To-Day’s Acadia

By BRUCE ROSS

Of all the fair provinces of this vast Dominion none is more interesting than any one of that group situated on the Atlantic seaboard. The rugged majesty of the Canadian Rockies, the vast plains of the central west and the picturesque highlands of Ontario and Quebec so dear to those thousands who yearly pilgrimage for rest or pleasure, all these must stand comparison with the rich heritage of the Maritimes. A domain fringed by waters teeming with fish; a mile upon mile of coastline indented with harbor-haunted harbors, the hinterland a series of valleys generously dotted with orchards; and over all an abundance of fertile land for general farming and pastureage.

From the earliest days of European settlement in North America, that part previously known as Acadia has figured prominently in the romantic history of France and Britain. It is a land famous as the field of battle between the English and French, from which struggles have evolved a race hardy of frame and indomitable of will. The sturdy pioneers accompanying Sebastian Cabot on his epoch-making voyage over four hundred years ago little thought that the name of their master was destined to be coupled with the founding of a mighty nation. They were but following a trail, blazed by Columbus five years earlier, that lead to the western horizon. These, with later discoveries, confirmed the legend that Vikings had travelled this way in the year one thousand and had marvelled at the magnificent vistas unfolding before them as their ship slowly sailed along the coast.

The literature of the country throws a veil of glamour over its exploration and colonization. Longfellow has immortalized throughout the ages the Annapolis and Cornwallis Valleys where Evangeline was wont to stroll; but they are only two of many of equal beauty, compelling interest and disclosing latent possibilities. Studied with fairy-like islands, clothed with evergreen bush and shrubbery, the waters present a perspective that must have charmed those early adventurers. No section of America, and perhaps of the world, offers such a maze of salt water inlets, swiftly moving streams, placid still waters and blue-bosomed lakes, provided by a generous Nature.

But out of this setting one gem has the inalienable right to be singled for more than passing comment. The little town of Annapolis Royal is so rich in picturesque lore and poetic association that even the ancient City of Quebec must allow precedence. Three years previous to the building of a white man’s hut near the site of Wolfe’s strategically attained supremacy, a fort and a village were to be found at Port Royal, established by the French in 1605. And on the basin of this town, later renamed by the British in honor of Queen Anne, was launched the first vessel built in North America; here too, the first mill was put in operation. The first sowing of cereal and root crops in Canadian soil was at Annapolis Royal and above all, in this place, was witnessed the first conversion to Christianity on the soil of a one-day world power. Although the nucleus was composed of French settlers and British soldiers, this was augmented considerably by the influx of United Empire Loyalists from the south. Thus the Maritime Provinces are predominantly English-speaking and contain no problems of assimilation of alien
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October, 1924

Gasoline in the Great War

A Few Rich Stories about the "Kid" Reservoirs who Manned the Sub Chasers in the Late War and who Converted the Gray Patrol from Ridicule to Unexpected Success

By BEWICK S. C. WATTHORN, Marine Department

When the war cloud burst over Europe the submarine was the big, new, practically uninsured instrument of naval warfare, to which the Germans, failing in their attempts to terminate the conflict in a single, rapid thrust, looked to isolated and to bring down the mighty British Fleet, bit by bit, to the level of their own. No weapon had yet been devised to counter it nor any successful method of fighting it evolved. But gradually, out of the chaos and the experience dearly bought with countless lives and scores of ships, there was evolved a method of defense and aggressive warfare too, with specially designed boats and numerous elaborate instruments for apprehending and destroying the submarine.

Western Ocean. And but few, even after the job was finished and they had crossed thousands of miles of ocean in the dead of winter to "Home," seemed to appreciate the fact that the Chasers were more than any other thing sealed the fate of the German submarine.

