

# Cylinders Reground



Cylinders ground and fitted with oversize Pistons and Rings. Piston Pins if necessary. Prices on Application.

## Automotive Grinders

R. M. CAMPBELL,  
Corner of Queen and Wellington Streets.

### VULCANIZING THAT'S OUR BUSINESS

You will be surprised by the number of miles we can put in that old Tire you thought was done.

**ALL WORK GUARANTEED**

## W. D. Johnston

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### ATTENTION! CAR OWNERS!

We have Five 2-Year Guarantee Batteries at real bargain prices. Call and let us fit you up. One 6-Volt 100 amp. regular price \$47.00; Sale Price \$37.00. Two 6-Volt 8 Amp. regular price \$43.00; Sale Price \$34.00. Two 6-Volt 100 Amp. regular \$46.00; Sale Price \$36.00.

## Burke Electric Company

74 PRINCESS STREET - PHONE 428.

### NEW PRICES ON BRISCOE CARS

4-34 Special Touring	\$1680
4-34 Standard Touring	\$1550
4-34 Roadster	\$1550

Prices f.o.b. Brockville and subject to Sales Tax.

This is a reduction of about 12% on this new model Briscoe, which is larger, more powerful, more handsome and more up-to-date in design than the former model, or indeed than any other car of equal price on the market to-day.

## ANGLIN BROS., Bay St.

MR. ROBERT W. ANGLIN, MANAGER

## WILLARD SERVICE STATION

This is the time of the year that your BATTERY needs a lot of attention. Do not hesitate to stop at the Willard Station and we will gladly look your outfit over without charge, also starting and lighting systems.

Enquire about new prices for WILLARD BATTERIES.

## I. LESSES

13 BROCK STREET, PHONE 1340.

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It's here and it is a beauty—the new "Master Four" McLaughlin Buick.

Nowadays when motor cars have been perfected to a high standard of efficiency, a sensation in any class is the exception rather than the rule.

In the new Master Four McLaughlin Buick—We have the exception.

We have the sensation.

We have a car that will out-distance all competitors in its class with respect to power, economy and easy riding qualities.

It is a wonder. Let us demonstrate and prove its ability to your satisfaction.

## Blue Garages, Limited

Thos. B. Angrove, Manager

# In the Automobile World

### MECHANICAL ADVICE OFFERED CAR OWNERS

#### Tips on This and That Are Given to the Whig's Many Readers.

If your half-inch spark plugs persist in leaking oil and compression in spite of your efforts, use a little graphite and shellac in the threads. Mercurial cement is sometimes used, as it is handier. Do not use white or red lead, as there is danger that the threads will become cemented together and will be broken when the spark plug is removed.

Be sure to keep a pail of fine dry sand in the garage near the car and do not allow it to get covered up or hidden. There is nothing better to put out a gasoline fire on the floor, but do not throw it on the carburetor. It will do no good there, but some of it will be carried up into the cylinders later when the engine is run again. Some will get into the bearings and rain them. Use a liquid fire extinguisher on the carburetor and sand on the floor. It builds up a mound of sand above the gasoline and so keeps the air away from it.

On cars having stiff clutch springs, it is advisable to cover the clutch pedal with rubber to prevent the foot from slipping. This is especially helpful in wet weather, as it also gives better control of the pedal.

Do not neglect to inspect the steering gear and connections at least once a week. See that all the parts are tight; that the split pins are in place, and that the lost motion at the steering wheel is not increasing. Your life depends more on the steering mechanism than on the brakes or any other part of the car.

Every time you grind the valves examine them carefully for the projection, which is bound to come at the lower part of the face where the valve face does not touch the seat. This will interfere with the quick seating of the valve, especially if the valve stem and guide are at all worn. In time it will also delay the opening of the valve, thus cutting down the power. As this ridge begins to form it should be removed with a file, preferably in a lathe.

