

Newest Notes Of Science

Powder to prevent false teeth slipping is the idea of an Ohio inventor. Millions of ducks are killed annually in China solely to supply the feather industry. For use on shallow streams an Englishman has built a tug boat driven by an aerial propeller. An inventor has added a foot brake to the hand power freight truck to make its operation safer. Traps that can be connected with light fixtures have been invented in Europe to electrocute insects. Driven by an electric motor a portable grinding machine for machine shop work is a Wisconsin inventor's idea. In a British arsenal is a scale that weighs from up to 100 tons with a possible error of less than seven pounds. In the interest of cleanliness, an Iowa inventor has patented a wire frame to hold a milk pail up from the ground. The replacement of sugar cane by cotton in some parts of Zululand is being considered by planters of the former. Double hinges in the ankles of new shoes for athletes afford additional flexibility without impairing their support. Several machines have been invented in England to exercise and make supple the fingers of persons other than musicians. A novelty in the penholder line is a short tube to be slipped on a writer's finger with a side projection to hold a pen. The germ theory of the transmission of disease was entertained as long ago as 1657, when Rome was ravaged by the plague. So that a watch will be as accessible as if worn on a wrist an inventor has patented a pouch to be suspended from a belt. Flour with which bread can be made is being obtained from the sugar beets in France as the result of scientist's experiments. For golfers' practice a canvas curtain has been invented that stops without permitting to rebound a ball driven against it. The Colombian Government has contracted for two powerful radio stations and a submarine cable from Colon to the north coast. A new pneumatic tool for cutting off river heads includes a sleeve to catch them and prevent them flying and injuring workmen. Hereditary color blindness, according to a British authority, is transmitted to children only by mothers and never by fathers. The light from an incandescent lamp is said to be increased by the use of a new globe which contains a phosphorescent material. A machine has been invented in England to reduce wooden paving blocks at the rate of 1,000 an hour so they can be used again. An attachment for clocks that a

SMOOTHER OPERATION WITH A LIGHTER OIL

Winter Lubrication is an Important Precaution at This Time.

Last month's threats of an early winter served to warn many city motorists that the proverbial "slitch in time" may save nine expensive radiators and much needless wear and tear on cars and on their drivers' patience. "Should I put heavy oil in the transmission and differential in place of grease this cold weather?" is a common question just now among automobilists. Winter requires the use of a lighter lubricating medium for the motor car than summer, since the lower temperature has a pronounced congealing effect on oils and greases. It is better to use heavy oil in both the transmission and differential in winter in place of grease, generally used in summer. In the engine, also, a lighter oil is often found more satisfactory in "chill" weather. Now is the time to have the engine oil drained and the oiling system washed out with kerosene and refilled with a lighter oil. The same applies to the transmission and differential gears. It will be a little more work to wash the hard grease from these gears than it is to clean the engine, but the extra work this requires will be repaid by the smoother operation it assures for the car.

Back to the Road.

A bird's eye view of the roads in England during the first days of the great railway strike would certainly have been worth having, even at a cost. The conveyances which turned out on the roads with such remarkable speed were almost as varied in point of shape and date as they were numerous. The war period saw some odd-looking vehicles in London, but nothing like to the extent of the last few days of September. In fact, no more curious collection of wheels has been seen at one time trundling their way from town to country or from country to town. Of all the amusing spectacles possibly the quaintest was that of a dozen of ministers cycling along the Welsh roads in top hats and frock coats to take up Sunday duty at a distance.

Argentina is one of the few important countries lacking coal mines

ABOUT RHEUMATISM

What Thousands Have Found Gives Relief From This Painful Trouble. Rheumatism is a chronic disease, manifesting itself in local aches and pains, inflamed joints and stiff muscles. It cannot be cured by local or external applications. It must have constitutional treatment. Take a course of the great blood-purifying and tonic medicine, Hood's Sarsaparilla, which corrects the acid condition of the blood, on which rheumatism depends, and gives permanent relief. This medicine combines, with excellent alteratives and tonics, what is generally conceded to be the most effective agent in the treatment of this disease. If a cathartic or laxative is needed take Hood's Pills. Purely vegetable.

Minnesota inventor has patented enables them to change the dates on a calendar at each midnight.

Known since the twelfth century, the first complete survey of the west coast of Spitzbergen will not be finished till next year.

