

REMOVE CARBON FROM AN ENGINE

Oxygen Method of Burning Out Is Applicable to Nearly All Contrivances.

HAND SCRAPING IS SUREST

In Use of Liquid Decarbonizers No Direct Indication Is Given at Time of the Effectiveness of the Treatment.

When an engine becomes carbonized to the point that premature ignition occurs as evidenced by the occurrence of the "carbon knock" the deposits must be removed and the removal of the incrustations by hand scraping is altogether the surest method, most authorities agree.

Engines having detachable cylinder-heads can be cleaned by scraping with the greatest facility, but those that have not often require expensive disassembling to enable a thorough scraping to be performed. Still by the use of specially adapted scraping tools most engines having valve openings of liberal diameters and cylinder-head plugs can be pretty well cleaned without their being taken apart.

The oxygen method of burning out deposits is applicable to nearly all engines with cast-iron pistons and is fairly thorough in its results. When oxygen is applied until no further combustion can be obtained in any part of the compression space it is certain that the cleaning is complete.

This process requires no disassembling of the engine and can be performed very cheaply if the owner can obtain the use of the necessary outfit to do the work himself and pay only for the oxygen used. In the use of liquid decarbonizers, no direct indication is given at the time of the effectiveness of the treatment, as is the case with hand scraping and the oxygen method.

In order to be sure that a thorough cleaning has been accomplished a valve cap or two should be removed before the application is made and the thickness of the deposit upon the inside of the cap and on the accessible parts of the valve chambers should be noted.

Engine Not Always Clean. If, after the decarbonizer has been applied, these parts are found to be clean, it is presumptive evidence that the piston heads and other not readily accessible internal surfaces are also free of deposits. Unless these precautions are taken it sometimes happens that even though later examinations show the decarbonizer to have had but little effect, the owner being in a state of mind to expect the best results, thinks that his engine is clean when this is not the case.

OPENINGS IN HOOD OF CAR IMPORTANT

Louvres Keep Temperature at Point of Greatest Efficiency.

Slits in Sides of Metal Hoods Are Not Fad of Automobile Designer—Absence Means Back Pressure on Radiator Fan.

In the mind of more than one man who owns and drives his own motor car the slits cut in the sides of the metal hood are purely a fad of the automobile designer, and excuse their existence by making a rakish looking bonnet. Judging from externals, it might seem that this is the case, since in a number of automobiles the hood openings, or louvres, either have lost caste completely, or have been so reduced in number as to lose any bit of significance.

The louvre, nevertheless, is rather an important factor in keeping the motor temperature at a point that permits the car to operate at its greatest efficiency. The air that has warmed in passing over the engine finds its exit to the outer atmosphere through these openings, and in this way opens a path for a constant stream of fresh, cool air above the working parts.

The absence of louvres, or the presence of only a limited number, means a back pressure of warm air on the radiator fan. On the contrary, it follows that the greater the number of louvres the greater will be the velocity of the unwarmed air flowing under the bonnet.

In many parts of the country, where temperature conditions do not require the utmost of cooling systems, attention to this detail of cooling system construction is a matter of little consequence. However, in hot, dry regions, motor cars must travel on their cooling systems as well as on their fuel tanks, and every item that points the way to a better radiator system deserves at least a passing notice from the motorist.

Useful Palm. In the lowlands of the delta of the Orinoco river the natives build huts suspended between trunks of *Mauritia flexuosa*, a palm. They also eat its fruit, its farinaceous pith, its succcharine juice, and use the fibers of its leaf stems for making ropes, hammocks, etc.

SPEED MANIA CONFINED TO RACING TRACKS



DARIO RESTA, AMERICA'S FOREMOST DRIVER.

Dario Resta's speed mania is confined to the racing tracks. The speed king is a champion in more than one form of sport.

As a racing driver he has stood supreme for years. In 1911-12 he was the international figure skating champion. He is a strong advocate of "sport for sport's sake," and practices what he preaches.

Exercise Is Necessary. In giving his views on sports and athletics in general, Resta says: "To keep the body and mind well, every man and woman needs a certain amount of physical and mental recreation. But they should not overdo them. They should not go to it as though everything depended on their putting into such physical and mental recreation all the energy they possess."

"My favorite game is golf. I never went in for the strenuous game of speed skating. I derived all the exercise I needed from the same branch of the sport."

Soap Berry Tree. The jaloneclo or soap berry tree grows in the humid parts of western Ecuador. It attains a height of about fifty feet and has wide-spreading branches and immense quantities of fruit of the size and shape of cherries. The nearly transparent yellowish skin and pulp surrounding the round black seeds are so saponaceous as to be used instead of soap by many people of Ecuador, being equivalent to more than fifty times their weight of that material.

Test of a Good Husband. Our position is simply this: That no man is a good husband who doesn't notice when he comes home that the sitting-room curtains have been moved to the dining-room.—Dallas News.

