

## Automobiles and Good Roads

Showing How Cost of Operating a Motor Can May Be Lessened.

THERE is no question but that the fear of high cost of operation keeps many a farmer from buying a motor car, says H. C. Hatch in Successful Farming. Tales told by town and city car owners, who hire all work done on the car, even to washing and polishing, tend to discourage farmers. The average farmer does not consider that because of his familiarity with machinery he is more competent to handle, care for and repair a motor car than the town and city man, who, very likely, has no knowledge of machinery, therefore must hire every little job done. Perhaps, too, the average banker, merchant and townsman is less inclined to tackle a job that will dirty his hands than the farmer.

The present and only car I have owned will soon have been five years in my possession. Somehow, I feel that this nearly five years of experience with a car permits me to speak of motor cars with experience. On the first day of November, 1909, I paid \$1,425 for a five passenger, thirty horsepower car that has given me uniform satisfactory service since. Being an average Kansas farmer, I have no money to spend on luxuries and nothing to pay out for labor than can as well be done on the farm.

### The Cost of Repairs.

With the car in my possession, I determined to learn it and to pay out for its upkeep only what was necessary. When a repair is necessary I send direct to the Kansas City branch for it and make the replacement myself. During the four and one-half years of actual use of the car it has been necessary to put in two new rear axle shafts, a new drive pinion and an intermediate gear wheel, as well as the main transmission shaft bushings. All this replacement I have done myself, at a cost only of time necessary to do it. It took me longer, of course, to do this work than an experienced garage hand, but it was done during stormy times, with little interference with the work on the farm.

A new clutch was put in the second year the car was in use, but this was a company replacement, at half price, the original clutch not proving what it should be, and as the company seemed disposed to do the fair thing, they put an improved clutch in at one-half price rather than to have an unsatisfactory piece of work on the road. On the same basis, improved and adjustable push rods were furnished, but I put these in myself when I had the engine down to clean it of carbon. Last summer the coil box gave trouble and it was necessary to exchange this for a new one, which the company did on a basis of one-half the cost of a new coil, with the old coil returned to them. This completes the list of repairs it has been necessary to buy during the four and one-half years the machine has been in actual use, and the car is now in perfect trim for another season's work. Tires and tubes are not included in the list of repairs but are taken account of in the running expense.

### Do Not Mind the Mud.

Living some distance from town, our car is used at times when the roads are not in the best of condition. Going on the theory that cars are made to be used, I do not stand back for a little mud or for rough, rutty roads. The machine was bought for business as well as for pleasure. Not having a driving team, it is used as a saver of horses—to prevent the use of work teams on the roads. I often make the trip to town, loaded down with cases filled with eggs, when the roads are such that the intermediate gear must be

used most of the way. The intermediate gear is there for use when the pulling is too hard for high gear, and I do not drive work horses to town just because the roads are too muddy to permit driving on "high" most of the way. I can make ten to twelve miles an hour on "intermediate" without overheating the engine or otherwise harming the machine.

Because I travel over any and all roads, except when absolutely out of the question to use a car, I do not make the mileage from gasoline that those do who travel only when the roads are good. A basis of ten miles to a gallon, for year around use, I consider conservative. When the roads are good I can make eighteen to twenty miles to the gallon, but it would not be right to figure that as the mileage because it is possible to do that well at times. When the sixty gallon tank is filled, the mileage of the car is set down according to the reading of the speedometer. When the tank is emptied the speedometer is again read and the mileage per gallon is figured. As gasoline evaporates and wastes in other ways, it is impossible to make use of all you pay for, but as you pay for it, it is only fair that the entire cost of gasoline be figured, waste as well as what is actually used. Figured in this way, a ten mile to the gallon estimate is not far wrong, particularly if all sorts of roads are negotiated.

### Tires and Tubes.

Tires and tubes are now cheaper than ever before. A 3 1/2 by 32 tire can now be bought for around \$16, with regular 3,500 mile guarantee. The second year I owned the car a new tire was bought, which then cost me \$28.50. This was not the high point, however, as a few weeks later the price soared to over \$32, or practically double what it is now. Crude rubber is now very low in price, consequently tires and tubes are much cheaper, as well as averaging better, since there is not the incentive to adulterate or use second-hand rubber, as there is when the product is high. A good quality of oil is likewise cheaper than it was three and four years ago. One can buy oil very cheap now, but it is cheap oil. I find that a grade costing around 50 cents a gallon is really cheaper, mileage and real lubrication considered, than a poor oil that may be bought as low as 30 cents or less.

