

## AUTOMOBILES FOR EVERYBODY

NO LONGER MERE TOYS OF THE RICH, BUT WITHIN THE REACH OF MEN OF MODERATE INCOMES—WHAT IT COSTS TO KEEP ONE—HOW THEY COMPARE WITH HORSES AND CARRIAGES FOR PHYSICIANS AND OTHERS WHO DRIVE—THE ECONOMY OF COMMERCIAL AUTOMOBILES

BY

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NOT long ago it was the generally accepted idea that automobiling is a sport for millionaires exclusively—an expensive diversion beyond the reach of people in moderate circumstances. This view of the sport—if it may be called a sport—holds true of enjoying the use of high-powered high-priced touring automobiles with their expensive equipment. But on the other hand there are automobiles that a man of moderate circumstances may own which will carry him wherever he may wish to go, at a reasonable speed and at a cost that, when the service which they render is considered, is not exorbitant.

The cost to consider, however, is not so much the first cost as the expense of up-keep. A glib-tongued agent may not hesitate to say that an automobile may be cared for as cheaply as a horse, but, really, it costs less to maintain a horse than to keep in commission even the lowest-priced runabout. The advantage of the automobile is not in its cheapness, but in its ability to cover tenfold more ground.

### AUTOMOBILES FOR PHYSICIANS

A physician's demands are perhaps as exacting as those of any other owner of an automobile would be, and a comparison of the cost of a horse and of a car to a physician will cover the case of many other classes of people.

A busy physician who undertakes to drive

daily in his professional rounds in any large city will require an equipment about as follows:

| COST OF EQUIPMENT FOR USING HORSES |         |
|------------------------------------|---------|
| Standard doctor's buggy.....       | \$ 300  |
| Cut-under carriage.....            | 400     |
| Single harness, hand made.....     | 50      |
| Double harness, " ".....           | 100     |
| Two horses at \$150 apiece.....    | 300     |
|                                    | <hr/>   |
|                                    | \$1,150 |

To this sum should be added the cost of a coachman's uniform, the cost of heat and light, veterinarian's services, shoeing, repairs, depreciation, and interest on investment; but these will be omitted as there are similar expenses, amounting to as much, in maintaining an automobile. An automobile would probably cost more for repairs than the carriages. The expense of maintenance of the carriages would be about as follows:

| COST OF MAINTAINING HORSE EQUIPAGES        |        |
|--|--------|
| Stable rent per year.....                  | \$ 100 |
| Oats, hay and straw for two horses.....    | 240    |
| Shoeing two horses.....                    | 48     |
| Hire of man at \$20 a month.....           | 240    |
| Harness repairs, painting of carriage..... | 50     |
| Sundries, brushes, blankets, etc. ....     | 25     |
|  | <hr/>  |
|  | \$703  |

Assuming that it is possible to drive twenty miles a day with this equipment, or approximately 7,000 miles a year, at a cost of \$700 for maintenance, the cost per mile would be ten cents.

To match the work of two horses, a physi-

cian desiring an automobile would need a powerful and sturdy runabout costing from \$1,000 to \$1,200, of at least ten horsepower, and with an engine of two cylinders at least. For all-year use, embracing winter driving, an air-cooled machine is most logical. The car must be fitted with a top and a storm apron and curtains, and as far as possible it must be simple of control and have easily accessible parts. The approximate cost for 7,000 miles of use of such an equipment might be estimated as follows:

| COST OF MAINTAINING AN AUTOMOBILE |        |
|-----------------------------------|--------|
| Stable rent .....                 | \$ 100 |
| Gasolene .....                    | 70     |
| Lubricating oil.....              | 10     |
| Battery .....                     | 15     |
| Painting.....                     | 25     |
| Tires.....                        | 100    |
| Services of a man.....            | 240    |
|                                   | \$560  |

There will also be valves to replace, broken chains and possibly crank-shafts, connecting rods or pistons; and no one can say just where the expense for repairs will cease, or what it will be. It is a matter of luck and of the amount of attention that a man gives his car. If the physician is his own mechanic, the expense will be materially reduced, but if he depends upon mechanics at sixty cents an hour, he must prepare himself for pretty stiff monthly repair bills. In the figures given, there is a leeway of \$140 in favor of the automobile, but according to my experience and that of my friends, it is impossible to maintain an automobile as cheaply as horses, though mile for mile, considering the great distances that an automobile will travel, it is cheaper. Of course, if travel covering twenty miles a day meets a physician's needs, and there is no necessity for his running forty or fifty miles, the horse equipment may suit him better. Still, the automobile gives pleasure and affords a saving in time that may compensate for the excess in cost of maintenance or other disadvantages.

