

first snowfall. While it remained we were very much worried for fear they would be injured by frost. However, when the snow commenced to go it went quickly, and in less than three days we were able to start the roots. The first morning the ground was frozen so hard that we could not pull the mangels, so my brother and I topped turnips for a couple of hours, then made a start at the mangels. Well, what was muddy, got steadily muddier as the sun rose higher, and by noon there was considerable real estate attached to each foot. That night there was no frost so we succeeded in pulling and topping the mangels the next day. This was without the help of father, the only man on the place, who was absent at a threshing. That was on a Tuesday, and father offered to pay us if we would remain home from school to assist in getting in the rest of the roots. On Wednesday, father being home, we hauled in mangels, while we were loading them, he worked at the turnips, but he went to the barn with us each time to help unload and back the horses and wagon out of the barn. He was called away to another threshing and before leaving he advised us to unhitch the horses and run the wagon out by hand, as the approach was very steep with a rail fence at the bottom, part of which was removed to permit drawing the loads through. We did as we were advised but then the fun began. That wagon would run on to one fence or the other. Try as we might we could not contrive to get it past that fence. As sure as we would cramp it one way, it would run the other. We had no trouble whatever with the horses, which are quite a spirited pair. They were on their best behavior for the occasion but the wagon it would

not keep off the fence. Of course, it was through some mismanagement of ours for father was able to get it past the fence quite easily. However, no damage was done to the wagon and the fence was not materially affected, beyond the breaking of a few rails. By the time father returned from his last threshing there was only one load of roots left for him to assist with. It was hard on back and hands, and I do not think we shall soon forget our first experience with drawing in roots.

Bruce Co., Ont.

MARION.

### Winter Fairs and Conventions.

During the winter months a number of conventions, agricultural meetings and fat-stock shows are held. If there is a slack time on the farm it is between the finishing of the fall work and the commencement of preparation for spring seeding. At these gatherings there is always something which will instill new ideas into the minds of visitors which are applicable to local conditions. Of course, many attend live-stock shows and meetings but fail to derive any benefit. The fault is usually in themselves rather than in the meetings. A person is likely to get what he goes after. The Guelph Winter Fair, held in the Royal City, November 30 to Dec. 6, affords many lessons in fitting live stock, breed type, conformation, etc., and it is well worth any young man's time and older man's, too, to spend a day or two viewing the well-finished beef cattle, heavy-producing

dairy cows, trappy, clean-limbed heavy draft horses, the fleet-footed light horse or some of the best sheep, swine, poultry, grain and seeds that the country produces. You will enjoy looking at the different animals and studying their conformation as they stand in their stalls or pens. The judging-ring will fascinate you if at all interested in live stock. Before you know it you will be picking the winners from a line-up of from ten to twenty head, and then anxiously waiting to see how your judgment corresponds with the official judges. You have an opportunity to note the recognized type of the different breeds so as to have an ideal in mind when purchasing breeding stock. A stockman has to visit a big show in order to be able to detect weakness in his own herd, and a deficiency must be seen before it can be remedied, consequently the show-ring sets an ideal to which breeders may work. With the chores and other seasonal work pressing, many find it difficult to leave home even for a day. However, "where there's a will there's a way," and a day spent at the Winter Fair this year will not be time wasted. The same may be said of the Winter Fair held at Ottawa in January.

The Eastern and Western Ontario Dairymen's Association Conventions are held in January at which instructive addresses will be given. If engaged in dairying you will find these conventions a source of obtaining profitable information. Then, there are short courses, special farmers' meetings, etc., which may be held right in your own locality. "Knowledge is power," and it is doubtful if you can afford to let this winter's conventions, fairs and short courses pass without attending one or more sessions.

