

cattle can be safely and quickly carried to market, with less chance of injury and a better chance of being fresh, when transported by the swiftly moving car, than when dependent on the team, which, under the most favorable conditions, cannot be expected to average much more than seven miles an hour, where the distance travelled is over 20 miles. With the car such a trip can be made at an average speed of 15 miles an hour, thereby ensuring the saving of half the time, otherwise spent on the road between the farm and the market town.

When not in use for the purposes of transport, the car's usefulness is by no means ended, as, by the simple expedient of jacking up the hind wheels, the car can be utilized to perform a hundred tasks that would otherwise require a great deal of manual labor. Pumping water, grinding feed, running churns, cream separators, fanning mills, wood sawing outfits, etc., etc., are only a few of the many tasks to which a car can be put, if it is given careful attention in the matter of lubrication and other details necessary to ensure the sweet running of the engine.

To the boy on the farm the car becomes an object of the greatest interest, and there are today many young fellows with a natural aptitude for mechanics; who take a delight in the proper care and maintenance of an automobile, and who find the dull routine of the old farm life considerably enlivened and their horizon enlarged by the presence of an automobile on the homestead.

With the ever growing demand for gas tractors in Western Canada, the value of an automobile becomes an important factor, as the gas tractor has many points in common with its more speedy brother, and a knowledge of the mechanical features of the car, places the farmer in the position of being able to more readily understand the operation and care of the gas tractor.

The Portable Engine.

Turning from the automobile and its part in farm life, the most interesting feature of the development of the gas engine, is the number of small, well designed one to four horse power portable engines that are marketed this year.

Mounted on a small platform, fitted with wheels and a handle to move it from place to place, it becomes almost an indispensable feature on a well equipped farm. Where no car is kept, or where the owner may not care to use an automobile for the purpose, the small engine makes a most efficient farm hand, and goes about its work with a vim and a

vigor which is often unattainable when the human engine is depended upon to do the work.

The hired man may be ever so willing, but he will never succeed in turning out such a day's work in chopping feed, turning the cream separator, churning the butter and cleaning the oats as the little mechanical servant will do, and do well at a daily cost of



"On the Shores of Loch Lomond."

30 to 35 cents. Whatever a man or woman can do, this ubiquitous little engine seems able to do, and finish at the end of the day fit and well, and, incidentally, leave the lady of the house feeling fit and well and not tired out with turning the crank of the churn and separator.

It can also, in its spare time, be used for running a dynamo

work on the road as the big luxurious models that sell from \$4,000 to \$8,000.

In this type of car the use of a block motor is the prevailing feature. All four cylinders are formed in a single casting, with integral water jackets. To simplify the cost of manufacture, the intake and exhaust manifolds are cast right in with the

which was always so noticeable on the earlier models.

Unit Power Plants.

Unit type of power plants are also noticeable on a great number of the 1912 models, the motor, clutch and transmission being all in one casting, and supported in the frame by the three point suspension method.

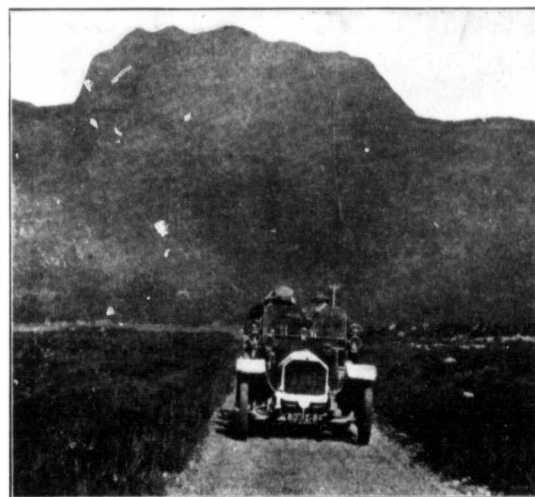
The coupe body has also taken its place on a number of the medium priced cars, and in fact it is possible for the owner of a moderate priced car to obtain both the touring type of body and the coupe body with the same chassis, the work of changing them being very simple, and giving a car that is serviceable in all kinds of weather.

No Radical Changes.

While there is nothing new to speak of at the exhibitions in the line of models, the automobile and its parts being now pretty well standardized, the great number and variety of improvements on established methods and devices shown by the exhibiting firms is of absorbing interest. In this regard it should be noted that the gasoline motor of the pleasure autos is basically unchanged, although now made larger, while the wheel base of car is longer. As might be supposed, self starting devices of various kinds are fitted, and, in most cases, shock absorbers also.

Among really new devices and accessories seen at the exhibitions—and, after all, they were but few—were ball bearings with a double row of balls, thus giving them a wearing capacity twice as long as the single row devices. Experts assert that this is the only bearing that will automatically compensate for deflected or crooked shafts with perfect reliability. In wind shields the latest thing appears to be one that curves upwards, thus throwing off the wind over the head of the driver, who is enabled to look over the top of the shield with nothing in front of his eyes. Of self starting devices there are, of course, quite a number.

An attractive nickel finish, in combination with bright, dainty colors, was used on many of the cars in the shows. As to the various 1912 models, of these the Thomas has a gasoline tank and an oil tank running parallel with the frame of the car, thus displaying the tank in the rear, of other days. The Also has a patent ventilating system as used in the Pullman cars. The Elmore is chain driven instead of with gears. In 1912 model the magneto has been raised and enlarged, and the roller distributor so regulated that the operator is enabled to throttle down and run smoothly. In the American Underslung, the frame is slung



Near Loch Maree, Scotland. Mr. Andrew Carnegie taking an airing.

for the charging of storage batteries to provide electric light for the house and stables, thereby adding a blessing in the safeguarding from fire.

The great feature of the present trend of automobile manufacture is the number of moderate priced cars that can be bought, and all of which are capable of doing exactly as good

the fitting of removable covers against the sides of the cylinder castings over the valve springs and rods. This has the additional advantage of giving the motor a much more clean cut appearance and adds to the ease with which the power plant of the car can be kept in a clean condition and free from the accumulation of dirt and grease