

CARE FOR MACHINE

Many Owners Ignorant of Everything Save the Control.

OIL AND GREASE IMPORTANT

If Drivers Had More Knowledge of Care and Applied It Much of Repair Business Would Fizzle—Lubrication Abused.

It is splorable but true that for each motor owner who really understands his car in its multiple details there are dozens ignorant of everything save the control. They know how to start it and stop it. But they know almost nothing about the proper care of the machine. Only the other way, for instance, a dealer told a man who had bought a powerful car and who was totally ignorant of the fact that oil and grease played important parts in its running.

When he was towed in a few days later with a badly damaged engine he said he had thought that little things such as lubrication were arranged before the car left the factory, and that all he had to do was to keep the tank full of gasoline. Repair men state that if private drivers had more real knowledge of their cars, and applied it, more than three-fourths of the repair business would fall away.

Motorcar Abuses.
Of motorcar abuses, improper lubrication is probably the most common, which is a little strange, considering that keeping a car oiled and greased is one of the easiest of the attentions it requires. The motor is a mechanism which runs at high speed and high temperature. It contains many rubbing surfaces. In order to keep these surfaces from burning each other, it is necessary to separate them by a film of oil.

If the lubricating system is in good condition and the oil of the right consistency, this protective film will be automatically provided. This applies to all the surfaces, such as pistons, cylinder walls, crank shafts, rod pins, bearings, crankshaft bearings, push rods, push rod guides, and even to the gears. The teeth of the meshing gears, of course, are not spaced to rub against each other, but to have simply a rolling contact. However, it is impossible to attain this degree of perfection in practice, and a certain amount of rubbing does take place, due to the fact that the teeth cannot be scientifically correct.

Severe Test of Oil.
The severest test of a lubricating oil is found in lubricating the pistons and cylinder walls, especially at the upper end of the stroke. At the moment of the combustion the temperature is above 3,000 degrees Fahrenheit, and both pistons and cylinder walls are exceedingly hot; therefore it is necessary to use an oil which will stand this temperature, neither vaporizing nor burning.

If the oil is too thin or has a tendency to vaporize or burn, these high surfaces will be improperly lubricated, increased friction will result and finally the film of oil may disappear entirely, with the result that rubbing between the two surfaces will occur and the parts shortly will be ruined. There also is a possibility when the piston becomes heated that it will expand until it fills the cylinder bore and becomes seized.

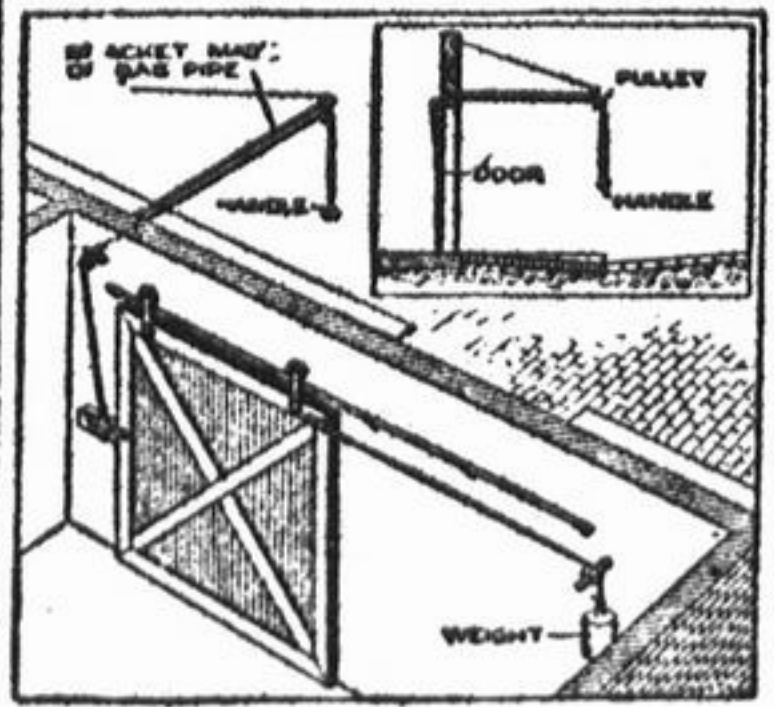
If the oil is not clean, if it contains grit or dirt of any sort, it will rapidly wear away the metal parts, the grit acting as an abrasive. Oil is liable to contain not only grit and free carbon, but also a certain amount of gasoline, and in many cases, water. The gasoline thins the oil, making it incapable of resisting the pressure between the rubbing surfaces, and wear increases. Water may form an emulsion and produce the same effect, while in winter there is always some danger

of the water freezing and producing a stoppage of the lubricating system. As many men neglect to fill the oil reservoir often enough, it is a good plan to make a rule of doing it every day, so that there will be very little chance of the car running for several days without adding oil.