To appreciate the work done by the little ships of "the Gray Patrol," it is necessary to have some idea of their construction. The length of an M. L. over all was 70 ft. 7 in. beam 12 ft. 1 in. draught approximately 3 feet 1 inch, with a full load displacement of 78,000 pounds, spanning 1 3/8 inch yellow pine. The Sub Chasers were 110 feet long. Crowding 900 horsepower into a craft of this size does not leave very commodious quarters for the crew. Forward in a length of 20 feet, seven or eight men lived and slept. The officers' quarters in the stern were divided into a ward room and a state room where two could turn round and three became a crush. Stuck in between the engine room and the防止ward room was the galley, "stink hole of weird stenches that carry their message of strange forms of nutrition fore and aft. And there would have believed it possible for them to live out some of the dirtiest weather that ever flayed the
Liest, X., reminiscently, “that I cannot tell in restrained tones of that hole of iniquity in the galley, with its tinnitus of shifting pots and pans and burning connections flung in a heavy sea over paraffine burners.”

Not only in the actual work of patrolling for submarines, but in countless other ways they were craft employed. Sweeping for mines in the channel and off the Irish coast, convoying merchant vessels, towing the deadly type Q parasite for lurking subs, laying mines, co-operating with air patrols sent afloat in the North Sea, in the Mediterranean, at the Dardanelles, and in the Adriatic.

When used actually to hunt submarines, the little boats of the “Gray Patrol” operated in groups of four, one of which was a flagship. Sometimes they worked out of an important harbor a day at a time, and as often you’d find them 100 miles off shore and days on end under conditions hitherto considered impossible, and with little food and water, say, some Scotch fishing village would return to us. For the men stuck out of touch with civilization for months, the simple everyday things in life took on a totally Liest, X., and the thought of a week in London was a dream comparable only to the orthodox idea of heaven. No wonder the men lived. It was to hunt submarines along the American coast, and they were reached by the little boats that stood by them so gallantly.

In the work of U-boat strafing the M. L. was working without the use of seagulls and biplanes, the small dirigibles which were found to be less than planes for spotting the sub-as fighters. A high-powered radio carried no wireless or telephones and depended upon the blinker and semaphore for communication. In the event that a blimp or seaplane spotted a sub, the information was communicated to the patrol boat only by means of telephone. The fighting equipment of M. L. consisted of a short calibre 8-inch gun using a shell weighing in the neighbourhood of 13 pounds. It was a short gun with a long recoil and while the range was much less than that of a standard Navy gun of the same bore, it proved equal as a paralyzing gun and was successful for these small quick-acting vessels on which the ability to shoot a large shell was more desirable than accuracy. But more important than the deck gun was the depth bomb. With a little finger gage put the fear of “Gott” into the biggest U-boats. This highly revered shipmate known to many as a submarine, contained in the North Sea, in the Mediterranean, at the Dardanelles, and in the Adriatic.

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Those who had occasion to traverse the war and during the last months of the war will remember the varied duties that the M. L.’s. were called upon to perform and the remarkable swimmers who with many of them were equipped. Dubbed the “movies” because of their activity in a sea way, the ubiquitous M. L.’s. took the title in a better sense because of their never-ending activity in performing their marines for which they were never intended. Probably one of the last duties one would expect the sub to handle is the job of sweeping, which was generally done by heavily built steel trawlers and paddlewheelers. But many of the M. L.’s were called upon for this service because of their ability to sweep a channel much faster than the regular sweepers. Frequent they swept in flotillas of four in quarter line formation, using the “Zee” to hold the sweeping cable extended. Another sweep, P. V. sweep was used, consisting of a pair of paravanes towed off the quarters. These paravanes or “ot- ter” were much the same as those with which all merchant and naval vessels traversing the war zone were equipped in order to protect them from mines. When used for sweeping, the paravanes operated in a practical way exactly the same way as for the U-boats and were towed off the quaters instead of from the forecastle there, by offering no protection to the vessel from which they were towed.

Extending out and down from the bow, parallel and approximately 45 degrees, the towing cable of the paravane encountered the mooring wire of the mine, deflecting it out to the paravane where it was cut by the steel knives in the head of the latter. After being cut adrift the mine was exploded by gun fire. But the ordinary method was the “Y” sweep, where the boats worked in pairs towing a cable one end of which was attached to each boat. The mines were caught by their mooring wires and if not pulled adrift from their mooring, were reeled in and

disengaged by hand—a hazardous operation which has resulted in many a casualty.

