The Imperial Oil Review

September 1925
Spirits of the Air

An outline of aeronautical development in Canada, in which Imperial Aeroplane Spirits have been almost exclusively used.

In December, 1924, aviation attained its major- ity. Over the twenty-one years since the Wright brothers showed the way to conquest of the air, there lies a wonderful record of progress.

Mechanical flight has advanced from the few feeble hops made then, to the records of to-day—altitude, 39,000 feet; speed 278 miles per hour; duration 38 hours; and distance, 2,700 miles. This progress has been curiously uneven, however, as aviation has seen many vicissitudes in its short life. By the opening of the great War, stability had been achieved; the speed, lifting power, altitude and range of machines were greatly increased, so much so in fact that serious plans were under consideration for a trans-atlantic flight.

Then came the war, and civil aviation ceased abruptly. The year 1919 saw its resumption on a practical scale. Thousands of machines of all types were thrown on the world market at scrap prices, and a boom in civil aviation followed. Many spectacular flights were made within the subsequent year, with the object of awakening the public to the unrivalled facilities of aerial transportation.

The Atlantic was crossed, from Newfoundland to Ireland, in less than seventeen hours; later by the flying boats of the United States Navy, the British airship R. 34, and finally the American planes successfully circled the globe.

To turn to the progress in Canada, it is noteworthy that, while in practically every other country the main effort has been toward aircraft for transportation of passengers, mail or express, development in Canada has been on quite different lines and little effort has been made to develop this side of aviation. Up to the present flying in Canada has been used principally as an improved method of observation.

Aircraft has been the natural solution to many difficulties in exploring the unsettled and hard-of-access districts of Canada. A pressing need for the services of planes in forestry and surveying, whose activities spread from coast to coast, has provided an immediate outlet for civil flying on useful and profitable lines. These, with transportation to inaccessible districts for the lumbering and mining operations and other services, special preventative patrols for the Department of Customs, and fisheries
The more organized forests they can only be regarded as a valuable supplement to the present ground forces; increasing their efficiency by providing, in conjunction with wireless communication, an improved method of detection. Their usefulness is greatest in the more remote forest areas, where population is sparse and the ground forces cannot be fully organized under the present conditions. In such localities aircraft patrols for forest fire detection and suppression are now accepted as being the most efficient method of controlling the fire hazard. It should be clearly understood, however, that forest protection, must ultimately be on a national basis. The amount which can be spent on protection depends principally on the values of the timber in question and the intensity of the fire risk. Forest fire protection is a question of insurance and must be worked out on this basis, just as any other fire risk. The principal obstacle to the extension of forest fire protection by aircraft is the high cost of flying; and, until the development of aeronautics enables efficient aircraft to be produced at a lower first and operating cost, the forest authorities hesitate to extend the system. Fortunately, there are many hopeful signs to-day that the desired improvements in design will be obtainable in a few years. If this is possible, there is undoubtedly a very large field for aviation in connection with the conservation of the forest resources of the country. In the meantime, as development in this particular line cannot be expected except under practical service conditions, the higher cost for fire protection by air is amply justified, when it is considered that, in many of the districts covered to-day by aircraft, the maintenance of highly organized ground forces would not be possible and the alternative to protection by air is, at best, an imperfect system of canine patrols.

The definite entry of the Provincial Government of Ontario into the field of aviation is, perhaps, the outstanding event in the progress of the Governmental work. In the Spring of 1924 they established their own flying service as part of their Forestry Branch, instead of continuing, as in the past two years, to make contracts with commercial aviation firms for the flying required by their forest services. This courageous decision was taken after four years’ trial of the use of aircraft in their work, under varying conditions, and in different parts of the province, and it proves that the Provincial Government is satisfied that flying can play an exceedingly useful, if not essential, part in a modern programme of forest conservation.

Another outstanding feature was the establishment of the first air route for the regular conveyance of passengers, mail and freight. This was undertaken by the Laurentian Air Service to serve the new gold field at Rouyn in northwestern Quebec.

In the technical development of aircraft and equipment also there is sound progress. Experience has shown the lines of most practical development and work is proceeding on the design and production of new types, to meet the particular conditions existing in Canada. The aircraft industry is playing its part in this development; and, during the past year, Messrs. Canadian Vickers Limited produced from their own designs, at their aircraft factory in Montreal, the first post war Canadian designed and built aircraft. This is a small three-seater flying boat built to R.C.A.F. specifications. The trials, carried out on the St. Lawrence river, last November, showed that this new aircraft, not only comes up to specification, but gives promise of further development into an exceedingly useful new type.

