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May 27, 1915



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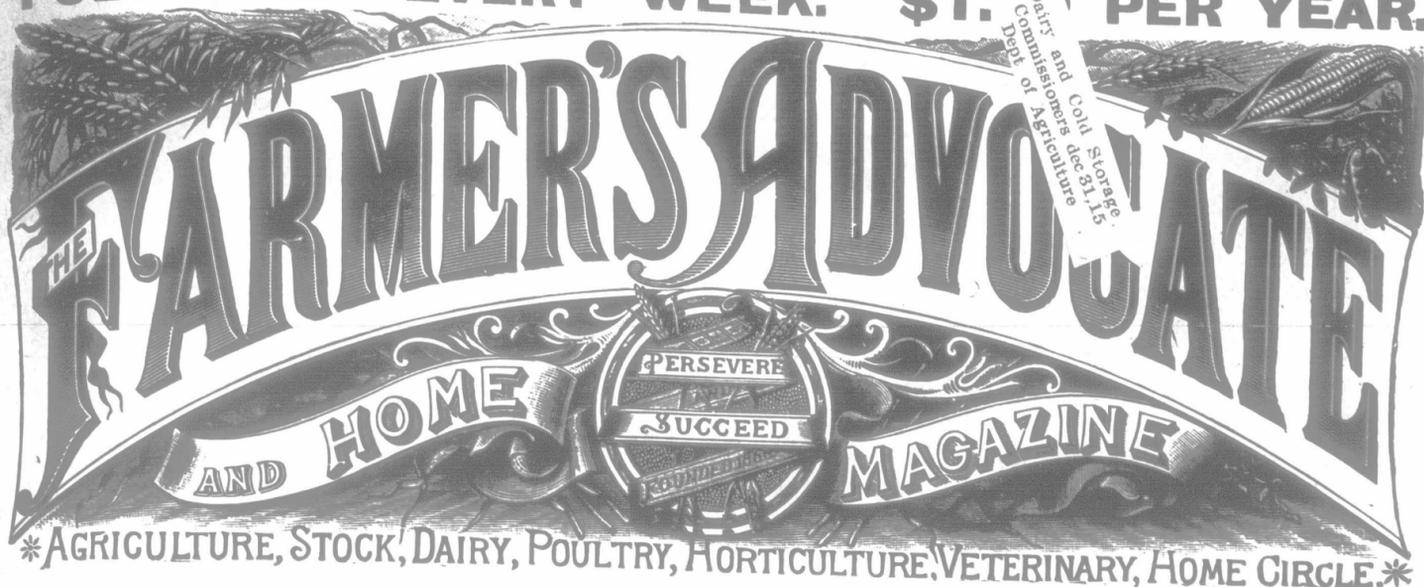
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ONTO

PUBLISHED EVERY WEEK. \$1. PER YEAR.



Dairy and Cold Storage
Commissioners Dec 31.15
Dept. of Agriculture

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VOL. L.

LONDON, ONTARIO, JUNE 3, 1915.

No. 1184

Feed Your Children Lots of Wholesome Bread

Make it with PURITY FLOUR so it will be More Nutritious

IN the words of Woods Hutchinson, one of America's most eminent physicians, "If a child is worth raising at all, it is worth feeding upon the best and most nutritious food—and plenty of it."

And the medical profession is a unit in placing good, wholesome bread among the best and most nutritious food for children. Many give it first place.

But some bread is more wholesome than others, depending upon the skill of the baker and the grade of flour used.

So if that boy or girl of yours is worth raising, make your bread of PURITY FLOUR.



The bread will be greater in food value, more nutritious, because it will be made of flour *consisting entirely of the high-grade portions* of the No. 1 Western hard wheat berries. It will contain the high-grade food elements, the high-grade gluten, phosphates and starch of the world's most vigorous wheat.

See that your children have lots of PURITY - FLOUR - BREAD.

It's a well-known fact among physicians that a vast number of children don't eat enough bread. A child should be encouraged to eat an abundance of bread, so as to supply fuel for energy and building material for growing bones, flesh and muscle.

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Combined specification and form of tender can be obtained on application at this office and from the caretakers of the different Dominion Buildings.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied, and signed with their actual signatures.

Each tender must be accompanied by an accepted cheque on a chartered bank, payable to the order of the Honourable the Minister of Public Works, equal to ten per cent. (10 p.c.) of the amount of the tender, which will be forfeited if the person tendering decline to enter into a contract when called upon to do so or fail to complete the contract. If the tender be not accepted the cheque will be returned.

By order,
R. C. DESROCHERS,
Secretary.

Department of Public Works,
Ottawa, May 20, 1915

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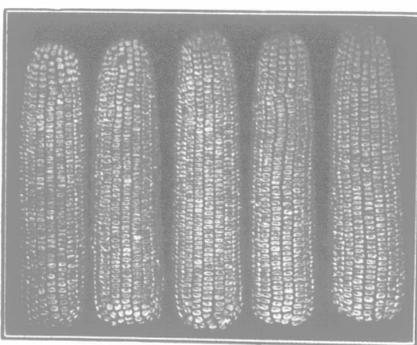
Despite the war tax, we made another big reduction February 15th. That was three reductions in two years, totaling 37 per cent.

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Broken bushel orders Cob Corn add 15c. extra for each broken lot. The Best Seed Corn is obtained on the Cob. Try some on the Cob this year.

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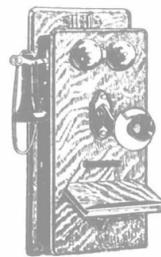
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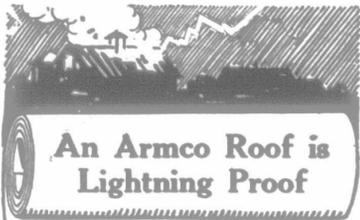
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IF HE WILL THEN TAKE FIVE minutes to compare the separating bowl construction: the size, material and finish of the working parts, particularly those subject to wear and requiring to be occasionally taken apart and put together; the manner of oiling, and everything which enters into the design and construction of a separator as a simple, durable machine, he will still further see the difference.

IF HE WILL GO A STEP farther and turn the cranks of the two machines side by side for half an hour, particularly running milk or water through the bowl, he will see still more difference.

AND IF HE WILL TAKE THE two machines home, as every De Laval agent will be glad to have him do, and run them side by side in practical use, the De Laval one day and the other machine the next, for a couple of weeks he will see still greater difference in everything that enters into cream separator practicability and usefulness.

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THE COMPARATIVELY FEW buyers of other separators are those who merely read printed matter claims or listen to the argument of some dealer working for a commission, and who do not think it worth while to see the difference for themselves.

THE WISE BUYER OF A cream separator to-day does see this difference when buying his first separator, while the unwise or careless one usually finds it worth while to do so when he comes to buy a second cream separator a year or two later.

EVERY DE LAVAL AGENT considers it a privilege to show the difference between the De Laval and other separators, and to afford every prospective buyer the opportunity to try out and prove the difference to his own satisfaction, if on first examination he feels the slightest doubt about it.

THAT'S THE REASON WHY FOUR buyers out of five are buying De Laval Cream Separators in 1915, and why the use of De Laval machines will, before long, be nearly as universal on the farm as already is the creamery and milk plant use of power or factory separators.

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The Farmer's Advocate and Home Magazine

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Vol. L.

LONDON, ONTARIO, JUNE 3, 1915.

No. 1184

EDITORIAL.

Kill the weeds while you may.
Keep the calves growing by giving plenty of clover.
Cultivate! should be the watchword this month.
June is the month to kill weeds and make the corn grow.
Get the breeding bull out in the paddock. He must have exercise.
The Kaiser will now have to divide up his hate and extend some to Italy.
On the sheep's back is no place for the wool at this season of the year.
Do not sow turnips too early. The middle of June is generally soon enough in Ontario.
June should bring the warm weather that the corn needs, but do not leave it all to the weather, cultivate.

The man who killed off all his brood sows is already beginning to wish that he had some of them back again.

In criticizing the operations of the war as waged by the Allies, some seem to forget the magnitude of the whole affair.

This war really consists of a battle between production and destruction. Canada can hold her own at either, but particularly the former. Keep it up.

Start the boy keeping a record of the number of eggs gathered each day. It will reveal something about the flock, and will start the lad in keeping accounts.

A retired farmer looking for work in the city seems out of place, and he must be lonesome for the old farm again. Retire on the farm and be happy and contented.

It is not enough to be able to say a cow is a good milker. The up-to-date buyer wants to know how much she gave yesterday, last month and last lactation period.

The man who blunders should not always be deprived of all credit, for is it not true that the successful profit by the mistakes of others who very often are given no second chance?

A good road to the man in the buggy is often a very rough road to the speeder in an automobile. That is one reason the farmer does not fix the road, and the latter still complains.

Ticks and lice cause thousands of dollars loss each year, and yet with very little trouble they may be practically exterminated by the use of powders or dips, either proprietary or home-made.

It is said that sheer weight of metal will win this war. If metal against metal did not mean the killing, maiming and bereaving of millions of people it would not be so bad, but with all the machinery for making war more men and brave men are needed than ever before.

