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W. C. Good.

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gas leaks may be found by pouring a few drops of water around the threads of the plug. If a leak exists, bubbles will pass up through the water showing its location.

The threads of old spark plugs become worn and sometimes cause leakage. The remedy is to install a new plug, or to run a new sharp tap into the spark plug hole and re-form the thread.

Temporary relief against leakage may sometimes be had by covering the threads with a thin coat of soap, care being taken that no soap gets on the insulation, as it will cause a short circuit.

Plugs are more easily removed from a cold cylinder than a hot. If the plug sticks firmly when engine is cold squirt kerosene around the threads. This will generally allow the plug to be removed.

Never exert any force on the porcelain or insulation. The high tension cables should be connected to the plugs by means of some type of "Snap Terminal," such terminals may be had from automobile dealers.

These terminals make a firm contact with the plug, and do not jar loose from the plug by the vibration of the engine. They are easily disconnected when the inspection of the plug becomes necessary, and are generally a most desirable attachment.

The high tension cable should be firmly connected to the plug terminal under all circumstances. A loose connection will cause misfiring or will bring the engine to an abrupt halt. If snap terminals are not used the plug binding screw should be screwed down tightly on the wire. When making connections see that the wire is bright and clean, and that frayed ends of the wire do not project beyond the plug and make contact with other parts of the engine.

Wires becoming disconnected from the plugs have caused broken down spark coils and magnetos, for the reason that the length of the gap was increased beyond the capacity of the insulation of the coil.

Make Needed Repairs on the Binder.

The season of the year has arrived when the mower and binder, two of the most complicated machines in use on the farm, must be brought into operation. In reality these machines are not altogether complicated, but they have a large number of working parts which must be kept properly adjusted and oiled. If the cutting bar of the mower is not in alignment, or if the plates in the guards are dull or chipped, the draft on the team is considerably increased and, at best, rather poor work is done. Many farmers take pride in keeping these machines in proper repair, but there are others who keep them going as long as they can, and, when they absolutely refuse to work, cast them aside. Unless the cutting bar runs straight, there is likely to be a side draft. Keep the knife sharp at all times. Put new plates in the guards if necessary. By making timely repairs, keeping the machine oiled, and seeing that bolts and nuts are tight, the life of the machine is greatly prolonged. There are some parts that are not subject to wear. Why discard the whole machine when new parts can be purchased for a small sum to replace the worn or broken ones? This is a time for economy, and no implements should be discarded if it can be put in repair.

There is a multiplicity of working parts to the binder, and yet when all are in order this great labor-saver runs very smoothly. Care must be taken of the canvasses. They are likely to give trouble before some of the other parts, unless they are properly looked after. When putting them in, see that they are straight. If by accident a slat or buckle is broken replace it without delay, and do not leave the canvass exposed to moisture. If the binder cannot be housed every night it is advisable to have a large waterproof cover for the machine. When the cutting season is over the canvass should be taken out of the binder and hung where there is no chance for dampness. Possibly the most delicate part of the binder is the mechanism which drives the knotter. We have seen binders discarded because a considerable percentage of the sheaves were being thrown out loose. Implement agents were possibly responsible for urging upon the purchaser a new machine. As a rule, all that was needed were two or three small parts to replace the worn ones which were causing the trouble. If the binder gave a little trouble last harvest, it is well to look it over before the grain is ripe and have the needed repairs made before the machine is really required for use. A day lost in harvest time waiting for parts means a good deal and should, if possible, be avoided. With both the mower and binder, have the knife sharp; good work cannot be done otherwise.

Both these implements are rather heavy on the horses. There is very often a good deal of weight thrown on the tongue. Trucks have been designed and are in use for taking the weight off the binder tongue. They may also be used on the mower. Anything that can be done to ease the horses is an advantage. Where tractors are owned, it is customary to attach this mechanical horse to such machines, and, barring accidents, they continue to work all day regardless of the heat. The draft of the binder may be lightened by attaching a small gasoline engine to run the moving parts, so that the horses will only have the machine itself to draw. This is a particular advantage when the ground is soft and the grain lodged.