## Automobiles, Farm Machinery and Farm Motors

### Preserving Appearance.

"If you were in my position and had plenty of time on your hands to devote to the care of your automobile, what would you do before putting it away this winter, in order to preserve its bright and shining appearance and be able to take it out in the spring looking as nearly new as possible?" This is a question that we were asked the other day, and in answering it we gave advice in a general way and at great length, that we have given in at least some particulars at frequent intervals. The bodies of most automobiles have been painted with sprays and brushes, because in a great majority of instances the steel contains an inner frame of wood, which prevents the complete body being placed in heating ovens for enameling purposes. The fenders, skirts and bonnet covers are baked in ovens, however, after the paint has been applied; but no matter what system is used you can rest assured that the manufacturer is turning out a car prepared to stand the rigors of rainy weather and wet roads without much depreciation, provided sufficient care is taken. We advised our inquirer not to use any preparation of any kind upon the finish of his auto. Nature provides the only essential, which is clean water. Your first step will be to run a hose over every part of the machine that contains even the smallest amount of dust and dirt. The pressure of the water should not be great and your work should not be hurried because, having plenty of time, you can well afford to avoid any chance of grinding dirt into the finish. If at the scene selected for the cleansing a hose is not available you can procure the same effect by pouring the water over the car through a big funnel, always remembering that your job is to gently remove the dust and dirt without allowing any hard particles to injure the paint or varnish. If you find that in certain cracks and crevices the foreign matter has become hard and is giving resistance take it away by using a very soft, wet sponge. This preliminary operation over, allow the car to stand until such time as you can determine how much dirt, such as grease, old oil, etc., remains to be taken away. If there is a great quantity, mix up a thick, soapy solution, using pure castile soap, and go over the machine again. Having accomplished this a cold water bath will now be in order, so that not an atom of soap may be allowed to remain upon any part of the auto. Many motorists often wonder why their car looks clean, but upon close inspection is found to have numerous streaks and spots. These latter are due to the fact that the soap has not been completely removed. You have now gone as far as any automobile garage proceeds when you ask for what is commonly known as a "wash." In this winter clean up, however, we are going to give what the trade calls a "wash and polish."

For the second step you require a couple of chamois skins. One for the rough work on the chassis, and the other for the finer manoeuvres necessary upon the tops of the fenders and the body. When you are rubbing the car down ring the chamois out at frequent intervals, and make certain before again applying it that no sharp particles have been left upon it. In using the chamois some considerable strength is required, and it upon the surface there is any sharp point, scratches must inevitably result. Do not hurry this rubbing process but rinse and ring out the chamois constantly. The best polishers have a long, sweeping motion with a smooth, even pressure. This gives the finest possible results.

There are systems of cleaning a car that are hasty, but the only one for maximum benefits is slow and tedious. Preparations can be brought into use that will give speed, but if the original lustre is to be maintained soap and water are the only articles to be safely employed. Many people use gasoline in cleaning a car. This, undoubtedly, hurries up the work but in time destroys the bright, shiny appearance. In going over the upholstery remove the seats to some place

where there is plenty of light. This is going to insure for them more care than they would otherwise get, and also gives you greater ease in handling the padding on the backs of the seats.

If there is a wood dash in your machine any good piano polish is a fine restorative and will add greatly to the beauty of the grain. The nickel parts require more rubbing than anything else, and if covered with vaseline will come out sparkling in the spring. May we suggest that aluminum paint applied to the demountable rims will cover up any rust spots that have developed and also gloss over road stains, in addition to making the wheels a better out-line and cleaner.

AUTO.

### The Small Threshing Outfit.

Several farmers in Ontario have purchased small threshing outfits and have found them a success. They are also proving their value out West. A writer signing himself "Young Homesteader" recently sent the following letter to the Farmer's Advocate of Winnipeg:

For some years we experienced considerable difficulty in getting our grain threshed, owing to the fact that we were somewhat isolated, and the only remedy seemed to be to get a small outfit of our own.

Accordingly we purchased a small threshing outfit in the fall of 1913, and have threshed our own crops and those of a few of our neighbors each year.

It is a 9 horse-power engine and 28-inch separator, hand feed, with straw carriers and all on the one truck. Last fall we had an unusually long run—forty days—out of which we ran fifteen days without a stop, and during the rest of the time had very little trouble. In fact, the only trouble we did have all through was caused by frozen ground, late in the fall.

This fall we ran for over two weeks, with practically no trouble, and have always kept three stook teams going pretty steady.