The Battle of Ideals.

A few days ago we read that the side with the greatest weight of metal would win the war now being waged, but this world war is more than a battle of metal, it is a conflict between freedom and despotism. On one side we have lined up the nations which believe that the end justifies the means, forces which tear up sacred treaties, forces which murder innocent non-combatants in the hope of inculcating fear into their enemies, forces which bayonet babies and sink innocent women and children. These forces operate on the supposition that what can be done is right to do—might is right. Germany and her helpers fight to subjugate. On the other side, and the world is happy to know that this side grows in strength as more nations join the cause for which humanity fights, the fighting is done for freedom. The allied armies are not waging a war of conquest, but are fighting in the defence of the freedom of the world. One would take away liberty, the other would increase it. Why do our armies fight so well against the great German machinery of destruction? As one young lad recently said to his father who wondered at the gallant stand of the Canadians at Langemarck against fearful odds: "Yes, father, but they were free men." Free men can never be conquered. The fight may be long and bitter, but freedom is the ideal which must and will permanently put away the ideal of despotism and subjugation, which means tyranny.

Keep Ahead of the Game.

Why is it that a farm is sometimes found situated favorably, with as good soil as that on neighboring farms, with practically the same natural chances as the farms surrounding it, and while the neighboring farms are trim and neat and prosperity is in evidence on every hand, this particular farm is in a backward state, fences down, trees untrimmed, work dragging, stock thin, everything bad? The man very often blames the soil, the weather, bugs or blight, yet his neighbors' crops are thriving under similar natural conditions. Sometimes a backward farm is placed under new management and a change soon comes over the place. The farm was not to blame. Not long ago we drove through one of the garden spots of Canada. Prosperity, the result of efficiency, smiled brightly on every side. Fruit trees were models of symmetry; fields were clean and mellow; farm steadings were neat and well kept, and in the midst of it all we came upon a farm which looked as ridiculous as would a man in overalls and smock with long uncombed hair and cow-hide boots at a society club banquet. On it the trees were mere piles of brush, the work was lagging behind, the horses were not equal to their work, and doubtless the owner wondered why he didn't make money, and grumbled that farming was a poor business anyway. Any business is very largely what the man engaged therein makes it. Farming is particularly so. Let the right man take hold of the place and it would soon tell a different story. It is a question of efficiency, of everyday ability to do things and do them right. It does not pay to do things by halves. Keeping two half-starved horses to do the work of three or four is false economy. Starved stock never pays any man; neglected trees never show a profit; poor fences do not make for economy; doing work ten days later than it should be done means a direct loss. Keep ahead of the game.

Forget Politics During the War.

Party politics are supreme in influence, no matter what the crisis. Their intricacies and ramifications are such as to make the whole situation an impenetrable haze to the lay mind. People will put party first and everything else afterwards, no matter what the danger which comes as a direct result. Sovereign voters on one side see nothing good in the men and policies of the other party, and so it goes. The Asquith Government in Britain has been criticized, perhaps rightly, perhaps unfairly, at a time when it is imperative that the Empire stand together as one man. The War Office has been severely criticized, and the Admiralty has come in for its share of the wrath of those, who, dissatisfied, are ever looking for some supposed weakness with which to find fault and so stir up public opinion. A move has been made in Britain which should put an end to party diatribe until the war is over. All parties have joined hands in a coalition ministry of the most capable men representing these parties. If criticisms must be made they must cease to be party criticisms. Behind the new Cabinet British people must stand, and aid them in every way to prosecute the war to a successful issue. And be it said that we are often a little too hasty in our judgments. People sometimes expect too much. Many looked for a war of very short duration, and because it is not over blame the men at the head of affairs. This is manifestly unfair. The German machine which has been building for over half a century in preparation for "the day" cannot be destroyed in a few weeks, no matter how capable the men in the Cabinet are. Good men have done and are doing their best. Mistakes are inevitable in a campaign of this magnitude. Let us always remember when we are wont to find fault the gigantic nature of the undertaking in hand. The British Cabinet has put away party strife, it is time for the people of the British Empire, including all the Dominions, to forget politics until the war is over.

The Case of the Rural School.

In the Province of Ontario in 1914, of village and rural schools, 278 are reported officially as having formally undertaken to give instruction in agriculture, an increase from 33 schools in 1911. The returns for 1913 put the total number of rural schools at 5,327, (not 6,000 as inadvertently given in last issue) so that progress is slow, and this is attributed to the lack of informed public opinion. In 1913 only two high schools were taking up agriculture, but during the year the number of secondary schools taking up the work increased to 13. Supplemental grants, summer courses for teachers and other incentives make a showing on paper, but do they not call attention to the need for more deep-rooted measures when so few rural schools receive instruction in the "elementaries" of agriculture, which we are assured in the newspaper has now acquired such "popular dignity" and in which "thousands" are anxious to share? With the prestige of extra plans to promote agricultural instruction in the schools by the Department of Education and a Federal Education Aid Act, the enthusiasm awakened, and the impetus given do not appear to have made any serious inroads upon the old order of text books, curriculum and normal training, judged by effects on the rural schools. The High School Entrance examination still appears to rule the roost. The number of candidates

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DOMINION.

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passing continues to grow, 1914 showing an increase of 2,759 over 1913. While the enrolment at urban public schools, high schools and collegiate institutes continues to increase that of the rural schools has fallen off, and the attendance at rural schools is less and is declining year by year. In a table classifying the pupils as to books, the number of pupils in rural schools has been increasing slightly for the First Reader, Part 1, and Part 2, and the Second Book, but after that increasing decline has set in, being greatest with the fourth Book. The urban classes all show an increase. Of the multitudes of rural youngsters who drop out on or before reaching "The Entrance" stage what incentive do they receive toward rural life or what aid toward its successful pursuit? Once those who "pass" are in the main educational current of the high school, goodbye to agriculture and rural interests? What ails the schools anyway or the homes, which grew out of former schools, if truancy laws must be invoked to tone up a falling and laggard attendance?

"I believe in education for all our boys and girls," said a leading local city school official the other day, and he meant the usual type of education as the schools have given it. We do not propose to disparage the knowledge, the broadening of sympathies and the pleasure that comes from the right use of books. It will not be well for the next generation if they neglect good training, at least in the "three Rs," and often woefully neglected art of expression. If real reading were properly inculcated it would be continued right along through life. But the fact is our school systems have been overloaded with books and lob-sided toward the professions and "gentle" occupations. The result has been one-sided development. In ancient Rome, in the middle ages and on down through later times higher education and the universities catered to the ruling and professional classes, and not to the

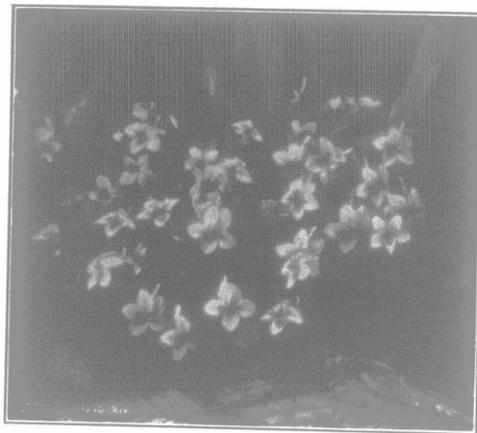
manual workers in agriculture and the industries. Those of us who have gone through the school mill, or perhaps helped to turn the crank, know how little recognition hand labor has received. It is neither appreciated nor honored as it deserves. We spin not, neither do we toil. The city school, just as badly as the rural school, needs the inspiration of a new attitude, and a change of direction if the people are to be saved from lob-sidedness and perils that threaten to grow worse after the world has sheathed its bloody sword. The demands of industrialism have struck a sympathetic chord in the cities and towns, and technical education is likely to forge ahead. What counterpart is the rural school to have?

Nature's Diary.

A. B. Kiugh, M. A.

One of the latest Violets to come into bloom, and at the same time one of the most beautiful species in North America is the Long-spurred Violet (*Viola rostrata*). The flowers are very large, the petals being lilac-colored with a deep spot near the centre, and the lower and lateral petals are strikingly marked with dark fine lines. The spur is long and nearly straight and gives the common name to the species. Fig. 1 shows a group of these handsome flowers in their haunts, and from this photograph the species may readily be identified. The leaves showing in the background of this picture are those of the Adder's-tongue. The Long-spurred Violet is not as common as many other species, and is more particular about its habitat than many of the Violas, apparently requiring what are termed "rich" woods in which to flourish. By a rich wood is meant one in which there is a deep layer of soil containing plenty of leaf-mould. Such woods are usually moist since the humus tends to conserve the moisture.

