills. Several more or less earnest efforts have been *made in the past* to put such undertakings on a practical basis, but the matter seems to have slumbered during the past few years. The supplies of lumber necessary for the operation of such a plant are in abundance within short water and railway distances of the city, and with our well-established distributing facilities, there would be no trouble in finding a market for all that we could produce either in the form of wood pulp or the completed book, news and wrapping papers. The uses to which wood-pulp is being put, means a broad field for the practical utilization of our forest wealth. The advantages which such an industry has among others is that a great deal of small timber which is not suitable for ordinary purposes can be used in pulp and paper making. We *should* certainly make an effort to manufacture the paper which is required for our provincial uses, instead of selling our raw material in the shape of pulp, as we are doing at present. There is also the well known fact that England imports every year nearly a half million tons of pulp, which is chiefly employed in paper-making. A cord of spruce wood manufactured into good sulphite pulp is worth $18, of which $9 are expended in the shape of labor and material in preparing it for market. The same quantity of lumber sawn in the ordinary way is worth $10, of which $6 goes into the cost of milling it. It will thus be seen that the wood-pulp industry means a greater distribution of labor, besides bringing a better price for the finished product.

Another industry which has been suggested as being suited to *this city* is that of extensive glass works. Generally speaking, it may be said that the chief objection to this particular undertaking is the enormous amount of fuel which is required; but on the other *hand* we have the compensating advantage of being in a position to obtain the raw materials, such as sand and lime, at the very lowest cost of freight by being in the immediate vicinity of these supplies. We also have the factor already mentioned of being in an exceptionally favorable position for distributing our manufactured wares. With the present duty on imported glassware, we should be in a *position* to support at least one plant for the manufacture of all kinds of bottles, preserve jars and hollow-ware, the making of which would give employment to a couple of hundred hands. There is talk at the present moment of starting such an industry in the town of Pictou, Nova Scotia, but we do not know of any inducements which exist there that are not equally present in the city of Halifax.

We are all aware of the vast quantities of cast iron water-pipe which are required by all communities in order to provide for proper and adequate supplies of water, and the manufacture of such has become a very important industry in portions of Pennsylvania where iron is smelted. Of course it would be more desirable to consider such an undertaking as a possibility in connection with the establishment of one or more large blast furnaces at this point, but this does not seem to be among the immediate possibilities. It is true that we have located here a fairly extensive plant for coke making and supplying of fuel gas; and there is a possible opening for the erection of a pipe mill in connection with the same, but it will require some further consideration.

In connection with our lumber industry, we believe there is room in this city for a plant to treat lumber by creosoting it, for use in wharf building and such other submarine employments and constructions in which it is now being utilized. This is an industry which might be undertaken in connection with the production of creosote, which is a feature in the operations of the present gas company.

One of the most important possibilities, however, of Halifax is to be found in connection with that of steel ship-building. This is the one industry which we think should find its permanent home along the shores of Halifax Harbor, and the reasons which can be adduced to support such a view are very many and favorable enough to place the subject beyond argument. There is no industry so well calculated to meet not only the aspirations of our people, but to produce satisfactory returns in the shape of dividends to the first company who will undertake to conduct this enterprise. Our strong point is the maritime character of our people and their acquaintance with all the details which make for the successful prosecution of such an industry. This journal has in its regular issues gone into the question in detail and has pointed out wherein we may achieve decided success. We could wish, of course, that we had mills for the manufacture of ship plates nearer than Sydney, Cape Breton, but in these days of low freights the question is of less importance than it would have been previously. In addition to these openings we would suggest that the manufacture of oilcloths and carpets is an industry which should engage our early attention. The manufacture of pianos is another enterprise which promises fair returns for those who will engage in it. Factories for the manufacture of tweeds, woolens and shoddies are additional avenues which should be cultivated by Halifax skill and capital. A knitting mill should very easily find profitable employment the year round in turning out such goods as are required by provincial users. There is room also for a larger measure of activity in boot and shoe manufacture in this city which it would be wise to cultivate. The building of carriages is another branch of activity which, notwithstanding the fact that several local men engaged in the business have not been successful, would pay a dividend on invested capital.

In short, we believe that there is a large sized opportunity open here for the development of a number of industrial undertakings and because one or two operators have failed to establish this fact it by no means follows that we are not well placed to become an important centre for these desirable industries. If there should be any among our readers who may be interested in looking into the merits of these openings we have no doubt the Halifax Board of Trade will be glad to furnish information likely to be useful to intending investors.

Halifax As a Lobster Market.

THE lobster trade in Halifax is about thirty years old. It has reached its fullest development within the past two decades, during which time the exports to all markets have amounted to something over $20,000,000. These are large figures, and the lobster fishery has been placed very rightly among the most important of Nova Scotia's industries. But it is an industry which, instead of showing that encouraging increase which characterizes the rest of the provincial trade, must inevitably decline—is, indeed, already declining. There are well-known reasons for this. The fishermen's motto has been "After us, the deluge," and by their own short-sightedness, coupled with the inadequacy of government regulations, they have depleted nature's resources.

Canada and Newfoundland have a monopoly for all the world of the canned lobster business. Nowhere else are the crustaceans put up in tins and shipped to foreign, or to any other markets. Norway is a great lobster-producing country, and sends live fish to London, but Halifax sends canned lobsters to Norway. This fact of holding the monopoly gives to Canada the control of the world's markets, and the prices rule high. European buyers object to these high prices, but it is the privilege of the monopolists to name their own figures. There is no competition, and the European buyer pays the price or—does without. In these days ample means of distribution are so many that Nova Scotia lobsters find their way to the grocery shops of Australia, China and Africa, where prices are still higher, and the lithographed can so familiar to us signifies a luxury. Great Britain is the greatest consumer of Canadian lobsters, and it is the better class of British working-people who furnish the demand. The wealthy people eat live lobsters from Norway. Though the aggregate is large, each family of working people who know the Canadian article buy but a very few cans in a year, for other foods are cheaper. The retail price in England averages one shilling and six-pence a pound, and British Columbia salmon sells for six-pence a pound. But the lobster is a rarity, and Englishmen are fond of it.

In 1884, and for five years afterward, the price of canned lobsters was $6.00; it now runs from $9.00 to $11.00. But even at these advanced figures the profits are small, and large amounts must be handled to leave a paying margin. The British or French consumer pays what he considers a high price because that is the lowest rate which will make it possible for the Canadian fisherman to catch and can, and make a living for himself.

With these facts of diminished supply and higher prices goes this other fact, that canning factories are greatly increasing in number. Statistics are impossible. Licenses are issued by the government, but a great many cases of lobsters are shipped from Halifax that come from illegal no-license canneries along the shore, where small fishermen operate on the quiet. This is one of the causes of the depletion of the catch. In Prince Edward Island, in 1879, three lobsters were enough to fill a can; it now requires eight. Canners have seen a dollar in sight, and they have put up a factory to catch it with. The lobsters suffer.

But aside from all questions of theory and practice, one of the most prominent features of the Canadian lobster trade is that Halifax is the great shipping port for the eastern provinces. Lobsters come to Halifax, by rail and by water, from all parts of the Nova Scotia shore, from New Brunswick, Prince Edward Island and Newfoundland, and are shipped to the United States, Great Britain, the Continent and the West Indies. There is no other port so well suited for a distributing centre. Halifax is in close touch with the best lobster ground of Nova Scotia, that portion of the Atlantic coast extending from its own doors to Canso and Cape Breton. The Island pack comes both overland and by water, and Newfoundland shipments by close-connecting steamers. The quantities shipped from Halifax do not therefore represent, altogether, Nova Scotia export, but are all the more striking proof that Halifax is the natural shipping port for the lower provinces.

Local packers generally sell their goods to dealers in Halifax, who buy up numbers of small lots from all along the shore and sell to European dealers on the spot, or ship on consignment. Shipments are made by regular schedule steamers plying between Halifax and trans-Atlantic ports, and cargoes of 10,000 cases have frequently been made up in this way. French shipments are made via New New York. The ill-fated French liner La Bourgogne had a consignment of Nova Scotia lobsters, worth $100,000.

The following statistics will show the proportions of the lobster-shipping business of Halifax, to all the markets. A "case" is a box of forty-eight one-pound cans, the net weight remaining the same if quarter or half-pound cans be made instead of pounds. For 1897 the shipments were as follows:

To Great Britain	81,929	cases.
United States	15,802	"
Other countries	46,614	"
Total	144,345	cases.

Last year the pack in Nova Scotia showed a decline in the total output, but the shipments from Halifax were somewhat larger than the year before. They went to the different markets in quantities as follows.

1898.

Destination.	Cases.
Great Britain	106,973
United States	13,479
France	33,382
Germany	4,691
Danish West Indies	2
British West Indies	73
British Guiana	67
Belgium	494
Holland	244
Norway	1,875
Denmark	443
Russia	500
Total	162,223

Value about $1,500,000.

For the three customs quarters of the present year, ending September 30, the official returns are as follows:

NINE MONTHS OF 1899.

Destination.	Cases.
Great Britain	42,022
United States	20,681
France	42,531
Germany	2,079
British West Indies	214
Spanish West Indies	11
British Guiana	104
Norway	532
St. Pierre	20
Denmark	964
Belgium	1,273
Venezuela	559
Total	110,990

Value $1,250,000.

It will thus be seen that Great Britain is the largest customer of Canadian lobsters, France averaging a close second. Russia and Venezuela markets are experiments.

The trade in live lobsters is also important. This is done almost entirely with the United States, and in the western countries forms much the more important branch of the business. A very large export in live fish is controlled from Yarmouth. But the bulk of the Canadian lobster trade is in canned goods, and is controlled from Halifax.

Biscuit and Confectionery Making.

Some account of the Extensive Works operated by Messrs. Moir, Son & Co.

IT would make an interesting chapter in the annals of Halifax industry if we could give some details of the development of Moir, Son & Co's. business, but unfortunately all the books from which such information could be obtained were lost about eight years ago when the building in which the firm was then doing business was destroyed by fire. But in the absence of figures we can sketch the development in a general way.

In the early part of the century Benjamin Moir started a modest bakery in Halifax, which by industry and the application of considerable business ability, he gradually developed into something greater. It was about the same time that Queen Victoria ascended the throne of Britain that Moir's bread began to be the staff of life in Halifax, and the name "Moir's Bread" has been a household word as well as a household necessity ever since and to this day. But it was in a very unpretentious building that Benjamin Moir began to make it.

After the death of its founder the business was taken in hand by his son, W. C. Moir, who carried it on under the name of W. C. Moir & Co. for fifty years, when the firm name was changed to Moir, Son & Co., by which it is still known. Under his management the business expanded wonderfully, biscuit and cake departments having been added by him, and in 1891 they were carrying on an immense business all over the Maritime Provinces, with travellers out everywhere and all the time. But in that year the unfortunate fire of which we have spoken occurred, which not only consumed a large part of the firm's assets and put them where they were half a century before, but made a break in the continuity of their business, for it required time to get a new building erected and new machinery installed so as to be in a position to take orders. But they were not slow in putting themselves on a better footing, and inside of two seasons their travellers were once more on the road taking orders for all sorts of biscuits, cakes and confectionery, and today they are getting along as if nothing had ever happened.

MR. JAMES MOIR,
Head of the firm of Moir, Son & Co.

All branches of the business are very extensive. The present head of the firm, Mr. James Moir, added the confectionery department about twenty years ago, which has become one of the best known of the whole establishment. Bread making is very extensive, 40,000 loaves being sold weekly, to deliver which 8 teams are kept constantly on the streets. In the biscuit trade their Cream Sodas and Family Pilot are leaders in which a large and constantly increasing business is being done.

The equipment of the firm consists of two parts—the factory in the city, where all the bread, biscuits and confectionery are manufactured, and a saw mill and box factory at Bedford, where all the wooden boxes required for the packing of their products are made, as well as boxes and shooks for domestic and export trade. They also have a paper box factory in connection with their main factory, where are made all the paper boxes required for the packing of confectionery and fancy cakes, as well as boxes which they make to order for other parties.

The main factory is shown forth in the accompanying engraving. It is a fine five-story building and has a deep basement running its entire length. It is an "L" shaped building, the main portion of which is 40 feet x 130 feet. The total floor area of the building is 53,200 square feet. The mill and box factory at Bedford has a floor area of 12,000 feet, which puts up the total area of floor on which the firms employees work to 65,200 sq. feet. The number of hands employed is 325 in the slackest seasons of the year, 300 in the main factory and 25 in the Bedford mill.

The Bread department, as before stated, was the first—the corner stone of the whole business. This turns out 40,000 loaves a week, and 8 teams are kept constantly on the streets from early in the morning until late in the afternoon. The making of the bread is carried on over night, and 6,000 fresh, warm loaves are in readiness *when the morning comes to go out to the* consumers. This will give an idea of the proportion of the bread trade of the city which this firm handles. An exceedingly interesting sight it is—the 18 white-aproned men, kneading and weighing and hurrying, to make sure that Halifax will have its bread to-morrow.

The great building is divided into departments, the chief of which is the confectionery department. This again is sub-divided. On the first floor biscuits and cakes are made. On all the other floors except the top floor, which is used for packing and storage, there are some candy-making operations going on.

The chocolate department is one which was recently extended and in which are now kept constantly engaged, even during the season when the demand for chocolates is slackest, 48 hands. It is a department, too, which will probably continue to expand, as business has increased along this line recently at a very encouraging rate.

Caramels, cocoanut candies and gum drops are made on the same floor, but in different rooms. There the steam cauldrons are always full or delivering their contents to the moulds, and all the latest machinery is brought to assist the operations. Formerly the creams and that sort of thing used to be made by hand, but now there is a special machine for that purpose, so that they are made not only more expeditiously, but more even in quality and much more cheaply. There are 36 hands employed in the caramel department and 23 in the gum drops department.

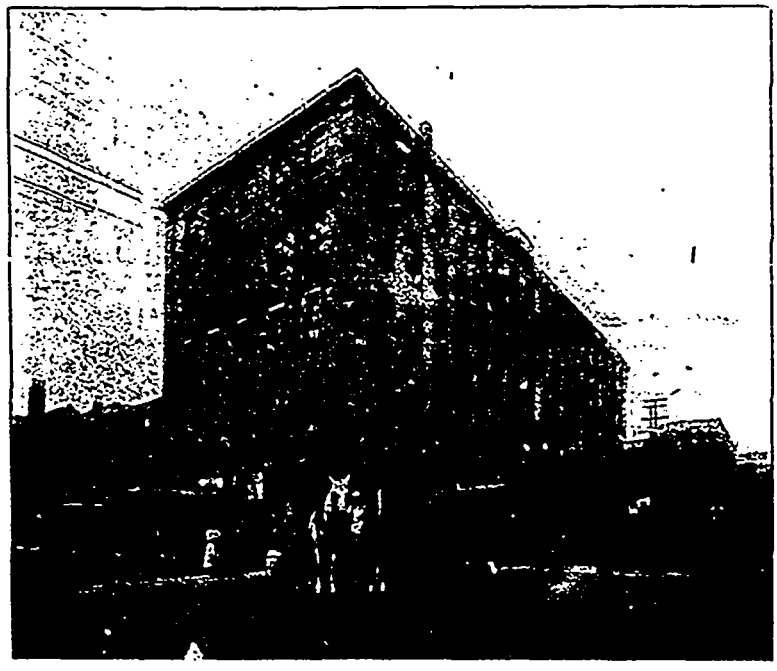
In another large room on the floor above that of which we have *been speaking, is the department of hard candies, where 31 hands* are employed. The room is a very large one and not candies alone are made in it. In its ample space are various machines, such as cocoanut shredders, and machines for cutting, grinding and performing many necessary operations. There, also, is carried on some of the work which can only be done by hand. Thus, opening cocoanuts has been reduced to a science by some of the men, who, when they have divested the useful portion off its rhind, pass it on to others who cut it into small pieces, which finally boys feed to the cutting machines in another part of the room, whence the material

goes through a shute to the cocoanut candy department below, and is either used as a component of candies or put up in packages as desiccated cocoanut. Considerable quantities of desiccated cocoanut are shipped to the Upper Canadian market.

Few only have been mentioned of the departments, but these are the chief. All the departments combined continue to turn out an immense variety of cakes, candies and biscuits. There are fully 1,000 varieties of these goods made by the firm. In the basement is a pastry department, which we have not mentioned, and where all the skill of the pastry cooks is bent on producing a variety of pies and such things for local consumption, whose number can serve any figure that the public demands.

The paper box factory is quite an interesting part of the establishment. As it is quite new, the plant is also quite new and up to date. All kinds of boxes are made there, and not only for the reception of the firm's goods, but likewise for whomsoever may require them, for its capacity is very great and it is the only factory of its kind in Halifax. There are 45 hands at work in it all the year round.

The details of this business are enormous and require careful watching. Mr. Moir has contrived a system whereby he can be kept constantly informed as to the factory's requirements in point of materials and other necessaries. He is also a close student of the markets, and has always been able by good buying to keep the expenses of the concern at a minimum. Mr. Moir is ably assisted in the conduct of the business by his brothers, Messrs. W. C. Moir, B. C. Moir and H. S. Moir, each of whom has control over certain departments of the business.



"Moir, Son & Co's main factory is a fine five-storey building."

Under the guidance of these men the business has so increased of late years that to-day they find it almost impossible to accept all the orders that come to them, and are seriously thinking of erecting another large building, almost as large as the one which they now occupy, to be run in connection with the present factory, so that they may be able to turn out a quantity of goods great enough to fill all demands.

The business that they do is not confined to the environments of Halifax, or even to the province of Nova Scotia, but extends away out as far west as Montreal, and even farther. They send large quantities of such of their products as desiccated cocoanut as far west as Toronto. Very frequently, and particularly about the holiday season, they send car loads of fancy goods of various sorts to the Canadian markets in Montreal and Toronto and other Canadian cities. There are firms who contract with them for special holiday novelties, and there may be seen in the factory during the late summer and the approach of the holiday season large numbers of expert workmen preparing imitation crab-apples and cocoanut confections and various things that require long experience and exceptional skill.

The capabilities of the concern were very forcibly presented during the last provincial exhibition at Halifax, when they made an exhibit which attracted the attention and called forth the admiration of all the visitors. Among those visitors were some who had seen some very large fairs in the large Canadian cities and also in some of the largest American cities, and their opinion was that they had not seen an exhibit to equal it. It stood 24½ feet high and covered a floor space of 400 square feet, near the centre of the building. Its design was very complicated, running into all sorts of angles. The general shape was pyramidal, and into its composition entered 450 boxes of confectionery, 250 tins of biscuits, 220 bottles of confectionery, all of different varieties, as well as 115 bottles of syrups of several different varieties, and over 200 packages which shewed nothing but the label. The base of the pyramid was in imitation of packed cases; and two show cases containing cut cakes entered into the general design. All the boxes of confectionery and biscuits had glass fronts, displaying the goods within, and their bright colors enlivened the scene in a great degree.

The firm also had at the exhibition some of the new machinery which they recently installed in their factory, and some of the men were engaged making doughnuts and other cakes after a new system. This demonstration of cake-making was what may be seen every day in the factory, where the best and newest machinery is always brought to assist the labors of the men and where new machines are installed as soon as the ones they have been using have become in the least antiquated.

In the bread department the mixing is done by machines, different kinds of machines being used for different kinds of bread. The loaves are baked in large revolving ovens. The firm is the largest bread concern east of Toronto. Besides supplying bread to city consumers they have for sixty years supplied the army and navy in Halifax almost continuously, having held the contract almost every year during that time with but an occasional intermittance.

They are the leading users of cocoanut in Canada, using, as a rule, twenty thousand cocoanuts a month, and sometimes more. As we have said elsewhere, they send large quantities of these to the Canadian markets, but most of it is used in the manufacture of cocoanut confections, of which they make a specialty.

What we have had to say regarding the trade of this firm has been chiefly concerning Canadian trade. The firm has not carried on an export trade to any great extent simply because, as we noted above, the local demand is so extensive that their factory, as at present constituted, is scarcely able to keep up with it. If in the future the plans of enlarging the factory are developed and the capacity of the concern increased, they will be able to pay better attention to export trade. Mr. Moir has already given it a certain amount of attention in the matter of finding out to what parts of the world the products of his factory can be profitably exported, and is in possession of some very valuable information on that point. Halifax industries have all been very progressive in the matter of enlarging their connection, of which fact this one is a very notable instance. When the good time arrives, and it is possible to devote attention to enlarging their connection farther, the firm of Moir, Son & Co will not be slow in doing it.

Cocoa and Spice Grinding

At John P. Mott & Co's Mills on the shores of Halifax Harbor.

ALONG the many miles of shore that bounds the harbor of Halifax is rarely to be found a portion where bold water does not give easy access to shipping. Consequently, along the Dartmouth side of the harbor where shipping facilities could be easily had, there have sprung up factories. Having railway facilities in the town as well as shipping, Dartmouth has long had great advantages as a manufacturing place, for these facilities by means of further advantages in the way of lower taxation have been made the more effective.

Among the factories which have been developed on the eastern side of the harbor, and whose products have earned the name of Dartmouth to almost every part of this great Dominion, are the Spice and Chocolate mills of Messrs. John P. Mott & Co. This concern commenced operations over half a century ago, when, in the year 1844 the late Mr. John P. Mott erected the first building of the group which the engraving on the opposite page sets forth.

This factory has the advantages with regard to shipping which we noted in the first paragraph of this article. The firm's own wharf juts out into the deep water of the harbor so that a haul of but a few hundred feet transfers to and from the storehouses. Whether raw materials are being imported, as in the case of spices and cocoa, from the first sources of supply in the West Indies, South America, Africa, the East Indies, and wheresoever else they may be obtained, or manufactured products are being exported, either to points within easy reach of the city, to other parts of the province, or to other countries, it is an easy matter to unload the first named from the vessels and store them away for further use, or to put the latter on board. The Intercolonial railway passes right along this shore, and a siding from it running close to the factory provides even an easier means of loading and unloading, as the cars are brought right up to the warehouses where either the raw material or the manufactured products are stored, so that the loading and unloading does not require even the use of teams as freights can be rolled on light trucks, on and off the cars without trouble.

Another advantage that the factory possesses is a stream of pure, fresh water. This stream finds its source in the lakes which lie among the hills behind, and coming through a part of the country where there is no foul drainage, and running over a bed of rock, it is kept very pure, affording an excellent quality of water for steam purposes.

The works cover 31,500 square feet. They comprise a large number of buildings spread over five acres of ground, so that they are well separated, and in the event of one catching fire all the other buildings are comparatively safe. The present establishment does not by any means bear a great resemblance to the establishment of half a century ago when there was but a single building in which but a few men worked, and when the industry was more of an experiment; for to-day there are a large number of buildings, some of them having been built in recent years, and in which a large number of men and women find daily employment. The factory and inclosure is quite a village in itself presenting such an appearance from the water.

