Headquarters of Imperial Oil, Limited, at the Canadian National Exhibition. Here thirsty visitors may refresh themselves with a drink of cool spring water. The building was unusually gay this year, being decorated in celebration of the new Imperial Three Star gasoline, which was introduced in Ontario at the beginning of September.

WE ARE able to write this article without splashing the paper with tears. While a year is a year and approximately a fortieth, fiftieth or sixtieth part of our lifetime, as will be determined in the future, the year 1931 was on the whole one of the kind of years we like to see pass and are not exceedingly anxious to recall. In many respects it made its deceased predecessor look like a good fellow. It heaped up troubles and difficulties of many kinds. As far as our particular industry was concerned, it could scarcely have been more unkind. Surplus stocks of oil continued to be accumulated in the United States. Foreign refineries continued to unload finished products at insolvency prices. The spread between crude and finished products here in Canada contracted almost to the vanishing point. The Company worked on the narrowest margin in its history. Notwithstanding the fact that gasoline for a great part of the year was selling at many points for the same price that it brought away back in the dim days of 1930, it was a product of relatively little importance; notwithstanding the fact that it was one of the most precipitate of commodities in skidding towards lower price levels, the cry against "excessive gasoline prices" was raised here and there, and towards the end of the year talk became current in some legislative circles of increasing the gasoline tax which, because it is the easiest of all taxes to collect, seems to be regarded as logically the heaviest of all taxes to impose.

So this was 1931. But on reflection it was not the worst possible kind of a year for the Imperial Oil family. By virtue of careful economies, the Company was able to carry on without important curtailment of expenditure in Canada or reduction of payrolls. Through the year it enjoyed loyal and enthusiastic support from that great body of men and women who are its employees. The spirit of camaraderie built up by these trials and tribulations will launch us hopefully into the sea of next year's affairs. We hope that the waves won't run so high nor the winds blow so hard; but whatever happens, the ship is sound and well-trimmed and will make port with a contented and undaunted crew.
All these preposterous ideas are just the outcome of a temporary delusion; the industrial world is not out of joint. For a man with a broken leg, walking is as necessary as it is injurious. But for such a man to forget forever the use of legs, would be worse still.

Yet that is exactly what the world is doing in its present, antipathy, anti-immigration, anti-work, anti-trust, anti-gold policy.

Now, with us in Canada the pain of dislocation is sharp. Our prosperity and advance of the last three decades, both before and after the war, was of a peculiar kind. It was very different from the steady and continuous forward movement of pioneer time, whose every farm was an almost self-sufficient unit, when every added settler was an addition to wealth, when two and two made four. With the newer epoch certain great extractive industries rushed forward out of their national proportion—sodium, wheat, paper, nickel, gold, uranium—and in them a huge outline apparatus of transport, whose principal meaning lay in the future.

It was a vast forward moving machine which could not slacken or stop. For the time being the profit seemed phenomenal; two and two no longer made four, but about forty.

We did not see that with all this there should have been built up an orderly mechanism of sale and disposal. We thought only of production and took sale and consumption for granted. Thus we found ourselves, like the political candidates, "in the hands of our friend." When they let go of us we fell. There we lie humbly, dejected and despondent, fallen off Wall Street.

Now, the first thing for us in Canada to realize is that after all, as yet there is no very great harm done. Luckily for us, as far as our economic basis goes, we are a people with a vast heritage, enormous assets, boundless natural wealth, most of it still intact and untouched.

National prosperity in the long run does not depend on stock exchanges and margins and market prices. There are only images reflected in the mirror of exchange. National wealth is based on the land, the resources and the character and the temper of the people. We must remind ourselves that Canada is three thousand miles broad, and is about as big as all Europe—where live over four hundred and fifty million people; that we are ready to raise a billion bushels of wheat, and as much as anyone will come here and eat it, that we are lifting out about fifty million dollars of gold every year; that we possess over 500,000 square miles of forest, either ready to cut or growing with readiness, water power to represent a potential turbine output of $3,000,000,000 horsepower—and so on all along the line.

In other words, all our present dislocation and distress is only a transitory phenomenon, a phase, a zigzag in our industrial ascent. If we are "over-developed," in a temporary transient sense, we are away "under-developed," in the real sense. Our little 40,000 miles of railway track is nothing to what we are going to have. We are not really over-developed, or over-tracked or overbuilt at all. Sooner or later, and not so much later either, we shall need more tracks and more buildings; our Royal Yorks will need presently another ten stories and our Chateau Lauriers another ten bedrooms. Nothing is wrong as yet. Let us not worry.

But now, protest the practical person, possessing all this, admittedly, what do we get to do straight? How do we bring back the good times? How do we start the tickler again?

The answer is that to get back to good times there are two or three things that we can do, of which the first is the easiest. It is simply to sit tight, without worry, with perfect confidence. As far as economic knowledge goes, that is, as far as the blind can lead the blind, we may say that depression somehow, even if painfully, cures itself. OUR INDUSTRIAL SYSTEM, so it appears from the two thousand years of its history, always BENDS—BUT DOESN'T BREAK, CLEARS BUT DOESN'T CRACK, STAGGERS BUT NEVER STOPS. In nature a broken limb heals itself; a mutilated lobster grows a new claw; organic nature always works out its own salvation.

So it is that in economic life there is a self-adjustive process, painful but certain.

This, one may say, is mere economic philosophy, interesting but of no particular immediate bearing. That is wrong. It has a very direct immediate bearing. We need a wide application of confidence and assurance to keep our people from imagining that our whole system of private ownership has got to be scrapped; that our independence, our common inheritance, the right to our own ways, our own brains, our own sayings, has got to be abolished in favor of some vague dream of associated brotherhood.

In our world today is an imaginary country called Utopia. In this an imaginary group of noble fellows, with unpronounceable names direct the labors of a band of brothers, it is a land where overproduction is unknown, and the payment of money has vanished; where industrial cases—a Stalingrad, a Chathalina, an Urdu-Aegean, rise triumphant in the Siberian steppes. But so great has grown the power of this myth that when a silly old man the other day said 'Bovles' over the rails, half a continent shivered with apprehension.

The real truth is that of a vast country, half raw, half civilized, a country of shabby villages and mean streets, with museums, the colons of an ash barrel, waiting, in long lines for their bread; where an organized group of beggars—beneath the circumstances, and there among them an idealist with a vision—impose their will upon the world, the people must have forgotten that we have never known anything better than the rule of Zhang Khon or Iran the Turkie, or the iron government of the Romanoffs. In such a land overproduction is unknown because there is never enough to eat, and unemployment is as sure as it is in the penitentiary.

The new Russian industrial cities are a wonderful tribute to the genius of the Americans who built them. They are a wonder just as long as the Americans run them. In a hundred years the Americans could do great things with Russia.

We can do a great deal. First, we can do our share to help correct some of the general dislocation of the world which is acting upon us as upon all others. A large part of this is due to the disastrous arrangements made after the war at Versailles. The economic basis of that treaty turned upon the payment of " reparations— not to be paid in goods or ships or money, but rather to be taken and imposed. To all this theory that all borrowing foreign money is good and that the selling of a bad made this arrangement look like the very quintessence of prosperity—like living on the foreigner. As a result, the greatest industrial nation of the world is taking in gold, gold, gold. It will eat up. It will exhaust and thus take in more gold and still more. But it will not buy. There it sits like King Midas of the Golden Touch, its lower halters only.

If all the nations of the world cancelled all the reparations payments tomorrow, there would be a leap upward in industrial prosperity like the setting free of a spring. Someone must begin. Let it be us. The Government of Russia now owes Canada twenty-five million dollars. As we number ten million in Canada there must be a Russianman who owes me two dollars and fifty cents. Let him keep it.

But we can do more than this. As an immediate measure, which we can do without international or
IMPERIAL OIL REVIEW

Inter-imperial discussion, we can go ahead promptly and confidently with every public development of our natural resources, that is bound sooner or later to bring in a reproductive return. The return should be one as early as possible, but if not early, better late than never. We can do this with Government action and we can do it with corporate action of subsidized and privileged chartered companies. Both ways are good if done honestly. Both are bad if done dishonestly. But we have at least found some lessons that make for public honesty; and there is room yet in the sunnier side of our penitentiaries. The key to prosperity, for a country with real assets, is the saving of money with one hand and the spending of it with the other. We need to save the public money, with the parsimony of a Gladstone and to spend it with the foresight of a Cecil Rhodes.

* * * * *

Internationally, also, we can start something. If it is really true that the St. Lawrence leads to Chicago, and that Toronto is a seaport, and if it is true that (Daniel Webster being dead) no American will ever get ahead of us again, then the project of the great waterway alone will keep us all working and busy for years. But we must do it right. It won't do to spend a lot of money to empty salt into the Great Lakes to make it a seaway.

But the best of all is the last. We must get busy to try to co-ordinate our production to our selling, so that we not only grow wheat, but find someone to eat it. Here our main immediate reliance is upon Great Britain and the Empire. There is already coming into existence, shadowy and undefined, a new idea of international trade, calculated to supply a market in anticipation of production, and thus guard against dislocation such as now impedes us. This is the method of international selling in huge quants or blocks of goods, as when huge quantities of wheat sold are offset by wheat bought. The wheat is sold before it is planted, the coal before it is mined.