An expert plowman will look carefully to the adjustment of his plow, but a novice, or careless plowman, will often wrestle all day with a poorly-adjusted implement, and then blame the tool for the bad work done. Adjust the cutting parts and the draft properly, and better work will be done, with less exertion, on the part of the man and team.

CANADA'S YOUNG FARMERS AND FUTURE LEADERS.

Getting the Farm Boy Interested.

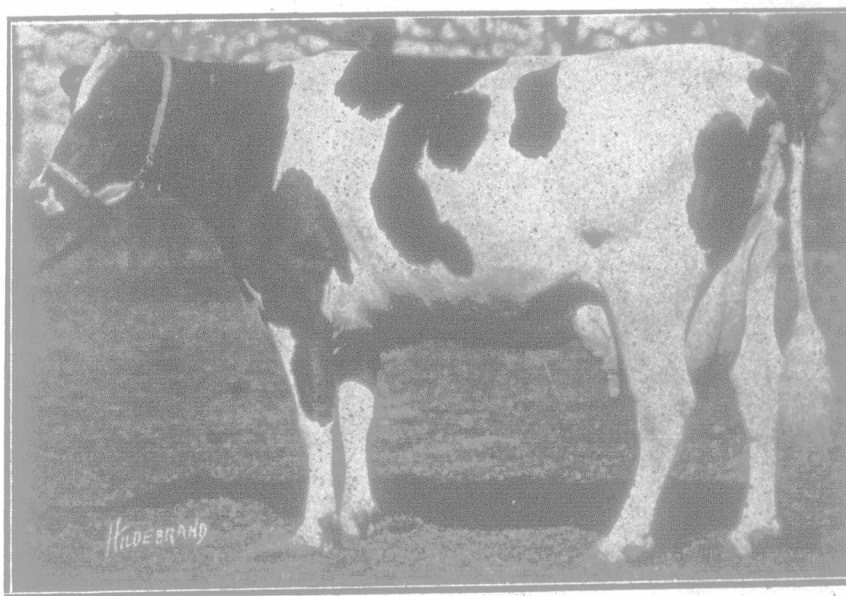
All boys are not intended by nature to be farmers, but there are many of them who would remain and develop the old homestead to the credit of the family name rather than seek employment in some line for which they are unsuited, if they had the proper education and encouragement. We recently read a book entitled "Farm Boys and Girls," written by Wm. A. McKeever, and published by the MacMillan Company, in which a chapter is devoted to this very subject. Boys as well as parents can find many useful suggestions in the following paragraphs, which we are reproducing.

The one who undertakes to develop a boy's interest in business affairs has really before him a problem in experimental psychology. Many of the youth's best aptitudes are necessarily still slumbering and unknown to either himself or others. The fundamental steps preparatory for a successful commercial venture on the part of a young man are comparatively few, but none of them can safely be omitted. They are as follows:—

WILLINGNESS TO WORK.—In this connection, perhaps something will be recalled from Chapter IX. We may at least be reminded of the difference in the attitude of mind of the boy who regards labor as a painful necessity, and the one who enjoys a willingness to work. So long as the youth feels as if he were driven to his tasks there is little hope of arousing his interest in the business side of it. His mind will continue too much on the problem of avoiding work, and on ways and means by which to get something for nothing.

There is probably a period of dishonesty in the life of every normal youth. Following the dawn of adolescence there is a great wave of new interest and new meaning coming to him out of the business and social world. The world is so full of interesting enticements. Everything looks to be good and within easy reach. He is especially prone to accept material things at their advertised value. He spends his dimes for prize boxes thought to contain gold rings and other such finery. His quarters and half dollars frequently go in payment for the "valuable" things offered "free for the price of the transportation," the purpose of this tempting gift being "simply for the sake of introducing the goods."

But it is well to see the boy safe through this period of allurements. So long as the world seems to hold out so many highly valued things which may be had for a trifle the youth will see little need of his working to obtain them. So, attend him in his efforts to get something for nothing. Permit him to be stung a few times, and thus teach him how and where to look for the sting. Finally, impress him with the thought that every material thing worth while represents the price of somebody's honest labor. At length he will see the reasonableness of industry, and settle down with a purpose of making his way through life by means of



"Fairview Korndyke Mata" Sold for \$35,000 at Pine Grove Farm Sale.

honest endeavor. You now have the youth so far on his way to successful business undertaking.