In Canada the English Primrose does not occur, and the plant most closely allied to this common flower of the British woods is the Bird's-eye Primrose (*Primula farinosa*). This



Long-spurred Violet.

species is local in its distribution, but in regions where it exists it grows in great profusion. On the sandy shores of Lake Huron on the west side of the Bruce Peninsula there are immense beds of the Bird's-eye Primrose, and when it is in bloom the shore is gay with the large patches of pale lilac or white. The leaves are in a rosette at the base of the stem, and they are covered on the under surface with a white mealliness. The flowers are small, being but half an inch across and are borne in an umbel at the top of the stem. The term "umbel" is used in speaking of a type of inflorescence in which the pedicels (little stalks) of the flowers all spring from the stem at the same level, and thus bear the flowers in a flat-topped cluster, as in the case of the carrot, parsley and parsnip. The name of the genus, *Primula*, is derived from the Latin "primus" (first), and refers to the early blossoming of the English Primrose.

In localities where there is fine sand we find some very interesting Wasps, known as Digger Wasps. There are several species of these Wasps, all of them belonging to the "thread-waisted" group, in which the hinder part of the abdomen is joined to the thorax (front part of the body) by a portion of the abdomen as fine as a thread. Throughout the animal kingdom we see many different ways of providing for offspring, and the Digger Wasps have a special way all their own. The females excavate burrows in the sand, then go off in search of some soft-bodied insect, such as a caterpillar, or of a spider. When the prey is found it is stung in the main nerve ganglion near the head end, which in the insects and their allies represents what in higher animals we call a

brain. The result of the sting in this particular place is to paralyze the insect or spider, but not to kill it. The prey is then dragged to the burrow and into it and the eggs are laid on it. When the young hatch out they find a store of fresh meat ready at hand for them to feed on. This may practically be called the first system of cold storage. After the eggs are laid the mouth of the burrow is carefully covered over so that its entrance is indistinguishable from the rest of the surface of the sand. When bringing the prey to the burrow some species have a regular routine which seems to serve no useful purpose, but which they unflinchingly go through. They drag the body to within about eighteen inches of the burrow, drop it there, run to the burrow, down it and up again, return to the prey, carry it to within six inches of the burrow, run down the burrow and up again, seize the prey once again, and drag it after them down the burrow. A performance like this, which is gone through always in precisely the same manner and which is done without any previous training, we term an instinct. If an animal modifies its behaviour to suit altered circumstances we say that it shows intelligence. Experiments have been made with these Wasps to see if they exhibit intelligence as well as instinct. Each time the Wasp left the prey within six inches of the burrow and ran down the hole, the observer removed it to a distance of some two feet. Eight times the wasp after a hunt recovered the prey and brought it back to the six-inch mark, but the ninth time it did not leave it at this point but dragged it straight down the burrow, thus showing that it possessed intelligence, since it modified its usual instinctive behavior when confronted with conditions which it had never met before.

One of the very few cases of the use of tools by animals is recorded by observers of the habits of these Digger Wasps. One individual was seen to take a small pebble in its jaws and use it to tamp down the sand over the entrance to its burrow.

A New Process for Drying Potatoes.

Older inhabitants of the country can well remember how, in the days prior to the advent of the canning factory and the evaporator, long evenings were spent in the process of drying apples. The many strings of halved or quartered apples hanging in loops from nails and rods above the kitchen stove are not easily forgotten by those who took part in the preparation of them, but this sight is now uncommon. The evaporator with its intense heat and efficient machinery does the work of many homes, and reduces the high moisture content of the apple, so it may be preserved for a considerable length of time or shipped to distant markets in a concentrated form. The canning factory, too, has its methods of using up a second grade of apples, thus relieving growers and their families from the arduous task of drying them. Potatoes are now being dried and deprived of their high moisture content. It is a practice in Germany, and it is being experimented with in Great Britain. Such a process, it is said, could be profitably introduced on this continent.

Canada produces a large quantity of potatoes and they, like apples, are made up largely of moisture, yet they are shipped from place to place in barrels or bags without thinking that out of every 100 pounds of potatoes, 80 pounds are water. It is bewildering when we think of how much water has been transported to and fro in Canada, and to distant countries by the movement of potatoes. It has meant earnings for the transportation companies, but it is remarkable how much money has been spent on the shipment of water to localities which have never been heard to complain about an inadequate precipitation.

About 15 years ago in Germany someone conceived the idea of evaporating potatoes. Since that time the production of potatoes in Germany has increased by 10 per cent., and now the evaporated or flaked potato can be bought at any grocery store in that country. Potatoes commonly contain about 80 per cent. of water, but through the operation of drying and flaking it is easily reduced to 15 per cent. This elimination of 65 per cent. of moisture would mean an immense saving in the handling of a potato crop, and they could be preserved from year to year, thus standardizing prices and preventing waste, such as resulted last season.

To our knowledge Canada has not experimented with this process, but at Wye in the United Kingdom considerable experimental work has been carried on, and they pronounce the "hot air system" of drying to be the best from a commercial point of view. The process of drying is as follows:

The potato is first sliced, then put into cold water (to prevent discoloration), then steamed for three to six minutes, and then subjected to a current of hot air, 70 to 90 degrees Centigrade, until dry. Ten pounds of ordinary potatoes will make a little more than 1 pound dry. This system is also said to give good results with other vegetables.

his particular... spider, but not... to the bur... laid on it... a store of... to feed on... first system of... aid the mouth... over so that... the rest of... ing the prey... regular rou... purpose, but... They drag the... of the bur... row, down it... carry it to... down the bur... ce again, and... A perform... ch always in... which is done... term an in... behaviour to... hat it shows... a made with... intelligence as... Wasp left the... row and ran... it to a... times the wasp... brought it... ninth time it... dragged it... wing that it... ed its usual... with condi...

In the current issues of the Weekly Bulletin, published by the Department of Trade and Commerce, this process of drying potatoes is being discussed, chiefly from information gained in Germany during recent years. As stated in these bulletins, the cost of flaking naturally depends upon the size of the plant, price of coal or other materials, value of potatoes and rate of wages. For a small plant it is considered from German calculations that 110 pounds of raw potatoes can be flaked for 8 to 10 cents. Assuming that the bituminous coal could be procured for \$4.81 per ton, wages per man to be 60 cents per day, and that the potatoes used contained on an average 18.22 per cent. starch, that the degree of wetness of the flakes average about 15 per cent. water, and that the plant operate for 150 days the total cost of production for 110 pounds of raw potatoes would be, for small plants, in connection with other undertakings, from 8 to 10 cents, and for independent plants operating day and night 6 to 8 cents. Some of the items of expense mentioned are very different of course from what would obtain in Canada, yet it is altogether likely that a cheap grade of labor could be employed in the preparation of potatoes, thus reducing the cost considerably.

This manufactured article in Germany has many uses. It is employed in the manufacture of yeast, glue, substitutes for flour, mixed with flour in bread making, in distilleries and food for cattle, and it is reported that the last use is especially successful. An inferior quality of raw potatoes may be used in making flakes for stock food. After the process they are light and easily digested. The dry potato does not possess the sharp qualities of the raw and, therefore, does not have injurious effects upon the digestive system.

THE HORSE.

The lowest service fee is often dearest in the end.

Stallions are plentiful, but good sires are not too numerous.

There is no reason why a cull horse should ever be used in breeding.

Return mares to the horse regularly if you would have success with breeding operations.

It is well to pull the shoes off the horses turned out for a few weeks or months on pasture.

A feed box for the suckling colt will ensure a better colt, provided it is kept clean and a few oats and a little bran supplied once or twice daily.

It might be better to postpone breeding the two-year-old filly until fall. If she is not well developed do not breed.

The good horse is a moneymaker even in times of high-priced feed, but the poor individual is always a losing proposition.

Never allow the colt to run in the field with a working dam. Both the colt and the mother give trouble under the circumstances.

Sore backs and sore necks often come with working on the cultivator, mower, binder and other tongued implements and machines. Keep collars and harness clean, and treat threatening sores early.

Never Neglect Handling.

Too much cannot be said in favor of handling colts at an early age. Many a horse grows obstinate and almost uncontrollable largely because of lack of handling when young and frequency of training as years go by. A writer in "The Farmer and Stockbreeder" recently described a horse as a bundle of nerves plus a wonderful memory, and goes on to say that in spite of what poets and sentimentalists have to say about him, his intelligence is not of a high order. If it were he would probably never let men obtain any kind of mastery over him. Perhaps his most marked characteristic is his memory of locality. For some reason or other he never seems to forget a place he has once been at or a road he has once travelled over. And if a horse is accustomed to answer certain signals, and if he knows that by answering those signals he will find safety with the minimum of discomfort, he will answer them at once and without trouble under any ordinary circumstances. The reason why horses misbehave is that they have not been sufficiently handled in their earlier days to give them

sufficient confidence in men to answer the ordinary signals with which the driver, rider or leader gives them at once and without hesitation.

An enormous amount of waste is brought about by negligence in handling young horses. This applies to all breeds, but is most marked in the light breeds, because in them there is more nervous energy. Perhaps it would be more correct to say that their nerves are more highly strung. In many places the light horse, till he comes to work, is looked upon as a kind of encumbrance. Farm men, even good ones, have a prejudice against light horses. My experience is that unless a breeder has a sufficient number of light horses to employ a man to look after them and do practically nothing else, he must look after them himself, or he will find them neglected. One of the first things that gets neglected is the handling of the young horse. He should be handled, and handled practically, every day from the time that he is a foal. If the handling is done daily it only occupies some few minutes, and if it is begun when the foal is but a few days old, and is carefully and intelligently done, he grows up in the habit of doing what is wanted from sheer ignorance of any other course of conduct. He should lead perfectly when he is six weeks old, and in a few more weeks he should learn to show himself, to stand properly, and to run out properly without swinging back or rushing forward and in front of the man who is leading him.