Queen of Hearts. The name, Queen of Hearts, was given in the low countries to Elizabeth, daughter of James I and the unfortunate queen of Bohemia. When her fortune was at its lowest she never lost her dignity of spirit, and poverty and distress only rendered her the more an object of admiration.

Youthful Mothers. Some of the world's notables have been born of parents well over thirty years of age. Conversely great numbers of them were born of youthful mothers. Abraham Lincoln's mother was only twenty-five at the time of his birth. Napoleon the Great was born of parents twenty-three and nineteen years of age, respectively. The mother of Pasteur, undoubtedly the greatest genius France has yet produced, was under thirty, as were the mothers of Herbert Spencer, Michael Faraday and John Stuart Mill.

Mushroom Is Old. The antiquity of the mushroom's establishment in history may be read both in the Bible and the treaties of the Talmud. The fungus that saved the Israelites has been identified as a mushroom of commerce, growing in its natural wild condition.

Getting Some Place. "See how easy it is to get nowhere," said a man in a car. "The man that makes the most of his opportunities is the man that makes the most opportunities for later years."

BATTERY STANDS SEVERE WEATHER

Discharged One Will Freeze at Temperature of 20 Degrees Above, Says Expert.

FREEZING WILL BURST JARS

Test Should Be Made With Hydrometer at Intervals of Two Weeks or Less—No Set Rules Can Be Given for Care.

The storage battery should be kept fully charged during the winter, according to E. V. Collins, instructor in steam and gas engineering in the Kansas state agricultural college.

"The charged battery," said Mr. Collins, "will stand very low temperatures while a discharged battery will freeze at 20 degrees above zero. Freezing will burst jars, and as a result the battery must be rebuilt."

Battery in Cold Weather. In cold weather the starting battery is especially likely to become discharged. The engine is difficult to crank because the oil is cold. It must also be cranked longer each time it is started because the gasoline does not vaporize readily in cold weather. Long trips are few and the charging periods are shorter. The lights which are needed earlier in the evening help in discharging the battery.

"The battery should be tested with a hydrometer at intervals of two weeks or less. If it is found to be discharged, it should be charged as soon as possible either by driving the car or from an outside source."

No Set Rules Given. "The conditions under which cars operate vary, and there are so many starting systems that no set rules can be given for the care of the storage battery. If the starter turns the engine with difficulty, the motor should be cranked by hand when starting on a cold morning. The engine may be made to start more easily by priming it through the priming cups or by pulling the choke when it is stopped. The lights should be turned on only when necessary and in many cases the dimmers may be used to save the current."

TALCUM BLOWERS ARE HANDY

Essential That Chalk Be Thoroughly Distributed Over Inside Casing of Tire.

When replacing the tubes it is essential that talc or French chalk should be thoroughly distributed over the inside of the casing. This operation is greatly facilitated by the use of a small blower such as is used for spraying insect powder. A blower of this kind may be obtained in any drug store, and its use results in the talc being evenly distributed all over the inside of the casing, a very important matter.

MATERIAL FOR WIND SHIELDS

"Super-Glass" Made by Welding Layer of Transparent Celluloid Between Glass Sheets.

A material known as "super-glass" used in making automobile wind shields is made by welding a layer of transparent celluloid between two sheets of plate glass. If struck by a heavy object super-glass will crack but the occupants of the car will not be injured by flying splinters.