Inside the buildings may every day be seen the various processes being followed out of converting the raw materials into marketable chocolate, cocoa, and spice, which are sold over every counter in almost every part of Canada.

In the case of cocoa manufacture, there will be found in the first instance a number of machines selecting the cocoa beans, cleaning off the dust and attached particles which have been accumulated from various sources during the fermentation of the seeds. After this preliminary process the seeds are very carefully roasted, and the roasting process carefully watched to be sure that a uniform effect is obtained in every part of the seeds and in all the seeds in the oven. This roasting changes the color somewhat, and modifies the taste, and it is largely by the change in color that the proper condition of the roasted seeds can be determined.

The roasting of the beans causes the shell to become readily detachable. This assists the process of removing the shell, after which the seeds are crushed into small fragments. This process is followed by a thorough winnowing during which the shells are carried away, just as in the preparation of flour, and the cleaned fragments of seeds are left for further manipulation. The hardened germ of the seed is then removed by a simple but efficient piece of machinery, for it is eminently desirable that these tough pieces of tissue should not appear in the finished product. The fragments are ground by a complicated mechanism until they are reduced to a very fine consistency, and become a paste. This paste is put into moulds, and after it has been put away for a certain length of time, wrapped up in paper and foil and sold as ordinary chocolate. The moulding is a very interesting operation though somewhat noisy. A plastic lump of the proper weight is placed in a shallow mould. A number of these moulds are put into a wooden tray placed upon a tapping table which is shaken automatically causing the metal moulds to vibrate. Every step of the process is watched carefully, and when the mass has been shaken into the moulds so as to be perfectly uniform in shape and size, the moulds are removed to the cooling rooms.

In the preparation of cocoa a press is used to remove a definite portion of the cocoa oil (the cocoa butter of commerce) from the roasted seeds, and great care is taken in the grinding of the fragments in order that they may be reduced to the greatest possible fineness, and after the operations of pressing and grinding, which are prolonged and carefully watched, the cocoa results as a very fine powder and is put up in attractive tin packages.

The grinding of spice is another department of the business. This of course does not differ in any great degree from the grinding of spice in other mills, and as the operation of grinding spice must be known, naturally it is not worth while to go into details here. The spice mill is of course in a building altogether separate from the chocolate mill, and there is no mingling of departments whatever. Great care is taken to see that the whole spices are of good quality before they are put into the grinder, and the process of grinding is carefully inspected to see that the work is well done. When the grinding is finished the product is immediately put into packages which are carefully secured from the atmosphere so that the strength of the spice may be retained.

All the wooden packages and cases in which round lots of the

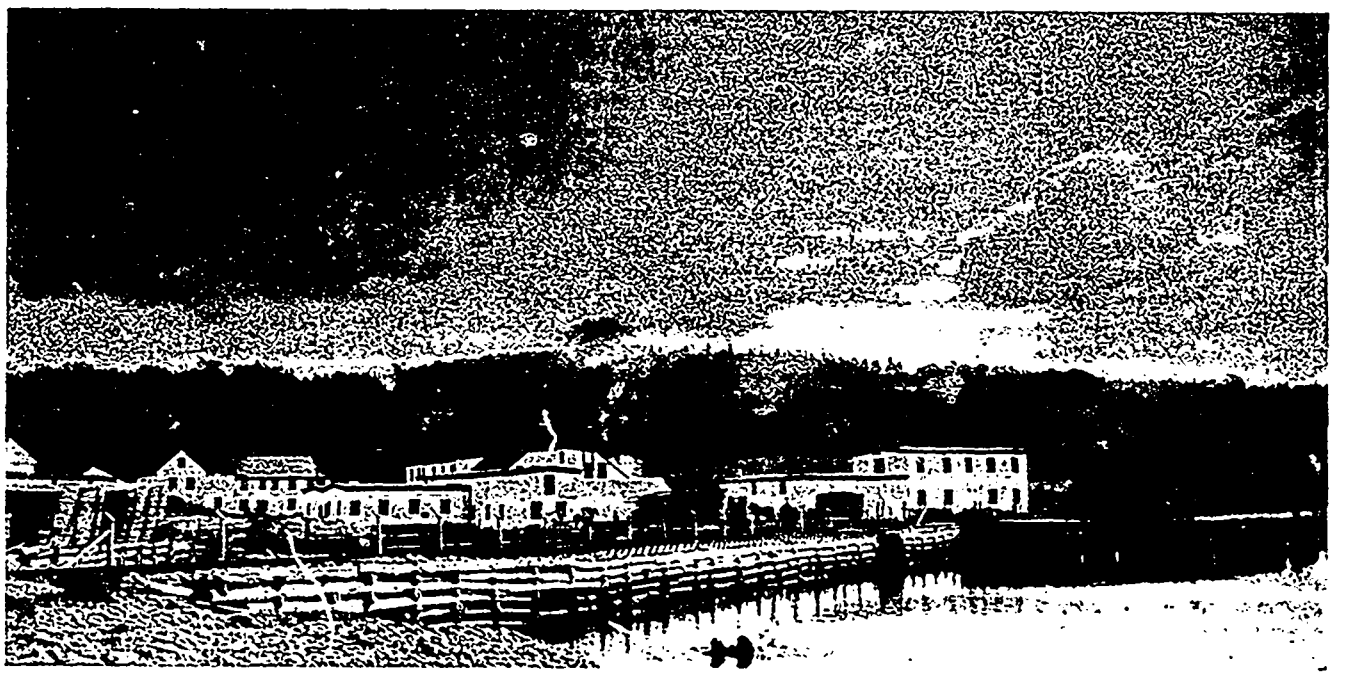
firm's goods are packed for shipment are made on the premises, which assures the best satisfaction to the shippers, and is, besides, considerably cheaper. The engraving shows large piles of lumber in the factory enclosure. This is the stock that is used in the manufacture of the cases, and large quantities are always kept on hand that it may be well seasoned.

Another factory in the enclosure distinct from the chocolate and spice departments, in a building by itself, is one for manufacture of soap. This is the factory of the Dartmouth Soap Company, of which John P. Mott & Co. are the proprietors. This, however, is not like the spice and chocolate business, one which extends over the whole of Canada, but is a purely local business, being confined to the Maritime Provinces. They manufacture several kinds of laundry, bath and toilet soaps, and in these do an extensive local trade.

But the business in chocolate, cocoa and ground spice is now a very extensive one, being confined not to the local trade, but to the trade of the entire Dominion of Canada, and sold on the Pacific Coast, nearly four thousand miles away. The firm has resident agents in Montreal, Toronto, Winnipeg and Vancouver, where large stocks are continually kept on hand, so that the trade may be supplied without delay at those points. The business is not only large, but is increasing, so much so that within the past few years the firm has been compelled to double the capacity of their chocolate works. Of late years they have not only been supplying the Canadian market with chocolate, but have also been supplying Her Majesty's navy in North American waters, and doing a certain amount of export trade as well.

It was chiefly through the exertions of the senior member of the firm living to-day, Mr. J. Walter Allison, that the trade in Western Canada has become so extensive. It was in 1876 that he became a member of the firm of John P. Mott & Co., and ever since that he has been very active, and has become identified with other manufacturing industries in the province, as well as with some of the financial institutions in Halifax, to which extended reference is made on another page. When Mr. Allison joined the firm his first business was on the road. He then only went through the Maritime Provinces, but later he commenced to invade Quebec and Ontario, and in the later years of his travels confined his attention entirely to Western Canada. When he left the road he had established connections all over the entire country, and the efforts which he made in this way he has reinforced by seeing that the trade gets the kind of article that enlists the adherents of a connection already opened up. He devoted, in his travels, a large share of attention to the confectionery trade, and was very successful in making the chocolate and cocoa preparations of his firm popular. Since the death of Mr. John P. Mott, Mr. Allison has been the manager and executor of his estate.

In 1896 Mr. Fred J. Ward joined the firm, and he now covers the route which Mr. Allison had travelled over, and he has succeeded in making himself very popular with the firm's customers, and is doing a great deal to assist in the extension of the firm's connection as well as in the holding of that already secured.



MOTT'S WORKS, DARTMOUTH COVE, Showing Wharf and Railway Siding.
These Works occupy about five acres, and the Buildings cover 31,500 square feet of space.

A glance at the engraving will reveal some of the beauty of the scenery which surrounds this group of factories. Set down in the midst of one of the loveliest portions of the exceptionally beautiful environments of Dartmouth, the factory has a situation that is very ideal indeed. The property in connection with it is very extensive and some distance from the factory, embowered amidst handsome trees, is the house which formerly the late Mr. John P. Mott built and which is now occupied by Mr. Allison. The property is one of the handsomest in Dartmouth, and is near to view for those who pass along the carriage road that leads down along the wooded hills to the sea-shore at Cow Bay, some miles distant. The whole scene is overlooked by a high hill, green with hardwood foliage in summer, and particularly delightful to the eye when it puts on the freshness of spring or the varied tints of autumn. There is probably no concern in the whole province of Nova Scotia, and it is doubtful if there are many in Canada that have been so fortunate in the selection of a site for their factory.

Nova Scotia's Pioneer Shoe Factory.

THIRTY years ago all the boots and shoes used by the provincial population were imported, some from Great Britain, but for the most part from the United States. There were no shoe factories. The highest development of the business in Halifax was in the jobbing trade and the bulk of it was held by one man, the late Edward Smith.

About forty years ago the man who was destined to inaugurate boot and shoe manufacturing in this province lived in Windsor. This was Mr. Robert Taylor, now head of the Robert Taylor Co. Mr. Taylor was then a young man whose ambition caused him to look for a broader field wherein to exercise his business talents, and the capital city of the province naturally appealed to him as offering the desired scope. Thither then he came with a small amount of capital but lots of energy to begin his life's work, and when he came he found the condition of the boot and shoe trade as we have described it above.

After giving the matter due consideration, and having a ready appreciation of the opportunities which were in store for a progressive man in this direction, Mr. Taylor's first move was to buy out the interest and business of Mr. Smith. He continued this business for a number of years, making himself familiar with every detail of the trade's requirements. But while he handled the goods which went out all over the provinces, it occurred to him that it ought to be more profitable to manufacture the goods which the trade demanded, and after this idea took firm hold it found fruition in the establishment of a factory upon a small scale for that purpose.

It is now just about thirty years ago since Mr. Taylor commenced to manufacture boots and shoes. The factory was then very small, employing only 25 hands, but has since been greatly enlarged, until now it gives steady employment to 160 hands. But the small factory that was started thirty years ago formed a landmark in the industrial progress of Nova Scotia and Halifax, for it was the first shoe factory in the province, and as other captains of industry saw it grow and prosper they were encouraged to enter the field also, and to-day there are several shoe factories located in different parts of the province. But the factory which is the subject of this article was the pioneer.

During the three decades of its history, many and varied have been the results of invention as applied to this line of manufacture. The machine has found a place in nearly every department of the manufacturing process and thus while the number of hands employed in the factory is only between six or seven times as large, the output of the Taylor factory is vastly more than proportionately greater. As a result of the application of inventive skill, a man's working capacity is many times what it used to be, and the work is less arduous and wearing. Machinery has invaded almost every portion of the labor involved in making a shoe. In the Taylor factory every operation is done by machinery that is practicable. The uppers could be cut by machinery, but the demands upon the factory call for such a variety of styles that it is found to be just as speedy to cut by hand, and until it is possible to specialize to a great extent, it is unlikely that the machine will be introduced for this purpose. The number of styles at present put out by this factory reaches nearly 500, and when it is known that it requires a limitation to something like 100 styles, to make the machine a profitable investment, it will be understood why the machine has not invaded this department also.

But nearly every other operation is done or assisted by machinery. Once it was thought that lasting could not be done save by hand, but now it is done just as well by machine. So with all other operations. This has made division of labor more possible and even necessary, and every man has his own machine to attend to and his own work to do, so that by practice he becomes perfect.

With regard to the first operations in the manufacture of a shoe, they are the cutting of the soles and the uppers. These two departments are kept apart, the former having machines and the other, as we mentioned before, none. The soles are first cut out of the great sheets of leather. They are then passed to a pressing machine where they are made all the same thickness. Passing from this machine they are put through a machine which lays over a little of the lower part of the sole all around the edge and beneath that cuts a little channel for the purpose of sewing. They are then put into a moulding maching which shapes them for the lasts, and then they are sent into the lasting room, where the uppers meantime have gone from the sewing room, where, having run the gauntlet of a great number of machines—each of which does its own word, such as skiving uppers, sewing parts together, putting on buttons or eyelets, making button holes, vamping, etc. The first machine in which uppers and sole are together for the first time is the lasting machine. From that the shoe—for it is now commencing to assume that shape—passes to the soling machines, of which there are three kinds: those which sew the sole on with a strong thread, those which cut nails to the necessary length and drive them through, and those which peg. The next operation is to put the shoe into a machine which rubs out all the lumps. The heels are then put on by a special machine, after which they are trimmed and the edges set, and then slugged, sanded and burnished. The bottoms of the heels and soles are then finished and the shoe passes on to the polishers, who hand it over to a man who inspects it and remedies any defects in the finishing, after which it is sent off to the packing room.

So perfect is the division of labor in this factory and so expert have the workmen become that it is possible to turn out a pair of shoes in two hours from the time the cutter commences to select the stock. The shoe goes to a great number of machines and is handled by a great number of men, but whenever an order is received for a certain kind of shoe it can be filled if it is not in stock almost as promptly as if it were.

The present output of the factory is 700 pairs a day, but by working overtime 900 pairs can be turned out with comparative ease.

There is no doubt that in course of time this business will expand, as it has expanded hitherto. During the thirty years of its existence it has been growing gradually and surely. We have shown the number of hands which they employ now is much greater than at the start, and the output is vastly more than proportionately greater. They have a good field to work in, and with the application of the same enterprise and ability which has made the business as great as it is, it cannot fail to become much greater as the years go by. Nova Scotia is developing very rapidly now, and there is every prospect for a rapid development of the shoemaking industry also, in which this factory, being the pioneer and the largest, will no doubt share in large measure.

Halifax As a Dry Goods Centre.

THE history of the wholesale dry goods and millinery trades in Halifax is very much like that of *any* other city in so far as the disappearing of old firms and the coming of new ones is concerned, with this exception that while in nearly every city disastrous failures have occurred there are only two cases in which a house has *gone out of business in Halifax* save with great credit to itself. There are only two instances on record of Halifax wholesale dry goods firms having been unable to pay one hundred cents on the dollar when retiring from business. It is a fact that a number of firms have gone out of business from time to time and it has been taken as an evidence that the business in Halifax is a lost cause; but, as a matter of fact, people who have so thought have failed to recognize the fact that new firms have come into existence and that the other houses have greatly extended their respective connections. There are six wholesale houses in Halifax and of these one is the oldest in Canada, viz., Kenny & Co., which was established in 1827 under the name and style of T. & E. Kenny. Of the more recent establishments those of A. B. Boak & Co. and Wellner, Moore & Partridge are quite young yet, but very vigorous and are getting a good hold on the trade. Of the older ones Smith Bros., J. & M. Murphy and W. & C. Silver have been in the business for many years and are fully entrenched, the former having an immense warehouse and doing an extensive trade. One of the houses that have gone out of the field of late years is that of Burns & Murray, but it must be remembered that Mr. Burns went out of business on account of failing health and that when he did so he was not only solvent but very wealthy, having made his money in the business. Murdoch's Nephews' business was wound up after the death of that one of the founders who retained a connection with the business, and that business was solvent also; moreover there is some evidence that Halifax merchants are not and have not been lacking in enterprise in the fact that the house of Murdoch's Nephews ventured successfully to establish a wholesale house in London, the very centre of trade of all kinds, and where a new house might be expected to have the smallest chances of success. Yet it was a success. And it is a fact that the dry goods trade of Halifax is a success to-day and always has been.

* *

The wholesale dry goods trade of Halifax appears all the more imposing when we reflect that there are not more houses in the business in such a city as Toronto and that there are even fewer in Chicago. Of course the Toronto and Chicago houses are much larger, but that is to be expected considering the size of those cities. But the fact remains that this trade in Halifax is on a solid and constantly strengthening basis. The tendency in great centres has been for small manufacturers to take the place of wholesale houses. In Canada there are several of these small manufacturers. But the Halifax wholesale trade have depended upon the large manufacturers for stocks, thus placing in their warehouses a greater variety of materials at a lower cost.

* *

Halifax is very favorably situated as a centre for a wholesale dry goods and millinery trade. As a writer in the September number of the *Contemporary Review* pointed out with a very convincing array of figures, "the sea is the only road for trade." The maritime situation of Halifax bring her in cheap and easy contact with the chief producing centres of the world. A great percentage of our dry goods and millinery comes from over the sea from Great Britain and the continent and steamers constantly arriving are constantly bringing into Halifax the fabrics and fine creations of Europe, at a cost just as small as that at which they can be imported into any other Canadian or American city. In the case of imports from the United States, a telegram sent at the proper time to New York or Boston will bring along the desired goods in two or three days at the most, and they can be landed here more cheaply than in most Canadian cities, and it is doubtful if there is one other at which they can be delivered from New York as cheaply Goods once here are very economically distributed by water, in many cases, or, as well, by rail In the case of imported goods it is obviously difficult for other houses to compete with the local wholesalers, and in the case of domestic productions the local houses have the advantage, because the goods are brought to Halifax and distributed at a much less freight rate than if the retailer imported in small quantities direct. This advantage is reinforced by the fact that wherever Halifax houses buy, their credit is so good that it instantly commands the best terms that are to be had.

* *

The position of the Halifax jobbing houses has been strengthened very much during late years by the fact that they have stood so well by the retail trade of the Province. It is quite a noticeable thing that Halifax wholesale people have suffered very little from bad debts, for they have helped their customers to build up their businesses by a prudent credit, and when the businesses have been built up they have given them every inducement possible to buy on a cash basis. Several Halifax houses have within the past few years adopted the system of "short terms" and "small shipments" wherever possible, so that their customers may avoid the danger of loss from over-stocking, and at the same time have their bills payable well in hand. Houses situated at a long distance cannot emulate Halifax houses to any extent in this respect, for it involves keeping travellers on the road all the time, and it is impossible for such houses to work up a connection sufficiently large to warrant this. Indeed, the wholesale houses of distant Canadian cities that have developed a connection in Nova Scotia, have spoiled it by not taking an individual interest in each retailer, as the Halifax jobbers do. The jobber in a distant city is naturally only sufficiently interested in a customer so far away from his natural constituency to sell him as much as possible, and it very often happens that it makes him an unprofitable customer by leading to his ultimate failure. Halifax jobbers, on the other hand, have been very careful not to jeopardise the interests of their customers, and the assorting trade and the cash basis are becoming very popular, thus contributing to the strength of our dry goods trade.

* *

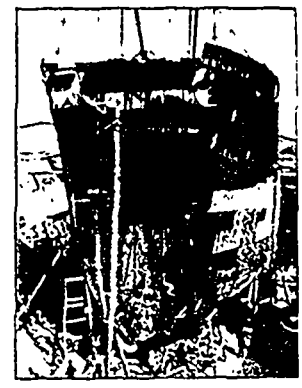
Another strong point in the Halifax wholesale trade is the fact that the habit of cutting on one article and depending on getting higher prices for other articles has not taken hold here as it has in many other centres, particularly in the United States. The trade of Halifax is very wise in this respect and there seems to be no disposition to adopt methods that are not thoroughly sound and honorable.

* *

Finally, the wholesale dry goods trade of Halifax has not only become strong itself, but it has, through some of its members at one time or another, greatly assisted in the development of those interests of which the Province and its metropolis are proud When wooden ship building was at its prime the ownership of vessels was made more possible for men of limited means on account of kindly aid of some Halifax wholesale dry goods men. There are many men along the Bay of Fundy coast and in other parts of the Province who are well off to-day, because years ago they were assisted by money made in the wholesale dry goods trade of Halifax. Besides, there is no doubt that our dry goods men became influential in banking circles and were instrumental in obtaining the banking facilities which the retail trade now enjoys, and in this additional way contributed to Nova Scotia's advancement.

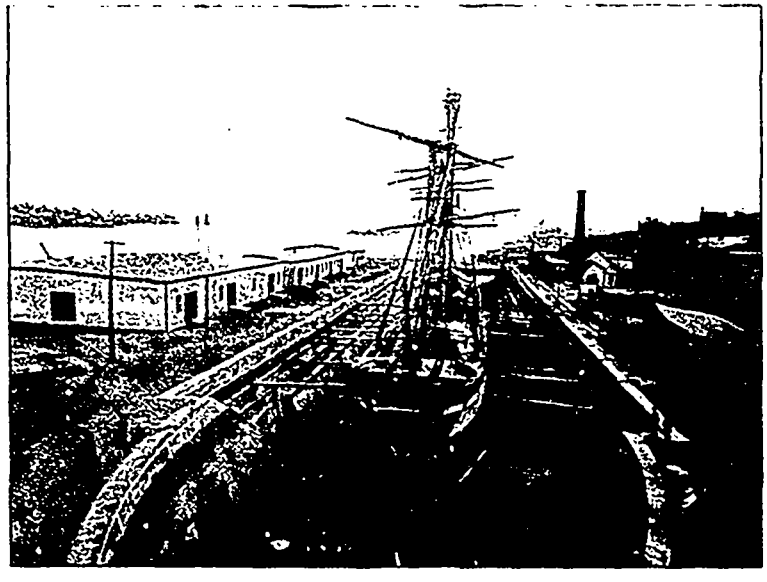
Dry Docking Facilities of the Port.

Halifax is the logical destination of any ship disabled on the North Atlantic.



AT the best of times a certain danger accompanies navigation; but when the path of the ocean greyhound is the path of the storm king, mishaps at sea are frequent, and oftentimes accompanied by thrilling experiences which fill the columns of the world's press and awaken the most human of sympathies in every heart. And there is not a place in the world where these are awakened to a more lively degree than in Halifax, for a very large percentage of craft disabled by storm or collision or breakage of machinery, find their way thither. Hence, not a captain sails the North Atlantic who does not recognize the importance of Halifax's geographical position; and the moment anything serious happens aboard ship the skipper's ambition is to make Halifax as quickly as possible.

This fact, and the frequent presence of British ships of war in the port—which is the chief station of Her Majesty's navy in North America — were the reasons which thirteen years ago gave rise to the idea of constructing a dry dock. And to-day we have a dock capable of receiving a ship of 580 feet length with ease- a dock that has no equal on this side of the Atlantic. Not even in the great republic to the south of us have they such an important piece of national equipment, and a couple of years ago when the United States government found that they had no dock that could accommodate their great battleship Indiana, they were put to the necessity of sending her here to receive the overhauling she required.