I have been told, when advocating such a plan as this, that it is all very well, but that there is a great deal of work to do on a farm, and there is not time to do such fancy jobs. When I was a young man on a farm, if I said I had not time I was told to get up an hour earlier. There

Keep up the Standard of Canadian Horses.

Some horsemen have recently been heard to remark that owing to the fact that few, if any, stallions and mares for breeding purposes will be available from Europe for some years after the war is over, some difficulty will be experienced in maintaining and improving the draft horse stock of this country. With this few horsemen agree. A large number of good sires have been imported during recent years, and these will be useful for several years to come. Besides, these good sires used on the best of the imported mares already in the country and the best of the Canadian-bred mares should produce just as good stock as much of that ordinarily brought out from the Old Land. A Western horseman says of the situation: "I think we will be able to improve our draft horses during the next 10 years. We have more good mares than we had 10 years ago, and although we will not have so many great breeding imported stallions we will have their Canadian-bred descendants, many of them fine, big horses and splendid breeders. It needs a much better horse or mare to win in our Canadian-bred classes than it did 10 years ago, and it has been getting harder every year. We take an especial pride in our Canadian-bred classes, and are slowly doing away with two separate classes. One open class for imported and Canadian-bred with more and larger prizes will soon be all we need."

It is not generally believed that as high a percentage of the extra high-class quality of horses can be raised in Canada as in Europe, because not so many good breeding horses are to be found in this country, and fewer of the best

class of mares are available, these being widely scattered. European breeders may come to America to replenish their depleted studs, but if they are to find the class of horses here which they desire breeders must put forth an extra effort to improve the standard of our draft horses. This is no time to practice indiscriminate breeding. Every mating should be made with a definite object in view. Outcrossing must not be tolerated. Matings for size, substance and quality must be made, and the best possible use made of the good mares and outstanding stallions already in this country. In a time like this no legislation should be necessary to drive the grade and the scrub pure-bred off the road. Canada has an excellent opportunity to make a name as a horse-breeding country, and the onus of the situation is on our horsemen, particularly the mares to nothing but the right kind of stallion, one which will nick well with them and throw a desirable colt. The good stallion should do a big season; the scrubs should go to work in harness. Mare owners hold the key to the situation. Canada can produce good horses from the best stock already in this country if the best methods are followed in breeding.



Dunure Freshful.

First-prize three-year-old Clydesdale stallion at the Ayr Show, Scotland, 1915.

is time for it; it is all a matter of system. "A business man is never busy," was Tom Green's smart reply to a cross-examining counsel who asked him if he was not too busy on a certain occasion to attend to some important matters. The longer handling is put off, the more it will cost, and the more difficult the work will be to do.

The breeder may rest assured of one thing—that by neglecting to handle his young horses he very materially limits his market. Where one man will buy a raw, wild, easily-scared animal ready to plunge or kick or rear at the slightest provocation, or without any provocation at all, there are a dozen ready and anxious to buy a handy horse. For the horse that has been properly handled is half broken. I say properly handled advisedly, because horses may be handled and in a great measure spoiled. A young horse should never be teased or played with. "Never play with a horse or a loaded gun" is a sound maxim. The greatest kindness should be used, but he should be made to understand that he is not the master, that he has to do as whoever is in charge of him wishes him to do. Obedience then comes as a matter of habit, and prompt obedience in a horse to the wish of his rider or driver saves many a nasty accident. There is one thing which it is as well to provide for if possible, and it always should be possible when two or three men are about. The man who handles the young horses should be relieved every now and again, so that they may learn to look on all men with equal confidence. It will be found that a little trouble in the way of handling young horses will come back fourfold.

LIVE STOCK.

Little Live Stock Leaves England.

Of sinister importance to the live-stock industry in America is the report of animals leaving England during the four months ended April 30, 1915. During that time 239 cattle with a value of £17,091 were exported against 939, valued at £81,130, in the corresponding period last year. Of sheep 332 left the country against 466 in the same period in 1914. Only 241 horses as compared with 21,199 in 1914 left the English shores, the values being £54,475 against £459,395.

A man in Wisconsin invested \$75 in a pure-bred heifer, and in nine years he was offered \$12,000 for the cow and the herd which she had brought him. Not a bad investment; much better than mining stock or unproductive town lots.

Live-stock Happenings in Britain.

Editor "The Farmer's Advocate":

A thrill ran through horse breeding circles in England when we learned that Mr. A. G. Vanderbilt and other noted horsemen went down with the Lusitania. Mr. Vanderbilt was well known all over Britain, as a man who loved horses and showed them for the pure sport of the thing. He died a sportsman's death, handing out life-belts to all the women and children he could reach, going down himself because the belt he fastened to himself at the last moment was put on the wrong way and was practically ineffective.

There was no more prominent figure and no man better loved than A. G. Vanderbilt in horse-show circles in London and those held near by the Metropolis. He gave liberally and no one ever knew about it. His quietness strong in life was maintained to the end.

We are getting up a fund, through the Royal Agricultural Society of England, to help in the relief of the agricultural communities of our Allies stricken by the onslaught of war, particular reference being made to Belgium, Serbia and Northern France. Money, stock and kind, i. e., farm implements, seeds, fruit trees, or indeed anything that will re-establish stock breeding and farming in these countries is being asked for. The wounds which the Allied countries are receiving in the common cause and which we, owing to our position, have escaped, can be largely healed by this effort. Not much can be done at present to relieve the Belgians and the folk of Northern France, but as soon as the evacuation is effected, it will be undertaken. H. M. the King has headed the list with £100; the Shorthorn Society has given £250; and all the breed societies are being asked to "down with the dust." These breeders of stock who will offer animals are being registered, and their gifts will go over when the enemy is driven off. Serbia is in a desperate plight. A commissioner is over there now going into the subject of what the country wants to put it on its feet again, that is speaking agriculturally. Now is the chance for some of Canada's wisest farm implement makers to get a free advertisement—so to speak.

The Irish Department of Agriculture is out to improve the dairy cattle of the country. It is doing it by registration, not of any one particular breed, but of all the many which produce a profitable flow of milk. Last year 137 Kerry cows were presented for inspection, and 91 were accepted for entry in the official register. There were 115 Shorthorns offered, and all but seven were selected. The movement in Ireland aims at the breeding of dual-purpose cattle, and one is glad to note that the Shorthorn prevails.

Ireland cannot do with any breed of cattle that does not breed a calf capable of growing into a good grazing sort.

In view of maintaining live stock, the Board of Agriculture has issued a warning that the slaughter of female live stock suitable for breeding is particularly undesirable. Heifers, ewes and sows should not be fattened and sent to the butcher. They point out that the cost of pig feeding may be reduced if store pigs and sows are allowed grass runs, or to run out on green crops. This is not done as a rule in England. Although an avoidable slaughter of calves is taking place, there is no reason to suppose that it is on a larger scale than usual. Flocks and herds must be maintained at their maximum, and they must only be marketed when at their highest economic value. The Board also ask the farmers of England to retain at least as large an acreage as usual for hay.

ENGLAND'S FIRST AGRICULTURAL SHOW.

England has held her first county agricultural show, that of the Oxford Society, which is now 105 years old. It was good to see a show again, at a time when most of the fixed exhibitions are being declared off, because farmers are too full up of their sons being in the trenches, and their hired men out with them. Shorthorns made a rattling good display, and the champion bull was W. Richardson's Basing 39th, a dark roan just turned five years old, full of quality, with good head and horns and a famous crest. F. B. Wilkinson's Spicy Champion, a few months younger and lengthy and level in his flesh was reserve champion. The championship award for cows fell to C. F. Raphael's Lady of the Snows, a lengthy roan, deep in her flank, wide and clear of lumber, and with a well-shaped udder. Best senior Hereford bull was H. J. Dent's Perton Loyalist, and leading junior bull was Lord Coventry's Galway. In Aberdeen-Angus cattle, J. J. Criddle won championship with Errant Knight of Wicken, by Elmston, and a massive bull standing on short legs with a remarkably nice top line and fine thighs. The champion Jersey bull was Dr. H. Corner's well-moulded Golden Leda's Stockwell.

Shire horses predominated at this show, and an array as good as a "Royal" exhibition made its appearance. The champion prize for males fell to Sir Walpole Greenwell for his two-year-old Marden King Regent, by Lockinge Forest King, and a big colt with a lot of bone, and free mover,

and a nicely carried head. Reserve was Sir Edward Stern's Timgad, a black yearling with big knees and a lot of growthiness about him. The champion Shire mare was T. G. William's Snelston Lady, which at four years old has twice been reserve for the London championship. She has great scale and length and is beautifully coupled together. Her reserve now was the Edgecote Shorthorn Company's Blackthorn Betty, a grand filly, by Halstead Blue Blood, brought out in rare bloom.