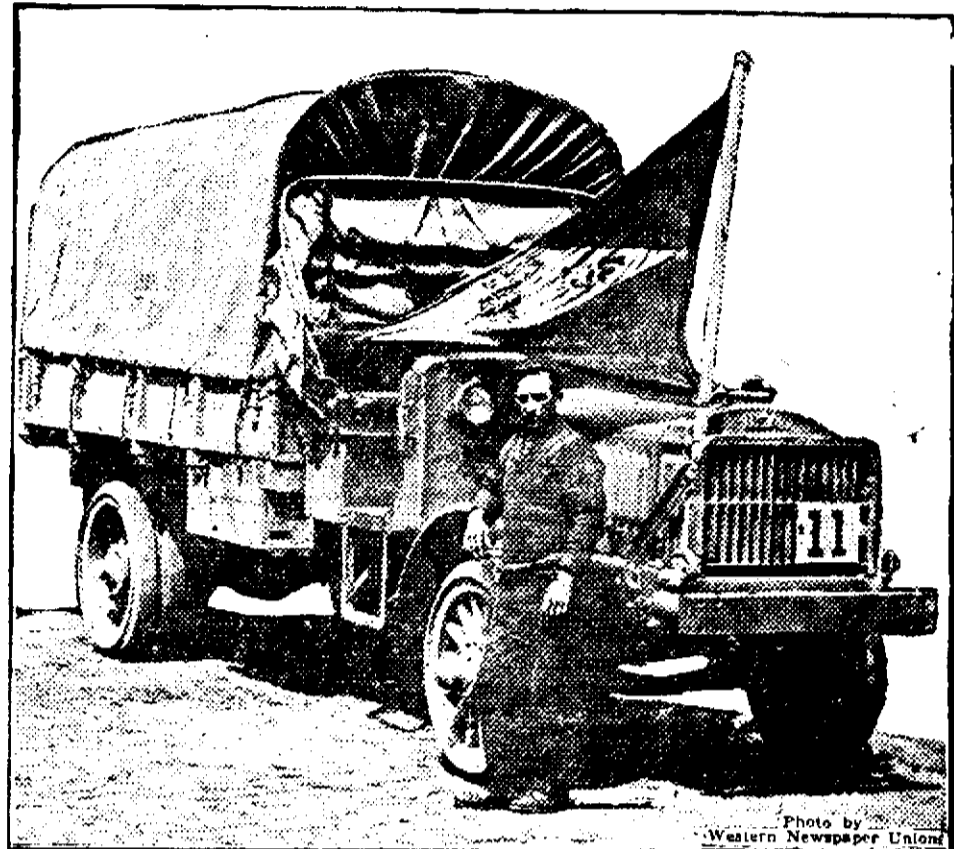
WRAP TOOLS IN OILED CLOTH

Prevents Implements From Becoming Rusty When Stowed Away in Tool Compartment.

It is an admirable idea to wrap good tools, such as drills, wrenches, etc., in oiled cloths before stowing them away in the tool compartment. The oiled cloth prevents the implements from becoming rusty, which is quite likely to happen in the course of a strenuous season's raining.

Etiquette. There is an ancient saying that "One should never speak of a rope to a man whose father was hanged," and there is a great deal implied in those few words. In effect, it means that subjects of conversation should be carefully introduced where persons present are not known to a certain extent; that is, that nothing untoward has happened, publicly, at least, that would make any unusual subject apply too openly to anyone especially.

MOTORTRUCK EQUALS 20-MULE TEAM IN HAULING LOGS ON THE PACIFIC COAST



ONE OF THE MODERN "LAND SCHOONERS."

What the motortruck can accomplish both in matter of hauling and in the way of economy may be judged by a letter from a logging concern on the Pacific coast. This letter was not of the publicity sort, intended to influence buyers, because it was sent by an employee to an officer of the concern in making a report on the work of the truck:

Get Away From Teams. "Before we got our truck it took about 30 teams to keep our mill oiled, and a short while after we bought our truck we cut our mules down to 25 head, keeping a few teams on the road hauling to the mill and some in the woods bunching the logs for the truck, but we are gradually getting away from teams altogether. Last week we sold 8 head, and are going to put on another truck, keeping only enough stock to bunch the logs and bring them out to a convenient place for the truck."

WINDSHIELD CLEAR OF SNOW

Alcohol Added to Cleansing Water Will Aid as Preventive in Keeping Moisture Away.

Frost, dew, snow or rain on the windshield of an automobile is dangerous. Alcohol added to the cleansing water will aid as a preventive. If the shield and windows in the car do not need cleaning apply a coating of three parts of alcohol and two parts glycerin and rub to a polish. This is especially useful in closed cars.

Citizen Want Ads Are Best.

"We have been loading our logs on the truck with skids and ropes, same as you would load log wagons, and it takes us about 30 minutes to load the truck. But we are now figuring on a drum that will be operated by the engine, and are expecting any day blue prints and specifications for the drum that we purpose putting in. We are quoted a probable cost of \$500 for the drum, and this is something less than a team of mules would cost.

Cost of Hauling. "The difference in cost of operating the drum and what it would cost to feed a pair of mules would pay for a drum in a short while. You can make no comparison of the cost of saving by hauling with truck and teams, for the difference between the two will pay for a truck in a short while and the only mistake we think you could make would be in your selection of trucks."

Chicken Mystery. Pearl and Stanley, six and four, respectively, had buried a dead chicken in their garden. A week later out of curiosity they went to dig it up, in the wrong place, and did not find it. Excited, they ran together to mother and cried, "Ma, that chicken must have gone to heaven, because it isn't there any more."

Wasting Her Time. "When do you think of a man who would spend his evening with his arm around the back of a girl's chair?" "Lord, like any other girl's time, I'd let him spend the evening with the chair."—Los Angeles Courier-Journal.

UNIQUE METHOD OF TESTING AUTO TIRES

A novel method of testing automobile tires, employed by a Denver manufacturing concern, is shown in the photograph. The track, one-half mile in circumference, presents every feature of good and bad roads. An ingenious machine, with its long arm to which the tire is attached, propels the tire around the track. A weight equivalent to that of a heavily loaded automobile is suspended over the tire in such a way that the tire itself carries the load. Once started on its journey the tire continues until it has given its maximum of mileage.

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