### Can It Travel?

Let us figure what it will cost to travel 100 miles with the average five passenger car, with the roads in average condition. Ten gallons of gasoline will cost \$14.00. Wear and tear on the tires will average 2 cents a mile, or \$2 for the 100 miles. Oil and grease to make the 100 miles will cost about 25 cents more, making a total of \$3.65 for gasoline, tires, oil and grease to travel the 100 miles. This takes no account of repairs or wear and tear on the machine. If the machine is well taken care of, however, and the few repairs needed by the machine that is well cared for are installed by the owner himself, thus escaping the garage bill that is often exorbitant, the cost of running 100 miles need not be more than \$5, or 5 cents a mile. On the whole, for the farmer's car, taken care of by the farmer himself, I think that an estimate of 5 cents a mile is not one bit too high or too low. This means 1 cent per mile per passenger, a cheap rate for transportation.

### As Cheap as a Team.

One cannot do it for less with a driving team, considering the high cost of hay and grain the team will eat. This is not all; with account taken of the extra time saved by the car, the cost of traveling by motor car is lowered still more, for a farmer's time is worth money, and just when time on the farm is worth the most the car runs the best and the roads are likely to be best. Notice that I speak of the use of the car purely from a business standpoint, as a means of transportation of five passengers or their equivalent in weight of farm produce. What it accomplishes in a business way it surpasses as a pleasure vehicle. With the car, trips will be made that would not be undertaken with a team, such as going some distance across country to visit relatives and friends or to town in the

evening to attend an entertainment. All this is possible regardless of the horses or the work they must do. After nearly five years of experience, I am convinced that the medium priced car, of standard make, will "break up" no farmer who has the ready money with which to buy it. The cost of operation is really less than I figured it would be before buying the car.

## French Automobiles

THE year 1913 was one of great prosperity for the French automobile trade. The production and home demand increased, while the foreign trade reached record figures. The value of the exports of pleasure motor cars in 1913 was \$41,978,850 as compared with \$39,970,879 in 1912. More noticeable was the increase in the foreign shipments of French motor cars for industrial purposes, the value of the shipments in 1913 being \$1,914,753 against \$944,735 during the previous year.

The use of foreign automobiles is being more and more felt in the French market, especially as regards the motor cars made in England and in the United States. The imports of passenger motor cars increased from \$2,481,980 in 1912 to \$3,617,399 in 1913. No official statistics are available which would indicate the countries from which the automobiles were shipped, but from information obtained from unofficial sources, there were 627 American motor cars imported into France in 1913 against 264 cars in 1912. The invasion of the American motor car has caused much comment in the French press and predictions have been made that the total imports of motor cars from the United States will greatly increase during the present year.

## Get the Facts

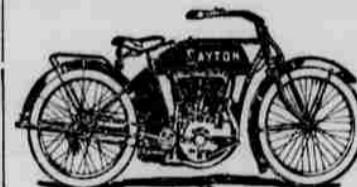
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### ROAD MIRRORS.

THE municipality of Bombay has decided upon the plan of making use of road mirrors at dangerous turns or junctions of streets or roads where there is considerable traffic, the idea being that drivers will be able to see on approaching such junctions whether otherwise blind streets are free from traffic or not. The Bombay Times says, concerning this plan of road mirrors:

"While this will be the first road mirror introduced in India it does not take the form of an experiment, as road mirrors exist in many towns in England and they have fulfilled their object with distinct success. But Bombay is going further than England in that, as far as is known, the mirror to be provided at the corner of Gamdevi Road and Hughes Road will be the biggest road mirror in the world. The most common sized mirror employed at home is 2 1/2 by 3 feet and the biggest one is 8 by 3 feet, while the mirror to be erected in Bombay will be 10 by 5 feet. The completion of the mirror will be awaited by motorists and others with interest, for in many parts of Bombay there are dangerous corners, and if they can be freed from their danger by the provision of road mirrors a difficult problem will be overcome."

### Hustling Needed.

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