SELF-OPENING GARAGE DOOR

Driver of Car Pulls on Handle, Releasing Catch and the Door Opens Automatically.

It is often annoying, especially in rainy or winter weather, to get out of an automobile at the garage in order to open the door. Customers at a public garage usually took their horns until the door is opened, and in order to make this unnecessary I built a self-opening arrangement for the garage door, writes R. S. Matzen of Fort Collins, Colo., in Popular Mechanics Magazine. The driver pulls the handle



Door Opens Itself.
When the driver pulls the handle, the door opens automatically. The door is then automatically closed by the counterweight. The garage attendant can easily close the door, and adjust the catch for the next patron. This device is also handy on private garages. A section of gas pipe, braced with strong wire, was used to support the pulley and the unlocking cord.

AUTOMOBILE AID TO FARMER

Distance He Is Compelled to Travel Makes Some Kind of Vehicle an Economic Necessity.

It is natural, when one studies the situation, that the farmers of the country should now be buying half the automobiles that are on the market. Aside from the fact that the farmer has had a year of exceptional prosperity and that the distances he travels make some vehicle an economic necessity, he is in a better position to keep an auto at a minimum expense than is the city man. In the first place, he is likely to do a good deal of his own repair work, being forced by his distance from town to rely on his own resources. Then he is likely to have a barn or a shed already built, and will be put to no expense for the building or rent of a garage. Almost every time he goes anywhere he saves time that is an essential in his business. If he is wise, possession of the auto enables him to reduce the number of his horses sufficiently to pay for the gasoline he consumes. The city man has no such offsets, and unless he uses the auto in his business he must figure on a clear added expense.—Portland Oregonian.

FIRST AID FOR CARBURETORS

Useful Precaution Is Provided in Filter Designed to Permit Use of Only Clean Fuel.

A useful precaution in these days of low-grade gasoline is provided in a clean fuel to reach the carburetor. Gasoline enters a lower chamber, where all sediment is supposed to be deposited, and from which it may be drawn off through a drain cock. The gasoline then rises through the filtering element of layers of gauze and special material to an upper chamber, from which it flows into the carburetor.

WORKING AUTOMOBILES FOR THE FARMER

(By JOHN F. HOLMES, in Power Farming.)
The time has come when the motorcar is a necessity instead of a luxury, and the majority of farmers have them. It looks as though the pleasure car is a necessity, even to the man who has to borrow money to pay for it.
Some have bought pleasure cars and used them as pleasure cars and spent their time riding around in them, when they should have been at work in the field. In many cases horses and cattle and the raising of poultry have been neglected by hurrying to get the chores done and not doing them as they should be done, just for the sake of a pleasure ride.
Many have felt the effects at the end of the year and wondered where the money had gone, but since they have owned a car, they have made two and three times as many trips to town as they did with the horse, and, naturally they have spent more money.
Some have bought pleasure cars and

GRAIN CROPS ARE PROMISING

Western Canada 1917 Crops in Good Shape.

While it is a little early to predict what the Western Canada grain crop will produce, there is every indication at the present writing that the 1917 crop will give an excellent return. Reports received from all portions of Manitoba, Saskatchewan and Alberta speak of good growing weather, a fairly advanced stage of all grains, with prospects as good as all grain, in the past two years. Should conditions continue as at present, it is safe to conclude that Western Canadian farmers, already free of debt, as a result of the splendid crops and prevailing high prices, expect from this season's returns to be in a position that will place them away beyond any fear of the future.

The acreage of Western Canada will be about the same as last year. Seeding was somewhat later than last year, but germination was quicker. The only possible drawback now would seem to be a scarcity of harvest hands, but it is felt by the authorities that the situation will be pretty well cared for by that time.