#### Grease Becomes Hard.

Many car owners habitually neglect the grease cups that are ordinarily fitted to the spring shackles for the lubrication of the shackle bolts. Unless these cups are regularly turned down, the grease in the passages becomes caked and hardened, preventing the passage of fresh grease to the surface needing it. If at any time difficulty is noticed in turning down these cups, they should be removed, and the obstructing matter should be carefully cleaned out; and then they should be filled with fresh grease.

#### Cylinder Head Nuts.

The holding-down nuts of the cylinder head should be tightened periodically. If the cylinder head is taken off for any reason, in replacing the part should be tightened up again by screwing down opposite nuts. Each nut should be turned a little, then its opposite should be screwed down somewhat, and so on, working around the cylinder head. If one nut is tightened all the way there is danger of springing the part.

#### Smoky Exhaust Means Piston Leak.

There are comparatively few automobile owners who know the real reason for a smoky exhaust. Excessive consumption of oil and a smoky exhaust indicate cylinder leakage; that is, the piston rings may not fit the cylinders properly, the cylinders may not be perfectly round, but may be worn oval or one or more of the cylinders may be scored or badly scratched.

#### Sudden Stops.

Carelessness causes as many accidents to automobiles as chance and poor management put together. It's careless to stop suddenly in crowded traffic. The man behind you may not be able to stop as quickly and a rear-end collision results. Unless in an emergency, apply your brakes slowly and with just enough pressure to bring your car to a quiet stop.

#### Do Your Ears Buzz? Have You Headaches?

When your ears ring, your head aches, and you seem slightly hard of hearing, beware of Catarrh. Mr. J. A. Hammil writing from Greenmount, P. I., was similarly troubled, and writes: "No one could have worse Catarrh than I had for years. It caused partial deafness, bad taste, upset my stomach, made me sick all over. 'Catarrhosone' cleared my nostrils, stopped the cough and gave me a clear feeling in my breathing organs. I am now absolutely well, thanks to 'Catarrhosone.' Nothing so certain as a Catarrhosone Inhaler to strengthen a weak throat, to rid you of Bronchitis, to drive out Catarrh, coughs and colds. Sold everywhere, 25c., 50c., and one dollar for complete two months' treatment. Dealers, The Catarrhosone Co., of Montreal."

#### Smoke

All the rich aroma of the best Virginia leaf

### LONDON IS MOST MODERN AUTO CITY

The city of London, Ont., is imbued with the motor spirit. It compares favorably with any city on the continent, regard- less of size or population, in its motor regulation.

Signs for parking, driving, stopping, traffic officers, one-way streets—in fact, every device from a mechanical direction sign to paved roads has been installed. This is the correct attitude to take, because, although small, London is growing rapidly, and the citizens and authorities will learn to cope with the traffic problem before it has grown out of bounds.

There is a moral in this for every city in Canada.

### The Time Has Come To Clean the Radiator

This is the time of year when it is well to remember the good old method of loosening scale that has formed in the cooling system. Six pounds of washing soda dissolved in five gallons of boiling water is the correct formula. Pour this solution in the cooling system and allow it to remain for a day, then drain and flush the system out with clean water and refill.

### Hints For Motorists

Few drivers realize how important it is to change the water in cooling system every week or two. The rust accumulates and should be drawn off while it is in a finely divided form. If it is allowed to accumulate too long it collects in masses and gradually fills up the water jackets. In time the cooling water cannot reach the bottoms of the jackets and the engine overheats very readily.

Do you keep a tire log? It will help a lot when you go to the adjuster with your tale of woe. Use a small note book and give a separate page to each tire. Rule off five vertical columns. Label them as follows: Date put on, speedometer reading, date taken off, speedometer mileage. Make the partial totals in the last column and add any other information necessary, such as kind of weather, etc.

While the magnet only needs two drops of oil in each bearing every thousand miles it is well to remove the distributor cover once a month and wipe out with a cloth dipped in gasoline. At the same time pass a piece of double-ought sand-paper between the breaker points to remove any corrosion that may be forming. This will put off magnet troubles almost indefinitely.

Keep your ear attuned to any noises from the engine so that the slightest change will be noticed. A loose connecting rod always gives plenty of warning and the careful driver will notice it and stop in time. The other man wrecks his engine and piles up a big repair bill.

