

bushel. The quality of the tubers is between 89 and 95 per cent. of the standard for the Maritime Provinces, over 90 per cent. for Manitoba and Saskatchewan, and 84 per cent. for Alberta and British Columbia. For Quebec and Ontario the quality is 76 and 77 per cent.

Owing to the dry condition of the soil in Ontario difficulties were experienced in the ploughing and seed-

ing of fall wheat. By October 31 only 656,500 acres were sown, as compared with 820,600 acres in 1915, a decrease of 164,100 acres or 20 per cent. In Alberta also there is a decrease of 36,500 acres, or 14 per cent., viz., from 260,500 acres to 224,000 acres. For all Canada the area estimated to be sown to fall wheat is 899,300 acres, as compared with 1,100,800 acres, a decrease of 201,500 acres, or 18 per cent. The condition

of fall wheat on October 31 for all Canada is 76 per cent. of the standard as compared with 88 per cent. last year and 97 per cent. in 1914. Of the total land in Canada intended for next year's crops 51 per cent. is estimated to have been ploughed by October 31, the percentage proportions in the west being 47 for Manitoba, 28 for Saskatchewan and 21 for Alberta.

Automobiles, Farm Machinery and Farm Motors.

The Winter Clean-up.

If you find time hanging heavily on your hands this winter, and your automobile does not present an attractive appearance, we would suggest that you take it to some expert carriage painter and have it gone over. The cost will be from \$25.00 up, according to the kind of job desired, but you can rest assured that the expenditure of this money will be gratifying in the highest degree. If a minimum price of \$25.00 seems too much and you can afford sufficient time to do the work yourself, there are a number of very excellent varnishes that can be secured in any hardware store. Upon most of them ample directions are given as to the amount to be applied and the brushes that are essential. There is one point which you must firmly impress upon your mind, however, and that is not to do this work in any place other than a thoroughly warm room. Varnish that is applied in a low temperature never gives satisfactory results. You must also bear in mind that the space selected for work of this character, should be absolutely free of the slightest draft. It would be well to put a lock on the door so that no one can enter the room while the operation is going on. See that the floor, the walls and the ceiling have been cleaned beforehand, and in doing the work, it might be well to pull heavy socks over your boots or shoes in order that no dust may be raised. Even the smallest particle of grit or dirt that flies into the air, and subsequently alights upon the warm varnish leaves what is known as a "needle point", and these are not only far from pleasing to the eye, but also are not delightful to touch. In automobile factories where the original fine finishes are put on cars, the workmen are locked in rooms, and after a job has been completed, it is rolled on a carriage to another room and there kept secluded even from public view. After the varnish has settled, of course it is not necessary to maintain a high temperature.

If the purchase of varnish does not appeal to your pocket-book, you can buy, at very low prices, a number of cleaning and polishing mixtures that give excellent satisfaction, but in putting them on, remember that the main thing in their application is not so much the quantity applied, as the persistent rubbing. In other words, it is not what is put on but rather what you take off that gives the finest effect. Do not undertake this work unless you are thoroughly determined beforehand to rub every square inch of surface until the varnish is as smooth as glass. When any quantity of this preparation is allowed to remain on the fenders, hoods, skirts or bodies of cars, the effect you have desired to obtain will be lacking.

If your machine was purchased last spring, and has not been run a great deal during muddy weather, and if also you were careful enough to wash it thoroughly at frequent intervals, perhaps it does not require either varnish or polish. In such a case, however, it would be well for you to take some good quality of soap and cleanse the car thoroughly all over. In this, as in all other methods, it is essential that every particle of material applied should be thoroughly rubbed. Soap is a good thing to remove dirt from enamel or painted surfaces, but even the smallest amount should

not be left after application. Do not, on any account, use cheap grades of laundry bars or other soaps of inferior quality. A high grade toilet article must be adopted. The difference in the price of the material utilized is so small that risks should be minimized.

While we are on this question of the winter clean-up, it might be well to again emphasize the advisability of using a gas spray on the motor itself. Gasoline cuts grease, oil and dirt and leaves a metal surface bright and shining. If you haven't the necessary power to create a spray, gasoline can be applied with cloths, but no matter how you use the fuel, remember to rub thoroughly dry every particle you attempt to clear, and under no circumstances, start your engine or allow a naked light to be in the vicinity while the operation is going on. This advice may seem simple and unnecessary, but accidents are bound to happen if any carelessness is allowed to creep in.

The cleaning of a top is a rather difficult proposition, and while we can say in a general way that gas blown into the fabric gives excellent results, still we would suggest that you secure some expert's advice as to the nature of the foreign matter that has been picked up, before you attempt to eliminate it. If the stains are not of a serious character and the condition of the top is purely the result of dust and dirt gathered up along the road, easy beating and a thin gas spray, would make a tremendous difference in appearance. For small spots, the rubbing in of gasoline with cheese-cloth usually gives satisfactory results.

AUTO.

More Discussion of Car Stopping and Starting.

EDITOR "THE FARMER'S ADVOCATE":

I read with considerable interest an article in your issue of October under the heading: "Automobiles, Farm Machinery and Farm Motors," re the stopping of a motor car. While there is very little ground for an argument with regard to the method employed in stopping and starting a car, especially the former, yet it is an established fact that it is one of the most important features in the operation of the car, since tire wear constitutes nearly half the up-keep cost.