Taken as a whole, the progress of aviation in Canada is encouraging. Every venture is being made to keep it on sound lines, and as far as possible self-sustaining and of direct benefit to the country.

The small town of Rouyn City. The planes on this service are built entirely by Imperial Aircraft Spirit.
Bootleggers in Oil

In which the methods of the unscrupulous oil dealers are exposed and an effective antidote suggested

BY ROGER FREEDRECKS in "Motor Life"

THE New York Stock Exchange made public some time ago the losses to the American public who invested—if you can apply such a dignified word to the transaction—in oil stocks. The figures as I recall ran well over $500,000,000, quite a tidy sum which follows of Doctor Cook and others parted with for their gilt colored securities. It costs money to dabble in oil.

The public shows the same fine disregard for common sense when it comes to oil in a form other than pretty colored stocks. As a motorist a high percentage of the public is playing the conventional sucker. What the cost is no one dares guess. With 17,000,000 passenger cars and trucks upon the roads today, the bill is a generous one. Unlike many bills, it is one that arises largely from indifference and lack of care. It comes from the habit of driving up to the garage or service station and after buying, five gallons of gas you add, "Oh yes, and gimee some oil."

"Gimme Oil" is the popular brand with the motorist. Ninety-nine out of 100 buy it and while they may wonder why the splendid car they bought two years ago has suddenly become a fine piece of junk, they little trace it to the antiquated "Gimme Oil" that is poured in the crank case every once in so often. Yet it is poor lubrication or the lack of any lubrication that sends your car to an early grave. And that same faulty lubrication is in case after case due to your buying the popular "Gimme" brand.

There is one qualifying statement that I must make here. Perhaps you are even as I am, fussy about the make of oil you use for your car. You specify it by name when you drive up to the garage. Maybe you get it. The chances are about even. It may depend upon whether the garage hand thinks he will ever see you again. Whether he has the "get-rich-quick" urge or any number of circumstances. If said garage has been sold on the idea that "honesty is the best policy" your engine may get what it needs. Otherwise, the brand of fluid that is poured down the breathier pipe is "enshaling fluid" of the purest type.

The boot-legging game is not confined to the nouveau riche who sell it by either case or bottle. Despite the work which the legitimate oil companies and refiners are doing, despite the millions of dollars that they are spending to protect you and your car, substitution of a poor oil with little lubricating value for a good grade is one of the big problems which confront the refiner and car owner alike.

Now a lubricating oil should do one thing only and it should do that one thing well. It should make a film between the metal bearing surfaces and prevent the metals themselves from coming into contact. That's all that you or I need to know. "Why lubricate?" But the manufacturer does have a right to ask that before I condemn his products as a piece of junk, that I take some care in seeing that the food I expect my car to live on should measure up to some standard.

Well, you may say, "I don't know anything about a car. Whenever I get in trouble, I take it to the garage. They'll fix it up for me." "Good, you're excused. But before you depart let me remark that this attitude is costing you in repairs and depreciation a round sum of money. When you take your car around to turn it in on a new bus, you are insulted at the offer you get. I know of a few people who can get 25 cents more for their car which shows 20,000 miles than others can who have run the same model car less than 8,000. The answer is "proper lubrication." What is "proper lubrication?" A fair question.

The big thing is this: you can't get proper lubrication from an oil that doesn't lubricate. The good refiners have their own methods of making a "good" lubricant, but the "gimme" refiner has only one—to turn out liquid that looks like oil, smells like oil, costs like oil and sells for oil with the biggest margin of profit that he dares ask for. His one interest is a quick clean up and a quick get-away. Needle to say this refiner can't operate alone and he enlists either knowingly or unknowingly some of the garages.

