



"Fellows like we, who drive most all the time every day, and who must keep down operating costs to make a profit, see the big advantage of Imperial Polarine and Imperial Premier Gasoline. The more you use the car the more highly you will think of Imperial products."

### Imperial Polarine Pays Because It Saves

ANY motorist, who keeps a record of his car expenses, can quickly satisfy himself that Imperial Polarine pays because it saves—because it saves not only gasoline, new piston-rings, spark plugs and other repairs, but also depreciation.

Imperial Polarine makes a good car better, keeps the motor in perfect tune, thoroughly lubricated against excessive wear and break-downs. It provides an unbreakable oil film which lubricates every friction surface—makes a perfect piston-ring seal and saves wear on moving parts.

What grade is best suited for your car? Do you know? Look for the Imperial Polarine Chart of Recommendations, on display wherever Imperial Polarine is sold, and learn the grade specified—use this grade exclusively and get the utmost service.

Four-gallon and gallon steel cans, steel half-barrels and barrels, also steel 12½-gallon kegs—for sale by dealers everywhere. Buy in large containers to save money.

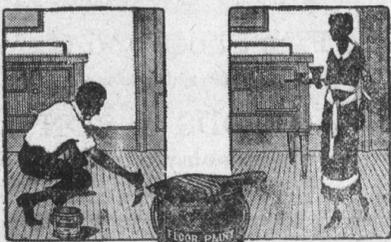


IMPERIAL POLARINE (Light medium body)    IMPERIAL POLARINE HEAVY (Medium heavy body)    IMPERIAL POLARINE A (Extra heavy body)

A GRADE SPECIALLY SUITED TO YOUR MOTOR

**IMPERIAL OIL LIMITED**  
Power · Heat · Light · Lubrication  
Branches in all Cities

## Lowe's



Paint to-day    Walk on to-morrow

Isn't it true that you would paint your floors oftener if you didn't have to keep the house upset so long waiting for the paint to dry?

Wouldn't you do it oftener if you could paint one half of the floor one day, then move the furniture over from the other half and paint that the next day?

Well, that's just what you can do with Lowe's Hard Drying Floor Paint. This fact, together with the way it stands wear and tear is the reason it is used so much on restaurant floors and ship decks.

Come in and ask for descriptive literature.

**T. DODDS & SON**

## Paints

Office Forms and Stationery at The Guide-Advocate.

### CHOOSING LUBRICANTS

Practical Advice Regarding Use of Machine Oils.

They Should Possess the Qualities of Adhesion and Cohesion—Mineral, Vegetable and Fish Oils All In Use—Planting Potatoes for Seed.

(Contributed by Ontario Department of Agriculture, Toronto.)

WHILE possibly every care and attention is given to the mechanism of farm machinery, few, if any, give consideration to the quality of the lubricants used.

The efficiency of any power is seriously affected by poor or improper lubrication of surfaces in frictional contact, indeed, it is estimated at about 50 per cent. of the available amount of energy in useful work.

The object of lubrication is not only to reduce friction, but also to carry away whatever excess of heat may be generated, for a certain amount of work will produce a given quantity of heat, but the carrying away of the heat is only an incidental condition, for heating of the bearing should not arise.

Oils for lubricating purposes should possess two qualities—that of cohesion and adhesion. Their cohesive properties lie in the character of their molecules to cling to each other, and their adhesive quality to stick to anything else. The union of these two properties make up what is known as viscosity, that is the body of the lubricant. This in a greater degree than any other factor determines the lubricating value of the oils. While viscosity of an oil determines its value as a lubricant, fluidity indicates its adaptability to any one particular machine. It is because of the struggle between viscosity and fluidity that the same oil will not do for the heavy engine shaft, and for light weight machinery. Each requires an oil with just sufficient "body" to carry the load without be-

ing squeezed out of the bearing. Beyond this condition the more fluid and easier moving the oil the better.

A thick lubricating film of good resisting body is needed for the line shaft of an ocean liner, but a drop of the same oil would put a watch out of commission.