Land values are increasing, but there is room for a much greater increase than in the past, owing to the returns that farmed land will give when compared with its cost. In some districts and that could have been bought five years ago for \$15 an acre is changing hands at \$60 an acre, the seller satisfied that he is giving the purchaser good value for his money. And why not, when it is known that in a great many cases during the past two years crops have been grown on this land that have produced a profit of forty and fifty dollars per acre, over and above cost of production. These cases, while not general, were not exceptional.

In addition to the lands that are offered for sale by railway companies, land companies and private individuals, the homesteading areas offer great inducements for those who are willing to do a little pioneering for a year or two. By that time settlements would come into existence, and this means a condition similar to that enjoyed by many of the older settlements of today—schools, churches, railways. The land is of high-class quality, strong and vigorous, easily worked, and capable of producing the very best of crops.

The demand for all grains for some years will be great, and it will require all the resources of man, beast and soil to meet it. That the prices will be good goes without saying, but at the present time there is something more appealing than the lucrative prices that prevail. That is, the desire to assist in winning the world war. The man at the plow is doing his "bit," and the spirit of patriotism that prevails will lead him into a broader sphere of action. No matter where he may be he will look about him that he may find land to further develop the country's resources. It is possible that his own state may furnish the land, in which case he will be quick to take advantage of the offer. If land in his own state is not available, Canada (now our ally) will be glad to furnish it in unlimited quantity, as she is vitally interested in largely increasing the supply of foodstuff which is now so urgently needed and is as valuable an ammunition to the allied countries.

The appeal made by Mr. Hoover, United States controller of foods, and also by Hon. W. J. Hanna, Canadian controller, emphasizes the need of the allies, urges economy and the prevention of the waste in food, and bespeaks whole-hearted allied co-operation. Speaking of Great Britain, France, Italy, Belgium and their European allies, they say:

"For nearly three years their man power has been engaged in the direct work of war, and in some cases large areas of their most productive lands have been overrun by the enemy. Their food shortage and the food to supply the armies of Canada and the United States must be wholly provided from this side of the Atlantic. The supply must also be sufficient to cover losses at sea. Australia, New Zealand, the Argentine Republic and other countries are not now available to relieve the situation because of their remoteness and the shortage of tonnage.

"The crop of storable foods grown in Canada and the United States suitable for shipment overseas threatens to be entirely inadequate to meet the demand unless the whole people determine by every means in their power to make up the shortage. Every individual is under a direct obligation to assist in rationing the allied forces. There must be national self-denial and national co-operation to provide the necessary supplies."—Advertisement.

A Philadelphia Idea.
Music and cleaning the parlor have never been very closely associated. When the housewife wants to play the piano, he generally waits until she has cleaned the parlor, taken a bath and dressed herself in party clothes. Now a Philadelphia has patented a dust-filtering attachment which can be attached to the player-piano, and the ordinary housewife can now seat herself at the player-piano, obtain music via the keys, work the pedals for all she is worth and, with her child to run the vacuum cleaner about the floor, she can have it clean in a jiffy. The bellows of the player are attached to the vacuum cleaner by means of a special pipe, and in this manner the needed vacuum is created for cleaning purposes.

Short Memory.
Dentist—You say you sent you up to have a tooth pulled?
Bobby—Yes, sir. I—er—I don't forget which one it was.

Philadelphia's St. Paul's Episcopal church will build a new home to cost \$500,000.

PASTURE, SHELTER AND WATER FOR BOAR

(From the United States Department of Agriculture.)

The boar need not be a drain on the time and finances of the hog raiser after the close of the spring breeding season. He needs little attention, and if given shelter, shade, and a fresh, clean water supply, he will largely care for himself. The chief consideration is to maintain him in good, hard, thrifty, breeding condition by giving him an opportunity to exercise and by feeding him largely on pasture and forage crops.