A lubricating oil is one that has gone through an engine, garage and the various companies jealously guard the various steps. To turn a crude oil into a good lubricating oil means a big expense and the "gimme" refiner by omitting some of these steps or running them through without the necessary precautions and tests is able to turn out a product that to the car and for that matter to the average garage looks like a good lubricant. They can sell this product for one-third the cost of a good lubricant and still make a long profit. The garage who buys this oil can offer it for five cents a quart cheaper than a good grade of oil and even so make an additional profit of ten cents. That's what he is interested in—that extra profit. As to whether this oil will ever lubricate your engine, whether it will send your car to the repair shop with burned out bearing, scored cylinders, well, that's up to you, the "gimme" dealer will not be responsible. You can't prove that it was the oil that caused you the trouble. No, my friend, the blame rests partly with you. Perhaps you will learn.

Why this oil isn't a good lubricant is a story all its own but in passing let me remark that if a lubricant is to serve its purpose, it must have certain chemicals taken out, it must have all impurities removed, it must be able to withstand heat and must not break down. The oil that doesn't meet these requirements in nine cases out of ten is the oil you buy under your own private brand of "Gimme."

The three factors that enter into the sale of this popular brand are first, the dishonest refiner, next the unscrupulous garage owner or perhaps one that is merely greedy for extra profit, and last the sucker who buys it for his car, the same being you.

The first factor cannot be controlled. Small refiners spring up almost overnight as new oil fields open up. It may be that the first factor is an oil Jobber who buys an oil that is produced for one certain purpose and doctors it so that it will pass at first sight for a lubricating oil. He then peddles this to whatever garage he can persuade to buy, telling the garage that he is bucking the big oil companies and making enormous profits and that there is no reason why he shouldn't be willing to save the motorist a little money and at the same time make a little more for himself. It's a hard job to get the goods on and will exist as long as there are credulous buyers who are looking for bargains.

The next link in this process is the garage. I have mentioned the reasons why he buys this "Gimme" Oil. I have talked to the sales managers of a number of oil companies. Substitution of "Gimme" oil for their brands is one of their greatest problems. They have spent thousands and thousands of dollars to prevent it. Through their advertising they tell the car owner to insist upon a certain oil. They make recommendations for particular cars. All this has helped a little in meeting this question. Working with the dealer so that he appreciates the damage that poor oil does to his trade is another part of their program. "But," they say, "if the dealer won't be honest, what can we do?"

They have supplied the garage with special equipment from which to sell, and that the dealer will not be able to substitute oil. These tanks will bear the name of a particular brand of oil. After the original supply has been sold, the dealer will make up an oil at a price and possibly, you can't prove that it was the oil that caused you the trouble. No, my friend, the blame rests partly with you. Perhaps you will learn.
these dealers but they are not able to obtain con-
yuous garage service, who maint-
nains that "he thought it was the same oil" —
the powerful oil company that is try-
ing to dictate what he shall sell — the jury never
hesitates to give the garage a clean slate.

Many refiners keep spotters on the road all
the time. Thousands of letters are received from
car owners who write in with bitter complaints
regarding this oil which they bought and which
seemed to their engine. The oil company will get
a sample of this oil wherever possible and have
long and expensive tests made. They generally
find out that the oil which the car owner thought
was their brand, was a substitute of the "Gimmes"
brand. But that doesn't repair the engine and the
car owner may doubt their word. So the com-
pany will send out one of its spotters and get
a new sample from this particular garage.
They will have it analyzed. Then they go to the
dealer and tell him in plain terms that they have
the goods on him and will refuse to sell him in
the future. But garages come and go so quickly,
the management changes hands so often that it
is hard to present a case for the public. In
other cases they have made an exclusive arrange-
ment with some garages to handle only their oil.
They know from experience about what amount of
oil this garage should sell in a certain period of
time. If the orders fall below a certain point,
that dealer is under suspicion of substituting
and the spotter gets to work. He may try to
exchange the garage and try to get into its ways and
point out that it is poor business to "gyp" his
trade. They will show him the results that
follow the sale of the "Gimmes" brand. "But," again
the refiners say with a sad smile, "trying to make
an honest man out of a dishonest man is a long,
en expensive job."

The refiners have tried every scheme. Tanks
have been sealed so that a substitute oil cannot
be introduced. The garage can easily drill the
tank or uncouple the fittings. Then, too, they
will refuse to install a locked tank and the re-
finer is left out on the end of the branch.
The sale of "package oil" has been pushed. Oil in
one and five quart cans is placed with the deal-
er and the car owner is asked to buy the sealed
can so that he can be certain there is no sub-
stitution. Along these lines, some progress has
been made but these cans cost money and the
refiner cannot absorb the entire cost. The sale
of oil by the drum which the car owner can
store in his garage has been pushed but here
again the car owner finds the job of filling his
tank and seeing that it is cranked over a new
job and what's the use when he can get the gar-
arge to do the job for him without any change?

