GRADE CROSSINGS DEATHS 1917-1919 MAINLY AUTOISTS

Seventy Per Cent of Those Killed in Three Years Were Motorists; Revolution Toll Far Exceeded.

Washington, Nov. 20.—Seventy per cent of those killed or injured at grade crossings in a three-year period were motorists, according to figures compiled by the interstate commerce commission and just given publicity by the American Automobile association, which through its touring, good roads and legislative boards is preparing a nation-wide agitation on this vital phase of highways travel and transportation.

"Three times as many American citizens were killed or injured at grade crossings in 1917, 1918 and 1919 as were killed and injured during the Revolutionary war," states M. O. Eldridge, the A. A. A. director of roads, who gives the American casualties in the principal battles as 6600 and places the grade-crossing killed or injured for the three-year period at 19,668 men, women and children, of which 5605 died of their injuries within 24 hours of the accident.

In spite of the combined efforts of railroad and highway officials and automobile clubs, the total number of accidents continues annually at about the same rate. The number of such accidents and deaths for the calendar years 1917, 1918 and 1919, as compiled by the interstate commerce commission, is indicated as follows:

Year.	Killed.	Injured.	Total.
1917	1,969	4,764	6,733
1918	1,852	4,683	6,535
1919	1,784	4,616	6,400
For three years.	5,605	14,063	19,668

MOTORISTS IN MAJORITY

These accidents include all persons who were injured or killed by railroad trains, striking or being struck by trolley cars, automobiles or other vehicles and by trains striking pedestrians. A great majority of these accidents have occurred to motorists, as will be seen from the following figures:

Year.	Killed.	Injured.	Total.
1917	1,083	3,000	4,093
1918	1,131	3,109	4,240
1919	1,232	3,558	4,790
Total for 3 years	3,446	9,167	13,213

Thus it appears that nearly 70 per cent of those injured and killed during the three-year period were motorists and that such deaths and accidents are steadily increasing from year to year. In fact, there were nearly 14 per cent more motorists killed in 1919 at grade crossings than in 1917.

During the year ending June 30, 1920, there were 1302 motorists killed at grade crossings in the United States.

That preventive measures are becoming more effective in some states than in others because of grade crossing eliminations, more cautious driving, and the protection of crossings by gates, bells, etc., is indicated by the fact that the deaths occurring are not always in direct proportion to the number of machines registered in those states. For instance, while New York gained first place in registrations, more motorists were killed in Ohio. Likewise, Pennsylvania, running third in 1919 registrations, has fifth place on the death list. Massachusetts was tenth in registrations, but twenty-fourth in fatality matters. Connecticut was twenty-third in registrations, but thirty-fourth in grade-crossing tabulation.

DELAWARE LEADS

More people were killed in Delaware in proportion to the number of machines registered than in any other state. Florida occupies second place on this unenviable list:

1. Delaware	13. North Carolina
2. Florida	14. Utah
3. Arkansas	15. Vermont
4. Mississippi	16. Kentucky
5. Indiana	17. Illinois
6. New Mexico	18. Michigan
7. South Carolina	19. Montana
8. New Jersey	20. Georgia
9. Oklahoma	21. Nevada
10. West Virginia	22. Ohio
11. Louisiana	23. California
12. Virginia	

In South Dakota there were fewer motorists killed in proportion to the number of machines registered than in any other state. Massachusetts occupies the second place on this list, with Maryland third. Oregon has place on neither list, indicating extreme conservatism in casualties.

1. South Dakota	13. Kansas
2. Massachusetts	14. Tennessee
3. Maryland	15. Idaho
4. Texas	16. Pennsylvania
5. North Dakota	17. Minnesota
6. Connecticut	18. Missouri
7. Colorado	19. Wisconsin
8. Rhode Island	20. Wyoming
9. Iowa	21. Alabama
10. New York	22. Maine
11. Washington	23. District of Columbia
12. Utah	24. New Hampshire

It is practically impossible to eliminate all grade crossings, on account of the expense involved.

The Pennsylvania railroad has already spent $66,000,000 in grade crossing elimination, but it is estimated that it would cost $600,000,000 to wipe out the remaining 13,000 crossings.

HIGHWAYS AT FAULT

"There are thousands of grade crossings, however, which could be eliminated by relocating the main highways and by confining the bulk of the highway traffic to one side of the railroad," comments Eldridge. "Very frequently the highway will wind back and forth across the railroad tracks and this without apparent reason.

