

USEFUL HINTS FOR AUTO-WHEEL OWNERS.

By A. MILNES POOLEY, Managing Director of Auto-Wheels Ltd.

MANY people think that if an engine does not develop proper power it should at once be taken to pieces. This is very wrong, so do not do it. Owners may be divided into three classes:—(1) Those who never do anything except to fill with oil and petrol; (2) those who are always taking the engine to pieces and tinkering with it; (3) those who keep the engine in good condition by just a little attention to small details.

I will endeavour to show the reader how to become a member of the third class. Always keep the engine clean. This is most easily done by means of a brush and a small can of paraffin, and if carried out shows that interest is taken. During the process of cleaning, any nut, bolt, or screw that is loose will probably be noticed and adjusted. If a detail like this were left it would most likely cause a dead stoppage. In tightening up the nuts take care not to use brute force, but firm pressure only.

How to Test the Constitution of an Auto-Wheel Engine.

Open the control lever to full speed, raise the Auto-Wheel off the ground by the left-hand, taking the spokes of the wheel in the right hand, and see if



Testing the compression.

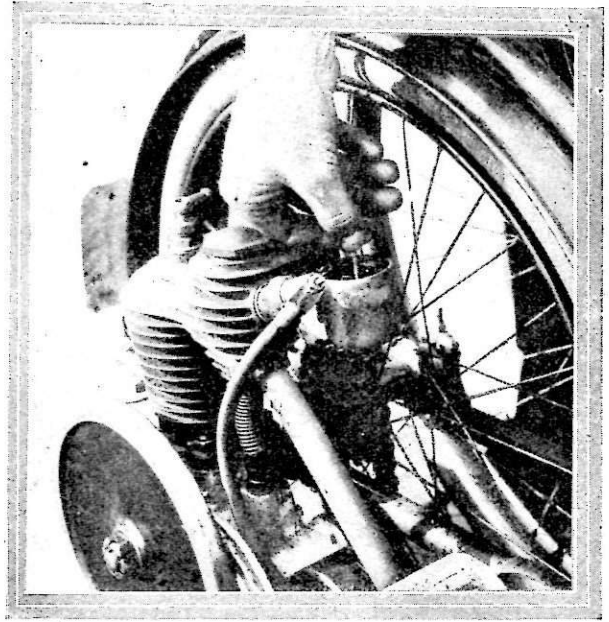
the engine offers stiff resistance. If so it indicates that the compression is good. If it is not good, grind-in the valves, and should this not put the compression right new piston rings are required. If the compression is good and the engine does not pull well, test the clearance between the tappet cap and the exhaust valve stem, the control lever being set at full speed.

This should not exceed the thickness of a visiting card. If the clearance is too great it can be adjusted by placing a thin piece of tin between the top of the tappet rod and cap.

After having satisfied yourself that this adjustment is in order and there is still no improvement in the running, the engine is probably getting too much petrol. Unscrew the cover on the carburetter and test the movement of the float needle; this should

not exceed 1-32nd of an inch. If it does, put a thin washer over the needle valve so that it rests on top of the float and under the needle valve.

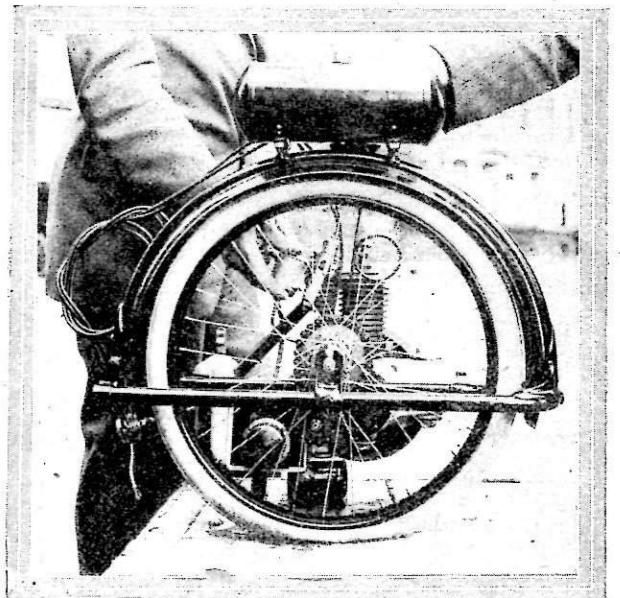
It is advisable to clean the float chamber, say, every 1500 miles in spite of the petrol filter, which



Feeling for movement in the carburetter needle.

is incorporated in the petrol tap; water and dirt collect in the bottom of the float chamber, and unless removed, sooner or later will cause a blocked jet.

Make sure your carburetter is fixed properly and is not twisted: the barrel in which the Bowden wires fit should be vertical and not as illustrated



The carburetter should always be exactly vertical
The photograph shows it badly twisted

Useful Hints for Auto-Wheel Owners (contd.)

Lubrication.

This is the most important detail. After the first 200 miles on the road the Auto-Wheel engines will run from 100 to 150 miles on one charge of oil. Too much oil is almost as bad as too little. It makes the valves sticky, fouls the sparking plug, and carbonizes the cylinder head and piston.

If the engine floods with oil, release the lock-nut with a spanner, and by means of a screw-driver turn the adjusting screw to the right (see below) as far as possible, then turn the adjusting screw to the left nearly half-a-turn—this should give the correct adjustment. If the engine still over-lubricates, again adjust, but release only a quarter-turn.