Do you see where the refiner gets off?

Many of the bigger companies have their own
fuel stations but they represent but a drop in
the bucket in comparison with the thousands
and thousands of places where lubricants are
offered for sale.

And now to the last link in this chain — which
is, gentle reader, you and several million more
like you.

Let me suppose that you have been sold on
the idea that you should change the oil in
your crank case every 500 miles. That is
something which you should do without question.
Friday night you decide to spend the week end
country and drive your car down to the garage
for gas and then, "Oh, yes, better change the oil."
You leave the car, go to the drug store for a pack-
age of cigarettes and return in fifteen minutes,
ask, "How much?" pay and drive away.

If this garage knows you and the proprietor is honest,
you will doubtless get a good oil. But let me
suppose that you have never been to this garage
before. You drive away, the garage chalks up
another fifty cents profit over its legitimate
profit.

About two hundred miles that so-
called lubricant has separated into a black
sludgy mess and a thin watery fluid with about
the same lubricating qualities as so much water
and molasses.

Your engine begins to heat,
refuses to pull and you stop at the next garage.

"Need to change your crank case drained and car
bronzed," you are told and so you follow
instructions because you can't do otherwise.

Perhaps you realize that you were stung on
the last oil you bought but you soon forget it.
But the chances are that your engine hasn't and
if you had had to drive for any distance with that
thin black fluid for a lubricant, you would soon
be talking about having to get a new car and
when you took the present car around to turn
it in and get a price quoted you, well, there's a
round sum to chalk up against your indifference
to the oil you buy.

Or again, let me suppose that after an ex-
erience like that mentioned you have become
cautious. You are on tour and decide you better
add a couple of quarts of oil. You drive up to
a garage that has a sign offering a certain well-
known oil for sale.
J. E. Sirdevan Passes

It is with deep regret that we announce the death on July 28th of J. E. Sirdevan, late superintendent of the Ioco Refinery in British Columbia. Mr. Sirdevan was an able and well-liked man whose fair dealing and activity in promoting all plans for the welfare of his employees only emphasizes the loss they feel.

During all the years that Mr. Sirdevan was associated with his employees they had formed a very high estimate both of his character and his ability. Always most jealous of the Company’s interests and reputation, much of the development in Ioco was due to his quiet and far-seeing initiative. He was held in high esteem by the Company. No man could have done his work more quietly, but none the less directly or efficiently. He was always willing to accept his share of responsibility, and yet at the same time expected those under his direction to also bear their share.

Born in Titusville, Pa., son; sixty years ago, he was still a boy when he started working for an oil refinery at Olean, N.Y., and the oil business was his life work thereafter. He knew oil refining from the ground up, having worked at, and mastered, all its branches. His experience was gained when conditions were much more difficult than at present. The eight-hour day was unheard of then and a shift was liable to be almost any length.

In 1915 he came from Sarnia to take charge of the Ioco Refinery. Under his supervision its business increased. Under his administration Ioco Townsite became a reality, replacing eighty-four modern homes and a fine school, a few shacks formerly scattered through the bush and along the waterfront. In the accomplishment of all these things, the interest and energy exerted by Mr. Sirdevan were a most important factor.

For the past month expressions of sorrow and sympathy have been coming in from all over the country, from business and social acquaintance alike, who frankly state their high regard for Mr. Sirdevan, and their sorrow at his passing.

There is, however, no person outside his own family circle whose sorrow will be so great as that of the men and women who have worked with him and for him at Ioco Refinery. Each of them has lost a true friend, and the Imperial Oil organization has been deprived of a valuable associate.

The Geology of Petroleum

In studying petroleum one must know its origin. In general terms everybody knows that it comes out of the ground, but to “get down to the rock bottom of the matter,” as the saying goes, it is essential to take a mental view of the layers and layers of rock underground which the well has to be drilled.

