

# In the Automobile World

## SOME MECHANICAL HINTS

**Pipeclay acts as a preservative of rubber and makes one of the best mediums for treating the rubber mats used in automobiles. Oil and grease are rubber solvents, and ruin the floor mats if they are allowed to remain on them. The mats should be wiped quite dry and then be pipe-clayed. The pipeclay dries and sucks the oil out of the rubber.**

**Cleaning the Radiator.**  
If the radiator is clogged up it should have a thorough cleaning. As a general rule this job should be handed over to a firm that specializes in this sort of work. When it is mentioned that sometimes as much as four pounds of muck will be taken out of a single radiator the reason why special treatment is necessary is shown.

**Fan Belt Fastener.**  
At each end of the belt to be joined make a number of separate wire loops running at right angles to the end of the belt. When the ends thus

are fitted are brought together the alternately loops form a passage way through which a small thing is passed. This thing becomes notched with services so that it does not slip out.

**Smooth Belts.**  
When the leather fan belt develops considerable slippage, it is probably because the rough inside of the leather is against the pulley surface. The smooth side of the leather has a much greater traction adherence.

**Ammeter Trouble.**  
If the ammeter does not register "charge" when engine is running at normal speed consult the repair man immediately. If you are handy at cleaning the commutator of the generator or adjusting the regulator, etc., all well and good, but do not delay or attempt to experiment.

**How to Straighten Axle.**  
A method of straightening a front

axle that has been bent in a vertical plane is to take two lengths of four by four inch joists long enough to reach from the upper side of the axle just outside of each spring plate to a cross timber of the ceiling or roof of the garage. Then if the jack is placed beneath the axle at the bend means of pressure may be applied by means of it to force the axle back into shape.

**Rust Easily Removed.**  
To remove rust, make a solution of one part sulphuric acid to ten parts water and dip in it the parts from which it is desired to remove rust. Next dip them in a bath of hot lime water and keep them in it until they have become so hot that they dry immediately on being taken out. Then rub the parts with dry bran or sawdust and they will be found to be perfectly clean and may be painted with fireproof paint, blued or nickelled.

**Adjusting Needle Valve.**  
If you are in doubt as to which way to turn needle valve, try choking the carburetor slightly. If the engine speeds up the mixture is too lean; if it slows down the mixture may be right, but you are making it too rich. If an air valve is accessible, try pushing that open a slight amount. If engine speeds up the mixture is too rich; if it loses speed the mixture is correct or too lean.

**Spark Plugs Costly.**  
Spark plug spaces are frequently injured while being carried in the tool box. An excellent method of guarding against this is to slip each plug into a section of rubber hose, closing each end up with a bit of waste to prevent the plugs working out.

**Getting More Speed.**  
When it is desired to get more speed into an old car one of the operations necessary is to change the gear ratio of the rear axle. Racing gear use less than three-to-one reduction, and this change can be made in the ordinary stock model by fitting a new differential ring gear and drive pinion, which can be obtained from the maker of the car.

For the convenience of tourists without motor cars, a motor bus line is operated through the Yellowstone National Park in Wyoming, making a complete tour of the park roads. Motor tanks are used in Switzerland by tourists in mountain climbing.

**USE OF TRUCKS MEANS LESS COST.**  
The growing importance of the motor truck in the transportation field is shown by figures recently compiled. According to the figures, the 975,000 trucks now in use haul approximately 1,100,000 tons daily, or 330,000,000 tons in a year of 300 working days. It is estimated that if the tonnage carried in trucks had been carried in wagons as formerly, the extra cost would have amounted to approximately \$1,000,000,000, the cost of truck hauling being figured at 18c per ton mile, and wagon hauling at 24c per ton mile.

## MOTOR TRANSPORTATION

A most daring idea in motor truck transportation is being promoted for the island of Wales. This is the "25-mile hop" scheme, and its cost is put at \$30,000,000.

Under this plan all drivers are to do a 25-mile stage and then drive back again. The motor truck may do 200 miles or more, but no one driver more than 25 miles. England and Wales will be split up into sixty equidistant freight points, each one approximately 1,000 square miles. This will take in all of England and Wales, whose combined area is slightly in excess of 58,000 square miles.

In the centre of each 1,000 square mile area is to be a garage with a freight dump in charge of a clerk responsible for the collection and delivery of all freight relative to his area. If the freight is to be delivered outside this 1,000 miles, it will be placed on the main service route running through or taken to one of the four freight dumps at the corners of his area, depending on the destination. In charge of the four corner stations will be four freight clerks.

There are to be 29 main service routes. Trucks will run on these night and day, and it will be possible for a truck fully loaded to leave Liverpool at eight o'clock in the morning, and by 25-mile hops arrive in London by midnight. Each area is to have its own collecting and delivery trucks, and at the termini square trucks will be ready, loaded up for the next journey, so as soon as one truck comes in the driver transfers to the loaded "spare" and goes back along his own 25 miles of road.

"Efficient operation of this 30,000,000 truck transportation system will necessitate the running of every truck on absolute schedule time. The Driver under the Hood, a device which holds a truck to any predetermined speed desired at all times, may be utilized to keep the trucks running with regularity. The high standard of efficiency of truck operation has proven that a fleet of trucks can be run on schedule time as easily as railroad trains are.

## SAVE GASOLINE IS GREAT NEED

Increasing Number of Vehicles and Price of Crude Oil Demand Economy. New York motorists, through the Dealers' Association and the National Automobile Chamber of Commerce, are urged to conserve gasoline and to co-operate in every way possible in the movement which will be launched to reduce gasoline consumption.