In principle such schemes are as simple as when a dweller in the city contracts with a country farmer for eggs, which the farmer—speaking as an economist—has not yet laid. The schemes suggested hitherto were not practical because not wide enough. Canada cannot buy British manufactures to the detriment of our own factories. But Canada can buy and has to buy enormous quantities of tobacco, coffee, rubber, oil, fruits, a multitude of purchasing power at present given without a quid pro quo. If we can make, with and through English co-operation, inter-Empire arrangements of a three-cornered, or even multiple, character, then the sale of Canadian wheat in England balances, for example, the purchase of raw cotton, tobacco and various fruits from markets open in turn to English manufactures. In this new inter-Empire block sale method rests a marvellous power for British union and British welfare.

Put together what has been said and it amounts to this: We need an assured confidence in our own country and our way of living; an intense and challenging public opinion as to public honesty; expenditure on any and every reproductive enterprise that develops our resources for an assured return; corporate enterprise, rewarded liberally for success; bigger and better penitentiaries; unite the St. Lawrence with Chicago and, if need be, with Omaha and Salt Lake City: join with England in a big scheme of inter-Empire guaranteed trade; cut our reparations; give the Roumanians two-fifty each: kiss the Russians good-bye: as soon as we can, let in the immigrants again: bring in brains, and money and capital: be just as anxious to buy as to sell: straighten up the currency so that it will do both equally well.

Do all this and in less than no time values will rise and the ticker will be clicking away merrily again, the hotel full, the sleeping cars crowded, the theatres jammed, motor cars parked—in short, the glad old life all back again.

Stephen Leacock.

THE TRANSFORMATION OF THE TEST HOUSE

By Dr. J. L. Huggett, of the Technical Research Staff, Imperial Oil Refineries, Limited.

About eighteen months ago, Imperial Oil Refineries, Limited, opened at Parmia a new building to accommodate its large equipment and staff for research and control of all products marketed by Imperial Oil. The contract involved an investment of about $100,000. In this building those particular functions performed by that class of people often considered peculiar and known as chemists, are carried on with the aid of the latest mechanical equipment and a staff of capable assistants. The name "laboratory" adorns the main entrance, enhancing the dignity of the building in the minds of its occupants who have become accustomed to the appellation "test house," a name that has long since ceased to describe adequately the work done there.

The importance of this branch of the organization, together with the rapid developments following the comparatively recent advancement of the petroleum industry to a scientific art, necessitated its division into two distinct departments, the inspection department and the technical and research division. Although the description of the duties of these two departments will be given separately, the reader should bear in mind that they work in close co-operation.

The inspection department, sometimes referred to as the routine department, under Mr. Gordon McIntyre, chief chemist, sees that the products of current manufacture meet the very carefully established specifications. This department maintains a staff of seven chemists, the total personnel being between fifty and sixty.

It is the work of the technical and research division, directed by Dr. R. K. Scratch, chief research chemist, to develop improved products in keeping with automotive and industrial progress and to increase the efficiency of the various refineries as far as problems involving chemistry are concerned. Dr. Scratch is assisted by a staff of about twenty-five, including seven chemists.

THE INSPECTION DEPARTMENT

This department occupies one floor of the building and controls the auxiliary laboratory at Plant No. 2, the asphalt plant control laboratory, and the knock- rating room.

For the purpose of description, the work carried on in this department will be divided into two general categories—chemical and physical. The latter term refers to inspections such as gravity and viscosity,
which properties are of a physical nature, while the term "chemical" will be used to cover inspections involving the use of chemical re-agents or will imply chemical changes in the products themselves.

**Chemical Laboratory**

All the inspections of Imperial Oil products and incoming raw materials which require the use of chemicals are carried out in this department. Raw materials such as animal and vegetable oils, fats, fatty acids, and waxes must meet rigid specifications to ensure the maintenance of the high quality of Imperial Oil greases and compounded oils. Shipments of caustic soda and lime are carefully analyzed to be certain that the minimum specification on inert and abrasive material is not exceeded, thus avoiding the presence of undesirable impurities in the greases.

Analyses of petroleum oils are made to determine the percentage of inorganic and organic acidity. The former term refers to mineral acids such as sulphuric acid. These acids are highly undesirable in petroleum oils on account of their tendency for metals. Their presence would indicate faulty refining methods. Inorganic acidity is reduced to nil in Imperial Oil products by recourse to neutralizing with alkanes or absorption by clay. Organic acids are much less active than inorganic as regards metals. Imperial Oil specifications permit only an extremely low percentage of this type of acid.

Experimental vacuum still and small crude still.

The chemical department is responsible for all determinations of an analytical nature, such as sulphur and British thermal unit values of gas, coal, coke, fuel oil, etc. The latter determination is a measure of the heat available in calories per pound of material.

The more involved physical inspections, such as the demulsibility of oils destined to be used in contact with steam, and those involving chemical changes in the oil, such as oxidation and sludging, are carried out in this laboratory.

**Physical Laboratory**

It has been found convenient to divide the work involving inspection of a physical nature into four departments: white products, lubricating and fuel oils, asphalt, and miscellaneous.

The principal duty of these four laboratories is to prevent shipment of products which do not meet the specifications. Following the axiom that "prevention is better than cure," the standard of the final product is practically assured by the maintenance of a rigid inspection commencing with the crude oil and followed by a close scrutiny of each intermediate operation.

The white products laboratory is concerned mainly with inspections on water-white products, which include unfinished and finished, gasoline, solvent naphtha, and illuminating oils. The principal inspections applied to these products are gravity, flash, viscosity, colour, test, vapor pressure and distillation. Each test has a significance but one must remember that the criterion of gas, coal, coke, the judicious selection of properties which can only be done in a well-equipped laboratory. From time to time tests are made to ascertain as this they lose their significance. The doctor test mentioned above is applied to products that have been treated with "doctor solution" for the purpose of rendering a noxious nauseous gas, for example, sweet smelling.

Samples pour into this department from a great many plant sources and the deluge is augmented by samples from the other Imperial Oil Refineries.

Besides seeing that the shipments meet specifications, the principal duties of these laboratories are to judge the still-runners, inspect the still streams and rundown tanks to avoid contamination of the storage tanks. Every precaution is taken to ensure uniform and high grade products.

The following description of the inspections made in the course of the production of solvent naphtha tells the story of routine control.

The gravity is determined on hourly samples from the crude line from oil fields, and additional inspections such as viscosity, sulphur, stock distillation and four point control, are made on composite samples. The latter determination indicates the yield of solvent naphtha that should be obtained. The continuous still or flash coil operator makes gravity determinations to control the light naphtha fraction distilling from the crude. This crude naphtha flows to the rundown tank on which gravity, distillation, colour and corrosion inspections are made daily.

The operator of the continuous naphtha treating plant charges his equipment from the rundown tank and doctor treats the naphtha, testing it periodically to be sure that no oil flows to the treated naphtha tank that is not sweet in odour. The laboratory makes its inspections on the latter tank whenever it is pumped.

The steam still operator then charges the streams from this tank and the laboratory inspects the stream coming overhead from these stills each shift, or more often if requested by the operator. The finished product is run to a storage tank on which complete inspections are made. Whenever barrel house filling tanks are pumped into or tank cars loaded, complete inspections are again made to ensure that the product meets specifications before shipping.

The same close scrutiny is maintained over all products. A conservative estimate is that at least 150,000 inspections are made annually in this department.

The lubricating and fuel oil laboratory controls the operations concerning lubricating distillates and finished oils, cracking stock and fuel oils. The same careful control is exercised here.

Many of the inspections made in this laboratory are similar to those made on white products but of course have a different significance in the case of heavy oils. Although these tests are rigidly carried on in accordance with the long-established standard methods of the American Society for Testing Materials, their significance has become greatly increased during the last few years, thanks mainly to the cooperation obtained from actual service tests, carried out by research organizations, motor manufacturers, oil companies and different governments. Approximately the same number of inspections are made annually in this laboratory as in the white products laboratory.

The asphalt laboratory is housed in the main building and handles all reports from the plant laboratory.
The Gasoline Tax

NOT the least of the petroleum industry's achievements is that of having evolved taxation schemes to new heights—heights undreamed of by the deficit-harassed legislator of only a few years ago. We may squint at paying forty mills on a part of our incomes or thirty mills on the assessment of our real properties, or five per cent. sales tax, or ten cents on a cheque, but we pay twenty per cent. on our gasoline purchases and do not write to the papers or say that there should be a law against it.

Such have been the seductive villains of the tax regulating authorities in our provincial government that it has all come about without any fuss or feathers and every time the Provincial Treasurer has an inquiry from the bank about an overdraft the impulse is to clip something more or less on the gasoline tax. Why not? The gasoline tax is easy to collect and any one person in a thousand keeps an account of it; it costs him directly and probably no one knows the indirect cost. It isn’t like a tax on property. You have the property and when the schedule of taxation is revised you can figure out right away what the revised rates will mean to you during any period of time. It isn’t like the succession duty. You can determine how much it will be in your heirs, if you are so fortunate as to have an estate and heirs. It isn’t even like the amusement tax—which by the way only amounts to two per cent., instead of twenty per cent. as does the gasoline tax. You can reduce the amusement tax by buying a cheaper ticket, or for that matter you don’t have to go to the show at all. With the gasoline tax you do not know how much you are going to pay and as already said you rarely know how much you have paid. If you want enlightenment in the latter connection you can easily have it by keeping a record of your gasoline purchases for a few months, and multiplying the total number of gallons by five cents. The result may open your eyes. The gasoline tax is a sort of "if as, and when" tax and so few of us take it seriously into account. Irresistible optimists, we always feel there will be no "when" as far as tax collection goes. When we pay it most of us do not realize that it is a tax, but we say to ourselves that the price of gasoline is pretty high and in these hard times we will have to see if we can’t use the car a little less.