This is always a fine sheep show, and Oxford Downs saw H. W. Stilgoe win the championship in rams with one of rare spread and depth of carcass and with good flesh. Miss Alice de Rothschild won the female championship with a ewe that handled well. W. T. Garne & Son won leading class honors in Cotswolds. In Hampshire Downs T. H. Ismay led in yearling rams with one of remarkable merit, and bearing himself like a nobleman. The same owner scored in ewe lambs with a ripe coterie, and with this pen won the championship. In Southdowns the male champion was T. R. West's leading yearling ram, one evenly fleshed, with excellent back, loin and leg. W. M. Cazalet won the female honor with one in a grand group of yearling ewes.

In pigs T. H. Ismay took the Berkshire championship with Iwerne Lord, one with a fine, long back and excellent fore and hind ends. Large whites made a good show, and R. E. W. Stephenson, from far off Liverpool, gained chief honors.

London, Eng.

G. T. BURROWS.

Where Stockmen Have Blundered.

Three-fifths of the meat products consumed in Britain are produced at home, and the remaining two-fifths come from meat-exporting countries. At the present time some of the importation is being used to feed the army in Europe, and authorities have become aware of a tendency to sell for slaughter young and female breeding stock to meet the market demand at home. This



A Cool Retreat for the Milking Herd.

unwise action is apparently unwarranted, for the Board of Agriculture and Fisheries has had occasion to point out the mistake that farmers and breeders of live stock are making at the present time. The Live Stock Journal has the following advice from the Board:

"The attention of the Board of Agriculture and Fisheries has been drawn to the fact that the prevailing conditions are causing many farmers to experience difficulty in maintaining the normal standard of production of their holdings, especially with regard to live stock. The shortage of labor and the increased cost of feeding stuffs, in conjunction with the high prices at which all classes of stock are selling, are tempting a number of farmers to make an immediate profit at the expense of future output and increased returns. Many breeders are marketing their stock before it has arrived at maturity, and several dairy farmers are either reducing or disposing of their herds to an extent that is very much to be regretted. The slaughter of female animals suitable for breeding is particularly undesirable. The Board possess strong evidence that there is a tendency to fatten an unusual number of heifers, ewes and sows, and to send in-calf cows and in-pig sows to the butcher. This practice, if it should become general would lead to a serious reduction in the number of flocks and herds in the country.

"The shortage of milkers appears to have tended to the dispersion of dairy herds, in part for slaughter, but it might be remembered that the calf is nature's milker, and where no other means are available it may prove a profitable

venture to adopt the practice, still common in many pedigree and beef herds, of rearing two or three calves on the same cow, more especially having regard to the high price which store stock is likely to command for some time to come. The Board trust, however, that the production of milk for market will remain the primary consideration, and with that object in view the employment of women milkers might be greatly extended."

Such teaching as is contained in this announcement by the Board of Agriculture and Fisheries is quite applicable to Canada, where some very unwise disposals of live stock have been made during the last year. The signs of the times all point to higher prices, and a shortage of breeding stock.

The Missing Link in the Life History of the Warble Fly.

Editor "The Farmer's Advocate":

I see in an American contemporary some remarks by Prof. L. M. Peairs, Entomologist of the West Virginia Experiment Station, which I think are worth discussion. He, like many others, holds to the theory that the ox warble eggs "are laid on the feet and legs of cattle, are licked off, and hatch inside the animal and live until late fall, when they are about half an inch long."

"This," he says, "is known definitely. The explanation of how they get up under the skin along the cattle's backs is that they force their way through between the muscles. This, from what we know of the habits of fly larvae, does not seem impossible, the blow fly larvae, for instance, being often found forcing their way through cracks where you could scarcely force a thin piece of paper. We know also that there is no other way by which bots could get from the mouth to the back, as they have no means by which to crawl up a surface like the side of an animal.

"The missing link," continues the Professor, "in this explanation is the fact that, so far as I know, no one has yet found the bots actually in the tissues, between the mouth and the back. I can readily see how even this explanation may be doubted by the farmer, and shall be very glad to learn of a better explanation, backed by real observation of all the stages of the insect."

Now, I admire and I like the Professor's frankness in admitting the existence of a "missing link" in this theory, which we'll admit is not his own, but has been "handed down" by other scientists. The theory has always seemed weak to me, and it isn't strengthened by Prof. Peairs' "missing-link" confession that, so far as he knows, "no one has yet found the bots actually in the tissues between the mouth and the back."

How, if no one has found the bots there, can the Professor prove that his thesis is "known definitely"? How can a thing be known definitely before it is proved?

I don't know how long this theory with a missing link has been absorbed and again given out by entomologists and veterinarians in the name of science, but we've all recognized it as an old acquaintance for, lo, these many years! It is presumed that if any other scientist had "found the bots actually in the tissues between the mouth and the back," Prof. Peairs would have learned of it in the literature of his profession, which is voluminous. The fact, therefore, that nobody has yet found the bots in the tissues between the mouth and the back, brands this very pretty theory as almost pure imagination on the part of its originator, and in my humble opinion brands modern scientists who believe it as innocent young gulls, ready with open mouths to swallow anything dropped into them in the name of "science."

If I were a scientist I would refuse absolutely to swallow this missing-link science until some real scientist went to work and peradventure "found" the bots "actually in the tissues between the mouth and the skin of the back," or until I could "find" those bots there myself. But I'm only a layman, concerned with cause and effect, and crops and weeds and weather, and other things that we "find" on the farm.

There was a discussion of the ox warble fly in York County the other day, and the inevitable missing-link theory was, of course, led in with its

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colors flying. Then, when the scientists had had their say, up rose a common farmer and delivered himself thusly:

"I do not agree with this theory of the fly being held in the stomach of the cow and passing through her body and coming out through her hide. My idea is, and I am firm in the conviction that I am right, that the egg of this fly is laid on the skin from the outside, and enters the hide from there, never going into the flesh at all.

"If the back of the animal," says he, "is rubbed three times with salt and water there would never be any of these pests. Make the first application about the last of June, the second about the end of July, and the third about the first of August. Any person following this up will find that I am correct. I have tried it successfully for some years."

I have heard of this treatment before. An English lady who conducts a large stock farm on Vancouver Island, B. C., once told me of it, but I had forgotten just when she said the applications of salt and water (quite strong) should be made. This summer I intend to try it, and see if I can't help scientists to find a theory without a missing link.

Northumberland Co., Ont. W. L. MARTIN.

Cow Troubles.

By Peter McArthur.

Say, what do you do when a cow swallows a rubber ball? I don't mean one of the hollow kind, but a solid rubber ball about the size of a small Ben Davis apple—one of the kind that used to sting our fingers when we played "Long Injun" with them at the old school. I hadn't seen one for years, but this spring an old one was ploughed up in one of the fields, and as it still retained its shape and would bounce the children used it to play with. Well, last night one of the boys went to bring up the cows, and when a cow strayed apart from the bunch and stood still he threw the ball at her. He missed her, but as the ball rolled past she ran after it and grabbed it, apparently under the impression that it was an apple or a potato, or something good to eat. I was in the stable when the boy came to tell me about it as a great joke, and I was inclined to think that the joke was on him, for I felt sure that as soon as the cow found that she had been fooled she would drop the ball. But when I went out to the gate to let in the cows I found "Beans," granddaughter of old Fenceviewer, with her head and neck stretched out, doing her best to chew and swallow something that was stuck in her throat. She was half choked, for her eyes were popping out, and she was red in the face—or at least had the same expression that a human being has when red in the face. With my customary presence of mind I rushed to her side and began to slap her on the back the same as we do to the children when they choke on something or when something "goes down the wrong way." But it did no good, and the slapping made her bolt to her stall in the stable. I immediately began to feel her throat, and was not long in discovering a lump that seemed about the size of the missing rubber ball. I then followed my usual practice when in real trouble. I sent for a neighbor.

