\*AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.\*

Vol. LIII.

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LONDON, ONTARIO, JANUARY 10, 1918.

No. 1320

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# The Farmer's Advocate

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Home Magazine

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LIII.

LONDON, ONTARIO, JANUARY 10, 1918.

1320

## EDITORIAL.

Put the ice in early.

The good feeder sees that mangers and feed troughs are kept clean.

The people of Canada have elected a Union Government and they expect results.

Some of the changes made "for the duration of the war" might well be extended to peace times.

The shortage of coal should prove an incentive to the further development of electric power in this country.

The United States is going to control its own rail-ways for the good of the nation. Canada might well follow the example.

The critic who tears down and has nothing to put in the place of what he destroys never rises to a very high level in the affairs of men.

The elector who didn't take enough interest in the municipal election to go out and vote need not grumble at the incompetence of the council elected.

The Junior Farmers' Improvement Association has a wide field of usefulness ahead of it. The hope of agricultural organization in Old Ontario lies in the young

How can the Kaiser make peace with a Socialist' Russia and deny socialists in his own country the right of free discussion of Germany's war aims? It will not work.

British breweries, we are told, are to be allowed to increase their output twenty per cent. Drinking seems to be more essential than eating in these times of so-called food shortage.

If farm poultry received the same careful attention that dairy cows, beef cattle, hogs, sheep or grain growing does on the average farm, the hen would show results for her owner.

How long would you like to live in a house with no more daylight in it than have some underground stables? You wouldn't last long, whether you liked it or not. Healthful conditions are necessary for live stock.

Keep a few choice roots of mangels and turnips free from frost and plan to grow your own seed this year for 1919. Root and vegetable seeds will be scarce unless Canada grows enough to supply her needs.

Those who buy oleomargarine complain that there is a difference of 10 cents per pound in the price of the product in the United States and in Canada, but then it is a new idea in Canada and, of course, would cost more

Freight rates in Canada have been increased in order that greater efficiency may result in transportation. Everyone hopes that the increased efficiency soon becomes apparent. It would not do to allow the equipment to fall so far short as to be a further handicap.

Necessary as it is to produce food, it is even more imperative right now that transportation facilities be improved. The big problem is transportation. Full stores of food in America will avail the Allies little in Europe if the food cannot be transported as required.

#### What the Market Reveals.

A review of the transactions on the Toronto livestock market during the past year, as compared with the previous year, is worth some comment. We often hear statements made regarding the numbers of animals going on the markets and the number in farmers' hands, and sometimes these are misleading. The facts here reiterated were included in the latest Government market report and refer to Toronto market only.

Cattle receipts were about the same in 1917 as they were in 1916. This would indicate a steady effort on the part of the feeders of this class of stock. They are "carrying on" according to well-laid plans, and not jumping hither and thither at every beck and call.

Interesting as this is, however, the fact that a considerable increase was made in the numbers of stockers and feeders returned from this market to the farms for further feeding is of even more importance. In 1916, 26,000 head went back to the farms from Toronto market, while in 1917 over 43,000 head were so sent back for further fitting. This is an increase of 17,000 head, quite an appreciable number. No doubt a number of these went back as a direct result of the efforts of the Live Stock Branch of the Dominion Department of Agriculture in making freight conditions easy for farmers, and placing men on the market to aid in selection and purchase of the stock. At any rate a greater effort has been put forth toward higher finish on the cattle, and it pays to finish well as a general thing.

Some people who are wont to complain tried to make themselves think Canada should put an embargo on beef cattle going to the United States in an effort to bring down the cost of living in this country. Of course, they didn't understand cattle raising, markets and marketing, but for the entire year 1917 only 8,000 cattle went from the Toronto market to the United States, and half these were unfinished. This was 3,000 head fewer than went over in 1916, when 11,000 found their way across, chiefly to Buffalo.

A point of interest to feeders is brought out in the fact that the high point of the cattle market for the year was in May, at \$13 per cwt., and the low point came in September and October, when heavy runs of grass cattle were made. The price has come back and choice cattle went as high as \$12.75 per cwt. in December. This would seem to indicate more grassing of cattle than usual, and we would not wonder at it. Probably a large part of the 43,000 head returned to the farms during the year went back to be grassed off and were again on the market in September and October, which brought the price down. Scarcity of labor in the country is also having a tendency toward less stall feeding and more grass finishing. Feeder prices have been very high in the fall, and this tends to limit the number of cattle put in at that season to be stall fed all winter and turned off in the spring. This, in part, would account for the high-water mark coming in May. There is a point in this: Avoid rushing grassers on the market too fast at the end of the season, if at all poss-

There was no great saving of calves effected in 1917 as compared with 1916, nor was there any great attempt to veal everything as some seemed to think. The farmer's judgment was good and he kept a steady supply going forward, chiefly of calves which were not suitable for raising to maturity. The receipts for the year were on a level with those of 1916.

More attention is being paid to sheep. Prices of wool and mutton have been high, and this is the chief incentive for breeders. The number of lambs increased several thousand on Toronto market, and the top price was \$18.50 per cwt. It looks like good times for the sheep breeder.

For the year, hog receipts were lighter than in 1916. Feeds have been scarce and very high in price. The scarcity in the fall of 1916 sent a large number of brood

sows to the slaughter houses, and litters were fewer in the spring of 1917. July and August were the months of lightest run and poorest quality. In these months the average weight of the hogs marketed was between 160 and 170 pounds, whereas in December this average ran up to 190 to 195 pounds. It is all a question of feed. Farmers are out of feed in July and August, just before the threshing begins, and fewer pigs are sent out then and they are always in poorer fit. Again, sows would be farrowing in cold weather to have pige reach six or seven months of age in July. For those who can keep the young litter warm and have skimmilk in abundance, it might pay to have a few more litters farrowed in mid-winter and save feed to finish them in July and August to catch the high market, However, young pigs in very cold weather are a risky proposition.

#### That Cheap Food.

Those who asked that oleomargarine be admitted to this country as a war measure to supply a necessary form of food for the poor man's table, at a price away below the market price for butter, would find some food for thought in market reports of the prices paid by consumers for this product. "The Farmer's Advocate" set forth the case against oleo at the time its entrance into this country was being considered. In that statement we did not contend that it was not a wholesome food, nor do we now. Moreover, all thinking and fair Canadians will agree that anything which will actually help the working man over the hard places in providing for his family at this or any other time should receive the full support of all the people. Those who objected to oleo coming in did so not only as a protection to the dairy industry but also as a protection to consumers. It is necessary to regulate the manufacture and sale of the product to safeguard the people. Only by pointing out the need can adequate regulations be made. The Canadian regulations appear to be well thought out, but oleo has not brought down the cost of living to any appreciable extent to the working man and his family. In our last week's Montreal market report statement was made that grocers asked 38 cents to 40 cents per pound for oleomargarine, while finest September and October creamery butter sold at 44% cents to 45 cents per pound, and fine quality one cent per pound lower. In the same report choice dairy butter was quoted at 36 cents to 39 cents per poundlower than oleomargarine, and choice dairy butter, made in a clean farm household, is good enough for anyone. These figures do not reveal any great saving to those who buy oleo in place of butter. And it has not brought down the price of butter which was selling on this same market a few cents per pound higher in price before oleo was procurable than it was when our last market report was received. Of course, conditions may change. Eventually the price of butter may be affected, but it does seem now that oleo was not really expected to lower the cost of living to the poor man very much. True, it is cheaper than butter in some Canadian cities. It can be bought in London, Ont., for 35 cents per pound, but why should it sell for from 35 cents to 40 cents per pound in Canada when it was quoted in Chicago at the same time as follows: table, 29 cents to 30 cents; cooking, 21 cents to 24 cents? These are questions which the consumer might well ask.

As to the producer of dairy products no great injury to his business has yet manifested itself, beyond a first shock which sent dairy butter down about 5 or 6 cents per pound in some localities, but from which it soon recovered. An upset may come later. There is a butter shortage just now. Creameries are getting very small supplies. This tends to keep the market up. Undoubtedly when the spring flush of grass and fresh cows comes butter will be more plentiful and will drop in price. If it drops much it will also force oleo down.

## The Farmer's Advocate

AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

Published weekly by THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

Agents for "The Farmer's Advocate and Home Journal," Winnipeg, Man.

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for the latter product will likely remain just a few cents per pound lower than butter-just enough to undersell

It is also said, strange to say, that the greatest demand for oleo is not found in the sections of cities where the poorer people live. We recently heard a wash woman complain about the high price of butter. When asked why she did not buy oleo she remarked: "I haven't come down to eating that stuff yet." It's a queer old

Now that oleo is here no one can call the dairy farmer inconsistent if he asks for free entry of some of the implements and machinery nece products. Some thought the prohibition of oleo was a protection to the dairyman. If it was it is gone and there is room now for those in authority to be fair and go farther. And yet eventually they might really cheapen food by lowering the cost of production.

#### "For the Duration of the War."

As the war goes on more changes are made in order to promote efficiency and economy. Many of these reforms are great and sweeping and would, doubtless, not be made unless the conditions affected demanded such procedure. It is strange, however, that we have become accustomed to coupling with the announcements of these changes the words: "For the duration of the war." If prohibition is good national economics in time of war, why not in time of peace? Why not for good and all "stop all waste of food, men, labor, and brain power during these days when the nation needs the energy of every man at his best," for the nation needs all people at their best all the time. If Government-operated railways are to be preferred in time of war, and many great nations have acted accordingly, why not in times of peace? In war and in peace there should be the widest possible application of public ownership and operation of all public utilities. Beneficial reforms should live for the good of the people long after the war drums throb no longer and the battle flags are furled. The people will have the say in the matter and must be prepared to back up the Government in a continuance of the operation of reforms which have worked for the good of the country as a whole.

#### The Railway Situation in Canada.

Canada has railways which have paid and some which have not. It becomes necessary for the people to stand behind the roads which do not pay, and Government aid has been extended in plenty. In a short time the Government will be operating the C. N. R. system. Canada will then have three great systems, one controlled by the people, the G. T. R. and C. P. R., privately owned and operated. The Commissioners who investigated Canada's railway problems a short time ago and made recommendations to the Government that the C. N. R. and Grand Trunk be taken over and a combination of the Intercolonial, National Transcontinental, Canadian Northern, Grand Trunk and Grand Trunk Pacific be made, leaving only the great C. P. R. system under private ownership and operation, found that of all the systems named in the proposed amalgamation only the parent Grand Trunk system was capable of carrying its fixed charges. Most of these systems fail to earn anything above operating cost. The Commissioners found that if all these roads were taken over the entire system would commence with an annual deficit of \$12,500,000, which would have to be paid by the people as taxes or would have to be secured by increased rates.

While these roads are in such condition the C. P. R. is prosperous. It paid a dividend of ten per cent. last year, and laid up millions to the credit of profit and loss.

Looking at these conditions some cannot see why the country should be loaded with the roads that do not pay and the system which does pay be continued as a private enterprise. If all were taken over and left to the experienced management in charge, the surplus of one could be used to meet deficits in the others, and traffic could be arranged to give all an equal chance.

An increase in freight and passenger rates has been announced. Objections are already heard. This increase will not likely give the Grand Trunk and Government roads returns any more than necessary if quite sufficient to meet the increased costs of operation. But it may add considerably to the surplus of the C. P. R.—the road which needs the increase least. Increased freight rates are not popular in Canada. The people realize fully that the cost of operation has advanced considerably, but they do not feel sure that increased rates will mean greater railway efficiency, and it is efficiency that counts. There is a shortage of cars and a shortage of locomotive power. Maintenance has not been looked after as it once was. These things must not be allowed to continue too long else conditions will get worse. The railways are common carriers, and for the good of the nation should be operated in the best interests of all the people. If the Government operated all the roads under the most efficient management possible, and there was need of increased rates, the people would not object. But just now when alf hands are asked to produce there are those who see no reason why increased production should bear a further burden of increased freight rates which will largely benefit a road which does not particularly need the increased revenue, and will not be sufficient to make other roads as efficient as they should be. If it is necessary to increase the rates to keep a number of the roads going, better take over all the roads and make the best use of the expert knowledge of the railroad men of long experience who have controlled and operated these roads under private ownership. It is true we have in Canada a Railway War Board for the purpose of co-ordinating railway work, and it is said that this Board has done considerable good in the interchange of rolling stock and motive power, however, it might be better to go the whole way as was done early in the war by Great Britain and has recently been done in the United States. Greatest possible efficiency is what is wanted, and this means most economical and best service to the greatest number. In union is strength. United railways controlled by the Government might make for greater strength in

#### Great Men.

It is well in these times that we do not forget the work of some great men whose efforts in life have resulted in great good to the world at large-"world benefactors." There have been a number of these whose works have lived after them and some are still living, who, when they pass on, will be remembered because of their efforts in the interests of humanity. Men who have made it easier for others to live-men who have devoted their lives to scientific research for the good of humanity-deserve a place in this list. It is our purpose to publish in the second issue of each month a short account of one of these men until the

list we have is covered. The first appears in this issue. Louis Pasteur was truly a world benefactor. If readers have in mind any really great men whom they think should be included in the list they would do us a favor by sending in the names.

#### The Bottom of the Ladder is a Good Start.

BY SANDY FRASER.

Every little while I will be readin' about some boy that has tae start oot tae mak' his livin' on the farm, wi' naething to his name but a pair o' blue overalls, a cotton short an' a straw hat, an' before the story is ended he's president or premier or somethin' like that, which na doot he would never have been if he hadna had sic a bad start. It looks as though the chap wha starts at the bottom always goes up, an' that one wha' starts at the top has no choice but to come doon. I dinna think mysel' that this is the case, but it happens often enough to mak' ye stop an' wonder what's the reason. I suppose it's with boys something the same as it is with chickens. When they hae everything they want they winna scratch for themselves, but when it's a case of wark or starve they soon get busy. An' once they hae the habit it stays wi' them till they get tae the top o' the pile. I dinna care whether it's boy or rooster, early habits are the ones that stick

I saw an account juist the ither day o' one o' these "start-at-the-bottom" farm laddies, an' gin ye hae the time I'll juist be repeatin' some o' it for yer benefit. Onyway, if it does ye no guid it canna dae ye ony harm. It seems this chap wis born in New York State, on a vee farm in Greene County. One o' the first things that he came tae understand about this farm wis that there wis a mortgage on it, an' the idea he got o' it wis that the mortgage wis bigger than the farm. The auld fellow that held the mortgage wis one o' these right onthe-minute individuals, an' the day the interest wis due he wad be there at the door waitin' for it. He pit sae muckle fear intae oor young laddie that he made up his mind that he'd get rid o' the auld mon an' his mortgage if he had tae stay up nights tae mak' it oot. Sae, as ye might expect, he started in tae wark wi'oot muckle o' an education. The mortgage wis pushin' him an' he hadna time to wait for things like that. He stayed wi' the farm till he wis aboot eighteen an' then took to railroadin'. He thought he saw better prospects o ettin' square wi' the auld mortgage holder on day wages than in raisin' grain an' live stock. An' na doot there wis, at that time. He got a job as brakeman an' later on as fireman. Then he took the notion tae gang tae the city. When he got to New York he had juist three dollars an' thirty cents to his name. It wisna lang till he got work as fireman on one o' their elevated roads there, an' a couple o' years later he wis made engineer at a salary o' a hundred dollars a month. It wis at this time he made up his mind tae get married. Ye can see he had caution as weel as courage. There wis a girl that he had left back hame, on a farm near his feyther's, an' he noo thocht he couldna dae better than to tak' her tae the city an' let her show them there the richt way tae keep hoose.

Aboot this time a brither o' his, that had been studying tae be a lawyer, died. Oor young engineer got the idea intae his heid that he should tak' his brither's place an' represent the family at the bar. Sae, wi' his wife's consent he began tae study for the job. He warked on his locomotive went in the day-time. He got what sleep he could between times, but it wasna' much. Between his regular wark an' his classes he hadna ony time tae study books, but his wife wrote oot his lessons on slips o' paper an' wad study these in the cab o' his engine. One time he got sae interested in his wee slips that he took his train around a curve sae fast that he cam' nigh to haein' a wreck, an' the result wis that he got fired. It wisna lang after this until he became unco' shy o' cash, an' he had yet tae try his examinations before he could set up as a lawyer. The examinations were held in anither city, an' the only way he could get there wis to ride in the cabs o' the engines that travelled between that city an' New York. He made a guid mony trips but he made oot, as usual. It wis the auld story ower again, 'ye canna keep a guid mon doon.

After his examinations had been passed the next thing he wis up against wis tae earn his livin' in New York as a lawyer, an' some that hae tried it can tell ye that this is no easy job. The first thing wis tae open a law office, an' this couldna' be done wi'oot money Sae he went back tae the auld farm an' pit anither mortgage on it, an' wi' the cash raised in this way he made his start. The first month he made twenty-six dollars, the second month forty-six, an' the third eighty-one. It wisna' lang after this that he paid off the last mortgage on the auld hamestead. His next move wis intae a larger office in a better part o' the toon.

Aboot ten years ago he went intae politics, an' although this has been the first doon-hill step for mony a mon it didna' hae ony bad effect on oor one-time farm boy. First thing he wis made magistrate, an' then county judge, an' the second time he ran for this office he wis elected by a majority o' twenty-seven thousand. It looks as though he must hae been a pretty decent chap a richt, unless maybe the ither fellow wis a chickenthief or somethin' o' the kind.

But the end o' the story is not yet. Last fall when the Tammany people in New York were lookin' roon for a man that they were sure wis popular in the city an' wad poll a big majority o' the votes, they picked on this country judge as the one safe bet. I dinna

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think ower muckle o' the Tammany party, I can tell ye that, but when it comes tae pickin' a winner they ken what they're aboot. An' if ye want proof of ken what they're aboot. An' if ye want proof of it I hae only tae tell ye that their candidate, John F. Hylan, oor boy that started oot by payin' off the fivehundred-dollar mortgage on his feyther's farm, wis elected by the biggest plurality ever given tae ony man that has tried for the job o' bein mayor o' the city that thinks itsel' aboot the greatest combination o' money an' brains that has yet happened on the face o' this auld earth.

I mind o' askin' a tramp, one time, how a healthy lookin' chap like him came tae be beggin'. "Oh, I didna' hae ony chance," says he, "Nobody ever helped

me tae get a start."

#### World Benefactors. Louis Pasteur.

We live in a time of great deeds. Devotion to country is universal. Acts of heroism are being performed on every hand and by all peoples. many climes are laying down their lives that the progress we have made in literature, art, science, and most of all, in freedom of thought and action may not be wiped out or buried for a hundred years beneath the burden of a Prussian dominance. On the other hand, misled millions are sacrificing all they have—life, husbands, sons, brothers, fathers—in a cause which, God grant, will soon be revealed to them as nothing short of a vicious and ambitious Hohenzollern desire. After the war is over-the carnage ended-let us not forget those great minds which through the ages have been working in the interests of a peace-loving humanity, but whose discoveries have, nevertheless, brought comfort and alleviation of pain where the wounds of battle are being inflicted by a world gone mad.

When we realize that,—

"Titles are shadows, crowns are empty things: The good of subjects is the end of Kings.

then will dawn upon a thinking people a greater appreciation of the life and work of Louis Pasteur, the subject of this short article. In the sick room, in the laboratory, in the factory, and on the farm, we are benefiting day after day by the ceaseless energy and wonderful discoveries of a mind consecrated to the good of mankind. Louis Pasteur was the antithesis of strife or conflict. Modest and simple minded, he labored on, seeking truth in nature and science, that his countrymen and the peoples of all nations might inherit something that would do them good. "There is no greater charm," said Pasteur, "for the investigator than to make new discoveries; but his pleasure is heightened when he sees that they have a direct application to practical life.

This great French chemist was born on December 27, 1822, at Dôle, Franche-Comté, where his father conducted a tanning business. Gradually, step by step, and after much hard work, for he was considered only an ordinary student, the youthful Pasteur obtained his diplomas which admitted him to the Ecole Normale at Strangely enough, a note was attached to his final diploma (probably by an examiner) stating that he was only "mediocre" in chemistry, but time has shown him to be one of the world's great men of that profession. He began as an assistant in the chemical laboratory of the famous college he had entered, but it was not long before he had revealed certain truths (by improved research method) that had haffled the lead ing chemists and physicists of his time. He was then made Professor of Chemistry at the Faculty of Science at Strasburg. He subsequently accepted a more responsible position of like character at Lille, where he developed to be the acknowledged head of the chemical profession, and from which station he was elevated to a dignified and honorable post in the École Normale in

The name of Pasteur has been made immortal through the adaptation of his scientific discoveries to ordinary life and industry. When a mother heats milk at a low temperature to make it safe for her child, she pasteurizes it, or destroys germ life, which this famous scientist proved to be the forerunner of disease. The dairymen, too, must thank Pasteur for the method of preserving milk and milk products from the ravages of bacteria or destructive organisms. It remained for him to demonstrate the causes of the various fermentations such as vinous, where alcohol is produced; acetous, where vinegar is the result, and in the lactic, where milk turns sour. Certain claims in regard to these organisms had been made, but Pasteur reduced the theories to reality and adapted the discovery to industrial possibilities. In June, 1865, he undertook to explain the cause of the epidemic of a fatal character which threat-ened to ruin the silk industry of France. Up to that time he had never seen a silk worm, but by September of the same year he was able to annouce results that pointed to immunity from the dreaded plague. He then turned his attention to diseases of animal life, and, cognizant of the fact that malady in many cases is due to germs or bacteria, he set about to produce immunity by inoculation with a weakened or attenuated virus produced by the culture of the specific organism. The first disease investigated by Pasteur was chicken cholera, an epidemic which destroyed ten per cent. of the French fowls. He was able to reduce the death rate to one per cent. by his inoculation or immunization method. The fatal cattle scourge, known as Anthrax, next claimed his attention, and by inoculation he was able to reduce losses in the French herds from ten to less than one per cent.; a saving which the famous Huxley said was

sufficient to cover the whole cost of the war indemnity paid by France to Germany in 1870. Most interesting of all was his gift to the world symbolized in the Pasteur Institute, where Hydrophobia in men and rabies in animals is brought under control. Not only was he able to render immunity by inoculating with the attenuated or weakened virus, but by the same method he could produce remedial effects in a patient in whom the disease was developing. Thus it was that the most dreaded of human afflictions was conquered by a scientific mind consecrated to public weal. Pasteur Institutes sprang up in all countries, and still stand as a monument to a great man whose name will live when kings and princes are forgotten. The keynote of his life was sounded in the closing words of his oration at the opening of the Pasteur Institute in Paris, on the 14th

of November, 1888 which were as follows:
"Two opposing laws seem to me now in contest.
The one, a law of blood and death, opening out each day new modes of destruction, forces nations to be always ready for the battle. The other, a law of peace, work and health, whose only aim is to deliver man from the calamities which beset him. The one seeks violent conquests, the other the relief of mankind. The one places a single life above all victories, the other sacrifices hundreds of thousands of lives to the ambition of a single individual. The law of which we are the instruments strives even through the carnage to cure the wounds due to the law of war. Treatment by our antiseptic methods may preserve the lives of thousands of soldiers. Which of these two laws will prevail, God only knows. But of this we may be sure, that science, in obeying the law of humanity, will always labor to enlarge the frontiers of life.'

Honored and revered, Louis Pasteur passed away at St. Cloud, September 28, 1895; simple-minded and affectionate as a child, he won distinction by diverting his labors and brilliant intellect to a useful end and giving to humanity a heritage which has made his name

#### Nature's Diary.

A. B. KLUGH, M.A.

Canada From Ocean to Ocean.-II.

If we visit a stretch of rocky shore on our Atlantic coast at low tide there are certain forms of life which are sure to attract our attention. Of these one of the most noticeable is the Starfish. We shall probably come cross several species of Starfishes, differing in the number of rays or arms, in size and in color, but the most abundant, and most characteristic of the shores of the Maritime Provinces, is the Common Atlantic Starfish, (Fig. 1).





Fig. 2-Barnacle.







Fig. 3-Shell of Polynices. Fig. 4-Shell of Whelk.



Fig. 5-Limpet, side view

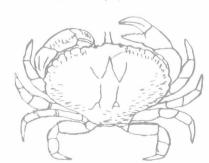


Fig. 6-Rock Crab

The Starfish are peculiar in many respects, differing widely in their structure and habits from the great majority of other animals. In the grooves along the under surface of their rays they have rows of "feet, which can be extended and contracted at will, and it is by extending and attaching some of these feet, and then shortening them that the Starfish creeps slowly along the bottom. In feeding most animals take food into their stomachs, but the starfish turns its stomach inside out through its mouth, wraps it around its prey and in this manner digests it

The Sea-Urchins, which belong to the same group as the Starfish, are usually common in the crevices of rocky ledges. The best description one can give of them is an animal shaped like a door-knob and covered with long, stiff spines. The commonest species, which has no particular common name, is green in color and about three inches across.

Nearly everywhere along the coast where the rocks are not covered with sea-weed we see the white, coneshaped, tightly-attached Barnacles. In our illustration, Fig. 2, we show a single individual, viewed from the side, but they occur in large groups, often covering areas of considerable size. These Barnacles look much like shell-fish, but as a matter of fact they belong to the same group as the Crabs, Lobsters, etc., and in their early stages are free-swimming. Then they settle down, secrete their shell, which is composed of several plates, and live by waving minute organisms into their mouth with their curled, feathery feet, which may be seen projecting from the top of the shell in our cut.

One of the very common animals between the tidemarks is a Snail known as Polynices, by which name we have perforce to call it since it has no common name. This Snail, which is from three to four inches in diameter, feeds upon clams and other Mollusca, drilling a clean, round hole in their shells with its rasp-like tongue and sucking out the soft contents. Another very common Mollusc is the Whelk, the shell of which attains a length of three inches. This species also occurs on the coasts of the British Isles, where it is used as food. On our coast the animal is often extracted and used as bait on the trawl lines.

A very characteristic shell-fish is the Limpet, Fig. The expression to "stick tight as a Limpet" gains a new significance when we try to pull one of these molluses off a rock. It is, in fact, practically impossible to pry them off, uninjured, with a knife-blade, unless the blade is slipped quickly under the edge of the shell before the animal has time to clamp it down. When the tide is in the Limpets wander over the rock in search of food, but before low tide they return to their original

In many places along the coast the Rock Crab is a common animal. This species, like all true Crabs is broader than long, and travels sideways. The Rock Crab rarely occurs high up on the shore but is usually found about low-tide mark.

There are, as we have already stated, hundreds of different species of animals to be found between the tide marks on our Atlantic Coast, but those which we have mentioned are the commonest and most charac-

(To be continued).

#### THE HORSE.

#### Diseases of the Feet—VII. Foot Punctures—Pricks in Shoeing.

A "gathered nail" may pierce any part of the sole or frog, but is probably most frequently found in one of the commissures of the frog (the hollow between the frog and the bar on each side). If the seat of puncture in one of the commissures about half way between the heel and the point of the frog, and be deep, there is danger of the nail having penetrated the bursa of the navicular joint. While punctures are generally caused by nails, many sharp objects, as glass, iron, wood, etc., may cause them. The symptoms usually are well marked. The horse suddenly goes lame in many cases, practically progressing on three legs, but in some cases the lameness is slight, and in some cases where the nail has not penetrated sufficiently deep to pierce the sensitive parts, no lameness is caused and no suspicion of the horse having "picked or gathered a nail" exists, until the groom discovers it the next morning when cleaning out the foot. This fact impresses upon our minds the advisability of cleaning out the feet and looking for nails, stones, etc., at each grooming. In a case such as stated, the presence of the nail would be detected, and its extraction would prevent trouble, while if not noticed and extracted there would be danger of it penetrating further if the animal stepped upon a stone or other hard substance, at the seat of puncture.

Treatment.—So soon as the horse is noticed going

lame, the rider or driver should dismount and carefully examine the foot. In some cases the animal may have trodden upon a nail that was somewhat firmly fixed. He suddenly lifts the foot which pulls away from the nail, but he goes lame all the same. In such a case the examiner will, of course, not see the nail, and, on account of the elasticity of the horny sole there will be no hole to mark the seat of puncture, as the opening through the sole will have closed as soon as the foot was drawn away from the nail. In some cases there will be a few drops of blood to indicate the seat of trouble, but, where this is not the case the examiner is often at a loss to know definitely what caused the lameness. In these cases the horse may or may not continue to go lame at the time. When the nail in such cases has been clean, and has not penetrated sufficiently deep to draw blood, no untoward results are likely to follow, but if foreign matter has been left in the wound, or if blood has been drawn, lameness will very probably become more evident in a few days. When the nail or other foreign substance be present it must be extracted. This can sometimes be done by the fingers, but in many cases it is too firmly fixed, and a pincers or claw-hammer is necessary to remove it. If the

examiner has not the necessary instrument of removal, he should allow the horse to stand until he can procure it, as if he drives or leads him it is probable that the nail will be forced farther in, hence aggravate matters If no blood appears after the nail has been extracted, and the horse goes sound, it is probable that no further treatment will be necessary, but if there be blood, or if from the evident depth of puncture the sensitive parts have been recorded further treatment will be necessary. have been wounded, further treatment will be necessary. Even though no blood should appear, if foreign matter has been introduced, or the sensitive parts wounded, pus will form and cause lameness, and an opening through the sole must be made for its escape Hence, the seat of puncture should be carefully noted, and after the horse has reached the stable his shoe should be removed, and by the use of a shoeing-smith's knife a free opening made through the sole to allow escape of clotted blood and other foreign matter. The wound should be thoroughly washed with an antiseptic, as a five-per-cent. solution of one of the coal-tar antiseptics, or carbolic acid, and either a poultice of warm linseed meal applied or the wound filled with a dry dressing as one part iodoform to four parts boracic acid, and a boot or wrapping put on to prevent entrance of foreign matter. The writer prefers a dry dressing. The wound should be dressed in this manner twice daily until lameness disappears. In some cases a fungoid-looking bulging appears in the wound. This is simply a swelling of the sensitive sole, and will disappear as the inflammation becomes allayed, hence neither caustics nor a knife ahould be used. When lameness has disappeared and the discharge has ceased, the opening should be filled with hot tar and tow, a leather sole put on, to prevent entrance of foreign matter, and a shoe put on. As foot punctures of any kind are liable to be followed by tetanus (lock jaw) it is wise to get a veterinarian to give the animal an immunitive dose of anti-tetanic serum. When lameness appears after an apparently harmless puncture, the seat of puncture must be located. an opening made for the escape of pus, and the case treated as above.

Pricks or punctures in shoeing are of two kinds, viz., those actually penetrating the sensitive structures, and those where the nail, although not actually reaching the sensitive parts, is driven so near as to cause a bulging of the inner layer of the horn and pressure upon the sensitive interior, leading to inflammation and lameness, and possibly the formation of pus. Many cases of lameness follow what are known as drawn nails; that is, the smith, finding that the nail has gone too near, or even penetrated the sensitive parts draws it out and drives it again less deeply. When the sensitive parts are punctured, lameness is usually noticed at once, in other cases it appears in a few days.

Treatment consists in locating and extracting the offending nail, and treating as for other punctures. To locate the seat of puncture of any kind, it is often necessary to remove the shoe, then examine all parts of the sole and frog by tapping with a hammer or pressing with pincers. When the seat of trouble is tapped or pressed upon the animal will usually evince pain by drawing the foot away. In paring and searching lame feet, care should be taken to avoid drawing blood, if possible, as this renders it more difficult to follow a spot of discoloration to its termination. When suppuration (the formation of pus) in the foot occurs from puncture or other causes, and an exit be not made through the sole, the pus burrows upwards between the sensitive and insensitive walls, and escapes at the coronet, causing what is known as quittor, which we hope to discuss in a later issue.

#### Founding a Percheron Establish ment.

BY E. A. DAVENFORT,

The problems of the beginner in breeding Percheron horses are many, but most of them can be solved by putting to proper use the information which can be obtained from experienced constructive breeders. It is, however, to be much regretted that we have not more of these breeders catering to Percheron improvement, but those that we have are doing good work and a great deal more is to be done in the future. It is unfortunate for the breed that until recently the cheaper class of Percherons were more profitable to the importers and breeders than better ones. It is always so in a new country and continues so until there is a real appreciation for a higher-class horse. The time, however, is now come when the breeder of "good ones" meets with his just reward, not only in pecuniary profits but in personal satisfaction and public appreciation. Constructive Percheron establishments in Canada are now be-coming more numerous. They are dotted throughout this entire prairie country, and will labor on in the production of a higher class of horse power, improving his wearing ability, his power-producing ability and his general efficiency for power production on the farm, There will be drafted from these establishments packages of good breeding which will lend to the general improvement of horse efficiency from the Rocky Mountains to the mining centres of New Ontario

I am requested to present as best I can some information which I have derived from the mint of experience in the establishment of a Percheron stud, which information may be of value to others through out Canada. The beginner must always bear in mind two factors which dominate and determine the merit of an establishment being formed and the success with which that establishment will inevitably meet.

These two factors are not merely associated with Percheron breeding alone, but are fundamentals in life's reproduction and apply to all animalism. First, of

supreme importance, is the foundation stock with which one begins that the possibilities of reproducing good progeny may be had; and, second, that adequate conditions for development may be presented by which the latent characteristics as transmitted may be given every opportunity of developing to their utmost. In other words, ancestral environment will determine the characteristics which are latent in the young and the present environment will determine the extent to which these characteristics will assert themselves.

Thus, to the young man starting out to own a team of high-class Percheron mares for the foundation of his establishment, I would say, start in right; however small the beginning may be, buy them sound. I would rather have one good mare and have her sound than have half a dozen and have them unsound. When you go out to buy an animal and find it a little coarse in the pasterns, turn it down—and hard at that. It matters not whether it is coarse pasterns or a coarse hock, bad eye or bad wind, they are all the same when it comes to breeding. Unsoundness will be passed on, not only for one generation but for generations. should stand squarely on large, wide-heeled feet with round, heavy heads, above which are pasterns of proper slope. The size of bone may well be considered, though too much stress frequently has been placed upon this factor. It is quality, however, that counts. a clean, hard, flinty bone, with wide hocks, large flat knees; they should also have good ends, long, wellsprung ribs and level top lines. One of the greatest mistakes of the young breeder is in picking his mares here and there, wherever one should strike his fancy. Years later he may awaken to the fact that the diverse types or uncongenial blood lines, or likely both, have foiled his attempts to produce such colts and fillies that the breed needs. With a foundation stock uniform in both pattern and ancestry one is reasonably assured that

the offspring will be of the same sort. While we may have a good foundation of mares, although it may be small in the beginning, our entire efforts in getting this foundation may be entirely wrecked when we come to purchase a stallion, provided he is not a suitable one for the production of high-quality offspring. The sire is one-half of the entire establishment when it comes to progeny, and his selection is most important, upon which will depend more than any other single individual the ultimate success that may be attained. The general considerations in his selection are very much the same as for the mares, in addition to which he should be stronger and more masculine in appearance, especially in head and neck and as well as being a little more upstanding. It is a practice among farmers who get around them eight or ten pure-bred mares, to purchase two-year-old stal-lions of good growth and type. This system is com-mendable, as two-year-old stallions can be purchased from \$600 to \$800, and soon grow into horses worth \$1,000 to \$1,200. He can obtain them at a lower figure, and if he owns a stallion he usually gets more of his mares in foal than by patronizing one traveling in the district. But in the selection of him, as with the mares. the utmost consideration must be given, not only to his individual type alone, but the beginner should also desire to see the sire and the dam that he may know whether or not the stallion gives reasonable assurance of transmitting the type desired. Although he may be individually of fairly good merit, yet, if his parents do not measure up, if they are of poor quality in limb or in top, then there is no definite assurance that this stallion about to be purchased will transmit anything better than the parents from which he came.

With this foundation set on a firm basis, with the possibilities made reasonably sure of obtaining progeny bearing in it latent characteristics for the production of high-class horses, thenceforth the ultimate product will depend upon the environment which it is surrounded

It is well known that at times environment is more powerful then heredity. If you take a high-class sample of wheat that has been developed through several years of selection and breeding, and plant it in poor soil and indifferently cultivate it, the results in two or three years you well know. Take a pure-bred cow, rich in the best blood for several generations, and shelter her on the sunshiny side of a barbed-wire fence, give her poor feed and treat her offspring in the same way, and the results you well know. Likewise, if offspring of strong quality, pure-bred Percherons be given inferior environment in the way of climatic conditions, feed conditions, etc., we cannot expect anything but inferior development, and the very purposes of good foundation stock are largely defeated.

We are fortunate in Canada that our climatic conditions are favorable for the production of healthy horses, that our soil conditions are such that the feed grown is wholesome and nourishing for the construction of a strong, perfect, enduring frame. The atmosphere is bright, bracing and pure, with the oxygen required for lung development and blood building, while abundant sunlight benefits animals and plants alike. For the development of dense, flinty bone of sufficient drink of horses. Without these requisites of nourishment imperfect animals will be produced. Canada, in regard to these requirements, is eminently adapted for the breeding and rearing of horses of the highest type and quality. Her soils are rich in mineral matters; her drinking water is strongly impregnated with minerals; her feeds are both rich in protein and earthy materials, and especially fitted for perfect frame building. We can at all times supply our horses with nutritious feed from never-failing stores

Of the commerical foods bran is proving to be of particular value in the feeding of horses, as it furnishes

materials for the development of strong bone, dense tendons, tough hoofs and powerful muscle, the essentials for which the Canadian horses are already famed. If all the requirements for perfect development of frame exist, it may be taken that vim, vigor, hardy constitutions and staying power will be the natural legacy of the horses there bred.

It may be, therefore, stated with confidence that the Canadian environment favors these desirable qualities, which are less perfectly developed in districts where the climate is hotter and consequently less bracing, and where the character of the soil is better adapted for the production of corn and other food materials more or less deficient in frame building ingredients. We can almost better than other sections produce draft horses of ideal quality and development as regards frame, vigor, stamina, constitution, action, docility and durability. There are no more important or necessary requirements than these in the horse that works hard in the city or upon the farm.

Thus, with suitable foundation stock and with suitable natural conditions for development, the successful production of a high-class horse lies within the grip of the breeder who is producing them. If these nourishing feeds are adequately supplied for the full develop-ment of the animals bred, and sufficient exercise be allowed, there need be little fear in regard to the ultimate product. We have been able by a system of starting with a few good mares, retaining the best of them, and the long-continued use of good sires, and through good environment, natural and otherwise, to produce a band of mares that are of good type, excellent in set of legs, good feet and real producers of rugged, drafty colts, which have found ready sale before they were two years of age.

I am satisfied that the tendency to breed regularly and the tendency to prolificacy is as certainly transmitted as color or type. The size of the brood mares is also of importance, the mare weighing 1,700 to 1,800 pounds being a draft mare that may be expected to give a good account of herself, both at work and in the stud. There is a general demand for ton mares; there are many such mares that are quick in their movements and handy at work on the farm; they make good mothers and are regular breeders. However, they are the exception among those of their size; size can be best obtained in the offspring through the selection of the sires and through the kind, quality and quantity of the feed

Our aim is to have the mares do most of the work, as well as to produce foals, and those that are given moderate work with plenty of clean, nourishing feed, usually produce healthy foals, and with proper cleanliness and disinfection the loss is very small. One can save more foals if they do not come too early in the spring, and the mares are much more apt to become pregnant if bred after the grass is good and they have begun to gain on pasture.