"I have in mind a highway in Arkansas which crosses the main line of an important railroad nine times in a distance of less than 30 miles.

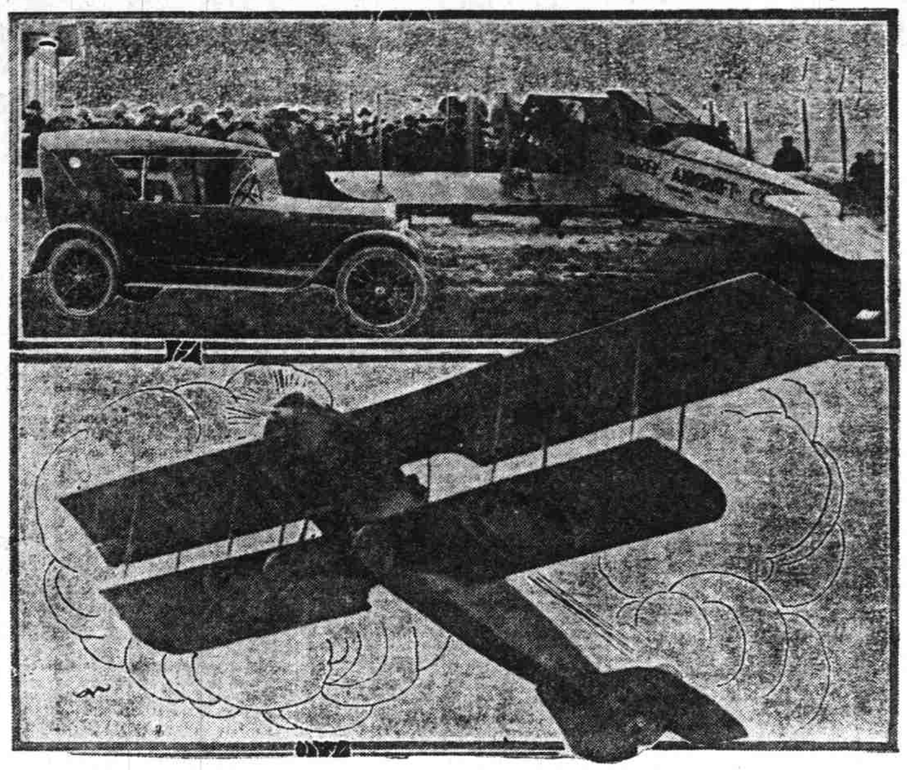
"The great majority of accidents occur at unprotected crossings over double track railroads where one train may prevent motorists from observing the approach of another train, or where the railroad tracks are obscured by embankments, buildings, trees or shrubbery. On the other hand, many serious accidents occur where the tracks are clearly visible in both directions. Such accidents may be attributed to plain carelessness or foolhardiness on the part of the drivers."

"It would seem that since the elimination of grade crossings is the only sure method of preventing accidents, this work should be continued as rapidly as funds can be secured," concludes the A. A. A. official, who urges that "every possible effort should be made to protect the public from accidents on existing crossings and to impress upon the drivers of all motor vehicles the necessity for extreme caution."

Lighting the Way

Highway "lighthouses" are now coming into vogue. The entire state highway system of Wyoming is soon to be equipped with them. Dangerous curves will be designated by yellow lights and railroad crossings by red lights. The lighthouses will "wink" 45 times a minute, throwing a 9-inch ray which can be seen three miles away.

MOTOR CAR AND PLANES MEET AT FLYING FIELD



Scripps-Booth Six snapped beside the Dudrey-Curtiss Standard, winner of the fancy stunt flying event at Lewis and Clark field on Armistice day. The car is handled here by a branch of the Scripps-Booth company, of California. L. A. Hannan, manager of the branch, who is an airplane enthusiast, drove the car as the official staff car for the classic. One of the planes is shown in action at the bottom.

Washington-Idaho-Montana

There are at present 278 miles of high gear motoring between Walla Walla and Portland, and by the time tourist traffic opens up next spring 115 miles of this will be paved road. This information has been secured from Secretary W. S. Parks of the Tri-State Automobile club, who has just finished a compilation of road improvement conditions following the close of road work in the Inland Empire with the oncoming of winter.

This means, those prominent in automobile circles here say, that Portland will be assured of the heaviest vacationist traffic next year from Eastern Washington and Oregon she has ever known, as the route from here to Seattle from the standpoint of grades and paving is said to be not comparable with the Columbia highway via Pendleton and the distance to Portland is 36 miles shorter. The completion of the paved stretch from Portland to Astoria is also a great inducement to the tourist from this section to visit the coast resorts in the region of Portland.

