

ALL UNNECESSARY RESISTANCE ADDS TO COST OF AUTO

Economy in Operation Is Dependent on Keeping of Machinery and Body Clean.

TIRES MUST BE WATCHED

Inflation Should Be Correct, Wheels Kept in Line and Every Other Fault Corrected.

"Usually the public wants its cars to operate as economically as possible and most every manufacturer is working with the same object in view, building the cars under a scientific principle so that they can be operated economically if properly handled," says F. H. DeVo, service manager of the Willys-Overland Pacific company, at Broadway and Davis.

"We will take the oil in the motor first. This has always been a hobby of mine, and I think of every other mechanic or person that knows the vital parts that are taken care of in the gasoline motor by the oil. How often do we take down the crank case of the motor and find the worst lot of black, dirty muck, sometimes like mud and sometimes as thin as water, from which lubricating qualities are gone. Just think what has to suffer for this. There is the crank shaft connecting rods, cam shaft bearing, push rods, cam pistons, cylinder walls and timing gears, and this is not all. Suppose it is a motor that is in unit with the transmission where it and the clutch also receive this lubrication from the same source. In that case all the gears and bearings suffer also.

COST LEAST FACTOR

"I do not believe that the average car owner realizes the fact and I don't believe he would allow these conditions to exist if he knew the critical point it is and what it means to him. Just the other day in going by a sales room where there was a truck in the window I noticed a large red card, possibly five by seven inches, hanging on the motor (the hood being up) which read something like this: 'Oil should be kept clean by changing in crank case regularly and often.' Then down at the bottom on this card I noticed the last line in large letters, 'Don't buy oil on a price basis.' I think we ought to hang on more red cards and if necessary make it a red light.

"We will go on now with the rolling or coasting quality of the car. This is an important thing, too, as far as economy is concerned. How often do we step up to a small car on the floor and can hardly push it, and right alongside stands a car twice as heavy that will roll along with half the resistance. Now this is where your gasoline consumption and power goes to. Naturally you think your motor has no power when it isn't the motor at all. It is laboring under difficulties and is putting an abnormal load caused possibly from several things, such as dragging brakes, soft tires, misalignment of wheels, etc.

DIRT WEIGHS MUCH

"I might add here that you can't realize the quantity of dirt that is carried around in the average car. You might smile at this expression, but to satisfy yourself take a car that has been driven for some time without much care and a new one of the same make and put them on the scales and see if you are not surprised at the difference in weight. This is where some of your power and gasoline consumption goes to. To demonstrate this you tone up your motor and go up over the hump, as we call it, just fine. You think that she is peach and working beautifully. You go back and get Mr. Owner to take him up over the same course to show him how fine she works and the chances are you will have to push on the "steering column" a little to make up for his weight.

RESISTANCE IN TIRES

"If the tires are soft and lots of service on the ground, you have an awful resistance there. Anyone can quickly see the theory of this. Just like rolling through sand and if your wheels are out of line you are shoving them to a certain extent instead of rolling. This does not only take power and gasoline but it also wears off the tread of the tires which is also very expensive, and if the brakes drag to such an extent that they merely run warm, what I mean by this is that when you are running along on a practically level country or street without the use of the brakes, the friction retards the coasting or the easy rolling of the car. This makes the motor labor, possibly not noticeable to you, but it makes a difference in mileage as far as gasoline consumption is concerned.

"So you can plainly see that if we had a sensitive instrument before us to indicate these things like our speedometer indicates our mileage and speed, we would be amazed to see how the hand would go up the dial."

FELLOWS ALONG THE ROW



FRIED chicken a la Maryland. Somewhere in the dim and distant past you might have heard that expression and wondered what it was, or most blissful of all, have eaten the real thing. But can you imagine being born and reared in a country where such a dish is a common occurrence? Albert C. Stevens, familiarly known as "Steve," distributor of the Winton and Haynes for the local territory, was born in the old town of Westminster, Md., in August, 1885, and declares he associated on most intimate terms with various delightful things in that part of his home state, and whispers that even Smithfield hams were not foreign to him.