When the M. L.’s were designed no one had the slightest idea that they would ever be called upon for the work of mine laying but in the latter months of the war many of them were so engaged. They were fitted with tracks capable of carrying two mines nested in their side rails which could be lowered in a few miles before arriving at the mine field, which was indicated by a buoy. After the mine was laid and the exact position determined, they would proceed in single file ahead under the senior officer’s boat arriving at the buoy. Then a signal would be hoisted calling for an eight point turn which would bring the M. L.’s in line abreast at intervals of about 75 feet. A rocket fired by the senior officer was the signal to start to lay, when the bow forward starboard mine would be dropped. Thirty seconds after the forward port mine went over, then the starboard board and then the last from the port side. In this way a staggered formation of two mines and a flotilla of twenty boats laid eighty mines in scarcely more than an hour and a half. It is impossible to describe the operation.

The last M. L. carried several buoys which dropped at the time the mines were laid to indicate the course of the convoy’s way. The M. L. was essentially an American product. The idea of the mine and the boots as well as their motors were built on this side of the Atlantic, but they served both British and American fleets. For the vast size of the Allied coast lines, they carried on, conveying merchant and naval vessels, swept the hundreds of mines and a hundred and other services, and they have written a story that will live with the classics of Naval History, to be read by the generations to come.

Next Month

READERS of the Review are advised that there will be no issue for the month of November. The December Number will appear shortly before Christmas, will be the South American Edition.

Thanks

The editor acknowledges with thanks the assistance of numerous naval sources which were loaned by the Royal Print and Litho Company, of Halifax.
The History of Halifax Refinery

By D. M. ALLAN, Superintendent

In 1916 land was acquired for the Halifax Refinery, situated two and one half miles south west of the town of Dartmouth, fronting on the harbor and extending two miles back from the harbor as far as Morris Lake. The land acquired was previously a farm consisting of about 600 acres and owned by Hugh Grant and Peter McNab, part of the land being covered with heavy brush and forest, the topography of which was hilly with frequent outcroppings of rock. Above described are occupied now.

The name given to the village was Imperoyal, suggested by Mr. C. O. Stillman on one of his early visits here, and afterwards adopted. It has been transformed in seven years from vacant land, principally wooded, to an industrial and residential community with a population of about 1,500. Thirty-three modern houses have been erected for the executives and a certain class of employees who, because of the nature of the business, necessarily must live within close proximity to the Plant. The employees' children are educated in a modern school, built and maintained by the Company. Recreation for employees and their families is amply provided for in the way of tennis courts, bowling green, quizzing, swimming, skating rink etc., and a modern playground for the children.

The refinery maintains its own water supply for refining and fire protection and has a capacity of fifteen million gallons per day. Electrical power and lighting is generated within the plant.

The building of the refinery at Halifax was primarily for the purpose of supplying the Maritime and Newfoundland with Imperial petroleum products, and followed with the expansion program that began in 1914 which resulted in the erection of four other refineries extending from coast to coast. The Directors undoubtedly had in mind as well the export advantages of Halifax as it is the nearest North American port to Europe.

At the beginning of the construction period, it was necessary to erect camps for the accommodation of both management and employees numbering about 800. To feed and accommodate this great army of men was a real problem especially as it was during the war period. Men were scarce and to keep satisfied employees required expert tact on the part of those in charge.

A never-to-be-forgotten incident during the erection of the refinery was the great Halifax Explosion on December 6th, 1917. At this time the 800-man camp was in full swing. When the catastrophe occurred, the Directors of Imperial Oil Limited authorized an expenditure of $10,000 toward relief in Halifax and Dartmouth. Several of our construction camps were turned into hospitals and nursing stations, and we were able to take care of more than 150 of those who were injured and rendered homeless.

MATERIAL began to arrive for the construction of the refinery in July of 1916, and preference was given to two large tanks for the storage of crude oil to be transferred in tank cars to Montreal during winter months when sea closed the St. Lawrence for navigation

The Imperial Oil Review
The Fishing Fleet pats our from St. John's, Harbour, Newfoundland

Newfoundland
By John L. Dee.

To many good people in Canada, Newfoundland is a mere denominating slip. Some, as we refer to the authority of the next day, Mr. G. W. A. D., dealing with our next door neighbor, is described with inaccuracies that willinterest it to know that U. S. Imperial Oil service was suddenly removed from Newfoundland to-day, the fishing industry would be completely paralysed.