AUTOMOBILES FOR FAMILY USE

The development of the gasolene runabout and light touring car, ranging in price from \$650 to \$1,250, has brought the automobile within the reach of thousands who in the early days of the industry, only five years ago, could as well have afforded a steam yacht or a

private car as an automobile, but who are today enthusiasts enjoying thousands of miles of touring every season. These powerful little cars, of from six to ten horse-power, have supplied the demand for so-called cheap machines, and thousands of users have proved that they may be operated at a cost of from \$20 to \$30 a month for maintenance and repairs. The man, however, who imagines that he can operate his runabout for \$5 or \$10 a month is doomed to disappointment.

Having purchased his car, the prospective user will find that he cannot employ his time to better advantage than in learning its mechanism. It is not enough that he should know how to fill the tanks, and how to start and stop the thing. He should make a study of his engine and the transmission, should know the function that each piece of the machinery performs, and how it works with other parts; and, after a few weeks' road experience he should be able to detect trouble by the varying of the noise of his motor, and to diagnose the case at once.

In my own experience, which has been gained with seven cars of different makes owned by me, and in covering a distance of 40,000 miles, I have found that it is about as economical for a man to store his car at a garage as it is to keep it himself, and that he usually gets better service when his machine is kept in a station where there are other cars of the same make. He profits by the experiences of his fellows, and also has his car in better shape when it is kept where experienced mechanics can tune it up.

ONE MAN'S EXPENSE ACCOUNT

Among the cars which I owned was a single-cylinder, air-cooled machine of eight horsepower, fitted with a convertible body that carried two or four passengers. I kept track of my expenses for seven months, from April to November, during the heart of one driving season. During this time the machine covered about 10,000 miles. My monthly bills tell a most interesting story that will give an insight into the various expenses met with in automobiling.

REPAIRS IN APRIL

|   |         |
|---|---------|
| 1-4 hours' time on adjustments at 50 cts. | \$ 2.00 |
| 1 gallon cylinder oil.....                | .75     |
| 2 extra inner tubes at \$7.50 .....       | 15.00   |
| Extra fan belt .....                      | 1.50    |
| 6-Repairing puncture .....                | .75     |
| 10-Repairing puncture.....                | .75     |

|                                   |         |
|-----------------------------------|---------|
| 12—One auto jack .....            | 4.50    |
| 14—4 hours time adjusting.....    | 2.00    |
| 18—Half gallon cylinder oil ..... | .38     |
| 21—Patching inner tube .....      | .75     |
| 23—2 hours' time adjusting .....  | 1.00    |
| 26—Extra spark plug.....          | 4.50    |
| 30—One month's storage.....       | 12.00   |
| Gasolene for the month .....      | 10.00   |
| Total.....                        | \$55.88 |

My bill in May was \$67.22 and was made up chiefly of time charged for mechanics' labor. When I saw the long list of hours I insisted on seeing the men's time cards, or having it shown to my satisfaction that the time charged for had been spent on the car. The time cards did not tally with the bill rendered and I secured a reduction of \$25.00. The experience proved the advisability of the owner's knowing how long it should take mechanics to do repair work.

In June I paid altogether \$41.55, and in July, \$65.25. In August I made a 1,000-mile tour through southern New Jersey and covered almost as great a distance around my own home in short runs of from fifty to one hundred miles. I therefore had two separate bills, one at the local storage station and the other for expenses incurred on the tour. They amounted to \$90.30. In September I paid \$38.60 and in October \$63.40.

Adding up the expense of the various months, the total is \$397.20. My first investment was \$1,300, and the interest on this at 6 per cent. for seven months figures up to \$45.50. I figure that the car depreciated in value 25 per cent. from the original cost, making an expense of \$325.00. I pay \$50 a year for liability insurance. This makes the total expense for the seven months \$817.70. My cost per mile of operation was less than eight cents, or two cents a mile for each person carried.

The expenses met with this type of machine would probably be duplicated in almost any other car of the runabout type, depending of course on the mileage and the kind of handling that the machine had. The figures show just what an automobilist is required to spend to keep his machine running. To the man who can pay \$3,000 or more for a car the cost is not so important as to a man of less wealth.

Let us take, however, a touring car costing \$2,500. The yearly depreciation in a car of this sort would be about \$650. Depreciation is one of the largest items of automobile ex-

pense and it increases in proportion to the first cost of the machine. Gasolene sells in most of the city garages at twenty cents a gallon; one may go ten miles on a gallon. Approximately the yearly tire expense may be placed at \$200. It may be less or more according to the care given the tires, the amount of usage, and the sort of roads covered. Luck also plays an important part in tire expense—luck in dodging broken glass, sharp stones, and nails which are to be found on most of our roads. A man with such a car would wish a chauffeur, to whom he would have to pay at least \$25 a week. This would make a total expense as follows:

## EXPENSES OF A TOURING CAR

|  |         |
|--|---------|
| Chauffeur's wages, etc.....            | \$1,300 |
| Tire expense .....                     | 200     |
| Gasolene for 4,000 miles.....          | 80      |
| Lubricating oil, carbide, etc.....     | 75      |
| Repairs and replacement of parts ..... | 200     |
| Depreciation .....                     | 650     |
| Liability and fire insurance.....      | 100     |
|  | <hr/>   |
|  | \$2,605 |

It has been worked out that a man can keep two horses, have two carriages, and employ a \$60 a month coachman for \$1,300 a year. This makes the automobile doubly as expensive as the horse equipage, but in order to arrive at a just estimate, we must compare the efficiency of the two equipments. A team of horses could cover distances within fifteen miles, and if driven fifteen miles and back each day for a year would cover 10,950 miles. It is probable, however, that their annual mileage would not be half this. An automobile has a maximum mileage of at least 100 miles a day, or 36,500 miles a year, more than three times that of a team of horses, with but double the expense.