By the time my neighbor had arrived the cow had stopped her frantic swallowing, and I had become suspicious that the lump I had been feeling in her throat was not a lodged rubber ball, but the end of her wind-pipe. My neighbor confirmed this suspicion, but he could not suggest what I should do under the circumstances. That is the trouble with my cattle. They are all the time doing things that are outside of the common fund of experience. Other people's cattle seem to confine themselves to ailments that can be treated according to recipes given in the Veterinary Guide, or in the back numbers of "The Farmer's Advocate," but mine are all the time doing something unexpected. Still, I got a line on what was an entirely new wrinkle to me. A person of experience brought me a beetle ring and told me that the way to dislodge a substance from a cow's throat was to open her mouth and keep it open with the beetle ring. Then I could slip my hand through the ring and remove the obstruction with my fingers, or take a piece of rubber hose and poke it down her throat. That sounds to me like a very plausible method, but as the little cow has stopped gagging and had commenced chewing her cud, it was considered unnecessary to try the operation. And speaking of her cud—she should not be in any danger of "losing her cud" in the near future. That rubber ball should provide her with just about the most serviceable cud that a cow ever had. Whenever the pasture gets short she can bring up her reserve rubber cud and keep herself contented with it until the pasture grows. Seeing that most of our young people seem to find it necessary to provide themselves with cuds of durable, rubbery gum on which they chew during most of their waking hours, isn't it just possible that our cows would be more contented and give more milk if

we provided them with rubber cuds. I wonder what a "real farmer" like Prof. Dean would think of the suggestion. If I could only get scientific endorsement for the scheme I would have no trouble in promoting a company to supply rubber cuds for cows. Anyway "Beans" seems to have suffered no inconvenience from having swallowed that indurated knob of gutta percha. When I was driving her back to the field after milking she hastily picked up a nice clean corn-cob and put it down as dessert to the rubber ball—all of which leads me to believe that she inherits her grandmother's digestion as well as her appetite. I am willing to bet that a post mortem on Fenceviewer would reveal a collection of junk that would give impaction of the rumen to an ostrich. Still, if any authority on cows thinks that having a rubber ball in her midst may be injurious to "Beans", I wish he would write and tell me what I should do.

And now having asked for help there should be no objection if I offered a couple of suggestions that seem to me to be valuable. Of course, they may be quite well known, but there are sure to be a few backward farmers like myself who will be glad to be enlightened. The first deals with the value of the old-style wire fences when feeding calves. The most annoying thing about feeding calves in a pen is that when trying to teach a new calf to feed without the finger a man usually has to step inside. While he is wrestling with the beginner other calves will try to get into the pen or to get nourishment from his coat-tail, occasionally administering a bunt to express dissatisfaction with the taste of the cheap dyes they now use in cloth. If you have the right kind of wire fence around your calf pasture you can keep on your side of it and let the calf stick his head through. As his head is the part you really have to deal with you can gradually teach him to take his milk without inhaling too much, and at the same time you have less trouble in slapping interfering calves on the nose. The wire fence has robbed calf-feeding of half of its terrors for me. So much for that suggestion. The other has to do with greedy horses. One of our horses usually tries to get all her oats in one mouthful, and when she tries to chew them she scatters them all over her manger and stall. On advice, we have put several corn cobs in her feeding box, and now when she is given her oats she has to take reasonably sized mouthfuls and there is no waste.

FARM.

Look Out for the Army-worm.

The estimated damage caused by the ravages of the army-worm in Eastern Canada during the season of 1914 amounted to \$300,000. Five-sixths of this loss should refer to the Province of Ontario, the balance of \$50,000 being losses occasioned in the Provinces of Quebec, New Brunswick and Nova Scotia. In these terms Arthur Gibson, of the Entomological Branch, Ottawa, in a recent bulletin entitled, "The Army-Worm," sums up the importance of this pest. Although the bulletin goes into detail to describe the life-history and characteristics of the insect, the most



Mature Army Worms.

Note the bands on the side and stripes on back. The worms are somewhat enlarged.

interesting and most pleasing part to read is where it states that the pest is never serious for two consecutive years. It appears that the army-worm is seldom abundant in dangerous numbers in the same locality for two years in succession. During an outbreak many parasitic insects, as well as parasitic diseases, attack the caterpillars and bring their numbers again down to normal. The last severe attack in Ontario was in 1896. The season of 1895 was dry. This was followed by a mild winter and another dry summer in 1896. In this latter year the army-worm was present in very large numbers, particularly all through the western part of the Province, and devastated fields of oats, timothy, rye, barley and corn. In the following year, 1897, not a single report of the presence of the insect was received.

While fighting the army-worm throughout Ontario last season entomologists were able to detect the presence of parasitic insects preying upon

the worm. It is hoped that nature, through these means, will have destroyed sufficient numbers of the army-worm to preclude another attack this summer. In case history should not repeat itself it would be wise for farmers to be on the lookout for this dangerous worm. The most severe attack has always occurred during the month of July or the early part of August. The worms, which are the larvae of a night-flying moth, are hatched and usually assemble in low-lying lands. When the number is small they may not be noticed, but when the army becomes larger they begin to migrate in search of food material. This is when devastation begins and the harm is done.

Although the army-worm may not be heard from this summer it would be well to watch for it, and look for it very closely. Last summer some farmers were not aware of its presence until they noticed pastures going dry from no apparent cause, and grain and hay crops being denuded of their foliage. When detected in time their depredations may be checked by ploughing furrows in which post holes are located every 6 to 10 feet. Into these the worms will fall as they gradually move across the field. With the upright side of the furrow as an obstacle they will be unable to make further progress and will perish. Poisonous materials have been used quite extensively, but farmers should band together upon the first appearance of the worm and endeavor to check its progress across the fields.

Can You Kill Bindweed.

Although not as widespread as perennial sow thistle and twitch grass one of the worst weeds in Ontario, or in fact in any other Province in which it occurs, is field bindweed. This weed should not be confused with the ordinary bindweed commonly known as wild buckwheat. Wild buckwheat is not a pernicious pest, and belongs to an entirely different family. Field bindweed is perhaps the hardest weed to kill known to Canadian agriculture. It is a persistent perennial with extensive creeping rootstocks which spread the weed in patches, and which when drawn to other parts of the field by implements or machinery quickly take root and start a new patch of the pest. Many call the weed wild morning glory because of the resemblance of the flower to the common morning glory. There can be no mistaking the weed once it has gained a foothold, but farmers should be on the lookout to thoroughly destroy any isolated specimens of the plant or small patches which may appear. Once it has gained a foothold in a field it is practically impossible, under ordinary systems of cultivation, to get rid of the weed. In one of our fields at Weldwood there was considerable of this weed when the farm was purchased. In 1912, which readers will remember as a wet season, the land was thoroughly summer-fallowed and cultivated once a week all season, and some times oftener. When conditions favored the rapid growth of the weed cultivation was made as close as five days apart. The following season the field was planted to corn which was thoroughly worked, and last year the bad section of the field was put into buckwheat after a thorough working up to about the first of July. The bindweed has been kept in check, but has not been killed. Patches of it appeared in the buckwheat last year, and will doubtless show themselves in the oat crop this year. Bindweed might be killed were it possible to keep cultivating it year after year so effectively as to keep the plant below the surface of the ground, but in ordinary farm practice this is too expensive. The average farmer does not care to summer-fallow a field two or three years in succession and cultivating every five days when a large area must be gone over is practically out of the question. Remedies set forth in bulletins favor a short rotation of crops, and the frequent use of broad-sharped cultivators.

Some practical farmers have recommended heavy applications of salt to small patches where they occur in fields. Prof. Howitt, in his bulletin "Weeds of Ontario," says that the weed may be kept in check by the frequent introduction of well-cared-for hoed crops, the shorter the rotation the better. Clean cultivation early in the season followed by the sowing of rape in drills at the rate of 1 1/2 pounds per acre about the first of July is about as successful a method as any of combating the weed. The rape may be pastured in the fall. We remember seeing a patch of this weed in a garden some years ago and the owner covered it deeply with manure, but he did not succeed in killing the weed which spread to the edges of the manure and thrived well all around the outside of the garden.

There are many methods in use to combat the pest, but so far we have heard of none which will permanently rid badly-infested fields of it. We invite readers to give their experience through our columns.

A correspondent writes that one of the disappointing things about agricultural bulletins is that they seem to contain almost everything but the particular and practical information he is looking for.

"Hen" Hawks.

Editor "The Farmer's Advocate":

I believe I have seen in your columns the statement that hen hawks were not hen hawks, only in name, and that they do not take or kill chickens. I am referring to the hawks with feathers somewhat speckled or barred, and which are in the habit of soaring quite high and screaming loudly.

To-day as we were sitting in the house we heard a commotion outside as though there were a dozen or more crows trying to outdo each other in cawing. Upon looking out we saw a large hen hawk, quite high in the air, and circling around him were the dozen crows, each seemingly trying to get a swipe at him or trying to scare him. The gun was handy in the corner of the kitchen. I grabbed it, ran out and fired in a hurry and the hawk came tumbling down not killed, as I found out later, but anyway down he came, and just as he started to fall he let go his prize, which was one of our plump chickens four or five weeks old. The chicken was dead but the hawk was not. I began to examine him, and he must have thought he would take another hold of a chicken for he grabbed me by the hand. He did not try to give me the high shake, but contented himself with squeezing it pretty sharply, for his talons sunk deep in the fleshy part, and if I had not got help in a hurry I might have put my foot on his neck, but it took two of us to loosen his handshake, and I found out that his only wound was in his wing. He had taken at least one of our best chickens that might have made a prize-winner, and I spoiled his chicken dinner. Look out for the hen hawk even if he is not a hen hawk. This one measured three feet ten inches from tip to tip of wings when spread.

Northumberland Co., Ont. B. ARMSTRONG.

THE DAIRY.

The "Over-run" in Buttermaking.