He was educated in the Maryland schools and spent his boyhood and early youth amid the pleasures that a Maryland town of the old sort can afford. When he was 17 years of age he went to Washington, D. C., and started in the automobile business as a mechanic. The call of the roaring road sent him three years later to Palm Beach, Fla., where he became a racing driver.

While speed and love of the track were strong in his makeup, he decided when he was 22 years old that there might be something in the selling of cars. He was in Philadelphia for some time, leaving only in 1910, when he came to Seattle as manager of the Seattle Taxieab company. He stayed with the transportation company only a year and then went into the Stevens-Knight agency, selling Stearns cars to the people of the Sound city.

The Winton company in Seattle procured his services in 1912, and after three years with that line in Seattle, he was transferred to Portland as the manager of the Portland branch of the Winton Motor Car company. The success he achieved with this machine up to the year 1917 finally resulted in the obtaining of this agency by the A. C. Stevens company, which was organized by him in that year.

This firm at first was engaged solely in the distribution of the Winton, but three months later the Haynes line was added, the firm securing the distribution rights for the state of Oregon. In April, 1918, he took over the Washington territory for the Haynes and is now handling that state in connection with his already large activity in the state of Oregon.

Mr. Stevens is now back at the Haynes and Winton factories, breaking up the furniture and trying to hurry up shipments of cars. From all accounts he has been able to jar a few more loose than he has been getting heretofore, and seems to be very optimistic concerning the outcome of the present shortage of machines.

UNUSUAL SOUNDS GUIDE MECHANICS

Squeaks, Knocks, Hisses and Pounds Should Always Be Carefully Attended To.

Give your motor truck a chance to live through a long life. Don't drive it to destruction and the scrap heap. Inspect it occasionally, keep it well oiled and tighten up loose joints, is the timely advice of C. B. Cadwell, local manager of the C. F. Goodrich Rubber company, whose firm has instituted a national educational campaign on motor truck operation.

Getting the maximum value from a truck is largely a matter of maintenance versus depreciation. The life of a motor truck may be prolonged surprisingly with proper care. Obviously, the quality of the truck must be considered in the construction. The driver's report of the work it is called on to perform and the manner in which it is handled.

The motor truck must encounter ridges and depressions of road surface, edges of bricks, car tracks and scores of other obstructions. It converts these shocks, together with the throbbings of its engine, into a ceaseless vibration which shakes every part of its mechanism from the radiator to the tail light. The different units of the truck with their various pipes, rods, gears, stays and supports, all of which must be kept tight and in perfect alignment at all times.

The operator must catch a squeak. He must remove the cause of trouble before it has developed into a serious ailment. Inspection is the basis of truck maintenance.

In the big majority of cases mechanical ailments spring up and develop into serious troubles before they come to the attention of the operator. In truck maintenance the work of repairing, replacing or adjusting the parts is secondary to the inspection which discovers what parts are in need of attention. The first step in the constant search for mechanical troubles is to question the driver. He is operating the truck under all conditions of stress and strain, and symptoms of troubles come to light on the road which might remain hidden during the inspection in the garage. The most satisfactory way of obtaining this information from the driver is by setting aside a space on the daily report card for this purpose. The driver's report furnishes the clue for a thorough inspection at the garage. The owner of

a fleet of trucks may employ one or more skilled mechanics and set aside a day for each truck's inspection. This inspection should be as frequent as once a month, but many fleet owners have their trucks thoroughly inspected twice a month.

Just as the physician determines from the pulse, the tongue, the eye and the breathing, the condition of the patient, the mechanic diagnoses the condition of the motor truck from squeaks, knocks, hisses and pounds.

It is the general opinion among large motor truck operators that the yearly overhaul is unnecessary and useless if the truck has been given rigid inspections at intervals of every few weeks. The only case where an overhaul is advisable is when the owner must rely on his driver for maintenance and has no expert mechanic to inspect his truck regularly.

Grinding Should Be Remedied at Once

When a grinding noise is heard in the transmission case it will be found to be caused by one of the following conditions: Lubrication failure—either the oil has leaked out or is too thin in body to do its appointed task; the shafts may be out of alignment; bearings may be badly worn or broken, or there may be chips from injured teeth in the case. Whatever the cause, it should be run down and eliminated immediately.