The feed and care of foals after weaning is about as important as the selection of the sire and dam. They should be weaned at five or six months of age, having had grain prior to weaning. After weaning they should have the run of a yard, and be fed liberally on grain. It is next to impossible to over-feed a colt that is getting plenty of exercise. The word exercise, which is a simple one the meaning of which a great many farmers hardly sufficiently appreciate, should be strong in the mind of every breeder of Percherons.

There are more good individuals among the mares than among the stallions. This is not a fault of the breed, but as Percherons are nearly all good feeders, a good many of the stallions are ruined by too much eeding and not enough exercise and fillies are put to work or have the run of a pasture

and develop soundly. There should be more good sires used, as farmers fail to realize the difference in the result of using the firstclass stallion to that of a second or third-class. It is a fact that an inferior stallion will get more patronage than a good one if they stand for a few dollars less service fee. The average farmer fails to realize that \$5.00 in service fees often means \$50.00 to \$100.00 difference in the price of the horse at maturity, and sometimes even more. A good horse eats no more than an inferior one. There is also a tendency among some farmers to sell their best mares and keep those they cannot dispose of. There is no hope for them even if

they do patronize good sires. The formation of horse breeding associations in the townships throughout the country would do much to advance the progress of the horse-breeding industry. Such associations should be formed of breeders who possess the same class or breed of horses and who will pledge themselves by legitimate means to further the interests of the association and the breed handled. It would be the work of such an association to protect the interests of its members, provide suitable stallions each year for use, advertise stock, attract buyers, hold sales, make exhibits at the fairs, hold meetings for discussion of horse-breeding matters and educate the lo-cality to better methods of breeding, feeding and de-velopment of marketable horses. Township associa-tions might affiliate with the breed organizations through delegates to represent them at the annual meetings of the horse breeders' associations. Were such associations formed in each horse-breeding centre throughout the country, and were each of them to practice and preach the same doctrine of breeding, the use of the scrub-bred, cross-bred and unsound stallions would soon be a thing of the past, while better mares would be used for breeding purposes, with the inevitable result of general improvement in the quality of our horses and profits to be reaped from the business.

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time for Percheron breeding; several Percheron studs have been recently established in England, and Japan has just recently purchased Percherons for crossing on their native horses. There seems to be something about the Percheron that is highly adaptable to all climates and conditions. He has made many friends on the battle front, and there are three times as many Percherons in the United States as any other draft breed, and they are steadily increasing in number in Western Canada. That the Percheron enjoys its present popularity must be attributed to its suitability to the de-

sires and needs of the people.

In my selling experiences I have made it a practice never to let a buyer go away if he offers me a reasonable price. Here is where many of our small breeders make a mistake; they ask such unreasonable figures that the dealer cannot buy; the small breeder is not well enough known to sell at retail and often holds his stock long enough past the right selling time that the food bill eats up the profits. A satisfied buyer is one of the best

advertisers a breeder can have.

## LIVE STOCK.

#### A Constructive Hereford Policy.

BY WARREN ). MCCRAY.

I have been asked to write a short article on "Methods of Breeding and Management Employed in Building up a Pure-bred Herd."

I do not know that I have anything to offer that is particularly new upon this interesting subject, but I am perfectly willing to tell of the methods which have brought success to the breeding establishment of Orchard Lake Stock Farm, and to assure your readers that what has been done there can be done any place where the same principles are put into practice.

From the very beginning I recognized the value of good blood lines, combined with the essential requisite of good individuality as being the corner-stone of every successful herd, and it was upon this sure and stable foundation that the celebrated Orchard Lake herd was

For the organization of the herd, I selected blood lines that were popular and recognized as the leading strains in the Hereford family. I had an early appreciation of the fact that the selection of the bull to head the herd is the prime factor entering into and determining the success or failure of every breeding en-

Having determined on my course, I began to look for the bull that was siring the best calves of the breed. In my investigations I concluded that among all the good bulls in the country Perfection Fairfax, then five years old, was siring the most uniform and pleasing calves that had come under my observation after a complete and exhaustive survey of the different herds. I imtions to purchase this bull, but found that in order to possess him I would have to purchase the entire herd. This was in 1908, and at that time the cattle business of the entire country, both pure-bred and market, was

at a low ebb, and the price I paid for the herd was considered by many as being exceedingly high.

Some time after the deal was consummated, I was visited by a prominent Hereford breeder who offered me \$8,000 for the bull, and I confess it took a lot of nerve and an abundant faith in the future of the pure-bred Hereford business to refuse this offer, as this amount would by comparison be equal to \$30,000 at the present time under existing conditions.

Subsequent events, however, have justified my faith and demonstrated the fact that the value of a good sire, in a herd of well-bred matrons, can hardly be estimated. The records disclose the astounding facts that since that time I have sold more than \$200,000 worth of the sons and daughters of this famous bull, and have at this time on the farm over fifty head.

Another thing of equal importance in constructing a good herd of cattle is the manner in which the herd is handled. It is the gravest kind of a mistake to expect the blood lines to do it all. Blood lines are essential, but it is also as equally essential that the herd receive the best of care. I do not mean by this they should be pampered and housed and fed beyond their actual requirements but they should have what they need to keep them in good, thrifty breeding condition. Especial care should be given them at the breeding season to see that each cow produces a calf, and every calf

should be saved.

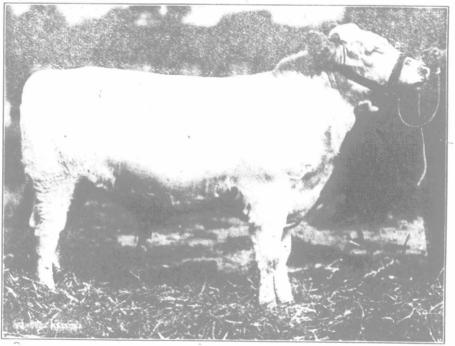
I like to think of my herd as a manufacturing plant, organized in the most efficient manner possible to produce maximum results. Each cow should be considered a unit of the producing machinery of the plant, and if she fails to produce you should ascertain the reason. If her

usefulness cannot be restored, she should be condemned and banished from the herd.

Young stock should receive the most thoughtful care. Their destiny depends in a very large degree upon their care and development during the first eighteen months of their life. One dollar's worth of feed during this period will produce greater results than it ever will again, and will determine the future size and quality of your breeding matrons. See to it that the youngsters are always in condition to do their best. They should be out in the open each day and permitted to get the exercise and fresh air so necessary in developing constitution and vitality. The herd should be handled carefully, prudently and with judgment. A mistake most commonly made is that they are not supplied with enough feed. Too many breeders try to carry too many cattle on their pastures, as well as being too niggardly with feed during the proper feeding period. The Hereford breed, as a class, has been improved during the past few years so carefully and so systematically that there is little more to be done toward making them the perfect beef entired done toward making them the perfect beef animal. There has been such marked improvement in the character, the levelness, and quarters, and at the same time all the good qualities have been preserved and developed, until to-day the modern Hereford embodies all that could be expected or desired in a perfect type of beef

# College Work in Keeping With the Times.

Down at the Iowa State College of Agriculture a building has been erected where the students will see slaughtered the animals upon which they have passed judgment in their class work. In the majority of cases colleges provide judging pavilions where the students are shown what to look for as exterior evidence of a good carcass, and they must take the instructor's word for it that what lies beneath the skin is as he describes it. The carcass is the finality of all live stock judging, and no better way can be devised whereby the student will be made acquainted with the relationship that exists between the outside and the inside of the animal than by following it to the block. We have judges of



Sultan's Royal.

First-prize junior Shorthorn bull call and junior champion at Toronto and London. Exhibited by John Gardhouse & Sons, Weston, Ont.

breeds; we have judges of fat bullocks, wethers and hogs, and we have carcass judges. Naturally we would expect them to agree pretty closely in their ideals, for a first-prize, finished bullock, for instance, would, to demonstrate the wisdom of the judge, also hang up the best carcass. This does not always happen, nor does it happen frequently enough to establish a genuine confidence in the present system of making awards. Of course, the bullock, wether or fat-hog judge must take type into consideration more or less, and he must give sone thought to the appearance of the animal in regard to the remuneration he might return to his feeder. On the other hand, the carcass judge has only one consideration—is it a good or a poor carcass? He has to look neither backward nor forward; he is concerned only with the present and with what is before him, Herein lies the source of slight difference between the decisions of the various judges of the animal on its way to the block. Any system of education that will enable men to visualize and draw a mental picture of the animal in the stall and later in the slaughter-house is worth inaugurating for it will help exhibitions and, through them, the live-stock industry.

The Iowa State College, is also outlining a course that will help young men to qualify as competent and reliable herdsmen. Some may say that the hard school of experience is the best teacher in this line, but a large stock of many breeds is kept at Ames and a student can acquire an experience there in a short time that would entail years of apprenticeship around the farm of an ordinary breeder. In turning out men competent to handle large herds or flocks any college in Canada or the United States would be doing the country a great

benefit, for the lack of reliable herdsmen is one of the greatest drawbacks to the industry. There are plenty of men, with capital and equipment, ready to establish herds and flocks if they could engage a man with whom they could trust a heavy expenditure in the form of pure-bred animals. Trained and qualified herdsmen would find ready and remunerative employment.

#### Constructive Shorthorn Breeding.

BY DEAN C F. CURTISS,

The outlook for pure-bred stock interests is highly promising. The conditions never looked better for conservative and constructive breeding. There are comparatively few Shorthorn herds in any country that have been maintained for a long period of years under a definite constructive policy. Such herds, where the policy is sound, and the management right, are the ones that make history and establish standards for the breed. To build up a good herd of Shorthorns is the work not of a few years, but of many years. Men of unlimited means often engage in the breeding of pure-bred stock, and they are of material service to the cause of better stock and better agriculture. Many very superior collections of cattle are brought together in this way. Some of these herds are magnificent in individual excellence, and such a herd when headed by one or more good sires will produce cattle of outstanding excellence.

To undertake to put together in a year or two a strictly high-class breeding herd, even at unlimited expense, is a herculean task. Such a task would tax the genius of the best and most experienced breeders of the world, and it is extremely doubtful if there are many who would succeed. The really great herds are not made in that way. On the whole it is fortunate that they are not. There is always cause for genuine regret at the dispersal of a leading herd that has been built up by years of patient, intelligent work. Such a herd loses much of its potency if divided and broken up,

even though it goes into another good herd. The best herds, those that in the end carry the greatest prestige and exert the greatest influence for breed improvement, are not put together-they are grown or built up by constructive process of breeding and selection. In many cases they come from a limited beginning with a few high-class animals mated with a good sire, and their offspring with other good sires, the breeder having constantly in mind a definite type and standard in such a way that the animals constituting the herd are always a little better than those that preceded them, particularly the sires. And this is not all. Very few good herds have been built up by introducing a new strain of blood every time a new sire is wanted, or by adding practically all of the known or leading strains through the females constituting the herd. A breeder may not seek to create new families. He may better take the best that he can find and strive to improve them in such a way that the stock coming from his herd will carry an added distinction and value. A herd built up in this way without too much in-breeding on one hand or too much infusion of deteriorating blood on the other hand, has greater potency and power for improvement of other herds than any herd made on the put-together plan can ever possess. An old herd made or maintained by the put-together plan is no better than a new one made by the same proces

The great herds of all kinds of stock are made first by the bringing together and second by the concentration of the best lines of blood of the breed. There must first be the purpose—the ideal—the discriminating judgment to select the right ideal, and a high standard of excellence; then the tenacity and adherence to that purpose and ideal, and concentration of good blood until the standard is firmly established. Results do not come quickly by this method, but when attained they are more enduring and of more service to the breed and to the breeder.

# A Note Re "The Shepherd's Calendar."

On another page are set down the salient points in sheep husbandry in calendar form, in order to provide a guide for the months which follow. Many shepherds, who are experts in time of trouble or emergency, do not look ahead and provide for droughts and unfavorable conditions that only too frequently affect the flock adversely, in spite of anything the shepherd can do. The sheep raiser has many duties and they are distributed over the year so almost every month has its own special activities. The lambing season, shearing, dipping, wool sales, lamb feeding and other lines must be attended to in order to maintain the revenue from the flock, and only as the producer of wool and mutton looks ahead and makes adequate provision for all these items can he depend on success. Sheep will get along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along with little care, but it is the flock which is tended along which is the flock which is the by a real shepherd that shows the greatest profit. "The Shepherd's Calendar" does not go into details. Its object is to mention the most important operations only, so the farmer can be prepared to meet any situation that arises, and in a manner quite in keeping with good sheep husbandry. Save the Calendar and read each section, as the particular month comes around with which it deals.

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# The Shepherd's Calendar.

#### January.

Start the new year by feeding the flock well and in such a way that the wool will be kept clean. Provide fresh water daily and salt that they may eat at will. The winter lamb for the early market requires special attention, and the ewe must be made to milk well under conditions not naturally conducive to lactation in sheep. This industry, however, is not extensive. When finishing lambs or wethers for the block, do not plan to exceed 1½ pounds of grain per lamb per day at the finish, and it is seldom profitable to feed more than 5 pounds of succulent roughage, and 3 to 5 pounds of dry of succulent roughage, and 3 to 5 pounds of dry roughage per head per day at any time during the finishing period. As dry roughage, alfalfa comes first; good clover second, and fine mixed hav next. For succulence, silage is good and the turnip is the safest of the roots, especially for wether or ram lambs. A mixture of oats, barley and feed wheat excels as a grain ration. The feeders must be kept cool. In the absence of succulent roughage, add a little bran, and, near the finish, a little oil-cake meal is splendid. Corn is excellent for shortfeds but hard to obtain this winter.

February. As spring approaches, the breeding flock must be To insure clean wool, use the combination or slatted rack that does not permit the straw and chaff to fall on the necks of the sheep, and, furthermore, do not carry forkfuls of hay or straw over them in the yard. The rack should provide from 15 to 24 inches of feeding space per provide from 15 to 24 inches of feeding space per head. Well-lighted and properly-ventilated shelter or pens should be provided, allowing not less than 10 to 15 square feet of ground space per head. Do not mistake drafts for ventilation. An outside yard is also essential. There is no one grain better for sheep than oats and ½ lb. per ewe per day is ordinarily sufficient, when the roughage is of good quality. Some succulent feed is necessary and not more than 2 lbs. of roots or silage per head and not more than 2 lbs. of roots or silage per head per day is ample. Never feed frozen silage to sheep, and the Canadian product this year is not likely to be any too good, as a general thing. Clover and alfalfa hay are both superior to timothy as a roughage. They should have what they will clean up nicely. Provide fresh water daily and make provision for plenty of exercise.

#### March.

The month of March brings the flock near to the lambing season. See that all doors and gates through which the sheep pass are large, in order to prevent injury to the pregnant ewes. Keep all strange dogs away and allow nothing to enter the pens that may excite the flock. Handle them quietly and frequently so as to gain their confidence. Early-lambing ewes should have separate pens, somewhat warmer than the winter quarters, until the lamb is strong; they may then be returned to the A little bran with the grain at and before lambing time is a good conditioner, and the mother should be fed lightly for a few days after yeaning. Too many roots prior to lambing are thought to produce large, flabby lambs. If lambs are expected during March, the shepherd should maintain a close watch and be prepared to lend assistance in cases of difficult parturition. When the presentation is normal the muzzle appears foremost with a foot on each side of it. Do not interfere too hastily and if the attendant is not trained in such work, expert help should be summoned. There are several means of restoring a lamb,

#### April.

Under Canadian conditions the largest percentage of lambs come in April, but in some districts May is the more popular month. The attendant in charge of a large flock must do a great deal of "watchful waiting" and always be ready when needed, for the crop depends considerably on how expert the shepherd is in resuscitating weak lambs and causing the dam to mother her offspring in cases where she is not inclined to do so. Clip the wool from the ewe's flank and udder so the lamb will have no trouble to get at the milk supply, This is more safely done soon after the young is delivered, for the pregnant ewe is likely to struggle and injure herself. The fresh ewe should have water with the chill off; nutritious roughage, such as clover or alfalta hay, but very little grain for a few days. A small ration of bran is very suitable at this time. Ram lambs, not to be kept for sires should be castrated when two weeks old, and the entire lamb crop should be docked. Ewes should be docked when 8 to 14 days old, and the rams 5 to 7 days after castration. Some shearing is usually done late in April.

Grain fed to young lambs returns a handsome profit. Construct a "creep" through which the sheep cannot pass, and in the small enclosure have a trough where the youngsters can be fed a mixture of ground oats, bran, oil meal and corn meal. Never put more in the trough than what they will clean up easily at one time. When docking May or June lambs watch them closely for blow-fly. Don't shear sheep when the wool is damp. Prepare a clean shearing floor and tie the fleece neatly without allowing it to pick up foreign matter Never tie the fleece with binder twine or store it in a damp place, for such treatment simply means a reduction of price in a very valuable product. Prior to shearing do not allow the flock to run in the orchard or fields where burdocks are standing, as these get into the wool and decrease its value Make early preparations to dip the sheep and lambs This is one of the most important operations in sheep husbandry. There are many good dips on the market, and a tank can be purchased or easily constructed at home. Turn the flock to pasture free of all disease and vermin.

In June the flock is luxuriating on pasture and the sheep raiser has little concern except to watch against the pestiferous cur and to see that the fences are tight. Buyers usually begin to bid for wool in June, so it is necessary to study the wool market and be prepared to dispose of the clip to the very best advantage. The co-operative grading and selfing scheme is now well developed in every province of Canada, and those in charge will, on request, keep sheep raisers posted as to the proper method of caring for their wool and consigning it to the grading depot. Dirty wool, moisture, and binder twine, all mean a low grade and a corresponding price from the dealer or through the co-operative system. The manufacturers get the clip eventually and they discriminate between grades, so the producer must depend on receiving no more than his wool is worth from the local buyer or through the grading organization. What the price of wool will be in June and July, 1918, is not well known, but it is sure to be high enough to warrant the wool producer taking the very best care of it. Good wool is a valuable asset now.

#### July.

It is time early in July to prepare for the fall feeding of lambs and ewes. Many shepherds rely on rape for flushing the breeding flock and putting weight on the late lambs. Prepare a field the first week in July and sow at the rate of 6 or 7 pounds broadcast per acre. This rate of seeding will give a finer crop, more suitable for sheep, than a thinner seeding. The drill method of growing rape is not to be recommended for sheep and lambs frequently get on their backs between the drills and die before being discovered in their distress. A good aftergrowth of clover will serve the same purpose, but the rape is so useful for all classes of live stock that it pays well to have a field of it for fall use. A large quantity of the clip is moved in July so it is necessary to keep in touch with the trade if the wool is not sold, and interesting to do so if it is. Some extra-early lambs may be lifted during the month, and if so it may become necessary to corral the flock occasionally and milk out the udders of the ewes whose lambs have been

### August.

The month of August very often sees dry weather and burned-up pastures. It frequently becomes necessary then to change the flock from one field to another in order to prevent loss in weight. Before making such changes the field to which they are to be turned should be made ready in regard to fences, and the weeds that are likely to lodge in the fleece should be cut. We have in mind particularly the Blue Bur, or Stickseed, which is often seen standing in grain stubble after harvest. The seeds of this pernicious plant adhere readily to the wool and are much detested by sheepmen. These weeds should be cut before exposing the flock to them. Smearing the nose of the sheep in July and August often prevents trouble. Watch also for the work of the blow-fly. The water supply must be looked to constantly in dry weather in order that the flock may never be without it. Salt, too, is essential in summer as well as winter. It may become necessary or expedient towards the last of August to turn on to the rape field and here caution is essential. Towards the end of the month, it mayi be necessary to separate the ram lambs.

#### September.

The activities of the sheep raiser in September are directed chiefly towards weaning the lambs, getting them ready for market, and preparing the breeding ewes for the mating season which soon In many cases the lambs are not weaned until marketed, but a lamb 4 months old and well developed might as well look after himself as harass his dam to little or no purpose. Put the youngsters on a field of second-growth clover and feed them a little grain to which they will have become accustomed in the lamb-creep. and lambs are separated beyond hearing distance it will be so much the better. Scant forage will do the ewes for a few days after weaning, and even then it may be necessary to milk out their udders once or twice. After the flock is back to normal again "flushing" should begin. This consists simply in building them up physically and having them in a gaining condition when mating. This practice ensures a large lamb crop. If they are not already accustomed to the fresh rape or green clover allow them to fill up on dry forage and then turn in for an hour or two at first.

#### October.

The period of gestation for the ewe is, roughly, 5 months or around 145 to 147 days. Breeders who desire early lambs release the ram in October, which brings the lambing season in March. This is considered altogether too early by some, and there is not a small percentage of good sheep raisers who prefer to have the lambs come in May after the flock has been some little time on grass. There is little loss then and less trouble. In any case, the flock header should be selected early in the month and gotten into condition. Do not tie him up in a stall or corner of the barn floor. If allowed the run of a small field where he can exercise, he will be strong and vigorous and his lambs will be robust. Pampering and over-feeding is to be guarded against, but this is not a common error. Rams are more likely to be under-fed and poorly exercised. A grain ration of oats and bran is ex-cellent and it will maintain his virility throughout the breeding season. If the grazing is poor and no special crop is available for forage, the ewe flock would benefit from a light grain ration. Dip the flock again in late October or early November.

November. A ram will prove a better sire if he does not run with the ewes continuously at breeding time. The common practice is to turn the ram with the flock at night or for a couple of hours in the cool of the morning and evening. Smear his breast well back between the forelegs with a mixture of oil and lampblack or other coloring matter, so as to identify the ewes with which he has mated. An English more rams the more lamb but an active yearling or two-year-old ram will serve 50 to 75 ewes successfully, if handled properly. Rams and wethers should not be fed roots, especially mangels, as they sometimes create urinary troubles. Lambs almost ready for the market could probably be helped along with some corn and bran; oats and peas are also very good. The wethers and ram lambs for winter feeding should be put on a grain ration and nutritious roughage. If the flock was not dipped in October, take advantage of a mild spell early in November to perform this good act. It will be doubly repaid in the thrift of the flock as well as in the quantity and quality of the wool.

December. The flock usually goes into winter quarters during the last month in the year, and thorough pre-parations should be made for them. If the flock is large it should be divided into groups according to age, for it seldom pays to run more than 50 together. Clean the pens thoroughly and make ample provision for light and ventilation. A building opening towards the south with the front doors in two sections (upper and lower) is most suitable. The upper section can be left open, admitting light and air, except in case of stormy weather. Bright, nutritious alfalfa or clover hay should be set aside for the flock; there is no place it will pay better. This and a small quantity of roots make a very good ration. Some shepherds always feed some good ration. Some snepnerus aiways teed some oats or peas with bran, but they do not allow the ewes to become too fleshy. They should only be thrifty and in good condition. Too many roots are likely to produce large, flabby lambs, so roots must be fed in moderate quantities. A combination of roots and grain is excellent. Fresh water daily and salt at all times are necessary to thrift. The salt should be placed in a box where they can

FUJI MICRO SAFETY A

#### THE FARM.

# Check the Loss of Plant Food in Farmyard Manure.

Crop production and, incidentally, the wealth of a country, depends to a large extent on the fertility of the arable acres. There are a number of ingredients in the soil which are essential to plant growth; without them in an available form, crop yields decrease even under ideal climatic conditions. It is reasonable to suppose that soils of like nature contained in their virgin state an equal amount of the elements which feed the plants and crops. Why is it then that after a half century or more of cultivation and cropping, one farm will give double the returns that the one adjoining it will yield? Is it not due largely to the methods of farming employed and to the care of the farmyard The soil contained, when broken out of its virgin state, a large deposit of nitrates, potash, phosphates, calcium, etc. These substances were drawn on by the crops and if these were sold off the farm and nothing returned the deposit gradually decreased and in some instances was reduced to a negligible quantity. The foundation of crop production has been removed from many farms in bags and bales. The land remains but its crop producing properties are to a certain extent gone and the farm which once was capable of giving fair returns now yields but a pittance to its owner. unfortunate for the present generation that the soil was robbed in the past, but it is a crime against the future generations if in the light of the present age the land owners permit the fertility of the farms to wane. The future success of the country depends to a large extent on the fertility of the soil.

There are many farms on which the deposit of plant food has been increased instead of decreased by a judicious system of cropping, and the marketing of the crops in the form of live stock. Then, too, the value of farm-yard manure was realized and methods of handling it were practiced which prevented loss by leaching. But, judging from the location of some manure piles, there are those to-day who do not realize the cash value of the plant food contained in the excreta and urine and absorbents used in the stables. Experiments and investigations go to show that the plant food in the excreta of the stock kept on the average one-hundred-acre farm is worth several hundreds of dollars. Yet, in many instances no effort is taken to conserve this fertilizer and to apply it in a way or at a time when it will do most good. By piling manure under the eaves or where it will leach, thousands of tons of nitrates and potash are drained away yearly and lost to the soil.

The excreta of the various classes of animals differs considerably in composition and value, but a ton of mixed manure will average around 10 pounds of nitrogen, 10 pounds of potash, and 5 pounds of phosphoric acid. Thus, at present prices of these essential plant foods, the value of farm-yard manure can be estimated. In order to get the best results it is desirable that the manures from the different classes of animals be mixed. The liquid should not be allowed to leach, as it contains a higher percentage of plant food in a more available form than is found in the solids. It is claimed that about half of the nitrogen and two-thirds of the potash voided by bovines is in the urine, and yet on very few farms is there an effort made to get this liquid to the land; too often it soaks through the floor of the stable or seeps from the yard and escapes in the drains where it is lost to the farm. Plant food may be applied to the soil in the form of commercial fertilizers, but that is no reason for permitting farm-yard manure to waste.

reason for permitting farm-yard manure to waste.

In Bulletin 206 of the Vermont Agricultural Experiment Station, R. T. Burdick, of the College staff, throws light on the value of farm manure and presents ways and means of handling it so as to have the least loss of plant food. The following are excerpts from the bulletin: "It is generally realized that when highly nitrogenous feeds are fed the manure contains more plant food than if the stock are fed on straw, timothy hay, etc. A large percentage of the fertilizer constituents contained in feeds like cottonseed, linseed, etc., are returned in the manure after the animal has made use of them. The age of the animal affects the amount of plant food consumed in the ration which is recovered in the manure. A mature animal, for example a ten-year old work horse, uses its food simply to maintain body weight. If it increases in weight the gain is usually fat only, and fat contains neither nitrogen, phosphoric acid nor potash. Hence it is that practically all of the plant food a mature animal consumes is excreted in the urine and fæces, One may count on getting almost 100 per cent. On the other hand, young and growing animals build much of the phosphoric acid and nitrogen into their bones, muscles and other tissues, while milk cows utilize a considerable proportion in milk production. However, it should be said that individual animals vary as to their ability to use food. Some are better ability to use food. their ability to use food. Some are better able than others to assimilate it. It is safe to assume that from 50 to 75 per cent, of the plant food which is present in the ration is voided by growing animals and by milk cows, from 85 to 95 per cent by fattening animals, and from 95 to 100 per cent by work animals." The author of the Bulletin explains the effect of bedding as follows: "The nature of the bedding or litter affects the agricultural value and composition of farm manuse. Bedding cultural value and composition of farm manure. Bedding is used for several purposes—to increase the bulk of the manure, to augment the bodily comfort of the animals, to absorb and retain the urine, to furnish humus and plant food. It tends to retard over-rapid fermentation and to prevent loss and is itself bettered for manurial purposes by its admixture with the fæces and urine,

Straw makes manure more bulky and contains about as much plant food as does average manure. this is not as available as is the plant food naturally present in the excreta which has become broken down by the processes of digestion, it soon de-composes in the soil. Sawdust and shavings rot much more slowly and are less bulky than is straw and they contain considerably less plant food. In case straw is abundant, it may, all things considered, be preferred to sawdust; yet on the other hand it cannot be too strongly insisted that sawdust and shavings do not injuriously affect the land. They out-class straw in one important respect, namely, their absorbent powers. One hundred pounds of oat straw absorbs 285 pounds of water, whereas 100 pounds of sawdust absorbs 435 pounds, being half as good again an absorbent. Nine pounds of straw or six of sawdust or shavings are needed to absorb a cow's 24-hour voidings. However, if enough bedding were used to entirely absorb the urine, the manure would be too dry and bulky. On this account, as well as for the reason that the cattle are out of the barn more or less, form four to five pounds straw and from two to three pounds sawdust or shavings would seem to be a fair daily allowance, varying according to the season. . . If the animals stand on cording to the season. . tight concrete floors and a tight storage pit is available, considerable liquid manure can be handled without absorption, and in that condition tends to keep the pit pile moist. It is seldom worth while to store the urine separately in a cistern, for the reason that special apparatus is needed wherewith to spread it and that the solid manure is apt to become too dry and to fire-fang.

It is rather difficult to calculate the monetary value of farm-yard manure as it benefits the soil in other ways than adding plant food only. It is well known that it increases the humus which improves the physical structure of the soil, and increases the micro-organisms. The latter two cannot very well be valued in dollars and cents. The bacteria in the soil must have organic matter to feed upon and it is believed that they aid in making plant food available. From a straight fertilizer standpoint farm manure should be worth from two to three dollars per ton with the present price of mineral fertilizers the value may be placed higher. The benefit which the soil derives from an application of manure depends a good deal on the care and method of handling it

The loss of fertilizing constituents commences in the stable and it is a serious one where the stable floor is of lumber. Mr. Burdick says: "Some farmers seem to prefer loose planks. Indeed, they sometimes bore auger holes through the floor in order to help out the openings between the boards. This procedure tends to keep the floor free from much liquid and enables one to economize on bedding. But, at what a cost! Fiftyone per cent, of the nitrogen! Eighty-five per cent, of the potash! A 1,000-pound cow produces yearly about 80 pounds of nitrogen in the liquid as compared with 76 pounds in the solid manure, 38 pounds of phosphoric acid in the solid and none in liquid manure and 108 pounds of potash in the liquid as compared with 19 in the solid The number of days and nights which she spends in the stable determines the proportion of this amount which can be saved. If she lives seven months in the stable she voids about 47 pounds of nitrogen and 63 pounds of potash in the urine during that time, nitrogen and potash which are better and more serviceable than the same ingredients in the feces, for the reason that they are soluble. These urinary voidings are worth several dollars per cow per year.'

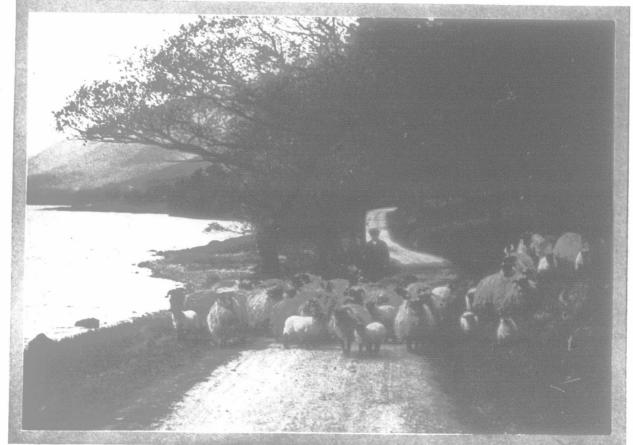
If this liquid is allowed to seep away it means a heavy monetary loss for a herd of even 10 animals,

a loss which can largely be avoided, and its use on the soil will tend to increase the crop yields which permit of more stock being kept to add more fertility to the The use of concrete gutters and more bedding aid in preventing this loss. But, even taking precautions in the stable is not enough; there is loss by leaching in the yard and field. If exposed to the weather, a considerable amount of the plant food may be washed out and escape in the ditch or drain where it cannot be of use in growing larger crops. As much as two-thirds of the plant food of a manure pile has been lost in this manner. "Voorhees exposed several 100-pound lots of mixed solid and liquid cow manure in a box eight inches deep with screened perforated bottom. One lot exposed 70 days (February 3 to April 13) lost 44 per cent. of its nitrogen, 16 per cent. of its phosphoric acid and 28 per cent. of its potash. Another lot, exposed 50 days (August 9 to September 27) lost 69 per cent. of its nitrogen, 59 per cent. of its phosphoric acid and 72 per cent. of its potash. The second lot lost more heavily because of fermentation".

Bacteria working on the organic matter of the manure renders the solids more available to the soil, but while they are beneficial in one line they may be harmful in another, as, unless conditions are right, they may cause a loss of nitrogen. Keeping the manure compact and moist tends to the least loss.

The wastage or loss can be checked to a certain extent by using tight floors, plenty of litter, and manure sheds. Many have concrete floors in the stable, but comparatively few have a shed for storing manure between seasons when it is not possible to apply it direct to the fields from the stable. In some districts cisterns for the liquid manure are common, but this entails extra expense and work. The liquid may be largely conserved for the land by use of absorbents in the stable. The advantages and disadvantages of applying fresh and decomposed manure to the land are discussed by Mr. Burdick in the following paragraphs: "The most benefit ensues when manure is applied as fast as it is made. There is never any increase, whereas there always is some decrease and at times tremendous decrease following the storage of manure, even for brief intervals. To phase the matter another way, the manure is never better for use on most field crops than it is the moment it is voided. The writer once heard a speaker say that any day in the year except Sundays and holidays is a good day on which to spread manure; on winter's snow (if the land is fairly level), in summer's heat. However, it is neither practicable nor advisable to follow this doctrine literally. At times the press of work is such that it must needs be stored. Then, too, there are soils and crops on which a rotted manure may do better than an unrotted manure, particularly if com-mercial fertilizers are not used. Hence one should know the good and the bad points of both.

"Fresh manure—advantages: The largest proportion of the total plant food may be utilized when the manure is applied directly to the land. The rains and the downward pull of gravitation cause the soluble portion to pass directly into the soil. Fermentation is checked, particularly in dry weather, since the relatively small clumps dry rapidly on the surface. Shutt found that when decomposing manure containing 9.8 pounds of nitrogen was exposed direct from the pile in thin layers it lost five per cent. of its nitrogen, while the loss was only two per tent. under similar conditions in manure that was well rotted. When fresh manure is plowed or harrowed in, it tends to lighten heavy soils. Its decomposition in the soil helps similarly to disintegrate sod or stubble which has been plowed under. Its



Natives of the Highlands.

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"Fresh manure—disadvantages: When coarse bedding has been used and the manures plowed under on a light sandy soil, it tends to make the soil so open that it dries out too rapidly. Then, as a consequence, the manure does not rot normally and proper root development is hindered. Furthermore, on the lighter types of soils the liquid manure may decompose so rapidly that a surplus of soluble plant food is furnished. Plant roots may become injured or 'burned' or an overrapid foliaceous growth secured of such crops as oats or potatoes which is likely to be followed by lodging and delayed maturity. And, finally, it is well known that It is a serious weed distributor.

Rotted manure—advantages: Manure which has been stored under conditions where it cannot leach and has been kept compact and moist decomposes more or less and, as a result, is better balanced and better fitted for the forcing of crop growth. Its mineral constituents in particular are made more available; it spreads better, for the reason that the coarse litter has been largely broken down; it exerts no ill effect on

light sandy soil; and the viability of its weed seed contents is seriously affected.

Fresh manures are to be preferred on the heavier soil types, on soils in need of humus, and on forage crops; decomposed manures are best adapted to use on the lighter soil types and on potatoes, truck crops

There is no denying the fact that there has been great wastage of farmyard manure, a substance which is an all-round fertilizer. It is possible to overcome some of these losses at slight expense. If ever there was a time when it should be handled carefully, it is now when there is need of the greatest possible returns from the soil. Some apply manure direct from the stable to the land, and by so doing believe they get the greatest value. Unless there is a great depth of snow or the land is rolling, there is little loss by leaching; bacteria are unable to break down the nitrogen and cause its loss to as great an extent as they would if manure were left in a loose pile. Another advantage of drawing direct to field and spreading is that the work is done during the slackest time of the year. Drawing a load of manure a day to the field is good exercise for a team and the work

can usually be done between chores. Under certain circumstances this cannot be done, but steps can be taken to avoid a stream of liquid manure flowing from the pile. The soil does not get the good out of organic manure all in one year; the benefits are spread over a

In some districts the practice is to give the corn and root fields a coat of manure during the winter; others manure the meadows and leave the corn field until spring. Top dressing for grain is advocated by some and the practice gives good results. The nearer the fertilizer is to the roots of the plants, the more good it does the crop. The custom of turning the manure five or six inches under is not approved as much now as it was in the past. Plant food naturally goes down, but must be brought up by capillary action, roots of plants or turned up again by the plow; consequently, it appears to be the most logical method to keep the manure somewhat near the surface.

Whether you pile in the yard during the winter, or apply it fresh to the land, the aim should be to as far a possible stop the leak in fertilizing material between the stable and the field.

speed of the saw is only 891 r. p. m., but with a 24-inch pulley instead of the 16-inch it would be 1,337, which

is the least shade high but not enough to make any ma-

terial difference. From the above you will see that

you would get better results by using the large pulley. The engine should use less gasoline per cord of wood cut with the new arrangement than with the old.

#### Automobiles, Farm Machinery and Farm Motors.

#### **Keep Machinery in Good Repair.**

The use of a badly worn machine results in inferior work, and is almost certain to cause a great loss of time due to break-downs when there is the greatest need for the work to advance rapidly. The solution of this difficulty is: Order repairs early, anticipate the break-down and order a repair for the weak part which will most certainly give way soon, or buy a new machine to replace the old one which is really unfit for further profitable use.

All old machinery should be sold as junk at the earliest opportunity. Before selling as junk, however, remove all bolts and screws of various sorts. Very frequently all bolts and screws of various sorts. Very frequently a bolt is lost on a machine in the field. No old bolts are at hand, the village hardware store is several miles distant, the machine is run without the bolt and a break-With an assortment of old bolts this could be prevented. Almost as serious is the use of a bolt of too small size. If all the bolts from several farm machines have been saved the assortment will supply almost any ordinary need. In the replacement of a bolt the diameter should receive first consideration. A bolt of too small diameter breaks at the time when it

is most needed. It never does its real duty, since it allows too much play of the parts. If a bolt is too long this can be remedied by bushing up with washers or old nuts of a larger size, and the strength is only very slightly impaired.

There may be other parts of the old machine worth keeping for repair purposes.—E. R. Gross, Colorado Agricultural College.

#### Gasoline Engine Queries.

1. My 6-h.p. gasoline engine has a speed of 390 The pulley on engine is 16 inches in diameter, and the pulley on saw is seven inches in diameter. The saw is 28 inches in diameter with a 130-lb. flywheel 30 inches in diameter. Would you kindly let me know through "The Farmer's Advocate" if my engine would use more or less fuel if I used a 24-inch pulley on engine inches of the 16 inch. instead of the 16-inch pulley?

2. Also has a gas engine weighing 2,000 lbs. any advantage over one weighing 1,250 lbs. of equal horse-Ans.—1. The proper speed for a 28-inch saw is 1,285 r. p. m. With your outfit as now arranged the

2. You do not say whether both engines are two or four-cycle, or whether the heavy is four-cycle and the light one two-cycle, and so it is impossible to answer your question definitely. A four-cycle engine is always heavier than the same power of engine of the two-cycle design, but on the other hand the lighter engine runs at a higher speed than the heavy one, which is supposed to make up for the lack in weight, and if used as a portable outfit the lighter engine has the advantage of being easier to move. The four-cycle, however, will do the same work on less fuel than the two-cycle, the difference

being sometimes estimated at about 10 per cent. If, however, both engines are of the same type, and are properly proportioned, neither one should have any decided advantage over the other so far as power is W. H. D.