Editor "The Farmer's Advocate":

At the opening of the creamery season we find quite a number of farmers making inquiry about the "over-run" and the number of pounds of butter which may be made from 100 lbs. of "butter-fat." In spite of all that has been written and said on this question, there are yet a large number of patrons of creameries who desire information on this problem, so at the risk of repeating some things which have been written rather recently, we shall devote this article to a brief discussion of "over-run" at a creamery.

First, let us gain a clear conception of what is meant by the term "over-run." In a word, it is the excess of butter made, over fat in milk or cream, which is usually expressed in terms of per cent. The "excess" or increase is due to an incorporation or mixing with the "butter-fat," a certain amount of water, curd and salt, to make what is commercially known as butter. The amount of water, etc., which can be incorporated with the milk-fat varies according to conditions and the skill of the buttermaker. There is no legal limit for curd and salt in butter, but there is for moisture, which is placed at 16 per cent. in Canada.

Another factor which causes a variation in the over-run, is the loss of fat in handling the milk and cream. In the process of separating the fat or cream from milk, a certain amount of the milk fat is lost in the skim-milk, consequently the over-run is less when based on milk-fat calculation, than when based on cream-fat. In a whole milk creamery, that is, where the milk is delivered by the farmer and the cream separated by large power machines, an over-run of 12 to 15 per cent. is considered good practice. In a cream-collecting creamery, the over-run should be from 15 to 20 per cent. Some claim to be able to make a 25 per cent. over-run, but this is usually due to some error in fat calculation, as our best creameries have an over-run of about 18 per cent. for the year.

On this point it might be well to clear up a misconception on the part of some. When we speak of an 18 per cent. over-run, we mean that 100 lbs. fat have produced 118 lbs. butter, not that 82 lbs. fat have made 100 lbs. butter. The term per cent. is applied to the fat and not to the butter. This difference in meaning of terms may account for the difference in results as expressed in the form of over-run by different creamerymen. When a man says he had a 20 per cent. over-run and explains that for every 80 lbs. fat he made 100 lbs. butter, he really had a 25 per cent. over-run as will be seen by the following:—

On 80 the over-run was 20
On 1 the over-run was 20-80
On 100 the over-run was 20-80×100=25

OVER-RUN A VARYING FACTOR.

Some seem to be under the impression that over-run is, or should be, a constant factor; that is, they seem to think that 100 lbs. fat should always make a given number of pounds of butter and that any deviation from this rule

indicates carelessness or dishonesty. This is not so. Analyses of butter show it to consist of somewhat widely varying components or parts, although these usually fall in ordinary creamery practice between the following limits for each constituent:

Milk-fat	80 to 85 per cent.
Water	12 to 16 per cent.
Salt and Ash	0 to 4 per cent.
Curd	½ to 1½ per cent.

This one fact alone will indicate that it is impossible to expect a constant over-run.

In addition, there is loss of fat in the buttermilk, which varies between .2 and .5 per cent.



Peace and War in Northern France.

Destruction and construction side by side. An armored car passes while the farmer works his fields. Copyright by Underwood & Underwood, N. Y.

fat; loss of fat in handling the cream when transferred from one vessel to another; and loss of butter by particles sticking to the inside of churn and worker, dropping on the floor, and in over-weight allowance on prints and boxes. Some buttermakers are careless about leaving pieces of butter in the churn and sticking to the worker and allowing butter to drop on the floor—these are losses which can be avoided to some extent by carefulness, but in the rush of work about a creamery there is bound to be more or less of these losses, all of which affect the over-run.

The question of allowances for print butter and butter packed in boxes is one in which we could wish for greater uniformity in practice. Some allow ¼ to ½ an ounce extra on each print wrapped in wet parchment paper. The half ounce

a commission basis; he maintains his reputation as a skilful buttermaker, which is something he should guard jealously; and he is honest in his weights for customers who buy his butter, which is an important factor in securing and holding customers.

Box butter is also a problem in the over-run of a creamery. Losses in print butter are due to a number of small weights added to pound packages, which in thousands make a large aggregate. Losses in excess weight on boxes of butter are greater on each individual package than for prints, though the number of packages is less; but these also aggregate a considerable loss in weight at the end of each month; however, as a rule not so great as where prints are made.

Owing to differences in size of boxes and differences in specific gravity and packing of the butter it is difficult to get uniform weight in the boxes, which are supposed to hold 56 lbs., or half an English hundredweight, each. (By the way, it is unfortunate that we adopted this awkward weight. As the export trade is now practically nil, why not adopt a 50, or some other decimal weight package which will accord better with our ideas of weight and currency?)

A common rule is to allow from ¼ to 1 pound extra of butter on each 56-lb. box. If the butter does not "leak," one-half

to a pound ought to be sufficient in order to have out weight when purchased. One pound extra in fifty-six seems excessive, and will lessen the over-run considerably in a large creamery. In addition, it is more or less unjust to the patrons, as this excess weight is really an added cost in manufacturing, where patrons pay a rate per pound for making. If the creameryman buys the milk or cream outright on a fat basis, he is usually quite careful to stop leaks so far as possible.

O. A. C. H. H. DEAN.

HORTICULTURE.

Insect Pest of the Turnip Crop.

We notice a very small black fly or bug eating the leaves of the turnips, cabbages, pepper cress and other garden stuff which is just nicely up. What could and should be done to prevent them? Last year they destroyed the turnip crop. A. C.

The small, blackish insect eating the leaves of turnips and cabbage is evidently the Turnip Flea-beetle. It attacks also the leaves of radishes and many other plants of the same family, for instance, wild mustards. Not infrequently turnip crops are completely destroyed by the adults eating off the young leaves as soon as they appear above ground. Usually it is early, or moderately-early sown turnips that suffer in this way. In such cases, if the ground is again put into condition and the turnips resown about June 21, a good crop may be harvested. The reason for this is that the beetles of this first generation have almost all disappeared by the time these later-sown turnips are up. Another method of combating the pest is to spray the young plants as soon as they appear above ground with 4 lbs. arsenate of lead to 40 gals. of Bordeaux mixture or of water. Hold the nozzle close to the plants to avoid waste. The spraying has to be repeated at intervals of a couple of days until the plants get a start. Sowing the seed thicker than usual will often help, but this makes thinning more difficult later. Where there are only a few cabbages or radishes, cheese-cloth coverings will keep off both this pest and the cabbage and radish root maggots. Leave them on until about the end of June. No openings in the covers must be left. Many farmers claim that soaking the seed in coal oil or turpentine a short time before sowing will keep these insects away. It has not done so in our experience.



Germans Plowing Fields in France.

Work is being done by huge motor plows owing to the scarcity of horses in Northern France. Photo copyright by Brown & Dawson, Stamford, Conn. From Underwood & Underwood, N. Y.

appears to be excessive and when calculated on a week, month, or season's make, in a large creamery means quite a lessening in over-run and a considerable loss in actual pounds of butter given to customers. On the other hand, there is the other extreme which makes no allowance for wet paper and the prints of butter when stripped are scarcely 16 ounces in weight. What should be aimed at is, that the person buying the butter shall receive full sixteen ounces of butter—no more, no less. It pays to have a fine set of scales in the creamery to be used for weighing prints and nothing else. The pound blocks should be either, all weighed separately, or as many as may be needed from each churning, so that the buttermaker may know how many ounces are going into each package of butter. In this way a buttermaker deals fairly with his patrons, which is an important point if he be manufacturing on

later-sown turnips are up. Another method of combating the pest is to spray the young plants as soon as they appear above ground with 4 lbs. arsenate of lead to 40 gals. of Bordeaux mixture or of water. Hold the nozzle close to the plants to avoid waste. The spraying has to be repeated at intervals of a couple of days until the plants get a start. Sowing the seed thicker than usual will often help, but this makes thinning more difficult later. Where there are only a few cabbages or radishes, cheese-cloth coverings will keep off both this pest and the cabbage and radish root maggots. Leave them on until about the end of June. No openings in the covers must be left. Many farmers claim that soaking the seed in coal oil or turpentine a short time before sowing will keep these insects away. It has not done so in our experience.

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The Turnip and Cabbage Aphid is a small grayish-green insect seen in great numbers on cabbage and turnips, especially on the underside of the plants. They are seldom very noticeable until about August, but after that date in some years they become so abundant that almost every leaf is covered. The leaves become sickly in appearance and the plants are dwarfed in growth and not infrequently begin to rot at the crown, causing a stench that may be smelled half a mile away. Fortunately this pest only occurs in destructive numbers once or twice in a good many years, weather conditions, disease and parasites controlling it the other years.

MEANS OF CONTROL.—1. Where possible, all the refuse of plants should be got rid of in autumn by feeding or ploughing down, because the eggs are laid on this. 2. Turnips or cabbage should not, if it can be helped, be planted in the same field two years in succession. 3. As soon as a plant here and there is seen to be infested, spray such plants very carefully with 1 lb. common laundry soap dissolved in boiling soft water, then diluted to 4 gals. The insects should be hit hard with the spray mixture to make it penetrate through the gray waxy covering on their bodies. A boy to help in examining the leaves and to turn them up to the spray will be a great assistance. Later spraying with the same mixture is sometimes necessary.

