IN THE WORLD OF EASY TRAVEL

Motor Notes.

There will be no more motor shows in Canada till after the war.

Plans are being made in England to build after the war a single-cylinder, 20-horsepower.

Los Angeles county, in California, has built a 20-mile road from Los Angeles to the harbor for the sole use of motor trucks. The same territory is being served by electric steam roads.

In applying wire to terminals, the correct way to perform the operation is to twist the bare end of the wire around the terminal in the same direction that the hands of a clock move. This is because the screw thread is right-handed and the tendency is tightening the nut will be to twist the wire, tighter even than it was. If the wire is twisted the other way, the nut tends to untwist it, making its hold uncertain.

The total automobile and truck registration in the United States as of January 1st, 1918, according to official figures furnished from all of the 48 states, is 4,941,276. There is now one motor vehicle for every 20 persons in the country. A year ago there was one vehicle for every 29 persons, and two years ago there was one vehicle for every 42 persons.

It has been announced in New York that the Interstate Garage Company, composed of leading New York hotel men, will open the largest and most complete garage in the world. This will be located at Second avenue, 47th and 48th streets, and will be 200 by 350 feet in size. Garages in other cities will be built, and hotel men will be interested. In each of these the car will have its own private garage, a commodious steel cage 20 by 12 feet, and even larger. The space will be thief-proof, and equipped with every conceivable improvement, including owners' and chauffeurs' steel, thief-proof lockers, stand pipes for washing, facilities for polishing within the private cage, work bench, flushing devices, smothering devices for fire, and telescopic doors to each cage. The cars will proceed on double ramps for entrance and exist on their own power. It will be possible to serve 36 cars with gasoline at one time. The building will be five storeys high and will accommodate nearly 90 cars, with each taking 240 square feet of space. There will be reception rooms for owners, club-rooms for chauffeurs and dog kennels.

If your engine is running hot it may be that your cooling water is not circulating properly on account of the accumulation of scale and rust in the water jackets. Here is the thing to do: Empty the radiator. Fill it with saturated solution of plain washing soda and water. Run the engine with retarded spark for a short time, until the soda solution is hot. Let stand for two or three hours, then drain the radiator again. Uncouple the lower water connection and connect the line to the water pump with a hose. Turn the hose on fully and start your engine. The water will be forced through the water jackets and radiator and out through the petcock and the loose lower connection. Then close the petcock, couple the connection, fill the tank with clean water and note the improvement.

Last year a man travelling through the country alone and on a lengthy trip was approached by a young man who asked permission to travel in the second seat of the runabout. He was given that permission only on condition that he would speak when spoken to, stop only when the driver cared to stop, eat only when the driver cared to eat, and make no demands to stop for any other but necessary purposes. He was told that he must be ready to go at a second's notice when any stop was made, and was informed that he would be left behind otherwise. That young man made the journey, and the experience was rather pleasant than otherwise for the driver of the car, who had the real enjoyment of a companion who did not bicker nor complain, who spoke only when he was spoken to, and who was "Johnny-on-the-spot" at every stop and at all times ready to start. A guest on motor car trips is a guest only when agreeable, and is a real pest and joy-killer when otherwise.

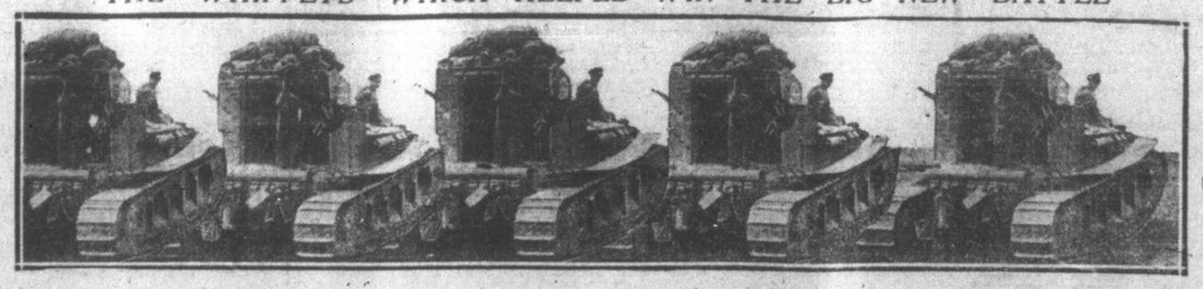
Dependability of Tractors.