# Canada's Young Farmers and Future Leaders.

#### Food For Thought.

A rolling stone gathers no moss.

Leaders are ordinary persons with extraordinary de-

"The prudent, penniless beginner in the world labors for wages a while, saves a surplus with which to buy tools or land for himself, then labors on his own account another while, and at length hires another new beginner to help him. This is the just and generous and prosperous system which opens the way to all, gives hope to all and consequent energy and progress and improvement of conditions to all."-Lincoln.

Promises are worthless unless they are kept. There are some folk who have a habit of making promises, but readily find excuses for not keeping them. Are you Inclined that way? Make your word as good as your bond if you want people to have faith in you.

As we are not sure of a minute we should avoid wasting hours.

Imitation is a sign that a person is nearing his limita-

We reap as we sow. There is no escaping the Inevitable:

> "Though the mills of God grind slowly, Yet they grind exceeding small, Though with patience He stands waiting, With exactness grinds He all."

A man's character depends a good deal on the kind of books he reads and the company he keeps. With all the high-quality books available, why weaken your character by reading questionable literature? Plan to read and study one or more good books this winter. "Reading maketh a full man," says Lord Bacon and Sir R. Steele says, "Reading is to the mind what exercise is to the body." None are so poor as to be unable to own a book nor so illiterate as to be able to read it.

"So many are The sufferings which no human aid can reach. It needs must be a duty doubly sweet to heal the few we can."-Coleridge.

#### Ways of Interesting Boys in the Farm.

EDITOR "THE FARMER'S ADVOCATE":

I have heard a number of people say that if you give a farm boy a good education he will up and leave the old farm and his father. This may be true in some cases but not in all. If a boy who has a good education gets the idea into his head that farming is too small a job for him, he will go off to work at something else which is bigger in his estimation. On the other hand, some other boy may have just as good an education, but he has become interested in farming and sees how he will be able to put his talent to good use on the farm. That boy is very likely to stay with his father.

I attended the public school till I was fifteen, and at that time I passed the matriculation examination admitting me to a "Normal School." I did not have the slightest idea of ever going to Normal, but would have liked to have gone to an "agricultural school." The following winter I stayed at home and helped father while my elder brother was attending an agricultural college. The next summer my parents decided that I should go to Normal School. I did not like this proposition very well at first, because I did not want to leave the farm, but finally I came around to it, and in September I started for school again. I passed the first-year examinations successfully and was then a licensed school teacher. During the summer vacation I stayed on the farm, and in the fall I started off to teach school. This seemed to me to be a very monotonous job at times, while at other times it was tolerable enough, still on the whole I did not like the work as well as farming. Before the school term was out I got a substitute to teach for me and I went to put in the crop for my aunt, who had lost her husband, and she, being unable to get anyone else to help with the work, was glad to have me around. I worked there until the first of July, and since that time I have been

If you want the boy to stay you must get him interested, and if he is really interested he will stay if he is given half a chance. Give the boy something to look after. The first live stock that I owned was half a dozen chickens, that a kind neighbor gave to me because she couldn't be bothered looking after so few. By the look of those chickens they might have been a mixture of every breed under the sun, but that did not matter to me; they were all the prettier for it. raised them all to maturity except an unlucky one that the crows got. (I have had a spite at the crows ever since.) This was only a small beginning, but it got me interested in poultry. When I was still very small my father gave me a calf to look after, and when it was two years old he sold it and put the money in the

bank in my name. A few years later I bought a swarm of bees. These little fellows are very interesting at any time, but especially so when they get cross and get under your bee veil and give you something less enjoyable than honey. But what's a sting to a healthy farm boy? He thinks very little of it, and indeed he will feel amply repaid in one night for all the stings of the season of he gets a chance to sit down to a table with a good dish of honey.

This summer my father made me a present of a nice yearling colt that will likely make a good driver. the horses. These are some of the ways by which I got interested, and I believe that there is no better way than to have something of your own to look after. There are other things to consider. The farmer who keeps poor horses, poor cattle, poor sheep and poor everything is not as likely to hold his boy as a farmer who has his cattle fat and sleek, and his horses so that who has his cattle lat and sleek, and his horses so that when they are taken out for a drive you have to "hold on" rather than "pile on." The fall fair is a very good way also to interest the boy. Fit up some of the stock or let him fit them up and let him show them at the fair and he will want to be around at the same job again the next fall. There are other ways of holding the boys, but I think the best way is to get them interested first. P. E. I.

#### With all its Drawbacks Farming is a Good Occupation. EDITOR "THE FARMER'S ADVOCATE":

While farming is the oldest and generally considered to be the best and most independent occupation, it has its drawbacks. I like farm work and since starting for myself have lived as well as I probably would have in town, but farming necessitates a considerable outlay for buildings, stock, implements, etc. Not having as much of this world's goods as one should have when assuming the responsibility of a one-hundred-acre farm, I had to take a mortgage for nearly the full value of the farm, besides giving a note for some of my stock and implements. Some may say that I should have worked out a few years in order to have more ready cash to start with; that may be so, but I wanted to settle down and

figured that I could do better working for myself than for another man, and I haven't changed my opinion. However, it is proving to be an up-hill fight, even with the present high prices of grain and stock. So far as stock is concerned, the price works against me, as I am still building up my herd. Some advise me to sell my grain and hay and not gather too large a herd around me when stock is so high. True, I might have more ready cash if I followed such advice, but I would be

By looking after one colt a fellow gets interested in all

R. L. CAIRNS.

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against the best teachings, as I believe it is generally admitted that keeping stock is the best method of enriching the farm so that bigger crops may be grown in the future to feed because

in the future to feed larger herds. If I did not like farm work and believe that I could yet make a success of it, I would have been tempted to quit several times during the past two years. My city friends, working on a salary which comes due at the end of each week or month, think that I have a gold mine; that I must be getting rich when butter, meat, eggs, potatoes, etc., are so high priced. They have little responsibility other than to do the one job given them. The manager bears most of the responsibility. But even his returns are little affected by changes in the weather; not so the farmer. He may do his best, but, as Burns said "The best laid schemes o' mice an' men gang aft agley." He has no control over the weather. It rains when he wants it dry and it is dry when the crops need rain. The markets are high when he has nothing to sell, and are low when the hogs or steers are prime. No, I am not a pessimist, but it riles me when city folk say I am not patriotic because I do not put at least one-quarter of my farm into potatoes so as to help bring down the price of spuds, and because I do not do this and that. They say "if we were in your place we would grow more potatoes, more apples, have more wheat to market, keep far more pigs and cows. Why, with the price of everything we would only need to farm a few years to become independent." But would they do all this if they were in my place. I am doing all I can and all I ask is a reasonable profit for my labor and investment. In 1916, the year I made the venture on the farm, the elements were none too kind for even though I made what I thought good plans they did not work out. In fact, with the rain in the spring and the drouth of summer I was unable to meet my notes, after paying interest and taxes. They were renewed. The potatoes I had planted with the expectation of using the increase to pay the notes, did not multiply. In fact, I dug less than I planted. A field of oats was so short that I couldn't cut them with the binder, and apples, there were none. The outlook was not bright but I still had faith in the farm. I planned and planted in 1917 and was rewarded with a fair crop of grain and a good yield of potatoes. The fall wheat failed to come through the winter as it should, so I sowed barley with it. While I had no wheat to sell I had good feed for finishing a batch of hogs. There were drawbacks, however. In the spring my best cow sickened and died; then, on in the summer, a sow which had farrowed a litter of ten pigs, was found dead in her pen one morning, leaving a bunch of two-day-old pigs to be cared for. The best of care saved three of the lot and they are doing well. They say troubles never come singly, and that there will be a third loss before I have a streak of luck. May the next loss be light, as at the end of the second year I am unable to lay away any cash to make a payment on principal, although an inventory would show that I am worth more than two years ago as the stock has in-creased considerably. I have enjoyed my work and my home, but I have not had the ready cash that my city friends have to spend even if the farm is what they claim it to be. I am not discouraged yet, but I would like to see those city folk who know so much about farming try it. If they have better methods of farming than I have practiced I want to know them, and if they can't do any better than I have done it would be

high time for them to cease volunteering advice. If I were starting again I would endeavor to have several hundred dollars in the bank for working capital. I have been handicapped by not having the cash to purchase stock when such were sold at what I considered a bargain. There have been several times that I could ade a few dollars by being able to pay cash. Then, would not tie as much money up in implements as There are a few that a person must have, but I believe I could rent haying and harvesting machinery for a few years or I could change work with my neighbor now that help is so scarce. Another mistake I made was paying almost as high a price for grade stock as would have bought registered stuff. I am trying to remedy my mistakes and to prevent others making the mistakes I did. I still believe that by putting the same business ability into the farm as one would have to use in a commercial enterprise to make a success there is a good living off the land and that owning a farm is better than working in a factory or clerking in a store. We must get organized, however, so that we can demand our

just rights from the powers that be.

Middlesex Co., Ont.

FARMER'S SON.

THE DAIRY.

#### Keep the Stock in Condition,

Breeders of registered stock lose thousands of dollars every year by their failure to keep the breeding stock and especially that which is for sale, in a thrifty condition. A dairy cow is not supposed to be loaded with flesh, in fact, if she carried a deep layer of fat the intendent purchaser would surmise that she put the feed on her back instead of into the pail. If a man wants beef he seldom purchases a member of a dairy breed. However, some stock is allowed to get very thin which makes it unattractive and besides a thin cow with dry, harsh hair seldom milks as well as one that is thrifty when given a like amount of feed. A cow with desirable lines, pliable skin, sleek, shiny coat and alert appearance will bring many more dollars in the sale ring than one of as good lines and breeding, but with an unthrifty appearance. The same applies to bull calves. While one animal may be as good as the other, stockmen

appear willing to pay for the fitting. This is noticed at many consignment sales. There is a lesson here for anyone contemplating having a sale. Plan ahead, and aim at having every animal offered in the pink of condition. If one or two are not up to the standard leave them out of the sale as they may lower the price of others. Fitting cannot be done in a week or a month; it requires time. Grooming and training to lead, while essential are not enough. The animals must be fed in such a manner that they will be gaining in flesh and their coat have a sleek appearance. Succulent feed, oil-cake, cotton-seed meal, etc., are splendid conditioners when fed with logues by an all still the sales.

ditioners when fed with legume hay and a little grain.

One man, whose consignment in a sale was thin and unthrifty looking stated that "feed was too high-priced for him to feed his stock extra, and that he was too busy to bother currying the animals he had for sale. Yet, this man received considerably less money for each individual sold than did his neighbor who had no better bred stuff. The latter, however, spent a few dollars in extra feed and for every dollar spent got two in return. Appearance makes a big difference in the price an animal will bring by auction and it is equally true of private sales. The same applies to grade stock as well as to registered animals. Maintenance of a well-fleshed animal is no greater than for one in poor condition. The expense is in getting that extra flesh, but the experience of stockmen is that it pays whether you purpose having a sale or not.

There are breeders who make a practice of purchasing the typy, well-bred individuals even if they are slightly out of condition. A couple of months in their stable under their system of feeding changes the appearance with the result that if they again change hands it is at a big advance on the first price. If contemplating having a sale, fit the stock, it will pay.



A Grade Cow that Pays Her Way.

#### Harvesting a Winter Crop.

The ice harvest is again at hand. The cold days and frosty nights have been gradually thickening the layer of ice over the ponds and streams. As soon as it is thick enough to make a fair-sized block, it is advisable to store away a few tons for the following summer's As it is a mistake to delay harvesting the ripe field of grain in the summer, so it is a mistake to delay the ice harvest once it is ready to cut. The weather is so changeable that one never knows when a thaw might set in and either break up the ice or render it of poor quality. As yet comparatively few farmers and dairymen lay in a supply of ice, and as a result have considerable difficulty in keeping milk and cream sweet during the tropical temperature of July and August. It frequently happens that as much milk is soured and rendered useless to the cheese factory during the summer as would pay for putting in ice which would have saved the loss. It is also a great convenience to the housewife to have ice handy. It enables her to keep the butter in a firm condition and permits her to make and keep various dishes which are nutritive and pleasing to the palate, but are impossible without ice.

The cost of putting up ice is not great. In August 2, 1917 issue, of "The Farmer's Advocate" different types of ice houses were described. An elaborate building is not necessary but there are several essentials which must be adhered to. A temporary building can be erected by using a few cedar posts and some inch lumber. A permanent ice house, with refrigerator room attached, while serviceable is rather expensive and could not be built now in time for this season's crop. If possible, erect the ice house at the north side of a building where the sun's rays do not strike it directly. Good drainage is necessary, as under the most ideal conditions ice will melt somewhat during the summer, and if this water cannot get away it tends to spoil the remainder of the ice. Then, too, it is necessary to have a circulation of air through the top of the house. can be arranged by having ventilators in the roof and an opening at the eaves. If there is no circulation the air over the ice rises to a temperature that will cause considerable wastage. A good roof is necessary, as water dropping through the roof will soon wear away the ice. Sawdust or planer shavings make splendid insulation material for storing ice in a temporary house. If erecting a structure at this time of year, drainage may be furnished by laying a few rails on the ground and then banking up around the outside with earth in the spring to prevent warm air circulating in the

Care should be taken that the ice is cut from a pond where the water is pure. Disease germs in the water are not necessarily destroyed by freezing. It is estimated that when the ice is used for cooling milk and cream,

about one and one-half tons should be stored for each cow in the herd, with an additional three tons for house use. This will give some idea as to the amount of ice to be harvested. To secure twenty tons will not require a very large area of a pond, especially if the ice is a foot or more thick. It is estimated that one ton of ice will occupy approximately forty-five cubic feet of space, which will give an idea of the size of building required. With ice twelve inches thick and the cakes cut twenty-two inches square, ten of them will make about a ton. An endeavor should be made to have the blocks as free from snow or porous ice as possible; the latter melts readily causing the good ice to waste. Where only a small quantity is required the snow can be shovelled off, or a cheap scraper can be made to be operated by horsepower. A cross-cut saw with one handle removed can be used for cutting the ice, and it is surprising the number of blocks a man can cut in a day. He should aim at cutting the blocks as nearly square as possible, as it makes them much easier to pack. A pair of ice tongs is essential in handling the cakes of frozen water. These can be made at any blacksmith

The wastage of ice through melting during the summer will depend a good deal on how well it is packed. Twelve inches of sawdust or shavings should be placed in the bottom and then the first layer of the stack of ice may be laid, keeping the blocks twelve to fourteen inches from the outside. The blocks should be fitted closely together and cracks filled with fine chips of ice. Some use an adz to level off the surface of the layer and sweep these fine shavings into the cracks. This makes the best filling material. One layer of ice is laid on another until the stack is complete. The fewer air spaces that are left between the cakes the better the ice will keep. Some leave the ice uncovered for a week or more and frequently sprinkle it with water which freezes it into almost a solid block. One objection is that by so doing the difficulty of taking out ice in the summer is increased. The sawdust or shavings used as insulating material around the outside should be firmly packed as it is being put in, and then it is necessary to put from twenty to twenty-four inches of this material on the top.

Harvesting the ice crop may require two or three days during the winter, but once it is stored it requires no more attention until it is needed for use during the heat of summer. The convenience of having an ice supply amply repays for the work and expense of harvesting it.

#### A Few Principles of Breeding.

Modern science and recent discoveries of certain laws of inheritance have not revolutionized live-stock breeding operations of to-day. They have, however, done a great service in freeing breeding of the detrimental influence of certain time-honored beliefs which, in the light of present knowledge, appear as absolutely false. Variation is universal. No two are exactly alike.

Variation is universal. No two are exactly alike. No matter how closely two animals may resemble one another, there always exist certain minute differences. Experience has shown that within a particular breed, or tribe, or strain we are likely to have exhibited certain variations which seem to be peculiar to it. Hence it is essential that in order to gain the greatest success with the breed that is our favorite we must be well informed as to its history. Then, knowing the history and variations most likely to occur, sound judgment must be used in departing from any of the definite principles of live-stock breeding.

It is interesting to note that within comparatively few years a special kind of animal has been produced for practically every utilitarian purpose. This rapid progress has largely come about by breeders keeping always in mind two things—utility and beauty of form. If the breed we are using is not especially pleasing to our sight, failure is sure to follow. The same thing is true if the breed is lacking in utility.

true if the breed is lacking in utility.

Observation was the chief asset of early breeders, and from their observations they came to conclusions which, in a measure, were correct. They observed that in ordinary breeding operations like tends to produce like; also that pedigree counts. It was realized that a certain dependence could be placed on an animal's pedigree, but of the value of this working of heredity they were not sure. It was also considered that in a general sense in-breeding brings uniformity of type, but with it a loss of vigor. Likewise, cross-breeding increases vigor, but destroys uniformity in the herd or flock. With these principles well in mind, it is not surprising that much advancement has been made.

Grading implies the mating of a common or relatively unimproved parent with one that is more highly improved, meaning a pure-bred. This is usually accomplished by using a pure-bred male, because in this way one animal's influence is distributed over the entire herd. Grading is the economical method of improving live stock, and consequently is the method in most general The reputation of any breed is made more on the grades of that breed than on its pure-bred representatives. It is somewhat surprising to note the percentage of purity in animals with a few top crosses. The progeny of a grade dam from a pure-bred sire is known as a half-breed or 50 per cent. pure blood. The progeny of a half-breed from a pure-bred is three-quarters or 75 per cent. pure blood. In this way we arrive at seveneighths, or 87.5 per cent. pure blood; fifteen-sixteenths, or 93.75 per cent. pure blood; thrity-one thirty-seconds or 96.87 pure blood; sixty-three sixty-fourths, or 98.44 per cent. pure blood, and so on. Since pure-bred animals are more prepotent than grades, these percentages are, no doubt, higher than can be shown mathematically.

Crossing means the mating of animals belonging to

Three forms of in-breeding are recognized: Mating the sire with his daughter, the son with his dam, and brother and sister matings. With the first two methods brother and sister matings. we have some idea what the combination will result in, because we get in the offspring a preponderance of the blood of one individual. In the first-mentioned case there would be a concentration of three-quarters of the sire's blood lines, and in the second three-quarters of the dam's blood lines. Although brother and sister matings have in some instances given good results, the chances for inferiority are greater than with the other methods. It must be borne in mind at all times that we can intensify both the good and the bad by inbreeding. There is ground for the popular objection that in-breeding impairs vigor and fertility, and these factors are sure to be intensified if they were lacking in the original animals. Neither in-breeding nor the reverse will be a success unless the animals are suited to each other, unless we select strictly and rigidly for vigor and high fertility, and are careful to note that there are no weaknesses in common and as much good as possible. The practice of in-breeding should never be adopted by the novice and seldom by the skilful breeder

Line breeding differs from in-breeding merely in degree. The number of ancestors of a line-bred animal in some particular generation, or generations, is fewer than the maximum possible number. It is a mild form of in-breeding, and has been productive of much good when judiciously practiced by experienced breeders. Many of the most noted sires of all classes of live stock have been line-bred individuals. Like in-breeding, however, it is not a safe practice for the average breeder.

Successful live-stock production depends a great deal on a proper degree of constitutional vigor in breeding animals. It is essential to long life and heavy production. Together with lack of vigor, imperfect sexual development is one of the most common defects in animals. Fertility is an unseen quality, and one that is most often neglected, yet there is no doubt but that it is a heritable character. It is a relative quality. All, as a rule, produce some offspring. Note the final results as shown in the table below, where the progeny of three cows, each possessing a different degree of fertility, is studied. "A" produces two calves, one of each sex, then becomes infertile. "B" produces four calves, and "C" six calves before losing their powers of reproduction.

		Females.					
Cow	Total	1st	2nd	3rd	4th		
	number	genera-	genera-	genera-	genera-		
	of calves	tion	tion	tion	tion		
A	2	1	1	1	1		
B	4	2	4	8	16		
C	6	3	9	27	81		

It is assumed that the female offspring of the original cows were prolific to the same degree as their dams, and the likelihood is that they would be. The progeny of "A" would never build up a herd, and "C's" progeny would soon dominate. It is true that we can hardly over-estimate the value of the old and tried females in our herds. It is history that the reputations of many of our prominent stock breeders have been made largely on the merit of some few exceptional individuals, either male or female, in their herds which possessed a high degree of constitutional vigor and sexual fertility, and were prepotent for these qualities. When our standards are against the highest fertility they are dangerous, if not fatal, to the breed.—Ontario Agricultural College, Bulletin 253 on "Dairy Cattle."

#### Holstein Breeders' Association Annual Meeting.

The 35th annual meeting of the Holstein-Friesian Association of Canada will be held in the Canadian Foresters' Hall, 22 College Street, Toronto, on February 7 at 9.30 a.m. The annual banquet will be held the evening previous. There is a notice of motion by T. A. Dawson which is to the effect that the section entitled "Tests eight months after calving," of the R. O. M. rules will be altered to read as follows: "A cow that has in the same or a previous lactation period made an official seven-day test admitting her to the R. O. M., will be eligible for a test eight months after calving, but must be at least four months bred when this test is made."

#### My First Bit of Oleo.

EDITOR "THE FARMER'S ADVOCATE"

On New Year's Day I had my first taste of oleomargarine fresh from an up-to-date establishment. It was pm up in a parchment paper package corresponding with a pound print of butter which it resembled but was branded for what it was. In texture it was very firm but rather tallowy, and although the initial impression was not unlike the genuine article, a sensation of something different with a flavor of staleness approaching rancidity lingered on the palate. The friends with whom I was dining had turned it down as a substitute for butter, and for baking purposes found it not equal to what is called "domestic shortening" procurable at the corner grocery or butcher shop for ten cents less per pound. The price of the oleomargarine was 38 cents per lb., but Canadian butter at a dime extra was worth more than the difference. People brought up on the yellow, imitation lubricant might put up with it, but those who know the tasty flavor and dietetic merit of real butter would prefer apple sauce or even dry bread to the substitute, in case the worst comes to the worst, as a war-time necessity.

On The Wing.

## POULTRY.

#### Sprouted Oats For Green Feed.

During the growing season the fowl will keep the grass around their pen picked short. They relish green stuff, and eat a large quantity of it when it is available. If winter eggs are to be gathered summer conditions must be duplicated so far as possible. Mangels, cabbage, clover leaves, etc., are generally used as winter greens, but they do not entirely take the place of grass. Many poultrymen have found that sprouted oats are readily eaten by the fowl during the winter and by the early-hatched chicks. Some are not so situated as to make sprouting of oats for the flock practicable. If a warm room is available where the sun shines frequently, it is quite possible to sprout a few oats at comparatively Some sprout them in the cellar quite satisfactorily. Boxes are made about two inches deep with holes bored in the bottom to allow drainage. Oats are soaked in water over night and spread out about an inch deep in the trays or boxes in the morning. They should be placed in a fairly warm place so that sprouting will be started quickly. Until sprouts appear it is advisable to stir the oats frequently, but they should not be disturbed once they become matted. moisture and warmth are essentials to the best development of growth, and if the proper degree of all three are maintained it is not long before there is a supply of green feed. It is necessary to keep the oats quite wet. This feed is a tonic and has a stimulative influence on the digestive organs. A piece of matted sprouts three inches square would be a feed for a flock of fifty birds. It is customary to allow a growth of four or five inches before commencing feeding. Keeping the oats moist may induce mould. If this develops, the addition of a few drops of formaldehyde to the water tends to prevent This form of green feed is not a necessity when there are plenty of roots and clover leaves on hand, but it is one of the best forms of green feed for early-hatched chickens. Laying stock and growing chicks require some form of green stuff in order to ensure health and proper development.

#### Feeding the Layers.

EDITOR "THE FARMER'S ADVOCATE"

The practice at Macdonald College is to feed a whole grain ration of two parts wheat and one part oats during the winter months. This grain mixture is scattered in the litter morning and evening, and the litter is kept in such a condition that considerable scratching is necessary. Enough grain is fed in the morning to keep the hens busy for several hours. In the evening they are given practically all the grain they will pick up before going to roost. There are many poultrymen who are not able to feed their flocks the proper amount of grain from time to time. On the other hand, there are some poultrymen who believe in feeding a definite quantity of grain at each feeding. It is far better to feed the birds about what they want from time to time, and since they will eat more at one feeding than another, it is practically impossible to state any definite amount which the flock should be given for each feeding. A very simply way of finding out whether the birds are being fed properly or not is to brush away some of the litter, then blow the chaff and dust away, and if corn or wheat can be seen on the bare spot of floor the hens are being fed too heavily. They should be made to clean everything up before being fed again.

Whole grain alone is not sufficient as the birds must balance the ration with ground grains to which can be added certain concentrated foods. The ground grains are chiefly wheat, bran, crushed oats, corn meal and mid-To these ground grains may be added linseed meal, gluten meal, beef scraps or fish scraps. These are concentrated foods and supply the fowl with protein which is largely lacking in the whole and ground grains and still considerable protein is necessary for the manufacture of eggs. It is not necessary to use all of the materials mentioned in preparing a mash. At the same time the larger the variety the better the fowls like the mash, and the better it serves its purpose. A good mash mixture is composed of the following: ground screenings, 132 lbs.; wheat bran, 66 lbs.; crushed oats, 66 lbs.; cornmeal, 33 lbs.; middlings, 33 lbs.; beef scraps, 66 lbs.; and charcoal, 4 lbs. This makes a mash which is quite palatable and which the birds relish.

This mash may be fed in two ways. It may be fed as a wet mash or as a dry mash. The wet mash is where the ground grains are thoroughly mixed and are moistened with water or sour milk. The mash is moistened and fed in V-shaped troughs at definite times. The object in wet mash feeding is really to stimulate maximum egg production. The troughs should be kept strictly clean, and it is wise not to overfeed on the wet mash. Just give what the birds will pick up clean a few

minutes after being fed. The best time to feed a wet mash is about noon or slightly after.

If the ground grains are to be fed in the form of a dry mash then more labor is saved. The ground grains are thoroughly mixed and placed in a self-feeding hopper from which the birds can help themselves at any time. This is a very satisfactory method of feeding laying hens. It saves much labor, particularly where there is a large flock, and its use is not so apt to be abused. The principal factor here is to have a hopper so constructed that none of the mash will be wasted.

Meat Foods.—Beef scraps and fish scraps have been suggested as a form of animal food. In some localities ground green bone can be obtained at a reasonable price. Where such is the case the quantity of beef scrap or fish scrap in the mash ration may be greatly reduced. Care should be exercised in feeding ground green bone that it always be in the very best of conditions. Sour milk is also an excellent animal food. It is one of the best poultry foods we have and should be used far more extensively. It is low in cost and, besides being a valuable egg producer, it tends to keep the hens in good health. One of the most profitable ways in which sour milk may be used is in feeding it to laving hens.

Green Foods.—While the birds are confined during the winter months some form of green food is absolutely necessary for best results. Give the birds mangels, turnips or sprouted oats. Alfalfa or clover hay may be fed if well cured. Mangels are cheap and easily grown, and the birds will consume large quantities of them. Sprouted oats also make an excellent form of green food. The method of sprouting is simple. Take a quantity of oats desired, soak them in luke-warm water for twenty-four hours, then spread them out on the floor of a fairly warm room or place them in flat boxes so that the oats will spread out in a layer about one inch thick. Keep them moistened and stir them to prevent them from moulding. When they start to sprout do not disturb them, and when the sprouts are about 3 inches long they may be given to the birds. Some form of green food should be supplied the birds every day. In feeding mangels it is a good practice to drive a spike in the wall about 16 inches above the floor on which the mangels can be placed.

Lime and Grit.—Oyster shells and grit should be kept before the birds at all times. Grit seems to aid in digestion, and oyster shells supply the fowls with material from which they make egg shells. The egg shell is largely composed of lime which is secured from oyster shells.

Good Drinks.—Clean water is also necessary, and it is very important to see that the birds are never without water. An insufficient supply of water often causes a serious decrease in egg production. Where sour milk is available it should be used and it will largely take the place of water. It should be given thick sour.

Exercise.—Finally, it should always be borne in mind that aside from the kinds and quality of foods given the method of feeding has much to do with egg production. The laying hen must be kept as busy as possible. It is the busy hen that lays best. Exercise means eggs.

Macdonald College, Que. M. A. Jull.

#### The Record of a Small Flock,

EDITOR "THE FARMER'S ADVOCATE"

A few years ago a neighbor looked over my back-yard fence and noticing my chicken coop in one corner of the yard remarked: "It never pays you to keep those hens." I replied that my books, showing a strict account of all poultry transactions, proved to me that it did pay in dollars and cents, besides the satisfaction of having fresh eggs for the entire year. My experience during the year just closed is further proof that hens, properly looked after, pay.

I started on the first of January, 1917, with fourteen hens, eight pure-bred White Wyandottes—of which six were pullets—and six Barred Plymouth Rock pullets. Three hens were allowed to hatch and brood chickens and some were killed early in the season, as they showed signs of going broody. At the end of the season I had seven, hens and four pullets. Strict account of the number of hens in the laying pen was kept and they averaged scarcely twelve for the year, and at times several of these were broody.

Their egg record for the year is not large but satisfactory, as they laid continuously. The following shows their output by months: January, 77 eggs; February, 130; March, 200; April, 242; May, 215; June, 200; July, 168; August, 70; September, 130; October, 77; November 72; December 44, a total of 1,598 eggs, or an average per hen, counting 12 for the year, of a little over 133 eggs. These hens were kept in close confinement, a small pen with a small wire run for the entire A glance at the monthly output reveals a few April was the month of heaviest production, which bears out what any good poultryman will tell May stood second in the list, with March and June on the same level. December was the month of lowest production, but August was second lowest with only 70 eggs produced. The months of January, August, October and November were very similar in number of eggs produced, each having between 70 and 80 to their The four pullets added to the pen to take the place of hens killed when they had stopped laying did not lay a dozen eggs by the end of the year, so they did not run up the total very much.

Figuring the eggs at average market price, each month of the year, they were worth a total of \$55.20, divided as follows: January, \$3.20; February, \$4.35; March, \$6.65; April, \$7.05; May, \$6.25; June, \$6.65; July, \$5.60; August, \$2.60; September, \$4.30; October,

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\$3.20; November, \$3.00; December, \$2.35. A study of these figures will show that the pen was most profitable in the month in which it produced most eggs, namely, April, but that March and June, owing to higher prices, were more profitable months than May, even though not quite so many eggs were laid.

A few chickens were raised, but owing to the ravages of rats only ten were brought to maturity. However, the total feed cost for hens and chicks for the year, taking in everything—mixed grains, shell, grit and mash feed, and also straw for litter, was \$39.55. Whole grains fed were wheat, corn, oats and buckwheat mixed. For the most part, shorts were used for mash and fed wet at noon. The whole grain was fed night and morning in the litter. Green feed was supplied from the garden

in the litter. Green feed was supplied from the garden. Since all the feed is reckoned, it becomes necessary to value the chickens and hens used on the table. Counting these at market price they would be seven hens at \$8.50 and six cockerels at \$5.50, a total of \$14. In each case these were large birds and well fattened, and the prices given were well within the limit at the time the birds were killed.

During the year one hen was purchased for setting at \$1, and one was sold at \$1.50. Also, a cockerel was purchased at \$2 the last week of February and sold May 11 for \$2. In December another cockerel was bought at \$1.25.

The year was commenced with 14 birds. There are only twelve in the coop now, so that an inventory valuing each at \$1.50 would show \$3 less at the beginning of 1918 than on the first of January, 1917.

For the year, then, the little flock returned \$55.20 for eggs, \$14 for poultry for the table, and \$3.50 for two birds sold; a total of \$72.70. Feed cost \$39.55; birds purchased cost \$4.25, and the inventory shows \$3 less than the beginning of last year, a total of \$46.80. This leaves a clear profit for the year of \$72.70—\$46.80 or \$25.90, or over \$2 per hen reckoned on the average of 12 hens which the pen carried for the year. The poultry paid in dollars and cents, helped a little in production, and were a source of satisfaction for the entire

Middlesex Co., Ont.

INTERESTED READER.

## HOR FICULTURE.

#### Methods of Pruning Peach Trees.

From now until the setting in of spring, fruit growers will be endeavoring to do as much pruning as possible, and the following notes regarding the pruning of peach trees, taken from the Ontacio Bulletin 241, compiled by F. M. Clement, offers very good suggestions in this respect.

The subject of pruning is one of wide discussion, and it is doubtful if the methods and systems of any two growers are exactly alike. The subject has been studied definitely but little, but a few suggestions are offered. There are, however, certain rules that may be considered basic:

 Have a definite system of pruning and do not change without some good reason.

2. Consider the variety and prune to suit its fruit-

ing habits.

3. Have good tools; both money and time are saved

by them.
4. Prune regularly.

The object of pruning:

1. To modify the vigor of the tree.

2. To construct a framework, make the tree shapely and keep it within bounds.
3. To open the tree top so as to admit air and sun-

shine.
4. To remove branches that are adding nothing to

the economy of the tree.

5. To aid in stimulating the development and proper distribution of fruit buds.

6. To facilitate the harvesting of the fruit.

Heading.—For the past ten years about seventy-five per cent. of the orchards planted have been low-headed. To-day a few growers are returning to the medium height. With the low-headed trees, spraying, pruning and harvesting are more easily accomplished. With the medium high-headed trees, cultivation can possibly be carried on more readily. However, with the extension disc and other modern orchard implements, the principal objection to the low-head is overcome. A tree that is too low is possibly objectionable, and one that is too high is a hindrance to the efficiency of labor. Fifteen to twenty inches, with a maximum of twenty-four inches to the first branch, is a good, convenient height.

Pruning After First Year.—Trees are pruned ordinarily in late winter or early spring. Pruning for the first year consists of selecting the branches which are to form the framework of the tree and removing all others. Care must be taken to have these branches so spaced that they all have separate unions with the trunk. A tree that has all its branches radiating from one common union is usually weak, and often the weight

of foliage and fruit cause splitting.

Having selected the branches that are to form the main limbs of the tree, cut these back to within eight or nine inches of the trunk. Then remove the other

branches entirely. Cut back to a bud that points outward.

After Second Year.—This year pruning simply consists in thinning out the tree, choosing the main branches and cutting out the others. Cut out all central leaders

that appear at this period.

After Third Year.—By the end of the third year the tree will be setting a few fruit buds. The main

limbs and branches are already formed, and pruning

consists largely of cutting back and thinning out growth.

Pruning Old Orchards.—Orchards that are yielding crops annually require regular and careful pruning.

The most practical system is to thin out the tree, then cut back the remainder to twigs which show fruit buds.

This is the most popular system.

Another plan that is followed by some is that of thinning out and not cutting back at all. Both large and small limbs are removed. It is maintained that whenever a tree is cut back, especially at the top, new growth is forced out and color on the fruit is sacrificed to some extent. Those who follow this latter system sacrifice ease in picking in order to obtain color. The regular cutting back or heading in undoubtedly keeps the fruit nearer the ground.

#### Spray Outfits.

Those who purpose buying a spray outfit and spray materials can find the addresses of the various manufacturers by looking over the advertisements in the various agricultural journals.

Those interested in the proper care of orchards will find some advice in the following paragraphs by Lawson Caesar, Provincial Entomologist for Ontario:

If there are only a few trees to spray, such as one finds in a back yard in a town or village, a small handpump, holding about five gallons of liquid, will suffice. This should be equipped with about twenty-five feet of good hose, a leakless stop-cock, an eight-foot rod and a good disc angle-nozzle. Some companies manufacture a special rod and nozzel so that by adjusting the latter the spray may be shot to the top of even a very high tree. A machine of this character with all the necessary accessories costs about \$20.

For more than about a dozen large trees this small outfit is much too slow. If the orchard consists of not more than about six acres of large apple trees or of about ten acres of trees the size of a moderately large plum, cherry or pear tree, a barrel-sprayer will suffice. This, fully equipped, will cost from \$20 to \$40.

A double action or duplex type of pump gives considerably more power than a single action or barrel pump, and so will enable a person to cover more trees each day, especially if the pump is installed in a 120 or 160-gallon tank. This type of outfit without tank will cost from \$40 to \$60.

For all apple orchards larger than those mentioned above, a gasoline outfit is almost essential for good work. A power outfit of this type along with tank and trucks costs between \$200 and \$350.

Good care with any of these outfits will more than double their period of usefulness. Any kind of machine should be washed out each evening after spraying, and when the season's work is over should be well cleaned, oiled and put away in a dry place.

## FARM BULLETIN.

#### Andrew Broder Passes.

There passed away at his home at Morrisburg in Dundas County, Ontario, on Jan. 4, one of Canada's best-known and most highly respected public men, in the person of the Hon. Andrew Broder.

The late Mr. Broder was 72 years old. He was a practical farmer, a man of the people and for the peo-ple, and was known to parliamentarians as the "Abe Lincoln" of Canada. He was born in Huntingdon County, Quebec, in 1845, of Irish parentage. seventeen years of age he left home and went to work on a farm in Massachusetts. He saved his money and later used it to secure education at the Huntingdon Academy in his native county and later in New York, At twenty-one he joined the ranks to repel the Fenians, and immediately after he went to Dundas County and commenced his business career as merchant and farmer. In 1875 he became standard bearer of the Conservative party in his county for the provincial campaign, and from that time until 1886 he sat in the Provincial Legislature. Then followed four years as Customs Collector at Morrisburg, after which Mr. Broder re-entered the political field and was elected to the Dominion House; seat which he held until the dissolution of the last parliament. He was made a member of the Privy Council of Canada in 1916. The late Mr. Broder was popular because he was honest and sincere and remained to the end a man of the people. His death is a deep loss to Canadian public life, and to the cause of agriculture in parliamentary halls.

#### Conditions in Leeds Co.

Editor "The Farmer's Advocate":

It is some time since I wrote to "The Farmer's Advocate." First of all, I want to tell you that I certainly enjoyed the Christmas Number, but every number contains grand information for all, particularly on agricultural matters. As to farm conditions in this part of old Leeds County, things are pretty quiet. One cheese factory is still in operation, and a large quantity of milk is going to the condensary at Brockville at \$56 per ton. Drovers tell me that stock is pretty well picked up. Feed is plentiful. Hay is selling at \$15 per ton; pork, live weight, is 17 cents per pound. There are preparations for some building the coming spring. Most of the farmers have their work well up and all are on the job for greater production in 1918. Cows are in better condition and will go through the winter

and come out in better condition, if possible, than in 1917. Some are keeping more sheep and brood sows. Some of the cheese factories are being equipped for making butter when spring comes. There is the usual number of auction sales, with stock selling at a high price; springer cows sell around \$100. Horses seem to be a drug on the market, a few changing hands among farmers.

Leeds Co., Ont.