"The repairs were expeditiously done and the Cromartyshire sails the ocean wave as proudly as ever."

Since the dock has been in working order many a ship whose name is a household word in every country, by reason of her participation in some great sea experience, has been repaired here. Everyone who reads knows well the story of the great French liner La Champagne, how for many days and nights she was at the mercy of wind and wave, and for a time her passengers almost despaired of ever seeing land again; while in many lands there were people who eagerly scanned the papers day by day to learn if there was any news of the missing steamer, until at last their anxiety was relieved by the fact that she had been towed into— Halifax. In this peerless harbor she lay safe at last, and the whole world talked of wonderful deliverance; and Halifax was a name on every lip. Her broken tail shaft was replaced at the dry dock, and while the great 7,000-ton ship rested on the shores within the massive walls of the dock, she was visited by a great multitude of people.

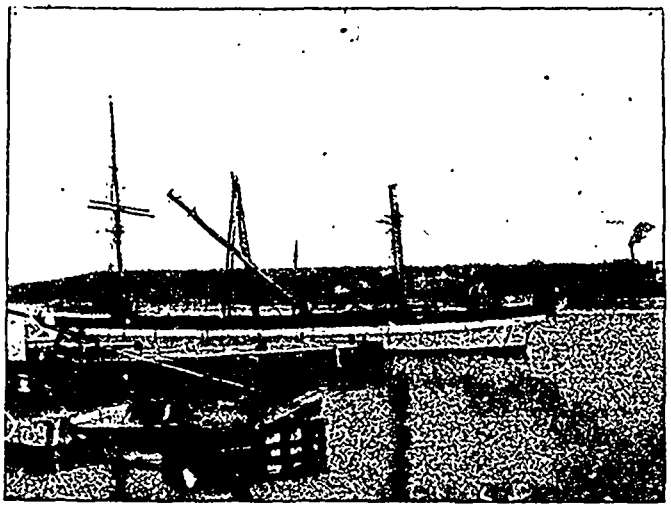
"It was in the Halifax Dry Dock that the Knight Bachelor had her new nose put on."

If it should happen that someone has not heard of La Champagne's case, surely no one lives who was old enough a year ago to take an interest in anything, but remembers the awful Bourgogne disaster. It was the Cromartyshire, a noble sailing ship, whose fate it was to be in collision with that great steamer, and it was the Cromartyshire's good fortune to come out of the collision in a fit condition to float; and while La Bourgogne went down and over 500 souls with her, the Cromartyshire was able to reach Halifax, the most easily accessible port on the North Atlantic and a port where very want of a disabled steamer can be attended to. Thither was brought the Cromartyshire and from Halifax was sent all over the world the mournful details of La Bourgogne's story. Once more the world had "Halifax" on its lips and the port was once more talked of as the logical destination of any ship disabled on the North Atlantic. Shortly after her arrival here the Cromartyshire went into the Halifax dry dock, and the extent of her injury the reader may determine by examining the pictures which we present of her. It involved great care and much labor to effect the repairs which were completed at the marine slip, but they were expeditiously done, and the Cromartyshire sails the ocean wave as proudly as ever.

Not everyone, perhaps, has heard of the Knight Bachelor. Sailing at a fairly high rate of speed this steamer encountered what every steamer that crosses the Atlantic to an American port has many chances of encountering — an iceberg; an

experience that cost her the better part of her bow. But even if everybody has not heard of the Knight Bachelor, her's was an important case and she might have fared badly had Halifax not been within such comparatively easy reach ; in fact Halifax was the only place she could make, which many steamers besides have found to be their best refuge. It was in the Halifax dry dock the Knight Bachelor had her new nose put on, the largest job ever done at the dry dock, the extent of which may be estimated from the picture.

It matters not what a "lame duck" requires in the way of treatment, the equipment of the dry dock and the skill of the men there employed are sufficient to meet that requirement. We have mentioned the mending of a tail shaft. The breaking of a shaft is probably one of the most frequent of ocean mishaps and several steamers have been brought into Halifax during the past few years because of such an accident. New shafts have been forged to replace the broken ones and put into position with the greatest of expedition. We have also mentioned the repairing of a crippled bow, which, also, has frequently occupied the attention of the workmen at the dry dock. Both are common experiences. But it required an extraordinary case to test the capabilities of this concern to the utmost.



"In three weeks they equipped the Maren with a mainmast once again." ✕ ✕ ✕

As a physician's skill is tested by his ability to cope with cases of a complexity and gravity such as he has never met before, so the efficiency of this dock was determined in an emphatic way just about a year ago, when the men who had never before attempted one of the most complicated operations in steel ship-building, viz., the building of a steel mast, did the work as expeditiously and as satisfactorily as could any shipyard.

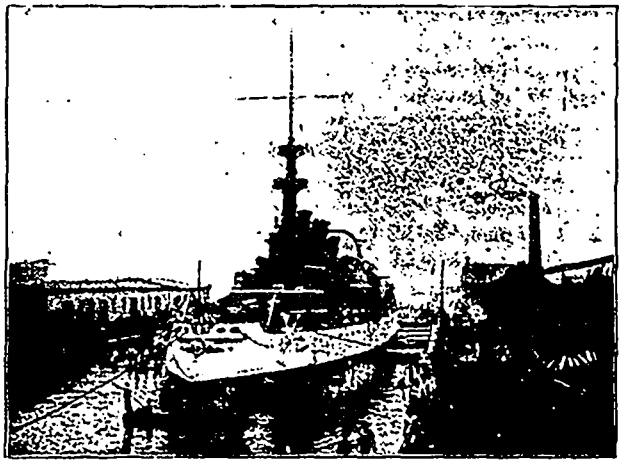
It was the steel ship Maren that came to this port disabled like many another that has breasted the storms of the broad Atlantic and for which this piece of work was done. The dock company contracted to do in three weeks a piece of work which required numerous plates and angles and endless rivetting, or pay a fine of £20 a day for every day the finished work was overdue. In spite of the fact that they experienced difficulty in getting the required plates at the first, they were able to live up to the contract and in three weeks they equipped the Maren with a mainmast once again.

Capable as were the shops at the dock for doing work expeditiously when the ships above mentioned were repaired, it is ever so much better prepared to do the work now, for since this time last year extensive additions to the plant have been finished. In the first instance the main shop has been enlarged and the additional floor area used to accommodate a number of new machines, including a steam hammer with a striking power of two tons. A commodious new storehouse on the opposite side of the dock, 120 x 100 feet, has been completed and is large enough to take the cargo of any steamer that may require to unload until repairs are finished.

This dry dock has at times received ships of the "Queen's Navee" and the visitor to Halifax then enjoyed the privilege of going over and through and underneath a British ship of war. A large cruiser like H.M.S. Blake has been overhauled here, and a great battleship like U. S. S. Indiana has undergone repairs also. It is not alone the peaceful merchantman that utilizes it ; indeed it was the value of the dock to the naval authorities that was one of the best arguments in promoting it ; and the fact that Her Majesty's ships make use of it is an indication of what its shops are capable of doing.

There is no doubt that the dry dock has given Halifax an importance in the eyes of the world which she would not otherwise possess, and certainly Halifax has profited very largely by reason of the dry dock's existence. If it were not for the fact that such facilities exist in Halifax for repairing, ships disabled in the North Atlantic would be compelled to seek other ports, which would not only distribute money for repair work in other cities which Halifax now enjoys, but would also mean the loss of money for supplies, as every steamer that comes into port disabled has probably been drifting for a long time and running dangerously short of provisions; thus the business in ship's stores in Halifax has been very considerable with disabled steamers.

From the fact that it cost a million of dollars to build this dry dock, it must be obvious that the promoters were pretty sure of the need of it and the advantages of such a situation as Halifax. If the port were not the most easily accessible in the North Atlantic and the nearest point to which disabled craft would turn for shelter and assistance, there is no doubt that the idea of attempting such an immense piece of work would never have materialized. The matter of greatest importance to a disabled steamer is to reach the most quickly accessible port where repairs can be effected, and a port whose direction lies where the fewest obstacles are to be encountered. Halifax is near at hand in the case of disaster in the middle of the North Atlantic and the facilities for repairing are, as we have shown, excellent ; while the comparative ease experienced in making Halifax suggests this port whenever disaster occurrs.



"A great battleship like U. S. S. Indiana, 15,000 tons, has undergone repairs at this dock." ✕ ✕ ✕

CORN-MEAL MILLING.

Cunningham & Curren's Mills.

WE have had more or less to say on other pages concerning Halifax as a milling centre and of the prospects which lie before those engaged in the milling business. There is no doubt that the same business has been the fruitful source of the prosperity of many communities in other parts of Canada, and there seems little reason to disbelieve that it may contribute as largely to the future development of Nova Scotia as it has to the development of the west.

The grain and flour trade may certainly be considered to be one of the greatest factors in the astonishing development of the commerce of this country. Wheat raising in the West has been closely followed by milling in the chief cities, and while in the midst of the wheat-raising lands have sprung up prosperous communities that derive their trade from the sturdy tillers of the soil, there have arisen about the mills which grind the grain, busy towns and villages, or else the mills located in some well established locality have contributed to the prosperity of those places and stirred up more activity in them.

Up to this time there have not been many mills put in operation in the Maritime Provinces, Indeed, it is not long since it was considered that milling would not be profitable so far away from the centres of wheat production. But for the past few years the idea has been gaining ground that there can be no better situation for milling enterprises than the Atlantic seaboard. And the growth of the idea has been accompanied by the erection of new mills in various parts of the province, which, when first started, were regarded somewhat in the light of experiments, but are now proven to be paying investments.

When we say that the idea is comparatively new of milling here being profitable, we mean that it has been generally accepted during recent years. For there are some concerns which have carried it on with considerable success for many years, even more than half a century. With them the milling business is not only now being demonstrated to be beyond the experimental stage, but has been a practicable thing and has never been anything else. And as they stand to-day, they are a strong argument in favor of establishing such industries on a more magnificent scale.

The milling operations carried on by Messrs. Cunningham & Curren are already fairly extensive. The daily capacity of their mills is 500 barrels, and the product seems to have enjoyed the confidence of consumers since 1845, the year in which it was founded.

The predecessors of the present firm who founded the house in 1845 were S. A. White & Co. S. A. White & Co. carried on the business until 1882. During the last 18 years of that period Messrs. Cunningham & Curren were connected with the firm, and during a considerable portion of that time were the chief managers of the business. Their intimacy with it naturally gave them an insight into every detail. Having watched the milling business when it was still young, they were able to conduct it prudently during the trying time when there appeared to be many forces operating against it. Thus it is that they were able to carry it through and make it an important industry among the many which have been established in this city.

The mill situated at the head of the new Furness wharf, is a stone building four and a half stories high and 40 x 80 feet in its other dimensions. It is a roller mill fully equipped with the newest roller machinery and all necessary appliances for the manufacture of corn meal. The machinery was manufactured by Goldie & McCulloch, of Galt, Ont., a firm which manufactures right in the centre of Canada's milling country and knows how to make the best milling machinery. Its proximity to water shipping is a great factor in keeping down operating expenses, for the corn comes by water and is taken direct from the vessels. All the wheat and corn imported by the firm from New York, Boston and Baltimore comes by water. So, likewise, is the matter of sending out shipments, the proximity of deep water enabling the firm to send their products to any part of the sea board which almost makes the province an island : and in that way deliver the goods at a very small cost. The terminus of the Intercolonial Railway is also near at hand, which terminus is also used by the Dominion Atlantic Railway, so that freights can at any time be put on board a train bound either east or west, and at a very small cost. The railway also brings to the firm such grain as they buy in the states of Michigan and Nebraska.

The office of the firm is immediately adjoining the mills, and has its entrance at 71 Upper Water Street. Besides doing a milling business, they act as commission merchants and brokers, representing in that capacity the Yarmouth Steamship Co. ; Reinach's Nephew & Co., of London, England, tea merchants ; Armour & Co., Chicago, pork packers ; and several of the most prominent flour mills of Ontario. They handle 250,000 barrels of breadstuffs a year of which they manufacture themselves about 80,000 barrels.

In determining the ultimate value of an industry of this kind many things must be taken into consideration. In the first instance 30 hands find employment about the mill directly and indirectly, which means that 150 people are dependent upon them for a living. When it is known that cooperage costs from $25,000 to $30,000 annually it will be understood how the mills are a support to other industries already started. The use of about 30,000 jute and cotton sacks means the disbursement of a large sum of money more and yet again the consumption of 1,000 tons of coal per annum is a fair contribution to the success of the mining industry. The sums which the products bring to the transportation companies and to vessel owners in the way of freights would certainly be missed if withdrawn. So that in many ways the mills are a benefit to the community.

Situated then on the harbor of Halifax near shipping facilities of the very best class, this industry has been developed, as we have seen, into something of considerable importance to the city and province. As an article elsewhere will point out, Halifax is destined to become the chief milling centre of Canada. When that time comes, which cannot be many years hence, naturally the first industries to enter the larger field will be those already established. Cunningham & Curren's mills having established for themselves an excellent reputation, will, when the sources of supply are brought nearer by the perfecting of shipping arrangements, be able to produce on a more elaborate scale; and with the growth of the province and our export trade, they will experience a demand constantly growing and requiring the attention which will develop their mills into something vastly more extensive.

Halifax as a Lumber Market.

THE exports from the port of Halifax, classified as the product of "the whole forest," are valued at about $770,000 per year. Of this amount the largest item is on account of spruce deals, of which over 60,000,000 feet are shipped to the European market. Boards, planks and laths, with small quantities of building sundries, make up the balance of the grand total asset.

Twenty-five years ago there was very little business in Halifax in the way of trans-Atlantic lumber trade. An occasional cargo was sent forward, more as an experiment, however, than with the idea that the business would so soon develop into practical proportions. It is within the past fifteen years that the greatest growth has manifested itself, and to-day the English market is always open for Nova Scotia lumber, and always ready to pay good prices in return. As a result the shipments to the United States have fallen off so largely that shipping lumber from Halifax is currently understood to mean shipping lumber to England. A good trade is still done, however, by coasting vessels between western ports and New England coast towns, small quantities of sawn boards and dimension stuff generally finding quick markets.

The lumber that is shipped from Halifax comes from different parts of the province. Saw-mills in Cumberland, Colchester and Halifax counties furnish the greater amount, and load their output on I. C. R. cars all along the line. There are also good timber limits along the shore country, within easy reach of the water, and the mills in these parts send their product by vessel or scow. Thus, from many sources, there comes into Halifax, the shipping centre of the whole country, a vast amount of manufactured lumber, which is here loaded on steamers and sailing ships, and finally dispatched across the ocean. Halifax's advantages as a lumber port are unsurpassed. There is room in the harbor for scows and barges to transfer their cargoes in the stream, and there is room at the wharves for the largest steamers to dock at any time of day, and take in a load from flat cars that are run down to the water's edge. Deep Water terminus is generally a busy spot—a forest of masts and a network of lumber-laden trains.

The lumber dealers shipping from Halifax make use of both steamships and sailing ships, each class of craft having its own advantages. The day of the sailing ship is passing, but it has this preference, that it can call at almost any port on its way and make a market that the big steamer cannot touch. Demurrage rates on the sailing ships are also very much cheaper. But the steamer takes a larger cargo and makes a quicker voyage, and these are points that have often to be considered, other things equal. Quick loading is an imperative demand in the case of these big ocean liners, and they charge from thirty to forty pounds a day for overtime. A steamer of 1,982 tons was loaded a few weeks ago with a cargo of 2,400,000 feet, or twelve hundred standards, in ten days. When a charter party calls for a time limit, it is to the interest of the shipper to respect its provisions and load his cargo within the time specified. With the superior advantages that Halifax offers there is seldom cause for delay, and vessels are loaded in the quickest time possible.

Liverpool is the chief market for Nova Scotia lumber. A large amount goes to London, but Liverpool is a better distributing centre, commanding the manufacturing markets of northern England. A fair idea of the volume of business with these ports, controlled from Halifax, may be had from the figures of the lumber exports for six months of the present year, from the middle of March to the middle of September. The following list of shipments to different markets includes deals and railway ties, in spruce, hardwood and hemlock:

MARCH 15—SEPTEMBER 15, 1899.

Destination.	Superficial feet.
Liverpool	8,250,470
London	2,986,979
Other English ports	3,310,454
Scotland	204,908
Ireland	2,852,513
Wales	1,465,843
France	4,136,690
Spain	1,329,406
Italy	399,510
Belgium	439,869

Total: 25,376,642 feet, or 12,689 standards.

The official customs returns for a like period, but beginning in April and extending to September 30, are as follows, in money value alone:

THREE MONTHS ENDING JUNE 30, 1899.

	Deals.	Deal Ends.	Laths.	Boards, etc
Great Britain	$148,346	$3,703	$1,900	$20,949
France	3,015	95	....	(to all
United States	....	....	3,691	markets)
Newfoundland	....	....	50	
British West Indies	...	....	127	

THREE MONTHS ENDING SEPTEMBER 30, 1899.

	Deals.	Deal Ends.	Laths.	Boards, etc.
Great Britain	$121,656	$2,739	....	$16,153
France	42,541	1,291	....	(to all
United States	818	....	6,166	markets
Belgium	3,345	24	....	
Italy	3,780	168	....	
Spain	2,970	176	....	
Newfoundland	....	....	15	

Total value of lumber exports for six months: $383,708.

This, however, does not include railway ties or timber; 193,993 feet of hemlock sleepers and 550 loads of birch timber were sent to the London and Liverpool markets.

There is in addition to these larger items in the lumber export, those of wood pulp and foreign woods. The manufacture of pulp is rapidly becoming a business of itself, and some three or four companies now interested in the enterprise are shipping large quantities of their goods to England. The market for this commodity is practically unlimited, and with the impetus recently given to the industry in the western counties there is no doubt that immense quantities of pulp will henceforth form a part of the forest product of the province. A large proportion of the output will go forward via Halifax. Last year the boats of the Furness line alone carried 4,877 tons. Five hundred tons of tropical woods were shipped to Great Britain from Halifax during the last six months of 1898. These woods are brought up by vessels and steamers in the carrying trade, which take potatoes from Halifax and bring tropical woods as return cargoes, to be re-shipped here.

Despite the enormous demands that have been made on the forest wealth of Nova Scotia for the past fifty years, there are still whole mill-yards of raw material to draw upon for export to foreign markets. There has been much ruthless destruction of valuable timber limits in years gone by, but the forest is now recognized as one of our great natural resources, a resource which must be husbanded, and whose wealth is to be used to the best possible advantage. A sign of the times is the novel method adopted by a firm in Digby county, whose limits are in the back country, some twenty miles from rail or water. There is splendid timber there, in primeval quantity and quality, but it was of little commercial value until the firm built a pole railway from its mill to the water-front, and now ships lumber with satisfactory convenience. The lumber industry will continue for many a day yet, and Halifax will continue to be the great shipping port. With railway lines extending east and west, and an ocean before and at either side, the position of Halifax as a centre for this and all branches of commerce is without parallel.

Paint=Making in Halifax.

The Nova Scotia Paint Works, owned and operated by Henderson & Potts.

THE paint and varnish factory of Henderson & Potts is very complete; in it are produced all the paints and varnishes and other incidentals of the paint trade, and these products are put up in tins manufactured on the premises.

The industry was started at Five Islands, Colchester County, N. S., 100 miles from Halifax. In 1879, five years afterwards, business having prospered, it seemed that there were greater possibilities ahead of the concern than were even imagined when work was first commenced, and the proprietors then thought that if they were going to make any ambitious move, it would be more effective if done in a greater centre. Halifax seemed the natural place to commence operations on a large scale. It seemed that manufacturing in the largest centre in the province would give the trade better confidence in them than ever, while this city being better known throughout the rest of the country as well as abroad, the path to other markets would be made easier. Also there was no doubt that Halifax was a better centre for manufacturing, for the facilities for shipping were better than at any other point.

"Everything is as shipshape as is possible in a factory of this kind."

These considerations determined the firm's movements and in the same year—1879—they erected a new factory in the capital city of the province. The situation was at the head of that beautiful sheet of water known as the North West Arm. In that factory "Anchor Brand" paints were made for ten years, when fire destroyed their entire establishment.

There were only two things for them to choose between either to go out of business or build a new and greater factory. During the decade which intervened between 1879 and 1889 they had developed their business and their paints were known everywhere in the provinces and were in good demand. They had just arrived at that stage of their existence as manufacturers when they were in a position to extend their business with comparative ease, and if they did not rebuild and plunge into it harder than ever, they would fail to reap the profits of a matured business. So it was quickly decided that they would rebuild.

In 1889 the first building of the new establishment was erected on a new site. The firm wished to get nearer to the railway, so they selected a site near the Cotton Factory, where a siding from the Intercolonial Railway passed near at hand. On this site the works are still situated, but there is not one building alone there are eight, the business having extended to such an extent during a decade as to require that number.

The works as they now stand are, as we have already stated, very complete. They manufacture colors for painters to make up in oils to suit their own requirements; but as there is such a large demand now for ready mixed paints, they make great quantities of these. They also make coach colors, ground in japan, carriage gloss colors, enamels, cycle enamels; hat enamels, in which they have done a very large trade; floor paints, distemper colors, oil and varnish wood stains, marine paints, copper paints, and a variety of other things that cannot be rivalled by any other manufacturer. Besides their own products they manufacture by special arrangement with Brandram Bros. & Co., London, Eng., the registered brand of B. B. White Lead, Zinc and colored paints for which that firm is famous. Brandram's white lead is said to be unexcelled. So favorably is it regarded that large quantities of it are imported into the United States, where the duty is regarded as prohibitive. As these products are well known throughout the world, they are naturally in large demand; and as Messrs. Henderson & Potts manufacture them for the Canadian market, the business in this department alone is very considerable. The firm of Brandram Bros. & Co. send all crude materials necessary for their manufacture to this Halifax factory, where they are prepared.

Another thing which gives this firm a great advantage in competing for trade is the fact that they mine and mill their own Barites. This is the basis of many colored paints, and it is important that it should be free from impurities and that it should be obtainable at the smallest possible cost.

From the building where the colors are precipitated and afterwards dried, to the rooms in the main building where the paints are ground and mixed and put into packages, everything is as

ship-shape as is possible in a factory of this kind. There is a place for everything and everything is in its place, so that there is nothing in the way and no one is hindered in his work by the want of anything. In the main building the plant is very extensive and up-to-date. An 80 H. P. engine operates all the grinding machinery, and is belted to a dynamo for electric lighting as well.

"The can factory is considered to be the most complete in the country."

It would be interesting to go into details and follow the process of manufacturing, but it is probable that most readers know more or less of that already. At any rate it would be impossible to give a thoroughly comprehensive idea of it, for one must go through the factory and watch all the details of the work to appreciate it, and that would require hours. Besides, anyone who is curious enough can learn as much as is possible from the article on paint-making in the encyclopedias, and as the process is the same in principle in every factory—though it may differ in small details—the encyclopedias will give a better idea than anything that could be said in the narrow limits of this article.

