

MOTOR CARS ARE REAL INVESTMENT

Canny Business Man Spends
Time on Investigations.

HARD CASH CONSIDERED

Puzzle Is How Can Such Person
Have Large Sum for Auto on
Slight Acquaintance.

When the average American business man makes an investment involving anywhere from \$1000 to \$5000 he carefully investigates the matter from all sides and calls in expert advice on which he can depend if any phase of the subject seems to be a little beyond his personal experience. When that same supposedly hard-headed business man purposes to invest a similar amount of money in a motor car he generally walks down automobile row and buys the vehicle that catches his fancy. He tells his wife's new furs or meets some equally unessential condition.

Only the fact that all modern American cars are reasonably good prevents the average buyer from being stung every time he plunges down his money. We shall try to indicate some of the points that should always be considered in buying a car.

The question of price generally settles itself automatically. The buyer knows about what figure he can afford to pay. His first step should be to get a list of all cars in the price class in which he is interested. From these he can narrow down his search and make a reasonably definite list of eligibles, for closer scrutiny.

Select Standard Make.
To be a satisfactory buy a car must be manufactured by a well established company which will remain in business. If the concern making the car fails the vehicle becomes an orphan, for which it is difficult to obtain parts. Be sure that the manufacturer is solidly established in business.

Next the dealer should be scrutinized. Has he facilities for making quick repairs? Is his service efficient? Is he able to give his customers replacements or broken parts without undue delay? All this is going to be vitally important during the later life of the new car, and the dealer's status is easily established by a few inquiries made among owners of the make of car he sells.

Face to face with the car itself, the first thing for the intending purchaser to settle is the size of the vehicle that will best serve his needs. The bride and groom who live next door to a man with seven children had better not buy a seven-seater. Common sense will rule here. The prospect should certainly be careful to try the seats, all of them, to see that they are perfectly comfortable. A long-legged man in a car with skippy leg room is in for much discomfort. If the buyer is to do the driving he should be sure that the pedals and other controls are placed within reasonable regard for his physical limitations.

Get Expert Advice.
Having examined the external qualifications of the car, the buyer should next proceed with an investigation of its mechanical qualities. And right here we should emphasize the desirability of the intending buyer securing the help of some qualified expert on whose integrity he can rely to help him weigh the mechanical merits of the vehicle under consideration. Of course, if the prospect is qualified to decide for himself through past experience he will need no outside assistance.

First as to the performance desired in the average man's motor car. To begin with, local conditions will somewhat govern the type of car to be used in a hilly country it must have plenty of surplussing power. And no matter where it is to be used, it should have a modest turn of speed, good acceleration and flexibility. This latter qualification means that it must be able to throttle down to a slow speed while in high gear and must also be able to travel fast.

A range of speed on high gear of from four miles an hour to 60 would be good flexibility. These three factors and the hill climbing ability of the car should be brought out in the road demonstrations and a motorist of experience should be in the car with the intending buyer, unless he is a veteran, to make sure the vehicle meets all these conditions.

Are Adjustments Easy?
And now we come to the vitally important matter that lurks under the hood. It should be ascertained that all the parts, particularly those that are certain to need attention or adjustment, are easily accessible. Are the oil and grease cups easily reached for adjustment and refilling? Can the differential housing be reached to drain, flush and refill it at intervals when this is necessary? Are the brake adjustments easy to make?

Getting down to the more technical details of the mechanism, it should be ascertained that the car under consideration embodies parts that are big enough for the work they are called upon to perform. This applies to gears, bearings, shafts and similar parts.

Obviously, determination of these is beyond the average car buyer, especially if it is his first inquiry about among owners of the car in your neighborhood. See if there is general or frequent complaint of a certain failure or breakage. If there is, you may put it down that the vehicle has a structural weakness. The appearance is not the only or the principal thing to remember is that ruling desideratum in a motor car.