In 1497 a “Company of Marchant Adventurers” of the City of Bristol, being stirred by the discovery of America by Columbus five years previous, set out on an expedition under the command of one John Cabot, a Venetian, and his son Sebastian. The object of this expedition like that of Columbus was two-fold, first to trade with the inhabitants of these strange new lands across the Western Ocean, and secondly to bring these inhabitants to the knowledge of Christianity. Early on the morning of June 24th, St. John’s Day, the lookout on the “Matthew” sighted land, and later in the day sailed through the “Narrows” into a land-locked harbor, and disembarked at the very point where now stands the Capital City of St. John’s, Cabot, before turning his ship’s bow towards the Labrador Coast, and was the first European to reach the mainland of America, as Columbus did not reach there until the following year.

In 1600 King Charles of Portugal sent an expedition under Gaspar de Correia. He cruised along the American coast and gave to the land the name of “Bacchusia” from the abundance of cod which he found in the waters. Two years later the first fishing settlement was founded by the Portuguese who were followed by the Basilians and the French.

In 1583 Jacques Cartier Sir Humphrey Gilbert and Sir Walter Raleigh were commissioned with five vessels. Sir Humphrey Gilbert was empowered as Viceregal Admiral and Governor for six years, and on August 5th, 1583, landed in St. John’s and planted the British flag, and thus laying the corner stone of Britain’s Dominions overseas.

During the greater part of the next two and a half centuries the history of Newfoundland is bound up in the struggle between the British and French for the supremacy of North America.

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During the last fifty years of this period England held the upper hand with the exception of the war with America in 1812 when the coast was much harried by American Privateers. During these troubles a battalion known as The Royal Newfoundland Regiment of Fencibles was raised in Newfoundland, and in July, 1812, was sent to take part in the defence of Canada, and the Newfoundland Fencibles saw much service around York (Toronto), Fort William and Fort George.

In 1832 a Representative Assembly was granted, but it was not until 1854 that a full measure of Responsible Government was granted. Since then the progress of Newfoundland, both politically and economically has been steady, and despite minor setbacks, continuous, and in 1918 as a recognition of the services rendered by Newfoundland’s naval and military contingents, was granted full Dominion status.

In 1865 the census gave the population as 98,000, as compared with 265,000. In 1921 the exports of fish and the number of the fisheries was valued at roughly $220,000,000.

The year ending June 30th, 1923, the produce of the fisheries amounted to $21,000,000.

The Imperial Oil Limited, St. John's, Nfld.

The area of the Dominion is 42,000 square miles and its dependency Labrador, 25,400 square miles. The coast line is very much indentated by long bays or guls, these themselves having many long land-locked bords or arms, the scenery of which cannot be equalled on the American Continent.

The weather quite contrary to the opinion held by many Canadians does not consist entirely of fog. A meteorological report over the past year reports eighteen days fog and twenty-two days slight mists, out of the three hundred and sixty-five days. The temperature is mild, avoiding the extremes of heat and cold which occur on the mainland. In summer the average is from 60 to 69 degrees, while in winter the zero weather is unusual, scarcely ever happening more than once in a year, and then only for a few hours.

The general formation of the soil is carboniferous which really means that the soil is the old agricultural province. Indeed the soil is so good, says the report, that in some of the sections the settlers have worked the same ground for twenty years within practically every river, and even one strange to hear Newfoundland mentioned as an agricultural country, but according to the official report of the Department of Agriculture and Mines for 1921, the value of the farm products raised that year exceeded by ten per cent the value of the fisheries.

Newfoundland as a sporting resort is already well known. The salmon fishing is probably unsurpassed in the world. Sea trout weighing up to seven and eight pounds are bred at the mouths of practically every river, and every brook and lake abound in the fresh water variety. October, November, and the first half of December is the open season for sea trout, and to any sportsman who is willing to rough it for a few weeks nothing better in the shooting line can be offered. F. G. Spreig, who is enthusiastic in his accounts of his hunting trips, estimates the car-
by herd of Newfoundland to number over two hundred miles. Although the fisheries are always to the principal source of riches to the Country, being to Newfoundland what wheat is to Canada and coal to England, they are not by any means quantities of Newfoundland ore were consumed by the Steel Works in the Ruhr Valley. Newfoundland is also a large producer of copper. Considerable development work in galeas, lead and coal areas is well under way. An area of bituminous shale estimated at 150 square miles has been located on the West coast, and a short distance north of this boring operations for oil has been carried on for some time by English capital.