We consider it superior to a larger machine because we can thresh for about half what it would cost us to have the threshing done by a larger outfit. Moreover, if we have a field of grain which has ripened early, we can cut it, and get it threshed. Then should a rain come up, we have a piece of land cleaned on which to begin plowing.

Our machine has threshed between 500 and 600 bushels of wheat per 10-hour day, in a fair crop, and from 1,000 to 1,200 bushels of oats in the same time. As far as cleanness of grain is concerned, one would think it had been through a fanning mill. It separates the grain from the straw as well as could be desired, unless the grain is tough.

Our experience has been that the small threshing outfit is the "clear thing" for a farm of one-quarter to one-half section. The biggest difficulty seems to be getting help, but when we thresh for a few neighbors and get their help we find that we can often have our threshing all done by the time the large outfits get started, as was the case this fall. Nearly every year since we have had our machine, our car has been the first to leave the loading platform, and, of course, that often means higher prices.

I might also say that the engine that comes with the small outfit is just the right size for running a grinder so as to make money out of it. The engines with the larger threshers are too heavy to run the grinder profitably. We have made enough out of our grinder alone to pay for the whole outfit.

We are highly satisfied with our small thresher and have found that the separator will do good work, provided it is given proper attention.

The trouble with the small outfit is that the farmer usually figures on running it himself, and the chances

are he doesn't know how, and succeeds in putting about half the grain in the stack and then says the separator is no good. But for any man who knows how to run a separator or is willing to spend a little time and patience to learn and will use his common sense in handling the machine, he will find without a doubt that his threshing troubles are reduced to a minimum.

### Trouble in Gasoline Engine.

In the event of trouble with a gasoline tractor, or any kind of machinery for that matter, the first thing an operator should do is to think. Never make any adjustment unless you can give a good reason for making that adjustment. The operation of an internal combustion engine depends upon three principles. First, a compression of the mixture, which means, tight valves and piston rings. Second, an inflammable mixture of fuel and air, which means the proper adjustment of the carburetor. Third, an electric spark, properly timed. Any engine having these basic features is bound to start.

If you have trouble in starting just think, before you grab a wrench and start tearing the machine to pieces, then try and locate which one of the three conditions is lacking. This will save time. Turn the motor over to make sure the compression is good. If it is not, some foreign material may be under the valve and it may be stuck, or a push rod may be too long; if the valves seem all right the piston rings will be the cause of trouble. They may be gummed up or broken, in the latter case they have to be renewed.

Next comes ignition trouble, probably the spark plugs. A good method of locating this kind of trouble is to use a wooden handled screw driver or hammer. Place one end of the hammer head on the cylinder wall and the other end close up to the binding post at the top of the plug. If the plug is all right, there will be a spark just before the hammer touches. It will short circuit the plug, and put it out of commission. This test may be repeated with the other cylinders. Plugs should be taken apart and cleaned, 1/32 of an inch between the points. Much trouble is caused by foreign material getting into the fuel tanks and from there to the fuel pipes or carburetor. Strain all fuel. The writer met a farmer a few months ago, who found a lizard in a new barrel of kerosene. He said he would not have minded the man watering the kerosene with well water, but he thought slough water was the limit. Use good, clean water in the cooling system.

On a tractor equipped with a high tension magneto having an impulse starter, see if the action of the starter is quick. If not, wash it off with gasoline in case oil has made it sticky and slow. Do this until it moves quickly, when the cam is released. This is important, because it is the speed of the armature that generates the spark, the greater the speed, the hotter the spark. Do not forget to drain off the water every night; it does not take very much frost to crack a water jacket. —J. MacGregor Smith.

"Kill your cow and you will have just enough meat to keep a soldier in the trenches six months; milk her and she will keep twenty soldiers in the field for a year," is the information given out to milk producers by Prof. Oscar Erf, of the Ohio State University, according to an exchange. To this we would add—don't kill your cow unless she is an unprofitable milk producer, and, if for this reason you turn her into beef, replace her with a pure-bred cow that will not only pay for herself and her board in a short time but will, if mated with a pure-bred sire, give you several hundreds, perhaps thousands, of dollars' worth of calves. Holstein Friesian Register.