The principal garage men here point to the fact also that there will be an increased traffic to Portland next summer from points between here and Spokane because of the completion of the paving in the region of Walla Walla this season and of improvement of the road north from Central Ferry on the road to Spokane. The macadamizing of that road is now nearing its finish while 150 men are hard at work just outside of Colfax. This will give a splendidly graded and surfaced road from here to Spokane with 40 of the 45 miles between here and Pendleton paved and the assurance that by spring the remaining five miles will be hard surfaced.

The concrete paving between Walla Walla and the state line has been completed and will be cured and open for traffic by about December 5. From the state line south for about six miles the black top paving has been finished to a point between Weston and Milton. From Pendleton the same road is hard surfaced to a point between Athena and Weston, which are three miles apart. The unpaved five miles is new macadam and will be paved next spring. From Walla Walla to Dixie a concrete road 20 feet wide has been finished and will be cured and open for traffic by December 5. Thus there will be within three weeks 50 miles of paved road in Southeastern Washington and Northeastern Oregon to connect with the Columbia highway at Pendleton. The 64 miles of paving from Portland to Hood River together with that finished in Umatilla county and that which will be completed from Hood River to The Dalles in the spring it is pointed out, will bring traffic from Spokane and points south through Walla Walla and Pendleton over the Columbia highway to Portland in greater numbers that ever known, if the proper cooperation is received from the tourist organizations of the Rose City.

All automobiles arriving from the East come into Spokane via Sandpoint, Idaho, and Thompson Falls, Mont. The route via Wallace, Idaho, being closed for the season on account of snow and mud mire.

From Spokane to Portland and Seattle the highways are reported fair. The Blewett pass is still open, but the going is very poor, due to some snow and earth slides. Snoqualmie pass is reported free from any heavy snow fall and good time is made through this pass. This information comes from the headquarters of the Good Roads association here.

The farmers living along the Inland Empire highway will have special cause for Thanksgiving this year as the final stretch of highway road out of Yakima, which has been closed for the greater part of the past year, will be thrown open on Thanksgiving morning, according to announcement made today by the state highway department. The road will enable motorists to have paved highway into Toppenish and connecting many other valley cities with Yakima.

Southern Oregon

The condition of the Pacific highway from the North Josephine county line south is as follows:

North county line to Grave creek, 8 miles, pavement and macadam. About one half mile of dirt road from Grave creek to foot of Smith hill that is rough. North slope of Smith hill is now macadamized. South side of mountain will require chains for comfortable driving. Smith hill to Grants Pass is fair traveling, although it is somewhat rough owing to recent grading. From Grants Pass south everything is pavement.

The Grants Pass-Crescent City road is not a good road for tourists during this part of the year, owing to heavy rains and steep grades. However, from Grants Pass to Waldo the going is good with the exception of Hayes hill, which is very slick. From Waldo to Crescent City it is all mountain road with heavy grades and sharp curves.

A large force of men and teams is at work on the Pacific highway between Myrtle Creek and Canyonville and will push the construction of the highway at that point until completed or the weather forces a halt. Travelers over the highway will find the longer road by Riddle in fair condition. The Pacific highway through the canyon is in fine shape, where the big bridge is almost completed. Frosts in the canyon during the past week interfered with cement work, but with a continuance of fair and warm weather, it is said that motorists will be able to use the structure by the first of the year.

The Pacific highway south of Ashland over the Siskiyou mountains is reported in good condition by the cars which are coming over every day.

The construction work on the summit has been held up by the recent rains but a representative of the construction company is out on the mountain this week expecting to call the crew out for work if the weather does not get worse than at present. Detours, however, are in good condition and the construction work does not hinder travel.

Construction work on the Green Springs mountain road has been suspended for this winter. Work will not be resumed until next spring. Rains have made the roads very rough.

The Ashland-Klamath Falls auto stage line has stopped its daily run for the season. This stage line goes over the Green Springs road.