W. F. Armstrong.

# Increase Potato Yields by Better Seed.

The Advisory Potato Council appointed at a recent meeting of Ontario potato growers are completing arrangements for the distribution of first-class New Brunswick seed in the North and to a number of Ontario farmers for experimental purposes. The Government purposes growing potatoes on a large scale on the provincial farms at Burwash, New Liskeard and Monteith so as to have disease-free, high-quality seed to distribute among northern farmers. Disease keeps the potato yield in Ontario below what it should be. The aim of the Committee is to establish seed centres where, by careful inspection and ranging, disease-free seed may be grown for distribution. Further study is to be made of potato diseases in an endeavor to formulate practicable and efficient methods of combating enemies of the potato patch. Northern Ontario is as yet practically free from the bad diseases which are prevalent in potato sections of older Ontario, and, as northern seed gives satisfactory results it appears logical to put forth a vigorous effort to prevent disease invading the northern fields and to secure seed from that part of the country. The Advisory Council will devote their efforts to the production and distribution of Irish Cobbler and Green Mountain varieties.

#### New Appointment at O. A. C.

J. A. Neilson, B.S.A., a 1915 graduate of the O.A.C., and since graduating a lecturer in horticulture at the Manitoba Agricultural College, has been appointed to a similar position at the O. A. C., and has taken up his new duties.

#### Wouldn't Give It for all Others.

EDITOR "THE FARMER'S ADVOCATE":

I enclose one dollar and fifty cents for next year's subscription to "The Farmer's Advocate". I have taken all kinds of farm papers, but I would not give "The Advocate" for them all.

Simcoe Co., Ont.

HAROLD COUGHEY.

#### The Farmer's Paper.

Editor "The Farmer's Advocate":

I consider the Christmas Number worth half the cost of the paper and Sandy Fraser's articles worth the other half. I would like to see Sandy's picture. I consider "The Farmer's Advocate" in all its departments is truly the farmer's paper, and I wish it every success.

uccess. Compton Co., Que. Jos. Evans.

#### Two Features Worth the Price.

Editor "The Farmer's Advocate":

I am greatly pleased with "The Farmer's Advocate". Sandy Fraser's letter and the Quiet Hour are well worth the subscription price. The Christmas Number was a dandy.

Renfrew Co., Ont.

PETER DICK.

#### None Should be Without it.

EDITOR "THE FARMER'S ADVOCATE":

I take pleasure in thanking you for the kindness and promptness in answering my question on size of pulley by mail as it was a help to me, also the question I asked last spring on manure not heating.

last spring on manure not heating.

I wish you the Season's best Wishes and a lasting prosperity of your paper. No farmer should be without it no matter what branch of farming he is in.

Lincoln Co., Ont.

L. G. MASON.

#### The Best Independent Medium.

Editor "The Farmer's Advocate":

Believe your paper to be the best independent medium in Canada.
Welland Co., Ont.
W. J. STOCKDALE.

#### For Fifty-two Years a Subscriber.

Editor "The Farmer's Advocate":

This is my 52nd subscription to the Farmer's Advocate—What changes have taken place in all those years!

York Co., Ont. Wm. Linton.

Use the buzz-saw instead of the buck-saw to cut the wood and save time for more valuable work.

# Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending January 3.

Receipts and Market Tops.

Dominion Department of Agriculture, Live Stock Branch, Markets Intelligence Division

*	Receipts	CATTLE Top Price Good Steers	Receipts	LVES Top Price Good Calves	
TORONTO (Union Stock Yards)	305	(1,000-1,200)  k Week Same Week ng Ending Week Ending 27 Jan. 3 1917 Dec. 27 (2\$12.00\$9.75\$12.00 (4\$10.259.75\$10.50 0\$10.259.75\$10.50	Week         Same         Week           Ending         Week         Ending           Jan. 3         1917         Dec. 27           350         211         243           115         384         143	Week         Same         Week           Ending         Week         Ending           Jan. 3         1917         Dec. 27           \$16.00         \$12.00         \$16.25           15.00         11.00         15.00           15.00         11.00         15.00	

#### Market Comments.

Toronto (Union Stock Yards).

Approximately four thousand cattle were on sale during the week and included in this number were a few loads of good to choice cattle. However, the abattoir demand was limited and with the exception of really choice cattle, trading was scarcely as brisk as during the weeks immediately preceding Christmas and prices ruled a trifle easier, drovers being forced to accept losses in some instances. A few heavy steers were on sale and those of good quality sold from \$11.50 to \$12 per hundred. For the bestkilling steers of ten hundred to twelve hundred pounds from \$11.00 to \$11.75 was paid, four head bringing latter price, while fourteen head sold at \$11.65, nineteen at \$11.50, nineteen at \$11.40, twenty-nine at \$11.25 and fourteen at \$10.60. Among the sales of handy-weight steers and heifers weighing from eight hundred to ten hundred hundred pounds from \$11.00 to \$11.75 from eight hundred to ten hundred pounds, were seventeen that sold at \$11.50 per hundred, nineteen at \$11.35 eighteen at \$11.25, thirty-five at \$11 twenty-two at \$10.75, nineteen at \$10.60, twenty-two at \$10.40, and nineteen at \$10.50; several small lots of medium and common cattle sold from \$9 to \$9.75. Cows were fairly steady with prices barely as good as during previous weeks, the best sales ranging from \$9 to \$10.50. Four head sold at \$10.30 per hundred, nine at \$10, two at \$9.85, twelve at \$9.75 five at \$9, eight at \$8.50, and common and medium at \$6.50 to \$7.50. Bulls of good to choice quality sold from \$9 to \$10.75, one choice bull bringing the latter price; two sold at \$10.50 and several sold from \$9 to \$9.50, while bologna and common bulls realized from \$6.50 to \$7.75 Feeders and stockers were in slow demand A few went to country points at last week's quotations. Feeders moved at \$9 to \$10 for best quality and stockers from \$8.50 to \$9, while common light steers and heifers brought \$7 to \$7.75 per hundred. Calves were in steady demand at \$14 to \$16 per hundred for the

Lambs were on hand in very limited numbers and were a trifle higher in price twenty choice lambs selling at \$19. of the best lambs, however, brought from \$18 to \$18.75 and common from \$15 to \$17

With a light supply of hogs available last week, the buyers were unable to obtain reductions of any account, the majority of the hogs moving at \$18.75 for selects, fed and watered, while a few sales were reported at \$18.50. The market closed on Thursday at the prevailing price of the week.

Of the disposition from the Yards for the week ending December 27th, Canadian packing houses bought 150 calves, 2,210 butcher cattle, 9,315 hogs, and 817 sheep and lambs. Local butchers purchased 50 calves, 200 butcher cattle 155 hogs, and 100 sheep and lambs, Canadian shipments were made up of 18 calves, 14 milch cows, 153 stockers, 24 teeders and 137 hogs. There were no

Montreal.

2,3071,641	3,549	17.80	0 10.5	0 1	7.35	213	241	84 15	.00 11	.25	
CLASSIFICATION STEERS		Vo.	(Union S Avge. Price	RONTO Stock Y Price I Bulk	ards) Range	Top Price	No.		NTREAL t. Charles) Price Rar Bulk Sal		Top Price
heavy finish	ned	36	\$11.50	\$11.25-	\$12.00	\$12.00					
STEERS go 1,000-1,200 comm	ood	94 5	11.02 10.00	10.75- 9.00-	11.50	. 12.00					
STEERS go 700-1,000 comm	ood ion	948 292	10.90 9.92	10.50- 8.75-	11.25 9.75	11.50 9.75	8 15	\$10.25 9.00	\$10.25- 8.00- \$9	.50	\$10.50 9.50
HEIFERS f	od air	580	9.50	9.00 -	11 .50 9 .75 8 .75	9.75	5 52	10.50 9.15 7.60	10.50- 8.50- 7.50-	.50	10.75 9.50 8.00
	ood	94 892		8.00- 6.50-	9.50 7.75		4 89	10.00 7.75	10.00- 7.25- 8	.75	10.00
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CANNERS & CUTTE	ERS	453	6.00	5.75-	6.25	6.50	62	6.25	5 75- 6	50	6.50
OXEN											
CALVES vo	eal ass	275	14.99	14.00-	16.00	16.00 8.00	70	13.00	11.00- 15		15.00
STOCKERS go 450–800 fs	od air	17 54	8.29 7.54	8.00- 7.00-	8.75 8.00	9.00 8.25					
	od air	62 88	9.61 8.75	9.00- 8.50-	9.00	10.00 9.00					
(fed and light watered) so	1es 1ts	10 313 162	18.75 17.41 17.19	18.75- 16.50- 16.50-	18.75 17.75 17.75 14.75	18.75 17.75 17.75	35 7	19.00 18.25 16.50	17.50- 18 16.25- 17	.50	18.50 17.50
Lambs go commo	on 1,	025 117	18.37 15.76	17.50- 15.00-	19.00 17.00	19.00 17.00	592	16 .00 15 .50	16 00-		16.00
	/y ht	33	13.52	11.00 -	12.00 15.00 8.00	15 00	114	12.75 11.50	12.50- 13		13.00

holiday coming on Tuesday which is the killing day for the Montreal packing houses, and butchers and drovers brought in light offerings as a consequence. The proportion of good quality stock was higher than last week, five loads of the week's receipts coming from the Winnipeg and Calgary markets; these consisted largely of heavy-weight steers. Despite the small receipts the market opened slow and continued so throughout the week at prices unchanged since the close of the previous week. On account of the rough weather a number of car loads of stock were delayed four days in transit and suffered in condition as a result. Steers weighing from seven hundred to one thousand pounds sold from \$10 to \$10.50 for those of good quality, and from \$7.50 to \$9.50 for common to medium. Heifers were improved in quality, a number selling up to \$10.75, while the majority of the good sold at \$10.30 per hundred. Butcher cows sold at a top of \$10 per hundred, while the majority sold from \$7.25 to \$8.75. Bulls showed a wide range in quality, selling from \$6.75 to \$10.25. Calves were unchanged.

Lambs met with a slow inquiry due

Rescipts of cattle at the Yards last week were the lightest of any week since the fall run of stock commenced. This condition was largely due to the New Year mas and New Year's trade. The market was lower by \$1 to \$1.50 per hundred. Sheep remained unchanged.

Receipts of hogs were light, but owing to the disruption of packing-house business on account of the holidays, the shortage was not very evident. It is expected that a fair demand will continue at present

prices which are advanced over last week from 25 to 50 cents per hundred for selects, fed and watered

Pt. St. Charles.—Of the disposition from the Yards for the week ending December 27th, Canadian packing houses and local butchers bought 143 calves, 135 canners and cutters, 63 bulls, 326 butcher cattle, 1,173 hogs, and 1,065 sheep and lambs. No Canadian ship-ments to United States points were made during the week.

East End.—Of the disposition from the Yards for the week ending December 27th, Canadian packing houses and local butchers bought 56 calves, 509 butcher cattle, 568 hogs and 312 sheep and lambs. Canadian shipments consisted of 30 butcher cattle. There were no ship-ments to United States points during the week.

Winnipeg.

Receipts during the week were very light, totalling only eight hundred and fifty head including through shipments. The market opened strong and the light

offerings during the week gave additional strength, the run not being large enough to fill requirements. Two steers averag-ing eleven hundred and fifty pounds topped the market at \$11 per hundred, and the majority of the butcher steers sold from \$8.75 to \$10.40 per hundred. Butcher heifers held steady and sold up to \$9.65 per hundred, while the majority sold from \$8.25 to \$9.50. Most of the cows sold from \$7.80 to \$8.60 per hundred, while a number reached \$9.50. Bulls were in good demand at a top price of \$9 while the bulk of the sales were made from \$7 to \$8.25. Oxen also were in demand, selling from \$7 to \$7.75. Calves sold from \$6 to \$9 per hundred; receipts are extremely light with scarcely enough to make a market. Only sixty head of stocker cattle were on sale and sales were divided equally between eastern and western points.

Receipts of sheep and lambs were light. The majority sold at \$15.50, and a few common at \$10.

The market for hogs opened strong at \$18 per hundred for selects, fed and watered. On Monday, however, prices declined 15 cents, followed by an additional reduction of 10 cents on Tuesday, the market closing on Thursday at \$17.75. Prospects indicate lower prices unless the eastern markets advance.

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best hand \$10 to \$10 yearlings, fair to goo Cows ar \$10 to \$1 \$8.60 to \$8.25 to to \$7.75; v

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# The Molsons Bank

invites farmers to discuss their financial requirements at any of their many branches.

If reasonable accomodation will enable them to increase production, they should apply to the local manager for it.

Savings Department at every Branch, Interest at Highest Current Rate.

Receipts of cattle during the year of 1917, including through shipments, totalled two hundred and eighty-six thousand six hundred and fifty-one, an increase of approximately eighty per cent. over 1916. During 1917, thirty-six thousand four hundred and thirty-eight stocker cattle were returned from the St. Boniface Yards to points in Western Canada. The total movement of stockers and feeders during the year was seventy-seven thousand six hundred and eightyeight head, and of the total thirty per cent. were shipped south, fifty per cent. west, and twenty per cent. east.

Receipts of sheep and lambs, including through shipments, for 1917, were twentythree thousand five hundred and seventyfive, an increase over 1916 of three thousand.

Hog receipts, including through ship-ments, totalled three hundred and seventy two thousand one hundred and sixtyeight, an increase over 1916 of fiftythree thousand three hundred and forty

Of the disposition from the Yards for the week ending December 27th, Canadian packing houses purchased 11 calves, 1,158 butcher cattle, 6,542 hogs, and 86 lambs. Local butchers purchased 63 calves, 505 butcher cattle, 526 hogs and 59 sheep. Canadian shipments consisted of 11 calves, 83 butcher cattle, 807 stockers, 35 feeders, 675 hogs and 95 lambs. Shipments to United States points totalled 81 butcher cattle, and 38 stockers.

#### Buffalo.

Cattle,—Receipts were only moderate last week and the demand none too brisk. Weeks following the holidays, when poultry is largely consumed, are generally bad on the beef trade and the weakness was reflected last week in the live stock trade, shipping steers selling about steady, with most of the butchering stuff ruling somewhat lower. Canners and cutters generally sold at about steady prices. bulls were in pretty good demand at unchanged values. Stockers and feeders were in light supply, selling lower, while the best, good producing fresh cows with large forward springers sold strong. Best shipping steers sold on a range of from \$11.75 to \$12 but were only of a fair kind. Best handy steers ranged from \$11 to \$11.60. Sellers are predicting that the margin will be narrower between the shipping steers and the handy butchering kinds, especially where the shipping cattle are only in fair flesh and show no better killing percentage than the handy grades. Offerings last week totaled 3,875 head, as against 4,225 for the preceding week and 4,125 head for the corresponding

week last year, Quotations:
Shipping Steers—Natives— Choice to prime, \$12.50 to \$13.00; fair to good, \$11.75 to \$12.25; plain, \$10.00 to \$10.75; very coarse and common \$9 to \$9.75.

Shipping Steers — Canadians— Best grass, \$12 to \$12.50; fair to good, \$11.50 to \$11.75; common and plain, \$9.50 to

Butchering Steers— Choice heavy, \$11 to \$11.50; fair to good, \$10.50 to \$10.75; best handy, \$11 to \$12.25; fair to good, \$10 to \$10.50; light and common, \$8 to \$9; yearlings, choice to prime, \$12 to \$12.50; fair to good, \$10.50 to \$11.25.

Cows and Heifers.—Best heavy heifers, \$10 to \$10.50; good butchering heifers, \$8.60 to \$9.50; fair butchering heifers, \$8.25 to \$8.50; common to fair, \$6.50 to \$7.75; very fancy fat cows, \$10 to \$10.25 best heavy fat cows, \$8.75 to \$9.25; good butchering cows, \$7.50 to \$8.00; medium to fair, \$6.75 to \$7.25; cutters, \$5.75 to \$6.25; canners, \$4.50 to \$5.75.

Bulls.—Best heavy, \$9 to \$9.50; good butchering, \$6.50 to \$7.50. Stockers and feeders.—Best feeders,

\$9 to \$9.75; common, \$5 to \$5.75. Milchers and Springers.—Good to best, in small lots, \$100 to \$140; in carloads,

\$85 to \$100.

Hogs.—Buffalo had a good market on the opening day of last week. Monday's top was \$17.50, bulk sold at \$17.35, and no hogs that weighed better than 150 pounds fell below \$17.25. On New Year's day the demand was very light and while a few sales were made at \$17.25, generally speaking it was hard to do any trading above \$17 and the bulk of the receipts went over unsold. Wednesday the general market was from \$16.90 to \$17, Thursday the range was from \$16.85 to \$17 and Friday the top was sold at \$17 and the latter part they sold in the same notch as the better weight grades. Roughs \$15.50 to \$16, and stags \$15 down. Last week receipts were 25,200 head, as against 29,265 head for the week before and 33,000 head for

the same week a year ago.
Sheep and Lambs.—Last week started with top lambs selling at \$17.75 and culls went from \$16.75 down. Tuesday best lots reached up to \$18.00, Wednesday none brought above \$17.75, Thursday tops were back to \$18 and Friday they were jumped up to \$18.25. Sheep were scarce and prices on these were firm all week, wethers being quoted around \$13 and ewes from \$12.50 down. Receipts for the week aggregated 6,900 head, being against 15,724 head for the week previous and 16,200 head for the

calves.—On the opening day of the week top veals sold generally at \$17.50, and the next four days the bulk landed at \$17. Cull grades sold within \$1 to \$2 per cwt., of the tops and fed calves ranged from \$6.50 to \$9, as to weight and quality. Receipts for the week numbered 2,000 head, as compared with 1,706 head for the week before and 2,400 head for the corresponding week a year ago.

#### **Toronto Produce.**

Live-stock receipts at the Union Stock Yards Monday, January 7, consisted of 141 cars, 2,510 cattle, 138 calves, 1,270 hogs, and 954 sheep and lambs. Cattle of all classes were strong at the previous week's quotations. Sheep and calves strong. Lambs 25 cents higher, quality considered. Hogs, \$18.50, fed and watered.

#### Breadstuffs.

Wheat.—Ontario, (basis, in store, Montreal.) No. 2, winter, per car lot, \$2.22. Manitoba (in store, Fort William, including 2½c. tax.)—No. 1 northern, \$2.23½; No. 2, northern, \$2.20½; No. 3, northern, \$2.17½; No. 4 wheat, \$2.10½.

Oats.—Ontario, according to freights outside, No. 2 white, 79c. to 80c., nominal; No. 3 white, 78c. to 79c., nominal; Manitoba oats (in store, Fort William)

No. 2 C. W., 815/c.; No. 3 C. W., 775/c. extra No. 1 feed, 775/gc.; No. 1 feed,

Barley .- (According to freights outside) malting, \$1.32 to \$1.34.
Peas.—(According to freights outside
No. 2, \$3.70 to \$3.80.

Buckwheat.—(According to freights outside) \$1.55 to \$1.58.

Rye.—(According to freights outside) No. 2, \$1.78. Flour.-Manitoba first patents in jute bags, \$11.50; second patents, in jute bags, \$11; strong bakers', \$10.60; Ontario winter wheat flour, according to sample in bags, \$10.05; Montreal; \$9.85; Toronto, \$9.80, bulk seaboard.

#### Hay and Millfeeds.

Hay.—Track, Toronto, No. 1, new, per ton, \$15.50 to \$16.50; mixed, per ton, \$13

Bran.—Per ton, \$35. Shorts.—Per ton, \$40; middlings, per ton, \$45 to \$46. Good feed flour, per bag, \$3.25.

Straw.—Car lots, per ton, \$8.50 to \$9.

#### Hides and Wool.

City Hides.—City butcher hides, green, flat, 20c.; calf skins, green, flat, 23c.; veal kip, 20c.; horse hides, city take-off, \$5 to \$6; city lamb skins, shearings and pelts, \$1.50 to \$2.25; sheep, \$2.50 to \$4. Country Markets.—Beef hides, flat, cured, 18c. to 19c.; deacons or bob calf, take-off, No. 1, \$5.50 to \$6; No. 2, \$5 to \$6. No. 1 sheep skins, \$2.50 to \$3.50. Horse hair, farmers' stock, \$25.

Tallow.—City rendered, solids, in barrels, 13c. to 14c.; country solids, in barrels, No. 1, 12c. to 16c.; cakes, No. 1,

14c. to 16c. Wool.—Unwashed fleece wool, as to quality, fine, 60c.; coarse, 58c.; washed wool, fine, 70c.; coarse, 65c.

#### Country Produce.

Butter.-Prices kept stationary on the wholesales during the week, selling as follows: Creamery fresh-made pound squares, 48c. to 50c. per lb.; cut creamery, 48c. per lb.; creamery solids at 44c. to 46c. per lb.; separator dairy, 44c. to 46c. per lb., and dairy 38c. to 42c. per lb.

Oleomargarine.—32c. per lb. Eggs.—New-laid eggs sold at unchanged prices on the wholesales during the past week, namely, 65c. to 70c. per doz.—but the cold storage variety again firmed slightly; No. 1's selling at 45c. to 46c. per dozen and selects at 48c. to 50c. per dozen.

Cheese.—New, large, 24c.;

24½c.; old, 30c. to 31c.; twins, 31c.
Poultry.—Live weight prices advanced during the past week. The prices now being paid to the producers being as follows: Chickens, milk-fed, 21c. to 23c. per lb.; chickens, ordinary fed, 19c. to 21c. per lb.; fowl, 3½ lbs. and under, 15c. to 18c. per lb.; fowl, 5 lbs and over, 20c. to 24c. per lb.; ducklings, 17c. to 19e. per lb.; geese, 14c. per lb.; turkeys, young, 25c. per lb.; turkeys, old, 22c. per lb.

#### Wholesale Fruits and Vegetables.

Apples.—Apples have been rather a slow sale, but owing to the scarcity of oranges, trade has greatly improved in the boxed varieties which sold at \$2.10 to \$2.75 per box. Ontario barreled ranging from \$3.50 to \$7 per bbl., according to variety and quality. Nova Scotias selling at \$4.50 to \$6.50 per bbl.

Potatoes.—There was a sharp advance in the price of both Ontario and New Brunswick Delaware potatoes during the week.—The Ontarios selling at \$2.20 and \$2.25 per bag and the New Brunswick Delawares at \$2.35, \$2.40 and a few at \$2.50 per bag.-This advance was mostly due to the cold weather reventing them being shipped in, and it does not look as if the higher prices would be permanent.

#### Montreal Produce.

Horses.—The market for horses is quite dull, and prices continued unchanged, as follows: Heavy draft, weighing 1,500 to 1,700 lbs., \$225 to \$275 each; light draft horses, weighing 1,400 to 1,500 lbs., \$175 to \$225 each; small horses, \$150 to \$200 each; culls, \$75 to \$125 each; good saddle

and carriage horses, \$200 to \$250 each.
Poultry.—Very little change took place following the holiday period, for the reason that the supply of poultry was not specially large. The weather was favorable for keeping, and the price not overly high by comparison. Turkeys ranged from 33c. to 35c.; chickens, from 25c. to 27c.; fowl, 19c. to 22c.; ducks, 26c. to

27c.; and geese, 22c. to 23c.

Dressed Hogs.—The market for dressed hogs continued quite firm, with sales of fresh-killed, abattoir-dressed stock at 26c. to 27c., and of country dressed at 241/2c. Demand for smoked and cured meats is light.

Potatoes.—Deliveries were very light, and the extremely cold weather made for higher prices. Green Mountains were sold at \$2 per 90 lbs., in car lots; while Ontario white potatoes were \$2, and red \$1.90 per 80 lbs., ex-store, in smaller lots. Green Mountains brought \$2.10 to \$2.20 for smaller lots.

Honey and Maple Syrup.—White clover comb was 19c. to 22c.; brown, 17c. to 19c., and white extracted, 17c. to 18c. Maple syrup was steady at \$1.40 to \$1.80 per gallon of 13 lbs. Sugar, 15c. per lb. Eggs.—The severe weather cut off the supply of strictly fresh laid, and these sold at 60c. to 70c. Fresh eggs were still quoted at 54c. to 55c.; and fall fresh at 50c. to 52c. per dozen. Selected cold storage were 47c.; No. 1, 43c., and No. 2 cold storage 40c. per dozen.

Butter.-It is likely that the market will be affected by the active demand for margarine, which sells at 38c. to 40c. retail, as against present quotations of 44½c. to 45c. per lb. for finest and Sept. and Oct. creamery, and 1c. less for fine. Current makes of creamery brought about 42½c. to 43c., while dairies were 36c. to \$1.50 to \$1.75 each; horse hides, country 37c.

Cheese.—Buying Commission prices were 2134c. for No. 1; 2134c. for No. 2 and

2034c. for No. 3. Grain.—The market for oats was quite firm, though peace talk brought about a decline. No. 3 Canadian Western were quoted at 92c., and extra No. 1 feed at the same figure. No. 1 feed, 89c.; No. 2 feed, 86c. Ontario No. 2 white, 87½c.; No. 3 white, 85½c.; No. 4, 84½c. per

bushel, ex-store. Flour.—The market showed no change, being \$11.60 per barrel for Manitoba first patents; \$11.10 for seconds, and \$10.90 for strong bakers', per barrel, in bags.

Ontario winter wheat flour 90 per cent. patents, \$10.70 to \$11 per barrel, in wood, and \$5.20 to \$5.35 per bag.

Millfeed.—The market for millfeed was unchanged, with bran at \$35 per ton, in bags; shorts, \$40; middlings, \$48 to \$50; mixed mouille, \$56 to \$58; pure grain mouille. \$61 to \$62. mouille, \$61 to \$62.

Baled Hay.—Hay was in good demand, with No. 2 selling at \$14.50 to \$15.50 per ton, ex-track, and No. 3, \$13.50 to \$14.50, and clover mixed, \$10 to \$12 per ton.

and clover mixed, \$10 to \$12 per ton. Hides.—The market was steady at 21c., 22c. and 23c. per lb. for No's. 3, 2 and 1, respectively, Montreal inspection. Calf skins were 25c. per lb. for grassers, and 28c. to 30c. for veals. Horse hides, \$5 to \$6; lamb skins, \$4.50 each. Tallow, scrap fat, 3½c. per lb. Abattoir fat, 8c.; rendered, 16c. per lb. rendered, 16c. per lb.

#### Chicago.

Cattle.—Beeves, \$7.60 to \$13.50; stockers and feeders, \$6.60 to \$10.50; cows and heifers, \$5.20 to \$11.40; calves,

Hogs.—Light, \$15.50 to \$16.30; mixed, \$15.85 to \$16.45; heavy, \$15.80 to \$16.50; rough, \$15.80 to \$16; pigs, \$12 to \$15.25. Sheep.— Lambs, native, \$13.25 to \$17.20.

#### Cheese Markets.

Montreal, finest westerns, 2134c.; finest easterns, 21 1/4c.; New York, fresh, specials, 231/2c. to 24c.; average run, 23c.

#### Gossip. Sale Dates.

Jan. 29, 1918.—Victoria County purebred Stock Association, Lindsay, Ont .-Shorthorns and Herefords.

Feb. 23, 1918.—W. A. Dryden, Brooklin, Ont.—Shorthorns.

March 20, 1918.—Oxford District Hol-

stein Breeders' Club Consignment Sale, Woodstock, Ont.—Holsteins.

#### Coming Events.

Jan. 2 to March 22.—Factory Dairy Course—Agricultural College, Guelph.
Jan. 8 and 9.—Experimental Union, O. A. C., Guelph. Jan. 8 to 19.—Short Courses at Guelph

in Stock and Seed Judging; Drainage and Drainage Surveying: Business and Marketing; Poultry Raising.

Jan. 10 to 11.—Eastern Ontario Dairy-

men's Association, Annual Convention, Perth. Jan. 16 and 17. - Western Ontario

Dairymen's Association, Annual Meeting, Stratford.

Jan. 21 to Feb. 2.—Short Course, Farm Power, O. A. C., Guelph.
Jan. 22 to 25.—Seed Fair and Farmers' Week at Kemptville.

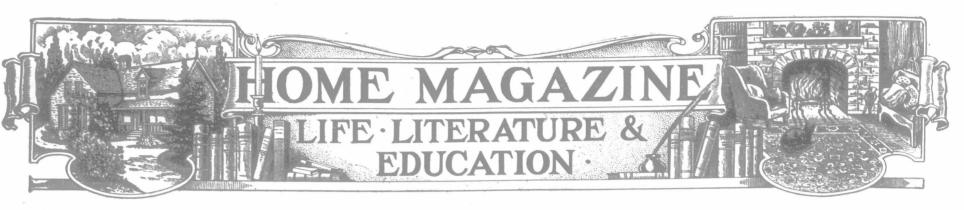
Feb. 4 to 8.—Live Stock Meetings. Toronto. Feb. 12 to 15.—Corn Show, Chatham,

Lord Halsbury, during one of his terms of office, had occasion to visit a certain lunatic asylum in his official capacity.
"I'm the Lord Chancellor," he announced to the attendant at the door.

The man looked at him curiously for

"This way, sir," he said, very firmly; "we 'ave three more of 'em in 'ere." Tit-Bits.

An Irishman out of work applied for a job at a repair shop. When the Celt had stated his qualifications, the manager began questioning him. Starting quite at random, he asked: "Do you know anything about carpentry?" "Sure." "Do you know how to make a Venetian blind?" "Sure, I'd poke my finger in his eye."-Selected.



#### "F" Company.

BY CLAYTON DUFF.

Along the iron road of war
A bright battalion wends
Beneath the sun, beneath the stars—
My Company of Friends.

The armies of the world go down
In dim, grey legions led,
But these are marked amid the host
As though they walked in red.

No Captain leads, no watchword's passed, No muster call is heard, But every morn I cry them "Hail!" With dawning wind and bird.

And every night when silence falls
Around the evening lamp,
Within my sheltered thoughts I light
The watch-fire of their camp.

They may not know the ranks they keep; Their ways lie far apart; They never meet except within The bivouac of my heart.

Yet in my love their lives are bound,
They march beneath my star—
My little company of friends
Upon the road to war.
—In University Magazine.

#### Travel Notes.

(FROM HELEN'S DIARY).

N the way back from Einseideln we made a little tour, going first to Lucerne, as Mrs. Shaw wished particularly to see Thorwaldsen's famous Lion. And apropos of the Lion, I have heard of some people who thought it was alive and kept in a pit, like the bears of Berne.

A wonderful work of art is this sculptured Lion, made more impressive by its isolation in a gloomy grotto with high perpendicular walls and over-hanging foliage. But I think it would be much more impressive if one could be taken to it blind-folded and thus escape the millions of grotesque reproductions of it which line the streets of Lucerne. The and is hewn out of the solid rock above a spring which forms a pool at the base of the high cliff. It is a memorial to the brave Swiss Guard of Louis 16th of France, who fell defending the Tuileries from the mob in 1792. The Lion is depicted in the agony of death, sheltering with its paws the Bourbon lily and the shield of France. In its side is the broken spear, and at its head the Swiss cross Beneath it are inscribed the names of the 26 Swiss officers and 760 soldiers whose devotion it commemorates.

There is something tremendously pathetic and soul-stirring about this tragedy in stone. Everyone feels it. So I was not surprised to see Mrs. Shaw mopping her eyes. But I was surprised when she apologized in a sob-choked veice and stated the cause of her tears. I was downright disgusted. For this is what she said:

"It makes me think of poor George." I did not ask her why. I did not want to know—not then. But afterwards—hours afterwards, the humor of the thing struck me and I began to wonder what mental process led up to her absurd remark. So I sounded her, cautiously—Oh! very cautiously indeed, and learned from her own frank admission that she didn't know herself. She said it just sort of came over her like a flood and she couldn't tell why, unless it was that George died from the effects of a wound in his side which he got when out hunting. Perhaps a psychologist could unravel the mystery.

Marvellous as is the Lion of Lucerne, it begins to pall upon one after a few days' residence in that town. It is so done to death for the tourist trade. The shops are crammed with big and little, good and bad, reproductions of it—in glass, in wood, in marble, in ivory, in gold and silver, one even sees it in Berlin wool, in sugar, and in butter. It is enamelled on jewelry, it is emblazoned on book-covers, it decorates letter paper—in fact, you can't get away from it unless you leave town. And even then it haunts you.

Lucerne is very German both in appearance and sentiment. You have to look all around before you make a remark there, as an enemy may be listening. In pre-war days it was a tremendously popular resort—but now, it is like a dead town.

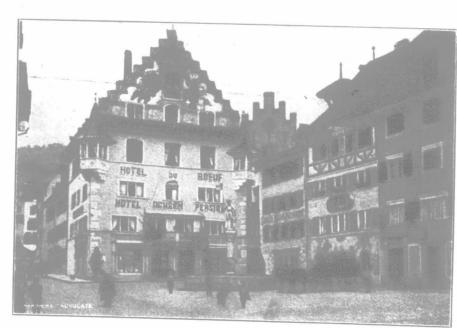
We spent three days there rainy days, so we had a fine opportunity to see the magnificent views for which Lucerne is famous, as the Alpine scenery is always most beautiful and impressive in showery weather. Owing to the frequent showers we spent considerable time on the two medieval bridges-most interesting they Each one is roofed, and decorated with historical paintings. The longest bridge has no less than 154 scenes from the lives of the patron saints of the town. Judging from the pictures, they must have been very determined, belligerant, and disagreeable old gentlemen and led very exciting lives. Each picture has explanatory text underneath, but owing to the fantastic lettering and peculiar German we could not decipher very much. When we got tired looking up we rested our eyes looking down on the rushing Reuss and watched the white swans floating upon its green waters.

But what interested me particularly in Lucerne was the German internes. We happened to be there on one of their "days" in town. They are not billeted in the town itself, but in various places in the neighborhood. There are a good many French and English internes

filled with German-looking womenknitting; fat, florid, round-headed men reading German papers;—and German soldiers. I could hardly believe I was not actually in Germany. The internes -with some exceptions of course-were a rough-looking lot, and their uniforms of which there seemed to be an endless variety, were ugly, both in color and in cut. Imagine a burly, red-faced Teuton wearing a uniform with rose-pink decorations! We saw very few lame or disfigured men among them, such as one sees every day on the streets of Vevey. The number of badly-set legs and facial disfigurements among the English and French internes is something appalling, due, they say, to the careless treatment received in German hospitals. We saw some German officers who were too gorgeous for words, one especially, was of an enormous height and fairly glittering with decorations. He walked as it he had a spinal column of iron, and looked as if he had been brought up on vinegar. Naturally weregarded the German internes with prejudiced eyes. Mrs. Shaw absolutely refused to sit down in the park near them, which I thought was going a bit too far, especially as the music was excellent, and there was a sunny bench beside us empty, and we were both foottired. Anyway, this is a neutual country and we are supposed, in fact, requested, to keep our feelings to ourselves. But Mrs. Shaw seemed to think it was more patriotic to stand—so we compromised she stood up and I sat down. I can be quite as patriotic sitting down. However, she put one of her parcels on the seat—she had been buying a few little things—and then, forgot it and left it there It was a paper bag full of cake.

We were about twelve trees distance when she missed it. We turned back, and lo! on the bench I had just vacated were four German soldiers eating Mrs. Shaw's cakes!

She was furious, the kind of "mad" they call "hopping". But it seemed to me to be considerable of a joke.



The Hotel at Which We Stayed at Zug, Switzerland.

in Lucerne at the various hospitals therealso Germans. In order to avoid unpleasant encounters on the streets the soldiers of the Allies and those of the Kaiser take their outings on alternate days. Sunday is prohibited to all. The only-dry and sunny half-day we had in Lucerne happened to be a *German day*, and every boat and train that arrived was crammed with German internes. The whole town seemed to have a beery oder that day.

We strolled along the quay in the morning. A band was playing German music in the park. The benches were

ZUG was our next stop—a quaint little village, with queer medieval buildings and fountains and towers, and a little lake all to itself—the lake of Zug.

And sunsets! magnificent sunsets! When we engaged our rooms the proprietor said to us: "You must see our sunsets." Just as if Zug had ordered them in advance. The hotel in which we stayed was a partiarch, dating from 1480. The walls were several feet thick, the ceilings low and made of wood much decorated, and the outside of the building covered with historical paintings.

We remember Zug especially for a number of reasons, apparently quite unrelated: we had the best bread and butter there, and more of it, than any other place we visited, (in these wardays this means something); we had perfect weather—golden autumn days; and we were serenaded Sunday morning about five a.m. by a group of men singing delightfully beneath our windows. (The explanation was that the men belonged to a singing society and were having a practice before taking an early train). And then, of course, those marvellous

And then, of course, those marvellous sunsets—doubled by the mirror of the lake.

ROM Zug we went to Zurich. Z's are thick in this section of Switzerland. Zurich was so full of hooked noses of German extraction, and seemed so noisy and dirty, we were glad to get away. The late King of Greece—Constantine—is making Zurich his headquarters now, and the city is quite puffed up over it.

Then to Solothurn, otherwise Soleure, otherwise Soletta. Take your choice. It's all the same place, but has three names, German, French and Italian, like most of the other places in this trilingual republic. It's very confusing to strangers, especially when buying railroad tickets. You may buy a ticket for Bern (German), Berne (French), or Berna (Italian); for Luzern, Lucerne, or Lucerna; for Basel, Bale, or Bazelia;—that's easy guessing. But when the name changes entirely, which is quite often the case it is most puzzling to travellers.

Solothurn is said to be the oldest town this side of the Alps, with one exception—Treves, in Germany. It was once a Roman city; bits of the old fortifications may still be seen.

There isn't a street car in Solothurn, so we proceeded to the Hotel Kronestarred by Baedeker—on foot. We entered. It looked rather strange; no genial proprietor rushed to welcome us in the usual enthusiastic Swiss manner. There didn't seem to be any proprietor. There were a good many Swiss soldiers standing about, and they stared at us rather queerly. We looked into a room or two—Swiss soldiers everywhere, so we modestly retired to the street and discovered, from various signs on the building that the Hotel Krone was occupied by Swiss soldiers. In fact, the whole town seemed to be full of them. They were even in the Cathedral-not praying, but sight-seeing. Every little while a military automobile would dash along the stony street with a thunderous

There are a number of big military hospitals in Solothurn where the Swiss soldiers are treated, and some one told us the hospitals were full of patients.

ROM Solothurn we went to Morat, or Murten, or-whatever its Italian name is. Morat is particularly interesting historically because it has an ancient wall in good preservation, with gates and towers, etc. It is haunted by artists who delight in the quaint old architecture and the picturesque arcaded streets. We liked it too—as a picture, but we left there for reasons intimately connected with the nose. couldn't stand the ancient smells. We stayed in a hotel which was part of the city wall, and I don't think the building had ever been disinfected since 1476-or thereabouts, when there was a terrible battle there.

What was it Mrs. Shaw lost in Morat? Something—but I can't remember what. She lost so many things.

Then to Avenches, now but a little picturesque village, but formerly a brilliant Roman capital. The Romans took possession of this part of the country in 58 B.C. At that time it was called Helvetia, and Avenches was called

JANU.

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Aventicum. It was then a city of 50,000 inhabitants. It was surrounded by a high wall, with 80 towers, many gates, and was strongly fortified. It had temples-the Temple of Apollo, the Temple of Victory, the Temple of Aventia (the local goddess), and many others. There was a forum, and theatres, and magnificent palaces.

Portions of the old wall are standing to-day, and there is one solitary column -all that is left of the temple of Apollo. There is a theatre in perfect preservation, and there is a museum filled with ancient Roman "dug-ups" found in the neighborhood of Avenches. Only last spring, a farmer unearthed five exquisite statuettes of Roman deities in a field near the village. These statuettes are in perfect condition—absolutely flawless, which condition—absolutely flawless, which seems remarkable when one considers their great age.