For the sake of illustration, let it be assumed that there is a deep, wide crack or crevice in the earth. The flat surface of this crack that goes down into the inside of the earth is, if looked at as one looks at the side of a house, a cross-section of the earth’s interior. Let us imagine that a man slides down a rope into the crack in the earth. In his downward descent he will pass layer (or stratum) after layer of rock that runs in bending and curving lines. He will see a variety of rock formations in bands of considerable width—just as if a great wall thousands of feet high had been built of sand, shale, sandstone, soft chalk, water-bearing sand, granite, and other forms of soil or stone—both of which the geologist calls by the general name of “rock”.

But now, in a larger sense, this man descending toward the core of the earth is seeing far more than a gigantic striped wall. As he views strata after strata he is reading Geology’s Wonderbook, which is the history of the earth as far back as perhaps 100,000,000 years—according to the estimates of scientists—but he is reading the book backwards, for the lower he goes the older are the formations encountered. The ages have deposited these globe-encircling layers of rock one after another upon the earth, and in each stratum there is embedded the decomposed remains of animal and vegetable life of the unthinkably long geologic age during which time the particular rock formation was gradually formed.

Of course it is impossible for geologists to penetrate very far into the earth, but science has proved its almost incredible antiquity. This is indicated by the strata which have been deposited, and changed in form, being buckled, shifted and cracked under the influence of glaciers, oceans, rivers, storms and the elements in general.

In the laboratory of nature oil is not created in a day. Thousands and thousands of years before the first primitive “dawn man” appeared, the earth, by the slow, unceasing work of ages, had been forming petroleum within the pores of rocks. Due to the pressure and shifting of hard formations around the oil it had been compressed within closer bounds, thereby making what modern man calls a “pool,” which his well taps, drawing the oil to the surface.

In its infancy this old, old earth—the scientists tell us—was veiled in heavy gaseous vapors so hot that possibly no natural life existed. But the
The Organic Theory—the one in favor among all geologists—has two branches: the animal and the vegetable, with sometimes a combination of the two. One branch of this theory attributes the formation of oil to the remains of marine animals which have been deposited in some geologic age within the rocks, where they decomposed. These marine deposits, in the nature of fish and oysters, clams and other marine life, were laid down in places that were at that time near the water, for it must be remembered that many valleys of today were in the far distant past the beds of lakes or oceans that have receded, while many mountains that now are distant inland were at one time washed by the ocean tides.

The vegetable branch of the organic theory is concerned with deposits of seaweed or land plants that were decomposed and embedded and then covered over by thousands of feet of slowly accumulating sedimentary material—age.

Whether it was animal or vegetable matter, the organic material was first laid down in clays and sands, which had been deposited along seacoasts, in swamps, bays or lakes. Other beds of material were placed on top which, together with the water (especially salt water, which acts as a pickling brine), protected the organic matter from rapid destruction by oxidation.

The why of oil has been briefly told; now what is oil as it is found today? Natural gas, petroleum, and asphaltum are formed from the mixture of a great number of hydrogen and carbon (hydrocarbon) combinations. Hydrogen is a well-known gas, and asphaltum is a solid bituminous material, which in its pure state is graphite or diamond.
the oil film remain intact and unbroken for from three to six hours, at the end of which time the entire brood present would be destroyed. Insignificant catapaws of wind and casual showers of rain easily ruptured and perforated a film of ordinary oil, this rendering the operation futile and necessitating the use of much more labor and material. In course of time a special blend of crude oils was evolved, one which, while inexpensive, possessed unusual tenacity and was thus eminently adapted for this unusual purpose.

During the spring and early summer months it was found necessary to give still waters and swampy areas from two to four applications of oil. The fluid was either sprayed from portable tanks similar to those used in orchards, or else simply sprinkled from ordinary watering cans. Metal drums of forty-five gallon capacity were transported in trucks and boats to convenient points throughout the territory, these serving as "filling stations" for the distribution of oil to the sprinklers. Normally, from one third to one half gallon of oil per acre was necessary for each application, the total quantity used during one season being approximately two thousand gallons.