Practically all the lubricants now in use are of the mineral oil foundation treated to free them from acid, and to improve their suitability for special purposes. Sperm oil is specially good for high speed light machinery; for heavy bearings castor oil, but both are expensive. For great pressure at slow speed lard, tallow, and other solid lubricants are suitable. If pressure is great, and speed high, castor, sperm, and heavy mineral oils are used. For low pressure at high speed, olive, sperm, rape and refined petroleum give satisfaction.

Vegetable and fish oils are drying oils, that is, they oxidize rapidly, causing gumming or clogging of the bearings to which they are applied. A mineral oil does not oxidize, neither does an animal oil. But mineral oils have a low flash point; that is, they fire at a low temperature. Animal oils develop fatty acids; these corrode and pit the metal they are used to lubricate.

Adulterants of various kinds are added to oils and greases to give them "body." Gum, soap, lime, resin, tar, soda and free acids all have their own distinct purpose to serve. Simple tests may be applied to lubricants for quality and viscosity. To test for acid saturate a bit of cotton waste with the suspected oil, and lay it open upon the surface of polished steel or brass for twenty-four hours. If steel shows even a slight corrosion or, if the brass turns green, free acid is present. To test for gummy adulterants place a drop of oil upon a piece of glass inclined at such an angle as to permit it to flow gently down. If any gum, resins or other viscosity producing elements are present, they will be apparent by the color of the oil streak, as the adulterants deposit themselves upon the glass in the form of sediment.

A good quality of lubricant will not break down, when rubbed between the finger tips, as quickly, as a poor one.

It would be economy in three ways at least to use two different kinds of oil; economy of power, of machine wear, and of oil, and in addition there would be greater efficiency.—Ino. Evans, O. A. College, Quebec.

### Planting Potatoes for Seed.

This refers entirely to the production of seed potatoes; not those intended for human consumption. The growing of seed potatoes is better divided into two sections, the early and the late. For growing early potatoes of the Irish Cobler variety the seed should be selected true to type and free as possible from any of the various diseases which affect the potato plant or tuber. These should be from 8 to 12 ounces in weight and cut up into pieces 2 ounces in weight with two eyes to the piece. They are planted about the 10th of June and are given every possible cultivation with the soil in a state of high fertility; better having been covered soil well fertilized with barnyard manure to which has been added a considerable quantity of commercial fertilizer, about 500 lbs. per acre. Thorough spraying to control leaf diseases and the Colorado beetle should be given throughout the season. For the late seed the Green Mountain or Rural New Year is used. The planting is generally done about June 15 to June 20 under similar conditions to the former. In all cases it is necessary to select a soil that does not dry out during the summer time, as potatoes for seed should not be subjected to a check at any time during their growing period.

An abundance of water is absolutely essential for thrive.

If Miller's Worm Powders needed the support of testimonials they could be got by the thousands from mothers who know the great virtue of this excellent medicine. But the powders will speak for themselves and in such a way that there can be no question of them. They act speedily and thoroughly, and the child to whom they are administered will show improvement from the first dose.

Capt. Steinhoff of Wallaceburg, has presented that town with a park and athletic grounds of ten acres within the town's limits.

## CASTORIA

For Infants and Children  
In Use For Over 30 Years

Always bears the Signature of *Chas. H. Fletcher*

Sarnia and Port Huron are growing very rapidly. There have never been such opportunities for young people who have a good training in Bookkeeping and Stenography.

The Secretarial Course in

*Sarnia Business College*

gives this training.

College opens for Winter Term, January 5th.

## PLUMBING and TINSMITHING

I have moved my Plumbing and Tinsmithing business from T. Dodds & Son's hardware store to more convenient premises 3 doors south. Your orders are solicited and will receive my best attention.

**EDWARD MACKNESS**

Phone 105

WATFORD

## SEWING MACHINES

We have a splendid range of Singer sewing machines—all priced most reasonably. You probably need a new machine this spring—come in this week and see ours.

Have you Hydro or Delco in your home?

See our Special Electric Sewing Machine. It's so pleasing and handy, attaches to any light socket and consumes very little current. Same price as other models. Come in and see it—it's worth while.

A couple of Second-hand Machines in excellent repair will be sold at a bargain to an immediate buyer.

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