Perhaps in a thousand years or so people will be digging up art treasures in Belgium—treasures which have escaped the barbarous Huns.

#### Have-You-Heard

That we are to have only one lump of butter a day?

That we are to have less bread?

And no desserts? That the ''undesirables'' are going to

be interned or made to work? That there are 4,000 young men in Geneva without any visible means of support?

#### The Pleasures of Life.

E must apologize for stealing the above title from Lord 4 charming book. The more so that we were of those who were inclined to think when that little book was published that it was easy for him to be an optimist, we on the other hand being of those whom the poet describes as:

"An ill-used race of men who till the soil, Sow the seed and reap the harvest with enduring toil,

Storing yearly little dues of wheat and wine and oil."

Yes, and after all the "enduring toil" arriving at just sufficient to make one gon on, while the other side of life was the only one with which Lord Avebury was acquainted. He was a rich man's son and in the matter of original endowment he had five talents for his share. His health was sound, his moral nature well balanced. He grew up and lived among highly-educated people, not 'smart society but society by birth and intellect of the highest class. Above all his inclination led him to one of the most tonic studies the human mind can engage in, natural history. If, thus favored, he attained to happiness, why should not orld know about it as part of the total life of man? But it ought also to know of the misery of the unfortunate as the other side of life, so that by taking the bright and dark together we may approximate a correct estimate of what life really is. Yet when Lord Avebury was reminded that he only knew the bright side of life and how favored he had been, he replied, "Well, I am naturally of a rather melancholy temperament.". So it is evident and all the more creditable to him, that he kept his black moods to himself and gave his sunshiny ones to the world, for in this age we want as much optimism in literature as we can get; there is no fear but that the pessimistic element will take care of itself.

This confession of the author of the Pleasures of Life, that he was temperamentally melancholy proves one thing, that the most favorable circumstances and the finest natural endowment in the way of brains cannot bring happiness. People tell us sententiously that "money is not everything", and we are at times, when we feel that we never have had nor shall have as much as we desire and deserve, ready to reply with the Yankee. "Well, no, not everything, only 98 per We are inclined even more to envy those who have been endowed with genius, but all of us know or have read that the cleverest and most gifted people of all time have been the most unhappy.

Let us take for instance our greatest living novelist, Thomas Hardy. He has not yet achieved that depth of pessimism which is reached in an old book with which we should all be more familiar.

THE FARMER'S ADVOCATE.

"I praised the dead which are already dead, more than the living which are yet alive. Yea better is he than both they, who hath not yet been, who hath not seen the evil work that is done under We think the writer of these the sun." words, beautiful in themselves, has touched bottom, that there is no lower depth he can sink to of unbelief or despair. The earth is an inferno, and the heavens filled with blackness, he does not even remember that the stars are still there if he could see them. Death and oblivion are his best hope. Thomas Hardy has not equalled this, though doubtless he has done his best, but what we have cause to object to in his and some of his followers' fiction is that it gives a wrong impression of England and the English people. One of his admirers writes

is being given by our brave soldiers, and a Frenchman writing to an English officer gives very forcibly his views on this very subject. "Before the war I tried to understand the English so far as a man could who does not care for travel and is content to study a people by its works. I had read those books which in France we believed to represent the best of what modern England was writing. Modern England to me was a very sombre country. I saw it always in my mind with those grey wet skies that we used to think (and in that no doubt, we were wrong too), as the habitual sky of England. There were heavy storm clouds always low over. England where Mr. Hardy's tragic figures stepped bravely enough to their doom; and an unbroken grey sky over that troubled,



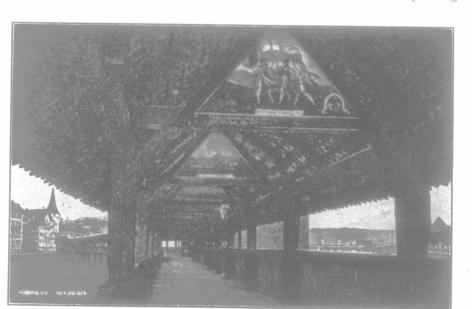
The Lion of Lucerne.

that Mr. Hardy writes a story of country life, containing a murder, seduction, desertion, etc., and with the fine cynicism of which he is a master, labels it, "Far from the Madding Crowd." Things are all as one takes them. We have read this beautiful story of the love and life of Gabriel Oak the Dorset Shepherd and Bathsheba, and have forgotten all these horrors. Indeed the story has in our opinion almost justified the existence of the Dorset ewe, an animal we never could admire, and Christmas lamb which is unnecessary and unnatural. Christmas is the time for roast turkey and the good roast beef of Old England, and whoso cannot content himself therewith should starve. This, however, is a digression; if Thomas Hardy was a fine cynic in those early days, he has developed into a good

unhappy, mismanaged England of Mr. Wells.

Then after this edifying reading our good British soldiers came to show this renchman what they are made of. He says he had never met in his reading any such men as he saw among our British soldiers. Here on the fields of France he met, not Mr. Hardy's tragic figures, stepped bravely enough to their doom, an unbroken grey sky over that troubled, unhappy, mismanaged England of Mr. Wells.

Then after this edifying course of reading our good British soldiers come to show this Frenchman what they are made of. He says he had never met in his reading any such men as he saw among our British soldiers—Here on the fields of France he met, not Mr. Hardy's tragic



The Old Bridge at Lucerne.

second-rate pessimist now. As to the people who dwell in quiet places "far from the madding crowd," let no man think that the elemental passions do not exist in equal strength under our cottage roofs. Tragedies there are aplenty for those who have eyes to see and hearts to feel them as Thomas Hardy has, but has he and have others who copy him in their attitude any right to send out these travesties of English life and character?

figures but the merry England that Shake. speare tells of, mud-covered soldiers singing their jolly songs, with their happy English voices and he adds, Sam Weller himself walking about in khaki, as judging from the pictures of another jolly soldier, Captain Bruce Bairnsfather, he undoubtedly is. Here is the the evidence of an eye-witness of the indomitable spirit of our men. Surely if anyone should be unhappy it is these dear lads, discomfort and danger on all hands. Yet off they We say No, very decidedly, but a go to their billets singing and joking better answer, because a practical one, arranging for sports as if they were not

engaged in the biggest game the world has ever known. Better than all, singing again as they go back to all the mud and horrors that life in the trenches means for them. They are giving a lesson to us and to the world which we pray God we may learn and never forget namely that the "pleasures of life" do not come to those who seek them. To prove this we have only to look at the aces of those whose object in life is to 'have a good time", fortunately a section of our community which is gradually decreasing.

Supply of the things.

Stories we read in the papers from time to time and hear from our friends of our soldiers at the battle front and in hospitals are now in these sad days among the greatest pleasures of our lives. One we rejoiced in lately was an incident related to us of one of the young heroes of Vimy Heights, a Canadian Kiltie. It appears that Scottish Highland Regiments had suffered severely there and many good men had lost their lives. This Canadian boy was wounded, but most of the wounded are cheerful and happy. A Scottish lady visiting him praised, as was right, the splendid bravery of him and his companions, and he replied, like the courteous gentleman he is, that it was one of his pleasures as he lay there to think that the "Canadians had been able to avenge some of the death and suffering that their Scottish brothers had experienced on the same ground."

We can send fine gentlemen to the battlefield it seems as well as good soldiers. It must be a pleasure to us all to know that we have given such fine young speci-mens of gallant manhood to represent Canada in the world war, for this surely is the greatest achievement we have yet made, the greatest any nation can boast of. Our wealth is still in the making but we can wait for it for we have already something far more important and which we must learn to prize at its proper value in the fine and chivalrous youth of our nation.

#### Finding Out What One is Good For.

By "The Owl".

Paper V.

THEN a doctor is called in on a "case", the first thing he does is to make a diagnosis, in other words find out what the disease is. If his diagnosis is wrong the case is not likely to progress very well. If the patient recovers it is in spite of and not because of his treatment.

Now it seems to me that children starting in life are just so many "cases" Each is good for something, and upon the diagnosis of his case depends, to a great extent, his future usefulness and happiness in the world. Yes, happiness, too, for no man or woman is truly happy if not very niche for which she was made.

Here is a man whose mental calibre, tastes and temperament fitted him to be a farmer. His mother, however, was "ambitious", and so she pushed and pulled him into "the ministry". The result is that he is a most indifferent preacher, never enthusiastic himself, never arousing enthusiasm in his people. He just jogs along.—But should a preacher ever just jog along? He is not extra happy.—Should not a true preacher be one of the happiest men in the world?

—feeling pain often, perhaps but happy
in the great joy of realizing the importance

of his work A good farmer lost, a poor preacher taking up the place that should be occupied by a better one.—And all because one foolish woman was "ambitious" in the wrong way, not perceiving that one may be ambitious for "the land" as well as for the church, and that an expert tiller of the soil may be, just as well as a good minister, one of the noblest figures in the world.

TERE, again, is a miserable, unhappy, unsuccessful farmer, who sits, often on a fence, and whittles a stick, and wishes he were yonder in the town working in a shop. He always wanted to be among machinery and people. This alone life on the farm never appealed to him. He has not patience to find out the things that must be found out if one is to be a good farmer. In short he has no talent for it, and so he wastes his life, to a great extent, because, somehow, he was forced on a

farm when his place was not there at all. Again, a poor farmer gained, a master mechanic, perhaps, lost.

If the youth feels within him the urge of great ability in other lines, the result is similar. The great lawyer or statesman or doctor, nipped in the bud and forced to stay on the land, may do the work well, but it will always be somewhat sullenly and half-heartedly—no joy in it. Compare him at any time with the real farmer, "over the fence", who loves his work and enjoys every minute of it, goes whistling to the field in the morning, reads every screed he can find on agriculture and stock-raising, is never happier than when talking over the crops with a neighbor, of an evening;—compare the one young man with the other and surely the moral will appear.

After all we do best what we do happily, best, at least, so far as our own lives are concerned,—these strange lives of ours, made up of such an odd jumble of character, opportunity, work and aspiration.

DUT it is so hard to find out what some boys and girls are good for."
Right, you are. Possibly one child in a hundred shows, from the very first, a marked bent for anything.

It seems to me that, for this very reason, the opportunities for observing the bent of children should be considerably widened, even in the public school. For instance, in the rural schools, there should be, in addition to the essentials for all education, such branches as the following:

Agriculture—really taught by someone who knows, not by a teacher of seventeen who has merely picked up a smattering on a 6 x 8-foot plot in a Normal School garden. If there is no other way, why not secure the best farmer in the neighborhood for an hour a week and pay him for his services? It might be inconvenient often, for him to spare that hour, but he owes something to his country. Under his direction the teacher might carry out the rest of the lessons in agriculture including the use of the school garden.

Domestic Science and Manual Training:
Surely the time will come when every rural school will have a warm, light, airy, well-equipped basement, in which these subjects can be taught. There may be boys in the school who are the "makings" of master builders, great civil engineers, inventors. Give them a chance to find out what they are good for, and don't make farmers of them if they will only hate farming.

Art—One cannot be much in favor

of the teaching of "art", as it is usually taught in the public schools. Not one teacher in ten thousand is an artist herself. But it is quite possible to have books in the school, showing the work of great artists; also models to be set up for the pupils to draw or paint. The teacher who is not an artist may quite possiby be able to recognize genius in art when she sees it.

Medicine, etc.—In the school library, too, there should be books on anatomy (illustrated), books on first aid, nursing, electricity, in short on any and every subject that deals with life. These may serve as reference books for the whole section, but still better may help the teacher to find out what the boys and gills are good for. By observing the class of books that a lad takes down in "spares" again, and again, and again, she can, nine times out of ten, gauge what he is interested in. Her next duty is to talk with the parents and see what can be done about if.

ONEY? Yes, all this costs money.
But what are the boys and girls worth?—Put them into their right spheres and they will not only make money—but so much more than that—for themselves and the world.

Of course everything cannot be done at once, but even ten dollars every year may be made to do wonders. It is "up to the teacher", assisted by a committee of the wisest people in the section to see how it can best be expended. Next time The Owl will endeavor to give some suggestions in regard to this.

# House Plants. Part IV.

F length of bloom is a requirement, the first place should assuredly be given to Hydrangea Hortensis, whose great clusters of bloom appear in summer and last for months, first pink but changing later to a pale green.

The plant will grow in any rich garden soil, if kept from the hot sun and watered frequently. It should be given plenty of root room. Late in fall gradually withhold water, and put the plant in the cellar over winter, keeping it rather dry until spring, when it should be repotted and cut back to one or two pairs of buds. The best soil for repotting is composed of loam leaf mould and sand with a little dried cow manure. During the growing season give liquid manure occasionally. If preferred the plants may

be set out in the open ground, but in a slightly shaded place in summer. New plants may be started from cuttings in February or March.

Impatiens Sullani—This plant, ordinarily and incorrectly called "patience plant", is really a balsam, a cousin of the garden balsams and the beautiful little swamp flower known as "touchme-not", or "jewel weed". It is easily frozen, but otherwise is very easy to grow, doing best when not exposed to bright sunlight, and in a light soil. Give plenty of water and shower the foliage every day to prevent red spider.

Jerusalem Cherry (Solanum pseudocapsicum) is a very pretty little plant with tiny white flowers and red berries, grown in the same way as geraniums. After the berries disappear rest the plant for a while, and in summer plant it out in the garden, taking it up carefully in fall.

Otaheite Orange.—A handsome dwarf orange that may be grown in pots; has fragrant pinkish flowers followed by beautiful edible oranges. Rest the plant in late fall and early winter, giving just enough water so that the leaves will not drop, then move to a sunny place with warmer temperature.

India Rubber Plant.—Belongs to the fig family. In its native country grows large, and is one of the best sources of rubber. Very easily grown as a house plant. Start in small pots, shifting to larger ones as necessary. In the summer it may be planted out in the garden if preferred. Give plenty of water and, occasionally, some liquid manure. New plants may be started in this way: Make an incision in the stem of a branch, and insert a match or something to keep the wound open. Bind some moss about the place and keep it wet. When roots have developed in the moss cut off the whole shoot and pot it, putting a little wax over the cut end of the old plant. If scale appears apply an insecticide—e. g. firtree oil solution.

Ivy.—English Ivy, if one cares for vines in the house, is greatly to be recommended, as it grows well, stands dust and hot air, and will flourish in shaded parts of the room. Give ordinary soil, enough water to keep it moist, and liquid manure once a week. Wash the foliage occasionally to prevent scale, scrubbing the stalks with soapsuds.

with soapsuds.

Oxalis sometimes called Shamrock.—
Bulbous or tuberous herbs, easily grown.
Give abundance of water until flowering season is over, also a little liquid manure.
Afterwards rest the plants, giving less

and less water, and finally laying pots on sides until next season. Start the roots again in August or September.

Pelargonium.—Handsome plant of the geranium order. Cuttings should be started in said, and when rooted potted in soil that is not too rich, else spots are likely to appear on the leaves. The best soil is a good clay loam without manure. Shift from pot to pot as the plant grows and the pot becomes filled with roots, packing the soil in firmly. When the plants are large enough for a 6-inch pot give manure water occasionally. During the hot months do not expose to too bright sunshine. Do not syringe the foliage or flowers, and do not give too much water at any time or spots may appear on the foliage. In dead of winter give very little water, increasing the allowance in February and March. Keep in slight shade when in bloom. The Pelargonium peltaium or Ivy Geranium, a climber, is a very handsome plant for the home and may be trained on a trellis.

#### Dressing Well on Little.

THE woman who always looks well dressed on a moderate expenditure is invariably the one who chooses conservatively-things that are always more or less in fashion. Among these are the perfectly plain suit, the plain long coat, a pretty sweater coat, and a rather plain hat in sailor shape, or, for an older woman, a plain small hat on something of the turban order. She chooses good material, has it well made, even though the cost is considerable, and wears her things a long time. Of course, if she is very clever at sewing, she may make even her coats herself, but she will be very particular about the linings and the finish, pressing all seams very thoroughly.

But the well-dressed woman always keeps her clothes well pressed. It makes a great difference in their appearance.

In dresses, as well as coats and suits, the woman who "looks well on little", finds economy in plainness. She insists on material that is "good", but spends no money on trimmings, which after all, seldom lend much real beauty to any garment. Perfect fit, lines suited to the figure and becoming color, count for so very much more. Of these things she makes a study; it pays. As a rule she keeps rather constantly to one color, the one that suits her best. This is the plan adhered to by the French women, of whom one who has known much of them in France says:

"The French woman sits down and counts the cost; plans out her clothes according to a scheme of color; one year perhaps she prefers blue, the next green, but whichever it may be all is in harmony. She will get all the little accessories for her dainty toilet, the collars, the ties, the sashes, at the same time, knowing that in these trifling details the supreme taste and individuality of the woman reveal themselves. It is all a question of degree. The smart woman has more toilets, a greater variety of costumes, but the same severe electicism applies to all. The Frenchwoman would as soon dress at haphazard, or wear a bodice that did not fit and a skirt that did not hang, as she would give up her pretty courteousness, her grace of movement, her supreme 'coquetterie de femme.'"

If trimming is permitted at all, it is just a bit of good lace at throat and wrists, or the mere touch of handembroidery that gives distinction and color. Pretty buttons, too, are given place, but only where they are needed

place, but only where they are needed.

This woman also knows that collars are an important item, and that they cost considerably if bought ready made, so she makes them herself, of fine muslin, satin or Georgette crepe, finishing the hems with knot-stitch, or having them hemstitched at some store which has a machine for doing the work.

She also knows that clean, whole gloves and neat, well-kept shoes win half the battle of a refined, well-dressed appearance, and so she washes her gloves frequently, and keeps her shoes well polished. Even in winter she is likely to wear silk gloves (with double tips), as she has found that kid gloves are hard to keep clean and are likely to become stiff if the hands perspire.

When not in use her shoes are kept on wooden shoe trees or are stuffed with paper or rags to keep them in shape. Stockings are changed very frequently as



A House that Suggests a Home.
"Our dwelling houses should be built to last, and also built to be lovely."—Ruskin.

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this makes them wear better; the perspiration from the feet rots them. She takes care, too, not to let her shoes get wet, a calamity which is likely to make them spread.

Speaking of wet days-she is always provided with a raincoat and umbrella, for she finds that this also pays. A dress or suit once wet scarcely ever looks the same again.

Finally she makes all her old white shirtwaists over into underwaists and her old skirts into petticoats (if she has not already transformed them into bloomers for the small girl of the family, for whom, nowadays, bloomers invariably take the place of petticoats). The shirt-waists are quickly made into under-waists by cutting off the sleeves, lowering the neck, and finishing with narrow lace. The skirts only require to be washed, shortened, pressed, and finished with braid or a narrow frill.



How to Order Patterns.

Order by number, giving age or measurement as required, and allowing at least ten days to receive pattern. Also state in which issue pattern appeared. Address Fashion Department, "The Farmer's Advocate and Home Magazine," London, Ont. Be sure to sign your name when orderng patterns. Many forget to do this. See under illustrations for price of patterns shown in this week's issue.

When ordering, please use this form:-Send the following pattern to:

Name... Post Office.... County P ovince. mber of Pattern.... Age (if child or misses' pattern)..... Measurement—Waist......Bust...... Date of issue in which pattern appeared.....





9550 Surplice Bl 54 to 44 bust. Price 15 cts.

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# Hope's Quiet Hour

On Active Service.

A little book containing thirty short poems written by one of our Canadian soldiers, has come into my possession lately. It is bound in khaki paper, tied with red, white and blue; and the proceeds resulting from its sale will be given to Red Cross and Patriotic Funds. The little book would give pleasure to other soldiers, and perhaps some of you may wish to procure copies to send over-The poems are by Oliver E. Baillie; and copies may be obtained from his sister, Miss Baillie, 21 Lonsdale Road, Toronto-price 25 cents each. These versus come burning hot from the heart of a soldier—one of the first Canadian Contingent. They are well named, "On Active Service". I will quote a few lines:

The first poem, "The Call," expresses England's appeal.
"The nations had pledged their honor

That the lamb should not be shorn, When s shot rang round a startled world, And a scrap of paper was torn.

"Then roused Britannia proudly, And her glance flashed o'er the sea, 'Sons I have loved and cherished, Say, do ye stand with me?

"Will we show the Teuton bully That the bond of the blood holds true, Who toucheth the mother of lions, Toucheth the lions too?'

The next poem gives Canada's eager answer to the Call. One poem, "Quo Vadimus", is a free translation of some verses found in the kit

of an unknown German soldier. It sings sadly of the honors won by the German warriors-of the medals and crosses of

"Can a man have heart in the fighting When his children are starving behind? Surely we're reaping the whirlwind, We who have sown the wind.

"Babes of the mothers of Belgium, Slain in our drunken pride, Babes of the Lusitania, Sobbing beneath the tide.

"What have we done, Almighty? What are we going to do? Have we thought we dealt with an earth To find we must deal with You."

Then comes "A Song of the First Contingent", which tells of mountains and prairies, rivers and pines of Canada and then turns in homesick longing to loving hearts at home:

"Hearts that encircle us still with their

Love that is pure as the angel's above, Tender as pure, yet wondrously strong, To guide us aright, to hold us from wrong."

In "The Optimist" we see the spirit of the soldiers who persist in smiling when smiling is no easy matter. 'Were you ever up against it, with your

belt's last hole drawn in, And the shrapnel and the splinters flying round like merry sin, And you couldn't heat your rifle for the

high explosive's din, And you knew that things could get no worse, and then you had to grin?

"But if suppose you hadn't grinned, but just sat down to cry, And by shifting your position got a nice

one in the eye, Not 'a cushy,' or 'a blighty,' but a one that made you die, Don't you think the smile, or grin, or

laugh, were better than the sigh?'

When mention is made of those who were "so young to die", we see their souls going up to God:

"What matter if they've missed a day or Of life on this torn earth? Why should

we rue That early they have passed to their eward

Beyong those portals that we all must through?"

Here is a verse from one of the sterner poems, an arraignment of those who plunged the world into this agony of war.

"Kaiser, now you know it, war is easy made.

A madman is his palace can start the awful

trade; proud and powerful nation, secure within its might,

Can tear a scrap of paper and swear that might is right;

But peace is God's own gift to man, the world is in His care, And He will never pass with scorn the little people's prayer.'

No matter how terrible outward conditions may be this young soldier-poet never loses his inward peace. When he passed through the fire Christ was his close Companion. These lines were written in June 1916-at Ypres salient.

"Let not your heart be troubled, Trust in His tender care, Fear not the terrors of battle, Jesus Himself is there.'

Many of our soldiers are loyal subjects of the King of kings, and it is fine to have them as bold and outspoken in their loyalty to their Divine Master as Oliver Baillie. His faith may help other young men to believe in the Presence of their unseen Friend, so I hope some of our readers will procure copies from 21

Lonsdale Road, and send them to friends in the war zone.

EMILLS AND SU. O.

But don't forget to follow the little book with your prayers. None of us can tell how much good is being done every day by God's power working through the prayers of our Canadian women. One of these a reader of the

Advocate—once wrote to me:
"I have learned this, dear Hope, that just to steal away, if only for a moment, from life's many cares, just to look into His face, and to feel His Spirit answering to my own, lightens the toil and sweetens

labor, and puts a song in my heart."

One day two friends were conversing together, and one said that he was very unhappy because he had lost faith in God. The other man made no attempt to argue with his friend, but prayed continually for him—"Open his eyes that he may see." A year and a half later the friends met again, and the man who had lost his faith joyously declared that his life was now consecrated to God's service. How had his friend's intercession helped him to see the Light of the world? I don't know how prayer helps—but I do know, from my own experience, that more things are wrought by prayer than this world dreams of. We, also, are—or should be— on active service; and our Commander has equipped each of us with the mighty weapon of prayer. Are we using it, or is it rusty from disuse?

It is our thoughts and desires that speak loudest in God's ears. Words of prayer may be a mockery, if they are only lip-worship. "It is better to have a heart without words than words without heart."

DORA FARNCOMB.

Christmas Gifts for the Needy.

A constant stream of donations for the needy has poured into-and through the Quiet Hour purse this week. Two dollars came from Mrs. A., and five from a country Sunday School. A "friend" sent two dollars and another "friend" sent one. From M. V. M. came three dollars, from S. J. T. a dollar and some booklets for the "shut-in" and from Doris two dollars for the sick and lonely and a pretty card for "Hope" -who is, I am glad to say, neither sick nor lonely, but very grateful to her kindly and generous friends. The children of Mrs. S. sent three dollars (their year's savings) to brighten some poor children's Christmas. Many packages of papers for the hospital have also arrived, and a letter from a farmer's wife which made one feel even more happy than usual-and I am usually very happy,

I can breathe freely again, for the Christmas gifts you have entrusted to me have all gone out on their errands of mercy, except a little silver (which is keeping the Quiet Hour purse warm) and some papers and magazines which will have to wait a few days until I have time to pass them on.

I wish you all a very happy New Year.

Dora Farncomb, 52 Victor Ave., Toronto.

# The Ingle Nook.

[Rules for correspondence in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen name is also given, the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope ready to be sent on. (4) Allow one month in this Department for answers to questions to appear.]

One Thing We Must Do.

TANUARY 10th, and we are now well launched into the year 1918. We cannot look far forward into the mists of it, but of one thing we are sure: that again we must economize in our homes-if it be only to have more on hand when the next Victory Loan is called for-and that we must use every other kind of food possible to spare beef,

bacon and white flour for Europe.
When one speaks of "economizing in the homes" nowadays, however, one never means scrimping, especially in food. Scrimping in food means inefficiency; economy should mean the greatest efficiency; for it is very poor economy indeed that saves on food at the expense of strength. Real economy is expressed rather in the following quip, parodied by some wag and published in the "New

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To get her poor dog a bone; But when she got there

She found that the bone had been used by Miss Hubbard, her daughter, in making a tasty dish from yester-day's left-overs."

—A very good dish it might be, too, if the meat lacking from the bone had its protein value made up by beans, peas or macaroni, and the fat supplied by some left-over dripping.

After all, there is a real pleasure in making something really "tasty" out of scraps. If you don't believe it, just And for your help look at the list of left-over dishes described elsewhere in this Department. They have been picked up from many sources. If you have any original ideas for other dishes, made in the same economical way, you will be doing a real war-work if you send the recipes to our little corner for publication. So many thousands of women, you see, will have a chance to try

And now to another matter, which is affecting the most of you, I daresay, as wellas myself:

One month ago I bought four pairs of cashmere stockings. stamped "made in England", and the salesgirl assured me that they were the last of some old before-the-war stock, so I thought they would be all right. To-day they are every one in holes, —and they cost 75 cents and a dollar a pair, too. A year ago, I bought 6 pairs at 50 cents a pair, and they proceeded to go into holes at an even faster rate. Ten pairs of stockings, with a few pairs of old ones-and they will not last me two winters! In the good old days before the war, the same number would have put me through three winters, and then a little longer, with some extra

darning.

The clear conclusion is that they were all made of shoddy, just shoddy.

Of late I have heard many similar complaints in regard to woollen goods, and now comes W. W. Reynolds, an Ohio farmer, who adds to the cry in American Sheep Breeder, asking why there are no labels to guarantee us pure wool in our clothes. "Every bolt of woollens that leaves the maker's hands should have his name in it," he asserts, and we should all echo the words. Pure food is guaranteed by labels, why not clothing materials?

Let us raise a cry for this, and insist that it be done. It is not much trouble to look for the name of a maker on goods selvage,-and a dishonest maker will think twice before he puts it there. At present materials-and yarns for cashmere stockings-seem to be made largely of old rags put through some process to make them last over selling time, but little longer.

TUNIA.

#### Days and Nights Overseas.

Following this are extracts from letters written to friends by the daughters of "The Old Engraver", from whom articles have appeared from time to time in these pages.

The letters have been given us, ver kindly, by our old friend "H. A. B." who still carries on in her own busy way, many good works in this city.

We pass the extracts on to you, knowing that it is good for you, as for us, to learn how things are faring closer to the great struggle line in Europe. glimpses help us to realize better what the war really means-help us, a very little, to put ourselves in the place of those who are more directly in the track of that enemy which, were it not for that long Western line of our men in France and Flanders, would even be here upon us. Reading such things must surely open our purses the wider and make our needles fly the more quickly.

"I cannot tell you what these three nights have been like at all," writes one of the daughters (evidently a teacher, though married), from London. She is speaking of air-raids. "We are expecting them again to-night. Last night the warning came at 7.15, and we did not receive the 'all clear' call till about The firing was going on nearly two hours. Many people go into the churches now and sing hymns-they say they cannot hear anything then. St.

Bartholomew's Church had about 700

packed in the hall. . . "'Take cover' just sounded, so must stop for a little. I know my child is happy with you—

"Terrible time again, 7.15 to 'all clear' 11.15—Several bombs dropped about here—Zepp accompained by Taubes, some say. How true I don't know, but thank God we are safe. There is a big mist coming up now. I think the armoured car was running up and down here, it seemed so close. God help all the poor sufferers—This is the sixth night."

A second letter reads:

"How thankful all London was when the weather changed on Tuesday evening. We were down at St. Columba's, and the vicar invited all of us teachers to go into a dugout he had discovered in the vicarage. A bomb exploded just outside the gas works and wrecked houses, how many I do not know as I have not the nerve to see, although all the streets are in front of our school. the main road was carpeted with glass On Monday for three solid hours, with scarce five minutes cessation, the guns and the bombs were terrible. closed's :hool in the middle of the morning on Tuesday for the rest of the day, and were just in the middle of dinner when 'Take cover' came again. We heard the guns in the distance but they did not get to London. Wednesday night the placards said 'No air-raids to-night, Wind against them. Go to bed.' How grateful we are for the wind and rain I cannot tell you.

soft wood floors to make them look like hard wood. I have used Mar-not varnish on linoleum and found it excellent. Should the painted floors be first painted a "ground color", then stained, and then varnished. I imagine that is the proper process, but I am not sure.

Here is a recipe for bran muffins which I can recommend:

Two-thirds cup brown sugar, ½ cup shortening, 1 egg, 1 teaspoon soda, 1 cup sour milk, 2 cups bran, 1 cup white flour. Graham flour may be used instead of bran and then no white flour is needed. Thanking you in advance. Carleton Co., Ont. "HAZELDEAN".

You can use your handkerchief very nicely in a tray—a tray, you understand, for passing cups and saucers, or glasses, when serving luncheon at night or after-noon tea. Have a frame made of plain stained wood, something like an oblong picture frame, but strong, with a stout back and handles. Cut a piece of linen to fit the frame—white, pale green or old blue (khaki or blue "derry" or drill will do, also)-whatever will best match the handkerchief. Press the handkerchief well and tack it to the linen, so that it will be exactly in the center, either cornerwise or "on the square. Mount the linen in the frame exactly as you would a picture, with glass over it. Cover the back of the tray with green felt or very dark flannel, to prevent surface on which it may be laid.

If you go to any good hardware store you can get floor finishes, with all directions. Usually three coats are necessary, put on in proper order, first a filler, then a coat of light paint and finally the stain.

be used in stews, meat-pies or meatballs. Cover the bones with cold water, bring to a boil, adding any bits of leftover meat that cannot be used in any other way. Boil several hours then strain into a scalded jar, cover, and keep in a cold place. In summer the stock must be sealed boiling hot, just as one would do up fruit. With a jar of this stock on hand, soup may be very quickly made. Heated and seasoned it may be served clear for dinner. If wanted for supper any left-over cooked vegetables may be added to it, the whole boiled up, put through a ricer or colander, and served very hot with little dice of fried bread on top. More water may be added if necessary, and some bovril or catsup added to give a stronger flavor.

Use for Fat.-Keep every scrap of fat in a covered jar in a cold place, and when enough have accumulated put them through a chopper and put in a saucepan with enough cold water to cover. Let cook until the water has almost evaporated, then strain through a fine colander or ricer, pressing all the fat from the scraps. When this forms into a solid cake, lift it off, put it with any more fat or dripping that requires clarifying, pour a pint or more of boiling water over, add a teaspoon of salt and boil, uncovered, for an hour. Let cool as quickly as possible, then lift off the cake of fat and scrape the sediment from the bottom. Melt again to let all the water cook out of it, strain through cheesecloth and put away. This may be used for frying anything, and even for shortening. Fat that is too dark for cooking may always be used up, with a ten-cent can of lye, for making laundry soap.

Spider Toast.—Cut up stale bread

rather thick and butter, or spread with dripping, on both sides. Place in a dry hot spider over a rather slow fire and cover with a tight lid. When one side has browned, turn and brown the other. Serve very hot. Nice for supper.

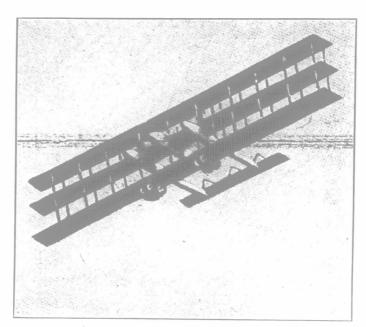
Bread Crumb Buckwheat Cakes.—Take 2/3 cup stale bread crumbs, 4 cups milk, 1 teaspoon salt, ½ cake yeast, 2½ cups buckwheat flour, 2 tablespoons molasses, ½ teaspoon soda. Scald the milk and soak the crumbs for 1/2 hour. Add salt, yeast and buckwheat flour, and let stand over night. In the morning stir in the molasses and soda melted in a spoonful of warm water. Beat well for a few minutes and bake on a hot, greased griddle like "pancakes." If needed for supper make ready in the morning. Serve with butter and syrup or jam. Buckwheat cakes, like foods made with oatmeal or suet, create warmth in the body, and should be used in winter.

Tomato Toast.— $1\frac{1}{2}$  cups canned tomato,  $\frac{1}{2}$  cup scalded milk,  $\frac{1}{4}$  teaspoon soda, 3 tablespoons butter, 3 tablespoons flour, ½ teaspoon salt, 6 slices stale Make a tomato sauce as follows: Mix the butter and flour, and cook, adding the tomato, soda and salt, then the milk, Toast the bread, cover with the sauce and serve very hot on warmed

Nut Pudding.-Meats from nuts to make ½ cup or more; 1 cup stale brown bread crumbs; 2 cups milk, 2 tablespoons sugar, 3 eggs, 1 teaspoon vanilla. the milk in a double boiler and add to it the crumbs and nut meats. Let simmer for 5 minutes, then take from the fire. When cool stir in the yolks of the eggs beaten with the sugar. Add the vanilla and the whites of the eggs beaten stiff. Pour in a buttered mould and bake for 30 minutes. Serve hot with fruit sauce or hard sauce. As nuts were very plentiful last year, most people have quantities of them on hand. They are a very valuable food because of their vegetable fat content, and should be used in cakes, nut-bread, pudding and salad, frequently, during cold weather. Eggs seem expensive to use just now, but it must always be remembered that they are very excellent food.

Baked Bean Soup.—Three cups cold) baked beans, 2 cups water, 4 cups stock or gravy, 2 slices onion, 3 stalks celery, 1½ cups canned tomatoes, 1 tablespoon catsup, 2 tablespoons butter, 2 tablespoons flour, salt and pepper to taste. Put the beans, chopped celery, onion, tomatoes, stock and water into a saucepan and simmer for half an hour. Rub through a colander. Add seasonings and thicken with the butter and flour melted together. When cooked enough serve hot with biscuits or bits of toast.

Croquettes.—Croquettes are an excellent way for using up any kind of leftover food such as cooked vegetables,



Caproni Triplane in Flight

Such is life in the portions of England most exposed to air-raids. The more we all help the sooner the horror and danger of it all will be over.

#### Re Souvenirs. Floors. Bran Muffins.

Dear Junia.—I have just received from my brother, who is on active service in France, a Christmas remembrance in the form of a dainty silk handkerchief, prettily embroidered and bearing the inscription, "Souvenir from France. It is very pleasing to the eye, but absolutely useless so I have been puzzling my brain to devise some plan by which I could preserve it and at the same time make it both useful and ornamental As the Ingle Nook seems to be a source of information for all I thought I would apply to you for a suggestion.

I once read something, somewhere which told how a bride might keep a souvenir of her wedding by embroidering a piece of the white satin, left from her wedding dress, and having it used, some how, in the bottom of a tray. I did not pay much attention to it and I do not clearly understand what kind of tray was meant, but the thought struck me that my silk handkerchief might be used in the same way. Did you ver hear or read anything about the matter or could you offer any other suggestion?

I would also like to know, if any one can tell me, of some good stain and varnish that can be used on old, painted

#### Cleaning Burlap.

Tell me please how to clean burlap? I have it in buff color in the kitchen and it is becoming soiled, would like to clean it or color it green. If you will help me in this you will greatly oblige. Lincoln Co., Ont. Mrs. A. A. S.

Burlap is usually painted with oil paint, when soiled. It is difficult to lean it otherwise without streaking it.

After it is painted it can be washed when To prevent the burlap from necessary. absorbing too much paint, first put on a filler of glue water and let it dry.

#### **Excellent Dishes Made** From Left-Overs.

Keep the Stock Jar Filled.—It is very easy, in winter, to keep a stock-jar always filled, so that you can have a delicious soup on short notice.—And, be it noted, soup should be used every day, either as a prelude to dinner, to set the gastric juices flowing and so aid digestion, or as a main dish for supper. At dinner only a little should be served to each person, and it should be thin. For supper it may be made as rich as you like, with the addition of milk, or vegetables, even as thick as a puree if you like it that way.—To make the stock, put any meat bones on hand in a pot, first cracking them in several places, pays to buy bones for this purpose and cut from them any meat that can

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meat or fish, used alone or mixed together. Even bread crumbs, rice or macaroni may be added. Really, when one knows how to make croquettes and stews not a scrap of food of any kind needs to be wasted. The foundation of nearly all croquettes is a thick sauce, either white or brown. Thick brown sauce is made with gravy, thickened with flour and cooked to the right consistency. Thick white sauce is made as follows: Put  $2\frac{1}{2}$  tablespoons butter in a pan. Stir until bubbling then add 1/3 cup flour, 1/4 teaspoon salt and a dash of pepper, stirring until blended. Gradually pour in 1 cup scalded milk and beat to a thick cream with a wire spoon. To this add the chopped meat, vegetables, etc., and spread on a platter to cool. When quite cold shape into croquettes. The mixture should be as soft as can be conveniently handled so they will be creamy inside. If liked the flavoring may be varied by adding cayenne, lemon, parsley, sage, nutmeg or celery salt. Take the mixture up, a tablespoonful at a time, and turn out on finely sifted bread crumbs, rolling each until covered with dry crumbs, then lay in a plate containing a beaten egg to which has been added a tablespoon of water. With a spoon pour the egg over the croquette, then take each out, roll in crumbs again and shape. If this is very carefully done the croquettes will not crack and the fat will not soak in. Now lay them in a wire basket and fry until slightly browned in hot fat, drain on brown paper and serve on a hot plate garnished with parsley, slices of lemon, or cress. Be sure to have the fat hot enough, and never have the croquettes too large or they will not be hot enough inside. Do not fry them in a draft or they may split. There must be plenty of fat to cover the croquettes completely, but as the fat should not soak in, very little of it is used, and it may be used over and over. Croquettes are pretty when made in little cones. Fry only about three at a time, keeping the cooked ones in the over until enough are done.