It must not be supposed however that the war against these obnoxious insects is entirely waged on the swamps and on the sloughs. Highly skilled entomologists, working patiently in research laboratories, have devoted much time and given much thought to mosquito control problems and, incidentally, have discovered many curious facts concerning the life history and habits of these insects. For instance, it is now known that the life of an adult mosquitof of the species common to the prairies and boreal regions of Canada may extend over a period of six weeks; that each female is capable of laying from eighty to one hundred eggs; that the eggs remain fertile for over seven years and may possibly produce larvae at ten years and that, most extraordinary circumstance of all, unless the eggs have been frozen to larvae whatever may be expected from them. It is also interesting to learn that whilst mosquitoes are found in very high latitudes the insect abiding nearest to the North Pole is a small butterfly. There is little solace to the inhabitants of a mosquito plagued community in the statement that normally the insect is a vegetarian and that the taste for blood is a perverted one. It seems incredible, yet it is nevertheless true.

Is mosquito control an expensive operation?

The one answer to this question is emphatic "No". The cost of the oil, borne equally by the community, is negligible, the work, as in this instance, may be carried on by young ladies who are enterprise enough to "pay their own way" through College and University. The benefit resulting from the application of oil to swamps and shallow lakes. Ask any of the tens of thousands of auto pilgrims who, with their families, have in Greenwood camps in the Canadian Rockies, passed joyous days and sleepless nights, uninterupted by the unwelcome attentions of tormenting mosquitoes.

**FROM A FAR-OFF CORNER**

The postmarks of Peru, Panama, Chile and Colombia are stamped upon the envelopes of fat and frequent letters from readers of the "Review." Magazines and newspapers both close to home and far afield often write to ask for "second serial rights" on articles published in your house organ.

Ye editorial staff thought itself calloused to unexpected requests until one day the mailman brought along a big envelope bearing the postmark of Rome, Italy.

For the benefit of those unable to read the letter reproduced above, it is quoted here:

Rome, June 5th, 1925,
Dear Mr. Editor:

"We had the pleasure of reading in the May issue of your Magazine, current year, an article by D. M. Allan, superintendent of the Halifax Refinery, illustrating the welfare work activities of said firm.

"As you may know, our Opera Nazionale Dopolavoro is editing a Magazine LA STIRPE, which you should regularly receive, in which a large section is devoted to the DOPOLAVORO, that is welfare work subjects. Other publications are given out by our Opera Nazionale, illus- trating the welfare work activities in all countries. You will receive a copy of our pamphlet IL DOPOLAVORO ALL'ESTERO, where you will find mention of these activities in America as well as in Europe.

"We should therefore be very glad to publish Mr. D. M. Allan's writing on our Magazine, with your permission which will not be denied owing to your well known courtesy, and we ask further you to be so kind as to make a request to said Mr. Allan for photos, pictures and other elements with which to make his writing more complete and attractive. Above all we would appreciate much some photos, as it is our custom to publish a build of buildings and other things pertaining to the subject of welfare work in industrial establishments, like sports, picnics and so forth. The picture is always attractive in an article on this subject.

"Trusting to get the best reply to our demand, with compliments to you and Mr. Allan, we remain,

Sincerely Yours,

MARIO GIAMI."
HAND vs. MACHINE

SEVERAL years ago it was our custom to handle cash disbursements as follows: First, accumulate a batch of bills to be paid, see that they are correct as to price, extension, goods received, discount etc. Second, write out by hand the pay voucher. Third, copy by means of the copy press, voucher in the voucher copy book. Fourth, issue by hand the cheques covering the various bills to be paid and as attached to the voucher. Fifth, transcribe by hand on the Cash report the voucher number, the cheque number, the name of parties to whom cheques were being issued and the details. Sixth, run the Cash report through the copy press. Seventh, mail cheques to customers. Eighth, mail the voucher, with attachments, to auditing office. Ninth, mail the press copy of the Cash report to Treasurer's Office. In addition to this it was necessary to have various forms comptometer checked.

In order to eliminate what seemed to be a lot of unnecessary work, we drew up a combination Cash Disbursement sheet and Voucher, particularly designed so that it could be used on a well-known combination typing and adding machine by the use of which we write our cheques, voucher, Treasurer's Office copy of Cash report and the main station Cash report all in one operation.

The Combination Cash Disbursement Sheet and Voucher is made up in triplicate—original white, duplicate tissue, triplicate yellow. The original white is the Voucher and to this are attached bills that are being paid. This is mailed to auditor's office to be examined as to the correctness of the disbursements, as well as to be distributed into the various items of marketing cost.

The duplicate tissue is mailed to the Treasurer's Office for comptometer checking and held there to verify totals at the end of the month.