Of more than 600 tractor owners on representatives' farms in Illinois who reported in a recent survey conducted by the United States Department of Agriculture, 54 per cent. stated that their outfits were not disabled a single day when needed during the entire season last year. Of the remaining 46 per cent. the average number of days their tractors were out of commission when needed was five. This average, however, did not include one man who stated that his machine was not usable about half the time.

The reports of tractor owners indicate that with a careful and proficient operator a gas tractor is a very dependable source of power. Occasional slight delays probably will be encountered, but serious ones will be exceptional, whereas with a careless or incompetent operator expensive delays are apt to be frequent.

A California ranch owner is the inventor of a portable iron gate which can be placed across main irrigation ditches to divert the flow of the water into laterals.

THE "WHIPPETS" WHICH HELPED WIN THE BIG NEW BATTLE



These new "baby" tanks did great work recently. One of them chased a German general. They can run and dodge faster than a man.

NEWEST NOTES OF SCIENCE

Grease turned into its sewers by wool washing plants is recovered by the English city of Birmingham at its sewage plant and converted into a profitable by-product.

Sleeping hammocks for small children have been invented which lace together to prevent occupants falling out and which are provided with mosquito netting and sun shades.

French interests have obtained possession of a South Pacific island that is believed to contain 10,000,000 tons of high grade phosphates and many million tons of inferior quality.

An Arizona scientist hopes to fix the time of the cliff dwellers by comparing the age rings of tree trunks still standing in their homes with the rings on the oldest trees now living.

An electrically heated mattress for pneumonia patients that an English doctor has invented has no heat at the top, a moderate quantity in the middle and the maximum amount at the foot.

Government experts have estimated that of the 26,000,000 horse-power possible of hydro-electric development in the United States, 19,000,000 horse-power lies west of the Rocky Mountains.

To give concrete columns for buildings wide foundations a German engineer has invented a method for blasting away the earth with dynamite, making a hole which soft concrete quickly fills.

Baking and several other kinds of cooking can be done with a stove that a California inventor has designed to be placed beneath the hood of an automobile and connected with its exhaust pipe.

Because locusts are rich in nitrogen and phospehoric acid the government of Uruguay has appointed a commission to ascertain if the insects cannot be utilized in fertilizers, soap and lubricants.

Evaporation from a new gasoline can is prevented by a spring controlled spout cover, while a tube extends from the spout to the bottom of the can to admit air and insure a steady stream being poured.

Rubber tree tapping by a series of small borers set in a circle, the invention of an English expert in the Belgian Congo, has proven a more productive method than the customary vertical incision system.

Scientists have advanced the theory that where the coal of Alaska is permanently frozen to depths of hundreds of feet it was concealed in some previous age and the following vegetation prevented it thawing.

For detecting leaks in underground water pipes an instrument has been invented consisting chiefly of a rod to be thrust into the ground to pick up the sound and a telephone receiver with which it can be heard.

A parliamentary committee that investigated found that the production of all of London's electric power in a few central stations would save 6,000,000 tons of coal a year and greatly lessen the smoke evil.

For ventilating in places where blasting is being done there has been invented a varnished canvas pipe which has the advantage of being practically proof against damage from blasts as it collapses if struck.

Instruments installed by scientists when a huge reservoir was built in New South Wales have recorded earthquake movements, dislocations and earth tides due to the weight of 30,000,000,000 cubic feet of water.

The discovery of a partly electrical and partly chemical process for the production of nitrogen fertilizers from relatively inexpensive and easily obtained materials is claimed by a Brown university professor.

To obtain a powerful searchlight with a comparatively weak current a Frenchman has placed several incandescent lamps on a revolving circle, each in turn being illuminated briefly and their combined rays being collected by a reflector.

WHAT TO DO.

Hot Engine Due to Crust Formed Inside Radiator.

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SPEEDING DOES DAMAGE TO TIRES

Going Thirty-five Miles An Hour is the Same as Falling Off a Housetop.

You have been bounced off your seat, of course, and heard the cries of passengers in the rear seat to "cut her down a little," just because you struck a hole or rocky, uneven spot in the road. Then you wondered if any damage was done. You slowed up for a short space and the old boat seemed to go along all right and you speeded her up again.

