

ing wood, a good honest 3-horse-power engine can keep three or four men busy, and will saw all they can handle in a day. For chopping and grinding grain, the same 3-horse-power outfit is capable of handling from 10 to 16 bushels per hour, according to the character of the grain and how fine it is ground. It will be found that an 8-in. chopper is sufficient for that amount of power, as a larger one would only be a drag on the engine. There is not much gain for the farmer in using a large chopping outfit, for, by simply running the smaller one a few hours longer, just as much work is done, and there is a good deal less cost for the outfit, and the smaller one is lighter and easier to move around. When it comes to running an ensilage cutter or thrashing, then the larger engines must be considered, and the proper size of engine depends on the size of the machines to be run, and the attachments used on them. Through Eastern Canada, there are not likely to be used as heavy engines as in the West, where threshing machines are larger, and where a good many traction outfits are used for both threshing and plowing.

The percentage of farmers using gasoline engines is larger in Western Canada than it is in the Eastern Provinces, but that is largely due to the fact that the ground has been more thoroughly canvassed, and the selling agents have been more aggressive than in the East. It would seem as if the large amount of dairying and feeding done in the East would cause a demand for such a convenient power as the modern gasoline engine, but it is a fact that the Eastern farmer is just waking up to the importance of a power that helps out to such a large extent on the problem of farm labor. The fear of not being able to understand the engine or to operate it successfully has probably kept a great many from purchasing, and salesmen have very unwisely endeavored to impress people with the fact that all that is necessary to know about an engine is to start it and stop it; that they require no attention, and only need to be kept in gasoline and cylinder oil.

In the writer's opinion, this has done the gasoline-engine business more harm than anything else. The gasoline engine does require attention, and the more intelligent that attention is, the better results it will give; but there is nothing about one that a person of good ordinary intelligence cannot learn if they give it serious consideration and are willing to spend a few hours in trying to understand the principle on which a gasoline engine works, and thoroughly study the instruction book usually supplied. It is a thing to remember that one-half the successful operation of an engine lies in the man who looks after it, and it is a good plan to study over any little trouble that may arise and try to figure out the remedy for yourself before sending for an expert. By trying to help yourself out of a difficulty in that manner, you are going to learn more than in any other way, and it will never be forgotten, while what an expert may tell you is often not remembered an hour after it is heard.

As stated, no intelligent farmer need have a fear of not being able to successfully operate a good gasoline engine, but in order to get the best of service from it, he must make up his mind to give it some good care and attention, and the return will be well worth the time spent on it.

In choosing an engine, there are so many points to look after that it will have to be considered in a separate article, to appear in a future issue.

E. S. COOPER.

THE INSTALMENT PLAN.

I was approached the other day by an agent who wished to make a sale. "You need not worry about paying," he said. "Will give you easy terms, whereby you can make us monthly returns. Your credit is good, and you can make the terms as small as you like." I was not keen to purchase, and dismissed the agent in order to have time for a little figuring. The result was that I discovered that it would pay me twice over to purchase on a cash basis rather than accept the agent's enticing terms. The terms he offered, while they looked easy, were really terms demanding a high rate of interest. Further, on making some inquiry I found out that many who had tried the monthly instalment method of payment had come to realize that they were paying dearly for any seeming advantage, and that they felt themselves continually reminded that they were in debt. In not a few cases people had become discouraged, and had abandoned payment altogether, much to their loss.

The best thing for one to do is to keep out of debt, and to buy and sell on a cash basis. It will mean self-denial, but it is astonishing what a little ingenuity and economy will do for one. Indeed, the average farmer will do well to remember and to act upon the advice given by the Old Country adage: "Jock, gang in debt for but a thing dang." No one can afford to go into debt for anything that does not give a reasonable assurance of a fair return. Food, land, clothing and implements can be had, of course, but a little consideration and contriving will reduce one's actual necessities to an astonishingly small minimum. Paying in cold cash is better for both buyer and seller, and waiting till one can do so will save many an anxious hour, and many a disappointment.

ment; whereas the easy payment system usually means either the purchase of something one does not want, or paying too much for one's purchase. It is better to get on in what the Scotch call a canny way than to invest readily and extensively in things that are handy in their way, but which are not really necessary. It is wonderful how far brains and patience can make things go. The newest thing is not always the best. Let others do the experimenting. It is the agent's business to sell goods, but it is the farmer's business to buy only what he puts to a paying use, and on terms that are the most reasonable. It is so easy for one to sign his name to a contract: pay day looks far off, but it is sure to come, and with it has come in many instances a deal of tears and heartbreak.