The triplicate is the main station's copy, which it uses as a posting medium.

The sheets are so designed that the cheque, when placed in position, copies right through onto the three sheets underneath as the work proceeds through the machine.

The machine for writing the cheques and sheets in one operation is so arranged that it carries an adding attachment for each quantity and value columns where separate grouping of products and expenses are desired. For instance, our main stations carry their own customers' Ledgers, and a value adding attachment is provided for same. Separate adding attachments are also provided for appropriation values, as well as Service Station Expense and a quantity as well as a value adder for our live stock feed purchases and finally another adder is attached to the machine for the expense items, chargeable to Treasurer's Office and from which Treasurer's Office make up their marketing cost figures.

The machine, in writing the sheets, carries the totals in the quantity and value columns so that when a voucher is completed, the total postings for each column show in the window of each corresponding adding attachment. These totals are filled in on the "Total Voucher Line." Next brought forward are totals from previous voucher and the final figure is "Total Disbursements to date."

In order to prove the correctness of each voucher, the value totals are listed in a special control adder on the extreme right hand of the sheets. Having done this, the control total should equal the results of the other adders, thus proving the correctness of the voucher.

The results of this change give one operation the cheque, voucher jacket, Treasurer's office copy of Cash report sheet and the main station posting sheets, all writing and figures exactly the same, fully proved; eliminating any chance of error in names, particulars, quantity or value, which were frequent in our old method.

Another step forward!

Picnic Ho! On the Bedford Basin

PRINCES LODGE was the gay spectacle of the third Annual Picnic of the Halifax Division on the 11th of July. Mr. Kelly daily officiated at the sports in his able manner and provided much entertainment for the contestants. Bedford Basin never seemed so tempting as it did on that fine, clear day and many pluvial aspirants found themselves ducking the waves before things really began.

The Committee is to be congratulated on having at its disposal a well balanced sportsman-like programme which provided much mirth and amusement. Honorable mention of the day goes to Mr. Elliott, the champion winner who won the two-twenty yard dash almost unaccompanied, and the featuring Tug-of-War successfully pulled by Mr. Murphy's team.

The refreshments were provided in abundance for seventy-five flaming heads by Miss M. Edwards, E. Bowser, Mr. G. Brady and Mr. G. Wonnacott. The final event of the day was of course the prizes judiciously selected by Miss Bracket and Miss Fraser and distributed by Miss Mahen and Mrs. Rutter.

Imagination

USE your imagination. Imagination is the eye of the mind, the power that calls up pictures of things not present, ideas not yet realized, perfections not yet attained. The painter's completed picture is in his mind before he lifts a brush or sets up his easel.

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Jottings

How to Crank Your Car Out of the Mud

Quite often we see motorists stuck in the mud, usually one rear wheel well in. In the majority of cases we see the driver doing his best to get the motor to pull the car out, while his fellow passengers are aiding him by pushing. Invariably, however, the wheel sinks deeper, the spinning wheel only serving to make the hole deeper.

The main factor is to turn the rear wheel very slowly. Now, using the engine, it is in most cases impossible to turn the wheel slowly enough. If the engine is throttled down it will stall; if running rapidly, when the clutch engages the wheels spin. The solution of the problem lies in the use of the hand starting crank. Shut off the ignition switch—be absolutely sure that it is shut off. Next, put the gear shifting lever in low gear position, or if advisable under the conditions, put it in reverse. Now place the crank in position and, in most cases, you will be surprised to find that you can crank the car out by hand much better than you can get the engine to pull it out.

The crank should be your first resort. Never attempt to get out by spinning the wheels. If you do, even the use of the crank may not get you out.

Everyday Movies

GASOLINE

Every Imperial Oil employee can be proud of the accomplishments of the company for which he is working. He can also, with a little direct effort, stiffen the organization's back bone and prove the way to bigger sales by encouraging others that Imperial Oil Limited is delivering the goods. As a vital and very live factor in the development of this company, every employee owes it to himself to see that his company keeps to the line. The series of articles on the Petroleum Industry commencing in this issue will equip anyone with much valuable information along this line.
Two horses argued:
Said one, "Your father was a donkey."
Said the other, "Before deciding, let us have a race and see whose father was a donkey."

MORAL — Action and not talk, proves us for what we are.

—from AESOP.