Bacon, the Elizabethan Philosopher, when he wrote "To the Queen, the Newfoundland Fishery, richer than the famous treasures of Golconda and Peru," spoke with a prophetic voice. After having been fished continuously by the vessels of every country washed by the North Atlantic, the waters of Newfoundland are in-day more productive than they were when they provided the crews for both the Spanish Armada and the English fleet which defeated it. To-day New England, Nova Scotia, France, Spain and Portugal each send their fleet to the Grand Banks. Indeed, so important is the Newfoundland Fisheries to France that substantial bonuses are paid direct from her Navy Appropriations for each man and each vessel outfitted and for each quintal of fish landed.

The Newfoundland Fishery proper, consists of three branches: The shore fishery which is prosecuted around the shores of the island, mainly by small boats, fitted with gasoline motors; the bank fishery, which is prosecuted by schooners from 100 to 200 tons, on the grounds, lie off the South East coast. The Labrador coast, is prosecuted by schooners and motor boats along the long coastline of the Labrador peninsula, from the mouth of the St. Lawrence to the mouth of the Great Whale Bay. The value of the codfish exported from Newfoundland in 1923 was about 80 million dollars, while the by-products such as cod-liver oil for medicinal purposes and cod oil for manufacturing purposes, were valued at nearly another million dollars, several fisheries such as lobster, salmon and herring

**Monarch of the Trawlers**

the sole industry. Great strides are being made in the pulp and paper industry and in mining. At Grand Falls, the head of the River stands the plant of the Anglo-Newfoundland Development Co. Ltd., producing 300 tons of newsprint daily for the London Times, Daily Mail, the Glasgow Herald, and other papers controlled by the late Lord Northcliffe, and by his brother Lord Rothermere. Several smaller plants are also open when the Bay of Belle River at Corner Brook a vast Hydro Electric Development scheme under the Armstrong Whithurst interest is fully completed, which will in operation next fall will develop three hundred thousand horsepower and will produce 400 tons of newsprint daily.

An Imperial Oil station is situated at Curling, three miles from the paper mill at Corner Brook, and the energetic Agent, Mr. Edward Barry, may be congratulated in point of plant on the grounds for the various construction contractors over their fuel and lubricating difficulties. Of such value has he and the service been that Imperial Oil, Limited, is now supplying all the oil used in this vast development scheme, which is employing upwards of six thousand men. A somewhat similar scheme is in contemplation on the Gander River, and it is expected that construction work will begin early next year.

The mineral possibilities of the Dominion have also attracted considerable attention of recent years. In fact it is the output of iron ore from Bell Island in Conception Bay which has made the world's news of Boes for the Sydney, N. S., and a previous to the war vast

**Discharging an Oil Tanker**

By E. C. HINNS, Halifax Refinery

If the reader does not work in the Marine Department of a Refinery dock, he has likely never had occasion to be interested in oil tankers and the handling of their cargo. The Marine Department at the Halifax Refinery issues a "Dock Movements Sheet" on which are posted the latest wireless positions of every vessel in the Imperial Oil, Limited Fleet. These movements sheets are placed in the hands of the dock officials at discharging ports, and are supplemented by letters and wires from the Marine Department. On the radio set itself a radio is received a few hours previous to arrival at discharge port to give the shore authorities ample time in which to prepare for the reception of cargo.

On arrival in Halifax harbor with the pilot who has been picked out at the sea buoy, the Port Doctor generally boards with our shore

**Captain Findlay.**

**Anchor is seldom dropped in the stream to inspect. Officers and crew give the necessary papers and the boat is permitted to continue towards the dock.**

The customs officer is always at the dock awaiting the arrival of the tanker, which he boards.