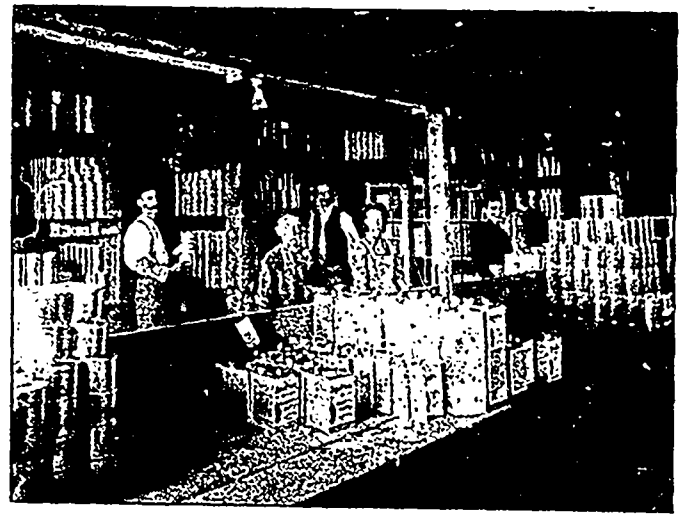
The completeness of the works is enhanced by the can factory. All the packages required for putting up the paints are made in it. The appliances are all thoroughly modern and the 16 men who handle them are able to make the tin and sheet iron cans as rapidly and as well as they can be made. This is very convenient, for tins of the exact size and shape wanted and as many as needed can be made at short notice, and it requires no argument to show that it is much cheaper. Neither does it need any argument to show that the firm are able to sell their paints much more cheaply than they would if they bought their tins ready made and were entirely at the mercy of market changes and the ability of other parties to deliver. The can factory is considered to be the most complete in the country.

The main building and the can factory are the most interesting parts of the whole establishment. But there is some interest also attached to the other buildings. The dry color factory is an exceedingly interesting place where you see the basis of paints being precipitated, drained off and put into a very warm dry place to have all the moisture driven out of them. Then there is the varnish factory. A little glimpse which forms a part of the heading of this article is a scene from the varnish factory, with the glow of the fire showing behind and above the cauldron. Finally, after having gone through the entire establishment, the blacksmith shop included, there remains the store room where everything is bright, and where small packages are labelled and prepared for shipment.

About the beginning of 1897, Messrs. Henderson & Potts opened a branch in Montreal. This branch is in charge of Mr. Alexander Manson. It was on account of the growing trade which they had opened up in the West that they opened this branch, and they have found it has paid them well. By means of it the trade has developed very rapidly and they are greatly encouraged with the results. Their paints are now known all over Canada, being sold not only in the Maritime and Upper Provinces, but away out in British Columbia as well.

The history of this concern is characteristic of many of the industries which have been built up in Halifax and which at the start had to encounter difficulties before they could get into a position that would enable them to reap all the benefit of such splendid natural advantages. It has only been by extreme care that industries so extensive have been built up where one would naturally expect to find fewer and smaller than Halifax possesses. The success of our industries is certainly a monument to the business ability of the men who have nursed them in their infancy and brought them up to the status of the fully developed and strong establishments they are to-day.

Messrs. Henderson & Potts commenced their industry in a very small way and it is probable that at the time the people who watched them do so felt that they were commencing in a very unpromising field, but, by adopting the best business methods, which are to make a fine product and then to put it on a market where such a product is in demand, they very quickly did what perhaps may have even surprised most of their friends. To-day they are conducting the business on the same lines on which they commenced it and it is not now a question of doubt as to what their success will be. They are firmly established and their connection is extending in every direction at a very encouraging rate. It gives Halifax the more prestige that such concerns as this exist here whose market is not at home only, but far and wide, for wherever the products go the name of Halifax goes with them; for it is a fact that consumers always base an idea of a place upon articles manufactured in it of which they make considerable use.



"The store room, where everything is bright and where small packages are prepared for shipment."

The Making of GAS, COKE & TAR in Halifax.

THE lighting of a city the size of Halifax is quite as important a feature of its municipal life as any we can name, and for a great number of years Halifax has enjoyed a very satisfactory system of lighting both by means of gas and electricity. Nothwithstanding the progress that the latter form of illumination has made during the past ten or fifteen years, gas lighting seems to hold its own for a vast variety of purposes, particularly for household use. As long ago as 1845 Halifax was provided with ample facilities for the manufacture of gas, and is still to the front with all the recent improvements for turning out this source of illumination at the lowest cost. The People's Heat and Light Company, Limited, is the proprietor of the present plant for supplying the city, it having succeeded the old Halifax Gas Light Company some four or five years ago and having removed the main works from the harbor front to the shores of the North West Arm. The old company has laid about forty miles of service pipe and mains, and this mileage together with the added length of about twenty miles laid by the new company gives it facilities for distributing its product in every portion of the city. Every year in the city of Halifax there is an approximate consumption of illuminating gas of about thirty-six million cubic feet, and when we state that this is furnished to users at a cost of $1.50 net per thousand cubic feet, we think we are offering fair evidence that the price has been reduced to a point which places it within the reach of all consumers. One of the developments of the gas-making business which has progressed considerably of late years has been the employment of a cheaper kind of gas for use as fuel for cooking, heating and driving engines, and in this connection the company has on its list about three hundred users, which shews that it has been successful in making considerable headway in bringing this form of gas before the public. Every year there is used at the works of the company some sixteen thousand tons of slack coal, which is brought to the works from Cape Breton collieries, having been previously washed and many sorts of impurities removed. An important product in the manufacture of gas is, of course, coke, and the first action of the company in this direction was based on the use of a special adaptation of the Hoffman coke-making oven, but for some reason or another the inventor of the variation, who came to Halifax with the expectation of proving his theories, did not succeed in making coke of as rich a quality or as economically as he had anticipated. This made it necessary some time ago for the People's Heat and Light Co. to rebuild their coke ovens, and they are now constructed on the Semet-Solvay system, which long experience has proved to be well calculated to produce a coke rich in heat units, and at the same time furnish a gas that is highly adapted for illuminating purposes. We have not space to describe in detail the processes which are involved in gas-making from the time the coal is put into the ovens and the products are turned into the gas holders and coke bins, but we desire rather to point out the importance of the industry of gas-making to the city of Halifax.

Ten ovens of the above pattern are in continuous use, and they are heated by a portion of the gas evolved from the coal, the remainder being conducted to the holders for distribution throughout the city. This gas is supplied through two sets of mains to consumers, one main being used for illuminating gas and the other for the cheaper quality. The coke remaining is of an excellent quality both for domestic and metallurgical purposes.

The company has had in view in all their operations the very desirable idea of displacing the very large quantity of anthracite coal which is imported into the city from Pennsylvania mines. This annually amounts to about twenty-seven thousand tons, and the aim of the company is to turn out a coke which shall offer the householders of Halifax much better value as fuel than is furnished by the imported article. That they are succeeding is evidenced by ths increasing use of coke in ranges, grates and furnaces, and it is claimed with very good reason that better results are obtained from this fuel than from any other. The company has made a considerable effort to introduce its coke on the locomotives of our railways, and have been quite successful so far as their experiments have gone. They have shipped coke to as far removed a point as Cuba, and have had very good reports of the fuel from that point. In New Brunswick the coke has met with success, and it is presumed in time that quite a market for this product will be experienced in our sister province.

Tar is another accompaniment of gas-making, and in order to make the best use of this by-product, a firm of roofing paper manufacturers have located close to the works of the company, and under contract take 150 thousand gallons, which is the entire output per annum. This is used in the coating of very large quantities of roofing papers and felts, which find a ready market throughout the province and outside points. The firm also extracts naphtha and creosote in limited quantities. Ammonia is another form of by-product which ismade in the gas operations, and which finds a market in Philadelphia, to which periodical shipments are made. During the past year as high as thirty-three thousand pounds of absolute ammonia have thus been supplied. One of the interesting features of the works to a person interested in the science of gas-making is the very large gas-holder which is located near the works. The construction of this holder is one of the chief objects of interest to an engineering expert from the fact that it is the only one of its kind on the American continent. It is technically known as the Gadd & Mason columnless holder, and is based upon a novel system of construction. Instead of the old-fashioned wide framing this gas-holder or lift is in two sections, telescopic, which when inflated rises spirally along a series of guide rails placed at an angle of forty-five degrees on the exterior of the holder, and it will contain three hundred thousand cubic feet when full. The company have a smaller holder built on the same pattern which holds twenty-five thousand feet. There are three gas-holders at their old works on the harbor front with a capacity of 166 thousand cubic feet. These latter are used for the storage of illuminating gas for city use, while the others are used for holding fuel gas.

About twenty-five men are on the pay roll of the gas works at the North West Arm, and there is no doubt in time that this pay roll will increase as the demand for coke and illuminating gas increases.

The site occupied by the company on the shores of the North-West Arm of Halifax Harbor is a very suitable one for the operations involved in this business and is no small factor in contributing to the success of the plant.

The Social Advantages of Halifax.

Few cities of her size can claim such a degree of culture as Halifax.

HALIFAX is a city of culture as well as a city of considerable business activity. Her children being born amid such beauty of natural environment, and provided with exceptional educational facilities, it is quite natural that, on attaining maturity, they should show the effect in their lives, and that consequently the people of Halifax are in a position to lay claim to an air of refinement and culture such as is seldom found in a city of her size.

An almost perfect public school system is amplified by many excellent private institutions of learning, and the presence of Dalhousie College, the strongest and best University in the Maritime Provinces, enables any who feel so inclined, to take a college course of greater or less extent on the completion of their academy term. As a consequence, in all walks of life, among both the rich and the poor, a much larger proportion of college graduates is found, and they, with their higher standards of work and thought, form the centre of the intellectual life of the town.

Halifax, being so small a city, is not visited very frequently by the prominent figures of the drama and opera, and is consequently dependent upon her own resources to furnish entertainment of the class demanded. This has led to the development of local talent, which has been followed with marked success.

In music Halifax has long been awarded the blue ribbon among cities of her size. The Halifax Conservatory of Music has earned an enviable reputation as a school for the training of musicians in all branches and grades. The staff is recruited from the principal European and American schools, and a completed course under them earns the degree of Bachelor of Music. Weekly recitals during the season accustom the pupils to work in public, so that at the completion of their course they are qualified in every way to lend their quota to the public entertainment. The success of the Conservatory is evidenced by the success of its numerous graduates in German schools, whither they have gone for still higher instruction.

It is only natural, with such an abundance of well trained musical talent, that there should be strong musical organizations, and in the Orpheus Club, the Symphony Orchestra, the Hispania Club, and numerous other smaller companies, Halifax has a corps of musical institutions which would honor any city.

The Orpheus Club is an organization of vocalists and the oldest in the city. It was originally composed solely of gentlemen, and even so was very successful; but before long it was discovered that the ladies were indispensible, and since their admission the performances have left nothing to be desired. They give a series of entertainments during the season, interpersing the lighter concert music with an Oratorio at Christmas. A yearly rendition of Handel's "Messiah" is now one of the features of the club and a very important event in musical circles. During recent years they have also produced several popular operas with a success that would have done credit to many professional companies.

The Halifax Symphony Orchestra, an institution of more recent origin, gives a series of instrumental concerts during the season, assisted by local vocalists. During the few years that they have been organized they have attained a degree of excellence that is remarkable, as is attested by the enthusiasm of the audiences that regularly crowd the hall on the occasion of their performances and also by the unstinted encomiums of musical connoisseurs.

The Hispania Club is an operatic company composed entirely of young men and has produced a number of comic operas very successfully.

There are numerous smaller combinations, such as vocal and instrumental quartettes, the Mandolin Club and others of a more private nature than those already enumerated.

Although without any regular dramatic organization, amateur theatricals are by no means rare, and though not marked by that excellence which characterizes the operatic performances, they reflect great credit upon the performers.

Turning to literature, we find the Nova Scotia Historical Society conducting its researches into the history of our Province and Dominion, a subject of never failing interest to loyal Canadians. This is rather a select body, composed for the most part of professional men, with a fair sprinkling of business men, but its meetings are open to the public, and the large and most representative audiences that monthly attend its sessions testify both to the excellence of the lectures, delivered either by members of the society or distinguished outsiders, and to the interest taken by the public at large in their deliberations.

During the winter, classes are held for the study of the works of standard writers. The presence and co-operation of the academic staff of Dalhousie College, whose members are, by virtue of their profession, in close touch with these subjects, makes it possible to carry on such work with much greater facility and thoroughness than could be achieved elsewhere. The interest taken in literary research is again evidenced by the numerous applications for membership, which always exceed the necessary limitation.

Several private and select literary clubs for the study of a favorite author and of literature in general exist and thrive, particularly among the ladies, and those who are so fortunate as to obtain an invitation to be present at the production of a play or the rendition of a selection of readings by the members are to be congratulated.

Halifax is fortunate in the possession of a public library of considerable extent, containing the best and most popular works of fiction, with many valuable volumes of history and reference, thus putting the very best and latest literature within the reach of all citizens. That this is appreciated is seen by the large number of books taken or referred to, totalling about 68,000 during the year. The many valuable and historical work of the Legislative Library are also available for public reference, although only members of the Historical Society are permitted to take books away from the premises. These, together with numerous smaller libraries, afford to the public an opportunity of keeping abreast of the literature of past and present without any, or, in the case of the private libraries, with a merely nominal expenditure.

With all these and many other facilities for the development and the gratification of the demands of refined society, it is not surprising that there is found among Haligonians a continual forward movement and a general tendency toward improvement and cultivation of mind and manners.

The advantages of Halifax as a place to live in are manifold, and from the standpoint of culture exceedingly attractive. The city is the seat of the provincial government, and also the home of the General commanding the British forces in British America, as well as a military city. Society is therefore highly organized, and a high standard is set in this respect. Then the advantages of education enjoyed by all the people, both in the matter of liberal education and education in the fine arts—painting, drawing, and other creative arts, as well as music—and special education for special needs, give Halifax a pre-eminence that can be claimed by very few cities even much larger. The people being much interested in all great world movements, it is probable that there is no place in the world where great current events are followed with such intelligence and intent interest. Of course, the city cannot claim the advantages of very large cities, but it can certainly claim what a city many times the size could be proud of, and that of which many a city many times the size is devoid.

Apples and Potatoes From the Port of Halifax.

A QUARTER-MILLION barrels is the average annual apple crop of Nova Scotia. A revenue to the province of nearly three quarters of a million dollars, besides the money value of the reserve for home consumption, is what the existence of a million apple trees means for the farmers of half a dozen counties in the garden of Eastern Canada. From insignificant homestead orchards, whose output went each year to the cider-press, the apple-growing industry of Nova Scotia has developed into a business which can be adequately represented only in fractions of millions. Indeed, it is estimated that the present season will put a whole million dollars into the pockets of the fruit growers, the crop probably reaching 400,000 barrels.

With this apple-growing business of Nova Scotia the city of Halifax has a very close connection. It is the shipping port for, practically, the whole horticultural district of the province. Geographical location has made it so, and that it is so the facts and figures of actual business are sufficient proof.

From seventy to one hundred miles by rail from Halifax is where the apples grow. The counties of Kings and Annapolis are the great fruit belt of the province, and of the two, Kings is the more fruitful, and the nearer Halifax. Kings County raises as many apples as all the rest of Nova Scotia, and this fact in natural resources is parallel with the geographical fact, that all this big crop is conveniently exportable only by way of Halifax. Hence a fleet of ocean steamers out of Halifax for the old country, all winter long, whose cargoes are made up largely of Nova Scotia apples on the way to the dinner tables of English squires.

Fruit growing has become a scientific business. A barrel of apples bound for England nowadays is not like a barrel of apples similarly destined twenty-five years ago. There is improvement in the apples themselves, in the style of package, in the manner of packing and sorting, and in the business transactions that are at the back of every shipment. For these improvements growers and consumers, agricultural societies and steamship companies are mutually responsible. New orchards are each year being planted and old ones re-created on practical lines, with the knowledge of just what the markets of the world call for, and to just what extent Nova Scotia can cater to them. And so we have an industry that is rapidly increasing, and sure to reach still greater things. There are other apple growing countries, but to none has been given Nature's able blessing so freely as to the land of Evangeline. We've got the orchards, we've got the apples, we know our markets, and we've got Halifax as a shipping port. It is not too much to say that a very important part has been played in the evolution of the apple business by the city of Halifax, and the men who have built up the ocean freight trade. Supply follows demand, it is true, but Nova Scotia's apple exports would not be what they are if there were no Halifax.

As already stated, a railway carriage of seventy miles a matter of two or three hours puts the product of the largest and best orchards on the Atlantic seaboard: from cellar to steamer in a couple of days if packers work fast and connections are good. At the Halifax wharves are docked big substantial ships, into whose inner chambers a cargo of apples from Kings or Annapolis counties can be transferred from the cars inside of thirty hours. Ten days later the commission merchants and fruit auctioneers in London are opening up sample barrels of Gravensteins, Russets and Pippins, that have landed as bright and fresh as when the farmers put them in the cars at the railway siding, and counted visionary dollars as they bade them godspeed and quick sales. One steamer of 3,000 tons loaded a mixed cargo last year in seventeen hours, and turned, full to the deck. These are days of steamship quickness, and Halifax has facilities for docking and loading, for getting in and getting out, that make it the one natural shipping port for Nova Scotia's apple crop.

Last season's apple export amounted to 250,000 barrels. Shipments were made almost entirely via Halifax, of the whole export not more than 10,000 barrels going by way of St. John. The growers in the western part of the province send some of their apples to that port, as much from a traditionary idea of the Bay route being a short one as from any real saving in freight rates. Not only do steamers get the quickest dispatch in Halifax this side the Atlantic, but the scale of distances is much less than from any other port; from Halifax to Liverpool is only 2,450 miles, to London, 2,726 miles. There are five regular steamship lines operating from Halifax, besides tramp vessels, and including these there are in the busy season as many as forty sailings a month. As a matter of fact, however, the apple trade is in the hands of the Furness, Withy Company, whose three steamers direct to London, and an equal number direct to Liverpool, make regular sailings every ten days. These boats are fitted for apple carrying, and quick loading has been reduced to a matter of habit.

Seven-eighths of the down-the-Valley apple crop goes to London, which is the fruit hub of the universe. Since the change in the United States tariff exports to that market have been very limited, never exceeding 20,000 barrels and sometimes being nil. But even so, there are equally good facilities at Halifax for American shipments. Steamers sail for Boston and New York all the year round and carry apples when they are offered. Boston was once the great market for Nova Scotia soft fruit, but the stress of circumstances induced by tariffs turned the attention of provincial growers more closely to England, and Gravensteins for London are now as regular features of the apple export as the hardest Nonpareils. It was a good thing for the London fruit merchant and not a great difference to the Nova Scotia grower, and it meant a very considerable amount of extra business for the steamers out of Halifax, which get seventy-five cents for every barrel they carry.

The same advantages that apply to Halifax as a shipping port in any branch of ocean export apply with additional force in the case of the apple trade. That Halifax harbor is open for the largest steamers all the year is a fact that Halifax is proud of, and that other ports in two hemispheres should bear in mind. The past records of ocean shipments from this queen city of the east are open to the world for inspection, and the harbor is open to the world for ships.

Side by side in many Nova Scotia orchards are apple trees and potato tops. Apples, rosy, plump and juicy, and smooth-skinned potatoes form two of the most important items in the list of exports. The potato trade is worth annually to the province about $150,000. Last year's export totalled about 100,000 barrels, of which Kings and Annapolis counties furnished 75,000 barrels. There were shipped from Halifax to the West Indies, altogether, 140,000 barrels, including some of the crop of New Brunswick and Prince Edward Island, forwarded by rail for re-shipment. The West Indies is the natural market for Nova Scotia potatoes. The export used to be controlled by sailing-vessels, but for the past eleven years the business has been in the hands of one company operating an excellent line of steamers throughout the entire year.

The great potato market in the Islands is Havana, which furnishes demand for about 120,000 barrels. Sailings to that port are made every ten days, and twenty-eight different boats were in commission last year. Schedule trips are also made to Bermuda, Jamaica, the Windward and Leeward Islands, and Turk's, averaging from one to two sailings per month. Santiago and Cienfugos are new markets, exploited last year for the first time, with excellent prospects of success.

Pickford & Black's steamers load potatoes at the rate of a thousand barrels per hour. The largest cargo ever taken was 13,000 barrels, but the average is 10,000. The trip to Cuba takes about eight days, and cargoes are landed in good condition, if loaded so. The West India market is somewhat stationary. There is a slightly better demand for Nova Scotia potatoes now, owing to the disrepute into which Spanish potatoes have fallen, but the market must remain limited.

And again, it is with potatoes as with apples and other freights. Halifax has the natural advantages for shipping. Sailing vessels that called at the farmers' back-yards have sailed away into history, for competition drove them out of business. The farmer, nowadays, puts his potatoes, as he does his apples, on board the cars, and bills them to Halifax.

ARTIFICIAL DRYING OF FISH.

A brief sketch of the Value and Importance of the Enterprise at Halifax.