A mature boar, if heavily grain-fed, has a great tendency to fatten. The boar should be well fed, but not fat, as too high condition makes him inactive, a slow breeder, and a rather uncertain sire. Pasture, therefore, is the best as well as the cheapest feed. It furnishes an abundance of nutrients, is palatable, and keeps the boar's system in good physical condition. Permanent pastures are among the best, and certainly require the least attention. The clovers, blue grass, Bermuda, alfalfa, all make excellent

pastures and furnish grazing during a long season. If these are not available, small plots of several temporary pasture crops may be used; for example, rape, peas and oats, peanuts, velvet beans, sorghum, cowpeas, and soy beans. By using any of these forage crops the boar can be maintained over the summer with a very small amount of grain, while if they were not used several pounds of grain per day would be required. On pasture fed only enough grain to keep the boar in breeding condition. Very often, on good pasture, none will be required. Guard against feeding too much grain and getting the boar too fat.

The boar should be confined to a paddock and not run with the rest of the herd. If he is with another boar, they are apt to fight, and if he is placed with the breeding herd, the sows will farrow at indefinite dates. It would be impossible under these conditions to keep records of the time of service, and no provision could be made to care for the sow previous to farrowing.



LONGFELLOW'S DOUBLE RIVAL—A PUREBRED.

HOW TO TREAT EWES AND CARE FOR LAMBS

Young Animals Intended for Breeding Stock Should Be Weaned Before Five Months.

(From the United States Department of Agriculture.)

Lambs kept for breeding stock should be weaned when from four to five months of age. The lambs intended for market, on the other hand, should attain marketable weights and should be weaned at the time they are born at weaning time should be kept for four or five days at least on the old pasture, as they do not fret as much as in a strange place. The ewes should be removed to another pasture as far away as possible from the lambs. If the feed on this pasture be a little scant, so much the better, for this will help check the milk flow. The ewes and lambs should not be turned in together again, for a large amount of milk from a ewe that has not been suckled for two or three days is liable to cause digestive disturbances in the lamb.

At weaning time the ability of a ewe to produce a good lamb is often ruined because the necessary care is not taken to see that she is dried off properly. A little care at this time will be well repaid. Two or three days after the separation the ewes should be milked out. All of the milk need not be drawn from the udder, but enough should be taken to leave the udder soft and pliable. Mark with colored chalk ewes needing no further attention. In about three days the ewes should be milked out again and the dryness marked. Further attention should be given four or five days later to those not dry. No effort should be spared to maintain every breeding animal in a sound and useful condition.

DISEASE OF LITTLE PIGS IS DANGEROUS

"Sore Mouth" Has Caused Much Avoidable Loss This Season—Treatment Must Be Quick.

That "sore mouth" disease of little pigs has caused much avoidable loss on stock farms this season is reported by Dr. F. B. Hadley, veterinarian of the Wisconsin experiment station. "When every farmer is trying hard to save every pig in every litter because of the urgent demand for pork and pork products, it is imperative that attention be called to this disease," says Doctor Hadley. "Hidden in the soft tissues of the mouth, this trouble is often undiscovered until too late.

ATTENTION TO HORSES DURING HOT WEATHER

Efficiency of Average Farm Animal Can Be Increased by Observing Simple Rules.

That the efficiency of the average farm horse can be increased 25 per cent by the observance of simple precautions, is the opinion of Dr. C. W. McCampbell, associate professor of animal husbandry, Kansas State Agricultural college.

"Water the horse frequently during hot weather," advises Doctor McCampbell. "He needs large quantities of water and frequent watering will overcome the dangers that result from watering freely at long intervals.

"Feed regularly a ration uniform both as to kind and as to amount. This lessens the danger from colic and other digestive disturbances.

"Eliminate lice, worms, and flies, for they may decrease the efficiency of the work horse 60 per cent and increase the feed bill 25 per cent.

"Clean the collar every time it is put on the horse, and keep its bearing surface hard and smooth.

"Sponge off the work horse when he comes in from work, especially where the collar and other parts of the harness have left marks. Sponge out his

Soil Rich in Nitrogen. If the wild growth on your farm is profuse and your tomatoes and melon vines run to leaf, your soil is rich in nitrogen.

Increase Farm Stock. Increase the farm stock to the extent of utilizing all the coarse food and idle lands of the farm.

Bees Visit Many Blossoms. Bees visit 3,000,000 blossoms to gather a pound of honey.

High Content of Humus. Secure a high content of humus in the soil by the use of legumes, barnyard manure, and farm refuse.

Immense Poultry Loss. It is estimated that nearly \$5,000,000 worth of poultry is lost each year through disease alone.