O n the arrival of the ship at the wharf, the dock force is waiting to take the lines and secure the boat, and immediately thereafter the oil hose from the dock is hoisted into position on board the tanker, and connected up by the dockmen. In the gauge has had his shore tanks gauged and temperature taken, and while the hose has been hoisted up and connected to the tanker he is taking the ullage of the tanks on board.

The record is kept of the time she docked, and again when she is connected up, and again when the pumps are started to deliver the cargo ashore. The dock crew is always desirous to have the pumps begin delivering the cargo as fast as the line is empty. When the recording thermometers begin to register and others to registers, he begins to register the pressure and temperature of the crude oil

**The Crappy Harbor of St. John's**

bouy of the ship's pumps, the dock officer proceeds to the foreman on the dock the condition of the lines and valves. This line-walker also gauges the tank once every two hours, and when the tank begins to fill up he gauges as often as necessary. The pumpman on the boat as a rule is always anxious to make a record and he keeps in touch with the foreman on the dock as to the amount he is delivering per hour. The tide runs in and out, shifting the position of the season is continually on the alert, making adjustments of hose and valves as required. According to the capacity of the boat, the amount discharged per hour varies, and if there is any delay in the delivery of the scheduled number of barrels per hour the ship is supposed to do, and should the delay be caused by any mishap from the dock or storage tank, demurrage is charged by the ship. It is on record that the "Vestal" and "Vestalite" and discharged through the lines to the shore tanks.

The good ship "Vestalite" discharging a cargo of Paracan Oil at the Refinery Wharf.

have discharged their cargo of from 107,000 to 110,000 barrels in 17 hours, from the time of starting to discharge until final discharge--about 6,500 barrels an hour.

From the moment an oil tanker passes the sea buoy inward bound, until she docks again in this remarkably short time, the refinery dock and the ship itself are kept up to the liquid cargo is pouring from her tanks, preparations for the next voyage are carried out with utmost speed.

Bunker fuel oil is loaded; stores and provisions are taken aboard sufficient to last thirty, sixty, and sometimes more days. Between one and five hundred tons of fresh water must be secured for boilers and drinking purposes. Necessary repairs have to be effected new crew signed on, and government requirements for clearances and customs papers fulfilled. Seventy hours to carry out the same routine for which a general cargo ship might have a week or two does not, as you may imagine, allow for much repose.
Coal Mining in Nova Scotia

By F. W. Gray, M. Inst. M. E., M. E. I. C., M. C. I. M. & M.

Mr. Gray, associated with the British Empire Steel Corporation, Limited, deals conclusively with the coal situation in Nova Scotia. Apart from the three colonies where the coal is mixed with bituminous coal and is noted below as the natural coal and the bituminous coal, it is interesting to know that Nova Scotia Corporation can produce annually over four thousand barrels of bituminous coal and gives rise to its mines and plants in Nova Scotia.

Coal mining in Nova Scotia has two distinct advantages over other large-scale mining of coal in North America. It is not in Nova Scotia that there has been a coal plant since the sixteenth century. Coal is being dug in the Canadian coals of the sea under a considerable depth of water and is in Nova Scotia that there are coal fields under a great depth of water.

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Moncton's Famous Tidal Bore

The tides of the Bay of Fundy are well known and their mysterious currents bring many a sightseer to the Province. One of the chief attractions is the bore at Moncton. It can be better described as an incoming wall of water, often two or five feet high, on the Petitcodiac, a tidal river. It can be seen to advantage from Hide View Square and the wharves adjacent. After it makes the turn in the bend of the river it forms completely and rushes past as one big wave, so that it takes eighteen miles per hour. It is a present a wonderful spectacle of the force of nature at play. The water sparkles in silvery splendor; it is particularly fascinating, and not only visitors but Monctonians as well flock to the waterfront to witness this tidal phenomenon.

Its counterpart is found in China on the Yangtze, where the tides are known as the Twang-Tiang Kiang. The rise and fall of the tide at Moncton is twenty-seven feet, but near the head of the Minas Basin an extreme range of fifty-three feet is found. Red mud is exposed at low tide and all that is left of the Petitcodiac River is a small stream trickling down its bed. The Bore is truly a wonderful and interesting sight. In fact, it is a sight that is the present by Hydro engineers with a view to harnessing this potential water power to the advantage of industry in N.B.