Intended for use in sick rooms, a new thermometer can be read at a distance as it has only three markings, for 60, 70 and 80 degrees.

The recent death of a woman in London from a mosquito bite is said to have been the first fatality of the kind ever known in England.

An attachment to be operated by a typist's knee has been patented to push the typewriter carriage back when the end of a line is reached.

A Frenchman is the inventor of a ten-shot revolver small enough to be carried in a vest pocket and fired when concealed in a man's hand.

Operating much like ice tongs, a bracket has been invented to hold a camera on a tree trunk or other upright object that its jaws can grip.

Engineers are studying the upper Nile river and its tributaries with a view to controlling its flow with reservoirs for practical purposes.

The heads of new thumb tacks for draftsmen are so flat that a T square can be slid over them and the tacks are removed with a special tool.

A British syndicate which is planning an aerial passenger service between England and Australia expects to cover the distance in seven days.

A recently patented bath tub fixture admits hot and cold water supply pipe and an overflow drain pipe through a single hole in the end of tub.

Southern Russia has made a new flower cultivation an important industry, the seeds being used as substitutes for olives in the manufacture of oil.

The hinges on a recently patented also door are so formed as to serve as rungs of a ladder to permit a man to climb to open any section of a sill.

Floats have been invented by a Englishman to enable a bicycle to be driven through the water the same as on land without the addition of a propeller.

A patent has been issued for a hole to be fastened over an automobile tire which makes steering a car so difficult that thieves will let alone.

An English concern plans to transport merchandise long distance through hydraulic tubes, much of the pneumatic tube principle but on a larger scale.

For identification of employees a large industrial camera has been designed that photographs a person's face, height and index number at the same time.

In connection with a canal system France has built a tunnel four and one-half miles long by 72 feet wide at 52 feet high, one of the greatest in the world.

FREEZE PROOF SOLUTIONS

Instructions Which Will Make Them When Temperature Falls.

As winter approaches the thermometer is falling, and motorists will use their cars all the year round, looking around for some means of ensuring that their radiators will not freeze. The best way to do this is to use freeze proof solutions, but they cannot be expected to do the work properly unless certain precautions are taken. In the first place, all dirt, sand and sediment must be cleaned from the cooling system by using a hot solution of ordinary washing soda, and attention should be paid to this several times throughout the winter. If the hose connections on the cooling system are not new, they should be replaced before using freeze proof solutions, using whit lead to make tight all hose connections. A light cooling system is absolutely essential to the satisfactory use of freeze-proof solutions. When using freeze proof solutions the solution should be mixed thoroughly in hot water, the amount being judged according to instruction received with the solution. The radiator should be filled up to within two or three inches from the top and kept at this level. Then the motor should be started and run for a few minutes to thoroughly distribute the solution throughout the cooling system. It is a good plan to always warm up the motor thoroughly before starting out on a cold day. Losses in quantity of solution in the radiator can be filled up in two ways according to the cause of the loss. Losses from leaks should be filled up with a solution of freeze proof solution, and losses from evaporation should be filled up with water. If these instructions are followed there should be no difficulty in preventing the radiator freezing in even the coldest weather.

PROPER LUBRICATION

Owner Must Study His Vehicle to Master its Oil Needs.

The term proper lubrication has no very exact meaning for the average car owner and yet it can be defined exactly. It means the quality of oil needed by the individual part, supplied in the proper quantity, and changed too little or too much, and kept it in condition to function properly. This latter condition carries with it the implication that the crank case or other part shall be flushed out with kerosene before new oil is put in. From all this it will be seen that the car owner must devote some study to his particular vehicle in order to master the lubrication needs of the car.

Distress calls were received at Boston from the steamer President Grant in mid-Atlantic. The vessel's boilers exploded.

The New Motor Car



The Greatest Improvement In Riding Comfort Since the Introduction of Pneumatic Tires

HERE is a brand new type of car, built in Canada by Canadians, for Canadians. It solves the problem which has baffled automotive engineers—how to combine riding comfort with light weight and economy.

prolong its life, minimize twisting or racking of frame and body, enable the car to hold the road better.

In every respect Overland 4 is a quality car. The body is all steel, all enamel, the brightest, hardest, most lasting finish.

Our new Three-Point Cantilever Springs make this possible.