The teacher was hearing the story in nature. Trying to improve upon the children's minds the horror of cruelty to animals, she told the following story:

"Once a farmer went out to milk a cow and a little calf switched the milk in the eye with its tail. The man took out his knife and cut off the calf's tail. Now, children, what verse in the Bible should that man have remembered?"

Of course she had referred to "Blessed are the merciful," but Philip had another answer:

"What God hath joined together, let no man put asunder."—Exchange.

Not So Smart.
Mr. Flatbush—It's the same old story.

Mrs. Flatbush—What's wrong now? "I painted the front gate and hung a sign on it, 'Fresh Paint.'"

"Well?"

"The first man who came along put his hand on it to see if the paint was really fresh."

"Don't be so smart."

"Why?"

"That wasn't a man that put his hand on the paint to see if it was fresh; that was me."

To Be Brief.
"What on earth did that fellow mean when he said that he was a peregrinating pedestrian, castigating his literary from the classic Athens of America?"

"He meant he was a tramp, beating his way from Boston."—Indianapolis News.

Naturally.
"What do you find most productive of hard cash?"

"Soft things."

The man who loves a woman as much as she wants to be loved has no time for outside flirtations.

Every Woman Wants

Partine
ANTISEPTIC POWDER
FOR PERSONAL HYGIENE
Disinfects in water for domestic uses: toilet, bath, wash, and laundry purposes. Recommended by L. D. Dr. J. H. Fisher, M.D., Co. for ten years. A health-giving powder for medicinal use. The only powder of its kind and of its quality. The manufacturer of Partine is Dr. J. H. Fisher, 112 W. Adams St., Chicago, Ill.

How Women Fish.
It doesn't serve to mellow a man's disposition to take a woman or two into the boat when he goes bass fishing. For women always want to fish, yet never could they or would they stick those horrid, nasty, wriggling angleworms on the hook. So, between baiting their hooks and removing the perch and pumpkin seeds and straining your spine to keep the boat from turning turtle and the lines from getting snarled up, you have a most enjoyable outing, do you not? Yes, you do not! I'll run the risk of answering that question for you, "Zim" writes in Cartoons Magazine. And then, when you finally hook a five-pound bass weighing at least three pounds and eight ounces by his own standard scales, and play him for twenty minutes against their earnest entreaties not to bring that big, ugly thing into the boat or else they'll jump out!—you calmly ease up on the line and give him slack, also his freedom, do you not? Yes, you do not! And when the day is spent, they tell you what a gorgeous time they have had, and make you promise to fetch them again, and you promise, of course, do you not? You do like—heaven!

His Defenders.
Recruiting Officer—"How about joining the colors? Have you anyone dependent on you?" Motorist—"Have I? There are two garage owners, six mechanics, four tire dealers, and every gasoline agent within a radius of one hundred and twenty-five miles."—Judge.

Our respect for old age depends a great deal on whether it is to be applied to men and women or boarding house poultry.

Splendid Medicine
For Kidneys, Liver and Bladder

For the past twenty years I have been acquainted with your preparation, Swamp-Root, and all those who have had occasion to use it, and a medicine possessing the merits of Dr. Kilmer's Swamp-Root, especially has it been very useful in cases of catarrh or inflammation of the bladder, firmly believe that it is a very valuable medicine and recommend it for what it is intended.

Very truly yours,
DR. J. A. COPPEIDGE,
Oct. 26, 1916. Alameda, Texas.

From What Swamp-Root Will Do For You. Send ten cents to Dr. Kilmer & Co., Binghamton, N. Y., for a sample glass bottle. It will convince anyone. You will also receive a booklet of valuable information, telling about the kidneys and bladder. When writing, be sure to mention this paper. Regular \$1.00 and one-dollar size bottles for sale at all drug stores.—Adv.

Mental Exercise.
"Do you enjoy modern poetry?"
"Very much. It's such good fun trying to figure out what it means."

Grude Job.
"I'm a self-made man."
"You knocked off work too soon."—Boston Transcript.

A Guarantee.
"You say you can offer me a loan, but is it all clean money?"
"It ought to be; I made it in a loan."

Don't waste anything. Not even energy in climbing hills before you come to them.—Milwaukee News.

Sore Eyes

POST TOASTIES
are the newest and best in corn flakes

—Bobby