Proponents of easily and cheaply collected taxes are talking about increasing the gasoline tax. They need the revenue, but that isn’t the only reason for increasing the gasoline tax. The plain and simple reason is because the gasoline tax has been in the past such a fruitful source of revenue and because it has been so easy to collect. But they may be making a mistake if they credit the motorist with all the patience of Job. If the motorist’s shoulders were as broad as these proponents of increased gasoline taxes seem to think, no highway would be wide enough for him to walk on.

We venture the prophecy that further increases in the gasoline tax will defeat its own ends. We believe that the tax of five cents a gallon is all that gasoline can bear. We think that further increases will result in reduced consumption, and, of course, a heavier tax on fewer gallons will produce no more revenue than a lighter tax on a large number of gallons. We think, too, that there will be an increase in the gasoline tax if it is increased. There is evasion now with the five cent tax and there will be much more incentive to evade with a six or seven cent tax. Then, too, evasion is most easily practiced by the vendor of foreign gasoline and so a hardship will be worked on the Canadian refiner. The Canadian refiner reports on his business to the provincial tax collector, but who is to report on purchases by an importer in a foreign country?

It is often stated that the gasoline tax is the most equitable tax because it makes the motorist pay for the roads according to the use he makes of them. That seems to be true, but it is only the man who rolls along the highway in a car or truck who benefits by the roads. What about the property owner whose land appreciates in value because of the road; the storekeeper who draws customers from a large area because of the roads; the farmer who finds a larger and more profitable market for his produce because of the roads? It is not the motorist alone who benefits by the roads. Everyone benefits and all should be required to pay a portion of the benefits derived. That the motorist should foot the entire bill is wrong.

It seems to be the experience of those few states of the Union which have tried a tax of more than five cents a gallon that the difficulties of collection increase very greatly and that the incentive to evasion is so strong that a large number of people cannot resist it. We may expect as much in Canada if the gasoline tax is further increased.
CELEBRATED CANADIANS IN CARICATURE

AN OLD fashioned sporting print of a modern sporting gentleman is the title given by caricaturist McLaren to the above attack on the genial features of R. S. McLaughlin, president of General Motors of Canada, Limited, and vice-president of the General Motors Corporation. It is whispered among Mr. McLaughlin's friends that he is still trying to breed horses that will be as fast as the horseless carriages his company makes. Whatever rumor may say, he is one of the most ardent horsemen in Canada. His love for horses may be ascribed to the fact that for ten or twelve years he devoted himself to the design of sleghts and carriages in the old McLaughlin Carriage Works which in the course of time became the McLaughlin Motor Car Company, and subsequently General Motors of Canada. Mr. McLaughlin has many interests and is honorary lieutenant-colonel of the Ontario County Regiment. Work and horses have been his chief hobbies.

TOURING CANADA IN THE EARLY DAYS

H owever it be, by land, or sea, or air, the love of the open road is in every heart. There are many who like their roads made smooth and easy, and go modern in a choice of ways and means. For these sylvan-soul it is the road will lead on to adventure, a smooth, comfortable kind of adventure, bound up with the luxury and guile of the ocean liner, the motor car, the perfectly appointed train and hotel. Should their choice run to higher things, the airways offer the safety and comfort of the cabin plane. All of which is not to be deplored.

And there are those of simple tastes who will "tire an 'am and see life.'", If need be, go forth afoot, with high heart and shining eye and little else - to seek in the byways of the land the well loved adventure.

But in this year of poverty, one thousand nine hundred and thirty-one, most of us must find our adventure between the covers of books and do our travelling there between pages one and five. Such adventurers will find few happier fellow-travellers than Mrs. Simeon, the wife of the first governor of Upper Canada, and no more entrancing country to explore than the Canada revealed in the pages of her diary, and whose travels in Canada antedate Imperial Oil road maps by several hundred years.

Fri. 13th - I was not disposed to leave the ship to enter so dismal a looking a town as Quebec appeared through the mist, slat and rain, but at six o'clock Lt. Talbot went ashore with me, and General Clarke's covered carriage, a small choice on runners instead of wheels, was ready to carry me to the inn in the upper town to which we ascended an immensely steep hill through streets all-built. Snow was not deep enough to enable the carriage to run smoothly, so I was terribly shaken and formed a very unpleasant idea of the town I'd come to.

Thus Mrs. Simeon tells of her landing at Quebec on November 11th, 1791. Seven months' sojourn in the town modified Mrs. Simeon's first impressions.

Sun. 4th Dec. - Mrs. Teasy, wife of the military chaplain, carried me to church in a carriage like a narrow trough, which, from its length, was much easier than those usually used, but too narrow for one who has to drive with ease, therefore seldom used.
Don with its winding valleys, its "augur-bird" plains captured their hearts. And it was on the banks of the Don that the Governor took up land for a summer home, to be called Castle Frankie River, and thus honor his son Francisco.

For, 29th (Oct. 1906): The Governor having determined to take a run of 250 acres upon the River Don for Francis, and the low oblique river having lost land to build a house upon them within a year, we went today to sit upon the spot for building the house. We went six miles by water from the Fort and started along the bay shores to the Don, and up that river, landed, climbed up an exceedingly steep hill, or rather series of sugar-bush hills, and approved of the highest spot, from whence we looked down on the tops of large trees and, seeing eagles near, I suppose they build there.

On the 9th (Nov. 29th), 1906, we went out in the canoes in case we came up on the Highlands, but it was so very cold I was glad to walk in part of the way back... I passed a spot on the peninsula where it was supposed an Indian had been buried lately. A small pile of wood was raised, a bow and arrow lay on it, and a dog-skin hung near it. Some Indians sacrificed dogs, other tribes set them ong seemingly.

But it is impossible to quote a whole diary. In her log home in the wilderness at the end of the Bloed Street Viauctu, her fellow-voyagers must leave the Governor's lady, with a sigh for the birch bark canoe, "such is used by the North-West Company to transport their goods to the Grand Portage... large enough to contain four or five passengers to sit very commodiously in the centre under the awning..."

For the marshes below the bay that Mrs. Simcoe once set fire for "amusement"... For the bonfires on the barrens that the Indians burned.... For the mud and the large parties they had with me in carriages to dine on toasted venison by a large fire on the beach below the... well, I see the negroes... delighted with the novelty of dining in the air in winter... and for that bass was Canada one hundred and forty years ago.

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The Fort and Chateau Saint Louis, Quebec.
EFFECTIVE January 1st, 1932, important revisions of the Annuities and Benefits Plan for employees of Imperial Oil, Limited, and its participating subsidiaries have come into effect. Employees throughout the Imperial organization will be advised of the changes which are summarized below.

To all employees who fulfill the age and service requirements, the company will pay retirement annuities at the rate of one per cent. per year of service of the average salary for the five years preceding retirement, with credit at the rate of two per cent. per year for active service preceding January 1st, 1932. In addition to this supplemental annuities will be paid to employees who contribute from their salaries or wages in accordance with the terms of the Plan. Participation through contribution is wholly voluntary. While the management believes that the contributory feature upon which supplemental annuities are based is profitable and desirable from the employee's standpoint, the status of no employee will be adversely affected if he decides not to contribute.

The revised basis of annuity payment is as follows:

For employees in the service on December 31, 1931, and who remain in the service until retirement, the Company will pay for each year of service prior to January 1, 1932, an annuity on the basis of two per cent. of the average annual pay during the last five years of service as under the former Plan. For all employees, as to service rendered after January 1, 1932, the Company will pay for each year of service an annuity on the basis of one per cent. of the average annual pay during the last five years of service. Employees are permitted to build this one per cent. annuity up to two per cent. by voluntary contributions of approximately one-half of the expense required, the remainder being paid by the Company.

The $800.00 minimum provided for the former plan for life annuities is retained but will apply only to that portion of the annuity wholly paid for by the Company.

**Rules for Participation**

Credits for which annuities will be paid are limited to 37 1/2 years of service in the former Plan. Employees are eligible to participate in building up supplemental annuities for themselves on or after January 1, 1932, if they have at least one year but less than 37 1/2 years of service to their credit.

Employees in the service on December 31, 1931, who then had less than one year's service, and those employed on or after January 1, 1932, upon completing 19 years of contributions will have one year or fraction thereof added to their contributory service credits without additional contributions by them, in order that they may not lose two per cent. credit for the year, or part of the year, during which they were not eligible to contribute.

Employees who are in the service on December 31, 1931, and who enter the Plan without delay get the benefit of a special contribution rate of three per cent. of their earnings. If they do not enter the Plan at once, they will become subject to the rates of contribution for employees who enter the service on or after January 1, 1932. These rates range from three and a half per cent. to five per cent. of earnings, depending upon the age at which an employee begins participation. The rate of contribution by an employee remains the same during the entire term of service unless he withdraws from the Plan, in which case, if he rejoins it again, he will pay the rate called for by his age under the rates at the time of re-entry; or unless experience and further actuarial studies show that the rates need to be either raised or lowered in order to bring them into harmony with the scale of annuity payments. If general changes of this kind are found necessary they will not be made oftener than once in five years and will not be retroactive.