ABILITY TO SAVE.—All healthy boys are naturally inclined to be spendthrifts. Saving a part of one's means is a fine art acquired only through judicious practice. It is assumed that the young son is being reasonably paid for certain required tasks. So the next duty is to see that he saves a part of his earnings. For the purpose of this training in saving, a toy bank may be produced; or he may be directed in depositing a small weekly sum in a penny savings bank. Still another way is to teach him to keep a book account of his earnings, giving him due-bills for the amounts withheld from his wages.

There is one small business practice, the importance of which for the boy is too frequently overlooked; that is, the practice of carrying a small amount of change in his pocket. He must learn to use his money thoughtfully and not merely on every occasion of his

being allowed to have it. He must acquire the habit of self-restraint in the use of money. To do this is to learn to spend judiciously. To have reached this stage of financial training is a sufficient guarantee that the youth is proceeding well on his way toward success in business enterprise.

Then, give your growing son as wide a variety of experience in work and in watching business affairs as the situation will permit of. During the process of this mental growth help him to make a small investment in something that will grow and increase under his intelligent care. Let us assume that your specialty is a certain strain of corn or a certain breed of cattle. If the boy shows an interest in this matter, start him at an early age, say ten to fourteen, on his own account. Give him in exchange for his work a small plot of ground on which to grow corn, perhaps with a view to his later entering the boys' contest for a prize. Or, help him to get a small beginning in the cattle business.

But in case the lad shows no interest in your business, do not let the matter seriously trouble you for a moment. Simply continue to give him his general education, including the best school course available and a training in the performance of work as well as the judicious use of the spending money that may come into his hands. Careful study of the boy may indicate to you that his aptitude for business runs in the direction of something to which you are giving little or no attention, but to which you may in time bring him.

There is the case of a successful wheat raiser who discovered his son's fondness for pure-bred cattle. So the boy was carefully started on a small scale in the business of raising Shorthorns. To-day that son is known far and wide as an able specialist in this line of stock breeding. Now, if the father in this case had done as thousands of other farmers are still doing; namely, if he had attempted to force the boy, against the latter's natural inclination, to take up wheat raising or any other undesirable business, then, the son would have most probably skipped off for the city and secured a fourth-rate place for the mere wages it would bring. Some day this tragic, oft-repeated story of mismanagement and misdirection of the growing boy will come out in all its distressing details.

Deal with your young son on business principles from the beginning. Do not hastily and unwisely give him a piece of property that will have to be taken from him in the future because of its having grown into a disproportionate value. This old form of mistreatment of the country boy has been the means of thwarting the business integrity of many a promising youth.

THE DAIRY.

No animal responds to comfort, good care and feed like the dairy cow. It pays to be kind to her.

Some dairymen find that it is profitable to keep the cows stabled during the day, and use silage or hay to supplement the grass.

It pays to milk regularly, even during the rush of haying and harvest. It takes no longer to do the milking one time than another.

Keep the milk flow up to normal, if possible, even if extra feed must be used. Once the flow drops in mid-summer it is difficult to bring it back.

Using fly repellent on the cows gives them a certain amount of relief. Cows kept busy fighting flies all day cannot do their duty at milk production.

Driving cows long distances to pasture during hot weather materially reduces the milk flow. Plan on having one pasture field near the buildings.

Cows should have access to water at all times. If it could be arranged to have water in every pasture field, we believe that it would pay well in the increased milk flow.

Pails, cans and other dairy utensils should be thoroughly scalded and then left in position for the sun's rays to do their disinfecting and sweetening work.

At the National Holstein-Friesian sale, held in Philadelphia, 37 bulls averaged \$2,335, and 157 females \$1,545. J. B. Hamners 6 head made an average of \$6,267.

Milking the hind-quarters first has a tendency to stimulate milk production in the back-quarters to the detriment of the front-quarters. To keep a well-balanced udder milk the fore-quarters first.