#### The Scrap Bag. Hint for Mending.

Ordinary embroidery rings will often be found helpful when mending, as they hold the goods in place while the darning is going on. Afterwards press well on the wrong side.

#### \* \* \* \* To Cook Cereals Well.

Put the porridge on the stove at supper time, let it boil, then let stand, covered, on the back of the stove all night. In the morning re-heat, adding a little more water if necessary. Cereals, cooked hurriedly, are indigestible; this all-night method cooks the starchy particles perfectly. If wood is used for fuel, and the fire goes out at night, put the boiling hot porridge in a fireless The cooker may be a box well-lined and padded inside, and filled with hay or excelsior. Put a woollen pad over the porridge pot, then close the box tight. The conserved heat will continue the process of cooking. \* \* \* \*

#### Canned Fruit Hint.

Canned fruit should be opened at least half an hour before serving and turned into a wide open dish. This will remove from it much of the "flatness" of fruit that has stood in cans. Lemon juice may be added to give snap.

#### \* \* \* \* Flavoring for Dried Fruits.

Dried fruits of any kind should be washed then soaked for several hours to restore the plumpness. Stew slowly in the same water, and flavor with lemon juice, nutmeg, cinnamon, almond extract or vanilla. Grated lemon or orange rind makes a very nice flavoring if added when the fruit is stewing. Add the sugar during the last half hour of cooking.

#### \* \* \* \* Saving Food Value of Vegetables.

Do not pour the medicinal properties of vegetables down the sink by boiling them and draining the water off. Steam them, or stew them with meat, or make them into a thick soup or puree to which milk may be added. If you do boil them use as little water as possible, and use the drained-off water for making soup.

Cold-Weather Laundry Hints.

A laundry convenience for cold weather, if the clothes must be hung out of doors, is a reel with removable lines. The lines are taken into the house, fastened to hooks put up for the purpose, and the clothes They are then put into are pinned on. basket carefully, carried out and hooked on to the reel. The lines must be short, however, as wet clothes are heavy to handle. . . If the clothes heavy to handle. . . must be hung on out of doors, heat the clothespins in the oven, and wear gloves made of old underwear and kept perfectly of salt in the bluing water will prevent the clothes from freezing before they can be put on the line.

#### \* \* \* \* Orange Juice.

J. H. Kellogg, in an article in Good Health, says that orange juice is a food that greatly helps digestion, and should be used more constantly than it is. It is to be recommended for use in many diseases, especially when there is fever. \* \* \* \*

#### Send Little Parcels.

Someone writing from the front about "the boys" says "send them little parcels and send them often," A moment's thought shows that this is better than to wait and send a large parcel. It is safer; then, who can estimate the joy that frequent remembrances can carry to the homesick lads? Of late whispers have gone abroad of rats in the ships and even in the post offices at home. To avoid possibility of loss in this way it is best to use tin boxes, padding the outside so that they will not punch holes in other parcels. Tin boxes, however, cannot be sent to Germany, nor any boxes covered with cotton.

#### \* \* \* \* Keeping Warm in Cold Weather.

A first essential in keeping warm in cold weather is to have a healthy, wellnourished body, and a stomach strong enough to eat heat-producing foods. Fats of all kinds, including suet and cream, are producers of heat. Oatmeal also is a heat producer, hence should be used considerably for porridge and oat-cakes in winter, even if given up during sum-. A second essential is to wear woollen underwear; a woman who goes about with Georgette sleeves and silk stockings in cold weather can scarcely avoid being exposed to changes of temperature that are disastrous. Every man and every woman should own, also, a warm sweater, which can be easily slipped on if the house becomes chilly, or worn under a coat when going out on an extra cold day. If one suffers from cold feet, woollen insoles (which may be cut from an old felt hat) should be worn, and when taking long drives the old-time device of putting hot bricks or a bag of hot sand in the sleigh is not to be despised. A further help is the plan adopted by many people who own motor cars, viz., to put a deep-padded pocket at the lower edge of the robe, into which the feet may be slipped. If one has a mind to go to the expense, one may, of course, buy a patented foot-A plan to keep the hands warmer. warm when taking long drives is to slip a hot baked potato, wrapped in a bit of flannel, in the muff.

#### \* \* \* \* Dish Washing.

Every housekeeper washes dishes, but very few wash them properly. To have really clean dishes—and to spare the good color of tea-towels—two dishpans are necessary, one for washing, the other for rinsing. In both put hot water, and to the one for washing add some ammonia powder or soap to cut the grease. Use a long-handled dish-mop for washing, to save the hands as much as possible, rinse the dishes in the clean hot water and dry quickly. Pots should be filled with warm water as soon as emptied, and left soaking. A little ammonia or washing powder added to the water will help. Scrape briskly with a metal scraper or "dish cloth", then rinse with a pot cloth. Never use the same cloth for washing pots that is used for the other dishes, but give the pot cloth just as scrupulous care.

The hen's a creature most perverse Her methods make me weep: She quits when she could fill my purse,

And lays when eggs are cheap.

#### A New Year's Reverie.

BY J. RAYMOND KNISTER.

The wind of winter's night comes sighing Through the white-trimmed cedars tall Through the wind-brushed cloud-mane

flying A full white moon, grandly sailing, lets fall

Light and shade to the prostrate earth. A rusty windmill's sudden loud complaining

Accentuates the utter dearth

Of sound. . . The light is softly shifting, waning, Now that the cloud-veil slips between; But a far, white roof is shining-That rat-tat-tat of "Emma Gee's" must

mean Another charge at dawn. The shrill whining

Of "Whistling Jimmy" is a torture to the Only to be outdone by the unavailing

Of the stricken, which, intermittently

heard, wear To the soul. But Time, as well as Death, flies: Over the bags at dawn! The weighing Life in hand, and flinging it past the low

. But now moonlight, Fear of fear. soft, allaying, Equal exposure makes of friend and foe.

#### L'Envoi.

Dear Lord, one moon looks down upon us! One ache consumes the hearts of all! And, though we err, do Thou not frown upon us,

But let us, tempted by rage-rent hearts to fall,

Cease for one day this fear-born hate, Lest the coming years deny The hope of peace, lest our most hoped-

Obdured by our wilful blindness, pass

1. Emma Gee-trench slang for machine

2. Whistling Jimmy—ditto for Howitzer

# Serial Story.

#### An Alabaster Box.

BY MARY E, WILKINS FREEMAN AND FLORENCE MORSE KINGSLEY.

By arrangement with McClelland, Goodchild & Stewart, Publishers, Toronto, Ont.

Chapter IX.—Concluded.

"I am going out to see if I can catch that Orr girl this afternoon," she explained as she took a seat beside her sister-in-law. "She ought to want a copy of Famous People—in the best binding, too. I ain't sold a leather-bound yit, not even in Grenoble. They come in red with gold lettering. You'd ought to have one, now that Henry' business by the minute. I should think you might afford one, if you ain't too

"Mebbe we could, Lois," said Mrs.
Daggett amiably. "I've always thought
I'd like to know more about famous people: what they eat for breakfast, and

people: what they eat for breakfast, and how they do their back hair and—"
"Don't be silly, Abby," Miss Daggett bade her sharply. "There ain't any such nonsense in Famous People! I wouldn't be cahvassing for it, if there was." And she lifted her pointed nose to one side with a slight, genteel sniff.

"Git-ap, Dolly!" murmured Mrs. Daggett, gently slapping the reins.

Dolly responded by a single swift esture of his tail which firmly lashed the hated reminder of bondage to his hind quarters. Then wickedly pretending that he was not aware of what had happened he strolled to the side of the road nearest the hay field.

"Now, if he ain't gone and got his tail over the lines!" cried Mrs. Daggett indignantly. He's got more resistin' strength in that tail of his'n-wonder

She leaned over the dashboard and grasped the offending member with both

"You hang on to the lines, Lois, and give 'em a good jerk the minute I loosen up his tail."

The subsequent failure of this attempt deflected the malicious Dolly still further from the path of duty. A wheel cramped and lifted perilously.

Miss Daggett squealed shrilly: "He'll tip the buggy over—he'll tip the buggy over! For pity's sake, Abby!' Mrs. Daggett stepped briskly out of the vehicle and seized the bridle.

"Ain't you ashamed?" she demanded sternly. "You loosen up that there tail o' yourn this minute!"

"I got 'em!" announced Miss Daggett, triumphantly. "He loosened right up." She handed the recovered reins to her sister-in-law, and the two ladies resumed their journey and their conversation.

"I never was so scared in all my life," stated Lois Daggett, straightening her hat which had assumed a rakish angle over one ear. "I should think you'd be afraid to drive such a horse, Abby. What in creation would have happened to you if I hadn't been in the bugg

'As like as not he wouldn't have took a notion with his tail, Lois, if I'd been driving him alone," hazarded Mrs. Daggett mildly. "Dolly's an awful Daggett mildly. knowing horse. nowing horse. . . Git-ap, Dolly!"
"Do you mean to tell me, Abby Daggett

that there horse of Henry's has took a spite against me?" demanded the spinster.
"Mebee he's a mindreader." she added darkly.

"You know I didn't mean nothin' like that Lois," her sister-in-law assured her pacifically. "What I meant to say was: got so interested in what you were saying Lois, that I handled the reins careless, and he took advantage. . . . Git-ap, Dolly! Don't you see, Lois a horse knows the difference when two ladies is talking.

"You'd ought to learn to say exactly what you mean, Abby," commented Miss Daggett.

She glanced suspiciously at the fresh striped muslin, which was further en-hanced by a wide crocheted collar and

a light blue satin bow.

"Where'd you say you were goin'
this afternoon, Abby?"

"Well, I should think Henry'd be
needing the horse for his business. I
know I'd never think of asking him for it—and me a blood relation, too, trying to earn my bread and butter tramping around the country with Famous People.

Mrs. Daggett, thus convicted of heartless selfishness, sighed vaguely. Henry's sister always made her feel vastly uncomfortable, even sinful.

You know, Lois, we'd be real glad to have you come and live with us constant," she said heroically. . "Gitap, Dolly!"

Miss Daggett compressed her thin lips 'No; I'm too independent for that, Abby, an' you know it. If poor Henry was to be left a widower, I might consider living in his house and doing for him; but you know, Abby, there's very few Orr has got a hired girl?

"Has she?" inquired Mrs. Daggett, 

Parsons on th' noon train yesterday. She brought a trunk with her, and her check was from

"Well, I want to know!" murmured Mrs. Daggett. "Boston's where she came from, ain't it? It'll be real pleasant for her to have somebody from Boston

right in the house. G'long, Dolly!"

"I don't know why you should be so sure of that, Abby," sniffed Miss Daggett.
"I should think a person from right here in Brookville would be more company. How can a hired girl from Boston view the passin' and tell her who's goin' by? I think it's a ridiculous idea, myself.'

"I shouldn't wonder if it's somebody she knows," surmised Mrs. Daggett. "Twould be real pleasant for her to have a hired girl that's mebbe worked for her folks."

"I intend to ask her, if she comes to the door," stated Lois Daggett. "You can drop me right at the gate; and if you ain't going far with your buggy-riding, Abby, you might stop and take me up a spell later. It's pretty warm to walk

"Well, I was thinkin' mebbe I'd stop in there, too, Lois," said Mrs. Daggett apologetically. "I ain't been to see Miss Orr for quite a spell, and—"

The spinster turned and fixed a scornfully, intelligent gaze upon the mild, rosy countenance of her sister-in-law.

"Oh, I see!" she sniffed. "That was where you was pointing for, all the while! And you didn't let on to me, oh, no!"

"Now, Lois, don't you get excited," exhorted Mrs. Daggett. "It was just about the wall papers. Henry, he says

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to me this Dolly!" mornin'— . . Git-ap,

"'Henry says—Henry says'! Yes; I guess so! What do you know about wall papers, Abby? Well, all I got papers, Abby! . . Well, all I got to say is: I don't want nobody looking on an' interfering when I'm trying to sell 'Lives of Famous People.' Folks, es a rule, ain't so interested in anything they got to prove the property of the papers. they got to pay out money fer, an' I want a clear field."

"I won't say a word till you're all through talkin', Lois," promised Mrs. Daggett meekly. "Mebbe she'd kind of hate to say 'no' before me. She's took a real liking to Henry. . Git-ap, Dolly. . . And anyway, she's awful generous. I could say, kind of careless; 'If I was you, I'd take a leather-bound.' Couldn't

"Well, you can come in, Abby, if you're so terrible anxious," relented Miss Daggett. "You might tell her, you and Henry was going to take a leather-bound; that might have some effect. I remember once I sold three Famous People in a row in one street. There couldn't one o' them women endure to think of her next door neighbor having something she didn't have.

"That's so, Lois," beamned Mrs. Daggett. "The most of folks is about like that. Why, I rec'lect once, Henry brought me up a red-handled broom from th' store. My! it wa'n't no time b'fore he was cleaned right out of red-handled brooms. Nobody wanted 'em natural color, striped or blue. Henry, he says to me, 'What did you do to advertise them red-handled brooms, Abby?' 'Why, papa,' says I, 'I swept off my stoop and the front walk a couple of times, that's all.' 'Well,' he says, 'broom-handles is as catching as measles, if you only get 'em th' right color!' . . Git-ap,

"Well, did you ever!" breathed Miss Daggett excitedly, leaning out of the buggy to gaze upon the scene of activity displayed on the further side of the freshlypruned hedge which divided Miss Lydia Orr's property from the road: "Painters and carpenters and masons, all going at once! And ain't that Jim Dodge out there in the side yard talking to her? 'Tis, as sure as I'm alive! I wonder what

he's doing? Go right in, Abby!"

"I kind of hate to drive Dolly in on that fresh gravel", hesitated Mrs. Daggett. "He's so heavy on his feet he'll muss it all up. Mebbe I'd better hitch out in front." out in front.

"She sees us, Abby; go on in!" commanded Miss Daggett masterfully. "I guess when it comes to that her gravel ain't any better than other folks' gravel.

Thus urged, Mrs. Daggett guided the sulky brown horse between the big stone gateposts and brought him to a standstill under the somewhat pretentious portecochere of the Bolton house. Lydia Orr was beside the vehicle in

a moment, her face bright with welcoming "Dear Mrs. Daggett," she said. "

so glad you've come. I've been wanting to see you all day. I'm sure you can tell me-

'You've met my husband's sister, Miss Lois Daggett, haven't you, Miss Orn? She's the lady that made that beautiful drawn-in mat you bought at the

Miss Orr shook hands cordially with the author of the drawn-in mat. "Come right in," she said. "You'll

want to see what we're doing inside, though nothing is finished yet. She led the way to a small room off the library, its long French windows opening

on a balcony. "This room used to be a kind of a den, they tell me; so I've made it into one, the first thing, you see.

There was a rug on the floor, a chair or two and a high mahogany desk which gave the place a semblance of comfort amid the general confusion. Miss Lois Daggett gazed about with argus-eyed

"I don't know as I was ever in this room, when Andrew Bolton lived here, she observed, "but it looks real homelike

now."
"Poor man! I often think of him," said
"Twould be turrkindly Mrs. Daggett. "Twould be turrible to be shut away from the sunshine f'r even one year; but poor Andrew Bolton's been closed up in State's prison fer-l' me see, it mus' be goin' on-

"It's fifteen years, come fall, since he got his sentence," stated the spinster. "His time must be 'most up."

Lydia Orr had seated herself in an

old-fashioned chair, its tall carved back turned to the open windows.

"Did you—lose much in the bank failure, Miss Daggett?" she inquired, after a slight pause, during which the promoter of Famous People was loosening the strings of her black silk bag.

"About two hundred dollars I'd saved up," replied Miss Daggett. "By now it would be a lot more—with the interest." "Yes, of course," assented their hostess. 'one should always think of interest in connection with savings.'

She appeared to be gazing rathes attentively at the leather-bound prospectus Miss Daggett had withdrawn from her bag.

"That looks like something interesting, Miss Daggett," she volunteered.
"This volume I'm holdin' in my hand,"

began that lady, professionally, 'is one of the most remarkable works ever issued by the press of any country. It is the life history of one thousand men and women of world-wide fame and reputation, in letters, art, science an' public life. No library nor parlor table is complete without this authoritative work of general information an' reference. It is a complete library in itself, and—"

"What is the price of the work, Miss Daggett?" inquired Lydia Orr. Just hold on a minute; I'm coming to '' said Miss Daggett firmly. "As that", said Miss Daggett firmly. I was telling you, this work is a complete library in itself. A careful perusal of the speciment pages will convince the most skeptical. Turning to page four hundred

and fifty-six, we read:—"
"I'm sure I should like to buy the book, Miss Daggett."

"You ain't th' only one," said the agent. "Any person of even the most ordinary intelligence ought to own this work. Turning to page four hundred and fifty-six, we read: 'Snipeley, Samuel Bangs: lawyer legislator an' author; born eighteen hundred fifty-nine, in the town of—'"

At this moment the door was pushed noiselessly open, and a tall, spare woman of middle age stood upon the threshold bearing a tray in her hands. On the tray were set forth silver tea things, flanked by thin bread and butter and a

generous pile of sponge cake.

"You must be tired and thirsty after your drive," said Lydia Orr hospitably. You may set the tray here, Martha.' The maid complied.

"Of course I must have that book, Miss Daggett," their-hostess went on, "You didn't mention the title, nor the price. Won't you have a cup of tea, Mrs. Daggett?"

"That cup of tea looks real nice; but I'm afraid you've gone to a lot of trouble and put yourself out," protested Mrs. Daggett, who had not ventured to open her lips until then. What wonderful long words Lois had used; and how convincing had been her manner. Mrs. Daggett had resolved that "Lives of Famous People," in its best red leather binding, should adorn her own parlor table in the near furture, if she could

"I think that book Lois is canvassing for is just lovely," she added artfully, as she helped herself to cake. "I'm awful anxious to own one; just think, I'd never even heard of Snipeley Samuel Bangs-Lois Daggett crowed with laughter.

"Fer pity sake, Abby! don't you know no better than that? It's Samuel Bangs Snipeley; he was County Judge, the author of 'Platform Pearls,' and was returned to legislature four times by his constitutents, besides being-

"Could you spare me five copies of the book, Miss Daggett?" inquired Lydia, handing her the sponge cake. "Five copies!"

Miss Daggett swiftly controlled her agitation.

"I haven't told you the price, yet. You'd want one of them leather-bound, wouldn't you? They come high, but they wear real well, and I will say there's nothing handsomer for a parlor table."

"I want them all leather-bound," said Lydia, smiling. "I want one for myself, one for a library and the other

"There's nothing neater for a Christmas or birthday!" shrilled Lois Daggett joyously. "And so informing." She swallowed her tea in short, swift

gulps; her faded eyes shone. Inwardly she was striving to compute the agent's profit on five leather-bound copies of Famous People. She almost said aloud

"I can have a new dress!"

"We've been thinking," Lydia Orr said composedly, "that it might be pleasant to open a library and reading room in the village. What do you think of the idea, Miss Daggett? You seem interested in books, and I thought possibly you might like to take charge of the work."

"Who, me?—Take charge of a library?" Lois Daggett's eyes became on the instant watchful and suspicious. Lydia Orr had encountered that look before, on the faces of men and even of boys. Everybody was afraid of being cheated, she thought. Was this just in Brookville, and because of the misdeeds of one

man, so long ago? "Of course we shall have to talk it over some other day, when we have more time,' she said gently.

"Wouldn't that be nice!" said Mrs. Daggett. "I was in a library once, over to Grenoble. Even school children were coming in constant to get books. But I never thought we could have one in Brookville. Where could we have it my dear?"

"Yes; that's the trouble," chimed in Lois. "There isn't any place fit for

anything like that in our town."

Lydia glanced appealingly from one to the other of the two faces. One might have thought her irresolute-or even

afraid of their verdict.
"I had thought," she said slowly,
"of buying the old Bolton bank building. It has not been used for anything, Judge Fulsom says, since—

"No; it ain't", acquiesced Mrs. Daggett perly, "not since—" soberly. She fell silent, thinking of the dreadful winter after the bank failure, when scarlet fever raged among the impoverished homes.

"There's been some talk, off and on, of opening a store there," chimed in Lois Daggett, setting down her cup with a clash; "but I guess nobody'd patronize it. Folks don't forget so easy. "But it's a good substantial building," Lydia went on, her eyes resting on Mrs. Daggett's broad, rosy face, which still wore that unwonted look of pain and sadness. "It seems a pity not to change sadness. the-the associations. The library and

reading-room could be on the first floor; and on the second, perhaps, a town hall, "For the land sake!" ejaculated Lois Daggett; "you cert'nly have got an imagination, Miss Orr. I haven't heard that town hall idea spoken of since Andrew Bolton's time. He was always

talking about town improvements; wanted a town hall and courses of lectures, and a fountain playing in a park, and a fire-engine, and the land knows what. He was a great hand to talk, Andrew Bolton was. And you see how he turned

"And mebbe he'd have done all those nice things for Brookville, Lois, if his speculations had turned out different,' said Mrs. Daggett, charitably. "I always thought Andrew Bolton meant all right. Of course he had to invest our savings; banks always do, Henry

"I don't know anything about investing, and don't want to, either—not the kind he did, anyhow," retorted Lois Daggett.

She rose as she spoke, brushing the crumbs of sponge cake from her skirt. "I got to get that order right in", said she: "five copies, or was it six, you said?"
"I think I could use six," murmured

Lydia. 'And all leather-bound! Well, now, I know you won't ever be sorry. It's one of those works any intelligent person

would be proud to own."
"I'm sure it is," said the girl gently.
She turned to Mrs. Daggett. "Can't you stay awhile longer? I—I should like—"

"Oh, I guess Abby'd better come right along with me," put in Lois briskly. and that reminds me, do you want to pay

something down on that order? As a general thing, where I take a big order—"
"Of course—I'd forgotten; I always prefer to pay in advance. The girl opened the tall desk and pro-

ducing a roll of bills told off the price of her order into Miss Daggett's hand. 'I should think you'd be almost afraid to keep so much ready money by you, with all those men workin' outside,"

she commented. "They're all Brookville men," said Lydia. "I have to have money to pay them with. Besides, I have Martha."

You mean your hired girl, I suppose inferred Miss Daggett, rubbing her nose thoughtfully.

"She isn't exactly —a servant," hesitated Lydia. "We give the men their noon

meal," she added. "Martha helps me with that.'

"You give them their dinner! Well, I never! Did you hear that, Abby? gives them their dinner. Didn't you know men-folks generally bring their noonings in a pail? Land! I don't know how you get hearty victuals enough for all those men. Where do they eat?"
"In the new barn," said Lydia, smiling.

"We have a cook stove out there. "Ain't that just lovely!" beamed Mrs Daggett, squeezing the girl's slim hand in both her own. "Most folks wouldn't go to the trouble of doing anything so

nice. No wonder they're hustling."

"Mebbe they won't hustle so fast toward the end of the job," said Lois Daggett. "You'll find men-folks are always ready to take advantage of any kind of foolishness Come, Abby, we must be going. You'll get those books in about two weeks, Miss Orr. A big order

takes more time, I always tell people."
"Thank you, Miss Daggett. But wouldn't you—if you are in a hurry, you know; Mr. Dodge is going to the village in the automobile; we're expecting some supplies for the house. He'll be glad to take you.'

"Who, Jim Dodge? You don't mean to tell me Jim Dodge can drive an auto! I never stepped foot inside of one of those contraptions. But I don't know but that I might's well die for a sheep as a

Lois Daggett followed the girl from the room in a flutter of joyous excitement. "You can come home when you get ready, Abby," she said over her shoulder. But you want to be careful driving that horse of yours; he might cut up something scandalous if he was to meet an auto.

(To be continued.)

## The Windrow.

Alberta Legislature will have two woman members in the coming session,
Mrs. Louise C. MacKinney of Claresholm, and Miss Roberta Adamson, a
returned nurse, sister-in-law of Hon. W. J.
Hanna, Food Controller.

\* \* \* \*

I notice that the chauffeurs are more careful to blanket their engines in cold weather than the drivers are their horses. The machine does not arouse compassion like the animal, but somehow it gets more care.—Our Dumb Animals.

Arthur D. Howden Smith, writing in the Evening Post, New York, notes that, because of the victories of British arms in the Holy Land, a Jewish Palestine is in sight, because the British Government has announced that it is in favor of the establishment there of an independent, self-governing, Jewish state. This will mean for the Jews the first home they have had since Hadrian destroyed the Jewish national existence in 135 A.

physician in the "Daily Mail", London, makes one more plea for slow eating. "Let the word 'hurry' be banished from the table", he says; the question is not how much one eats so much as how much he digests. "If we all ate our food properly, a fraction of what we are now eating would suffice for our needs."

In order to stimulate agriculture in Italy the Italian Government has been granted full powers for the requisition and distribution among the people of all the available lands for agriculture. and implements are to be supplied, also fertilizers and proper instruction. All expenses are to be paid by the Government until the land becomes profitable.

A wonderful violinist has again appeared in the world. He is not yet seventeen years of age, and is a Russian. His name is Jascha Heifetz. Of late he has been playing in New York, Chicago and other American cities, everywhere conquering the musical world. "There conquering the musical world, is only one Heifetz in a century," exclaims one enthusiastic admirer, those on earth, when such a phenomenon appears, have one more reason to be happy to be alive."

The largest herd of buffalo in the world is now owned by Canada. They form a picturesque group as they roam over the new national reserve set apart for them near Wainwright, Saskatchewan. Canadians recognized the need of action if the buffalo were to be preserved, and pur-

FUJI MICRO

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ED 1866

smiling. ed Mrs. m hand ouldn't hing so

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chased practically an entire herd of 600 or 700 from Montana. The herd was transported across the international boundary line by train from the Pablo ranch. The rounding up of these untamed animals and their young was no light task, and 150 of the most unruly had eventually to be left behind. An effort will be made to move these later.

Ukranian and Ruthenian farmers in Saskatchewan, in one hour subscribed \$10,000 to erect a Ukranian College.

Palestine is now twice as densely populated as the United States. It contains some 700,000 inhabitants, of whom the Jewish colonists before the war numbered only about 15,000.

Dr. Geo. J. Fisher, in an article in *The Independent* describing a number of experiments with tobacco using, states that smoking even a single cigar increases the heart rate and blood pressure. "As far as we have gone", he says, "we seem to be compelled to believe that smoking is not beneficial. The experiments were made upon men twenty-one to twenty far as well as a single cigar increase. twenty-five, of unusual physique, men accustomed to smoking and those unaccustomed; both groups were affected and in all the experiments there was a remarkable consistency in the character of the results obtained. The case seems to be against tobacco.

## **TheBeaverCircle**

#### That H8Ful Boy.

(A "figurative" rhyme.) 1 f8ful day a boy went 4th; His dog went 2, 4 fun; The dog 4stalled a Iton cat, Which 4thwith tried 2 run.

That poor at10u8ed cat Dashed str8way 2 a fence And sounds of 3fold rage and h8 Now eman8ed thence

"This chance I can't af4d 2 miss," The boy did specul8; 4thwith he threw 1 stone, which puss Avoided all 2 18. But some 1 now 2 his surprise At 1ce in view appears, And chides in 4ceful tones be9 That boy of 10der years.

"At10d 2 me," his teacher says,
"Why, I'm disconsol8!
I'll 40fy your 10der mind With 4titude, not h8."

But quite in4mally the boy Calls to his ca9 creature, And pointing 4th his 1 in 10t, He 6 him on the teacher.

Little Bits of Fun.

Pardonable Curiosity.—Rector after exposition of Sunday School lesson to infant class)—"Now, would any little

boy or girl like to ask me a question?"

A Terrible Infant—"Have you got on trousers under that nightgown?"—The Lamb.

A gentleman, who had called to see Mr. B., found his little son, Frank, in the library, rubbing his eyes and gaping. "Sleepy?" he inquired. "Um," grunted Frank.

"I suppose you usually go to bed with the chickens?" smiled the visitor.
"No, I don't!" snapped Frank. "I

have a little bed in my room all to myself." -Sacred Heart Review.

#### Senior Beavers' Letter Box. Wants to be a Boy Scout.

Dear Sir.—I am now twelve years old and wish to be a boy scout when I get old enough. How old should I be, what heighth? How much does the uniform cost, or do you get it free when you join? What do they do? Do they get paid for scouting or not? How do they drill? Do they use a gun? because I would always like to use one. Please answer as soon as possible because I wish to know.
Glamis. Ont.

W. GROVES.

The best way to do would be to get some grown man to start a Boy Scout corps right in your own neighborhood Preserves getting low?

Tide over the winter with

Everybody likes this delicious Table Syrup—and it's much less expensive than butter for the children to eat with bread.

At all Grocers-2, 5, 10 and 20 lb. tins- 3 lb. Glass Jars. Write for free Cook Book.

THE CANADA STARCH CO. LIMITED, . MONTREAL.

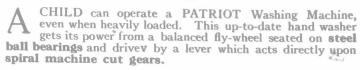
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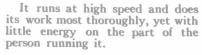
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ORN SYRUE

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Spiral Cut Gear Handy-Washing Machine





Three features make the PATRIOT the machine you should buy. They are

### High Speed **Ball Bearings** Cut Gears

smoothness in running and firstclass finish are other points you will appreciate.

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Cream Separators of Quality

## **FARM** FOR SALE

Sunnyhill Stock Farm, 300 acres

One of the finest grain and stock farms in Ontario, twelve miles from Lindsay, one mile from Grass Hill C.P.R. station, and two and a half to G.T.R. Close to church and school. Excellent water, including good well and spring creek. Fine dwellings, bank barns on stone foundation, good stables. May be sold all in one or divided.

Sealed tenders received up to February 1st, Further particulars apply:

Wm. Manning & Sons, Woodville, Ont., or Wm. Manning, 99 Pacific Ave, Toronto, Ont.

When writing please mention this journal we moved to Vankleek Hill, from the

or nearest village. He could write to Mr. H. G. Hammond Dominion Bank Chambers, Bloor and Shelbourne Sts., Toronto, (he is Provincial Secretary) for all information. A book called Scouting for Boys, by Baden Powell, will also help, and if you can't get it at your nearest bookstore write to T. Eaton Co., Toronto, about it, asking the price. There are many other books about Boy Scouts. Perhaps some of our Beaver boys can tell us about them.

CROMN BRAND

In the meantime I'm almost sure, you yourself will write to Gregory Rawlings, whose letter follows this.

Dear Puck and Beavers.—This is my third letter to your charming Circle. I have not seen either of my letters in print, but got courage to try again. My father has taken the "Farmer's Advocate" as long as I can remember. I always look forward to the day when the "Advocate" comes, as I like reading the letters.

Have any of the Beavers "Erector" sets? I have, and I like mine very much.

I have a No. 2 set, as it is large enough for me. I am going to school and try to go regularly. I am in Jr. fourth book. I like school fine. Our teacher offered a prize to the one in my class who got the highest per cent. in our examinations at Christmas.

Are any of the Beavers interested in Boy Scouts? I am. I enjoy scouting very much. If any of the Beavers are scouts, I wish they would write to me. I like reading very much. I have read many books such as "Limpy", Sam's Chance", and others. Isn't this war an awful thing. I hope it will end soon, so are having many of our hove think I will close now, as my letter is

getting rather long.
GREGORY RAWLINGS, age 11). R. R. No. 4, Petrolia, Ont.

P. S.— I wish some of the Beavers would write to me, as I will answer all

Dear Puck and Beavers.—It is a long time since I have written to you. I, wrote twice before and both letters were in print. I was out of school for two weeks with the chicken pox, but I am going back to school again. I am in the fourth book at school and intend to try entrance at mid-summer. I like all the subjects except Grammar. Our teacher is Miss Forster from London.

There were lots of hickory and beach-nuts this fall so the squirrels will have

a good winter's supply.

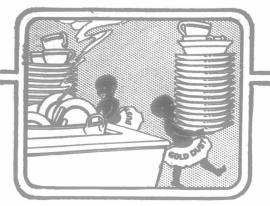
I am taking music lessons and have to practice half an hour every night.

I have read a great number of books but I like the one about "Uncle Remus" best of all. I also liked "Bad Little Hannah" and "Patsy", by Kate Douglas

Well I guess I will close. MARION SYMINGTON.

Dear Puck and Beavers.—I have been a steady reader of the "Advocate" ever since I learned to read, and enjoy the Beaver's letters very much. saw my other letters in print, I thought I might risk my third one. Last fall

JAN



# Will Gold Dust dissolve the grease?

Yes! And to discover how quickly Gold Dust dissolves the grease make this test. Take a batch of dishes—greasy ones. Wash them with Gold Dust, following the simple directions on the

See if Gold Dust doesn't remove the grease with surprising quickness. See if you don't save

Try one package of Gold Dust. See if you don't find it a superior cleaner for all dirt that you can't brush up or sweep off.

But look closely that it is Gold Dust you really get. It is for sale everywhere in large and small packages.

The Busy Cleaner



THE M.K. FAIRBANK COMPANY) LIMITED, MONTREAL



Eastern Townships. We are living on a farm, close to the town, of about one hundred and fifty acres. We have not a sugar-bush, which I miss very much. In the spring I used to go to the sugar camp, to watch them boiling the sap. For pets I have two dogs, and one cat. One dog I call Nornie. We say he is one of the family. We have kept him ever since he was a puppy. He is eight years and The other dogs. old. The other dog is a puppy six months old. I got him last spring, as a present. His name is MacMorgan, but we call him "Mackie" for short. He is learning to go after the cows, and he will draw my sleigh alone fine. Are any of the Beavers helping in any way for the soldiers? Our room gives at least one dollar and twenty-five cents a month. I give ten cents a month to buy bread for the prisoners. This year our teacher's name is Miss MacLaren. I like her There are a few cases of small pox on Vankleek Hill at present, so therefore we have been ordered to get vaccinated. Well I think this will be all for this time. Hoping this will escape the ever hungry

w. p. b. I will close with a few riddles.

What animal is a chain made of?

Ans.—A lynx, (link).

Brown I am, but much admired, many horse have I tired. Tired horse, tired men, guess this riddle if you can.

Why is K like a pig's tail? Ans.—Because its at the end of pork.

Patch upon patch without any stitches. Ans.—A cabbage.
I will close for this time.
MARGARET ALLEN, Sr. III, (age 11).

Vankleek Hill, Ont.

Dear Puck and Beavers.—My sister wrote to your Circle and as I found it in print I thought I would write, My father has taken the "Farmer's Advocate" for a long while. He stopped but he has started again and we like it very much. We would not be without it

#### Your VICTORY BOND

If you own a Victory Bond or any Dominion of Canada Bond you will want to read our

circular.

【 It tells you clearly and plainly all about them, -How to collect your interest-When it is due-How to buy and sell them, and other useful information.

■ We have a few extra copies for free distribution.

Write for circular 33 It will be sent you without obligation on your

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#### **Elmcrest Holstein Friesians**

Must sell within next two weeks regardless of price. No. I—Bull, large, strong, sure, born July 28, 1915. Dam's record, 31.54 lbs. 7 days; sire's dam 29.01 at four years, No. 2—King Teake = 19392=, dam, 30.78-lb. cow. Her dam 27.56 lbs. at 11 years. Sire's dam, Evergreen March, 110 lbs, milk 1 day, 29.45 lbs. butter 7 days. Mostly white, 4 years old, active, guaranteed sure, cheap. No. 3—Calf born March 1st, 1917, to our 24.26-lb. cow, sire No. 2. These animals are sound and right. No reasonable offer refused.

W. H. Cherry, (Bell Connection ) Hagersville, Ont.

Advocate Ads. Pay

for a good deal. My sister and I would both like to join your Circle. Does it cost anything? If so, how much?

My sister and I go to school. We have a mile to walk to school. My teacher's name is Miss Gourlay. I will close now wishing your Circle success. Here are some riddles.

Where was Moses when the lights went

nt? Ans.— In the darkness. Why isn't E. B. Eddy going to make matches any longer. Ans.—Because they are long enough.

OTIS BOUCHER.

R. R. 2, Stittsville, Ont. It costs nothing at all to join the Beaver Circle, Otis.—What a pretty name you have!—P.

Dear Puck and Beavers.—This is my first letter to your charming Circle. My father is dead. My brother has has taken the Farmer's Advocate for a year and we all like it. We have four geese; one is a pet. I go to school and I am twelve years old. I have read many story books. Some of them are: "Tales from the Farm-yard", Hansel and Grethel", "Thoughtful Joe." I have a lot of schoolmates. I guess I will close with a riddle. Hoping to see my letter

What is round as an apple, flat as a chip has four eyes and can't see a bit? Ans.—Button.

C. M. LOUDEN. Franklin Centre, Pro. Que.

Dear Puck and Beavers.—I have never written to your Beaver Circle before. I read the letters every week. I enjoy reading them very much. My father has taken the "Farmer's Advocate" as long as I can remember. I go to school every day and I have two miles and a half to walk every morning. I have three brothers going with me. We have to leave home at eight o'clock every morning to get there in time. We have a school fair every fall and I took a drawing of "Our Flag", and I took writing of "God Save the King". Our school made fifteen dollars and eightyfive cents this year. There was a great crowd at our fair. I won two races and got second prize for another race which is called "The Three-Legged Race". I ran with one of my playmates

IRENE THOMPSON, (age 11), Sr. III. R. R. No. 2, Clayton, Ont.

## Current Events.

Dr. William Wilfred Campbell, the poet, died at his home in Ottawa on January 1st.

Andrew Broder, ex-M. P. for Dundas Co., Ont., died in Morrisburg on Jan. 4th.

The Public Health Commission of Saskatchewan has announced that in future venereal diseases must be reported as are other contagious and infectious diseases.

By a collision on the C. P. R. at Dorval, near Montreal, on Jan. 4, 7 soldiers were killed and 20 injured.

The new Cabinet in Newfoundland, consisting of 9 members, was sworn in on Jan. 5th. Mr. Lloyd succeeds Sir Edward Morris as Premier.

By the recent destruction by earth-quake of the city of Guatemala, Central America, 125,000 people have been left

The Province of Bessarabia in southwestern Russia has declared herself an independent state.

United States destroyers last week captured 4 German submarines, and the guns of an American passenger steamer destroyed another.

Teuton airplanes raided Padua, a historic city in Northern Italy, on Dec. 28th and again on Jan. 3rd. Fortunately little damage in general was done, but the front of the cathedral was damaged, including some fine frescoes, and paintings by Titian and other masters.

It is feared that the Antarctic exploring ship Aurora, which took part in the Shackleton expedition has been lost on its return voyage to England.

Alaska went on the list of "bone dry" states on New Year's Day.

France is now calling up men up to fifty years of age. The United States announces that the despatch of men to the French front will be greatly hastened.

The war news for the past week has been more encouraging than for some time past. At time of going to press Haig announces another slight advance south of Lens, the region in which our Canadian divisions are operating. . From Italy comes the assurance that heavy falls of snow in the mountains are greatly favoring the work against the Huns, and that Italian troops have forced the enemy from the Seenson Bend on the Piave, while French troops, farther to the north, have gained a victory in the Grapa Hills. . . Even from Russia the news is reassuring, and in England the feeling grows that the Bolsheviki may have "more method in their madness" than has been dreamed.