A Picnic by the Ocean

Not many of us can have the privilege of packing a basket and ambling down to the ocean beach for an afternoon’s outing. The staff of Halifax Sales Division did that very thing one day last July. The young ladies in the picture prove by their very evident concentration upon the fare that was spread before them that the ocean air has a peculiar charm.

Reversing Falls at St. John

Draw a mind picture of a narrow, winding, high walled gorge (at one point less than 500 feet wide), where in your setting for the Reversing Falls, through which the waters of the St. John River pass, after a 400 mile journey. At low tide, a depth of 1 foot and, at high tide, a depth of 175 feet. The fall at low tide is about 15 feet lower than the river above the gorge, and at high tide, of course, the fall is the same. The river returns it moves up the gorge, overcoming the river current and causes a fall in the opposite direction. As the river is smooth and vessels large and small, can go through in safety. This phenomenon, found nowhere else in the world, is due to the great range of tides in the Bay of Fundy, there being a rise of 28 feet at St. John. To really appreciate this wonder it must be seen in its three phases; when it runs down river, when it runs up river, and when the tides are setting from its seeming reversibility of nature's laws.
Midwinter Problems
During the Bleak Winter Months a Man's Job at our Refinery on the North Atlantic Seaboard is not a Bed of Roses.

DUE to its location, midwinter problems at the Halifax Refinery are more aggravating than in most refineries. In direct contrast with the blazing tropical sun or warm torrential rains under which our fellow-workers carry on in Peru and Colombia, the refinery men at Halifax have to combat high wind storms and snowy blizzards in which the thermometer is way down out of sight.

It is a big problem to remove the drifts of snow which accumulate around the plant on those occasions. Day or night when a snow storm sweeps over the property, horse drawn snow ploughs are put to work to keep the main thoroughfares through the grounds passable as a contingency against fire when the hose carts would be urgently needed at almost any point.

It is unusual to see the Main Separator, through which all the water passes before reaching the Harbor, so covered with snow that no water is in sight. There has been ten inches of ice in the Harbor close up to the dock allowing employees to walk on the Harbor for at least a mile. Boats coming into the refinery dock during this season are as a rule heavily coated with ice, and between the dock being covered with snow and ice, and the pipeline connections of the year. Any project involving ground digging is practically out of question.

Steam costs, as may be imagined, run appreciably higher in the winter time.

Boats must be kept out of the lines and prepared from accumulating in the tanks. Frozen water in the bottom of a tank or in a pumping line is a troublesome inconvenience at the least, and frequently it develops into something serious.

Another source of annoyance is the oil lines used with staticic tools which, despite precautions that would do credit to a Swede, will freeze up. Steam costs, as may be imagined, run appreciably higher in the winter time.

In the summer of 1924, with the oil business on the down side, the company decided to use a ten-ton crane. This was a big step, and although it was not a cure-all, it was a great help.

Rest While You Rest
Don't take your business anxieties to bed with you. When you lie down to rest, let your business rest also. You cannot master the business of that day which follows a night of restless worry.

Midwinter is a time when there is light enough to see by, and if you are content with the business of the night before, you may have a good night's rest. You may have to get up early the following day than you have been a long night of sleep.

Let your day be your memory over night; leave your business worries there; don't take them to bed.

Newfoundland
(Continued from page 10)

Newfoundland particularly on the Labrador where they are only as far from six to seven hundred miles from their home ports. This coupled with other features, such as the shortness of the season, and the lack of communication, make the question of supplies quite a serious one.

During the last fifteen years since the introduction of the small internal combustion motor, the consumption of kerosene and gasoline has increased in leaps and bounds. Previous to 1916 this the Oil Trade was an unimportant side line, but since that time the ship carrying a few tons of fuel, the supply has increased in proportion. With bulk storage facilities and an assurance of an ample supply of fuel, the supply has increased in proportion. With bulk storage facilities and an assurance of an ample supply of fuel, the supply has increased in proportion.

In the winter of 1924, the company decided to use a ten-ton crane. This was a big step, and although it was not a cure-all, it was a great help.