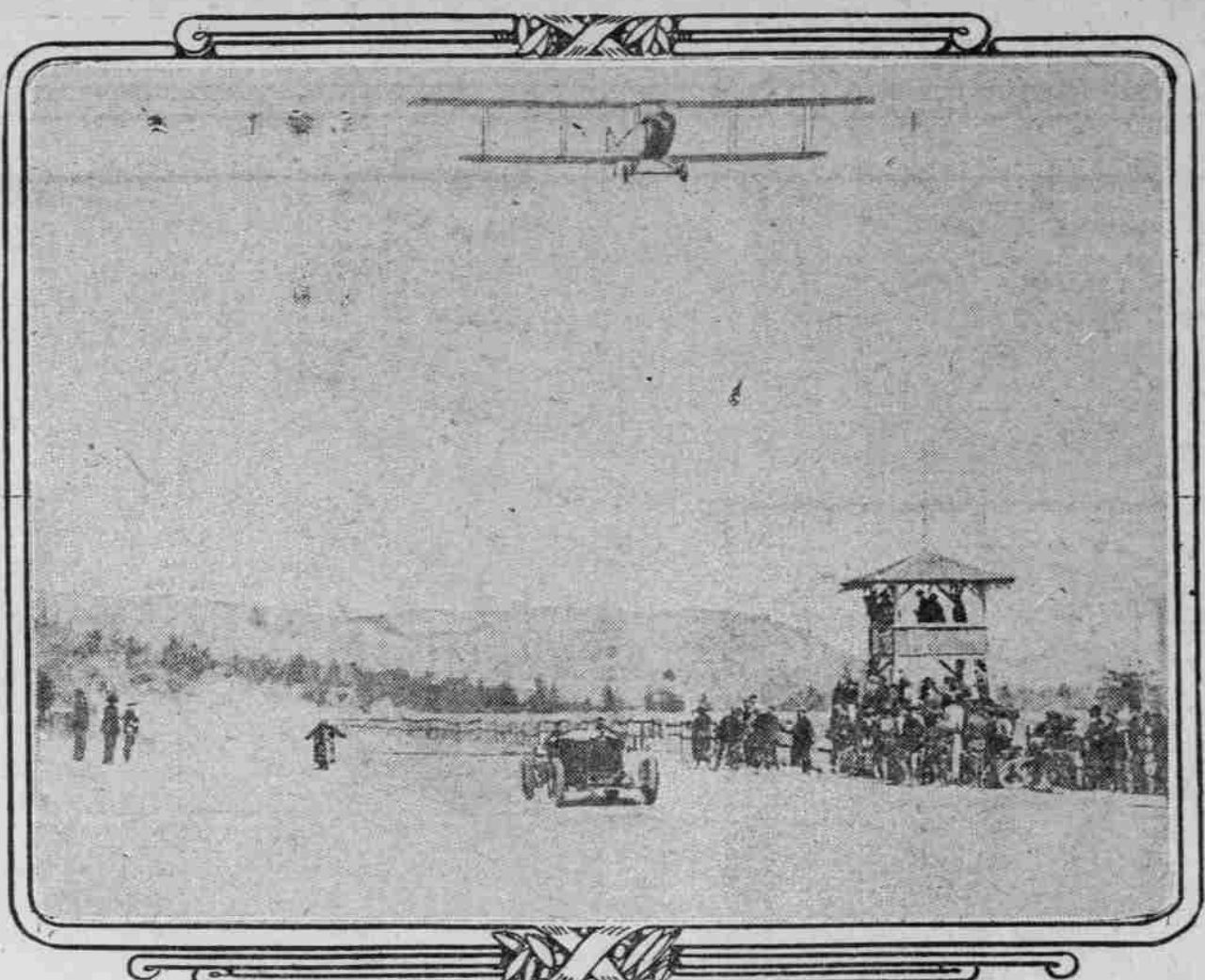
TO GET TIRE ON THE RUN

Here's Correct Way to Mount Your
Straight Side Casing.

Many owners find it difficult properly to mount straight side tires. The correct method is to lay the rim on the floor and insert the valve stem of the tire in its proper location. Next force the bead for ten inches on each side of the valve stem into place. With the tire started in this way, the operator should force it into place by stamping upon it with his feet, first on one side of the valve stem and then on the other. If the feet prove not sufficiently powerful to force the casing into place, a tire tool must be utilized, the ends of the rim being pried into place with a screwdriver. The new owner frequently gets the tire in place only to find that he has gotten the ends of the rim overlapping in the wrong way. A rim contracting and expanding tool is a great help in this connection, but sometimes this useful device is not at hand, when the above method may be used.

Seven million dollars has been paid for the registration of motor vehicles and the licensing of chauffeurs and operators during the first four months in New York state.

ESSEX CAR PACES MATCH RACE BETWEEN AIRPLANE AND MOTORCYCLE.



Portlanders attending motorcycle races at the Rose City track recently enjoyed the unique spectacle of a three-mile race between an airplane and a motorcycle, paced as shown in the picture by an Essex car, driven by Forrest Bradley and George V. Adams of the C. L. Ross Automobile company. Following the race the car, the same stock model that last fall set a record of 2 hours 21 minutes from Astoria to Portland, drove an exhibition mile around the track and made it in 58 seconds, only four seconds slower than the record for the track made several years ago in a racing car by Barney Oldfield.