Tillamook District

Trucks and passenger cars are having difficulty negotiating the rickety road of boards near Willamina, on the Tillamook road. The Willamina-Grand Ronde Railway company and the state highway commission have threshed the matter back and forth for the past few weeks without result, and motor cars still plug through mud. The stretch is about a half mile in length and was originally repaired by the Bates-Rogers Construction company while the latter had charge of making the railroad grade. Little effort is being made to keep the plank road in good condition, the place is narrow, and at times as many as 20 automobiles and trucks are lined up awaiting their turn. Frequently machines slip from the planks and a tussle with the mud is the result. This is the worst portion of the Tillamook road, and, in fact, is practically the only spot where motorists are having any trouble.

TRANSPORT BIG FACTOR IN THE COST OF GOODS

(Continued From Page One)

road engineer has built up. A heavy truck standing still at one spot on a highway will cause no visible damage, but roll the same truck back and forth over the same spot for the same length of time and an effect will be noticeable. The continual pounding on the highways is what tears them down. Speed is a contributing factor—one reason why state and city governments allow vehicles to proceed only at a certain pace.

UNSPRUNG WEIGHT

The element of safety to human life is the personal reason for speed curtailment. Unsprung weight, the weight below the springs without any softening influence to mitigate its effect upon the surface or foundation of a roadway, has been found to be the secret of road wear. This weight may be taken up by the cushioning effect of pneumatic tires, but when solid tires are used and a heavy rear axle is employed to furnish contact for motive power, the impact weight of the truck is increased that much and the wear on the highway is augmented proportionately. The foot-poundage of torque generated in the differential is impact weight.

While consumers are viewing with gratification the opportunity for quick, efficient, and comparatively cheap transportation through motor trucks, it might be well to raise the question as to how the highways will ultimately fare. This inquiry may result in legislation regulating the speed of certain types of trucks, recommendations for certain equipment may be made and other conditions imposed for the purpose of eliminating the chance for a great future expense to the people, lost sight of at present in the satisfaction of profiting by a type of transportation efficiently shouldering the task of supplying continual short haul service and occasional emergency transfers. The cost of transportation may not mean the immediate rate per mile ton. It may mean the ultimate bill for highway repair.

roadways through the action of various types of trucks, seeking to solve for all time the relative importance of static and impact weight. Should the highways of the country go to pieces under the wheels of this type of commercial transportation, then the cost per ton mile will be increased just in proportion to this deteriorative effect, and the consumer will pay the difference.

CONSUMER ALWAYS PAYS

The truck will not be a benefit if it proves too great a strain upon the country's purse. With a $28,000,000 four-driveway tube going under the Hudson river between New York city and Trenton, N. J., with the government about to spend something like $800,000,000 on highway construction, and with the states combined spending a total sum in excess of that for the next few years, unless the roads are built to endure or unless truckbuilders cut their cloth to suit the highways available the common citizen will eventually pay the bill.

It has been found that impact weight rather than static weight is the influence which seeks to tear down what the

AUTOMATIC SPEED CONTROL URGED BY TRAFFIC HEAD

G. L. Case of Meier & Frank Co. Says Guard Against Reckless Driving Is Essential.

G. L. Case, traffic manager for Meier & Frank Co., has decided opinions regarding delivery cars.

Case says, "the necessity of regulating the speed of commercial vehicles is universally recognized. The many abuses of reckless driving compel the truck owner to safeguard his interests by equipping his truck with some device which automatically keeps the speed within a predetermined limit."

Manufacturers of a considerable number of standard trucks, realizing the necessity for the regulation of speed, have adopted the policy of equipping their trucks with governors which regulate the speed. If all commercial cars were so equipped, it is believed, 50 per cent of accidents could be entirely avoided, in itself a sufficient reason for the general public insisting upon such equipment on commercial cars.

"The truck owner has other reasons of equal importance," continues Case. "Judging from our own experience, repair bills can be cut in two. On most of our equipment the speed is regulated by governors. We have trucks so equipped that have been in service since February of this year, upon which there has been no expense for repairs, some of them having covered a total of nearly 8000 miles. By regulating the speed of delivery cars, the tire expense can be reduced from 20 to 25 per cent. In addition, the elimination of a large percentage of accidents, the saying in repair and tire bills, the life of commercial cars so equipped is increased from 300 to 400 per cent. In other words, a truck will last three or four times as long.

"For the benefit of truck owners who are not familiar with governors, Case says that a standard governor which can be installed on any make of car or truck and for which repairs or parts can be obtained locally, is preferable. Information at hand would indicate that a superior instrument of this kind is being distributed on this market and would suggest that truck owners could investigate it to their advantage."