There are now, of course, automobiles for every use—electric runabouts for the city physician or for a woman's use, light runabouts for riding about town or driving to and from the station in the country, medium weight touring cars for general touring service, high-powered road machines for the wealthy man who delights in speeding, huge closed cars for touring and for winter use in cities.

In some of the larger cities samples of each of these types are kept in the garages of wealthy men who are automobile enthusiasts. Mr. W. Gould Brokaw, of New York, for example, recently placed his order for three

magnificent automobiles which, it is said, will be the handsomest and most costly in America. The largest of the three will be a fifty-horsepower, four-cylinder closed car. The interior seats will be so arranged that they may be made into berths for sleeping. There will also be a complete camp cooking outfit, a washstand with a complete toilet outfit, an ice-box, a lunch hamper with dishes, electric lights, electric signals to the driver, and many other conveniences. With this car it will be possible to tour regardless of hotels, and night stops can be made without discomfort anywhere the machine happens to be.

Mr. C. K. G. Billings, who is known as the owner of the fast horse Lou Dillon, is as much interested in automobiles as he is in horses, and has the largest private garage in America. He has thirteen different cars and uses two stables for their storage, paying \$300 a month rent. He has a complete workshop with lathes and other equipment for making repairs, and also an electric charging plant which costs about \$1,000 a month to operate. Every month he spends another \$50 for lighting, and \$225 for wages to his head chauffeur. There are also three other chauffeurs who get \$150 each, and two washers to keep the cars clean, who get \$50 a month apiece. He spends also every month about \$400 for tires, \$100 for new parts, \$200 for his chauffeurs' clothes and food, and large sums for gasoline and oil. It is estimated that his thirteen automobiles are worth \$100,000 and cost from \$25,000 to \$30,000 a year to keep in commission. Automobiling of course is made exclusively a rich man's sport when carried on so lavishly.

#### COMMERCIAL AUTOMOBILES

Pleasure vehicles now receive the most attention, but before very long automobiles for commercial purposes will probably outnumber them ten to one. Many manufacturers are now turning them out.

The average cost of a delivery truck or wagon that will carry two or three tons is from \$2,000 to \$4,000; some of the five-ton trucks sell for \$5,000. A good truck for horse use may be bought for \$500. Six horses at from \$300 to \$400 each are required in order to allow each team to have a complete day's rest after each day's work. This means a total cost of about \$2,500. Feed, stabling, and so on about balance the expense of the other repairs and cost of maintaining an automobile truck. Brewer-

ies have thus far been the largest users of the heavy electric trucks. They have found that trolley-car motormen make the best drivers, and they draw their men from the street-car service. The cost of charging these big trucks with electricity is heavy. A light automobile delivery wagon may be operated about as cheaply as an ordinary touring car of the same class, but will cover four times the territory that a horse will and with a great saving of time.

Mr. W. A. Purer, superintendent of the delivery stations of the Chicago public library, where gasoline delivery wagons have been in use for more than a year, estimated the monthly expense for gasoline, heavy lubricating oil, etc., at \$27, repairs at \$22.50, and tires at \$15 per wagon, making the average expense for a year \$774. This estimate was made before the car was put into service. After a year's use it was found that the cost of maintenance had been exactly \$779.76 or \$5.76 more than the estimate. This was a great deal cheaper than horse service, for the work done by this car had previously required two wagons and three horses at an expense of \$100 a month more, or \$1,200 a year above what the automobile costs.

In the last six months of the year the gasoline and lubricants were bought in large quantities. This reduced the cost materially. For the first six months these cost \$36.50 a month. In the last six months the cost was reduced to \$23 a month. The total cost of gasoline for the year was \$357, the cost of repairs was \$217.80 and the cost of tires \$204.96.

Eventually three machines were put in use and did the work of the five wagons and twelve horses. The expense of delivery has been reduced about \$185 a month—an annual saving of about \$2,200. The service is more satisfactory and prompt than before.

For light delivery work it is estimated that a car, exclusive of the driver's wages, may be kept in commission for \$40 a month and will take the place of three horses costing \$25 a month each. An automobile delivery wagon or truck is considered by business men to be a good advertisement, and as soon as the manufacturers give as much attention to the development of the commercial vehicles as they have to the pleasure cars, the use of horses for city delivery and trucking will be greatly limited.