At all events it is known that Trotsky has indignantly repulsed the overbearing peace terms demanded by the German representatives at the Peace Conference at Brest-Litovsk, and has taken such steps as make it appear that he is endeavoring to unmask to the German people themselves, the real character of the autocrats who are governing them and making them but dupes to serve their own ambitious purposes. Could this be achieved the only result possible would be a revolution in Germany and speedy discussion of peace terms with a world ready to have an understanding with a truly democratic and reasonable spirit, wherever it can be found.

Since the above was written news has come that Premier Lloyd George, in a speech at the British Laborite Conference, stated definitely the war aims of the Allies. The text leaves to Germany no reasonable excuse for continuing the

In the Holy Land Gen. Allenby, with his territorials and Irish troops, has advanced over a mile north of Jerusalem, driving the Turks yet further back from the holy city

## The Dollar Chain

A fund maintained by readers of The Farmer's Advocate and Home Magazine for the soldiers and all who are suffering because of the war.

Contributions from Dec. 28 to Jan. 4: "Friend", Belgrave, Ont., 75 cents; "Reader", R, 2, Goderich, Ont., \$2; "Scotia", London, Ont., \$1; "A Friend", Hoard's Station, Ont., \$2; "Nellie", \$5; S. S. Alexander, New Liskeard, Ont., \$2, 50

Previously acknowledged... \$5,074.80

\$5,089.05 Total to Jan. 4.

Kindly address contributions to The Farmer's Advocate and Home Magazine, London, Ont.

#### Galsworthy on Slaughtering.

None but licensed men shall be employed in or about slaughter-houses.

If more animals than one are being slaughtered in one slaughter-house at one time they must not be in view of each

All animals (cattle, calves, sheep, lambs, and pigs) without exception must be stunned or otherwise unconscious before blood is drawn.

Animals awaiting slaughter must be so placed that they cannot see into the slaughterhouse, and the doors of the latter must be kept closed while slaughtering is going on.

If it were true that the present methods of slaughtering animals for food in this country were necessary, if all the suffering they involve were inevitable, I should be the first to say: "Let us shut our eyes! For needless suffering —even to ourselves—is stupid." It is just because this particular suffering is avoidable, and easily avoidable, that one feels we must face the matter if we want to call ourselves a decent people.

Save Weeks of Time
Save Thousands of Feet
of valuable Timber

THE best barns are no longer built with heavy timber frames.

The new idea in barn-building is to use trusses. This idea increases the space and convenience of the modern barn. It saves the waste of fine timbers that are so much more valuable for other purposes.

Anyone planning to build a barn should look into this idea before spending time needlessly in hauling out timber. A little investigation shows that wonderful savings in time and money can be made; the time of cutting and hauling the timbers; the value of the timber; the weeks upon weeks of time in the summer when time is so precious.

For the new-style barn—the Steel Truss barn—is put in a few, days by a few men. There is no longer need for the old framing gang, the barn-raising bee, the hungry and high-priced crowd of mechanics.

## The Old Idea Was Extravagant

Farmers have not always had time to figure out what these old-time barns actually did cost. To-day they **must** figure it out. Labor must not be wasted. To-day it is criminal waste to put into

barns fine timbers of oak, hickory, ash. We have even seen black cherry timbers in some barns. These items, the extra weeks of labor, the value of the timber, the cost of feeding a gang of barn-builders, should and can be saved. They are valuable. They are money. They add needlessly to the cost of building.

### Learn What Other Farmers Have Done

Now, before you start carrying out your building plans, is the time to see some Preston Steel Truss Barn plans. They show how other farmers avoided trouble and waste; how they made the very best use of their barn and stable space.

We will plan a barn for you exactly as you want it and the plans will not cost you a cent. Our barn experts have planned many of the finest barns in Canada. Their

advice, after building so many barns, and "talking barns" to so many practical farmers, is worth money to any man. It is yours to command, free of charge.

## 100-Ton Barn, \$1,766

We still have large supplies of building material under contract at favorable prices. This makes possible a very low price to farmers in the early months of 1918. All the materials for a barn to hold 100 loads of hay or grain will be delivered, freight paid to any point in old Ontario, for \$1,766.

For a 50-ton barn the price is \$1,186. These prices include everything needed to build fine, fireproof and lightning-proof barns under the Steel Truss patent form of construction.

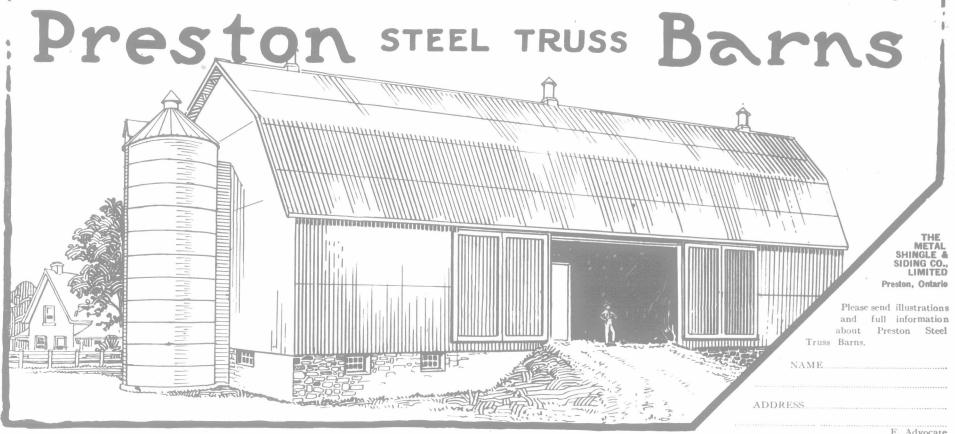
Write to-day for full information. Tell us something of the barn you have in mind. You will be delighted with the service we will give you in planning every detail of a fine barn for your farm. Please use the coupon.

# THE METAL SHINGLE & SIDING CO., LIMITED PRESTON, ONTARIO

Factories: Preston, Toronto, Montreal, Winnipeg, Saskatoon, Calgary

Makers of

Preston Garages and Implement Sheds, Acorn Corrugated Iron, Preston Safe-lock Shingles



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The spread in price between that paid the producer and that paid by the consumer must be reduced.

We buy direct from the grower and sell at a small margin direct to the farmer. That is why our prices are the lowest on the market. Get our catalogue and compare

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	No. 1 (Extra No. 1 for Purity) No. 2 (Extra No. 1 for Purity) No. 2 (No. 1 for Purity)	5.50
ı	Clover	Bus.
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Write for quotations on turnip and mangel seeds. Send us your name for a copy of our 1918 catalogue.

Special Quotations to Farmers' Clubs

GEO.KEITH & SONS 124 KING ST. E

Did you know that in The Mutual Life of Canada all the accumulated assets belong to the policyholders?

#### THE UNITED FARMERS' CO-OPERATIVE CO., LIMITED

wish their patrons and all other farmers a prosper-ous and Happy New Year.

Buy Co-operatively and Save Money We are here to serve the farmers of Ontario at the lowest possible cost. Get prices from us be-fore purchasing your 1918 requirements of harness, cutters, sleighs, gasoline engines, fencing, lumber, shingles, fertilizer, groceries, etc.



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted and Pet Stock.

TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

FOR SALE-FARM 100 ACRES, FIRST-CLAS soil, clay loam, tile drained, well-feneed, A 1 buildings, bank barn, water in stables, good pig pens and hen house, I hay barn. Brick house, modern conveniences, situated on the 6th concession of Markham-Township, York County. Government road direct to Toronto, 22 miles; Unionville, 2 miles; school across the road. Price \$13,000.00. Apply to Fred J. Bagg, Unionville, Ont.

FEMALE COLLIES — TEN CHAMPIONS IN the family in five generations. A. B. Van Blaricom, Morganston, Ont.

FOR SALE—FARM 290 ACRES, FIRST-CLASS buildings and stabling. Brick house, slate roof, modern conveniences. Land all under-tiled; lots of water, good orchard and hardwood bush; also house for hired man. Apply Box 142, Springfield, Opt

Ont.

EXPERIENCED HERDSMAN OF PURE bred Holsteins open for engagement March 1st, or would accept management of dairy farm; references. Box "W", Farmer's Advocate, London, Ontario.

FOR SALE -AN OPPORTUNITY OF A LIFE. 

Beard Corthard, N. Y. Y. Y. M. P. S. R. M. P. R. P. R. S. P. Y. M. L. Y. R. R. R. R. S. I. D. R. T. R. M. P. R. C. P. R. S. Somet. One is an irod and fatty acres chore day loann, the from stars, cultivated; six hands of mather trees in bash, large in their barn, tally equapped, readons specify water, three-ton which is described in the start of the start

#### Gossip.

Champion Jerseys at Edgeley.

When one stops to think of the many herds of dairy cattle there are in Canada to-day and of how many good cows there there are in hundreds of these herds, it is then that one begins to realize what a wonderful achievement it is to develop the greatest butter cow of the whole Dominion, regardless of breed. The breeders to whom this honor at present belongs are no doubt already known to most readers of these columns, but for the benefit of those who have forgotten we might mention here again that the breeders and owners of such a cow are James Bagg & Sons, of Edgeley, Ontario. The name of the cow is Sunbeam Edgeley, and in breeding she is a Jersey. She will also be remembered as the champion winner of the three-day test at Guelph in 1916, and here we want to say that while her yearly record of 18,744 pounds of milk and 926 pounds of butter-fat is of course by far the largest record for the herd, there were, at the time of our visit to the farm recently, several more

that were pleasing indeed.

The Edgeley herd all through are producers and while in size they are a little above the average of the individuals of most herds they lack nothing in smoothness and type, a fact which many visitors who saw the Edgeley exhibit at Guelph last month can well bear out. A short review of the yearly work of a number of breeding cows in the herd

may be of further interest. Princess Flora, a daughter of Sunbeam of Edgeley, has 11,000 lbs. of milk and 598 lbs. of fat for the year. Lady Amy, a half-sister to the champion cow, has 11,020 lbs. of milk and 619 lbs. of fat, while the oldest of her three daughters in the herd, Mabel of Edgeley, has 9,158 lbs. of milk and 453 lbs. of fat for the year, besides being the highest scoring Jersey at Guelph last month. Amy's Jewel of Edgeley, another daughter of Lady Amy, has 10,508 lbs. of milk and 477 lbs. of fat in the four-year-old form. rose of Edgeley, a full sister of the old cow again, has 11,246 lbs. of milk and 561 lbs. of fat as a four-year-old and is making around 14,000 lbs. this year. Fanny of Edgeley has 11,310 lbs. of milk and 627 lbs. of fat as a three-year-old. These are only a few of the more mature cows in the herd, but a number of heifers freshening this past fall with their first calves look equally as promising. There are, at present, one of the strongest offerings in young bulls ever seen at the farm. Several are nearing serviceable age and nearly all are sired by the young son of Sunbeam of Edgeley, Edgeley's Bright Prince. He is got by Brampton Prince Stephen, a son of Bright Prince, (imp.),

Clydesdales at the Columbus Stables.

and his dam is the noted champion show

youngsters by this young sire are sure

to go out quickly and those wishing to

get a grandson of Canada's champion butter cow should get their orders in early.

cow. Brampton Reverencia.

more experienced horsemen throughout Eastern and Western Canada are already quite familiar with the difficulties that have confronted the larger importers for some time past in getting their annual importation of stallions and mares released for export from the ports of either France or Britain. The Allied Governments of both countries have not only enforced the most stringent of regulations regarding the export of all breedng stock, but prices too, in the old land, have soared skyward since the outbreak of the war as compared with prices asked in days of peace, and our importers here have considered them almost prohibitive. This has resulted in reducing the number of importations during the past eighteen months to the minimum. There were, however, several of the larger firms in Canada who were fortunate in having 1916 and the early part of 1917, and among the most fortunate of these was the old-established firm of Smith & Richardson, of Columbus, Out. Their alone, and despite the high prices ruling high class material as this Advocate at the recent Guelph Fair is evidence of this. It is not the object of these few

lines to offer lengthy comment on the quality, etc., of individual animals, but rather to include a partial list of the more outstanding ones, and we take the responsibility for saying that each one mentioned is well worthy of a visit from intending purchasers. Royal Favor (imp.), 18361, a 7-year-old bay by Royal Favorite, dam by Baronson by Baron's Pride, was the Durham County Premium horse in 1917, and the grand champion stallion at the recent Guelph show. Baron Arthur (imp.) 18362, a five-year-old horse by the great Baron's Pride, dam by Montrave Mac, was grand champion stallion at Ottawa Winter Fair in 1917, and the Merlin Premium horse the same year. Everard 16333 by Everlasting, dam by Sir Everard, is a 4-year-old with a long list of show-ring honors, including first at Guelph and Ottawa as a yearling; second at both fall and winter show Ottawa, 1916, and first again at Ottawa Winter Show in 1917. He was the South Wentworth Premium horse last year. Gartley Ideal (imp.) (15163) is by Baron Ideal and has for dam the great mare Gartley Baroness by Sir Everard, and second dam Gartley Princess by Prince of Carruchan. Baron Crawford (imp.) 9592, a big, thick, ton horse, is got by Blacon Sensation, and has been a popular winner wherever shown. Royal Design (imp.) 17286, a many-times winner, is a three-year-old of the right stamp, got by Baronet of Ballindalk, and has stood either first or second at both Guelph and Ottawa at every show since his first appearance as a yearling in 1915. Baron Orr 7769, and Knight of Maryfield 7760 (imp.), are two good breeding aged horses, the latter being got by Prince Thomas and out of a dam by the Prince of Wales' horse, Duke King; his second dam is by Moray, a grandson of Darnley. This horse is the sire of the first-prize stud-foal at Guelph this winter. Viscount Kinnaird 13822, by the Sir Hugo horse Viscount Seaton, is also one of the best bred horses in Canada, his fourth dam being got by Sir Everard, and his fifth dam by Prince of Wales. In addition to these there are several other good imported sires as well as seven Canadianbred horses, many of the latter ones being prominent winners this past season. There are also fifteen in-foal mares in the stables, about half of which are imported and, like the stallions, all were purchased before the vast increase in price took place, which the breed has experienced during the past year and a half.

#### Questions and Answers. Miscellaneous.

Vermin-Bloody Milk.

What is the best means of killing vermin on cattle?

2. A young cow which freshened in September gives bloody milk out of two of her teats. What cure do you ecom-

Μ. Ans.-1. Insect powder sifted into the hair of cattle proves effective. Another remedy is to mix four parts cement to two parts hellebore and sprinkle the mixture on the sides and backs of the animals. Do not turn the animals treated out in the wet for a few days after applying the treatment.

The trouble is due to the rupturing of small blood vessels in the udder, which may be caused by an accident or may be inherited weakness. Bathe the udder with cold water and give the cow one ounce tincture of iron in a pint of water twice daily.

An aged negro was crossing-tender at a post where an express-train made quick work of a buggy and its occupants. Naturally, he was the chief witness, and the entire case hinged upon the energy with which he had displayed his warning

A grueling cross-examination left Ratus unshaken in this story: The night was dark, and he had waved his lantern frantically, but the driver of the carriage paid no attention to it.

Later the division superintendent called the flagman to his office to compliment him on the stedfastness with which he stuck to his story

"You did wonderfully, Rastus," he said. "I was afraid at first you might

waver in your testimony."
"Nossir, nossir," Rastus exclaimed, "but I done feared ev'ry minute that 'ere durn lawyer was agwine to ask me if mah lantern was lit."—Puck.

# **Baled Shavings**

FOR SALE

We have a limited quantity of baled shavings to offer at 15c. per bale, f.o.b. our yard.

Place your order while they are going at this price. All orders promptly cared for.

The Nicholson Lumber Co., Ltd. Burlington, Ontario

Condensed advertisements will be inserted under this heading at three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 50 cents.

AM SOLD OUT OF GEESE AND TURKEYS. Now offering Indian Runner Ducks and Barred Rock Cockerels. Bred right. priced right. John Annesser, Tilbury, Ont.

BARRON'S 282 STRAIN, S. C. W. LEGHORN cockerels; also S. C. R. I. Red cockerels from good layers, both good quality. \$3.00 each Earle Willson, Aurora, Ont.

FINE, HEAVY, PURE-BRED MAMMOTH Brine, Heavy, Brure-Bred Mammoth Bronze turkeys; bred from prize stock. Also Scotch Collie Pups. R. G. Rose, Glanworth. Ont. HIGH-CLASS BARRED ROCKS AND PEKIN Ducks; also White Wyandotte cockerels from bred-to-lay strain. Prices right. Leslie Kerns, Freeman, Ont.

WANTED-HIGH-CLASS POULTRY MAN wanted—High-class Poultry Man who has had experience with show birds and who is capable of managing a ten-acre farm situated close to Toronto, consisting of tree and small fruit, and usual stock. Comfortable house for man and wife. Opportunities ideal for the right man. References requested. Box E, Farmer's Advocate, London, Ontario.

I will sell my TOM BARRON bred-to-lay

# White Leghorn Pullets

Beauties; pedigree; 282 eggs. Also egg-bred cockerels. May hatched. Finest I ever raised. At about half price, if purchased in lots of 12 or more in the month of January.

G. L. Doherty, Clinton, Ont.

OF ALL KINDS

Write for price list. We pay highest prices. The Canadian Carpet & Comforter Mfg. Co., Ltd. 340 Dufferin St., Toronto, Ont.

THE ABOVE PRICE PAID BY Wallers, 702 Spadina Ave., Toronto WRITE FOR PRICE LIST

WANTED Registered Clydesdale Mares 4 and 5 years old. Be sure to state color and markings, and lowest price accepted.

FRANK O. GEE HUGHTON, SASK.

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for

#### Smiles.

A Scottish minister, taking his walk early in the morning, found one of his parishioners recumbent in a ditch. "Where hae ye been the nicht, Andrew?" asked the minister. "Weel, I dinna richtly ken", answered

the prostrate one, "whether it was a wedding or a funeral, but whichever it was it was a maest extraordinary success. –Selected.

#### Family Secrets.

A man with an uncanny mania for juggling with fingers, producing pencil and paper, commanded a friend to "put down the number of your living brothers. Multiply by two. Add three. Multiply the result by five. Add the number of living sisters. Multiply the result by ten. Add the number of dead brothers and sisters. Subtract 150 from the result.

It was done.
"Now," he said, with a cunning smile, "the right-hand figure will be the number of deaths, the middle figure the number of living sisters, and the left-hand figure the number of living brothers."

And it was so says Tit-Bits.

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#### A Gold Mine on Your Farm

You can double your profits by storing up good green feed in a

# BISSELL SILO

'Summer Feed All Winter Long"



Scientifically built to keep silage fresh, sweet and good to the last. Built of selected timber, treated with wood preservatives that prevent The BISSELL SILO has

strong, rigid walls, air-tight doors, hoops of heavy steel. Sold by dealers or address us direct. Get free folder. Write Dept. W.

T. E. BISSELL CO., LTD. Elora, Ont.

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The latest in design for rural telephone systems. Write for particulars.

Canadian Independent Telephone Co., Limited

261 Adelaide St. West **TORONTO** 

CHILDREN THRIVE ON

# JERSEY CREAM Sodas

Sold everywhere ALWAYS CRISP AND DELICIOUS

#### Gasoline & Kerosene Engines

Saw Frames, Saw Blades, Grain Grinders, Straw Cutters, Belting, Scales, Farm and Lawn Fence. Write for price-list.

A. R. Lundy, 251 West King St., Toronto

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Sent free for one month's trial. Write for particulars.

"1900" WASHER COMPANY (Factory, 78-81 Portland St., Toronto)

# Cockshutt Catalogue

will give you valuable farming hints, and shows the full line of Cockshutt and Frost & Wood Implements. Write for a copy to-day.

Cockshutt Plow Co., Ltd., Brantford, Ont.



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& Son, St. Catharines, Ont.

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or stuttering overcome positively. Our natural methods permanently restore natural speech. Graduate pupils every-where, Free advice and literature. THE ARNOTT INSTITUTE

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#### Gossip.

Baird's High-Producing Jerseys.

In glancing over the numerous live stock advertisements appearing in these columns, we would advise our dairy readers to make special note of the offering of young Jersey bulls mentioned in the copy of R. & A. H. Baird, of New Hamburg, Ont. In many respects, the Baird herd of Jerseys are unequalled in the whole Dominion. To be able to make the somewhat startling statement one needs only to glance over the daily records of the yearly production of not only three, four or five cows in the herd, but of the entire 50 head that are of milking age, and then a very simple calculation reveals the wonderful evidence of over 400 lbs. of butter for every cow, heifers included, in the entire milking herd. In addition to the 50 breeding females referred to, there are also in the neighborhood of 100 head of younger heifers, mostly yearlings, and every one was bred and raised on the farm. As yet, however, every thing in the herd is not pure-bred. Many of the better individuals and heavier producers among the grades are most excellent results of careful grading for the past 25 years, and the herd still numbers a few of their descendants. These grades, however, are both tested and cared for in the same way as the pure-breds, and even Baird grade heifers, safe in calf to the farm's good pure and richly bred sires, have been in great demand for years. The present stock bulls are Brampton Dairy Farmer and Brampton Bright Togo. The former is out of Primrose of Edgeley, a 11,264-lb. full sister to Sunbeam of Edgeley, Canada's champion butter cow. The latter bull, "Brampton Bright Togo," is by Brampton Stockwell Junior and out of a daughter of the great sire and show bull, Bright Prince. The young bulls now advertised for sale are got by these sires, and as no bulls are retained that are not from good record cows, each and every calf advertised should be worthy to head the best and strongest of herds Full particulars and quotations will be gladly furnished by Messrs. Baird at all

#### The Heart of the World.

EDITOR "THE FARMER'S ADVOCATE":

The heart of nature is right; the heart of man is wrong, and where the heart is wrong the head is apt to be wrong also, hence come envy, avarice, inordinate lust of power, wars, tumults and "vaulting ambition" which "oft o'erleaps itself." Sandy Fraser was right, as usual, in a recent article when he said, "A change of mind and heart is needed." Mar needs to get into harmony with nature. In the great universe about us, all is apparently tranquil. The stars roll on in their courses from year to year, from age to age, in evident regularity and peace, without friction, shock or collision. The astronomer, as he scans the heavens, viewing millions of orbs with his great telescope, discovers nothing but harmony and glory; no evidence of lawlessness, no clash or crash of contending worlds, as of man's armies and engines of war. Moral law and order, no less than natural law, is everywhere in evidence. Emerson says: "Moral law lies at the centre of nature and radiates to the circumference. Yes, the heart of the world is right. So long as man will not receive the light of knowledge his troubles will not cease. Man is his own despoiler and foe; nature is his friend, not his enemy. If she chastens him, it is to teach him the needed lesson-obedience of her law, or, as a necessary penalty for its violation. After much scourging, man will learn his lesson, but he must first be tried as by fire, and let us trust and believe that his exaltation will be the greater.

Nature, in its formative processes, passes through many transitions. Thus the worlds were born, the suns and stars were swung in their orbits and rounded into beauty, symmetry and grandeur. Man is part of nature, and there must be concord. Two thousand years ago, St. John, with the far vision of the seer, postulated this earth as the dwelling place of exalted man, when "there shall be no more death, neither sorrow nor

Kent Co., Ont. W. J. WAY.

# **EDWARDSBURG** The feed that means more milk and richer milk. Write for prices. Guaranteed The Canada Starch Co. Ltd.



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Here's your opportunity to get the wonderful new Aladdia Coal Oil Mantle light FREE. Write quick for particulars. This great free offer will be withdrawn as soon as some distributor starts work in your neighborhood. You only need show the Aladdin to a few friends and neighbors; they will want one. We give you yours free for this help. Takes very little time, no investment. Costs nothing to try the Aladdin 10 nights.

**Burns 70 Hours on One Gallon** common coal oil, no odor, smoke or noise, simple, no pumping up, no pressure, won't explode. Tests by Government and thirty-five leading universities show the Aladdin gives three times as much light as best round wick flame lamps. Won Gold Medel at Panama Exposition. Over three million people already enjoying this powerful, white, steady AGENTS light, nearest to sunlight. Guaranteed. And think of it—you AGENTS can get it without paym out a cent. All charges prepaid. Ask WANTED for our 10-day Fre-Tiral Offer and learn how to get see Fres. WANTED MANTLE LAMP COMPANY. 233 Aladdin Building, MONTREAL Largest Coal Cil Mantle Lamp House in the World



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For free information, write:

W. I. Smale, Secretary,
Aberdeen-Angus Association,
BRANDON, MANITOBA

Jas. D. McGregor, President, Brandon, Manitoba

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These pads prevent Sore Shoulders and cure Gall Sores. Your dealer will supply you, or write:

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Angus—Southdowns—Collies

SHOW FLOCKS

Rams and ewes. Heifers in calf to Queen's Edward. 1st Prize, Indiana State Fair.

Robt. McEwen, R. R. 4, London, Ont. Dr. Bell's Veterinary Medical Wonder. 10,000 \$1.00 bottle FREE to horsemen who give the Wonder a trial.Guaranteed for Colic,Inflammation of Lungs, Bowels,Kidneys; Fevers and Distempers, etc. Send 25c. for mailing, packing, etc. Agents wanted. Write address plainly.

Dr. Bell, V. S., Kingston, Ont.

#### ANGUS CATTLE

Aberdeen Farm has for sale a nice bunch of young stuff of both sexes. Come and see us and supply your wants. J. W. Burt & Sons, Hillsburgh P. O., R. R. 1, Erin Station, Ont.

#### Aberdeen-Angus

Alonzo Matthews, Manager, Forest, Ontario H. Fraleigh, Proprietor, Forest, Ontario

#### Beaver Hill ABERDEEN-ANGUS

Cows with calves at foot. Bulls of serviceable age and females all ages. ALEX McKINNEY. R. R. No. I, Erin. Ontario. Kennelworth Farm Aberdeen-Angus

A grand lot of calves for sale; ages in the neighborhood of 7 months. Victor of Glencarm at head of herd. PETER A. THOMSON, HILLSBURG, ONT.

Gossip.

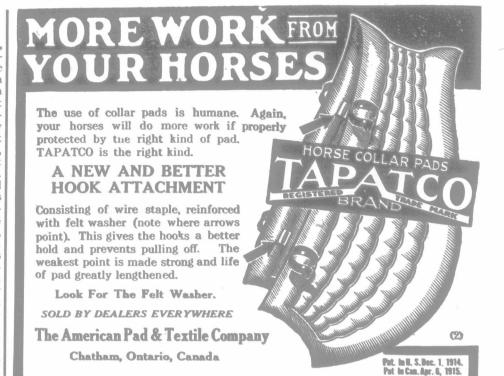
Foundation Holsteins.

In laying the foundation for a herd, there is, perhaps, not one breeder of purebred live stock in Canada who was more fortunate in his first purchases than Wm. Stock, the well-known Holstein breeder of Tavistock, Ont., and while it was fortunate it was no less good judgment that induced him to buy at a very reasonable figure the dam of his present highest record and great producing cow, Baroness Madoline, which was the first pure-bred calf ever calved at the farm. There are but few in the Holstein world to-day who do not know Baroness Madoline. Her 5-year-old record of 21,-770 lbs. of milk in 335 days is only 14 lbs. below that of Toitilla of Riverside, the champion R. O. P. cow of Canada. Her butter record for the same period is 1,043.25 lbs., and when we take into consideration that she not only started on her record after giving Mr. Stock a pair of living bull calves but also calved again with twins in time to qualify, thus producing four living calves within fourteen months, these records are surely extraordinary, nor do they end here. As a four-year-old, previous to dropping the first pair of twins, she produced 21,149 lbs. of milk and 966.3 lbs. of butter, beating her 3-year-old record of 20,710 lbs. of milk and 962.50 lbs. of butter by another good margin and making an average of 21,207 lbs. of milk and 990.66 lbs. of but ter per year for three years in succession In 7-day work she has 34.48 lbs. of butter from 636.1 lbs. of milk; for 14 days she has 68.02 lbs. of butter from 1,362 lbs. of milk, and 141.01 lbs. of butter and 2,866.3 lbs. of milk in 30 days. Besides her 23-months son, sired by King Segis Alcartra, which is being retained as the chief herd sire, she has three daughters in the herd The youngest is just now due to freshen with her first calf. The other two, Madoline Dollie De Kol and Mado line Dora De Kol, have both done excellent work in the R.O.M. and R.O.P The former in her three-year form made 20.42 lbs. of butter in 7 days and last year, in her four-year form, exceeded her three-year record by over 3 lbs. In the yearly work her three-year-old record was 13,685 lbs. of milk and 577 lbs. of butter, and she is still running now as a 4-year-old. "Dora" has 25.83 lbs. of butter and 523 lbs. of milk in 7 days as a junior three-year-old, and made 11,748 bs. of milk and 572.5 lbs. of butter for the year in her two-year form. Both heifers, as well as the mother, are running again now in the R.O.P. Their records will be announced in these columns later In addition to several other good record mature cows in the herd, Mr. Stock also has 5 heifers that are from 9 to 18 months of age and all got by the noted sire Correct Change, which now has a 44,29 lb. sister. Among recent sales Mr. Stock cports the sale of Baroness Madoline's 3-months bull, to a syndicate of breeders ar Burford Ont. This calf is a well-grown fellow and is got by King Lyons Hengerveld, whose dam and two grandams average 32.99 lbs. of butter in 7 days.

S.W. Jackson writes that he has recently made the following sales of Shorthorns: "To J. H. Clare of Tweed, Ont.,

ten-months bull by the R. O. P. bull St. Clare, and from the R. O. P. cow, Butterfly Rose. To G. K. Allonby of Calgary, a 13-months bull by the R. O. P sire, Butterfly King 19th also the R.O.P cow, Ida Butterfly, with a 3-year-old record of 8,043 lbs. in 10 months, testing 4.2 per cent. fat. To R. D. Riley of Milford Bay, Muskoka, Fancy Rose, second-prize cow at the recent Winter Fair at Guelph, and her heifer calf by St. Clare. Mr. Riley also took a two-year-old heifer, Mina Butterfly, in-calf to St. Clare. Both these cows are sired by Butterfly King 19th. I delivered by Riley's purchase and believe that Mr. Riley's purchase and believe that Muskoka, with its large ranges of pasture land, and well-watered valleys, is admirably adapted to the breeding of

In a recent communication to "The Farmer's Advocate," K. M. Dalgleish, Kenmore, Ont., writes that he has disposed of his 1917 crop of calves except me, which is from his 30.11-pound cow, Hester Pietje Netherland. One of the foundation cows, Avondale Lady Pietje De Kol, a daughter of Pietje 22nd, Woodcrest Lad, and from the 100-pound cow Lady Woodcrest Paxton, has given birth to a beautiful pair of twin calves by their





Several choice imported and Canadian-bred mares, safe in foal. Also several prizewinning fillies and stallions, and a few show geldings, 2 and 3 years of age.

W. A. McNIVEN,

R.R. No. 4, HAMILTON, ONTARIO

OUR LATEST IMPORTATION OF CLYDESDALES arrived at our barns late in November. A number of them since have been prominent winners at both Guelph and Ottawa. But we have others (both stallions and mares) that were never out. The majority of the stallions weigh around the ton, and better quality and breading were never in the stables

#### CLYDESDALES AND SHOR THORNS

see them. We like to show them. SMITH & RICHARDSON, COLUMBUS, ONT

I have on hand a number of real choice young mares and fillies. Eight excellent young bulls, from 9 to 12 months, of Right Sort and Royal Blood breeding; also a number of females. Inspection invited. R. R. No. 3, GLANFORD STATION, ONTARIO

#### LARKIN FARMS, QUEENSTON, ONTARIO

OFFER EXCEPTIONAL VALUES IN

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SHROPSHIRE SHEEP SOUTHDOWN SHEEP

Visitors welcome. Correspondence solicited. (Please Mention Farmer's Advocate)

#### **BROOKDALE FARM HEREFORDS**

Herd headed by Bonnie Ingleside 7th, the Canadian-bred champion bull at Toronto, 1914–1915. We are offering several young bulls that were Toronto and Ottawa winners this year, all sired by the herd bull, as well as a few females in calf to him. Come and see our herd or write us for anything in Herefords.

W. READHEAD, BROOKDALE FARM, MILTON, ONT.

#### **GLENGOW SHORTHORNS**

We have a choice offering in young bulls, fit for service. They are all of pure Scotch breeding, and are thick, mellow fellows, bred in the purple.

WM. SMITH, COLUMBUS. ONTARIO. Myrtle, C.P.R., Brooklin, G.T.R., Oshawa, C.N.R.

## SHORTHORN BULLS

of my own breeding, around a year old, best families and good colors, are for sale. Also a few young imported bulls.

Myrtle, C.P.R., Brooklin, G.T.R., Brooklin, C.N.R.

Will A. Dryden, Brooklin, Carterio Co.

#### **SHORTHORNS** FIFTY IMPORTED

I have fifty head of choice Scotch bred cattle now on the water, which will land at Quebec early in November. These were selected from many of the best herds in the old land. Wait for these, Write for particulars.

GEO ISAAC, COBOURG, ONTARIO.

OAKLAND SHORTHORNS This herd, numbering nearly 60 head, is of our own raising, and of the dual-purpose, prolific kind that satisfies the buyers Present offering is 7 bulls, from 8 to 18 months, and females of any age, price, worth the money. All registered. Crown Jewel 42nd at head of herd. John Elder & Sons, Hensall, Ont

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are a necessity if you are making a "business" of farming. Imagine your money invested in a commercial undertaking where you knew they kept no books of account! Yet many, many farmers, whose every cent is invested in their farm and its development, keep no reliable records to show their worth or progress.

Perhaps you have kept no accounts because ou felt you didn't understand how, or thought it too much work.

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has been carefully devised to meet the need of busy farmers, and is easy to understand and

One prominent agriculturist savs: "I have gone into your system of farm bookkeeping very carefully, and find it well suited to the average farm, I would not hesitate to recom-

Another says: "To my mind the system is easily the best thing of its kind that has yet appeared."

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Government Says Keep More Cattle This Winter

The Ontario Government advises all farmers to ke-p one or two extra head of cattle this writer. You can do this most economically by cutting your own feed, as cut feed always goes farther.

**Peter Hamilton Feed Cutters** will exactly meet your requirements, as they do the work quickly, easily and satis-factorily. Hand and power outfits in a wide range of sizes and prices.

Write To-day for Free Booklet. PETER HAMILTON CO., LIMITED Peterborough, Ont. 27



#### **Questions and Answers.**

1st—Questions asked by bona-fide subscribers o "The Farmer's Advocate" are answered in this

to "The Farmer's Advocate are answered in the department free.

2nd—Questions should be clearly stated and plainly written on one side of the paper only, and must be accompanied by the full name and address of the pressure.

and must be accompanied by the full name and address of the writer.

3rd—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

#### Miscellaneous.

#### Chronic Indigestion.

I have a sick horse. He gets sick quite often; the symptoms are those of colic, although the veterinarian says it is indigestion. Has a horse a third stomach? When he recovers from an attack he appears weak across the kidneys. What is the trouble? D. J. O.

Ans.—Owing to lack of detailed symptoms, it is difficult to diagnose the case. The symptoms of colic are uneasiness, stamping, pawing, throwing himself down, and bloating may occur in flatulent colic. The causes are due to improper feed, overfeeding, too much succulent and easily fermented feeds, or possibly to weak digestive powers which are predisposed. For spasmodic colic drench with 11/2 ounces each of laudanum, sweet spirits of nitre and tincture of belladonna in a pint of water. Acute indigestion is also due to change of feed, imperfect mastication, heavy exercise immediately after feeding. The horse shows great uneasiness and oppressed breathing. In such cases the treatment consists in giving 2 or 3 ounces of oil of turpentine in a pint of raw linseed oil. Foment the abdomen. If the animal is in severe pain, give 2 drams of solid extract of belladonna. Some horses are subject to chronic indigestion and always appear unthrifty, have a capricious appetite, dry, staring coat, and frequently slight colicky pains. This may be due to improper mastication or weakness of the digestive glands. Have the teeth examined. Give a purgative, followed by a dram each of ginger, gentian, nux vomica and bicarbonate of soda three times daily. Feed on first-class feed. A horse has one stomach; ruminant animals four stomachs.

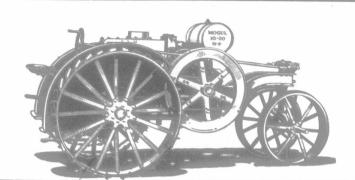
#### Itchy Legs.

Describe a treatment for horses which have itchy legs. They stamp their feet and bite at the legs. The hair is coming off and there appears to be quite a scurf. This has taken place since we quit plowing. They are fed on a ration of equal parts oats and bran and good clean hay. What is a good tonic for a horse?

2. I have a foal which got her foot through a bridge about three months ago, It appears to have affected the hock joint which swelled up considerably. I have consulted a veterinarian and he said the oil had possibly run out of the joint. The swelling is quite soft as yet; what treatment do you prescribe? W. L.

Ans.—1. Give a purgative of 8 drams aloes and 2 drams ginger, follow up with 1½ ounces of Fowler's solution of arsenic twice daily for a week. It might be a good plan to apply linseed poultices to the affected parts for a couple of days, and then dress with a lotion made of 1 ounce each acetate of lead and sulphate of zinc in a pint of water. The parts should be rubbed dry if they get wet or muddy. A solution of corrosive sublimate, 30 grains to a pint of water, heated to about 105 degrees Fahrenheit and rubbed well into the skin twice daily is also recom-mended for itchiness. If the mare is in foal, omit the purgative. The following makes a very good tonic: Equal parts sulphate of iron, gentian, ginger, and nux vomica. Give a teaspoonful three times daily. Feed well and see that the horse gets daily exercise.

2. If the oil has escaped from the joint, the colt would likely go lame. An absorbent liniment, as 4 drams each of iodine and iodide of potassium and 4 ounces each of alcohol and glycerine, applied daily with smart friction, would tend to reduce the swelling. If this fails you might try a blister.



# Buy Your Tractor Now

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Kerosene is the best, as it certainly is the cheapest, tractor fuel. Therefore all our tractors are designed and built to operate successfully on this cheap, plentiful fuel.

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There is such a great demand for these machines that we cannot promise anything better than early spring deliveries. Send for catalogues now, make your decision, and send in your order as soon as you can if you want an International Harvester kerosene tractor for the spring plowing. Address the nearest branch house listed below.

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EAST: — Hamilton, Ont., London, Ont., Montreal, Que., Ottawa, Ont., Quebec, Que., St. John, N. B.

# **Dual Purpose Shorthorns**

#### Herd Headed By DOMINATOR No. 106224

whose grandam on his mother's side has an R.O.P. record of 13,535 lbs. milk, testing 3.99; and whose dam has an R.O.P. record of 10,689 lbs. milk, testing 3.88.

The cows in our herd are large and strictly dual-purpose in type and performance, many of

them have high milk records. A few cows, heifers and young bulls for sale, three of the latter are out of cows in the herd which have given between 10,000 and 11,000 lbs. of milk each in one lactation period.

Weldwood Farm

Farmer's Advocate, London, Ontario

#### PURE SCOTCH SHORTHORN BULLS

Our present offering of young bulls, sired by our herd sire, Broadhooks Star, a son of the great Newton Ringleader, Imp., are the best lot of bulls we ever had on the farm. Come and see them. or write for particulars We also have females of the richest breeding and highest individuality.

GORDON SMITH WOODSLEE, ONT.