The car and passengers ride smoothly as though floating, free from road shocks.

Overland 4 has been tested for two years and more than 250,000 miles over the Rocky Mountains, prairies, through deep mud and scorching deserts—through quick, sharp climatic changes. As a result of these tests we were able to judge the car's performance under every condition and to perfect it before offering it to the public.

These are the first springs of their kind and they are made of chrome vanadium steel. They are exclusive with Overland.

But this new riding comfort, possible only with these Three-Point Cantilever Springs, is but one of the advantages of Overland 4.

There is no previous car of any size or price to adequately compare with the character of service Overland 4 introduces.

Because of these springs, Overland 4 combines the riding qualities of large, heavy, expensive, long wheelbase cars, together with the advantages and economy of small, light cars.

Its light weight makes possible great economy of gasoline and tires.

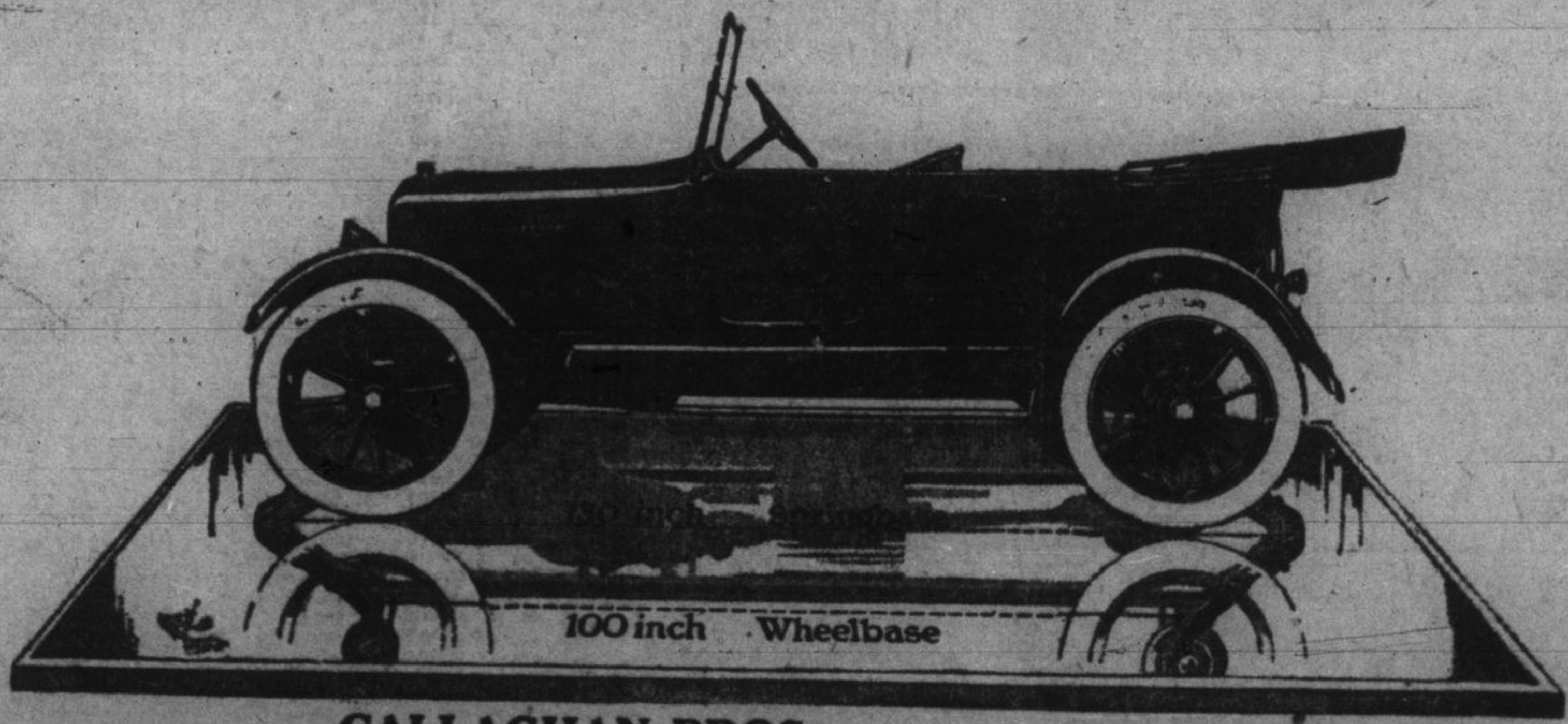
The farther you ride in it the more you will appreciate it. Come in and get a Booklet. The demand for Overland 4 will be greater than the supply for some time. Overland 4 Touring, \$1195; Roadster, \$1195; Coupe, \$1845; Sedan, \$1995. Prices f. o. b. Toronto, War Tax included.