Eugene District's New Roads Praised

Eugene, Nov. 20.—Engineer C. G. Whitmore of the State Highway commission, paid a recent visit to Eugene and looked over some of the finished road projects in this vicinity. He intimated that these compare very favorably with any surfaced roads in the state. He states that this county will receive the amount of $55,000 from the state market road funds next year, with the provision that the amount be matched by an equal amount to be raised by special levy in the county.

A Letter From All of Us to S. Kozer

(Apologies to K. C. B.)

TO Sam Kozer
DEAR Sam
I get a letter from you
EVERY year
ABOUT this time
AND in every letter
YOU ask me
THE same question
AND that is
HOW many inches wide
ARE the cylinders
ON my Ford car
AND I never
CAN remember
HOW wide they are
AND every year
I have to go
TO the garage man
WHO knows these things
AND get this information
TO send to you
AND as you probably know
WITHOUT writing to me
THE width of the cylinders
IN a Ford car
I wish you would tell me
IN your next letter
HOW wide they are
SO I would not
HAVE to bother
THE garage man
WHO is not very affable
AND makes remarks
ABOUT the number of times
HE has to answer this
QUESTION
AT this time of year.
YOURS truly.

ALL OF US.

"Freezitis" Soon To Hit Radiators; Alcohol Is Remedy

Now that winter is here once more and inasmuch as radiators in a large number of cases will be afflicted with their customary complaints of "freezitis," it pays to remember Friend Alcohol. Radiators are not beholden to the eighteenth amendment.

It is well known that if the water in the cooling system is allowed to freeze, serious damage will result to the radiator and cylinder water jackets. The use of alcohol as an anti-freeze medium is almost universal, but in a great many instances it is incorrectly employed. The following formula may be found helpful: For a temperature not lower than 20 degrees above zero use the mixture, wood or denatured alcohol 5 per cent, glycerine 5 per cent, water 90 per cent; for a temperature not lower than 10 degrees above zero, alcohol 10 per cent, glycerine 10 per cent, water 80 per cent.

The glycerine does not evaporate, but the alcohol does, so that alcohol should be frequently added to the solution.

BIG TIRE DEMAND TO RAISE PRICES

Present Reduction Not Viewed With Alarm; 8,580,000 Cars Will Need Shoes During Year.

Tire companies announcing substantial reductions in their product opens a new channel of thought, and dealers are at once making predictions regarding the possible market for automobile tires as soon as the market is sufficiently stabilized to offer attractive buying conditions for the consumer. One dealer sums it up in this wise:

"Late registration figures show that more than 7,000,000 cars are in actual use in the United States, all wearing out tires, and the estimates for the coming year call for nearly 2,000,000 more. Making allowance for 420,000 cars which will be junked during the year—based on the recognized depreciation figure of 6 per cent per year—8,580,000 cars will require tires during the coming year. Which means a potential market for about 34,000,000 tires!

Dealers are reflecting the optimism of manufacturers and distributors, and, although many have been making sales at prices below list, with slow sales at that, they think that if the market can fall to a solid level, a healthy demand for tires will materialize shortly.

Portland Man Wires His Order for Car From Factory in East

S. V. W. Peters, manager of the Portland Motor company, is in receipt of a telegram from C. F. Wright, of Ballou & Wright, who is now in the East, giving him an order for one of the new Packard Single Sixes, delivery of which he will take when he returns to Portland within a few weeks. Wright wired that he had visited the Packard factory, seen the car and driven it. This experience was enough for Wright and the telegraphic instruction to save him one was the result. "While the wire was in the nature of a surprise to me," said Peters, "the Single Six is only running true to form. Simply from the information that the Packard company was to get out a light six, was enough for several buyers to come to our salesrooms and place their orders. As fast as the first few cars are received they will go into the hands of owners. Some of them were purchased without even knowing the exact price. Peters also received notice last week that the Portland Motor Car company had been appointed a direct factory distributor for the entire Packard line of passenger cars and trucks, with territory to include Western and Central Oregon and Southern Oregon. Heretofore the company has operated under Seattle. The new arrangement enables the company to carry a much larger stock of parts and to better their service facilities not only in Portland but throughout the territory which the company now controls.

Watch the semaphore.

Although Armless, Fresno Man Flies Like an Old-Timer

San Francisco, Sept. 20.—The only armless birdman in the world is today skimming over the country surrounding San Francisco. And despite his physical handicap, L. C. Thornton of Fresno is qualifying as an expert aviator, his great ambition in life.