OVER eight million dollars worth of fish as the annual yield of the province of Nova Scotia is quite sufficient to place this one division of our natural industries in the foremost place in the maintenance of her commerce. Taking the population of the province at 400,000 inhabitants, this gives us a per capita value of twenty dollars for each person as the product each year derived from the prosecution of our valuable fisheries. It is not strange therefore in considering these figures that Nova Scotia should come to be associated so closely with the fishing industry, and that any topic which involves the discussion of this subject has a decided interest for Maritime people. Of this total catch valued at eight million dollars, cod fish amounted to $2,818,162; haddock, $769,158; pollock, $352,134, and hake $250,521. These four varieties of fish, as will be seen, absorbed $4,189,975, or more than one-half of the total catch of the province. These are the figures which are given as the result of the year's catch, up to June 30th, 1897. The last two years do not show very much difference. As is very well known, the curing of cod fish in such a way as to make it fit for market, is an art very thoroughly practised in the Maritime Provinces. This has always been a natural process in which the aid of the sun has been invoked to remove the surplus moisture from the dressed fish and thus give it keeping qualities which would make it available for use when wanted. Now, the great enemy to the successful curing of fish is long continued spells of wet or damp weather. These are not infrequent occurrences in the Maritime Provinces where the humidity of the atmosphere is more pronounced than in most latitudes, and for that reason it has been sought for a long time to devise some means of producing by artificial aid the same curing effect as is brought about through the action of the sun's rays. Ever since the fishing industry has been one of our chief sources of wealth, much loss has occurred every year through large quantities of fish being injured through this cause. The firm, therefore, that has by its enterprise prevented this loss, has not only done a great service to themselves from a monetary standpoint, but have conferred upon the fishing industry of the provinces a most decided advantage, which as time goes on is being more readily appreciated. The port of Halifax is particularly fortunate in having located here the firm of Collas, Whitman & Co., Ltd., which has devoted a great deal of attention to the question of scientific fish curing. The name of "Collas" is one that has been identified with the progress of the fish industry in this country for the past fifty years, and in choosing a site at Halifax for the operation of modern fish-driers, is exhibited that acquaintance with the requirements of the business which long experience has made it possible. The plant in this city which is operated by the Collas Whitman Co, was established in 1893, and has from year to year met with an increasing success in the quantity of fish handled. The success which has atttended the Halifax drier plant has resulted in their building a similar establishment at Annapolis, N. S., which has been proven of very great advantage to that part of the province, and in their search for newer fields to conquer they have extended their operations to East Boston, Mass., where they have built the largest of their stations. This has only been about completed, and no doubt will have a valuable effect on the fishing trade of the near by ports. Modern fish drying by means of suitably regulated temperatures is practically a new undertaking, although some attempts and experiments have been made here and elsewhere, but without success, until the present system has been inaugurated by the Collas, Whitman Co. Taking the combined output of the three plants operated and owned by the Collas, Whitman Co. at Boston, Annapolis and Halifax, we are assured that it will run from sixty to one hundred thousand quintals of fish each season. Now it must be admitted that this is a very large quantity to be handled by one firm, but the fact is true, and by reason of this fact they are able to meet the requirements of almost any market. The bulk of the semi-dried fish which comes to the plant before curing, is destined for the Brazilian markets. There is also a large quantity shipped to points in Central America, the West Indies and the Mediterranean. All of these markets require a fish that is very thoroughly cured and that will keep for a longer period than is usually the case. This is necessary on account of the distance which they have to be transported, and also to the humid and warm character of the climate at the tropics. It is not strange that in view of their close connection with the fishing interests of the province, the Collas, Whitman Co. should have been enabled to develop a very extensive trade with these countries we have named. Recently, shipments of their cod fish, prepared especially, have been shipped to Great Britain and South Africa and the prospects of this trade are very promising in these particular directions. The fact that they have these artificial means of preparing fish, enables them to fill orders more promptly than would be the case under other circumstances, because the fish are always ready to be forwarded to the addresses at a moment's notice and shipments may be made to any part of the world via New York. To the average person unfamiliar with fishing subjects, there is not much difference between cod, haddock, hake and pollock, but each has a special field in the markets of the world which the Collas, Whitman Co. are engaged in meeting. All four varities of these fish are treated in the dryers of the company. In addition to this special business, the company are extensive handlers of pickled salmon, mackerel, herring and alewives, they having found it necessary to deal in these goods in order to care fully for the trade they have worked up in foreign markets. We cannot emphasize too greatly the influence which such an establishment as the Collas, Whitman Co. exerts upon the business of the port. By having such facilities as they offer in the handling of fish, we receive at this port many valuable cargoes which would go elsewhere for treatment and thus there is a direct benefit to the trade of the city of Halifax through the operation of this enterprise. The actual loss which would occur each year in the making and curing of cod and similar fish, were it not for the presence of this plant, would be so great as to warrant even the erection of similar means under governmental supervision in the interests of our fishermen, but this is obviated by the existence of the firm whose efforts we have briefly endeavored to place before our readers and in this respect they are entitled to at least some measure of thanks as public benefactors. There is no doubt that they have made the venture profitable and we will say that in no branch of activity is a profit more deserved than in this particular division. There is a great future before such an industry as Messrs. Collas, Whitman & Co. have established not, only in the handling of fish from Nova Scotia, but also that of Gaspe, New Brunswick, Prince Edward Island, Magdalen Islands and other points whose products may be attracted to this point by reason of low water freights and its proximity to the best fishing grounds.

The process in use by the company was invented by Thomas S. Whitman, of Annapolis, N. S., and he has secured his rights by patent. Messrs. Collas, Whitman & Co. are the proprietors of the patent in the United States and the Maritime Provinces and it will be readily granted that their success is not only a source of congratulation to themselves but a valuable addition to the active establishments of the city, in a branch of industry that is undoubtedly one of the most important that we possess.

A Halifax Clothing Factory.

CLAYTON & SONS' MODEL ESTABLISHMENT.

THE clothing business which is now the largest of its kind under one roof in Canada, was established in 1869. Nothing was done by the firm then in a wholesale way, but about 1884, Clayton & Sons added that to their programme, and now they manufacture clothing on an extensive scale.

Ever since they commenced to manufacture ready-made clothing, the firm have endeavored to take advantage of every new invention calculated to increase the efficiency of their factory and reduce the cost of production. They have been very aggressive in this way, and as a result have a factory equipped as thoroughly as possible and capable of turning out work as rapidly and as well as the largest and most up-to-date American concerns which have set a standard in respect of despatch in production.

The process of bringing this factory up to the present state of efficiency was at first slow. It is a business that has developed, rising to bigger and better from small beginnings. There was no great capitalization at the start, and no great flourish of trumpets. The founders of the business had no idea at first that it would eventually assume such proportions. But "there is a tide in the affairs of men which when taken at the flood leads on to fortune," and it seems that the Messrs. Clayton have the faculty of knowing when the tide is at its flood, and the exceedingly practical faculty of taking the tide when they know it is at the flood. So they have gone on developing their business and have not finished yet, for it seems to grow every year; and even now they are making preparations which indicate that the expansion of coming years will be very considerable.

About four years ago fire took possession of their building at a very busy season of the year. The factory was completely destroyed, and all the precise machinery was rendered useless, and the stock of manufactured clothing was so badly damaged that it had to be disposed of immediately. But no time was lost in restoring the building and in putting in an entirely new plant. For a year afterwards the firm continued their work with an equipment equivalent to that which they had before the fire, but were compelled then to make room for their increasing business by adding another storey. Now Messrs. Clayton & Sons' main building stands 100 feet square at the corner of Jacob and Barrington Streets, with five floors of 10,000 square feet each, and they have besides a large brick building in the rear facing Poplar Grove.

We mentioned the fact above that there is no other clothing factory under one roof in Canada as large as this. It is not only the largest, but the best equipped. It has the most machinery and that is of the most modern and improved pattern. The cutting-room has labor-saving devices which are a marvel of exactness, speed and ingenuity, while in the work-room is a vast array of machines of various designs according as they are for sewing seams, making button holes, binding, etc. The world's work-shops can produce no better machines than those used in this factory.

Without burdening readers with details, it is sufficient to mention but one class of machine, which will give some idea of the equipment of the sewing room to which we will have reference later on. It is a sewing machine which makes 3,500 stitches per minute, the acme of speed and perfection. All the machinery was selected with a view to putting only the best quality of clothing most rapidly together and at the least possible cost. No other factory in Canada has so much machinery.

An expedition through this factory is well worth the expenditure of time required. It is very interesting and more instructive to watch the progress of the work from the time the cloth enters the building until it goes out again as finished garments.

On the first floor is a large cloth room, where large quantities of cloth are stacked up, according to the quality and style, in great piles. This is the room into which they are put as soon as they are opened. Here the cloths are gone over before they are sent to be manufactured into made-up clothing, and are cut into the required lengths for the pattern marker and cutting machine, and checked up.

From the cloth room they go to the shrinking room, where is a steam shrinking machine that does its work thoroughly and rapidly. This machine is an affair of very simple structure, the principle of it being a perforated cylinder, into which steam is forced as it revolves with the web of cloth. After they have gone through this machine the cloths are dried and then sent to the next department, which is the pattern room.

In former days a great deal of difficulty used to be experienced in the pattern room, especially when there was any great rush. Patterns then had to be made, as they are made in any tailor's establishment, being sketched out on paper in the first instance and traced out afterwards on the cloth. It was necessary in that instance for every piece of the pattern to be carefully put in position and carefully traced by hand with marking chalk. Now-a-days the process of pattern-making is greatly facilitated by means of a new process. When a style of garment is designed the patterns are made out and traced on a specially prepared paper. The paper is then perforated by a special perforating machine along the lines of the pattern. When this is done, the pattern for two suits being marked on the sheet, it is rolled up, indexed and put away. When required, it is brought out, unrolled, and laid over the uppermost piece of a pile of cloths. The man who has charge of the marking then rubs powdered chalk over all the perforations, an operation which requires but a few minutes, after which he lifts it off, rolls it up and puts it away again, the pattern being traced on the uppermost piece of cloth as perfectly as could be done with the marking chalk and with a saving of about half an hour's time.

As we have said, the patterns are not traced on every piece of cloth, but on the uppermost of a pile. It would not do in a great factory of this kind to cut each individual suit out of a single piece of cloth—a great number must be cut at one time Accordingly after the marking is done on one piece, the pile of cloths with the variety of patterns placed in superposition is sent to the next department, viz., the cutting department.

Years ago cutting had to be done entirely by hand, but so great are the demands in a great factory of this kind that it is necessary to do it now entirely by machinery. Nothing simpler and yet nothing more perfect could be devised than the cutting machine, which is capable of doing in the course of a single day as much as a man could do unaided in perhaps a whole year.

The principle of the machine is that of a human arm. Suspended from above, and with a self-sharpening cutter where the hand would be in the human arm, it is possible to direct this with great rapidity and precision, so easily and so precisely does the whole device work. The self-sharpening knife is in the shape of a bevel-edged wheel which resolves with great rapidity and cuts its way cleanly through a stack of cloths as thick as its own diameter.

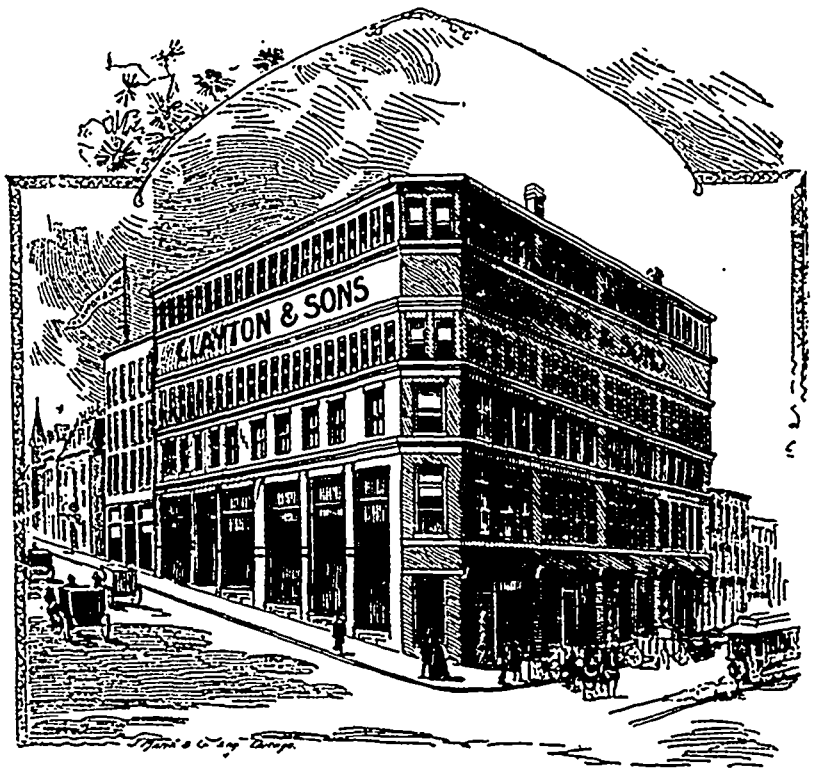
The man in charge of it simply directs this wheel along the lines of the pattern, there being a grip on the under side to be sure that the entire pile is picked up and that the knife goes through every piece.

As soon as the cutter is done with the cloth, it is passed on to the trimming room. There various things are done with it—one man putting on the lining and other necessaries; another seeing that there has been no irregularities in the cutting, and repairing any defects if there should be; another performing such other operations as are necessary, and so on until it is ready to go to the sewing room. Before it goes to the latter, it must first pass through the hands of an inspector, who, after he has satisfied himself that everything is right, distributes the work to the various machines.

In the sewing room no one plies the needle and thread, for the machine does in a twinkling what the most expert needlewoman requires many minutes to do. As there are different parts to a garment such as sleeves, and back and so on, these must be made separately, and thus there is one machine to seam the sleeves, attaching both parts together, another for seaming the linings, another to seam together the fore and back parts of the coat, another to baste in the linings, and so on, there being a great number of machines, each having its own particular work to do. Then the sleeves are sewed in by a special machine, the collar is then sewed on by another, the buttons put on by yet another, and the button holes made by another. Another machine puts on the binding, and there are still other machines to perform the various operations necessary in making a perfect and well-finished garment. No single operation necessary is done that has not a special machine for the purpose, operated by a smart young woman, who as soon as she has done her particular work with her machine, passes the garment on to another, and she to another, and so on until the whole garment is completed. Then it is examined once more, and gone over to see that there are no defects and to pull out bastings and touch the garment up generally. It goes thence to the checking room, where it is ticketed, the various markings to distinguish the garment in matter of size and classification being put on the tickets. It is then sent down stairs and put in the store-room ready for shipment whenever the order is received.

The main work-room in which all the machines are operated is a most impressive sight. All is activity, and there is much clatter of machines. But it is a happy contrast to the old-time drudgery, and the amount of toil which is daily saved by these devices is something that the human race must be thankful for. And certainly it impresses the observer with the wonderful strides made in invention within the last few decades. It is not long since the first sewing machine was made, and even then people were sceptical that it would ever amount to anything really practical. But it is safe to say that it has far more than realized the dreams of its inventor.

Four hundred people find steady employment in the factory which is the subject of this sketch, and besides there are a number of people outside the factory who are more or less dependent on it for a living. It is an establishment that has done a great deal of good, and it may be truthfully said that in no establishment in the Dominion are the relations between employers and employed on a more satisfactory footing. Such a desirable condition is not only due to the personal interest which is shown in the welfare and comfort of the operators by the firm—and which was recently demonstrated by the adoption of the profit-sharing idea—but by the perfection which has been reached in directing their labors. There is never a hitch in the clock-work regularity of every department, and it is to the smoothness and absence of friction that such results are traceable as mark Clayton & Sons' factory as a model establishment.



"There is no other clothing factory under one roof in Canada as large as this. It is not only the largest, but the best equipped."

The development of this business as we said at the outset was at first slow. It was commenced in a small way with comparatively little capital, and the fact that it has been built up to such proportions stamps the men who are at the head of it as men of unusual business ability. There is another thing that has something to do with the success of this industry, and it is a fact that the Messrs. Clayton were not slow to recognize, viz: the advantages which Halifax offers as an industrial centre. These varied advantages the Messrs. Clayton recognized many years ago, and while they watched them grow in numbers with succeeding years, they were prompt to make every new one turn in to them the utmost measure of success that it was capable of bestowing. And thus with careful watching the industry has developed and has become a great boon to Halifax, and something of which the people are rightly proud. If it goes on developing in future years as in the past, a thing which it gives every promise of doing, it will be an industry of such magnitude that the people of Halifax would be almost startled if they could see it now. This is the kind of enterprise which develops a city, and it must be a source of satisfaction to Haligonians to know that the proprietors of this factory have a stronger grasp of the trade than ever they have had

The Home of the World-famed "Acme" Skate.

The Fastest and Best Skates in the world are manufactured at the works of the Starr Manufacturing Co., Ltd.

WATER-POWER abounds in the vicinity of Halifax. The country near by possesses many lakes elevated some height above the sea level and containing in the aggregate a vast body of water. This water as it finds its way to the sea through rapidly flowing streams, or as it flows along more quietly through lake after lake to lower levels, comes with a force that if completely harnessed would be sufficient to drive the machinery of Halifax very cheaply and reduce the cost of manufacture at this centre very materially

Some smaller concerns, such as saw and grist mills, have located near good sources of water power, but no great concern has as yet undertaken the task of utilizing one of the greater streams for the purpose of making electricity cheaply for the supply of power to manufacturers. This no doubt will come in time, for there are some magnificent bodies of water in the near vicinity of the city, admirably suited for the purpose. But nearly all the sources of such power have been neglected in the past except in a few cases.

We have mentioned the fact that a few smaller concerns have taken advantage of suitable powers when erecting factories of different sorts in places in the vicinity of the city. But there is only one instance where water power is used on a great scale. The founders of the establishment now operated by the Starr Manufacturing Co., Ltd., when they commenced to manufacture the famous self-fastening skates, now called the Acme, over thirty years ago, realized that money could be saved by utilizing the force then going to waste in the water that flowed down from the Dartmouth Lakes, through the town of Dartmouth and into Halifax Harbor They accordingly decided to forsake the idea of using steam power for driving their machinery and instead of purchasing a costly boiler and engine, installed a turbine water wheel. They then made arrangements for the control of the water power which came to them by way of the Shubenacadie Canal, a work which had been brought to completion for the purpose of carrying freights across the peninsula of Nova Scotia from Halifax Harbor to the Bay of Fundy and from the country inland to Halifax, but which had to be forsaken on account of its sources of business having been removed by the railways which were started immediately after this project and completed almost simultaneously with it. The company owns the water power to-day and with it operates a turbine water power to propel the machinery of their own factory and to run the dynamos which supply electricity to light the streets and stores and dwellings of Dartmouth. There is a special wheel also which is not for use except in case of fire, it being attached to a pump which is connected with the water supply on one side and an elaborate system of pipes on the other which communicates with every part of the factory, providing a means of drenching any part completely in the event of fire.

An engraving on the opposite page represents the works as they appear to-day. In 1866, when Messrs. John Starr and John Forbes commenced them as a private enterprise, the building was very small. The original building is still standing, a part of one of the three divisions which appear in the engraving. It was very small, but it was in it that the idea of using water power was demonstrated to be a practical thing, and while the same thing is being demonstrated over and over again at the same place, it is a strange fact that it has not taken practical hold in more instances, instead of being discussed continually and spoken of as a great possibility of future days.

It was in 1866, as we said, that the factory was started. Mr. John Forbes had applied his inventive brain to the task of originating a self-fastening skate that would combine all the good qualities of the skates that had up to that time been produced and possess none of their bad points. He achieved a great triumph when he succeeded at last in inventing the Acme Club skate, which has seen many rivals in its time, but has been able for all that to retain its popularity.

With the patent of the new skate in their possession, Mr. Forbes and Mr. John Starr, who became associated with Mr. Forbes, thought they recognized a good investment in a plant to manufacture the "Acme. Accordingly they built the factory, harnessed the water power of the Dartmouth Lakes and commenced. They found in the skate an article which met with instant popularity, for they had only been manufacturing it for two years when the demand was so great that they could not keep pace with it while simply using the equipment at hand, and they had not the means wherewith to increase the plant to such an extent as to be able to meet the demand in any satisfactory degree.

It did not seem right to these men that such a good opportunity should be lost. There was a chance such as it is seldom the lot of man to enjoy, yet as far as they were themselves concerned it seemed almost impossible to take advantage of it. Instead of submitting to what seemed a hard fate, they decided to allow others to profit by what their ingenuity and enterprise had accomplished, and when they presented the scheme of forming a joint-stock company there were not lacking men who were ready to invest their money in the venture. By its own record it had proved itself to be a paying concern and by its own promise it would be a still better paying concern in the future.

With such prospects before them a number of Halifax men organized in 1868, and applied for incorporation, which was granted, as the Starr Manufacturing Co., ltd. These men were Messrs. John Starr, John Forbes, C. H. M. Black, J. L. Sinclair, M. P. Black, W. L. Black, D. Henry Starr, J. B. Campbell, Hugh Hartshorne, J. H. Anderson, Samuel L. Shannon, B. H. Collins and Robie Uniacke. The company was incorporated on Sept. 21, 1868, "for the purpose of manufacturing skates and other iron and steel and hardware goods." The capital was then $60,000, but it is now $100,000.

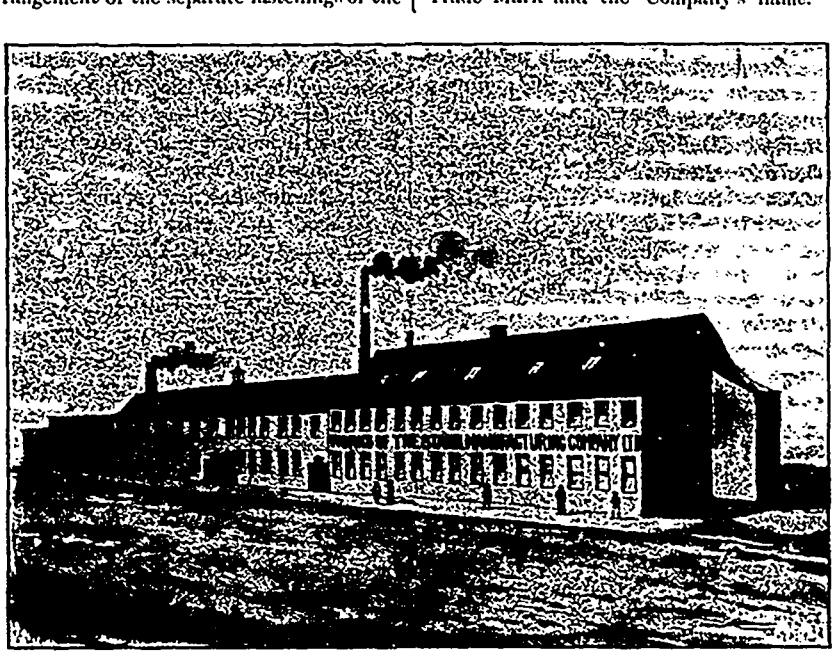
As the manufacture of skates was the chief thing for which the works were started by Messrs. Forbes and Starr, so it was chiefly for the manufacture of skates that the works were enlarged by the money invested at the incorporation of the new company. Recognizing the importance of the market, they immediately increased their plant, putting in machines to do the work more thoroughly and rapidly, and enlarging the building so as to give ample room for the needs that were then present and offering sufficient room for the expansion of their plant with the expansion of trade.

The factory has been greatly extended since that day. Additions have been followed by additions, until now the works extend along Canal street a great distance, even farther than the engraving shows, for the storehouses at the south end do not appear to have come within the scope of the camera. All these extensions

have been necessary because the business has increased and output of skates and other products has become so much greater.

Besides the self fastener which was made first, and which in an improved form remains to-day a great favorite and even a standard among self-fastening skates, the company manufacture many other varieties. Very much like the Acme, but having a heavier blade, is the Victoria Club Acme. The principle of this skate is the same as that of the Acme, but some people prefer it and for these it is made. They also manufacture the "Achieved," which some consider to be the equal of the Acme.