Contributions will be made by deductions from the payroll upon voluntary authorization by employees.

Under the Plan, funds or reserves will be built up, one from contributions of the participating companies for the payment of Company annuities and the other from contributions made jointly by the employees and the participating companies for the payment of supplemental annuities.

**ANNUITIES AND WITHDRAWALS**

The normal age for retirement is 65 for a man and 60 for a woman and the normal service requirement is twenty years. In special circumstances, including permanent and total disability, employees with less than the normal age and service requirements may be granted regular or special annuities.

Life annuities paid for wholly by the participating companies will terminate on the death of the annuitant. The same is true of supplemental life annuities, unless an employee at the time of retirement chooses to receive that portion of the supplemental annuity provided by his own contributions in the form of a reduced supplemental refund annuity, in the latter case, if he dies before he has received, under the portion of the annuity provided by his own contributions, a sum less than his own contributions with interest accumulated to date of retirement, the difference shall be paid to his beneficiary or his estate.

An employee is permitted to withdraw from the Plan at any time prior to retirement and stop his contribution, in which case he will be paid back all he has contributed with compound interest of not less than three per cent. He will lose all contributory service credits which he had built up before withdrawal and for a period of six months will not be permitted again to contribute.

An employee who leaves the service will be paid back all the money he has contributed with compound interest at not less than three per cent. However, if at the time of leaving he has twenty or more years of contributory service he may choose between getting his money back with interest or receiving a deferred life annuity commencing at regular retirement age and based upon his own and the participating Company's contributions toward his supplemental annuity, (not the one per cent. non-contributory annuity paid for wholly by the Company). An employee who was in the service on December 31, 1931, and who later leaves the service and chooses to take the deferred annuity, will have all credited service prior to January 1, 1932, during which he was making no contributions, credited as contributory service, provided he entered the Plan on January 1, 1932, and continued his contributions without any interruptions other than authorized suspensions.

If an employee dies before becoming eligible for retirement, his contribution with compound interest at not less than three per cent. will be paid to his beneficiary or his estate.

The photograph reproduced above shows the Canadian Airways, Limited, combined seaplane base at Lac Le Jeune, Terrace, B.C. Three of their Firthchild 71 planes are flying above it. Imperial oil products are used exclusively by this concern.
IT RAINED that day, but if one always waited for the proper weather conditions... so much and a few splashes are apt to occur anywhere and any time, but a visit to an Imperial Oil refinery is an event! First of all, we were taken through the laboratory, that is a refinery in miniature. There are little furnaces and stills and bubble towers and cracking coils and all the rest of it; and any process which is carried on in the enormous structure outside is first perfected in the research department. There we saw the viscosimeter, that automatic instrument which determines the viscosity of any oil. There, too, was the mysterious needle which measures asphalt penetration. The men were absorbed in their tasks and worked with an exciting care which speaks well for the continuance of the high quality of Imperial products.

A tanker, discharging her load of crude oil, happened to be at the dock. What luck! We have a weakness for boats, and welcomed the opportunity of inspecting one of our own motor ships. One of the cylinders from her Diesel engines was being overhauled. It was a second or so before we realized that the large black barrel hanging from the tackle was a cylinder. "Is it the 60 per cent good oil?" "No, sir," remarked the engineer, grinning. In spite of her cargo, the boat was beautifully clean and her paint was bright even after the buffeting of many seas. Almost noiselessly her pumps sent the crude oil surging through the three great "lines" sprang like sea serpents across the dock and disappearing under the place where they joined the underground pipes leading to the tank field at the back of the lot, a mile or so away.

Nearby were the headers, rows of them, lengths of heavy pipe coming up through the floor of the dock, with fittings at the outer end for attaching to the loading lines. These headers are painted in various bright colors, with valves at a little distance, colored to match. They give the dock a most festive air, but the idea is not gayity but to distinguish which line carries which finished product. For instance, an Ethyl line never carries Three Star gasoline, nor is a gas oil line turned over to fuel oil.

As we passed the dock watchman's office, a terraced-bungalow was sleeping on the step in the sun (which had decided to come out for a few minutes). The dog responded very slantly to our greeting, and the watchman explained that Towzer had been fighting again; it was one of his chief diversions.

Towzer is the refinery mascot. He stood away on a tanker coming from South America and disembarked at Montreal refinery where he has established his headquarters. He can sight an incoming tanker while it is a mile or more away. Every morning the dock, he searches her more thorough than a customs officer, whether for news from home or possible rivals, no one can tell. He owns no man's master, but is impartially friendly with everyone belonging to the refinery.

"Suppose," said our guide, "we just follow the lines back to the beginning of things, the crude storage." So we trotted up the road, marveling at the number of huge round tanks, all duly numbered and identified. There seemed to be acres of them. Without the name plates, they are several hundred, each one large enough to accommodate a good-sized dwelling, its capacity being 2,940,000 Imperial gallons. Of course, there are a great many smaller storage tanks, used for mixing, temporary storage, treating, and other purposes, scattered all over the place—perhaps not exactly scattered, but every time we turned a corner, there were a couple more tanks. Each tank has both an inlet and an outlet and these are all controlled by an apparently intricate system of manifold valves at the pump houses. It seems very simple to say that if you want so many thousand gallons of crude from Tank 399 delivered to a certain still, all that is necessary is to start one of the pumps, turn a pair of little handles and the machinery will do the rest, but we got the impression that the man who turns those handles must have his wits about him. And the pumps themselves, the silent ones were like sleeping giants and those in operation had no nonsense about them, they were deadly serious. Watching them, we had the queer sensation that was to recur often that afternoon; and which is always induced by the beauty of well-designed, powerful and efficient machinery.

The crude oil is pumped first of all into what is called the crude battery. In this row of stills it is subjected to gravity and comes off in three main subdividers: gasoline, which is treated and then pumped to storage; gas oil which goes to the cracking coils; and the residue, pitch, which is delivered to the asphalt plant. One fascinating feature of this part of the refinery is the "tail room." Through this room run pipes from each of the stills in the battery and where the pipes bend there is an enlarged glass elbow, instead of a metal one. Behind each of these little glass boxes is a light, and they are provided with hinged lids so that some of the product may be taken out and tested for temperature, color and other specifications, from time to time. In this way the men are exactly informed of the progress of the run every moment of its duration. Our guide picked up a test tube, ran some of the new gasoline into it, added something out of a bottle, shook the mixture vigorously and after allowing it to settle explained that this was the test which determined how much sulphur, if any, was in the gasoline. The amount in this case was negligible. He explained all this, since he is a chemist, in chemical terms which he very kindly translated into ordinary English at our urgent request.

After seeing the gasoline safely on its way to the treating plant where it is washed and deodorized, prepared to store for market, we were taken to the cracking coils where the gas oil, or second division of the crude, is handled. The gas oil is preheated to a temperature of 900°F., and when it reaches this heat it is introduced into the cracking coils and subjected to a pressure of 800 pounds to the square inch. This strenuous treatment breaks down the original structure of the oil, yielding about 60 per cent of gasoline. Then comes the fuel oil, and when this is drawn off, the drums are found to be lined with a porous black substance known as petroleum coke. The furnaces where the gas oil is preheated are, (on the inside) a fearful and gorgeous sight. Back and forth across the ceiling run the pipes carrying a constant stream of gas oil. Two feet or less, for a moment, a blazing, white hot, the entire area of the room, and beneath this is a replica of an inferno. Openings in the thick brick walls admit the mouths of oil burners spouting flames yards long and feet wide all mingling their fiery breath. It is quite easy to imagine 90°F. as the guide pulls you away lest one of the flaming tongues curl backwards in its fierce hunger.

On our way to the asphalt plant, we visited the machine shops. The forgers with their sullen-hooded fires flaring suddenly as a gust from the bellows and casting ruddy shadows on the leather-armed blacksmiths were a challenge to our camera. But when we were almost ready to take the picture, the workmen discovered what was about to happen, and between their curiosity and stage fright we thought better of it. There are machines for cutting threads in pipes, from pencil size up to the 12-inch. The pipe end is inserted, adjusted, the man turns a switch, something revolves and, as neatly and easily as cutting butter, the job is done. Other machines turn flanges on sheet iron and others put a dangerous curve in the iron sheeting that is used for building the storage tanks.

We looked for a moment into the boiler house where steam is generated for the entire plant. The furnaces are fed on waste oil products and roar like a congregation of dragons. Man seems, at such times, a feeble custodian of the forces he puts in harness and drives with such a light and confident hand.

Then we were shown through the storage house. Piles of this, coils of that, boxes of the other, barrels of something else... a perfect labyrinth of supplies, and the stock keeper assures that if asked for anything he can find it at once without reference to his inventory to ascertain its location. He
must be the father of Pelmanism, that man. The
time office and the first aid rooms were
nest
in line. It is a point of pride with the employees to
keep the accidents as low as possible, and at the
time of our visit there had been no casualties for sixty days.
The record goes much higher than that, and the man
who is unlucky enough to be hurt, although he gets
all due sympathy, cannot escape a little resentment on
the part of his fellows for spoiling the sheet.