When following another car closely on crowded roads be ready to turn out to one side or the other when using the brakes. Sometimes they fail or do not work as quickly as you expect. If you are pointed to one side there is less danger of a collision.

### Canada's Growth Year by Year

Automobile registrations in Canada go ahead by leaps and bounds, and already thousands of motor licenses have been issued in the several provinces for the current year. With so many farmers buying automobiles and trucks, 1921 is expected to be a record year in the trade and eclipse all previous years.

The growth each year in Canada since 1907 is indicated in the following table:

1907	2,100
1908	4,711
1909	8,937
1910	21,682
1911	34,789
1912	50,489
1913	67,415
1914	87,673
1915	120,318
1916	198,739
1917	269,727
1918	332,887
1919	402,929
1920	461,600
1921 (estimated)	461,600

### Under-Inflation Fatal To High Tire Mileage

Tires are not built to take the place of steel springs or of shock absorbers. Under-inflation results in an unnatural flexing of the layers of fabric, which causes separation and early destruction of the tire carcass. If easier riding is desired oversize tires may be used, and such tires, in addition to furnishing extra resiliency, give more traction on rear wheels and supply greater mileage. However, oversize tires require a readjustment of the speedometer, otherwise the recorded distance will be less than that actually travelled.

#### Clean Fuse for Flicker.

When the lights flicker, a cause may be a corroded fuse. Electrical connections will corrode. They should be cleaned now and then to maintain efficient service.

### INDUSTRY SPEEDS SCIENCE OF STEEL

#### Metallurgy Is Seeking New Metals to Aid Auto Manufacture.

In no other industry are the demands for high-grade steel so great as in the automobile industry. In no other industry are the intricacies of the science of metallurgy so studiously applied as in the manufacture of automobiles.

The slow-speed internal combustion engine and the easy-going horse-drawn vehicle of a few decades ago could be constructed of ordinary steel. The combination of the internal combustion engine and the carriage into high-speed, self-propelled vehicle necessitated light-weight parts of great strength and wearing qualities.

Fortunately all branches of science tend to keep pace with each other, and when such high-grade parts were demanded the metallurgical world was ready with extraordinary alloy steels, such as nickel steel, chrome nickel steel, chrome vanadium steel and uranium steel. These metals which a few years ago were classed as semi-rare, are now used by many firms.

To the casual observer it might appear that but little more could be expected from the metallurgical world in connection with the automobile industry. But the end is not yet. The future holds much for us. Many of the metallurgical features of the modern automobile are soon to be superseded by improvements.

### Business Recovery Aided by Trucks.

Work which trucks are doing every day in rural delivery work and in rural express, and the work of every truck in large cities, is educational. As the use of the motor truck spreads, as the business men of Canada learn the real value of trucks in their business, and as the farmers come to realize that with the pneumatic tire anything is possible with a motor truck regardless of roads, the business will have a natural increase which will be enormous in itself.

### Defy Darkness With Trouble Lamp.

There should be a trouble lamp with a good length of wire as an integral part of the car.

The most important aid a trouble lamp could give would be to light a wheel for tire changing. One with a magnetic base exists. The current which lights the lamp magnetizes a little iron button in the bottom of the socket, so that the lamp can be stuck against any steel part of the chassis and will hold itself there. Failing this refinement, a little screw clamp could easily be designed which would fit on almost anywhere.

### Compression Gauge.

The shell of an old spark plug, in conjunction with a tire gauge, makes a very handy compression tester. The porcelain of the plug is removed, and a washer fitted at the bottom. The gauge is next inserted and the packing tamped in around it. The packing nut forces the packing down around the base of the gauge, until a perfectly tight joint is made. This instrument is screwed into the spark plug hole and when the engine is turned over by hand the compression is registered in pounds.