The conspicuous points about the Acme are its simplicity of adjustment with security of fastening; correct curvature of blades enabling the user to readily acquire all the difficult movements and figures with ease; absence of all unnecessarily complex parts, thus ensuring great durability and holding power, and the fact that once adjusted it is always adjusted, thus avoiding the necessity of re-fitting and re-adjusting each time they are worn. The important points about the "Achieved" are that no preparatory fitting or adjusting is required, the skate being at all times ready to put right on; while the peculiar arrangement of the separate fastenings of the sole and heel prevents any distortion of the blade, which is a very common fault with many self-fastening skates. The front, by the action of securing the skate, is pressed firmly against the boot sole, giving a feeling of firmness hitherto unattained, and entirely overcoming the sensation of looseness which is a common fault of clamp skates generally. The heel of the skate, by the use of the improved patented device, is absolutely perfect in its holding powers and adjustment, the largest as well as the smallest sizes of boot heels coming within the range of its adjustment.



The works of the Starr Manufacturing Co., Ltd, where the world-famed Acme skates are made.

Of course both the "Acme" and "Achieved" receive the same careful attention in respect of materials put into them and of workmanship. These latter also obtain with respect to the other skates which they manufacture, viz:—the Starr Club, the Starr Hockey, the Beaver, the Ladies' Beaver, the Starr Skeleton, the Starr Racer, the Mabel Davidson Figure Skate, the Starr Wood-top Speed Skate, and the latest production, the Mic-Mac Hockey Skate.

The last named is the fastest skate in the world, and has been adopted by all the leading players. It is natural that in Canada, the home of Hockey, particular attention should be paid to the production of a skate especially adapted to the purposes of the game; and it is natural that a Canadian factory should succeed in producing such a skate. This skate makes the sixtieth style which is regularly produced in the factory.

Altogether there are over 60 operations necessary to produce a skate and 32 different parts enter into the construction of an Acme.

There is no doubt but that the skates produced in the Starr works are the best in the world, which is attested by the fact that at whatever great international exhibition they have been exhibited they have won the highest award. They accordingly have medals from Paris, Philadelphia, Chicago and London, and an elaborate exhibit is now being prepared for the coming Paris exhibition at which it is quite probable that they will win the same honors they have won before. The increasing demand for them is a further proof of their excellence, for it would be impossible to sell them in competition with the many makes that are on the market and in such distant markets as British Columbia, Yukon, England, Scotland, Germany and Russia, and in which they hold their own against all others. Even in the United States, into which country they find access in spite of a very high tariff, these skates are in great demand, skaters preferring to pay the enhanced price caused by the duty rather than take an inferior skate. The skates naturally find an immense sale in Canada and Newfoundland.

Skates manufactured by the Starr Co. have been presented to H. R. H. the Prince of Wales as well as some of the leading potentates of Europe, and there are some royal personages who enjoy skating with Acmes.

The great popularity of the Acme has led other manufacturers to produce a poor imitation which though they may resemble the Acme in appearance, lack the essential elements of reliability and value. All the genuine are stamped with the Company's registered Trade Mark and the Company's name. It has happened that people have been defrauded by purchasing these skates. But as it is well known that nothing but a first class article is turned out from the Starr works, such people have forsaken the imitation, taking care to see that they received the Acme afterwards. Imitations of this skate have never had a chance to remain on the market, as their inferiority is speedily detected and the effect has only been to make purchasers more careful to examine the trade mark. So particular are the manufacturers that only a first class article shall leave their factory, that they welcome the return of any skate that may have been fractured and which may have by sheer accident passed out of the factory having escaped the rigid inspection which every skate is expected to receive before it is packed.

We said above that it was with the idea of manufacturing skates on a larger scale that the works were enlarged upon the incorporation of the concern. Reference to another paragraph will recall that the Company was incorporated for other purposes as well. Accordingly, besides making skates they occupy themselves with the manufacture of bolts, nuts, spikes and various iron articles of that nature which require many fine pieces of machinery. At present they are engaged in making bolts for the new Midland Railway of Nova Scotia and a large quantity of special bolts for the new grain elevator at St. John. For the manufacture of the various kinds of bolts and nuts they have a very complete shop, with furnaces and machines in great variety. The products of this department have won a reputation as enviable as that of the skate department.

There is also a well equipped shop in connection with the works where the finest repairing is done. Any delicate piece of machinery can be entrusted to the workmen there with the confidence that it will receive exactly the same treatment that it needs and without fear of anything being done to it that ought not to be done. Work that requires nicety of workmanship such as the repairing of sewing machines, surgical instruments and bicycles is in hand continually.

Another department of the work at the Starr factory is electro-plating. For this purpose they use steam to run a special dynamo, this being the only department of the factory in which steam is used. The plating plant is kept busy all the time, and it is probable that it could find more work to do if the plant were larger.

Bridging the Ocean.

What the Furness Line has done to draw Halifax and the Old Country closer together, and wherein it is helping to make Halifax a great port.

VARIOUS interests have at various times and are even now contributing actively to the building up of a great industrial centre in the City of Halifax. All through this supplement emphasis has been laid upon the shares that the different manufacturing enterprises have had in increasing the activity of the city which by virtue of its excellent maritime situation must become, in the course of a few years, the chief Atlantic port of Canada, as well as the National Atlantic port. These manufacturing enterprises are so important that Halifax, though smaller than many other Canadian cities, has the proud distinction of being fourth in Canada in point of the value of her exports of manufactured goods. Figures taken from the Government returns for 1898, showing the total value of manufactured articles, the produce of Canada, exported from the principal cities of this country during the fiscal year ending June 30,1898, to be :

Montreal.....	$2,397,554	Halifax.....	$759,133
Toronto.....	1,553,875	Quebec	431,317
Brantford.....	848,584	St. John	327,285

This is what the manufacturers of Halifax have done and it is not boastful to say that they have done very well. Indeed this record is a credit to the city, and proclaims that her people are a business-like and busy people.

The position occupied by Halifax as a manufacturing place is well borne out in several articles on individual industries and in other articles as well. The aim of this article is to show what has been done in the way of making a great Atlantic port of Halifax during recent years.

When Furness, Withy & Co. this summer built the magnificent wharf which they now utilize as the Halifax terminus for the Furness line of steamers, they evidently had sufficient confidence in the port of Halifax to believe that they could develop an immense business in carrying freights and passengers between Canada and the old country. The fact not only showed that, but it further showed that the company intended to get the business, otherwise they would not have spent such an amount of money as was necessary to build and equip such magnificent berths for their steamers.

The wharf above mentioned is capable of accommodating the largest modern steamer. It is 560 feet long by 80 feet wide, and has a large warehouse on it, 400 by 70 feet, ample enough to store away over 7,000 tons of freight.

The Furness Line during the time it has maintained a service between this country and the old, has developed an immense volume of business and has displayed such aggressiveness in its methods and such a ready disposition to improve its services as the requirements increase, that it enjoys the greatest confidence of shippers on both sides of the Atlantic. The company has established offices at different points in Canada, their head Canadian office being in Montreal, a fact which indicates that they are reaching out everywhere in this country for trade. They have greatly improved their services both in points of frequency, capacity and comfort, they have increased their facilities for handling traffic here ; and from what they have done and are doing we are warranted in believing that as time passes they will vastly improve all these and as they do, Halifax will grow in importance and value as a shipping point.

Among the most recent examples of this company's enterprise and also of its work in building up the port of Halifax, was the effort put forth to utilize the facilities provided here for shipping grain. When it was known that the elevator would be in working order this fall the company opened negotiations with a Montreal firm for grain freight via Halifax and were soon after notified that a consignment of peas would be in Halifax for shipment on November 4. This will be the first shipment to go through the new elevator. The fact that it is coming to Halifax proves one theory in particular and that is that even while the St. Lawrence is still open it is possible to ship grain and for that matter other western freights via Halifax. It must be just as cheap, otherwise it would not be possible to obtain the business. So Furness, Withy & Co. are proving the practicability of Halifax being the entrepot of Canada all the year round. This is something for which they will receive the thanks of the people of Halifax, for what has been contended by the latter through their public men for many years has been thus proved, and practice chimes in with theory.

The Furness line first commenced to call at Halifax about 18 years ago. The service then consisted of a boat about once in three weeks calling at Halifax en route to Boston. The company had no branch office here then ; Pickford & Black acted as agents, and while the boats called on their Westward trips, they never called on their Eastward trips, except during the apple season, when they could find sufficient freights at Halifax to make it worth while calling at this port when homeward bound.

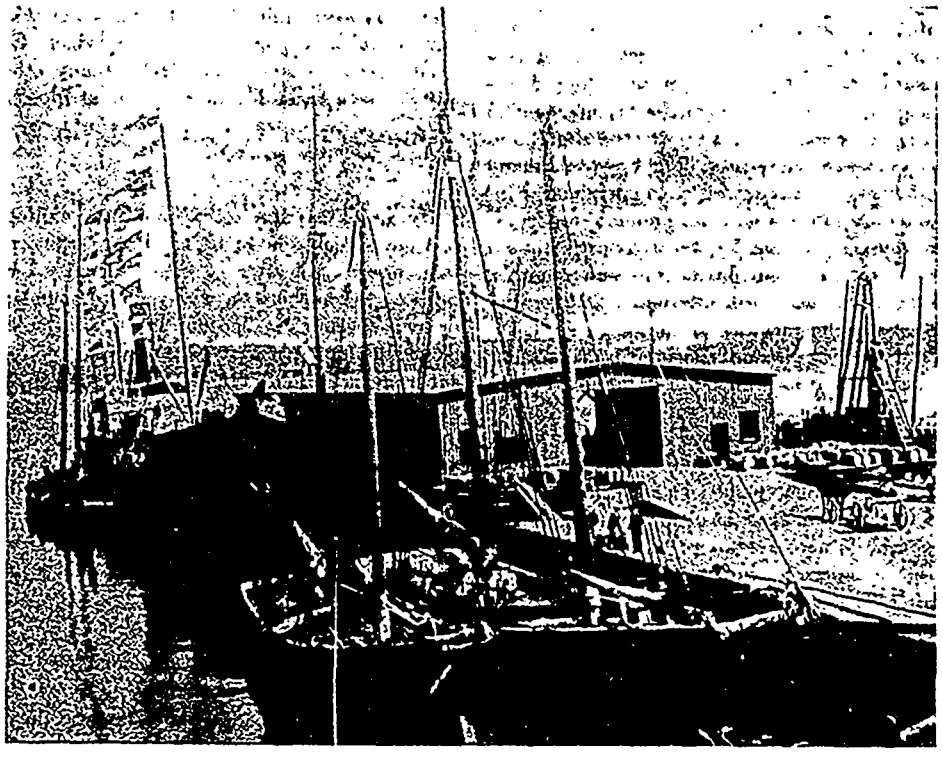
After doing business with this port for a number of years along the lines just mentioned, the company found it would be an advantage to the Maritime Provinces to have a direct service both ways between London, Halifax and St. John. This was finally arranged for, and when the Dominion government granted a subsidy of $25,000 a year for 13 trips annually, the liners commenced to perform the service which they maintain to this day, with many improvements, as above noted. It was about 13 years ago that this direct service was inaugurated, and in it ran such steamers as the Newcastle, Bradford and Gottenburg Cities, coming from London direct to Halifax, proceeding thence to St. John, and returning to London via Halifax.

The business was found to increase considerably, and the company was induced to purchase the Ulunda and Damara, which they placed on the route in place of the other steamers, and they shortly afterwards added the superb steamer Ottawa. These three steamers, the Ottawa, Ulunda and Damara, performed the service until the unfortunate accident to the Ottawa on Blonde Rock en route from Halifax to St. John. This was very embarassing, for at the time shipping was very difficult to obtain and very high in price ; but despite the difficulty a steamer was secured and the service maintained.

Afterwards things continued to run along smoothly until a similar fate as befel the Ottawa, befel the Ulunda, and in the Bay of Fundy, while performing the St. John end of one of her voyages, she went ashore. This loss rather upset things for a time, but it was not long until the company realized that if the trade was worth anything it was necessary to have better ships. The next important move was accordingly the building of the Halifax and St. John Cities. These two new steamers, along with the Damara, were kept on the London service.

An incident of the accident to the Ulunda was the fact that

having been abandoned and sold by the company, some Halifax capitalists got possession of her and having had her repaired and made to all intents and purposes as good as new, formed a new steamship company, called the Canada and Newfoundland Steamship Co. This company later purchased another steamer, the Barcelona, and inaugurated a service between Halifax and Liverpool, Eng., via St. John's, Nfld. A few years ago Furness, Withy & Co. bought out the assets and good will of the new company and maintained the Liverpool service, improving it very much. They transferred the Damara to it, placing on the London route a new steamer called the London City. The Damara, Ulunda and Barcelona performed the Liverpool service, and the Halifax, St. John and London Cities the London service. The Barcelona was soon found to be unfit for the Liverpool service, and the Dahome, bought at the same time as the London City from a company which ran then in the West Africa service, was placed on the route. The Barcelona was allowed to run in the Manchester service until in a dreadful gale she was so badly damaged that the underwriters preferred breaking her up to repairing her. The London service is still performed by the three "Cities" mentioned, while the Damara, Ulunda and Dahome perform the Liverpool service.



Furness, Withy and Co.'s Wharf is 560 feet long by 80 feet wide and has on it a warehouse 400 feet by 70, capable of storing 7,000 tons of freight.

The latter service is kept up with schedule sailings and is the only all the year round service between Halifax and Liverpool. The steamers also call at St. John's, Nfld., and have been able on every trip with few exceptions to gain access to St. John's during the winter. During the seven years of the combined experiences of the Canada and Newfoundland and the Furness Lines, St. John's harbor has been inaccessible on account of ice on only two occasions.

During a season like the present there are large quantities of fruit to be sent forward to England by the Nova Scotia farmers. The Furness Lines have splendid facilities for shipping perishable fruits like apples and on account of the fact that their sailings are regular, they have been able to obtain constantly growing freights of this description. It used to be said that Liverpool was no market for Nova Scotia apples, but now that the Furness Line take them there direct and land them in good condition, it is realized that a better market cannot be found. Every Liverpool steamer of the Furness Line now carries not less than 8,000 barrels of apples in her cargo, a thing unprecedented, for never more than 3,000 or 4,000 barrels have been known to go at one time on any previous season.

When the Liverpool service was started it had to depend for freights chiefly on the lumber trade, but as the service became established other cargo was found to take the place of deals.

Furness, Withy & Co. are agents for the Manchester lines, which go to Montreal in summer and Halifax and St. John in winter. Sir Christopher Furness, the senior member of Furness, Withy & Co., is also a member of that Company, being a chief shareholder. The steamers which will sail in the service this winter are the Manchester Port, Manchester Commerce, Manchester City, and Manchester Corporation. Of these, the latter has a large displacement of 13,500 tons, while the others are not less than 8,500 tons each. Commencing December 7th with the Manchester City, these steamers will perform a fortnightly service.

The prospects for a large winter business from Halifax are very good. It seems now as if it will be impossible for Montreal to handle all the freight offering before navigation closes, particularly if it should close early. When it does close, freights from Montreal will naturally seek the best port for shipment, which is Halifax, for reasons enumerated in detail elsewhere in this issue. Furness, Withy & Co. have been so aggressive in securing European business that it will not likely fail to bring a large portion of the Montreal freights to Halifax via the I. C. R. for shipment in their steamers from this port.

During 1898 the Furness line, with fewer steamers than they now run on those services, shipped from Halifax to London and Liverpool 186,073 barrels of apples, 65,140 cases of lobsters, 4,877 tons of pulp, 5,490 standards of deal, 11,956 tons of coal, 3,502 bags of flour, and 34,560 cases of spirits, of a total value of nearly three million dollars. It also carried 400 passengers to the same ports. At the end of this year 52 steamers will have been loaded here by this line some of them having a cargo-carrying capacity of over 10,000 tons and the amount of cargo carried will be largely in excess of that carried in 1898. The apple exports carried by them will alone be considerable, for, as we have shown, it is rapidly increasing, and is likely to assume enormous proportions. They have already carried large shipments this season.

Manufacturing Explosives on the Shores of Halifax Harbor.

PRIOR to 1873 the bulk of the explosives used in the prosecution of the mineral industry in Nova Scotia was imported from Great Britain. Gunpowder of course was almost wholly used in all mining operations previous to that date, and in the opening up of a great many coal and gold mines, very large quantities of this material figured in the imports of Halifax. Ever since that date the progress in railway construction and the further opening up of new mining areas in every district in the Maritime Provinces has resulted in a very extensive demand for explosives of different kinds. The manufacture of gunpowder and dynamite is not by any means a new industry in Halifax as it has been made here during the past twenty five years. The increasing call however, for this material, as the result of a large measure of projected enterprises, involving bridge and railway construction, is sufficient to justify the undertaking of another venture in the same line, which Halifax has the pleasure this season of adding to its many previously existing industries. Taking into account the large increase in our gold and coal mining and other mineral properties, it would appear that there is an opening in Nova Scotia for an additional industry of this kind, and during the past month a start has been made in inaugurating the enterprise. The locality which has been chosen for the purpose is an ideal one, being situated on the eastern shore of Bedford Basin about six miles from Halifax, far removed from the settled portion of the neighborhood, and having the advantage of a splendid water front. The site has in the past been known as Wright's Cove, and is one of the numerous bays that mark the contour of the shore surrounding the Basin. The point which strikes a visitor most strongly is the fact that, on account of the hazardous character of the occupation, it is necessary to so locate the various buildings required that in case of accident, as little damage as possible may result. This involves the erection of about twenty separate and distinct buildings in which to carry on the various operations necessary in this business. These buildings are, by the peculiar formation of the land, separated by hillocks which act as natural barriers and which will serve to protect one building from the other in the event of accident. The undertaking has been developed by the Maritime Explosives Company, Ltd., of the city, a recently organized joint stock company, and within one month from date the product of the plant in the shape of high grade blasting and sporting powders will be placed on the market. Messrs. H. H. Fuller & Co., of Halifax, who are largely interested in hardware and mining supplies, are the representatives of the Company in Halifax and from their long connection with this branch of activity it is certain that the Company's product will be marketed to advantage.

The Company has, on its water front, erected a substantial wharf, measuring about 160 feet long, and which is well calculated to give ample shipping facilities for handling raw material and shipping the manufactured product. The presumed danger which is attached to the handling of gunpowder and dynamite makes it necessary that this class of goods should be carried as much as possible by means of water freights. In this way high costs of carriage are avoided and the product is laid down at consuming points at the lowest possible cost, which is a point that has much influence on its distribution.

About 160 feet to the north-east of the wharf is located a boiler and engine house which contains a "Mumford" boiler of 125 horse power, and a "Robb-Armstrong" engine of 100 horse power. This will give sufficient power to run the various pulverizing appliances which are necessary to the industry.

In the preparation of the ingredients which are contained in gunpowder much depends, of course, on the quality of the material used and for the best grades of sporting and blasting powder it is necessary that very good charcoal should be made. The wood which the Maritime Explosive Co. will use for this purpose includes poplar and alder, which have been found by experience to be more suitable than any other. This wood requires to be carefully peeled and stripped of its bark, after which it is carbonized in closed retorts, by means of which a perfect carbon is secured.

Dynamite was first introduced into mining operations in the provinces some time in 1874. Its exportation from England at that time was a matter of great difficulty owing to the regulations of the authorities who then surrounded the article with many restrictions on account of its dangerous character. The relative efficiency of dynamite over that of gunpowder has been variously estimated. It has been said that a gain of almost thirty per cent. has been recorded in favor of dynamite, but it must be remembered that this may have reference to places in which gunpowder is hardly suitable; for instance, gold mining is a more suitable field for the employment of dynamite than coal mining, on account of the different character and hardness of the rock to be blasted. Under these circumstances, of course we can easily imagine that dynamite would show a much greater percentage of efficiency.

We may assume that there is a field for the use of both forms of explosives. The manufacture of dynamite is included in the plans of the Maritime Explosive Co. and they will begin to turn it out as soon as possible.

During recent years there has been a decided decrease in the selling price of explosives in this province owing to the increased demand and the fact that we are enabled to supply our wants from home producers. Not only this, but the progress of this manufacturing enterprise in Canada has been sufficiently great for us to figure as exporters, to some extent, of this class of goods.

The fact that a second industry of the kind has been found to be a feasible undertaking at this point is undoubtedly the strongest proof of the growing character of the mineral development of this country, and as the bulk of the supplies required in the development of this and kindred enterprises is obtained from Halifax, it may be seen that the industry above referred to is a valuable addition to our manufacturing plants. It is estimated that it requires one-seventh of a pound of powder for every ton of coal mined, and as the tonnage is yearly increasing there is every hope that the undertaking above outlined will be very successful.

LIME JUICE.

NOVA SCOTIA has many advantages as a manufacturing country, and while the public generally appreciate this fact with regard to manufactures which require coals and minerals, we wish to call attention to the extensive manufacture in our midst, of another article, in which Halifax leads America, that is in the refining of Lime Juice, to which the climate of Nova Scotia is peculiarly adapted.

Lime Juice cannot be successfully refined in the West Indies, on account of the extreme heat, and other climatic conditions, and to obtain the best results, the crude material has to be shipped from there as soon after production as possible, as the deterioration by fermentation sets in almost immediately, and the matter of refining promptly is an important consideration.

Besides the favorable temperature of Nova Scotia, and the other climatic advantages not to be found elswhere, we also have facilities for speedy carriage of the Juice from the point of production and until it becomes the finished article of commerce,—bright, clear, and tempting to the thirsty palate.

To go fully into the story of the refining of Lime Juice would perhaps be tedious, but it would be an object of interest to one who had never seen the crude Juice, to see this side by side with the finished product, that is the Sovereign Lime Fruit Juice as it comes from the laboratory of Simson Bros. & Co., Wholesale Druggists of Halifax.

Messrs. Simson Bros. & Co. are the largest refiners of Lime Juice in America, and one of the largest in the world, their business in this item extending to Europe, Africa, and Australia. **Throughout the Dominion of Canada Sovereign Lime Juice is taken as the standard Juice.**

BANK OF NOVA SCOTIA.

INCORPORATED 1832.

CAPITAL, $1,752,720. RESERVE FUND, $2,005,610.

DIRECTORS.

JAIRUS HART, *President.* JOHN Y. PAYZANT, *Vice-President.*
R. B. SEETON, CHARLES ARCHIBALD,
ROBERT L. BORDEN, GEORGE S. CAMPBELL. J. WALTER ALLISON.

Head Office, Halifax, N. S.

H. C. McLEOD, - GENERAL MANAGER.
DANIEL WATERS, - - INSPECTOR.
W. CALDWELL, - CHIEF ACCOUNTANT.

BRANCHES.

NOVA SCOTIA.