And then we came to the asphalt plant. We did this
on purpose first thing, at the loading platform, where
stood hundreds of barrels ready for their journey to re-
pair the country’s highways. The tank cars for delivery
on road jobs are built on the principle of a thermos
bottle so that the asphalt arrives in a liquid state, ready
for application. From there we went to the plant itself,
saw the machinery controlling the vacuum process and
the elaborate and delicate instruments in charge of
a man who, like all the others we met, takes an
intense personal interest in his work. Although the
product he handles is the dirtiest of all, his direction
is as spotless as a bride’s kitchen. One of the bubble
towers was “dead”—that is, the heat was turned off
and it was being cleaned, so we were permitted to
ascend the long iron staircase and peep into its innards.

That glimpse brought enlightenment as to why they
call them “bubble” towers, for they are full of pipes,
through which the boiling pitch continually rises and
bubbles over.

By this time the rain had stopped and the setting
sun was transforming the few remaining clouds into
banks of gorgeous color. From our pinnacle on
the bubble tower we looked over the busy scene. The
big tanker had finished unloading; two smaller tankers
were pulling out, bound for Ottawa and other ports
on the inland waters, with a cargo of white products;
a pompous little tug steamed up for a refill of bunker
fuel oil; a row of railway tank cars stood ready for a
locomotive, while from the loading rack one of the
silver and green 2,500-gallon motor tank trucks
maneuvered lightly into the roadway with more gaso-
line for Montreal’s service stations. Somewhere a
whistle blew, seemingly it was five o’clock. We
reluctantly descended the staircase. Our long-promised
visit to an Imperial refinery was over.

Colds

V
iewed from a standpoint of the present day
morbid psychology, life is but a series and succes-
sion of losses, woes, and calamities. Great as
the world’s calamities are, they are infinitesimal along-
side those physical ills to which the human flesh is
exposed. We have struggled through the summer with
its intense heat and accompanying prostrations and we
have nicely got rid of the sunburn from our back. We
have wept and sniffled our way fevered way from
June to October, and just as we are looking forward
to relief brought by the first frosts of fall, we come
crashing into an even more distressing malady—colds.

Immediately following the changeable weather
which is manifest at the autumnal equinox, this new
illness seizes us, redvers our eyes and nose and destroys
the little bit of cheerfulness that we had rescued from
the woes of summer. However, in the face of all this
dismal outlook, a ray of light appears to encourage us
to persevere in the struggle for existence, for after all,
no matter how great the calamities may be, life is still
sweet. Life is largely (though not entirely) what we
make it. If we insist in wearing blue glasses, all objects
presented to our view will be tinted with the same
color. Cheerfulness is not always an accompaniment of
health and good fortune, for we often see that those
who are the most afflicted are the most cheerful.

It is a common object to see a man, beset with health and
wealth and all else on this earth could desire, become
unhappy and dissatisfied simply because he has too
much. With colds, as with other illnesses, the best pre-
ventives is a cheerful disposition, tempered with
moderation in all things. Over-indulgence in food,
play or work, very frequently has an unfavorable
effect on the maintenance of body health. When we
stop to consider the delicate and intricate construction
of our bodies, the wonder is, not that there is so much
illness, but that there isn’t more. Take, for instance,
the ciliary passages; these are lined with a peculiar
tissue especially adapted to its purpose. This tissue
is called mucous membrane because it secretes a viscid
substance called mucus. The purpose of this mucus is
to keep the membrane in a continuous moist condition,
so that the germ-laden air passing over it has the
bacteria and other particles of matter abstracted from
it. The surface area of the nasal passages is increased
by certain box projections which serve the same
purpose as the sectional radiator which is more
efficient than a simple tank of hot water in a room, for
by this means the air entering the body becomes
warmed.

Now that the functions of the nasal passages are,
if only superficially seen, understood, one method of avoid-
ing colds becomes self-evident, that is, all respiration
should take place through the nose and not through the
mouth. It is equally important to be assured that
there is no organic disorder in the nasal passages,
such as growths, ulcerations, etc. These when
present must of course receive the indicated treatment.

Chronic infections such as diseased tonsils or sinuses
must be attended to, and similarly, physical obstruc-
tions to respirations such as adenoids, must be removed.

Apart from the local conditions, the general health
must receive reasonable attention because all the
different parts of our body are so inter-dependent that
any malfunction in one place not infrequently
manifests its effects elsewhere. As an example of this,
take the skin which serves two principal purposes in
the maintenance of health. First of all, it constantly
excretes perspiration, the evaporation of which cools the
body and is a very important factor in maintaining the
correct temperature. In addition to this, the
perspiration there are also contained certain poisons
which the body gets rid of in this manner. The skin
is richly supplied with blood vessels and contains a con-
siderable portion of the total blood in the body, conse-
quently an exposure to cold, by contracting the small
vessels in the skin, drives the blood to the more internal
parts; a condition favorable to the setting up of an
internal inflammation. This process is commonly
known as catching cold. In this process the mucous
membrane of the respiratory passages becomes
congested and affords an opportunity for the activity of
those bacteria which are always present there. Conse-
quently, the avoidance of chilling of the body is an
important factor in the prevention of colds. The skin
must be kept in a healthy condition by frequent
bathing. The friction of a rough towel aids greatly to
the toning up of the skin circulation. While this chilling
of the body surface is of great importance in a general
sense, it is equally important in a more restricted way,
such as getting the feet wet. Now it is not the fact
that the feet are wet which gives the cold, but it is
the accompanying chilling which really does the
damage. There is an old saying, "The proper place to wear
a chest protector is on the feet." The wearing of

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suitable footwear is a matter which should be given very serious consideration.

As to clothing generally, there is much argument. Men, with their criticism to the scantily-clad women of today, and expect the wonder that they are not all dead of pneumonia or typhoid. While in our temperate climate it would be most advisable to wear woolen clothing, of light weight, if necessary, on the other hand, the wearing of too heavy clothing in our over-heated boxes of today is not in the best judgment. Sufficient clothing should be ordinarily worn indoors to maintain a comfortable heat, and going outside the proper amount of heavy clothing added to adjust the body to the lower temperatures. On this account the ladies have many advocates to support them in their present day weights of clothing, in that it is every woman's ambition to wear, during the cold weather, a fur coat. This is with judgment even if it be an expensive taste. Lighter suits and heavier overcoats is the correct practice.

Another very common cause of colds today lies in the fact that our houses are kept too hot and, owing to the system of furnace heating, the air is often too dry and ventilation not properly maintained.

Another fruitful source of cold is over-indulgence in food. Many a person, after having partaken of a more than ordinarily rich and heavy dinner, awakens the following morning, with a cold and wonders why he has it. The over-eating of sugar in particular is often productive of this distressing affliction. It is, of course, needless to remark that moderation in diet and proper attention to elimination will avoid this condition.

Lack of proper sleep and sleeping in over-heated and ill-ventilated rooms will, with many people, produce the condition of respiratory infection. Proper attention to the hygiene of the mouth, which is in every case boards millions of bacteria, is essential. Morning and evening, attention with that very personal article purchased at a drug store for a nominal figure, and the rinsing of the mouth with warm water, will remove a number of bacteria by physical action alone. The addition of a suitable antiseptic such as borax will add further to the destruction of these disease-producing bacteria.

Finally, after all these hygienic precautions may have been taken and where there is no organic change in the respiratory passages, there are still a number of people who have a lesser resistance to cold-producing infections and who suffer from recurrent respiratory disease. These unfortunate can very often have the condition considerably ameliorated, and consequently in winter made more enjoyable, by the artificial building up of the necessary resistance through a series of inoculations with serum. These sera have been in use for many years and have given very great satisfaction, even though they have failed in certain cases. To people of this class this course of treatment is distinctly of value.

AGAIN it is my privilege on behalf of the Board of Directors to extend to all shareholders and employees of Imperial Oil, United and its affiliated companies, and to all other readers of the REVIEW the Season's greetings and good wishes for the coming year.

Mr. W. Boyd Irwin
President

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IMPERIAL PERSONALITIES

WHY did I leave Canada for Mexico as a young man, " said W. Boyd Irwin. "Well, in the eighties and early nineties Canada did not show many signs of prosperity. It was a country of raw products. Outside of lumber mills, agricultural implement factories and flour mills, there were few industries of importance. The upward swing did not commence until 1896. Around 1894 things were particularly bad. There had been a succession of crop failures in the west; wheat was around 46 cents a bushel. The older provinces looked upon the West as unprofitable and it was doubted whether the Canadian Pacific Railway would ever be a financial success. The young Canadians of the day could find few business openings in their own country to encourage them and so migrated by thousands to the United States.

"In Toronto at that time business was very flat; the city had not yet recovered from the great real estate boom of the 1880s. In 1894, a semi-detached, seven-roomed brick house in a good residential district could be rented for $11.00 a month. The best apartment brought $2.75 a room. I remember a restaurant opposite where the Robert Simpson Company's store stands, where 21 meal tickets could be bought for $2.50."

So, after serving six years in the General Freight Department of the Canadian Pacific Railway at Toronto, young Irwin left in 1896 for Mexico City. Its population was 400,000 while that of Toronto was only 270,000, and there seemed to be more scope for his ambition. For two years he was with the Warden Pierce Oil Company, under A. P. Coombe, who retired a few years ago from the presidency of one of the largest oil companies in the United States.