Automobile's Hum Is Magnet to Bees

The hum of a motor car engine has become a familiar metaphor, but that it may be so realistic as actually to deceive a swarm of bees was shown when the inhabitants of some Augusta citizens' hive pecked out a large motor car on a prominent street in which to make their home. The bees settled upon the cushions in perfect contentment, but this feeling did not extend to the chauffeur.

Ninthand Everett

EFFORT AFOOT TO AGAIN POPULARIZE BALLOON RACING

First Open Contest to Be Held in This Country Since War Is Scheduled for October 1.

PILOTS ARE WELL KNOWN

Bags to Be Used Will Be Considerably Better Than Those in Use Before the World War.

A step toward regaining the prominence that balloon racing had attained before the war is indicated in the announcement of a national balloon race to start at St. Louis, Mo., October 1, 1919. The first balloon race to be held in this country since the close of the war was the one starting at Akron, Ohio, last May, when seven spherical balloons were sent up from the Wingfoot lake naval air station, formerly the flying field of the Goodyear Tire & Rubber company, since taken over by the United States navy. But the balloons in this race were all Akron balloons, piloted by civilians and army and navy men from that city.

The race to be held at St. Louis is open to all American pilots. The winner is to be styled the champion balloonist of the United States and will receive a prize of \$500. Second prize will capture \$300 and third \$200.

The coming race will have among its entries some of the most noted pilots of the country, a number of whom have participated in former national balloon races. Ten balloons have already been entered, by such noted balloonists as Captain Elmer G. Marschuetz, Captain C. W. Dammann, E. S. Cole, J. S. McKibben, G. L. Bumbaugh, H. E. Honeywell, Ralph Upson, Warren Rascal, William Assman and P. M. McCullough.

FORMER WINNER TO CONTEST

The best known of these American pilots is Ralph Upson, present holder of the title of world's champion balloonist, in the international race held at Paris in November, 1913, in the balloon Goodyear, in competition with pilots from all parts of the world.

In the St. Louis race Upson, who is chief aero engineer for the Goodyear Tire & Rubber company, will pilot the Goodyear II, successor to the original Goodyear, with which he won the world's champion. It is of the same gas capacity, 50,000 cubic feet, as the original balloon, but is a better bag, as considerable progress has been made in the manufacture of balloons since the outbreak of the war.

Upson's aide in this race will be W. T. Van Orman.

Balloon men are expecting a big revival in balloon racing in this country as a result of the national race at St. Louis. Thousands of young men have become balloon pilots since America's entry into the war and have seen active service with our expeditionary forces. These men and their friends are certain to take an added interest in ballooning in this country because of their services abroad. At the Wingfoot lake naval air station alone 2500 young men received training in piloting balloons during the war, in addition to those who received their training at other naval air stations.

LITTLE POWER OF CONTROL

There is, of course, no way of controlling the course taken by a balloon, except that an experienced pilot, fully acquainted with air currents and atmospheric conditions, may in a measure control the direction taken by a balloon by ascending or descending from one stratum of air to another. In the case of the race, the prime requisite is to keep the bag in the air and to keep its course as

straight as possible, for the winning balloon is the one that travels the greatest air distance from the starting point.

The big race at St. Louis will be conducted under the rules of the International Aeronautics Federation and sanctioned by the Aero Club of America. Arrangements are in charge of Major A. B. Lambert of the U. S. army air service and all prizes will be awarded by the Missouri Aeronautical society.

As a preliminary to the big race three balloons will be sent up on September 26, piloted by crews from the Pensacola naval air station, the Wingfoot air station and the navy department at Washington, D. C.

SHOCK ABSORBERS

JOHN A. WALTER has some great tales to tell of a recent loop trip he made. He says it was a combined path-finding trip for next season's tourists and test for Falls tires. John took in some of the beaches.

J. E. Nicholson, western representative of the Federal Motor Truck company of Detroit, is a Portland visitor. Mr. Nicholson will take in the Salem State fair next week.

W. J. La Casse, supervisor of the Maxwell Motor Sales corporation, local Maxwell factory branch, left Thursday for a short trip to the Seattle and Spokane territories.