### Imported SCOTCH SHORTHORNS

Our present offering includes 100 imported females and 12 young imported bulls, representing the most desirable lines of breeding. If interested come and see them. Burlington Jct., G.T.R. is only half mile from farm. J. A. & H. M. PETTIT, FREEMAN, ONTARIO.

## **SHORTHORNS**

I can spare a couple of cows, imported or Canadian-bred, with calves at foot and in calf again to Imp. Dalesman. I can also give one the choice of fifteen bulls, from five months to two years old. About half are imp. They are priced to sell. Write, or come and see me. A. G. Farrow, Oakville, Ont.

#### **PURE** SCOTCH SHORTHORNS

of exceptional merit. The young things we are offering this year are something extra, especially the bulls. Come and see them if you want something choice. GEO. GIER & SON, WALDEMAR, ONT.

# SHORTHORNS--T.L. Mercer, Markdale, Ont.

ROSEWOOD CHAMPION, by Nonpareil Archer, Imp., at the head of the herd. I have almost 100 Shorthorns in my stables at present. Marr Missies, Campbell-bred Clarets, Nonpareils, Minas, Rosemarys, etc—the best of breeding and the best of cattle; bulls or females; also have a few Herefords SEVENTY-THREE HEAD OF SHORTHORNS

Ten young bulls of serviceable age, Nonpareil Ramsden = 101081 =, and Royal Red Blood = 77521 =, at the head of the herd. The ten young bulls range in age from 8 to 15 months, and are for immediate sale. They are out of good dams which will bear inspection. Our cows and heifers will please, and you'll like the bulls.

JAMES McPHERSON & SONS, DUNDALK, ONTARIO.

SALEM SHORTHORNS

Herd headed by Gainford Marquis, (Imp.) undefeated in England and Canada. Sire of the winning group at Canadian National, 1914, 1915, 1916. Can supply cattle, both sexes, at all times.

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Blairgowrie Shorthorns and Shropshires
20 imported cattle, cows and heifers; all have calves at foot or are in calf to British service. Bulls for breeders wanting herd headers. Also home-bred bulls and females. Prices right. Rams and ewes in any numbers. JOHN MILLER, Myrtle Station, C. P. R., G. T. R. ASHBURN, ONTARIO.

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War conditions have decreased the supply of fertilizer and increased the demand. Late orderers may be disappointed.

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#### Mardella Shorthorns

Dual-purpose bulls, 20 young cows and heifers—bred, some calves by side. Size type, quality; some full of Scotch. The great massive Duke—dam gave 13,599 lbs. milk, 474 lbs. butter-fat—at the head

Thomas Graham, Port Perry, R.3, Ont.

R. O. P. SHORTHORNS
THE EVERGREEN HILL HERD
Present Offering—Four young bulls from R. O. P.
dams, and each tracing to three R. O. P. sires.
Could also spare a couple of R.O.P. cows.
S. W. Jackson R. R. 4, Woodstock, Ont.

#### Plaster Hill Shorthorns

Two 2-year-old bulls, one yearling bull, one bull calf. Heavy-milking families. F. Martindale & Son, Caledonia, R.R. 3, Ont.

Glenfoyle Dual-Purpose Shorthorns Herd bull College Duke 4th, 95430, big, thick, young cows and heifers for sale; 8 young bulls, some herd headers. Also a yearling Clyde stallion, STEWART M. GRAHAM, LINDSAY, ONT.

**Questions and Answers.** Miscellaneous.

Scours.

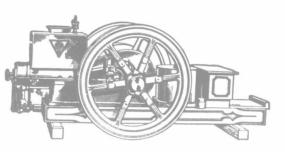
I have a two-months-old calf which has the scours. It has been fed clover hay, a little oat chop a handful of oilcake meal, and 4 quarts of milk. What is the cause, and what treatment would you advise?

Ans.—The trouble may be attributed to a number of things. Over-feeding, sudden changes in feed, wet stalls, unclean feed pails, feeding the milk too cold, etc., may cause scours or it might be due to an irritation of the mucous membrane of the intestines. Then, there is the contagious disease known as white scours, which causes a heavy loss in some herds. However, this disease usually makes its attack when the calf is a few days old. The ration which you are feeding should give good results. Care should be taken to change from one feed to another very gradually and always feed the milk in clean pails. Having the skim-milk chilled at one feeding and at blood heat the next will frequently cause scours. An attempt should be made to have the skim-milk at as near blood heat as possible. We know it is sometimes difficult to do this when the milk must stand a little while before being separated and then must be held, after it has passed through the machine, until the operator gets time to give it to the calf. At least, try to have it at the same temperature each time. One to two ounces of castor oil and a teaspoonful of laudanum is claimed to be good. If the calf has become weakened, feed new milk for a few meals and gradually go back to the skim-milk. A very simple remedy and one which is highly recommended is to add to the milk one-fourth of its bulk of lime water. This is good for a calf at any time when it appears unthrifty.

Pigs With Sore Feet.

I have a bunch of pigs about three months old that have been kept in a box stall which has a concrete floor. Plenty of straw bedding has been kept in the pen and the ration has consisted of two parts oat chop and one part shorts. The pigs appeared thrifty and did well up to about three weeks ago when one became sore on its feet. I slightly changed the ration by mixing bran with the other feeds. However, the other day another one appeared to be ailing the same as the first. They do not eat much. I turn them out in the yard for exercise. Do you think the frozen ground would make their feet sore? I gave the first one two doses of salts; would sulphur and salt-petre be good for them? F. N. S. Ans.—From the symptoms given the

feet must have been injured in some way. However, it is just possible that they are suffering from an attack of rheumatism. The ration which you are feeding should give results. Some people raise exceptionally good pigs on a cement floor, while others have more or less trouble from pigs crippling. The pigs should be turned out for exercise, and unless there was a lot of sharp, icy projections the frozen ground should not injure the feet. Examine the feet carefully and if there is any soreness between the hoofs or a bruise on the bottom, treatment should be applied. However, it is seldom that trouble of that kind happens. The salts are all right fo the pigs. Giving a little sulphur, salt, wood ashes, and charcoal occasionally is a good plan, especially during the winter when the pigs are confined pretty much to the pen. If you have a little earth from the root house, throw it in to the pigs rather than out in the yard If the trouble should be due to rheumatism, which would cause the hogs to become lame and stiff, care should be taken to have the pens well ventilated and the affected animals kept in dry, warm quarters. A dose of 20 or 30 grains of salicylate of soda is a very good drug to give three times a day as a drench or in the feed. Quinine and bitter tonics can also be given. If the joints are inflamed, liniments or blisters might be applied.



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## THE MANOR STOCK FARM---SHORTHORNS

Present Offering-A choice young red bull, fit for service in any herd. Write or come and see. DENFIELD, ONTARIO

# NICHOLSON'S SHORTHORNS

Herd headed by "Best Boy" =85552 =, and "Browndale Winner" =106217 =. Bulls and females for sale. Visitors always welcome to this herd of long-established reputation.

R. & S. NICHOLSON, PARKHILL, R. NO. 2, ONTARIO.

## HAWTHORNE SHORTHORNS

5 young bulls, and several females bred to the herd sire, Royal Choice "79864," a Toronto winner Both milk and beef strains. A few Leicester rams and Yorkshire sows. Everything priced to sell R. R. 4. PETERBORO, ONT. G.T.R., C.P.R.

#### WELLAND DISTRICT SHORTHORN BREEDERS' CLUB are still offering young bulls of serviceable age, and a few breeding females,

CHAS. GAINER, Secretary, Box 607, Welland, Ont. A. E. HOWELL, President, Fenwick, Ont

#### **BURNFOOT STOCK FARM**

We have a choice collection of dual-purpose Shorthorns that are of fine beef form as well as good milk and butter-fat producers, as proven by their official records in the R.O.P. We have a few bull calves of quality and breeding, which commend them for use in the best of dual-purpose Shorthorn herds. Will be pleased to have you visit the hard or address your enquiries to S. A. MOORE, Caledonia, Ont.

# HIGH-CLASS SHORTHORN BULL

We have a number of choice young bulls on hand, ready for service. Some are straight Scotch and others are bred for milk production. Also offering the four-vear-old Duchess-bred bull, Duchess Hur for sale or exchange.

GEO. MORDEN & SON, OAKVILLE, ONTARIO.

#### FLETCHER'S SHORTHORNS

Our herd of Scotch Shorthorns represents Orange Blossoms, Kiblean beauties, Matchlesses, Mysies, Missies, Clementina's, etc., and is headed by the Watt-Stamford bull, Victor Stamford =95959 = a Toronto winner. Present offering, two young bulls (show animals) also several heifers and cows.

GEO. D. FLETCHER, ERIN, R. R. 1, ONT. Erin Station, C.P.R., L.-D. Phone

#### GERRIE BROS' SHORTHORNS

Herd headed by Gainford Matchless, one of the very best sons of the great Gainford Marquis. Our breeding cows are Missies, English Ladys Duchess of Glosters, etc. Present offering of young bulls are by our former herd sire, Master Missie, Junior Champion at Brandon last summer.

GERRIE BROS.

### **IRVINEDALE SHORTHORNS**

Herd headed by Marquis Supreme 116022. For sale at present, 9 granddaughters of (Imp.) Right Sort, and a good lot they are; also 2 bulls (roans), 15 months old, by Gainford Select. JOHN WATT & SON, R. R. No. 3, Elora, Ont. G.T.R. & C.P.R.

# SPRING VALLEY SHORTHORNS

Herd of seventy head, straight Scotch, good individuals. Headed by the great show and breeding bull, Sea Gem's Pride 96365 and Nonpareil Ramsden 83422. We have for sale four as good young bulls as we ever had and a few females. KYLE BROS., DRUMBO, ONT. (Phone & Telegraph Via Ayr.

\$800 Sired by Escana Ringleader 95963; dam, Claret Cup 66757; by Orange Victor 38371. A flashy roan heifer; long, thick, silky hair; loose, mellow skin. She is of prize-winning type—broad, deep, low-set, thick and smooth; straight top and underline; good head and horn. Claret Cup is the dam of Proud Diamond, herd bull at O.A.C. Other heifers and bulls equally good for sale. Prospective buyers met at Elora or Alma. MEADOW LAWN CLARET 2nd

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#### **Ouestions and Answers.** Miscellaneous.

#### Discharge of Mortgage.

Who should pay for the drawing and registering of the discharge of mortgage, the giver or the holder?

Ans.—The man upon whose property the mortgage was drawn should pay for registering the discharge of that mort-

#### Heating Water For The Stock.

I have a large water tank into which the water runs steadily, but it freezes over as well as around the sides so that the cattle do not care to drink. Would a cast-iron tank heater be all right? Has anyone had experience with one? G. S.

Ans.—Personally, we have not had experience with a heater, but we understand that they work satisfactorily. During cold weather it is undoubtedly better for stock if the chill is removed from the water. Where the tank and trough are located in the stable, the water does not become so ice-cold.

#### Pigs With a Cough.

What is the cause of pigs coughing from the time they are weaned until have a warm, dry pen which is cleaned every second or third day. We had thought it was caused by worms but I tried worm cures without effect. Up to the weight above mentioned they appear restless and cough a good deal. What is the cause and remedy? S. E.

Ans.—It is rather unusual for the cough to continue for so long a time, and we are inclined to believe that there must be some infection in the pen. From the symptoms given, it is rather difficult to definitely diagnose the case. Coughing is a symptom of bronchitis, but this usually leaves the hogs in an unthrifty condition if they escape death. It may be due to an irritation of the lungs. Good ventilation in the pen would tend to alleviate the trouble. Lung worms may infest the air passages of the lungs and cause a spasmodic cough. In some cases they cause death, but when the worms are few in number no really bad effects are apparent. For this trouble there is no effective treatment. Clean pens, frequently disinfected, and the plowing up of old hog lots and re-seeding them are preventive measures.

#### Watering Stock in the Stable.

Describe a system of watering stock in the stable. Is a concrete trough in the manger bottom satisfactory? M. D.

Ans.—There are a number of ways of installing troughs for watering stock in the stable. The concrete trough in the manger gives satisfaction, but it is necessary to have a tight board cover in order to keep out the dirt. We saw one in use where the stock lift the lid and drink at will. The owner of this system has had no difficulty from dirt getting into the water, as the cover is on a spring hinge which closed it the moment the animal raised its head. One objection would be that feed might get in behind the lid and prevent the animal opening it sufficiently to get a drink; then, too, feeding grain, salt, etc., has a tendency to rust out the hinges. We have seen concrete partitions built between the stalls and a cement water box built in this partition; the feed pipe entering from the bottom. This was not difficult to make as a mould the size of the trough was fitted up at the time the partitions were being installed. The pipe was also put in so that the soft cement settled tightly around it. Some use a continuous metal trough running along in front of the cattle. It is raised sufficiently high to feed underneath it. True, it is a slight inconvenience for feeding. However, it serves the purpose and there is not much danger of it becoming filled with chaff, if care is exercised in putting feed into the manger. Metal-lined wooden boxes may be used. We were in a stable the other day where a box 6 inches deep and 6 inches wide ran the full length of the stable in front of the cattle. A pipe led from that trough at the far end to a trough on the opposite side of the passageway; water was pumped into the one and flowed by gravity to the other. This was an inexpensive outfit, but served the purpose.



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More than one farmer has told us—since he has got a copy of "What the Farmer Can Do With Concrete," that the advice it gave him netted him hundreds of dollars in actual profit.

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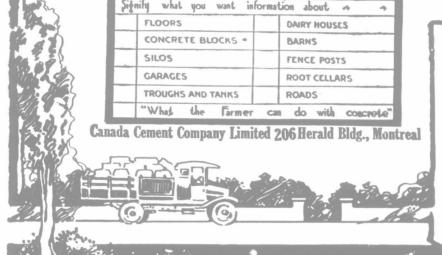


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Herd headed by (imp.) Newton Grand Champion and Belmont Beau. We have for sale a goodly number of real good young bulls that will suit the most exacting; also females. Inspection invited Geo. Amos & Sons

C.P.R., 11 miles east of Guelph

Moffat, Ontario

Robert Miller, Stouffville, Ont.

still has a few Shorthorn bulls, fit for service, and some females that are as good as can be found for the man that wants to start right in Scotch Shorthorns. They will be sold for a low price, considering the quality, and the freight will be paid. Write for anything in Shorthorns and Shropshires. One hour from Toronto.

#### CLOVER BAR HOLSTEINS

We are now offering a number of young bulls, sired by our senior herd-header, Francy 3rd's Hartog 2nd, the noted son of the famous old Francy 3rd and Canary Mercedes Hartog; also a few females. P. SMITH, Proprietor, R. R. 3, STRATFORD, ONT.

# **DUMFRIES FARM HOLSTEINS**

Present Offering-A few bull calves.

S. G. & ERLE KITCHEN ST. GEORGE, ONT

## HOMESTEAD HOLSTEIN STOCK FARM

I must sell 12 or 15 young cows, due to freshen in March or April in order to make room for young stock, also a few young bulls. For further particulars, write

B. R. BARR Harrietsville Station, C.P.R. Phone Connection.

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#### A HOLSTEIN HERD YOU SHOULD KNOW WM. STOCK & SONS, TAVISTOCK, ONT

Home of the great Baroness Madoline, 34.48 lbs. in 7 days, 1,043.35 lbs. in 335 days. Write at once for a list of the good record bulls they are now offering, and plan now to spend a day this winter at the farm. It will be a day worth while and here there is always a welcome. Mention the Advocate.

#### WALNUT GROVE STOCK FARM

Holstein-Friesian Cattle, Tamworth Swine. We are offering a choice lot of 5 months' sows and boars and also have several nice voung litters. Must clear a number quick to make room. We are also offering White Wyandotte Cockerels at \$3 each. Satisfaction guaranteed. C. R. JAMES, R. R. No. 1, Richmond Hill, Ont. Take Yonge Street Radial car from Toronto—stop Thornhill.

WHO WANTS THIS BULL?

Lyons Colantha (No. 23221), Born Sept. 11, 1914. His sire is King Lyons Colantha, whose six nearest dams average 30.10 lbs. butter in 7 days; his sire is by a son of Colantha 4th's Johanna, 35.22 in 7 days, and 1,247 lbs, butter in 1 year. His dam is a 4,875 lb. 2-year-old in R. O. P.; her dam a 8,258-lb. 4-year-old. Must be sold at once; right in every way. For fuller particulars write:

J. Mogk & Son, R. R. 1, Tavistock, Ont.



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Why throw away your money to middlemen. We will furnish you, f. o. b. Watford, Ont., this beautiful set of strong and easy-running sleighs; isual price, \$35.00, for \$25.00. Fully guaranteed, nade of the best of material, white oak runners, dix or seven feet long—your choice; two inches wide. Spring steel shoeing; well painted; made to ast a lifetime. Ask your neighbor about them. For 20 years the Hastings sleigh is known to be the best made, strongest, and easiest running sleigh in he market; you run no risk. Send us a P. O. noney-order or your cheque. Address:

HASTINGS SLEIGH COMPANY WATFORD, ONT. Robt. Taylor, Manager

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FOR TOWNSHIP ROADS Snow Ploughs for sidewalks Stone and Stump Pullers

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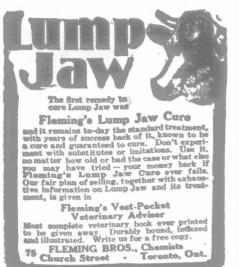
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in the ground, in the shape of wooden posts.

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The figures of yesterday may be TOO LOW for to-morrow. We furnish cans.

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Shropshire ram lambs.
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# For Milk, Butter, Cheese, Veal Holstein Cows Stand Supreme

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**W.** A. Clemons, Sec'y, - St. George, Ont.

# Holstein Bulls

of serviceable age and younger; from dams with records of 30 lbs. down. Write for prices.

R. M. HOLTBY, R. R. 4, Port Perry, Ont.

KING SEGIS PONTIAC DUPLICATE

A 1/4 brother to the \$50,000 bull is the sire of our young bulls offered at present. Two of these are ready for service. Write us also for females.

R. W. Walker & Sons, Manchester Station,
G.T.R., Port Perry, Ontario

# Questions and Answers. Miscellaneous.

#### Fertile Eggs.

How long must fowl be mated before eggs are fertile?

2. If a male bird of a different breed gets in a flock how many days should elapse before it would be safe to save eggs for hatching from the flock? F G.

Ans.—1. The time varies. Sometimes the eggs are fertile a few days after the male bird is put in the flock. However, ten days or two weeks should elapse before one would be reasonably sure of a high percentage of fertile eggs.

2. One might gather eggs which have been fertilized by the intruder for a month after he had access to the pen.

#### Ewe Eats Wool.

I have a ewe which eats wool. She pulls it off her own fleece and also off her mates. What is the cause and treatment for same? G. S.

Ans.—This is an abnormality which is hard to treat. The sheep has acquired a depraved appetite, possibly through lack of mineral substance in her ration. Feeding on good oats, clover hay and roots, and having clean water and a supply of substances which will provide mineral matter within reach, may aid in stopping the habit. A mixture of salt, wood ashes, bone meal, etc., should supply the want for mineral matter. There is danger of wool balls forming in the stomach, which will sooner or later occlude the passage and cause death.

#### Carrots for Stock Feeding.

1. What is the feeding value of carrots?

2. How many should the average cow receive at one feed?

3. What would you advise adding to clover hay, carrots and bran to make a good ration for a milk cow?

4. Are carrots worth \$12 per ton for feed, compared with other feeds? C. T.

Ans.—1. According to chemical analysis, carrots have a slightly higher feeding value than either mangels or turnips. We can find no record of where carrots have been used alone in an experiment to prove their exact value. However, as it is claimed that one pound of dry matter in roots equals one pound of dry matter in mixed grain. Nine pounds of carrots would have about the same

nutritive value as one pound of grain.

2. We would not care to feed over a peck at a meal; in fact, we would start with a gallon and gradually increase.

3. The feeds mentioned make a fairly good ration for a cow of average production. The carrots would add succulency to the ration, although when cost is considered we believe that silage or mangels would possibly come cheaper. However, if a person has a quantity of carrots on hand the cost may not be the point. Oats are exceptionally good for cows, as they are as nearly a balanced ration in themselves as can be secured in any grain. They could be used to displace part of the bran. A cow should have all the clover hay she will eat, a fair amount of succulent feed, and then concentrates added according to production. One pound of concentrates made up of bran, oats, barley, etc., to four or five pounds of milk, makes very good feeding. Some dairymen use considerable cotton-seed meal or oil cake, especially when the cows are on heavy production. A pound or twoofthese feeds at a meal brings up the protein side of the ration. However, when good clover hav is available the feeding of high-priced concentrates is not as economical as if the roughage part of the ration consisted of feed other than legume. 4. It all depends on what other feeds

4. It all depends on what other feeds are available. Twelve dollars a ton would be 30 cents per bushel and we doubt whether or not a feeder could get that value out of them when he had plenty of clover hay and was feeding bran and oats. Silage would supply cheaper succulent feed. One experimenter has figured out that with other feeds at \$30 per ton, roots would be worth about \$4. On this basis carrots at \$12 would be considered too dear to feed. We would be inclined to sell the carrots and possibly purchase oil-cake meal, cotton seed or bran; any of which tends to keep the animal in thrifty condition when fed along with home-grown feeds.



20,177 lbs. milk, 782 lbs. butter in 1 year as a four-year-old, is the record of

# Burkeyje Hengerveld (9906)

1st 20,000-lb. 4-year-old in Canada. Let us send you particulars about a beautiful young son of this great cow. He is sired by "May Echo Prince", a ¾ brother of the world's champion "May Echo Sylvia". We have pleased dozens of others and we can suit you too, in both price and breeding. Write us and see.

O'Reilly Stock Farms, Peterboro, Ont., R. R. No. 9. J. O'Reilly, Prop.

# LLENROC STOCK FARM

On the Boulevard of the Beautiful Niagara River

A few well-bred young Holstein bulls for sale. Also a Belgian stallion, weight about a ton ADDRESS:

W. C. HOUCK

R. R. No. 1, Chippawa, Ontario

# HIGHLAND LAKE FARMS Herd sire, AVONDALE PONTIAC ECHO, (under lease) a gon of MAY ECHO SVI VIA et

Herd sire, AVONDALE PONTIAC ECHO, (under lease), a son of MAY ECHO SYLVIA, the world's record cow. Only one other 41-1b. bull in Canada.

We have young bulls for sale whose two nearest dams (both Canadian champions) average as high as 35.62 lbs butter in seven days; another whose two nearest dams are both 100-1b. cows; and one ready for service, from a 41-1b. sire and an 18,000-1b. two-year-old dam.

SEND FOR OUR BOOK OF BULLS A few females for sale. Satisfaction guaranteed.

R. W. E. BURNABY (Farm at Stop, 55, Yonge St. Radial) JEFFERSON, ONT.

# Hospital for Insane, Hamilton, Ont.

Present offerings are 4 grandsons of **Dutchland Colantha Sir Mona**, and high-testing, large-producing R. of P. dams of Korndyke and Aaggie DeKol breeding. Born during April and May, 1917. **Apply to Superintendent**.

# **Roycroft Farm Holstein-Friesians**

Our 30-lb. bulls have all been sold, but we still have several sons of Pontiac Korndyke of Het Loo, that are just nearing serviceable age. Get one of these for your next herd sire, have a brother of Het Loo Pletertje, the world's greatest junior two-year-old at the head of your herd. We also have a 9 months, 27.78-lb. son of King Segis Alcartra; and one other, same age, by Dutchland Colantha Sh Mona. See them at once or write early.

W. L. Shaw, Roycroft Farm (Take Yonge Street Radial Cars from N. Toronto) Newmarket, Ont

# SUMMER HILL HOLSTEINS

The only herd in America that has two stock bulls that the dam of each has milked over 116 bs, a day, and their average butter records are over 35 lbs, a week. We have 50 heifers and young bulls to offer by these sires, and out of dams just as well bred. We invite personal inspection.

D. C. FLATT & SON.

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The first I have ever offered. I am away overstocked and am offering females for the first time.

I have over eighty head. Come and make your selection—one or twenty-five.

The best-bred lot of cattle in Ontario. I also have five young bulls.

A. A FAREWELL 30 miles east of Toronto—C.P.R., C.N.R., G.T.R.

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For important

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JAS. B. for high-Herd head two-year

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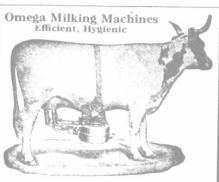
These are the months in which Bricks should be hauled for use next Spring. Ask us for samples, which we will send without delay prepaid.

is a smooth, hard surfaced facing brick and is the kind to hard for first class work. Made of shale, which ensures durability. Interpr-vincial Brick offers many pleasing shades in

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Write to-day for free booklet describing the pecial features of the *Omega*. C. Richardson & Co., St. Mary's, Ontario

TWENTY-FIVE YEARS BREEDING

#### Registered Jerseys and Berkshires

We have bred over one half the world's Jersey Champions for large yearly production at the pail. We bred and have in service the two grand champion Berkshire boars. If you need a sire for Improvement, write us for literature, description and prices.

HOOD FARM. LOWELL, MASS.

#### **AYRSHIRE COWS**

are good breeders, rich milkers, easy feeders.

WRITE W.F. STEPHEN, Secretary CANADIAN AYRSHIRE BREEDERS'ASS" Box 513. Huntingdon, Que.

LAKESIDE AYRSHIRES

A choice selection of young bulls for sale from Record of Performance dams imported and Cana-

dian bred.

SIRES: Auchenbrain Sea Foam (Imp) 35758
many times grand champion.
Fairfield Mains Triumph (Imp) 51137, a son of
the noted Hobsland Perfect Piece.
Write for catalogue.

Geo. H. Montgomery, Proprietor, Dominion Express Building, Montreal. D. Mcarthur, Manager, Philipsburg, Que.

# Fernbrook Ayrshires

Young bulls for sale (out of R.O.P. dams) from one to fifteen months old; tracing closely to the world's champions, Garclaugh May Mischief and Jean Armour.

COLLIER BROS., Beachville, Ont.

#### D. M. WATT

For imported or Canadian-bred Ayrshires, bulls or females, get my prices. My importations win wherever shown. Write me for one animal or a carload. St. Louis Station, Que.

Kelso Farm R. O. P. Ayrshires. Herd headed by Palmerston Speculation Imp. We never had a stronger line-up of R. O. P. producers than we have at present. Our 1917-1918 young bulls are sure to please. D. A. Macfarlane, Cars Cross-ing, G. T. R., Athelstan N. Y. C.; Kelso, Que.

JAS. B. ROSS, MEADOWVALE, ONTARIO for high-producing, show-yard AYRSHIRES, Herd headed by SNOW KING 47376, first-prize two-year bull at Toronto, 1917. Write me also for anything in Yorkshires. anything

Meadowvale P.O., Streetsville Station

SUNNYSIDE AYRSHIRES We have at present the strongest lot of young bulls we ever offered—one by Hobsland Masterpiece, one by Sunnyside Matchless, and the others by our present herd sir., Sunnyside Masterpiece.

Tobb. W. Lodan.

Hawick Station, Oue. John W. Logan, Howick Station, Que.

#### Questions and Answers. Miscellaneous.

Doing His Bit.

Is a boy seventeen years old, making cheese as a helper, doing his bit as faith-

fully as if on the farm? OLD SUB. Ans.—If the boy is conscientiously working in the factory and cannot be replaced he is doing his bit. Cheese factories must be operated. Of course, if the boy knows more about making cheese than about farming, he should stay at it. If he is more expert in farming he

#### Depraved Appetite.

him to decide.

might do better on the land. It is for

Our cows and young cattle are not thriving as they should. I feed them silage, cut straw and chop three times a day, and they have access to salt. They keep continually chewing boards or small sticks while outside and chew at their mangers when tied up. They appear to have a longing for something which is not in their ration. What treatment do you recommend? J. B.

Ans.—Evidently there is something lacking in the ration which the cow require. You do not state the kind of chop you are feeding. Some feeds contain more mineral matter than others. The indications are that it is mineral matter which the stock are wanting. If the soil is deficient in phosphates there is less of this material in the feeds. Clover hay, rolled oats, and wheat bran should help to balance up the ration. It might be a good plan to put a small handful of hard-wood ashes or bone ash with the meal once or twice a week.

#### Stifle.

I have a mare which was stifled when a colt. I broke her in last year but did not work her very much. I have used her during harvest and fall plowing. The trouble bothers her principally when trotting. Will she improve when she gets older and is worked more, or is there any danger that it might get worse?

Ans.—It is doubtful if you can do much to remedy the trouble at this stage. If treatment had been applied at the time the mare got stifled, there would have been a chance of strengthening the joint and thus lessen the danger of lameness. Even yet blistering may tend to help it. Clip the hair off the joint and apply a blister made of 2 drams each biniodide of mercury and cantharides mixed with two ounces of vaseline. Rub the blister well in and tie the mare's head so she cannot bite the parts. In wenty-four hours rub well again and at the end of another twenty-four hours apply sweet oil. Oil every day until the scale comes off, then blister again.

#### Foundation for Barn.

I am thinking of putting a cement foundation under a barn which is 40 feet wide and 56 feet long. I want a 9-foot wall, with 2 feet below the ground; thus making 11 feet of concrete in all How thick should the wall be built? will it require re-enforcing? Should there be re-enforcements over the doors and windows? How much gravel and concrete will be required for the wall? E. W.

Ans.—It would be advisable to put a 20 or 24-inch base for the wall to rest on which should be 6 or 8 inches deep. Above that a 12-inch wall should sufficient, provided it is well built. Mixing in the proportion of one of cement to eight of gravel and sand it will require about 60 barrels of cement, and you will need about 77 cubic yards of sand and gravel. If the gravel is of good quality and contains a considerable percentage of sand, it will not be necessary to get much clear sand. Re-enforcement for the walls is not necessary, except at the corners, and even there when the corner is built up at one time it is not absolutely essential although it does eliminate any danger of spreading. Re-enforcement over the doors and windows is only necessary to prevent the weight above them from sagging the door or window frames. A straight wall where the weight is downward is different from a silo where there is a great pressure outward; in the latter case re-enforcement is absolutely necessary to prevent spread-







# Humeshaugh Ayrshires and Yorkshires

Three young bulls, fit for service; sons of Hillside Peter Pan and R. O. P. dams. These were winners at Toronto and London A few young sows and boars of good quality and priced right

Alex. Hume & Co., Campbellford, Ont., R.R. No. 1

Gladden Hill Ayrshires Winners wherever shown—Herd headed by Fairview Milkmaid; sire Hobsland Stumpies Heir, Imp; dam, Milkmaid 7th, a 166.96-lb. R. O. P cow with 729 lbs. of fat; average test 4.36 per cent. We have three 12-month bulls that were winners at Toronto and London. All are by herd sire. Come and see our females. We also have two three-year-old Clydesdale stallions, one by Surname Imp. and one by Cairndale Imp, Good quality and sure breeders. Will sell one. Price reasonable.

Laurie Bros. C.P.R., G.T.R., C.N.R., Shipping Stations, Agincourt, Ontario.

LHOUSE AYRSHIRES--F. H. Harris, Mt. Elgin, Ont. Headed by Burnside Lucky Master Swell, a combination of blood so hard to equal, being of the Masterpiece and Lucky Girl families, a combination which means quality, production and constitution. Ninety head to select from. Special offering—20 yearling heifers and 3 bulls. Inspection invited.

Herd Sires: Netherton King Theodore Imp., and Humeshaugh Invincible. Grand Champion. London, 1917. Our herd at present holds the Canadian records for both milk and butter in the two-year, the three-year and the mature classes. Let us tell you about the daughters of Netherton King Theodore. We have sons of both bulls for sale—all have R.O.P. dams. Visitors met at Hamilton by appointment, A. S. Turner & Son (3 miles from Hamilton) Ryckman's Corners, Ont.

# Ormsby Grange Jerseys

I offer for immediate sale, at bargain prices, two promising young Jersey bulls fit for servic . RALPH LACTUS [6767], calved January 30th, 1916. Sire, Róyal Merger II [3200], Dam, Lady Lactus II [3182]. ROYAL MERGER IVth, [8454], calved February 24th, 1917. Sire, Royal Merger II [3200]. Dam, Lily Lactus, 2074.

D. McEACHERN,

ORMSTOWN, QUEBEC

RECORD OF PERFORMANCE JERSEYS
Choice Bulls and Females. We have six young bulls of serviceable age, all from R.O.P. dams.
Three are by our senior sire, Brampton Dairy Farmer, and three are by our junior sire, Brampton
Bright Togo. Write for records. We also have females.
R. & A. H. BAIRD, (G.T.R. Stations—New Hamburg, Bright)

NEW HAMBURG, ONT.

**EDGELEY STOCK FARM** 

The home of Canada's greatest producing Jersey, Sunbeam of Edgeley, the Sweepstakes Dairy Cow at the recent Guelph test; is also the champion R.O.P. butter cow for Canada. Would a grandson of great-grandson of this famous cow improve your herd? We have them. Write for particulars.

JAMES BAGG & SON, (Woodbridge, C.P.R., Concord, G.T.R.) EDGELEY, ONT.

THE
WOODVIEW FARM
JERSEYS
LONDON, ONTARIO
John Pringle, Prop.

CANADA'S MOST BEAUTIFUL JERSEY HERD
the foundation of this herd is made up of very high-class cows, imported from the island of Jersey, most of them in the Record of Performance, and while we have, at all times, a few mature cows for sale, we make a specialty of in-calf heifers and young bulls. Write us your wants, or better still, come and see the herd. We work our show cows and show our work cows.

## **BRAMPTON JERSEYS**

Special Offering:—50 cows and heifers in calf, 7 bulls; the best breeding ever offered in Canada from R. O. P. stock. The ancestors of these bulls have made and are making Jersey history. No better stock can be obtained.

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OFFERS:—Several young bulls, all of serviceable age, and all from R. O. P. dams. These are priced right. Interested parties should write or see these at once, We also have females of breeding age D. DUNCAN & SON, Todmorden P.O., Duncan Station, C.N.O.

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Tells How to Loosen a Tender Corn or Callus so it Lifts Out Without Pain.

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No pain, not a bit of soreness, either when applying Freezone or afterward, and it doesn't even irritate the skin. Hard corns, soft corns, or

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Morriston Tamworths and Shorthorns—Bred from the prizewinning herds of England. Tamworths, both sexes; boars from 2 to 12 months. Shorthorn bulls from 5 to 10 months old, reds and roans—dandies.

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Meadow Brook Yorkshires Fifty young pigs from five litters, weaned and ready to wean. Pairs not akin. Also a large choice G. W. MINERS R. R. No. 3, Exeter, Ont.

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Young sows bred for spring farrow and a nice lot of young boars for sale. Write: John W. Todd, R. R. No. 1, Corinth, Ont. BERKSHIRE PIGS, all ages and sexes, headed by Successor's Double II., bred by Hood learn, Lowell, Mass, U.S.A. SHORTHORN CATTLE. dual-purpose strains, headed by Gelden Dake (Imported, bred by Lood Lawis, Wrest Park, England, Althest—J. B. Pearson, Marager, Credit Grange Farm, Meadowyale, Ont.

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#### **Questions and Answers.** Miscellaneous.

Pigs Suffering from Apoplexy. I have a bunch of pigs which are ten weeks old and are very fat. I have been feeding bran and shorts three times a day. A couple of days ago, while eating, one of them curled up in a heap and started kicking and panting. A day or two after that another one acted the same. Am I feeding them too much, or what is the trouble? C. W. E.

Ans.—The symptoms are those of apoplexy, which is due to high feeding and lack of exercise. Purge each with one to two ounces of Epsom salts, feed lightly for a while and try and get the pigs to take plenty of exercise. If you have roots, feed a few of them to the pigs; also, throw dirt from the root house into the pen. Young pigs should be kept thrifty, but, if they get too fat, disorders frequently set in. Shorts, finely ground oats and skim-milk make a splendid ration up to the time the pigs are three and a half to four months old, when heavier feed can be added. It is sometimes advisable to remove about a pint of blood from a pig affected with apoplexy. This is done by tying a cord tightly above the knee and then opening the vein on the inside of leg.

#### Comb Turns Dark.

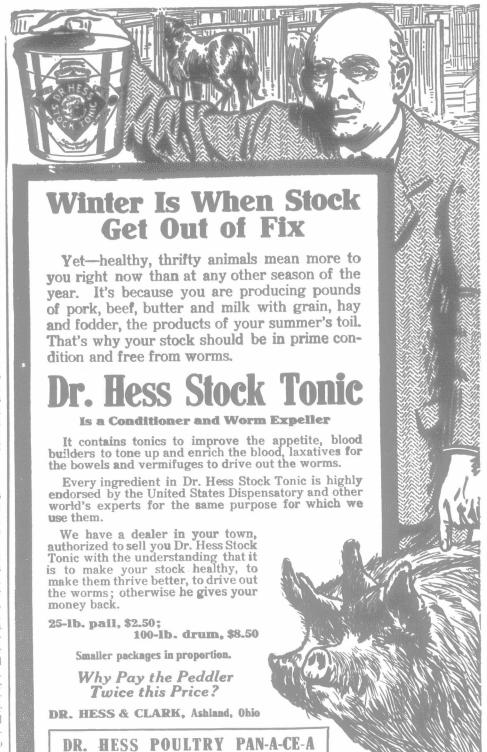
What is the cause of my rooster's comb turning a dark red at night? becomes a shade lighter during the day. He eats heartily, but I expect to find him dead in the morning.

Ans.—It is rather difficult to state just what disease or trouble the symptoms given would indicate. A dark comb is a symptom of liver trouble, and the cause is lack of exercise coupled with overfeeding, especially with rich, albuminous food. Treatment would be change of diet, less meat scrap and nitrogenous foods, plenty of green feed should be included in the ration, and the birds should be compelled to take exercise outdoors if possible If a bird is suffering from ptomaine poisoning the comb usually turns nearly black. Treatment consists in giving the bird a teaspoonful of castor oil, followed by sulphate of strychnine in doses of onefifth grain every five hours. The comb usually turns very dark with birds suffering from pneumonia. Of course, with any of the diseases mentioned there are other specific symptoms beside discoloration of the comb. Without more details than those given, we cannot definitely diagnose the trouble.

#### Swollen Legs - Cracked Heels.

was worked but little last fall. She remained in the pasture quite late in the season. When I brought her in I noticed her heels were badly cracked. I found them very difficult to heal. When standing in the stable her legs swell, but the swelling leaves when driving her. Is there any danger of it leaving her with thick legs. She is fed on clover hay. What treatment do you advise? A. W.

Ans.—Some horses are predisposed to the trouble mentioned, and it is with difficulty that the legs are kept from With others the trouble beswelling. comes chronic and they are left with permanently enlarged limbs. If the heels are still sore, it might be advisable to apply a hot poultice for two days and two nights and then dress the parts three times daily with a lotion made of 1 ounce each acctate of lead and sulphate of zinc in a pint of water. When the legs get wet, or muddy rub them dry. it is good practice to give a purgative as giving as much grain on Sunday when when the mare is idle as she was getting when at hard work through the week.



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# YORKSHIR

From choice breeding stock. Four large litters, recently weaned: also some a few months old. WELDWOOD FARM, Farmer's Advocate, LONDON, ONT.

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