Perhaps a day or two later you are forced to change a tire. Upon showing it to the repair man, who tells you that the carcass of the tire is in need of repair because of a bruise, commonly called a "stone bruise," you remark, "Rather strange. I have no recollection of hitting a stone; I have travelled only on improved State roads and city streets." But you fail to recall the severe shock your car and its occupants experienced when you hit the bump or hole in the road.

One rarely stops to consider the force of such a stroke when delivered to the tire upon meeting such an obstruction or road irregularity.

Back to school days for a moment, if you will, and recall that old law of physics: The energy of a moving body varies as the square of its velocity. Apply this to you car and you will note that by doubling the speed the energy is increased four times. Triple your speed and the violence of the road shocks deliver a blow to your tires the force of which is increased nine times.

While an increase of speed greatly multiplies the force of the road shocks, the direction of the blow is also changed. In driving slowly over a slight obstruction or depression the force of the blow is downward, due to the dead weight of the car, and the shock is received in a vertical direction, which is easily absorbed by the cushion of air and the springs on the car without injury to either.

By speeding up the car the force of the blow from a road obstruction or irregularity has changed its direction from vertical, straight up and down, to a horizontal force, as the weight of the car not only has a downward thrust on the obstacle but a forward one as well.

The cushioning effect of springs is not used, hence they do not absorb this horizontal blow, which is aimed directly at the axle; therefore it is a dead blow on the tire which overtaxes its cushioning effect and stretches its inner carcass constructions to such a degree inward that the inner ply of cords or fabrics is strained or broken and later develops into a blowout. The length of time for a blowout to develop depends on the force of the blow, which in turn is governed by the speed of the car when the blow was first received.

Thus you will note that the colliding force of an automobile is governed absolutely by the speed. If you should drive your automobile off the roof of your house, which we will say is about forty feet above the ground, what would be the effect? Horrible, you say. Quite right. The force of the impact when the car hit the ground would be equal to its striking or collision force of being driven at a speed of thirty-five miles an hour.

A drop of 163 feet is equal to a force delivered to a car when travelling at a rate of seventy mile san hour. By doubling the speed you increase the force of the blow fourfold.

Drain Oil From Crank Case.

"The owner of a good motor car ought to drain the oil from the crank case at least every four weeks," says an automobile sales manager. It will frequently be found that the oil has been diluted with gasoline which has got past the piston and into the oil. This destroys its lubrication qualities. During the summer season it is advisable to use a somewhat heavier oil than in the winter. It is also well in the hot season to run the carburetor with as thin a mixture as possible."

When draining the water system of the car it is well to make certain that no water remains in the pipes and packets, by rocking the front of the car. This will throw the water out of the bends and pockets. The majority of thermosyphon cooling systems drain off easily enough, but in the pump system it is necessary to use care. It is a good plan in draining off the water to let it run into some receptacle, a large can or pail, so that it can be used again. The reason is that in all water there is a certain proportion of foreign matter that forms deposits on the cylinder jackets and radiator. In the water already used this deposit may be supposed already to have been made, whereas with fresh water a new deposit will be precipitated. By using the same water over and over again this furring up of the water spaces may be minimized.

Spark Plug Troubles.

Spark plugs are a source of much obscure ignition trouble that car owners have great difficulty in locating. In many cases the insulating material in the construction of the plug is porous, permitting electric leakage through the porcelain and also allowing absorption of the carbon formed with each explosion, until finally the insulation changes its properties entirely. In such cases the car owner having cleaned his plugs and finding the trouble still existent, assigns its source to some other part of the system. In these circumstances the car owner is recommended to consult the service station of a spark plug manufacturer and get a plug equipment which is specifically adapted to his car.

Trucks Haul Big Farm Produce.

Statistics obtained by the B. F. Goodrich Rubber Company indicate that trucks engaged in the haulage of grain, produce, truck, and live stock in the rural districts numbered 79,789 during 1917. Next rank manufacturers with 65,928, and then retailers with 64,486. According to the figures, there are 238 commercial vehicle manufacturers in the United States; 90,000 trucks were made during 1917, and it is estimated that the 1918 production will go over the 200,000 mark.

Arch Enemies of Tires.

Gasoline, grease, kerosene, heat and light. The first three are solvent of rubber, and will rot the tire if allowed to remain on them. Gasoline may be used to clean off any grease or oil, as it evaporates immediately, but tires should not stand in contact with any of the above.