Wentworth Co., Ont.

O. C.

THE RESTLESS COUNTRY BOY.

Restlessness is a characteristic of all healthy boys, and should never be a source of worry. A young colt may be perfectly happy if only he have plenty of grass and shade and water and liberty. But a boy with forming hands and a contriving mind is restless because he finds stirring in him the possibilities of the infinite. It need not be wondered at, then, if the country father finds himself wrestling with a very live problem when he undertakes to guide his growing boy.

There are various things that contribute to the restlessness of the country boy. In the first place, his familiarity with country life has dulled his senses to its charm. The delights of rural surroundings, by reason of his daily contact with them, have become mere commonplaces. On the other hand, he sees the town only occasionally, and knows professional life only from the outside. The preacher, to his way of thinking, works only half an hour a week; the doctor does little but drive behind a brisk-stepping horse; while the clerk has a delightful time handling light goods, sheltered from the hot sun and the storm.

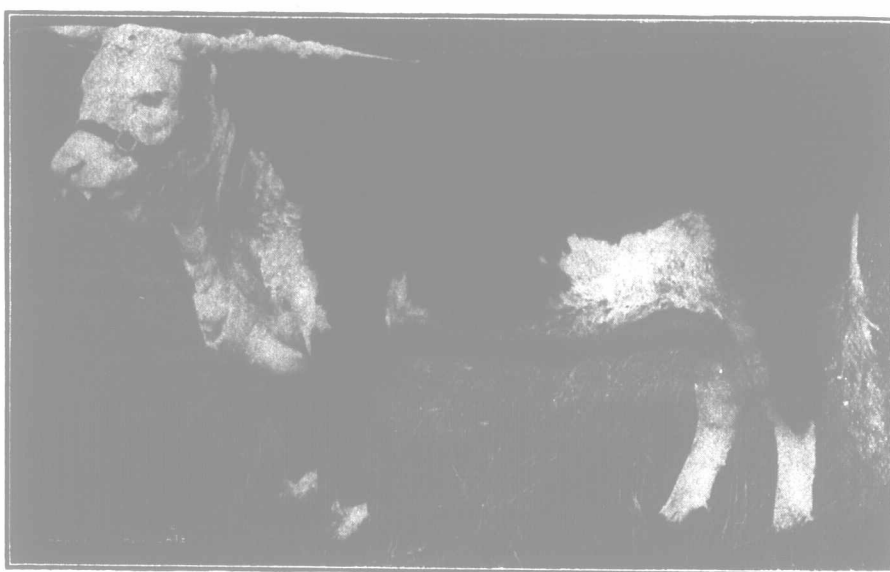
Further, the boy is exposed to the mischievous effect of the class of literature that belittles country life. In

ing for the farmer what is worth more to him a thousand times over than any bank account in the world, the love and service of his boys and girls. O. C. Wentworth Co., Ont.

SYSTEM OF LAND TENURE THE CURSE OF BRITISH AGRICULTURE.

The British land system—namely, that of landlord, farmer, and laborer—which meant three separate castes, had broken down in every other country in Europe, had broken down in Ireland, and was breaking down in England. To it was mainly due the startling rural depopulation, said Jesse Collings in an address before the British Association for the Advancement of Science, as reported in the London Times. The conclusions at which he had arrived were: (1) That the policy of placing trade and manufactures above agriculture was a wrong one; (2) that an amount of capital (including the personal labor of the cultivating owner and his family) properly invested in land yielded a far greater return to the community than a similar amount invested in commerce and manufactures; (3) that, if health, physical strength and an increase of the population were to be reckoned as national assets, agriculture enriched the nation far more than manufactures possibly could; and (4) that the home trade, resulting from the development of agriculture, was larger, more certain, less fickle, and more valuable than the foreign trade. Agriculture must not be regarded simply as any other trade, but as the basis of all trades. Leaving the larger branches of agriculture—the raising of corn, cattle, etc.—and turning to "small cultivation," it was to be observed that we annually imported some sixty million pounds' worth of smaller articles of food, such as butter, cheese, bacon, eggs, poultry, fruit, vegetables, etc., and that those articles might be wholly or mainly