In 1899, he transferred his services to the Bank of London and Mexico in the same city. Many are the tales he tells of life in that romantic country where courtesies came before business. He was a man calling at the bank to make a deposit or requiring a loan, required solicitude after the health of one's whole family, even to that of the cat. Mr. Irwin rented a home with a beautiful garden surrounded by a wall covered with roses and passion flowers, the property of one of the priests. The tax on the lease amounted to $2.78 and was shown on the document by a long row of variously colored stamps.

Only two classes in Mexico were clean shaven, the priests and the bullfighters. Consequently, when Mr. Irwin returned from a trip to Canada minus the dark beard which had given him the look of a Spaniard, he was greeted by his landlord, the priest, as a brother in the church. The worthy curé, apprised of his error, apologized and added, "but, Senor, what an improvement!"

This clerical appearance led to many embarrassing moments, when devout women and children stopped him in the streets and asked for his blessing. Mumbling a few words, supposedly a benediction, he graciously allowed them to kiss his hand and hurried on.

Then there was the "Death Club" organized by the high-heeled young "gropers" who chose as president one of their members most likely to die first, either by drinking, or from susceptibility to climatic or other conditions. Mr. Irwin, by the way, never became president.

In 1903, his health necessitated a return to Canada and he became a salesman with the Queen City Oil Company, under Mr. A. S. Rogers, who is now a member of the Imperial Oil Board.

Mr. Irwin's Mexican experience stood him in good stead in his new job. His ability as a salesman, coupled with the natural poise and courtesy which his southern experience had developed in him, proved (Continued on page twenty-six)
ANOTHER IMPERIAL OIL MAN GOES ABROAD

WHEN F. J. Wolfe, lately Vice-President in charge of marketing of Imperial Oil and now Chairman of the Board of the Anglo-American Oil Company, Limited, of London, England, settled to his duties, he evidently felt the need for the assistance of a staunch fellow Canadian, particularly in connection with the handling of motor equipment. Therefore he chose G. Gordon Bell, who joined the Imperial organization in 1924 as motor equipment engineer. And on September 30th, Mr. Bell bade farewell to his associates at 56 Church Street, sailing for England a few days later.

Mr. Bell was born in Ottawa, and is a graduate of McGill University. When the war broke out in 1914 he enlisted with an infantry regiment, transferring in the fall of 1916 to the Royal Flying Corps. His adventures and narrow escapes were many, for he saw service on several fronts and, although he has little about it, his courage and clearheadedness won him distinction, among his decorations being the D.F.C., Legion d'Honneur, and Croix de Guerre avec Palmes.

When Mr. Bell assumed the oversight of Imperial’s motor fleet, it numbered 642 vehicles. As the Company expanded the fleet increased until, in 1921, it consisted of nearly twice as many. He made a thorough survey of the territory, the distance between towns, the type of roads, the nature of the service required and from that determined the size and make of trucks most suitable for the work to be done. He increased the efficiency of the repair stations, and inaugurated a system of road inspection, the inspectors each having a well-defined district to cover, and equipped with a covered truck containing minor parts, tools and work bench. This has the effect of greatly decreasing breakdowns and keeping the vehicles in better condition. His next step was the design of the trucks and tanks. Everything from tires to taps was gone over with a view to adapting it to the business of carrying oil products. Even the driver’s seat in the cab was specially constructed. Mr. Bell’s idea being that comfortable working conditions make for efficiency. His designs have proved so excellent that they have been adopted by other oil companies.

A year or so after Mr. Bell came to Imperial, he was asked to add to his other duties the care of the motor equipment of International Petroleum Company, Limited, in their South American field.

In 1928, when the Company became interested in aviation and in the manufacture of fuel and oils for aeroplane use, Mr. Bell was appointed chairman of the committee on aviation. In this capacity, he compiled the “Aviation Manual,” a handbook for pilots which is said to be one of the most useful of its kind.

Mr. Bell is a man of wide interests. His work is characterized by its thoroughness, no detail is too small to be overlooked or reckoned unimportant. He is greatly missed in the organization and The Review turns with his friends and associates in wishing him success in his new field.

He has been succeeded by A. W. Same, technical engineer, who had previously been with Toronto Division.

NORTHERN ONTARIO JUSTIFIES FAITH

By R. Jenkins, Assistant Sales Manager, Northern Toronto Division, Imperial Oil, Limited.

THIRTY years ago, Ontario, north of the Canadian Pacific Railway, was solid bush. The fringe of the timber looked good, but how far did it extend? To go into the bush and cut timber required money and hard work. It would take years from the time the timber was cut and floated down the rivers until it was ready for the market in the cities, and there was always the chance that prices would not give a profit on the venture. The sporting instinct is strong and the lumberman took those chances. As he chopped his way back, he found that the land looked as though it might be good for farming. But it was far from the railways, summer frosts were prevalent and the markets distant. It required vision to build a railway and still greater vision for the settler and merchant to risk their all. Yet the railway was built, the settler came, and the merchant followed.

In one of the last rock cuts necessary to complete the railway to the southern edge of the clay belt, silver was found near Long Lake, afterwards called Cobalt Lake. The discovery was not considered very remarkable, as several geologists and some mining engineers had said that the vein was too rich to continue to any depth. However, the fact that Cobalt produced over three hundred and fifty million...
dollar's worth of silver vindicates the faith shown by the persistent few in its future.

Near the hills erected by the settlers at Haileybury, shortly after the completion of the railway, the Queen City Oil Company (later a part of Imperial Oil) built its first warehouse and tanks. It was preparing to give to the North a service equal to that being given in the southern part of the province, in spite of roads axe deep in mud or mountain high with snow. When the hastily constructed road between Cobalt and Haileybury became almost impassable, the Company built a warehouse and installed tankage to supply Cobalt. During the development of the flotation system for separating the waste rock from the valuable ore, Imperial Oil was asked for advice and sent one of its chemists to help solve the problem.

Recently the old tanks at Cobalt that had been swung up from the railway to a natural ledge were dismantled. This bluff is now the abutment of a concrete bridge which diverts motor traffic from an extremely dangerous level crossing. The site of these tanks was given up by the Company at the request of the Northern Development Branch of the Department of Highways, to make this bridge possible.

Year by year the country opened up and the railway was pushed on from mining town to mining town. As Gowganda, Larder Lake, Porcupine, Silver Centre, Kirkland Lake, Lightening River, Rouyn, Harricana and Red Lake were discovered in turn, Imperial Oil, Limited, kept pace with the development. Before the paint on the new railway stations was dry, Imperial Oil tanks and warehouses were up and doing business, giving service and advice as to the proper use of its products, making deliveries to the camps winter and summer and over such roads! Tires on the buses were judged then as now by their length of service. Three weeks was the average life of a tire. If it lasted longer another order was assured.

Today the introduction of Imperial products to a new mine has become almost a formality. If a paper mill or hydro electric plant is to be built, there is no doubt but that for the supply of petroleum products can be had on short notice. There's an Imperial station somewhere near. When a mine is discovered in some out-of-the-way place and planes are needed, the pilot calls the nearest Imperial agent, and knows he can be certain of the quality of his supply and of its delivery as near as possible to his intended use.

The Imperial Oil Station at Neko, Ontario, in 1910.

The American industry was making notable progress toward stabilization when the great oil strike in East Texas occurred a little over a year ago. Output for the year had been shaven down by approximately 100,000,000 barrels of crude in comparison with the previous year; and stocks in storage were being reduced by about 20,000,000 barrels. Progress, however, was soon undone. Following Joiner's discovery, wildcatters flocked into East Texas, using anything that would pass for a drilling outfit; they sank, one paying well after another. Then came the fine steel rigs of Humble, Gulf, Sinclair, Magnolia, Shell, Houston and Baronafield. The new field spread over four counties, and oil production from East Texas flooded both domestic and foreign markets, sweeping world prices steadily downward.

Oklahoma, being nearest to hand, was particularly affected, its posted prices declined with those in Texas until a 42-gallon barrel of crude oil could be had in either state for the price of a chocolate soda. Some even sold for a nickel. By August this year, Texas and Oklahoma prices were somewhat above one-half of the world's current oil output—virtually giving their oil away. That, of course, would have been the oilmen's own affair had it not been for the fact that both states usually derive about half of their income from severance taxes on oil and, in addition, draw royalties of one-eighth of the oil from state lands leased to producers.

At this point the governor of Oklahoma, William Henry Murray (otherwise Alfalfa Bill) stepped in. He ordered the companies to pay one dollar per barrel on which the state's two per cent tax or 12½ per cent royalty fee would mean something in money. On August 4, when the oilmen failed to post dollar prices for crude the shotgun governor called out the guard. He declared martial law on and around 3,000 wells in 20 Oklahoma fields. The lid was down to stay, the Stalin of the derricks said, until crude oil went up to a dollar or the president or supreme court of the United States lifted it.

But there are other complications in the oil situation. Over-expansion in the marketing division of the industry is an important factor in the present crisis. There is no means of telling the exact number of filling stations in the United States, estimates varying from 300,000 (male in 1927) to 500,000; but somewhere...
Between 25 and 35 per cent. of their have come to be owned or controlled by the major companies in their race for marketing outlets. As they have multiplied their own and their dealers’ outlets, the sales volume per unit has declined drastically.

Further insight into this unprofitable but huge capital investment in filling stations reveals other weaknesses in the structure of the industry. Assuming, rightly, that the motorists last season paid an average of 16 cents per gallon for gasoline, see how it was divided:

- Average state tax: 4 cents
- Transportation cost to retail market: 2.3 cents
- Terminal handling cost: 2.5 cents
- Filling station margin of profit: 4 cents

Therefore, out of 16 cents only 3.2 cents was left for the production cost and profit margin of both the producer and the refiner.