WATCH RADIATOR HOSE

THAT MAY BE TROUBLE WHEN
ENGINE IS OVERHEATED.

Top Section of Hose Generally Is
One That 'Goes Bad.'—Pumps
Often Freeze.

When engines which normally keep cool even in hot weather or heavy climbing begin to heat up, suspect the condition of the rubber hose which connects the radiator with the water jacket. There are two such pieces of hose, but it is the top one that usually "goes bad," because it carries the hot water from the top of the engine into the radiator. The bottom hose carries the cool water from the radiator back to the water jacket, if the engine uses the thermosiphon cooling system.

Cars that use pumps for water circulation have smaller pipes and consequently smaller rubber hose connections than those which use thermosiphon cooling systems. Hot water gradually disintegrates the rubber and cotton of the hose, and when the inner lining of the hose breaks down into a mush it frequently stops up the hose connections to an extent sufficient to prevent proper water circulation. Replacing such a hose connection can be done in a few minutes.

Sometimes engines which cool properly in winter heat up when the warm days come. In engines of the pump circulation type, this is often caused by a hitherto unsuspected freezing of the pump, which has resulted in broken pump wheel blades. Dismounting the pump and taking it to pieces is the only way to make sure of this trouble. The remedy is a new impeller in the pump.

MILTON COMES TO FORE

SPEED FIEND CUTTING NICHE
IN HALL OF FAME.

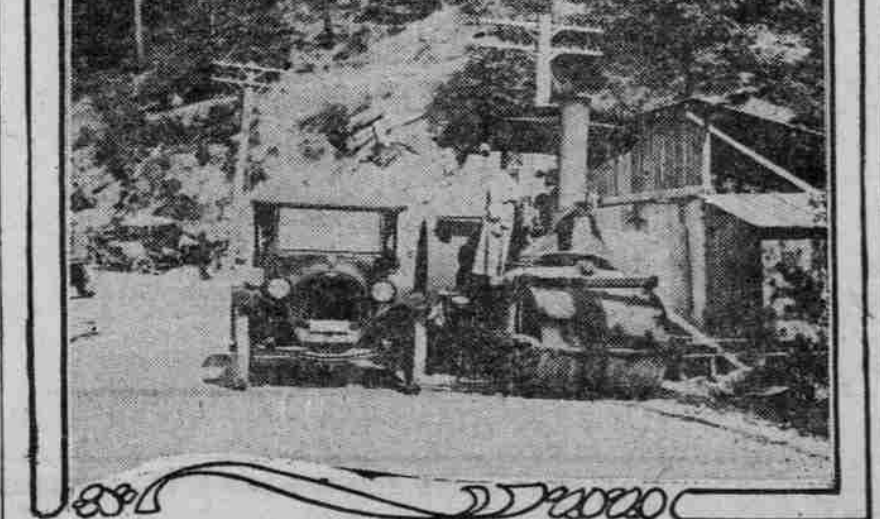
Clean-Cut Victory at Tacoma
Speedway Follows After Other
Achievements.

By his clean-cut victory at Tacoma last week, following his win of third place at Indianapolis and first at Uniontown, Tommy Milton, speed king, has set the notice that he must have full consideration as an aspirant for the 1920 speedway point championship.

As a matter of fact, Milton's 155-mile-an-hour dash over the Florida beach last winter was only an incident in his long apprenticeship. He began driving races in his own roadster, on half-mile tracks, and graduated to speedway tracks only after two seasons on the minor ovals.

Success has never turned Tommy's head. He remains the same quiet, modest, well-bred youngster he was before he became famous. Veteran critics see in Milton's driving many characteristics that once featured the

AT SONNY, NEAR MITCHELL POINT TUNNEL, ON THE UPPER COLUMBIA RIVER HIGHWAY.



This hamlet with the youthful name is the center of paving operations on the highway between Cascade Locks and Hood River. Before the end of this month pavement should be completed into Hood River. The car beside the steam roller is a Chevy let.

TUBES SAVING TIRES

CHEAP, UNBRANDED STOCK TO
HANDICAP CASINGS.

Maximum Mileage Delivered Only
When Tires Get Proper
Support.

How do you buy an auto tube—as a merely necessary and somewhat incidental accessory or as a part of the tire as vital as the casing? Upon the motorist's answer to this question depends, in large part, his freedom from tire troubles. The car owner courts trouble when he buys tubes carelessly.