### Sand for Fires.

The usually recommended substance for putting out gasoline fires is sand, which certainly has many advantages. Equally efficacious for the purpose is sawdust, particularly if it has been soaked in carbonate of soda. The sawdust floating on the liquid prevents air from reaching the fire, and also a certain amount of carbon dioxide is generated. White sawdust is nominally combustible, in reality it burns slowly at best, and actually discourages the rapid spread.

### Play in Main Shaft.

Excessive play in the main shaft of the gearset may cause the gear shifter lever to be forced out of position. Usually the front bearing on the main shaft is shimmed, so that the condition is easily remedied. End play in this shaft also may be the cause of chattering in the clutch and a bucking when the car is on a grade or otherwise pulling hard under load. If this is not corrected in time the shaft play may cause permanent injury to the gears.

### Crankhandle Knock.

An obscure cause of knocking was recently discovered in a crankhandle, which stuck so that the log at the end touched the ratchet on the end of the crankshaft. In this way the two parts would strike as the crankshaft turned over, causing an annoying knock.

### Japan Likes Sedan.

Closed passenger automobiles are preferred in Japan, especially for private use, on account of the dust in the streets, and also because the Japanese women do not wear hats, and their carefully-arranged coiffures suffer considerably in open cars.

### Grease Stops Short.

Moisture gathering on the exposed part of the porcelain of the spark plug will often cause irregular firing. This trouble may be cured by greasing the porcelain with gasoline or hard grease.

Try and keep your requirements in subjection to the limits of your purse.

## Vulcanizing Done Right

That's the way we do it and our prices will please you too. Call and give us a trial order. MICHELIN TIRES—all sizes always in stock.

## ATTWOOD & DINE

277 BAGOT ST. Phone 410w.



### Tires You Can Depend on Always

Our tires are day and night tires, fair and foul weather tires, tires that will give you 100 per cent. service and satisfaction at all times, under all conditions. Made with smooth and non-slip treads, all standard sizes. Next time you want a tire try us.

## Suddaby Bros.

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## Equip Your Car With a RAY Battery

Come in and let us demonstrate to you the extra good qualities of this Battery.

Battery Repair Work of all kinds given first-class attention.

## M. LAWSON

Auto Battery Expert PHONE 275. 110 CLERGY STREET.

## FORD PRICES Effective Sept. 3rd, 1921

Roadster	\$558.00
Roadster, with starter	\$645.00
Roadster, Light Delivery	\$586.00
Roadster, Light Delivery, with starter	\$674.00
Touring	\$609.00
Touring, with starter	\$696.00
Coupe	\$951.00
Sedan	1,053.00
Light Chassis	\$514.00
Light Chassis, with starter	\$599.00
Truck Chassis	\$662.00
Truck Chassis, with starter	\$749.00
Tractor	\$775.00
Governor	55.00
Pulley	40.00 870.00

## VanLuvenBros.

Phone 1609. 34-38 Princes Street.

## H. APPLETON

Announces the opening of a new Plumbing and Heating Establishment

417 PRINCESS STREET—OPPOSITE ANDERSON BROS. Prices on contracting and all kinds of job work furnished. Give us a call. Phone 524w.

## SLATEX SHINGLES AND ROOFING

is the best on the market. Also Ru-Ber-Oid Wall Board. Make us prove it. See our window display!

## W. H. COCKBURN & CO.

Corner Wellington and Princes Street. Phone 316.

## MATHIEU'S SYRUP OF TAR & COD-LIVER OIL

### CURES

Coughs, Colds, Grippe, Bronchitis, Whooping Cough, Asthma, Etc.

MATHIEU'S SYRUP is a sovereign tonic combining the curative properties of TAR and the strengthening virtues of COD LIVER OIL.

Colds, when neglected or badly treated give rise to consequences of such a grave character that you should not risk using inferior preparations.

MATHIEU'S SYRUP is the only genuine remedy whose reputation has caused to crop up many imitations of doubtful value.

**ON SALE EVERYWHERE**

His in Valves. The first hint of leaking valves is a hissing sound in the cylinders when compression occurs. The best method of following this clue is simply to turn over the crankshaft slowly, listening meanwhile to determine the location of the leak.