While reorganization and reform of various sorts go on at home, abroad the indomitable Bolsheviks is stepping up his oil output as fast as possible. Exports, which he has increased about 150 per cent. from 1927 to 1930, he hopes to expand another 100 per cent. (to 50,000,000 barrels) this year. And not only is Russia blessed with oil fields far richer than our own in East Texas, but her oil industry—being a government monopoly—has neither taxes nor royalties to pay, and its labor costs little, in comparison with labor elsewhere.

Yet even upon the Soviet horizon there is a cloud. For in the ancient Arab kingdom of Iraq there exist perhaps the richest oil fields in the world. In 1935 it is expected that by means of a 600-mile pipe line across the Arab desert these new fields will be emptying crude oil into tankers at the Mediterranean ports of Haifa and Tripoli. When this oil starts to flow, it may conceivably figure in a foreign price war that will shake the petroleum industry to its foundations.

In any event, the potential, increased overproduction in the world supply of oil, practically guaranteed by the projected development of Russian and Iraq supplies, promises to continue indefinitely the conflict through which the oil industry habitually moves.

**Imperial Personalities**

*(Continued from Page 21)*

many a difficult customer for the Company. His territory was eastern Ontario, then very sparsely settled. That meant he had to cover a good deal of ground, sometimes on horseback, to reach his customers. And this was in the days before asphalt highways and automobiles. Train time tables and livery horses were the joker in the deck then.

Coal oil, or kerosene, instead of gasoline and fuel oil, was sold by the barrel, and his customers comprised factories, stores, lumber mills, mines, and threshing outfits. Nearly all these used horses; axle grease and harness oils were big lines. With such a wide spread and varied clientele, and time and distance as factors, a salesman had to do some close figuring to keep his customers satisfied and outwit his competitors. The very smallest complaint was a foothold for a sly rival then at now. It was the custom, for instance, as winter drew in and the farmers had to substitute lamps for daylight, for them to bring in their 5-gallon cans, leave them at the general store to be filled with coal oil at the storekeeper's leisure, and call for them the next time they came to town. Sometimes 20 or 30 cans would be lined up, and as they had often been used for turpentine, or something else, during the summer, and not cleaned, it was much easier for the storekeeper to blame the quality of the oil rather than the user's negligence.

In his 28 years of selling oil products, Mr. Irwin has seen many world industries rise and fall, and his customers have been moved from being to meet new demands. Older industries have adapted themselves to altered conditions. Automotive progress has made a tremendous difference in the oil world. But the qualifications of a successful salesman remain the same. Courtesy, a sincere desire to further the interests of the customer as well as the Company, a capacity for hard work and head work—in short—imperial service is still behind the little card reading "Imperial Oil, Limited, represented by . . . . .

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**TRAGIC EPISODE**

The above letter closed another Company file relating to one of the many tragic episodes attending pioneer flying activities over the Atlantic.

Gatapalting of a mail plane from a ship in mid-ocean has for a considerable time been regarded as a practicable means of greatly accelerating trans-Atlantic mail deliveries, and all the careful preparations which were made by the North German Lloyd, the flyers, and the Imperial Oil organization, seemed to promise that the successful experiment of the previous September would easily be duplicated. The following report from A. C. Demont, divisional manager of Imperial Oil at Halifax, outlines briefly the events which led up to the letter reproduced above:

"We received a radio from the S.S. Bremen to the effect that the mail plane New Yorker DJT72 would take off 315 miles off Cape Sable for Sydney. We completed arrangements at Sydney for fueling this plane with Imperial Ethyl spirits and mobilized Aero H. The first message we received intimated that the plane would be taking off at five o'clock standard time and we gave them weather reports.

"However, the plane landed at Glace Bay last evening in the vicinity of 10:30 and our Mr. Mercer proceeded to Glace Bay to give them directions to get to Sydney. In the meantime, a fishing boat gave them their charts and they took off for Sydney and when they landed at Sydney it was well out in the harbor, off the coal piers.

"Our Mr. Mercer arranged motor boat service and towed them a considerable distance to the lee side of the harbor and fueled them with 240 gallons of Ethyl Aerial Spirit and four 4-gallon cans of Aero H. Mr. Mercer advised that the weather was not altogether favorable, the water was quite choppy, and the men experienced considerable trouble. The planes were used at Sydney advised that while he could not pull up all the conversation between the pilot and the radio operator, their general talk seemed to be centred on the trouble they were having with the radio, not apparently so much from the standpoint of dispatching and reception as from the element of danger from the wire. Just before the plane took off the pilot conveyed to Mr. Mercer that they experimented considerable trouble with the radio and that unless they were successful in making the necessary repairs they would probably be forced to land.

"Mr. Mercer advised that he gave the pilot and radio operator supper just prior to taking off. The plane took off at 12:31 and an hour or so later Mr. Mercer phoned the Boston seaplane base and gave them information as to when the plane took off and that they would probably arrive there between six and seven o'clock and would require 200 gallons of fuel. The pilots' name was Fritz Simo.

"The next report we received was early this morning at Halifax from a light-house keeper in Cabequid Bay,
stating that he heard a plane flying very low and apparently with engine trouble and soon after heard a crash in the water and then cries for help. This lighthouse keeper did all he possibly could to reach the scene where the cries were coming from but being alone it was an hour and a half after the incident occurred when he got out into the Bay, but nothing could be found.

"Early this morning the writer arranged for Mr. Dumaresq from our office to go down to Cobequid Bay on the Harris County shore, in the vicinity of Noel with a reporter and photographer from the Halifax Herald and an hour ago we received a telephone call that they found a wreck of the plane but no trace of the plane itself or the men. In the meantime we passed all the information we received along to the Furness-Westy people here who were in touch with the North German Lloyd Steamship people at New York and they mentioned in their telegram that we were following the matter and had a man proceed to the place where the plane crashed and would give them a full report."

### George Gregoireff, Ex-Sailor

By John Goulans, formerly of the Maintenance Department, Imperial Oil, Limited.

From Imperial Russia's battleship, Peter the Great, training ship of the navy, to Imperial Oil, Limited, with its extensive commercial fleet, was perhaps a natural step.

Carefully mending the Union Jack that flies over 56 Church Street, George Gregoireff, ex-sailor of the Russian Navy, could not help reminiscing of the days when he was entranced with the brilliant double-eagle standard of the Tsar of all the Russians.

Too young to serve in the Russo-Japanese war, George was stationed in the hospital at Odessa on the Black Sea, first in the emergency ward and later in the drug-compounding department. Just when he became eligible for service in the navy, the war ended disastrously for the Tsar's forces, and George turned his steps to service on the crack passenger steamer Graf Tofeld. While on this ship George was frequently in districts affected by the terrorist strikes and mutinies following the Japanese victory over Russia, and was in danger of arrest every time he landed, due to the severity of the martial law enforced by the Cossacks. Wise to the unfortunate who strayed into forbidden territory without a passport covered with endless military signatures! Coming into one of these areas, George at one time only escaped annihilation by tamely waving his shipping papers in the face of a furious Cossack with his murderous knob. The trooper seemed thoroughly disappointed when he was compelled by others to lower his weapon—the notorious symbol of Russian authority.

It was on the Graf Tofeld that he met Prince Michael Gagarin, who was favourably impressed by the young sailor and persuaded him to join his personal staff. Eventually, pleased with his service, the Prince secured for George a position as seaman-instructor on the renowned cadet ship, Peter the Great. In those days it was George's proud task to carry the flag when the Tsar, or the Grand Duke Nicholas, inspected the future sailors. Equally proud is he that he assisted with the training of those eager cadets. On this beautiful ship George visited most of the nations of the world, and became familiar with several languages and only left the service of the "Little Father of the Russians" to come to Canada.

Embracing for this country, in 1912 he escaped the revolution and revolutionized, an adopted son of Canada, he is imparting to his children the principles of loyalty learned under a different flag.

George is now a porter at Head Office and his work consists of mapping and polishing floors, cleaning windows, shining shoes, running elevators and other similar tasks. He is an expert at all of them and can substitute for any of his fellow members of the maintenance staff. The building superintendent, speaking of him, said, "Give George anything to do and it will be done without fuss and done well. He's courteous, reliable and good natured, and he's always the same."

### Sarnia Man Comes to Toronto

Charles Leaver, B.A.C, who was recently appointed vice-president and general manager of Imperial Oil Refineries, Limited, is a graduate of the University of Toronto in mechanical and electrical engineering, 1910. In 1911, after taking post graduate work, Mr. Leaver was employed by the Ludlow Motor Car Company of Oshawa until 1912, when he joined the engineering staff of Imperial Oil Refineries at Sarnia.

His flair for the oil business was recognized early in his career and, in 1918, saw Mr. Leaver transferred to Montreal refinery, then nearing completion. Here he expected to serve in the manufacturing end of the business, but fortune willed otherwise. In 1916, the Company's plans for a refinery at Dartmouth and for marketing facilities at St. John’s, N.F., being completed, Mr. Leaver was made responsible for their execution. The following March, this work being well under way, Mr. Leaver was made assistant superintendent of Montreal refinery. This appointment was of short duration for, with manufacturing about to begin at Dartmouth, the Company, in November, 1917, brought him back on the job as assistant superintendent. Promotion came again in 1929, this time as superintendent of Montreal refinery and again in the following year, when Mr. Leaver came back to western Ontario as superintendent of Sarnia refinery. In July, 1931, Charles Leaver received a further recognition of his ability when he assumed his present position.