AMHERST, -	JOHN McKREN, -	Manager.
ANNAPOLIS, -	J. H. LOMBARD, -	Manager.
BRIDGETOWN,	J. IMRIE, - -	Manager.
DIGBY, - -	H. GREEN, - -	Manager.
HALIFAX, -	GEO. SANDERSON, -	Manager.
KENTVILLE, -	J. M. WALKER, -	Act'g Mgr.
LIVERPOOL, -	G. W. BABBITT, -	Act'g Mgr.
NEW GLASGOW,	W. D. ROSS, - -	Manager.
NORTH SYDNEY,	C H. EASSON, -	Manager.
OXFORD, -	W. H. TAPPER, -	Act'g Mgr.
PICTOU, - -	A. D. MUNRO, -	Manager.
STELLARTON, -	JOHN MOWAT, -	Manager.
WESTVILLE, -	SUB. TO STELLARTON,	
YARMOUTH, -	BLAIR ROBERTSON, -	Manager.

ONTARIO.

TORONTO, -	J. PITBLADO, -	Manager.

QUEBEC.

MONTREAL. -	H. A. FLEMMING, -	Manager.
PASPEBIAC, -	W. M. CONNACHER,	Act'g Mgr.

MANITOBA.

WINNIPEG, -	C. A. KENNEDY, -	Manager.

WEST INDIES.

KINGSTON, JAMAICA, W. P. HUNT, - Manager.

NEW BRUNSWICK.

CAMPBELLTON, -	D. R. LAIRD, -	Manager.
CHATHAM, -	R. H. ANDERSON,	Manager.
FREDERICTON, -	W. H. BURNS, -	Manager.
MONCTON, - -	GEO. W. DANIEL,	Manager.
NEWCASTLE, -	A. WILSON,	Manager.
ST. ANDREWS, -	SUB. TO ST. STEPHEN.	
ST. JOHN. - -	T B. BLAIR, -	Manager.
ST. STEPHEN, -	JOHN BLACK, -	Manager.
SUSSEX, - -	G. S. MOORE, -	Manager.
WOODSTOCK, -	B. M. MACLEOD, -	Act'g Mgr.

PRINCE EDWARD ISLAND.

CHARLOTTETOWN,	H. A. RICHARDSON.	Manager.
SUMMERSIDE, -	A. E. WILLIAMS, -	Manager.

NEWFOUNDLAND.

ST. JOHN'S, - -	J. A. McLEOD, -	Manager.
HARBOR GRACE, -	G. R. VIETS, -	Act'g Mgr.

UNITED STATES.

BOSTON, MASS., -	W. E. STAVERT, -	Manager.
CALAIS, ME., -	H. S. PETHICK, -	Manager
CHICAGO, ILL., -	ALEX. ROBERTSON,	Manager.
	W. H. DAVIES,	Asst. Manager.

CORRESPONDENTS.

DOMINION OF CANADA.

CANADIAN BANK OF COMMERCE AND BRANCHES.
BANK OF BRITISH COLUMBIA.

GREAT BRITAIN.

ROYAL BANK OF SCOTLAND AND BRANCHES.

ST. PIERRE, MIQUELON.

LA BANQUE DES ILES, ST. PIERRE ET MIQUELON.

FRANCE.

CREDIT LYONNAIS.

UNITED STATES.

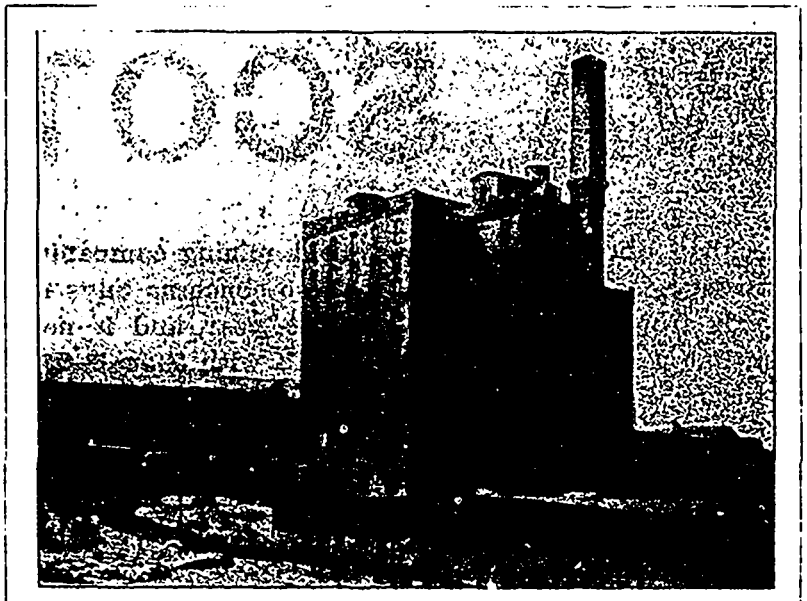
NEW YORK, BANK OF NEW YORK, N. B. A.
BOSTON, MERCHANTS' NATIONAL BANK.
SAN FRANCISCO, BANK OF BRITISH COLUMBIA.
CHICAGO, FIRST NATIONAL BANK.
MINNEAPOLIS, NICOLLET NATIONAL BANK.

HAVANA, CUBA.

ZALDO & Co.

GERMANY.

DRESDNER BANK.

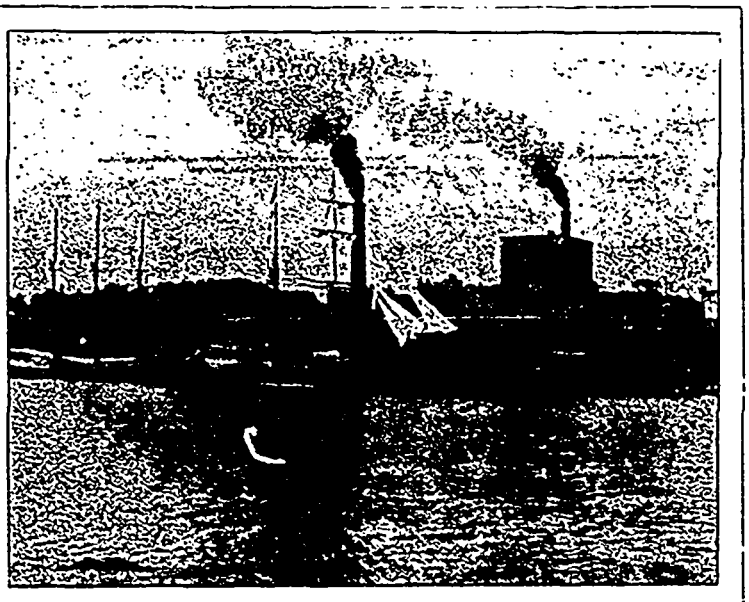


RICHMOND REFINERY.

ACADIA SUGAR REFINING CO.,

LIMITED,

HALIFAX, : : : NOVA SCOTIA.

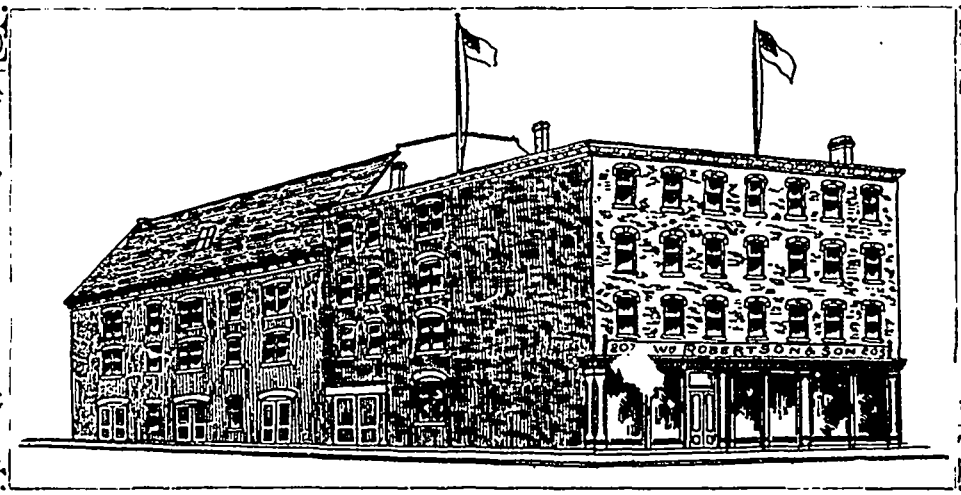


WOODSIDE REFINERY.

WM. ROBERTSON & SON,

(ESTABLISHED 1871.)

205 & 207 LOWER WATER STREET.



205 & 207 LOWER WATER STREET.

Wholesale Hardware

AND

SHIP CHANDLERY.

SPECIALTIES WITH US ARE:

Cordage, Nets, Lines and Twines.
Lobster Packers' Supplies.
Naval Stores, English Paints and Oils.

We are also Agents for:

THE FORT WAYNE TOOL CO'S. "BE VE BE," "AROOSTOOK," and "LITTLE GIANT" SCYTHES, BROWN, BOGGS & CO'S. and THE FERRACUTE MACHINE CO'S CANNERS' TOOLS, JAMES H. TARR'S YACHT COMPOSITION and CAPE ANN COPPER PAINT.

HALIFAX, = = = NOVA SCOTIA.

Cable Address:
"Bell,"
Halifax.

Agents for
Fairbanks' Scales.

BUILDER'S HARDWARE.

We carry everything in hardware required to build a house. Especially fine patterns always on hand in latest designs of bronze goods We are ready to tender on Architects specifications for the hardware required on any building.

PAINTER'S SUPPLIES.

Carson's Ready Mixed Paints Bells' Decorative White Lead, Oils, Turpentine, Dry Colours, Glass and Putty.

HOUSE FURNISHINGS.

We supply everything in this line for the interior of a house including English and German Cutlery, Tin ware, Enamelled Ware, &c., in great variety. The Wickless Oil Stove is one of our leaders.

METALS.

Black and Galvanized Sheet Iron, Ingot Tin, Ingot Lead, Sheet Zinc Copper, Charcoal, and Coke Tin Plates at lowest prices.

LOBSTER PACKERS SUPPLIES.

We supply many of the largest factories in Nova Scotia and Newfoundland. We invite enquiries for Rope, Tin Plate, Ingot Tin, and Lead We also carry a full line of Box Shooks

SPORTING GOODS.

We carry a full line of single and double barrelled Guns, Smokeless Cartridges, Gallery Rifles, Powder, Shot, Caps, Cartridge Cases, Wads Loading Implements, &c Orders filled promptly

FISHING SUPPLIES.

Lines and Nets in both hemp and cotton, Twines, Hooks, Corkwood and all the industries used for deep sea fishing.

UNDERTAKERS SUPPLIES.

Coffin Linings in great variety, Shrouds and Metal Trimmings of all kinds.

A. M. BELL & CO.,

67 & 69 Upper Water Street,

HALIFAX, N. S.

H. H. Fuller & Co., Halifax, N.S.

Get the

Horse Shoe Brand

Striking Hammers, Stone Sledges, Crow Bars....

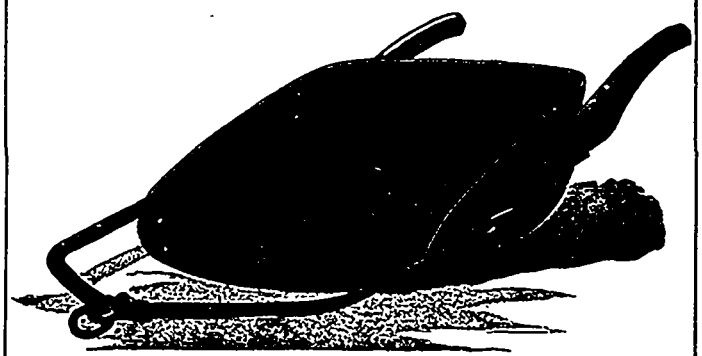
MADE BY

ATHA TOOL CO'Y.

..ELECTRIC BLASTING..

is **safer** and more **certain** than any other method, and in some classes of work will do 10 per cent. more execution with same .. quantity of dynamite than any other method of **firing**.....

Made by **James Macbeth & Co.**



DRAG SCRAPERS,
WHEELED SCRAPERS,
CONTRACTORS' WHEELBARROWS,
TUBULAR STEEL ORE BARROWS,
CONTRACTORS' CARS,
ORE CARS.

All of Highest Quality. Made by

Kilbourne & Jacobs Manufg. Co'y.

=PICKS=

AND

Mattocks,

FOR

Contractors

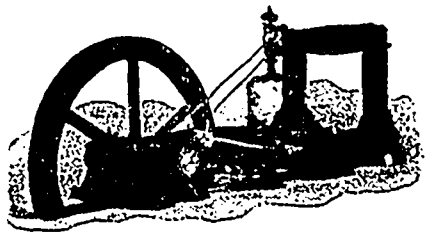
AND

Miners.

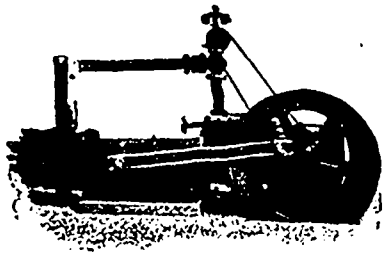
The Klein Logan Co.

Contractors' Supplies.

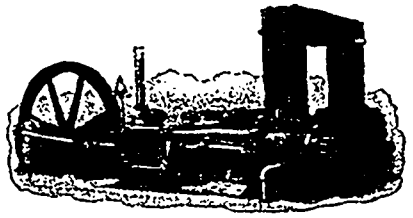
Mining Supplies.



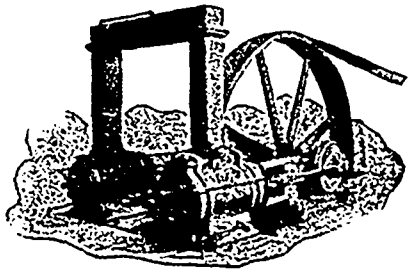
DUPLEX MEYER VALVE) COMPRESSOR.



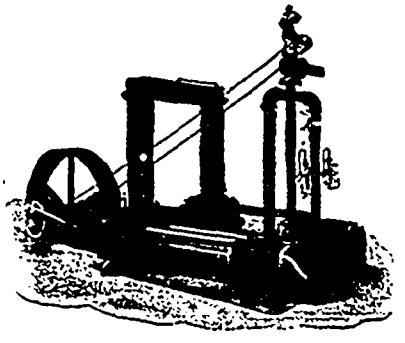
STRAIGHT LINE STEAM-DRIVEN COMPRESSOR.



CROSS-COMPOUND CORLISS COMPRESSOR.



COMPOUND BELT-DRIVEN COMPRESSOR.

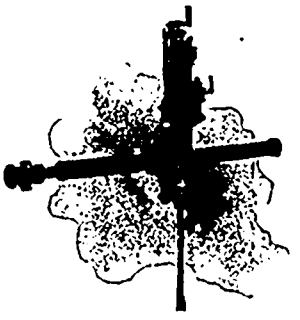


CLASS B-D COMPRESSOR.
(AIR CYLINDER NEXT TO FRAME.)

FOR THE

Special Conditions of Nova Scotia Mines,

(Damp Climate, Hard Rock, &c.)



LITTLE GIANT ROCK DRILL
WITH STOPING BAR.

Rand Duplex Compressors

AND

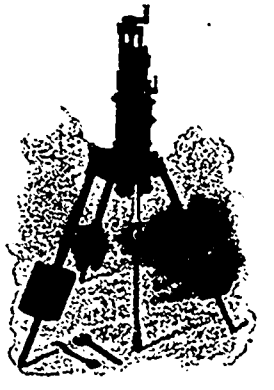
Rand Little Giant Drills

Have been universally found to be

THE BEST.

Some Nova Scotia Mines using Rand Machinery are as follows:

Montreal-London Co	Touquoy Gold Mine,
Economy Mine,	New Egerton Mine,
Guffey-Jennings Mine,	Consolid'td Gold Lake Co.
Blackie Lode Mine,	General Mining Assoc'n,
Royal Oak Mine,	Dominion Coal Co.
Brookfield Mine,	Intercolonial Coal Mine,
New Glasgow Gold Mine,	Blockhouse Mine,
Crow's Nest Mine,	Sheet Harbor Gold Co.
Napier Gold Mine,	Ecum Secum Mine,
Blue Nose Gold Mine,	Nova Scotia Steel Co.
Golden Group Mine,	Modstock Gold Mine,
Withrow Mine.	



LITTLE GIANT ROCK DRILL
WITH TRIPOD.

CANADIAN RAND DRILL CO.

General Hardware.

FISH FISH FISH FISH FISH FISH FISH FISH FISH FISH FISH FISH FISH
FISH FISH FISH FISH FISH FISH FISH FISH FISH FISH FISH FISH FISH
FISH FISH FISH FISH FISH FISH FISH FISH FISH FISH FISH FISH FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH
FISH

L. HART & SON,

HALIFAX, Nova Scotia.

ISH.

PACKERS AND SHIPPERS

OF ALL KINDS OF

Dry & Pickled Fish.

Orders promptly filled and satisfaction guaranteed.

Cable Address: - - - "LEVI," Halifax.

HALIFAX.

To All Crockery Dealers

We would like to say—"Give us a trial order, and if not satisfactory, tell us why."

Import Orders

are a specialty with us.....We have an . . Import Department which devotes exclusive attention to this branch.

WEBSTER, SMITH & CO.,

HALIFAX, - - Nova Scotia.

..IMPORTERS AND DEALERS IN..

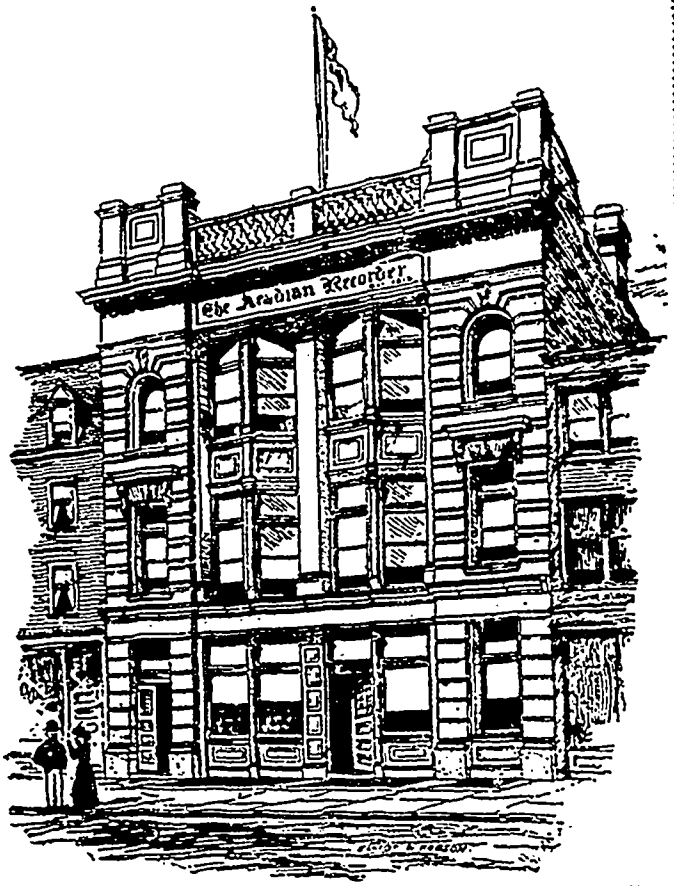
China, Glassware, Earthenware, Lamps,

Burners, Chimneys, Wicks of all kinds, etc., etc.

QUOTATIONS FURNISHED FOR ANYTHING CONNECTED WITH CHINA GLASS, EARTHENWARE OR LAMP GOODS. . . . . .

CORRESPONDENCE SOLICITED.

"ACADIAN RECORDER."



90, 92, 94 Granville Street.

THE 1900 A. D. NEW OFFICE OF

The Acadian Recorder.

(ESTABLISHED IN 1813.)

And published uninterruptedly through all the 88 years since elapsed.

SHAKESPEAR in one of his plays makes a character remark :—

"The people were not used to be spoke to but by the Recorder."

It was long before the time of daily papers—indeed before the era of newspapers at all; but it is certain that through half a dozen generations, though men come and go, the ACADIAN RECORDER has retained a first place in the estimation of thousands of the people of Nova Scotia and many abroad, scattered here and there over the world.

The ACADIAN RECORDER aims to be especially reliable and to eschew mere sensationalism. From its columns can be gleaned everything that is worth reading, knowing and remembering, in the way of News and Happenings, while it takes an honest independent view of public affairs "unawed by influence and unbribed by gain." The ACADIAN RECORDER has maintained the People's Rights and Privileges in times before men were born who lived the alloted term of life and passed away; and it has never been complicated with any influence that would cause it to even tacitly acquiesce in the personal, taking precedence of the public, interest.

The large advertising patronage of the RECORDER which employs no drummers for that purpose, is an evidence of the popularity of its columns for business and other announcements.

Tri-Weekly Recorder, three papers a week, (containing all the news in the six dailies.) We have decided to make the price of this paper only One dollar per annum, furnishing a whole years record of the world's progress, for less than two cents per week Sent to any address postpaid in the province, Canada, or the United States or across the Atlantic. In the latter case there is a trifling sum for extra postage, but only One dollar a year for the paper three times a week.

ADDRESS for Subscriptions, Advertising Rates or Printing,

BLACKADAR BROS.,

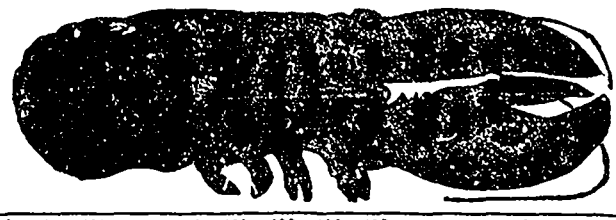
"Recorder" Office, 90. 92. 94 Granville St., Halifax, N. S.

ADVERTISING.

Reasonable Rates.—Every order in this line with which we are favored is considered on its merits in accordance with the nature of the announcement and the return likely to be derived from it.

Printing.—In our new Office we shall have the latest and most improved plant for every description of printing, plain and colored, from the largest to the smallest piece of work. Superior machinery to any hitherto imported into the city.

Subscriptions.—Daily RECORDER, $5 per annum, sent by mail or delivered to subscribers in the city or suburbs or in Dartmouth.



Cable Address: "FRASER," Halifax.

Codes Used: A. 1, and A. B. C.

JAMES FRASER,

Commission Merchant,

Lobster Exporter.

xxx Importer of xxx

Tin Plates, Metals, &c.

HALIFAX,

NOVA SCOTIA.

Offices

ACADIA FIRE INSURANCE BUILDING,
58 BEDFORD ROW.

DOMINION COAL CO., LTD.

Bunkering Department.

The following are some of the testimonials received in regard to the satisfaction given by our Coals for Bunkering purposes :—

PLANT LINE.
CANADA ALANTIC AND PLANT STEAMSHIP COMPANY, LTD.