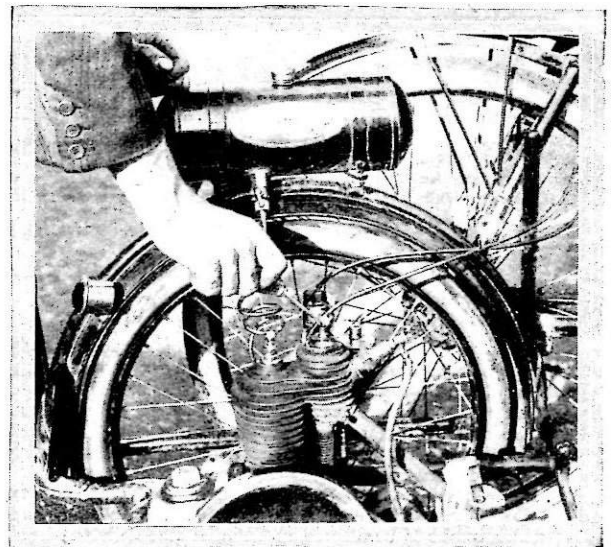
A good tip is to keep your oil reservoir always as nearly full as possible.

Gear Ratio.

"Standard" machines have in the past had an engine gear ratio 6 2-3 to 1. My company have recently decided to produce as standard a much lower geared engine, namely, 8 1-3 to 1. This gives far greater hill-climbing powers, improved control in traffic, and greatly increased acceleration, without any consequent loss of speed on the flat or increased petrol consumption. This change is brought about



Adjusting the oil screw.



A few drops of petrol will always release a sticky inlet valve.

by increasing the number of teeth on the chain sprocket road wheel, and the change can easily be incorporated in the earlier types. The lower gear ratio has been adopted as standard this month.

It should be borne in mind, however, that with this low gear the oil adjusting screw only requires to be released about $\frac{1}{4}$ th of a turn. Another good tip is to put two teaspoonfuls of lubricating oil in the petrol tank.

A detailed improvement is a lubricator cap in the inlet dome; a few drops of petrol here will release a sticky inlet valve; this, together with a few drops in the compression tap, will make starting the easiest thing possible.

Always keep the chain adjusted, and take care when making this adjustment that the chain wheels are perfectly in line, otherwise a broken chain will result. Chain wheels *must* be in line.

Tyres.

The life of a tyre is several thousands of miles, provided it is driven quite soft. A highly inflated Auto-Wheel tyre wears out very rapidly. Ninety-nine per cent. of tyre troubles are due to inattention to this detail. Do not drive at full speed on very bad roads.

My company are always at the service of owners to explain any detail which is not clearly understood.

Avon Successes in the Six Days Trial.

Taking into consideration the extreme severity of the English Six Days Trial, it is interesting to note that machines fitted with Avon tyres secured three gold medals, one bronze medal, and the sidecar cup. The fact that these tyres were untouched throughout the trial is a striking testimony to the strength and reliability of Avon manufactures.

Gold Medals for Palmers.

The Palmer Tyre, Ltd., ask us to announce that they now find that, in the Six Days Trial, users of Palmer tyres were awarded six gold medals and one bronze, not five gold, two silver, and one bronze, as stated in their advertisement last week.

Success of Chemico Oil.

The new motorcycle oil which the County Chemical Co., Ltd., of Bradford Street, Birmingham, have recently introduced has not been long in justifying the claims for efficiency put forth by its makers. In the Calthorpe Trophy Trial P. Pike, who secured the 100-guinea trophy and gold medal, was using the new Chemico oil, as also was J. Veasey, who was second, both riders being mounted on Levisettes, while in the Scottish Trials the Ariel team pinned their faith on Chemico. We have not as yet had time to give this oil an extensive test, but on the few occasions that we have used it, it has given satisfaction.

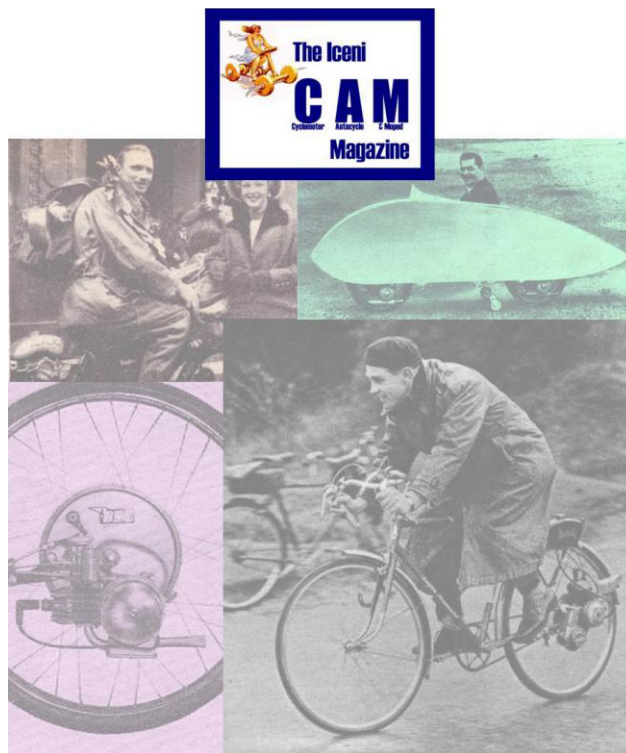
Valuable Prizes for Motorcyclists.

Our readers will remember that valuable prizes are being offered for the best name for Chemico oil, which is provisionally known by that title. Suggestions for a name should be sent at once to the County Chemical Co., as the competition closes on 31st July.

M.A.G. Successes.

M.A.G. engines had a day of successes at the M.C.C. meeting at Brooklands last Saturday, gaining no fewer than seven firsts, four seconds, and four thirds. In the team race, in particular, they were successful, for every machine in the arriving team was fitted with the M.A.G. engine. By the way, the report that the designer of these famous engines has joined another firm is unfounded.

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