In order to check the forward motion of the car a strain similar to that of driving it must of necessity be forced upon the tires, so it makes absolutely no difference as to how the revolving of the rear wheels is hampered so long as they are not locked, a condition existing freely among motorists. The only reason for your correspondent leaving the clutch engaged while using the service brake is to prevent this undesirable skidding of the rear wheels. Of course, this almost entirely eliminates all possibilities of locking the wheels, but it has an equally bad effect upon the brake mechanism, which is even more delicate than casings. Any brake is made to lock the rear wheels if necessary, and a little care and judgment on the part of the driver must be exercised in using it. Care must be taken not to have the brake adjusted too tight, as this would make the danger of locking the wheels all the more prevalent.

In approaching a place where a stop is to be made, three things must be carefully and quickly considered: The speed of the car, its weight and load, and the road conditions, whether hard or soft and muddy or whether up grade or down. Of course, it is not necessary to mention that the throttle first be closed before the clutch is disengaged and that the brake only be applied with the clutch neutral. It is in the last four or five feet the car travels before coming to a dead stop that the wheels are inclined to lock. This is due to the tendency of the stationary part of the brake to grab the part in motion as it nears the dead stop. This grabbing, jerking condition is present in the majority of cars. The only way to prevent this is to release the service and apply the emergency brake as the car nears the dead stop.

Still another place in which tires are abused, and of which many drivers are totally ignorant, is in the starting of the car. After a man has stalled his engine a few times, he is disposed to think he must race it in order to prevent a repetition, when most of the trouble lies in his manner of applying the clutch. As with the brake he is in too big a rush and expends much unnecessary energy and muscle. The result is that the rear wheels are spun round, which is fully as harmful as, and has all the bad effects of, skidding. In order to obtain the best results in starting, the throttle must be used in conjunction with the clutch pedal. When the driven part of the clutch attains almost the same speed as the driving part the two will grab or set, and this is the point at which the spinning commences. The careful driver will start his car in such a manner that this point cannot be detected, and passengers' necks are saved many an unnecessary strain.

I have read with much interest Auto's invaluable ideas and suggestions that appear from time to time in these columns, and have found much of his advice to be of every-day value to the average motorist. The taking into hand of the motor car does not present the problems to the farmer that it does to a great many men of other professions, at least not mechanically. It is but an addition to the already large list of farm machinery. He knows from experience the necessity of proper lubrication in any machine, the different grades of oils and greases for the varied requirements of different machines from the wheelbarrow to the cream separator. He is also thoroughly versed in the relation of the different temperaments of metals for various purposes, and has a thorough understanding of gears and transmissions, so that the modern automobile does not provide many conditions and mechanical devices with which he is not thoroughly familiar. However, the majority have to admit that they know very little about ignition system. Even those who are well versed in the ignition of stationary gasoline engines have found new problems to face in the motor car, and it can be safely estimated that two-thirds of their trouble lies in improper ignition. I think an article treating this field would be very much appreciated by a goodly number of our readers.

As for myself I think that proper ignition and valve timing are the most essential features in the successful and economical operation of the modern automobile. Bruce Co., Ont. W. E. JACKSON.

Canada's Young Farmers and Future Leaders.

Topics for Discussion.

Each week we shall announce topics for discussion in this department. A start was made last issue. Four topics will appear each week during the winter season, with the dates upon which manuscript must be in our hands. Readers are invited to discuss one or more topics as they see fit. All articles published will be paid for in cash at a liberal rate. Make this department the best in the paper. This is the boys' and young man's opportunity. Here are the topics:

1. The Literary Society.

This is a big and important question. Every community should have such an organization but many haven't. Tell readers of its value. Explain how it is managed, and methods used in starting it as well as how interest is maintained. Do you have debates? Are short addresses successful? There is room in this subject for the expression of new ideas. Get copy here by December 9 for this topic.

2. The Farmer's Club.

This is a topic for many of our readers. What was said about the Literary Society applies to this topic. Outline the organization, the operation and benefits of the Farmer's Club in your community. Give suggestions as to its improvement. Copy should be in our hands by December 16.

3. Field Crop Competitions.

This is a big subject, and one in which hundreds of our young men are interested. Tell us frankly what you think of field crop competitions, the rules, the judging, the effect upon crop production. If any improvements are necessary suggest them. Copy should reach us not later than December 23.

4. What is Wrong With the Community?

Discuss social, financial and other problems from a community viewpoint. Why have so many young people left the land? Why does almost every boy tire of his rural surroundings at some time in his early life? Is there a lack of proper social intercourse? Is there a lack of co-operation between the different members of the community? What is wrong? What is the remedy? Articles on this topic should reach this office by December 30.

What the Season has Taught.

EDITOR "THE FARMER'S ADVOCATE":

As we have had two very unusual seasons in succession I would like to give my experiences with same. Last year we had a short crop of hay, cured in poor condition, and this year a bumper crop, cured in first-class condition;

also last year's grain crop was large and this year's small. I follow mixed farming, selling nothing off the farm in grain except wheat and beans. Last year our wheat was damp and we could not get sale, for it at a paying price, so held some of it over and find it comes in very handy now to mix with this year's spring grain to make the chop heavier for the hogs. I was also fortunate enough to hold over a few hundred bushels of oats and barley, and will be very glad I have them before threshing time comes again.

While almost everyone in the locality has an almost total failure in the bean crop, I am surprised and glad to say I have a good crop, harvested in first-class condition, and expect them to run "hand picked" from the machine. This is the way I got them: I top-dressed a clover sod last summer with manure that was left over after covering the corn ground, and plowed part of it last fall and part this spring. I worked it down this spring after we got our grain in and sowed 3 pecks to the acre, some June 15 and some June 20. They had practically no rain from the time they were sowed till they were pulled, but as soon as they appeared well in the rows I put the cultivator on and kept it going once or twice a week till they began to blossom, consequently have a good crop of straw well loaded with pods and expect them to make me close to \$100 an acre.

Owing to the very wet spring I changed my plans a

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