Three years ago Thornton lost both of his arms in a railroad wreck. Sheer determination and grit has led him to accomplish wonders since that time. He first wanted to drive an automobile. By rigging a sling on the side of the steering wheel and with a hole punctured in the rim of iron inside the wheel, Thornton drives with ease.

Thornton recently joined an aviation school and has succeeded in learning the art of flying until he is an expert. He is a first class machinist and the proprietor of a machine shop in Fresno.

Auto Equipment Show at Chicago Proves Revelation

E. R. Wiggins, president and general manager of Wiggins & Company, Inc., is in the East attending the fifth annual meeting of the Automobile Equipment association, terminating in Chicago this week. He is accompanied on the trip, which is one of pleasure as well as of business, by Mrs. Wiggins.

Manufacturers of all kinds of automotive equipment are showing their wares at a show in connection with the convention, the second year of this feature, and so large has the event grown that the Coliseum had to be commandeered to house the vast display. Wiggins writes to his organization here that great strides have been made during the past year in the development of automotive equipment of all kinds.

Akron, Ohio, is also on Wiggins' lists, as that city is the home of the Diamond tire, for which his company is the local distributor. It is said that the local equipment man will return to the city the first of the month.

Zinc Rims Retard Rust

Many automobile wheel rims are now zinc coated by the sherardizing process. This treatment retards rusting, which in the past impaired the life of the rims and caused occasional accidents due to fastenings giving away.

FEDERAL
Nothing Succeeds Like—
Another FEDERAL
Wm. L. Hughson
60 North Broadway, at Davis
Phone Bdwy. 321

If the Hupmobile were a living creature, the word *devotion* would exactly describe the qualities which actually endear it to the average family.

It so seldom sulks; it is so ready and willing; it performs so faithfully, that it repays, over and over, the confidence people place in it.

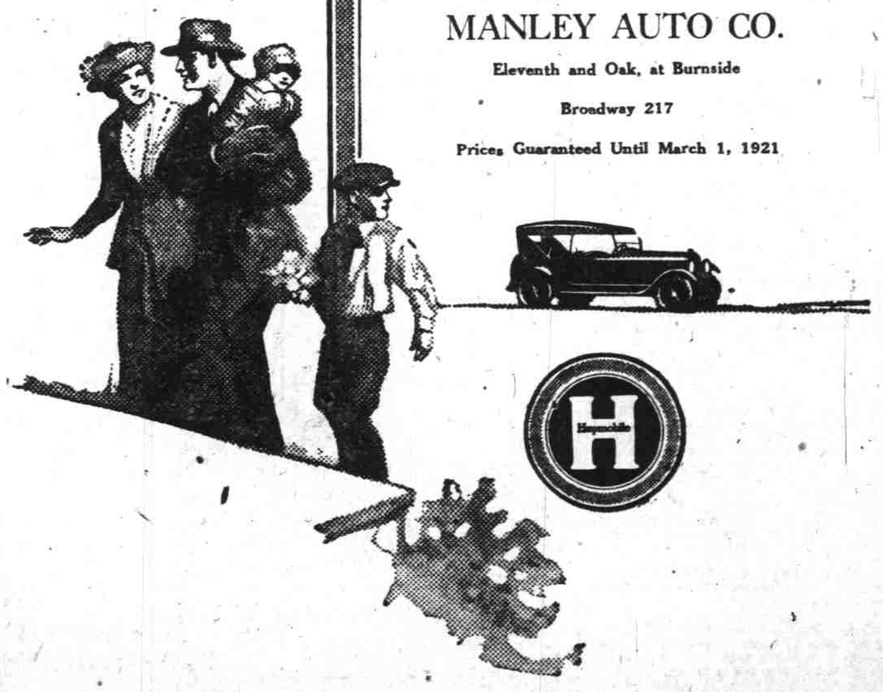
Without question, these are the underlying reasons for the great good will in which the Hupmobile is held everywhere.

MANLEY AUTO CO.

Eleventh and Oak, at Burnside

Broadway 217

Prices Guaranteed Until March 1, 1921



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Prospective buyers of motor trucks need have no fear for a "falling market" in reference to MACK trucks.

The average increase in the price of MACK trucks has been only 15 per cent in eight years. Compare this with other trucks.

MACK truck prices are as substantial as the trucks and everybody knows there is no truck that compares to the MACK in ruggedness of construction.

Can you name any truck besides the MACK that has a heat-treated, case-hardened crankshaft and camshaft?

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Tenth and Davis Streets
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MACK