produced at home if our land system were what it ought to be. We had the land, and we had the men standing idle or only partially employed. Many country-bred men now employed in towns would gladly return to the villages (for which they were better fitted) if adequate and reasonable facilities were offered to them. "Occupying ownerships" ought to be the governing principle of our land system instead of being a mere incident in it. To facilitate the carrying out of the suggested scheme of small occupying ownerships, the author strongly advocated (1) a better system of rural education, and (2) the establishment of co-operation among the cultivators both for the purposes of buying and of selling. But co-operation was the natural outcome of small ownerships, but was not readily adopted by yearly tenants, who were often here to-day and gone to-morrow.



Princess Beatrice.

First-prize two-year-old Hereford heifer, Royal Show, '07. Shown by W. B. Tudge.

too many of our papers and books for young people the hero is represented as one who finds no scope for his talents amid farm surroundings, and who comes to his own only upon leaving the old home for a life of adventure. The country boy feeds on this, and soon comes to believe it.

Again, as "The Farmer's Advocate" has been reminding its readers, our school system does not foster a love for farm life. However we account for it, our schools do not encourage our boys to make their living from the soil. Our high schools and universities point the way to the surgery, to the chemist's laboratory, to the mine, to the pulpit, to the bar, or to the legislative hall, but in how many cases is there a serious effort made to teach the students the wealth of the sun-swept valley and meadow, and the satisfaction that comes to mind and heart and fortune by a pursuit of agriculture, the most ancient as it remains the most honorable of the arts? A father need not be surprised to find his son ill disposed to follow in his footsteps if he allows him to be taught for six hours in the day, and for five days in the week, that farming is a poor, sordid and unremunerative occupation.

The cure for this restlessness cannot be wrought in a day. A permanent change in conditions is brought about very slowly, but the farmer must make it his business to see that the change is being brought about. In the meantime let him use all the tact, born of his love and good sense, to show his son the advantages amid which he has been reared. As best he can, let him make his home and work attractive. A little money spent in music and pictures and magazines, and in encouraging his children in carrying out experiments in poultry, in roots, in dairying, or in any farm work in which they take an interest, will be an investment that will yield a tenfold return. A house full of company of young friends brought in occasionally may rob the farmer of some hours of needed rest, but they will do much to relieve country life of its monotony, and do a great deal in the way of preserv-

tion was the natural outcome of small ownerships, but was not readily adopted by yearly tenants, who were often here to-day and gone to-morrow.

CORN HARVESTING.

The silo is undoubtedly becoming the popular Canadian method of caring for the corn crop, but in many cases good farmers who make a specialty of rearing corn primarily for the ears, continue to dry-cure the stalks. In both methods hand cutting is rapidly being superseded by the improved corn harvester. An interesting bulletin on this subject has been prepared by P. J. Zintheo, an expert in farm mechanics, of the U. S. Department of Agriculture. Beginning with the old corn hook, he traces the evolution of modern harvesting machinery down to the present, figures out the cost of different methods with their comparative advantages, and draws therefrom the following conclusions:

Summarizing the comparative returns per acre of husking corn from the field, of cutting and feeding from shock, and of cutting and shredding by the various methods, it is found that the net value of the crop is \$17.93 for husking by hand and leaving the stalks standing in the field. This is obtained by adding to the net value of the corn 55 cents per acre for the stalks and subtracting the cost of husking by hand.

By allowing 25 cents per acre as the value of the fodder in field where a corn picker (a machine for picking the ears off the stalks in the field instead of by hand) is used, and adding this to the net value of the corn and subtracting \$1.80 per acre for picking with the machine, we derive the net value of the crop of \$17.81 for this method of harvesting, which indicates a small loss per acre as a result of using the corn picker.

The net value of the crop by feeding the stalks whole is \$23.18 for hand husking, \$23.50 for harvesting with large machines, and \$23.62 for small machines) is ob-