### Marine Notes

**Perhaps** it is tales of the "coast of Spierie" that make the heart of youth yearn for the sea. But however that may be, in 1917, you are there, and you are disposed of by the sea. The more you learn about it, the more you admire it, and when a writer begins to tell tales, he is at sea to write about it, and the story is inexhaustible. In this account, it will be told how the Mariner's Wharf, or stick-to-itiveness, was established in 1918.

In 1918, when the Boys' Naval Brigade was formed at Victoria, Basil Ford was among the first to join up. In 1923, at the age of fifteen, he became apprenticed to the Robert Dollar Company and at the end of four years advanced their ship the Esther Dollar, got his second mate's papers. On leaving the Dollar Company, he shipped with the Standard Transportation Company of Hong Kong, serving as second and third mate aboard the Troad. At the end of a year, he came back to Canada, obtained his master's papers and shipped again with the same company.

In the autumn of 1930 he joined the earlier Albertine of the Imperial Oil Fleet as second and third mate. In June 1931, he left her and has since obtained his master mariner's papers, at the age of twenty-three. This youthful skipper is the grandson of the late C. E. Redfern, pioneer business man of Victoria, and for several terms, mayor of that city.
TORONTO
56 Church Street Club

By John Ness

IT SEEMS a strange time to be writing about golf, but then some of it was "strange" golf, and thus long-extended fall has allowed the divots to crust over to be large for the game as usual.

On a beautiful afternoon in August, the Royal York course was the scene of the Imperial Golfers, some sixty of whom entered into competition for the G. H. Smith Trophy and the prizes presented by the club.

Sixty little white balls departed from the first tee, some in long flights, others en route to the sand traps or the water hazards, some in an apolitical hop and a-skip. Some were eastward, some west, and some stayed put.

Sixty golfers, in the generally accepted meaning of the word, followed the "pills" over the horizon and Solomon in all his glory was not arrayed like any of these.

We suppose the society editor would have called it a "flat tire" to use a phrase descriptive of the deflated state of the golfers. But I hear the yellow sweater a man or a man plus doesn't come with you and the sunset was just too bad.

The shades of night were falling fast and one of those men "what have you" slowed his weary way up the eighteen fairway or made a buck on the last green from the rough, and what had happened in the course itself could only be guessed at, golfers being notoriously modest when talking of their game.

There were the usual hoary albatross and the customary hard luck tales. The putt which lingered shivering on the brink, the pigeon's progress from the bunker, the edge of the grass, of the hole, the hill to the pool, the house, the gale that howled in the night, all added to the mystique of the game, making the difference between par and parzynski.

The Psalmist said in his haste: "All men are liars." If he had been with us he could have said it at his leisure with appropriate adjectives.

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IMPERIAL OIL REVIEW

When the entire office comptometer staff had worked late into the night, and the Liver had not returned, it was discovered that the scores ranged all the way from 72 to 58 (marked down from 81 by 18), and from amongst these the thirty-six for the month, twenty low scores qualified for match play.

These games provided a great deal of interest and much enjoyment. Many good golfers fell by the wayside before the finalist emerged in the persons of James Pope and S. F. Heard, both previous winners of the trophies.

The final of 16 holes was played over the Royal York course and was a real battle. Bobby Heard, concluding 12 strokes on each round, was 1 down after the first eighteen holes. Next day, he staged a brilliant exhibition afternoon to square the game at the 25th hole. With only three holes to play the match was still deadlocked, but Jimmy Pope put in a stirring finish and annexed the cup.

The curtain was rung down at a subsequent executive meeting, when Mr. G. H. Smith, honorary president of the club, presented the trophies bearing his name and the granting of the successful competitors.

In complimenting Jimmy Pope on his second success, Mr. Smith emphasized that it was his intention that the cup should become the undeprecated property of anyone winning it twice. In that view, the new event, a new trophy would be provided.

The unofficial view of the golfers present was that Jimmy's handicap would be so drastically reduced next spring that there would be little danger of him repeating.

The prize winners were: James A. Pope - G. H. Smith Trophy and Miniature; S. F. Heard - Runner-up; Vic Green and F. Hall - Semi-Finalists; C. G. Wilcox - Low net, qualifying round; J. N. Payne - Low gross, qualifying round.

The service stations team in the softball league were worthy winners of the Viceroy Rose Trophy, emblematic of the league championship.

At a dinner tendered them by the club the trophies were presented by the officers of the company.

Congratulations are due to the Imperial Golfers who played a sterling brand of ball.

The Badinomction Section of the Imperial Oil Company in the cities of the Metropolitan Church House. This year some of our male members have joined in this popular indoor sport and is providing a great deal of enjoyment and exercise.

Hockey fans, who are denied the privilege of watching for a reasonable price this league this year, may still get a kick out of following the fortunes of our house league at Rama Ring or our T.H.L. team at Varsity Arena.

Some real talent has been uncovered at Rama and it would not be surprising if Gonnie Sibly tried to strengthen his tailoring with Maple Leafs from the ranks of the Maritimes, Internationalists or Anti-Knights.

Charlie Stone has high prospects of fame and fortune with his T.H.L. entry and it is hoped the Club members will turn out and lend their vocal and moral support to the "Three-Stars."

The mixed bowling league has embarked on the long grind for the 1932 title, which has six teams being in competition.

The men's bowling league are not carrying out the above schedule that will compete for the J. W. Wolfe Trophy and miniatures in a sudden death engagement in January.

At the annual meeting of the 56 Church Street Club reports were submitted which showed a highly successful year, numerically, financially, and socially.

As the entire staff of officers was re-elected unanimously, it will not be necessary to harrow the readers with pictures or biographical details.

SARNA

George L. Stewart, who succeeds Charles H. Leaver as superintendent of Sarina refinery, is a graduate of McGill University in mechanical engineering; OIL 14, and carried on his work at that university for two years as lecturer and demonstrator.

Since 1916, when he entered the employ of Imperial Oil, Mr. Stewart has gone steadily forward in the Company's service. His first move came in 1918 when he went from Sarina to Halifax as mechanical superintendent of the refinery there. The following year he was transferred to Ottawa office special work for Mr. Stellman, who was at that time vice-president and general manager of manufacturing. In 1922 he was appointed to Regina refinery as assistant superintendent and still serving in that capacity, the following year he returned to Sarina, which has come to the scene of his latest activities.

George L. Stewart

The following paragraph, reproduced from the Petroleum Advertiser-Tropic of September 10th of this year, disproves the old saying that a man cannot enjoy a holiday in his own country.

The end of a year, he entered the University of Toronto to study mechanical engineering and worked for the Company during each summer holiday. After graduation, Mr. Grant was five years with the Canadian General Electric Company, working as travelling engine in the engineering department. In 1913 he returned to the service of Imperial Oil where he has since served.

During these years his appointments have been made every year. Beginning with a year at Sarina, he

A. D. Grant
was sent to Peru for three years as chief engineer. After another two years at Sarania, he was transferred to the Toronto office. Here he remained until 1925, when he was made assistant superintendent of Inco refinery. He held this position until February, 1931, when he became superintendent.

Imperial Oil Review

Imperial Oil Review

Obituary

THE death occurred at his summer residence at St. Eustache on July 26th of Edmund W. Foley, in his fifty-first year.

Mr. Foley entered the service of Imperial Oil as city salesman in Montreal Division, on October 12th, 1913 and on December 1st, 1913 was transferred to the office where he was in charge of automobile records. Eddie, as he was affectionately known, was a capable and conscientious servant of the Company and his untimely passing is deeply regretted by all his associates. The funeral service was held in Wray's Mortuary Chapel on July 29th and was attended by the management, as many of the staff as could be spared, and several of his old customers who came to pay their last respects to one who had always retained their esteem and friendship. Burial took place in Mount Royal Cemetery.

In his younger days Mr. Foley was a prominent figure in athletic and military circles. He served for many years with the Victoria Rifles of Canada, and was a life member of the Montreal Amateur Athletic Association.

Mr. Foley leaves his wife and young daughter, to whom we extend our heartfelt sympathy in their bereavement.

Calgary

Mr. and Mrs. C. E. Young of Calgary have been receiving congratulations on the birth of a son on October 11th of this year. Mr. Young is in the Production Department of Imperial Oil at Calgary.

Calgary

When ever Turner Valley is mentioned, the mind instinctively turns to Royalite No. 4, and wherever Royalite is mentioned to a Turner Valley man he immediately thinks of P. D. Moore.

Entering Imperial Oil's service shortly after the Turner Valley began to be talked about, P. D. grew to be an institution, admired and respected by his associates in our own organization and practicably revered by the independent operators, who came to him with their troubles and their sand samples, seeking his expert advice. When it was announced that he was leaving the Company's service, those same Independents rendered him a dinner in Calgary and presented a gold watch as a token of their appreciation.

P. D. seeks pastures new with the good wishes of all who associated with him.
This little lad has just been given a balloon at an Imperial Oil service station on "Three Star Day". Gasoline doesn't interest him yet, but what a great time he is going to have with the bright plaything! He evidently doesn't get many toys. The photograph has something of the quality of a painting by Murillo.