The Non-Producer
By G. H. GABLER, Sarnia, Ont.

One often hears the remark that office workers are non-producers. The statement has been made so often that it has become accepted as a fact. It is well to note that an office does more than perform its work; it does that, but it does more. It performs most real, actual, original work such as improving pricing, extending, billing and shipping orders, which result in correspondence, dispatching, copying, filing, handling, distributing mail, as well as the necessary bookkeeping to see that the goods are charged to the customer and the funds to carry on the business are received according to terms of sale.

How well all of the duties are performed depends almost entirely on the system adopted. A good system is always being strengthened by improvements here and there. A poor system is probably worse than none, for the reason you think you have some sort of system, while as a matter of fact what you have is worse than nothing, as it degrades you in your thoughts as to what you have.

In a well regulated office each clerk has special duties which duties fit in a well thought out schedule, all of which leads to the maximum of efficiency and the minimum loss of personal results of goods well made, well sold, satisfied customers, and cash in the till.

A Great Day for Selling
GEORGE HENRY LOSKIEL, in his book on Selling, said of the Indians published in 1789, noted: "One of the most favorite medicines used by the Indians is Fossil oil extracted from the earth, commonly with water. This oil is of a brown color and smells like tar. They use it chiefly in external complaints. Some take it inwardly and it has not been found to do harm. It will burn in a lamp. The Indians sometimes sell it to the white people at four guineas a quart." That would be about $3.111 for a barrel of crude selling 30-to-day around $1.
found Halifax a first place owing to its many natural advantages and its unrivalled harbour, and today it is the chief Atlantic seaport of Canada. It can be entered by the largest ships at any time of the year, day or night.

Since the hanging of the Cornwalls, May 1788, Admiral Rooke unwound out of the harbour with a fleet of 137 vessels, to lay siege on Louisburg. During the American Revolution, troops and warships crowned the streets and harbor of Halifax, and again in 1815 the harbor was the centre of Naval activities, and it was that harbor that the British ship "Shannon" towed the American warship "Chesapeake" as a prize of war.

The harbor proper has an area of ten square miles and an average width of about one and a quarter miles, with about twenty-three miles of deep water anchorage—some five and a half miles of which are along the business waterfront of the city.

Halifax has a population of 65,000. Its Provincial Building, built in 1811, is a veritable treasure house of historic interest and artistic merit. The Government House, official residence of the Lieut. Governor of the Province, for a long time was considered the finest residence.

There is probably no city in its size in the continent of North America which maintains so large a number of institutions, both educational and charitable, as does Halifax.

The Public Gardens and North West Arm are unrivalled in beauty by anything of a similar nature in any city in North America. At Improy, on the eastern shore of Halifax Harbor, is situated Imperial Oil Refinery, one of the most up-to-date Refineries in the world today.
The Petroleum Age

JOHN CABOT has long since gone. The ships, the trappings, and the customs of his time have disappeared with him. The sun of an era in which the strength of man was measured by the breadth of his chest and the steel in his arm, has dropped below a westering horizon. Up from the east and into the celestial loft of Industry the superseding sun of a Machinery Age ascends toward a zenith as yet remote and undetermined by the mind of man.

And the Machinery Age is the Petroleum Age too. The hardy fisher folk who have been spawned upon the shores of our Maritimes can testify to that. They have seen the slow transition from creaking oarlock and screeching tackle to the synchronizing chug of oil-powered motor boats. Today, if oil unexpectedly failed the fishermen of the Grand Banks and Maritime waters, either in quantity or quality, their industry would be paralysed.

But it will not fail. Day in and day out seven thousand men and women in the Imperial Oil organization are laboring for insurance against any such deficiency, and the Halifax Refinery of Imperial Oil, Limited, is sending its products in augmenting quantities into the most remote coves on Canada’s Atlantic seaboard.

The most eloquent and practical testimony to the satisfaction and efficiency of Imperial Oil can be observed from the wharf of any coastal village, when in the half light of approaching dawn, the fishing fleet casts off and points seaward for another stern day’s work, a work wherein the inflexible law of the sea to survive or perish demands an oil that can be relied upon—every drop!