The fact that tire costs are largely dependent upon tubes is frequently overlooked. Though the motorist has learned to shun "gyp" and "no-name tires" by reason of bitter experiences along the road, a bargain price frequently causes him to buy an inferior tube. Cheap and unbranded tubes will handicap any casing.

Leaky tubes ruin millions of tires annually through under-inflation. Ordinarily the motorist blames his casings for troubles for which his tubes are almost entirely responsible. On the other hand, good tubes enable a tire to deliver the maximum mileage the maker built into it.

The best casing is at the mercy of a poor tube. As the tube represents a small sum in comparison to the cost of any standard casing, it is frequently the part of economy to throw away inferior or worn-out tubes. The purpose of the tube is to hold air and to keep on holding air. When it fails in this it is worthless.

The Miller Rubber company believes that tubes have been an important factor in increasing the mileage of its casings 115 per cent in the last few years. Tube rubber is subjected to constant laboratory tests. Walls, for one thing, must stretch nine times and then return to normal. Today all standard tubes are built of laminated construction. In other words, they are built layer on layer up to the proper ply. This construction is made necessary by the fact that rubber in its natural state is a wretched air container. Both chemically and physically it leaks air. By using a number of layers of rubber so tiny flaws can go through.

Some tubes, if punctured, are easily mended. Some rip. The difference in tubes is worth the same careful attention from the motorist that he gives to the purchase of his casings.

FIRST CAR CROSSES SUMMIT

Automobile Towed Short Distance
Due to Bad Road.

EUGENE, Or., July 10.—(Special.)—The first car over the summit of the Cascades by way of the Mackenzie pass reached Eugene Monday. A party of people from central Oregon made the trip in fair time, but reported that their car had to be towed a short distance east of the summit because of a very bad stretch of road torn up by construction work. The snow did not interfere in any way.

Change oil every 800 miles.

Water in Crankcase Oil.

Few motorists realize that a comparatively large quantity of water gradually accumulates in the crank case, mix with the oil and forming an emulsion, which has impaired lubricating qualities. This accumulation of water is more pronounced in winter than in summer and is found to greater extent as the number of cylinders increases. This brings out the importance of changing the oil every 1000 miles, and for the best lubricating results every 500 miles, in which case the old oil may be run through a charcoal skin to remove the water, after which it may be used again.

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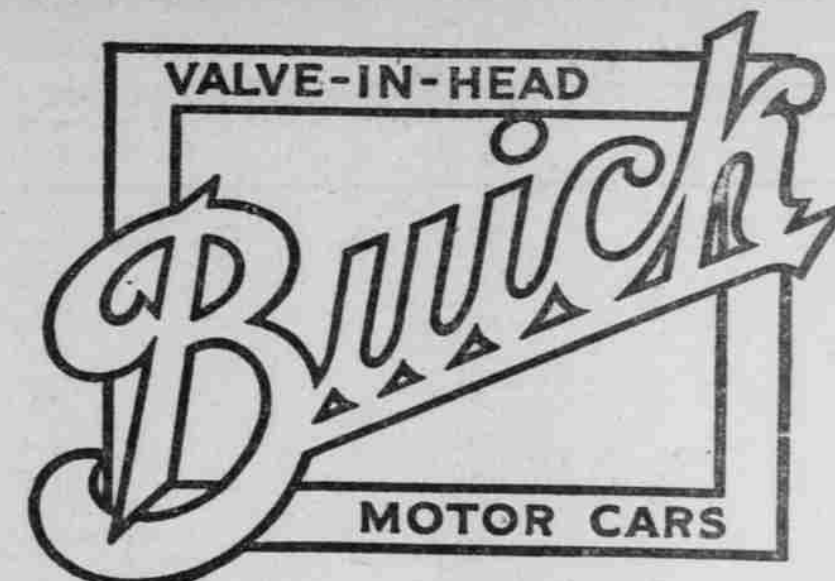
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ARRIVE IN PORTLAND

POSTAL TELEGRAPH - COMMERCIAL CABLES		RECEIVER'S NUMBER
CLASS OF SERVICE DESIRED	CLARENCE E. MACHAY, PRESIDENT	CHECK
FAST DAY TELEGRAM	TELEGRAM	FIVE FILLS
NIGHT TELEGRAM	THE POSTAL TELEGRAPH-CABLE COMPANY (INCORPORATED) TRANSMITS AND DELIVERS THIS MESSAGE SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE BACK OF THIS BLANK	
NIGHT LETTERGRAM		

SEND the following Telegram, subject to the terms on back hereof, which are hereby agreed to.