With 100-inch wheelbase, Overland 4 has the luxurious riding ease of 130-inch Springbase.

High quality materials insure durability. All vital parts of the front axle and steering gear and all highly stressed driving gears and shafts are made of alloy steel.

The exclusive, Three-Point Cantilever Springs cushion the car so that it rides well on all roads; they reduce choppy rebounds and side swaying, protect the car from road shocks and

The equipment list of Overland 4 is like that of expensive cars: Auto-Lite Starting and Lighting System, Electric Horn—Specially Resilient Upholstery Springs—Demountable Rims—Three Speed Transmission—Slanting Rain Vision Windshield—Tillotson Carburetor, and many other high quality conveniences.



CALLAGHAN BROS. 210-214 Wellington Street. Phone 1410 Willys-Overland, Limited, Toronto, Canada

All Prices Subject to Change Without Notice

SUGGESTION TO MOTORIST

Motorist is Told How to Remove Hub Washer.

The job of removing the wheel hub washer of the front wheel is often an almost impossible job, but it can be made easy by the use of a simple tool that can be made by any handy man. Take a pair of round jawed pliers five or six inches long. File a notch on the inside of each jaw near the end and then reduce the diameter of the jaws until they will just slip into the holes in the ends of the split washer. With this weapon it is easy to remove the washer. Simply hook the ends of the pliers into the holes, close the jaws to contract the washer so that it may be drawn out of the groove, when it is easy to slip out by running a screwdriver point around the edge.

Anti-Freezing Mixtures.

The subject of anti-freezing mixtures now begins to occupy the attention of the motorist. When the mercury drops to 32 degrees above zero Fahrenheit is the time to take notice. Various mixtures are in use. One recent and rather popular method is the use of coal oil, but in investigating this method the Automobile Club of Canada has found many objectionable features. In the first place, coal oil will deteriorate hose connections. It is known that the boiling point of water is 212 degrees Fahrenheit and that of coal oil 265 degrees. At the boiling point of water, the driver will notice a vapor, or steam, but not so with coal oil, and unless he has a specially constructed and properly installed type of thermometer, he may overheat and do damage to the motor. This danger is more pronounced in cases where motorists, glycerine and alcohol, and water in varying percentages, according to the temperature under which such anti-freezing mixtures are

required, as well as many of the anti-freezing mixtures on the market, give good results, but the owner should consult his dealer before using one or the other, and in this way he will receive the best advice as to what mixture he should use for his particular car.

Rattle in Shackles.

Spring shackles play or looseness between the spring end and the shackle may give much trouble until discovered. Rattling caused by this looseness will be more frequent and distinct when the car is riding over fairly rough roads. A good method of taking up the play is to place shims between the spring end and the shackle, or the play may be removed by tightening the bolt. Watch the shackles, as small particles of glass-like substances in parts cause excessive wear. Lubricate the shackle bolt generously. Don't wear off—simply cut.

Racing Motor Bad.

A cold motor should be warmed up slowly, as it is dangerous and detrimental to race or accelerate a cold motor. This does more harm than constant service under a full load at correct motor speed. Never race an old engine. Where this instruction is disregarded and the engine is speeded up beyond the speeds which are indicated as the safe running speeds you are inviting trouble, repairs and expense.

Mud Gathers in Brakes.

Sometimes brakes are harder to operate after a trip over muddy roads. It is because mud gets into the joints at the brake bands and other places in the braking system. These parts cannot be properly cleaned merely by wiping. One must disassemble them to get a clean working surface that will operate freely when lubricated. Cleaning of this sort prevents rusting, and certainly goes a long way toward making for better handling and car operation.

That Hair Mattress

OR THOSE FEATHERS SHOULD BE RENOVATED NOW. SEE US WE ARE EXPERTS.

Kingston Mattress Company 222 Princess Street - Phone 4100.