S. S. "HALIFAX," Oct. 26th, 1898.

M. R. MORROW, ESQ.,
DOMINION COAL CO.,
Halifax, N. S.

Dear Sir.—For the past five years or more the S S. "Halifax" has been bunkered with the Dominion Coal Company's steam coal and it has given every satisfaction; it burns well with light draft, makes steam easily and produces a very small quantity of ashes and clinkers. It gives me great pleasure to be able to recommend it as a first class bunker coal.

Yours truly,
JOHN DOBBIE,
Chief Engineer S. S. "Halifax."

YARMOUTH STEAMSHIP COMPANY, LTD.

YARMOUTH, Oct. 28th, 1898.

J. S. McLENNAN, ESQ.,
TREASURER DOMINION COAL CO,

Dear Sir.—I think you will be pleased to hear that the steamer "Boston" has been using the Dominion Coal Company's coal on her fast runs between Yarmouth and Boston. I can recommend the Dominion Coal Co.'s coal as giving our engineers perfect satisfaction.

Yours truly,
L. E. BAKER,
President Yarmouth Steamship Co., Ltd.

Best quality of BUNKER COALS supplied Steamers with dispatch night or day as required, at HALIFAX, N. S., LOUISBURG or SYDNEY, C. B.

DOMINION LINE ROYAL MAIL, STEAMERS.

HALIFAX, N. S., April 22, 1897.

MESSRS. THE DOMINION COAL CO.,
Halifax, N. S.

Dear Sirs—Referring to the 200 tons Bunker coals supplied by you to the R M. S. "Vancouver," on her last homeward voyage when she had also been supplied with some coal at Portland, Maine, her Chief Engineer reports: "The Cape Breton coal was much better than the Pocahontas coal, having more lumps of round coal and much less small and would burn easier with less draft and maintain the steam better."

Yours truly,
A. G. JONES & CO.,
Agents.

DOMINION GOVERNMENT CRUISER "ACADIA."

HALIFAX, N. S., April 30th, 1897.

This is to certify that I have used the Reserve Mine coal for a number of years in the engine department of this ship and, as it has given me every satisfaction, as compared with the other coals of this country and United States, I have much pleasure in recommending it to parties requiring a steam coal.

DAVID M. MOONEY, *Engineer.*

CAPE YORK, GREENLAND, July 25, 1898.

J. S. McLENNAN, ESQ.,
TREASURER DOMINION COAL CO.,
25 Milk St., Boston, Mass.

Dear Sir—I write this line to thank the Dominion Coal Co., for the quality of the coal furnished my ships "Hope" and "Windward." It was very satisfactory and enabled me to make, in the "Hope" a very quick run of ten days from Sydney to Melville Bay.

Kindly present my compliments to your President and believe me, Sincerely yours,
R. E. PEARY, U. S. N.

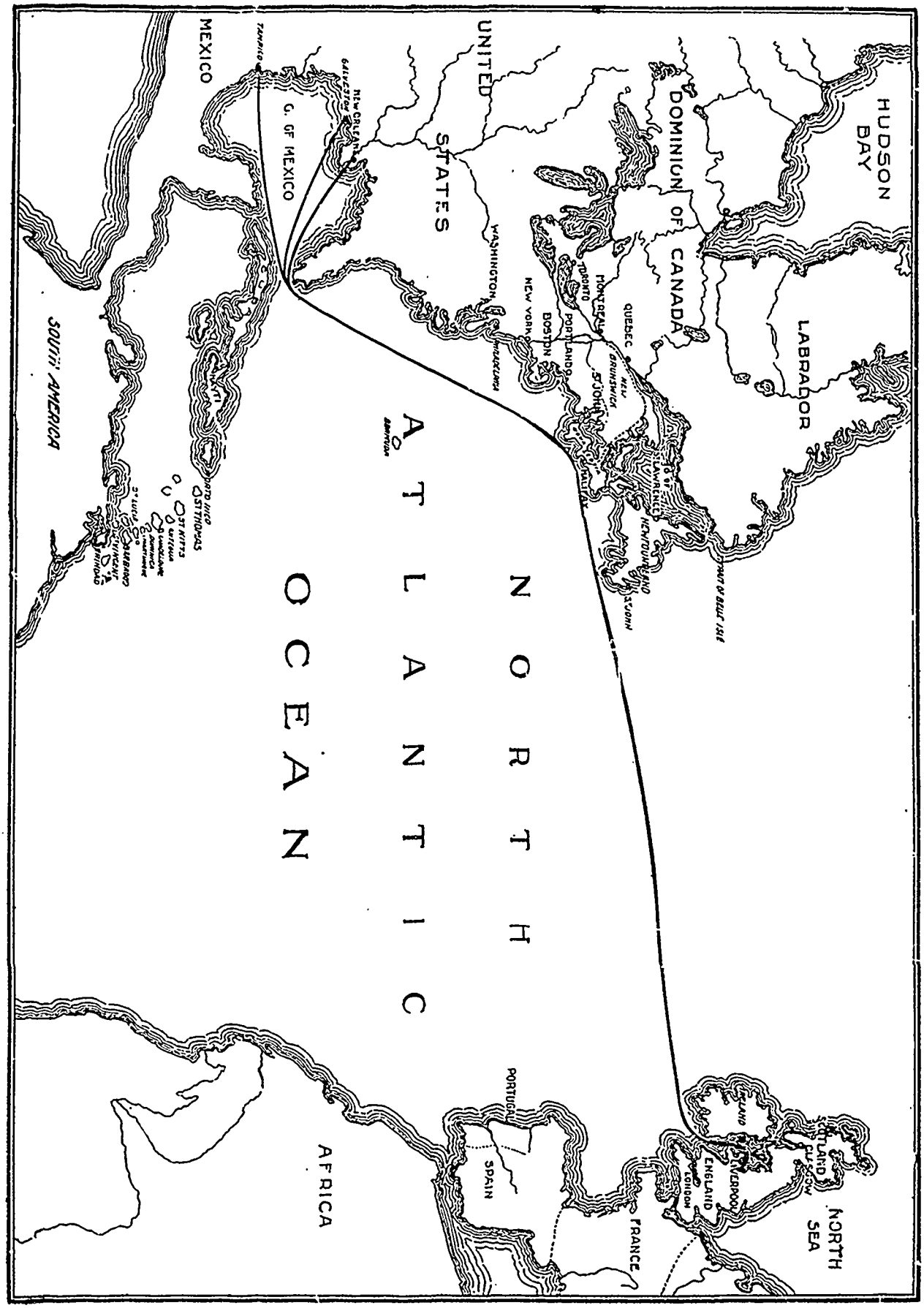
We take great pleasure in announcing that we are about adding to our equipment at Halifax, for the rapid coaling of steamers on arrival, with or without previous notice.

We would call the attention of owners of steamships engaged in the North Atlantic trade, and especially where sailing between Southern U. S. and Gulf of Mexico ports, and British and Continental ports, including ports in the Mediterranean, to the very great advantages of bunkering at Halifax or Louisburg over ports other than the loading port, nearer the point of departure.

Situated as they are, almost midway between New Orleans and Liverpool, by utilizing these ports more cargo can be carried on account of the less dead weight space required for bunkers. (See map opposite.)

Information as to prices, etc., furnished on application to

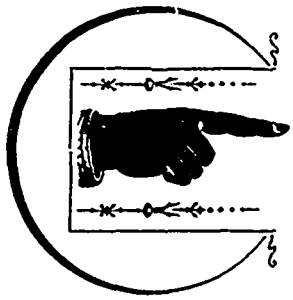
M. R. MORROW,
General Sales Agent for Maritime Provinces,
HALIFAX, NOVA SCOTIA.


HUDSON BAY
DOMINION OF CANADA
LABRADOR
UNITED STATES
MEXICO
G. OF MEXICO
SOUTH AMERICA
NORTH ATLANTIC OCEAN
AFRICA
NORTH SEA
SCOTLAND
ENGLAND
FRANCE
SPAIN
PORTUGAL
TORONTO
MONTREAL
QUEBEC
BOSTON
NEW YORK
WASHINGTON
PORTLAND
HALIFAX
NEWFOUNDLAND
GALVESTON
NEW ORLEANS
TAMPICO
PORTO RICO
ST THOMAS
ST KITTS
MARTINIQUE
BARBADOS
TRINIDAD
LONDON
LIVERPOOL
GLASGOW

Cable Address:
"Pyke,"
Halifax.

George A. Pyke,
Wholesale Grocer,
Halifax,
Nova Scotia.

Proprietor of the
Famous Cey-Lind-Chin Tea.



All the newest ideas in **Groceries** *may be seen in my salesroom. I make it a point to keep in touch with the progress of both the Canadian and United States markets at all times. I invite the enquiries of domestic and foreign buyers.*

Special Letter...

About West India Trade!

Halifax, N. S.,
Oct. 31st, 1899.

To the Exporters and Importers of the West India Islands:

DEAR SIRS,

The increase next season in the number of sailings of steamers which ply between Canada and the West Indies, must have a tendency to increase the volume of trade, both outward and inward, between you and us. Twenty-six sailings a year mean a lot of cargo space and I think the people at both ends of the line should co-operate in trying to fill it. I handle quite a large quantity of West India goods and, if it is possible to do it, I would like to handle more. ORANGES, LEMONS, BANANAS AND COCOANUTS are four lines which I now import and, if the delivery under new arrangements could be made satisfactory, I believe a larger trade might easily be done. With regard to exports, I would say that I can supply a very good shipping quality of POTATOES, ONIONS, AND OTHER VEGETABLES in season, at the very best market rates, as I am in touch with all the producing centres and have had a long experience in the requirements of the trade. I also handle CHEESE, EVAPORATED AND DRIED FRUITS, CANNED FRUITS, AND CANNED VEGETABLES, and am prepared to sell in competition with American houses.

My warehouse is one of the best of its kind in Canada, containing a cold storage department for the preservation of Butter, Cheese, etc., and a frost proof compartment for Fruit and other perishable articles.

I invite correspondence.

C. W. OUTHIT.
HALIFAX, CANADA.

Wholesale Dry Goods, Fancy Goods, Millinery.

Prints, Grey Cottons, White Cottons, Grey Sheetings, White Sheetings, Pillow Cottons, Canton Flannels, Cottonades, Flannels, Flannelettes, Shirtings, Linings, Ticking, Ducks, Drilling, Denims, Cretonnes, Art Muslins,	Velveteens, Dress Goods, Mantle Cloths, Tweeds, Lace Curtains, Chenille Curtains, Chenille Table Covers, Table Linens, Table Cloths, Napkins, Towels, Towelling, Hessians, Blankets, Wadded Quilts, White Quilts, Colored Quilts, Oilcloths,	Carpets, Hats, Shapes, Flowers, Feathers, Trimmings, Ornaments, Ribbons, Ribbon Velvets, Velvets, Laces, Veilings, Silks, Whitewear, Blouses, Wrappers, Skirts, Collars and Cuffs,	Ladies' Vests, Corsets, Jackets, Capes, Shawls, Gossamers, Parasols, Overalls, Shirts, Braces, Umbrellas, Neckties, Handkerchiefs, Caps, I. R. Coats.

SMITH BROS.,

Granville and Duke Sts.,

Halifax, N. S.

W. & C. SILVER

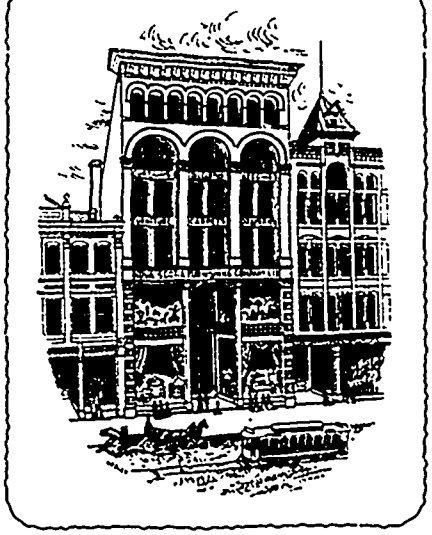
Wholesale
DRY GOODS,
CARPETS,
HOUSE FURNISHINGS,
CLOTHING,
LADIES' COSTUMES,
AND
MANTLES,
ALSO FURS,
AND
MENS' FURNISHINGS.

Homespuns a specialty.

Our travellers cover Nova Scotia, Newfoundland, St. Pierre, Prince Edward Island, and part of New Brunswick.

Established 1839.

Halifax, = Nova Scotia.



WE SUPPLY EVERY .. FURNITURE REQUISITE FOR THE COMFORT . AND CONVENIENCE OF THE HOME. . . . . .

HALIFAX, N. S.

AND

SYDNEY, C. B.

THE

NOVA SCOTIA FURNISHING CO., LIMITED.

HOUSE FURNISHING,

FURNITURE,

CARPETS.....

WE OFFER AN ENORMOUS RANGE OF GOODS TO SELECT FROM BOTH AT HALIFAX AND SYDNEY, AND INVITE THE ENQUIRIES OF PURCHASERS WHO WISH TO BE WELL SUITED AT A REASONABLE OUTLAY. OUR BOOK "THE HOUSE FURNISHING GUIDE," SENT FREE ON APPLICATION.

HALIFAX, - - 72 TO 76 BARRINGTON STREET,

SYDNEY, - - CHARLOTTE STREET.

LEGAL CARDS.

ARTHUR DRYSDALE, Q. C. W. H. FULTON,
HECTOR McINNES. J. B. KENNY.

DRYSDALE & McINNES,

Barristers, Solicitors, &c.

HALIFAX, N. S.

JOHN A. MACKINNON,

B. A., LL. B.

BARRISTER, &C.

OFFICES: METROPOLE BUILDING,

HALIFAX, N. S.

JAMES M. DAVISON, LL. B.

BARRISTER, SOLICITOR,
AND NOTARY PUBLIC.

OFFICE: 18 PRINCE STREET,

HALIFAX, N. S.

WILLIAM B. ROSS, Q. C. CABLE ADDRESS: "ROSS."
HUMPHREY MELLISH, B A., LL. B.
FREDERICK F. MATHERS, LL. B.

ROSS, MELLISH & MATHERS,

Barristers, Solicitors, Etc.

HALIFAX, N. S.

B. F. PEARSON. W. H. COVERT.

PEARSON & COVERT,

Solicitors, &c.

REDDEN BUILDING: 45 SACKVILLE STREET,
HALIFAX, N. S.

CABLE ADDRESS: "PEARSON"

LEGAL CARDS.

RICHARD C WELDON, D. C L., PH D., Q. C., COUNSEL.
ROBERT E. HARRIS, Q. C. CABLE ADDRESS:
WILLIAM A. HENRY, LL. B. "HENRY," HALIFAX
CHARLES H. CAHAN, LL. B. A. B. C. CODE.

HARRIS, HENRY & CAHAN,

Solicitors, Notaries, &c.

ST. PAUL BUILDING,
HALIFAX, NOVA SCOTIA.

W. B. WALLACE, LL. B.
A. A. MACKAY, B. A. LL. B.

WALLACE & MACKAY,

Barristers, Etc.

REDDEN BUILDING,
HALIFAX N. S.

F. H. BELL,

Barrister & Solicitor,

REDDEN BUILDING,

HALIFAX, N. S.

DANIEL MCNEIL. GERALD B. TERNAN, LL. B.
ALEX. MCNEIL, M.A., LL.B. W. F. O'CONNOR, LL.B., B.C.L.

MCNEIL, MCNEIL, TERNAN & O'CONNOR,

Barristers, Solicitors, &c.

METROPOLE BUILDING, HOLLIS STREET,
CABLE ADDRESS, "NEIL." HALIFAX, N. S.

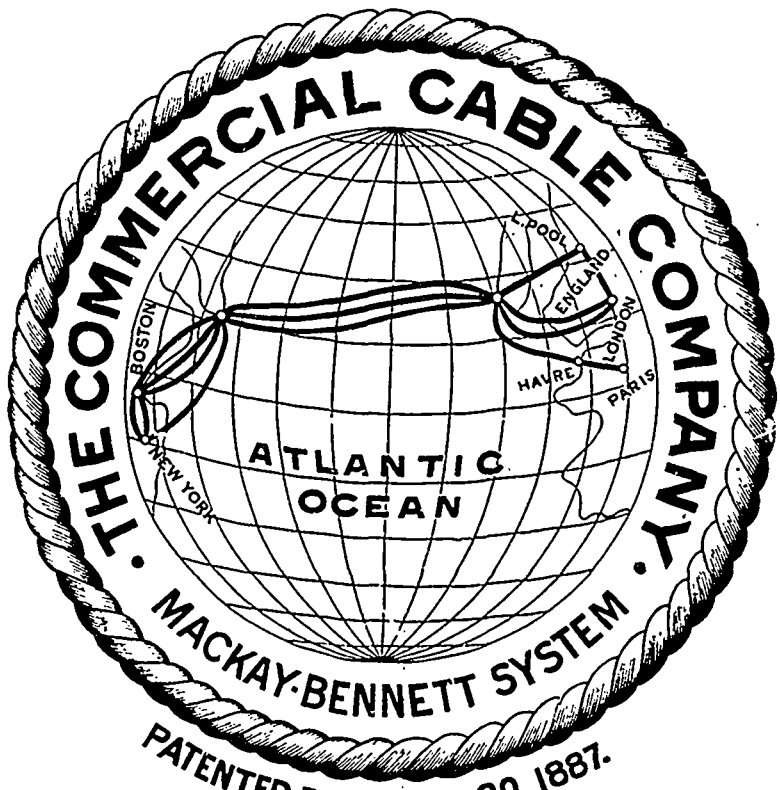
R. H. MURRAY,

B. A., L. L. M.

BARRISTER,

Keith Building,

HALIFAX, N. S.



The Commercial Cable Co.

THE LEADING ATLANTIC SYSTEM.

Owns and operates **THREE** duplex and automatically worked trans-atlantic cables and an extensive system of land lines throughout the United States.

—IN CONNECTION WITH—

CANADIAN PACIFIC RAILWAY TELEGRAPHS,
HALIFAX & BERMUDAS CABLE COMPANY,
DIRECT WEST INDIA CABLE COMPANY.

The **"COMMERCIAL"** is the only company possessing three cables between Europe and Nova Scotia.

Its office in Halifax is directly connected with the lines of the Canadian Pacific Railway Telegraphs for all parts of British America.

MARK YOUR MESSAGES WITH THE **FREE** ROUTE INDICATION **"VIA COMMERCIAL."**

Dominion Paint Co.

HALIFAX, N. S.

WORKS AT DARTMOUTH.

THESE works were established by a joint stock company in 1871, for the purpose of manufacturing the celebrated **MOSELEY'S MARINE PAINTS.** They were purchased from the company by Mr. Robert Moseley in 1883, and have since been conducted by him. During his term of ownership the capacity of the plant has been largely increased, and to-day the sale of Moseley's Marine Paints has been extended throughout all parts of the Dominion of Canada. At the present time the works are producing all kinds of White Leads and Colours in addition to Marine Paints. These works are situated on the shores of Halifax Harbor, on the Dartmouth side, and are admirably located for the shipment and receipt of goods, both by rail and water, having a good wharf property and a siding where manufactures can be backed on the cars right out of the warehouse.

LIQUID PAINTS IN LEVER TOP TINS are a specialty to which the Dominion Paint Works are giving especial attention, and throughout the provinces where these paints have been sold, they have given universal satisfaction.

Dealers, both in Canada and the West Indies, are invited to write for fuller information and a catalogue containing prices.

Orders received from the West Indies can be shipped by the following steamer at shortest notice.

DOMINION PAINT CO'Y.,

Halifax, N. S.

BUTTER

CHEESE

BUTTER.

OUR "BLUENOSE" brand of Butter is now very well known throughout the West India Islands and South America and its quality has made friends for it wherever introduced. "Bluenose" Butter is packed in ½ lb., 1 lb., 2 lb and 5 lb. tins and in kegs of about 35 and 55 lbs. It is packed to compete with the very best Danish and French Butter and our increasing sales indicate that it will eventually crowd them out of the market.

A leading firm in Trinidad writing us on Feb. 20th last, say:

"We have tried your "Bluenose" Butter and find that it compares favorably with the Danish and French brands we handle. We hope to in future favor you with a liberal share of our patronage."

A New York exporter who was in Halifax on Sept. 15th, said on examining "Bluenose": "It is the finest tinned butter I have ever seen."

CHEESE.

WE are large handlers of full sized Cheese for the English market, and Twins and Flat Cheese for the West India trade. Enquiries solicited.

SMITH & PROCTOR,

HALIFAX, NOVA SCOTIA.

PICKFORD & BLACK'S

STEAMSHIP LINES.

Demerara Service.

S. S. "Taymouth Castle,"

S. S. "Duart Castle,"

One of the above named Steamers

Will Sail from HALIFAX, N. S., and ST. JOHN, N. B., every fourth week for DEMERARA, calling at BERMUDA, ST. THOMAS, ST. CROIX, ST. KITTS, ANTIGUA, DOMINICA, MARTINIQUE, ST. LUCIA, BARBADOES, TRINIDAD, returning via same Ports.

After July 1st, 1900, this service will be fortnightly instead of every four weeks.

Fortnightly Jamaica Service.

S. S. "Beta."

From HALIFAX, the 15th of every month for KINGSTON, JAMAICA, calling at BERMUDA and TURK'S ISLAND, going and returning.

A Steamer will also sail about the 1st of every Month for KINGSTON, JAMAICA, direct, and the principal outports in JAMAICA.

Eastern Shore and P. E. Island Service.

S. S. "CITY OF GHENT"

every Tuesday Evening for SHEET HARBOR, SALMON RIVER, ISAACS HARBOR, CANSO, ARICHAT, PORT HAWKESBURY, PORT HASTINGS, CHARLOTTETOWN and SUMMERSIDE, returning via same Ports.

Cape Breton and Newfoundland Service.

S. S. "HARLAW"

Will sail every fortnight alternately for CAPE BRETON and NORTH and SOUTH COAST OF NEWFOUNDLAND, as follows:

NORTH COAST TRIP—ST. PETER'S, GRAND NARROWS, BADDECK, NORTH SYDNEY, SYDNEY, INGONISH, NEIL'S HARBOR and ASPEY BAY, C. B. and CHANNEL, CODROY, BAY ST. GEORGE, BAY OF ISLANDS, and BONNE BAY, NEWFOUNDLAND.

SOUTH COAST TRIP—CAPE BRETON PORTS above mentioned, and CHANNEL, ROSE BLANCHE, LA POILE, BURGEO, HARBOR BRETON, ST. JACQUES, BALLORAM, GRAND BANK, FORTUNE, BURIN and PLACENTIA, NEWFOUNDLAND.

☞ All information regarding Freight or Passage on application to

PICKFORD & BLACK, - - HALIFAX, N. S.