"The present situation is not critical," says an official, "but it may become so if steps are not taken to stop fuel wastage. The constant rise in the price of crude oil is forcing up the cost of gas, and the best possible method of combating this increase, particularly with automobile sales mounting the way they are, is to practise economy. "I think that motorists everywhere will agree that the adjustment of their carburetors, which is suggested as the first move in the campaign, should be undertaken at once; and I believe that a flat rate for the service would lead the vast majority of drivers to have this done. "All car owners will be requested not to permit their engines to remain running while the vehicle is waiting for them. While this appeal will be addressed especially to the drivers of trucks, who are thoroughly guilty because of the lack of starters on the machines, it can also be read and acted upon by the owners of passenger cars. "With the price of gas where it is, there can be no reasonable excuse for letting the engine run in a touring car or runabout, because such dereliction costs us all money."

**Misfiring from Air Leaks.**  
Air leaks are a common cause of misfiring, though they are often overlooked. A worn valve guide allows enough air to be sucked into the cylinders to cause misfiring, and it also permits oil to leak out. If oil is discovered leaking out it is fair to assume that excess air is being injected into the fuel charges.

**Cement for Autos.**  
Four parts of iron filings two of lime, a fifth part of common salt, mixed to a paste by the addition of vinegar, makes an excellent cement for spark plugs, for connecting pipes, etc. When properly compounded, this cement will withstand compression and heat and can be air dried.

A fifty-year charter was granted by the city of Buenos Aires, S.A., to a motor bus company to operate four lines from the centre of the city to suburban points.

Gasoline in Italy is obtainable in restricted quantities only, at the rate of approximately fifteen gallons a month for an automobile of 15-horsepower.

**STANDARD TABLE OF TIRE PRESSURE.**

In order that readers of the automobile section may know the correct amount of tire pressure to carry in tires, a standard table for all makes of tires is printed:

Rim Size	Inflation
28x3	60 lbs.
28x3 1/2	60 lbs.
32x3	70 lbs.
34x3	70 lbs.
29x3 1/4	60 lbs.
30x3 1/2	60 lbs.
31x3 1/2	60 lbs.
32x3 1/2	60 lbs.
34x3 1/2	60 lbs.
36x3 1/2	60 lbs.
38x3 1/2	60 lbs.
30x4	70 lbs.
31x4	70 lbs.
40x4	70 lbs.
34x4	70 lbs.
35x4	70 lbs.
35x4 1/4	70 lbs.
32x4	70 lbs.
33x4	70 lbs.
34x4	70 lbs.
35x4	70 lbs.
36x4	70 lbs.
37x4	70 lbs.
32x4 1/2	70 lbs.
33x4 1/2	70 lbs.
34x4 1/2	70 lbs.

## WORLD WIDE MOTOR ITEMS.

Russia has one automobile to every 5300 inhabitants. Motor vehicles increased 1700 per cent. from 1909 to 1918.

Siam purchased 79 motor vehicles from Uncle Sam last year. Motor hearses are licensed as passenger or "pleasure" cars in Ohio.

The New York National Guard is authorized to form a motor tank unit. British motor manufacturers are booking orders for 1924, 1922 and 1923.

United States foreign trade in automobiles and tires during 1919 covered 94 different countries. The retail price of gasoline has advanced four times since the middle of January.

In 1902 there were but 220 motor car owners in Canada. Registrations for 1919 totalled 324,886.

German helmets are being used as the base of roadway instead of cobblestones near London, England. Tennessee leads the country in increase of motor-car registration.

The Society of Automotive Engineers will hold its summer meeting at Ottawa Beach, Michigan, June 21 to 26.

St. Louis, Mo., will have a manufacturing plant for the production of gasoline-propelled railway cars. Close on to 20,000 motorists, representing nearly every State in the Union, visited the Province of Quebec last year.

Long distance motor truck freight service is extensively patronized by department stores in New York and Philadelphia.

For repairing automobiles along country roads, traveling machine shops carried on motor trucks are operated in England.

Materials for the construction of automobiles have averaged an increase of approximately 35 per cent. in the past six months.

The World War revealed the fact that one man of every ten in an efficient army must be proficient in automotive engineering.

Investments ranging from \$1,000,000 to more than \$2,000,000 are made by security corporations in this country in motor truck lines.

Of the \$2,460,529 collected from New York City in motor fees last year, \$1,322,907 went to the State for use in road maintenance.

Because of shortage of railroad cars, more motor vehicles are being delivered this year under their own power than at any time in history.

With the enormous increase of automobiles in Paris, the most difficult problem is an adequate number of garages in that city.

By assembling a complete car in less than half an hour, one automobile industry in the United States plans for a production of one million cars for 1920.

**What Case.**  
Teacher—"Sammy, in the sentence 'I have a book,' what is the case of the pronoun 'I'?"  
Sammy (promptly)—"Nominative case."

Teacher—"Next boy, tell me in what case to put the noun 'book'?"  
Next boy (thoughtfully)—"Book-case."  
—Christian Guardian.

## PILES

Do not suffer another day of itching, burning, bleeding, or prostration. No surgical operation required. Dr. Chase's Ointment will relieve you at once and as certainly cure you. 50c a box; all dealers or Edmundson, Bates & Co., Limited, Toronto.

## Solids and Pneumatics

Tires have gone up once this season and in all probability there will be a further advance. Buy now and take no chances. We carry a full line of Silvertown Cords, Gutta Percha, etc. We are prepared to take care of your Hard Rubber difficulties and can apply these tires at once.

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