Frank P. Bawden, factory representative of the Scripps-Booth company of California, was a Portland visitor last week.

W. H. Little, factory representative of the Lee Loader & Body company of Chicago, Ill., is a Portland visitor at the William L. Hughson branch. Mr. Little will attend the state fair at Salem.

Seth Leavens of Leavens & Howard, local Goodyear tire distributors at 331 Couch street, has just returned from a trip to Southern Oregon.

T. J. Tobin, factory representative of the Day Eider Motors corporation, visited with the Taylor Motor Car company several days last week. The latter concern has just recently moved to its new home at Twelfth and Flanders streets.

A. C. Stevens, local Winton and Haynes distributor, left last Wednesday evening for the Haynes factory to hasten deliveries of cars for the Oregon and Washington territories, for which he has the distribution.

J. H. Wiles of the Wiles Auto company, Chevrolet distributors at Forest Grove, was a Portland visitor last week at the Fields Motor Car company.

I. Bruner of the Bruner Motor Car company is back at the Lexington factory arranging for more cars for the Oregon territory.

C. L. Boss last week received word from the Hudson Motor Car company that that concern had chartered a boat to carry 250 Hudson cars from Detroit to Duluth in order to hasten deliveries to the coast. Mr. Boss' concern will receive 45 of the 250 cars.

Clean Off Parts Treated With Oil

After the operation of oiling has been completed it is a good plan to go over the parts treated and wipe off any surplus oil on the outside. This oil serves no useful purpose whatever, but it does collect dirt as surely as flypaper attracts flies. Neatness is a healthy sign about the motor car, for the mechanism is kept clean has probably been given the attention it needs.

Company Expands

Beloit, Wis., Sept. 20.—The South Beloit plant of the Stewart Speedometer corporation will be doubled in size and the force of employees will be increased more than six hundred within the next six months, according to G. J. Behrendt, general manager of the Beloit shop. Production will be greatly increased after new machinery is installed.

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AUTOMOBILE WAS DETROIT'S MAKING

Since Motor Industry Took Control Population Has Jumped to Over 1,000,000.

Once the City of Comrades, Detroit now has become a City of Strangers. Overnight almost, as in the boom days of '49, the city has become a veritable melting pot for the 47 nationalities, creeds and millionaires. The native hardly knows his city, so rapidly has it grown away from him. Publishers of the yet unmarketed directory estimated the present population the other day at more than a million. In 1918 the population was 886,699, and in 1910 it was 465,766. The population in 1900 was 285,204.

The automobile industry took complete control (it started in 1899) and with it came mechanics from every section of the globe. Detroit's acreage in 1915 stood at 26,726.4, in 1918 it reached 51,751.50, and recent prediction placed it at 100,000 in another year.

The Ford plant alone covers 50 acres and still is growing. More than 50,000 men and women are employed. Fully 40,000 new workers came to the city in the last year, officials estimated.

With this extraordinary growth has come a housing problem city officials find hard to solve. Rent, it is estimat-

Automobile Is Fine Weapon to Knock Holdups Out With

Did you know that the auto has demonstrated its efficiency as a protection against holdup men? Well, it is a fact. The unique demonstration took place on the Four Mile creek bridge near Hamilton, Ohio.

It was night. A. L. Marvin, secretary of the Butler County Y. M. C. A., and his wife, were returning to Hamilton in an auto from Seven Mile, a hamlet nearby. Two bandits held them up on the bridge. Flashing lights in the faces of Mr. and Mrs. Marvin, the highwaymen demanded money. Marvin pressed his foot on the accelerator. The machine sprang forward, knocking the holdup men into the ditch. Mr. and Mrs. Marvin got away safely.

Community House Is Being Erected

The General Motors corporation has begun the construction of a seven story fireproof dormitory building at Flint, Mich., located three squares west of the Buick Motor company plant, to cost approximately \$2,500,000, and will be in every sense of the word a community building, with recreation and entertainment features to accommodate 2760 persons at one time. The plans call for a structure that will be beyond question the largest enterprise of this nature ever undertaken by a private corporation.

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