30 po g 10am 42 1 ex

Flint Mich June 26

Howard Auto Co
Portland Ore

Sixty seven carloads forwarded Great Northern since sixteenth
Eight forty-fours one hundred eighty seven forty-fives
Three forty-sixes one forty-seven thirty-four forty-nines

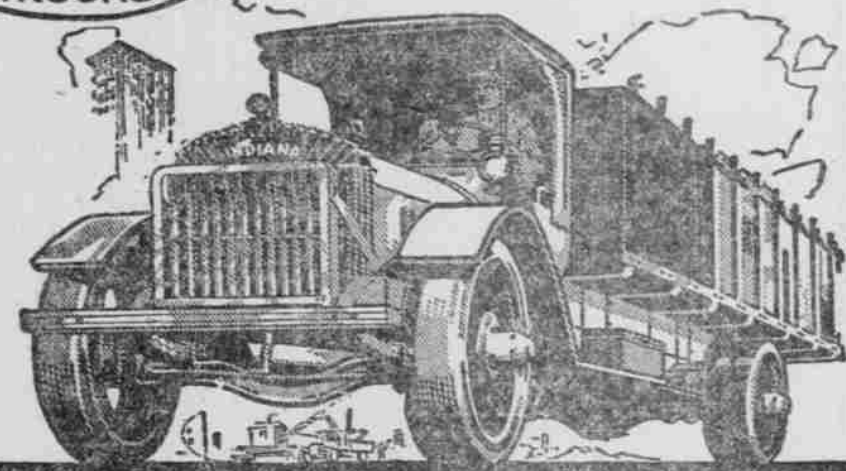
Buick
Conn

These carloads are now arriving. We have a few, in excess of waiting orders, for

IMMEDIATE DELIVERY
Is Your Order Placed?

14th and Davis Sts.

HOWARD AUTOMOBILE CO. Bdw. 1130 56-241



Real Profit and Economy in
15,000 Miles a Year
Record of Indiana Truck

AN INDIANA Truck purchased in 1916 by James Vasumpaur, 1701 W. 18th Street, Chicago, has run nearly 60,000 miles in 4 years—an average of 15,000 miles per year. It is still making daily deliveries of hardware in five counties—within a 50-mile radius of Chicago. Mr. Vasumpaur says: "This truck has paid for itself in four months and has never failed to deliver, despite bad roads and steep grades."

This is a typical INDIANA performance. The first INDIANA Truck—built in 1910—is still giving its owner daily service. For 10 years it has paid handsome profits—has travelled more than 100,000 miles—and is still going! Staunch, rugged and enduring—INDIANA Trucks will solve your hauling problem with absolute economy and large profits.

The harder the work, the greater your need for INDIANA, with its 112% reserve capacity, its brute strength and power and the long-life which assures lowest cost per mile of delivered service. Capacities: 1 1/4, 2, 2 1/2, 3 1/2 and 5-ton. See these splendid trucks at our salesroom.

"How to Choose a Motor Truck"
—a safe, practical, impartial market analysis. Unique and helpful. Write for it.

Pacific Motor Sales Co.
328 Glisan St., Portland
Phone Broadway 2199

INDIANA TRUCKS
The Highway Freighters

Manufactured by INDIANA TRUCK CORPORATION, Marion, Indiana

40% OFF ON TIRES
First in Line to Reduce Tires

Fresh new tires from the factories of the world's most famous makers—bought at inside prices—now sold at \$5 to \$25 under previous prices.

Size	Plain	Non-Skid	Tubes
28x32	\$11.00	\$12.25	\$2.10
30x32	12.50	14.00	2.40
32x32	14.00	15.50	2.70
34x32	15.50	17.00	3.00
36x32	17.00	18.50	3.30
38x32	18.50	20.00	3.60
40x32	20.00	21.50	3.90
42x32	21.50	23.00	4.20
44x32	23.00	24.50	4.50
46x32	24.50	26.00	4.80
48x32	26.00	27.50	5.10
50x32	27.50	29.00	5.40
52x32	29.00	30.50	5.70
54x32	30.50	32.00	6.00
56x32	32.00	33.50	6.30
58x32	33.50	35.00	6.60
60x32	35.00	36.50	6.90

Eagle Tire Company
122 Broadway,
Portland, Or.
Phone Broadway 1612.

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Why take a chance? Be sure that your next battery has Threaded Rubber Insulation, the kind selected by 136 manufacturers of cars and trucks.

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Ninth and Everett
and
East Burnside
at Seventeenth.