In gardens in cities or in towns this and many other kinds of small delicate insects on any kind of vegetable or bush may often be very satisfactorily controlled by turning the garden hose on them and blowing them off the plants, to which very few will ever be able to return. The garden hose is a most efficient insect destroyer if carefully used.

The so-called "Turnip Fly" will nearly always prove to be synonymous with the Turnip Flea-beetle. The Turnip Louse is another name for the Turnip or Cabbage Aphid.

O. A. C., Guelph.

L. CAESAR.

Fewer Varieties for the Orchardists.

Editor "The Farmer's Advocate":

As soon as the individual starts farming he bumps into the problem of marketing, and if he starts fruit farming he bumps into the most obstinate problem there is in agriculture. Now, this article is not a solution of the whole problem of fruit marketing, but it will give you an insight into the workings of one of the Okanagan organizations. A short time ago an article in your paper, written by G. C. Caston, suggested that our way of approaching this question may help to some extent in solving the same difficulty in the East. It was noted by him that the difficulty crops up from the handling of many varieties, particularly in the case of apples. And it is this particular phase of the subject with which I wish to deal at the present time.

Mr. Jones buys a piece of land, and he intends to set it out as an orchard. He gets a paper in which fruit trees are advertised. He looks it over and finds Stark's Delicious pictured most appetizingly, said (by the nursery) to be the best apple grown, and he decides he will have some of them. Then he gets hold of a catalogue, where he finds the Winter Banana, that lovely apple of the Dry Belt, described in all its beauty. It must be a fine apple, and he will have some of that variety. Then Mr. Nursery Agent gets hold of him, and tells him that there is no apple that has the flavor nor the quality of the Winesap,—not the Stamen's Winesap, but the old Winesap, and that he will make a big mistake if he does not have some of that variety in his orchard; so he decides he will have some of it. Then he goes to a Farmers Institute meeting, and he hears them discussing the merits of Ben Davis, Northern Spy, Jonathan, McIntosh Red, and by the time they get through he hardly knows one from the other, but he has decided that he will have to get some of about 15 varieties in his orchard, in order to have the best, so he puts them in.

Now, that is just about exactly what has happened in this district. Perhaps it may seem strange to you, nevertheless it is true. The place we bought when we came here is typical. Upon investigation we found it to contain 17 different varieties of apples; 8 different kinds of peaches, 6 different kinds of plums, and—but there is no use wasting time telling the different varieties of each kind of fruit. We tried to ship them all, and we were just in the position that an orchardist in here found himself at one of our recent United Growers' meetings, when he got up and protested against some of his selected varieties being shipped as No. 2's. The president was discussing our new marketing scheme for the boosting of the O. K. Brand, and suggested that the executive strongly recommend to the different unions that they reduce to 7, the number of varieties that would be eligible to be shipped out under the O. K. Brand.

Farmers are being thrown into a mystic maze

in the way of different varieties of farm produce that is going to cause endless trouble, and make marketing a harder problem than it is now. Before, it used to be sufficient if a potato was an early or late variety. Just look at the list that confronts the farmer now; and it is ever increasing: the Early Rose, the Rochester Early Rose, the Peach Blow, the Table Talk, the Empire State, and the Vermont Gold Coin, and you might go on in an almost endless list. But it is apples we are talking about, and when we get to them, the remarks made on the articles just referred to, have some very weighty facts for our consideration.

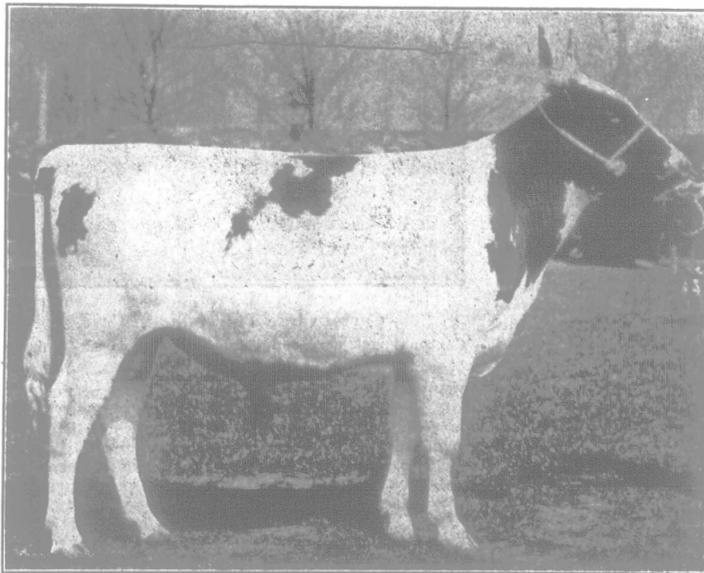
Mr. Caston comments on the fact that the people want the Northern Spy for two reasons. One is, because it is a good dual-purpose apple, and another is because it is a well-known apple, perhaps because it came out before there were so many varieties to confuse. Then why not grow the Spy, and give the public that? If we don't want to, can we make them forget it? These are the two questions that naturally follow when we have other varieties on our hands. As your correspondent noted, while the Northern Spy is a fine apple, it is not by any means the only apple, and furthermore, it is not as profitable an apple for the orchardist, for two very strong reasons: one being that it is a long time coming into bearing, even with most judicious summer pruning. Another is that it is a shy bearer, much given to fruiting in alternate years. There are other apples that are just as good, with flavor just as pleasing, whose appearance will sell themselves, and which will be much more profitable to the average orchardist.

But single handed the growers are not in a position to convince the people of this fact; unitedly they can do so. But it is only to be achieved by consistent, constant, efficient advertising, and advertising costs money.

It is eventually going to be thrust upon the farmers to take this step, in order to relieve themselves of the great difficulty in marketing, not only the United Growers, with fruit but farmers generally as soon as varieties of any kind of farm produce starts to confuse the purchaser, as they are now doing. If they are going to be compelled in the future to attend to it, why not take time by the forelock, and attend to it now, before there are many more varieties introduced, and much greater loss suffered through the necessity, that will be inevitable, of top-grafting our orchard, and so discourage the seed merchants from the introduction of new varieties by which they may fleece the agriculturist through effective and attractive advertising. Many will say that this will retard or even discourage progress, but this need not be so, because there is plenty of room to work upon, and improve the potential ability of the good varieties of trees and the inherent tendency of grain seeds, etc., to yield a better crop. This would make it possible for a group of agriculturists to advertise effectively, but the energy that might now be available for this, will have to be devoted to achieving a co-operative spirit among the farmers that will induce them to top-work their apples, and it is a hard proposition to induce a man to throw over some vet variety that he has already planted, even though it has been made a pet for him by an irresponsible agent from a nursery.

We are in the same difficult position in which the automobile merchants found themselves a few years ago, when they came up against the problem of selling their machines. Their prospective customers invariably threw the argument up to them: "We cannot get parts for our machines from anyone but you, and your factory is too far away. So-and-so's factory is nearer, and we will have to buy from them." In order to meet this argument, effectively, the automobile manufacturers got together and they standardized, and it may seem surprising that in less than three years they standardized more than one million parts. It is time for us to standardize our varieties, and make them as fit as possible.

W. M. WRIGHT.
B. C.



Auchencloigh Pearlstone.

First-prize yearling Ayrshire bull and reserve champion at the Ayr Show, Scotland, 1915.

Where Pears and Small Fruits are Trumps.

On the North-western shore of Lake Ontario is a portion of the province to which man has given limits and named the County of Halton. These confines were fixed in the course of a few weeks, perhaps, and with chains and instruments lines were projected that placed neighbors under different municipal governments and under different obligations. Nature has in the course of centuries upon centuries developed a portion of the country, and endowed it with soil and climate suitable for the production of fruits and vegetables. This beautiful tract of land now called the Burlington District at one time was encumbered by a huge field of ice. That was centuries ago when the avalanche came slowly down from the north and crushed beneath its weight the northern part of the continent. Warmer years and centuries followed and the ice and snow disappeared, but in its place on the southern side of these lake counties remained what was known as Lake Iroquois. The waters from this lake were obliged to escape southward through the State of New York, for the St. Lawrence Valley was then full of ice. Later the way opened via the St. Lawrence, and the waters of Lake Iroquois took an all-Canadian route to the sea instead of a southerly and unpatriotic course through another country. At the present time the shore line of old Lake Iroquois is still discernable, and between it and Lake Ontario lies some of the best soil of the Burlington District.

Districts are difficult to define. The boundaries depend upon soil, upon climate and upon shipping and marketing facilities. With the exception of

a little heavier soil which extends downward to the lake in the neighborhood of Bronte, the shore line between Hamilton and Toronto is practically all suitable for fruit growing. However, there are ideas, neighborly associations and sentiments which sometimes assist nature in drawing lines of demarcation about communities, and all these factors have combined to include in the Burlington District a number of people, an arbitrary area of land, and a climate of which the farmers have taken advantage to produce farm crops, fruits and vegetables in such a way and in such a profusion as to cause the district to resemble a large and modern departmental store. With H. R. Hare, District Representative for Halton, as guide, the writer viewed the different departments of this district during the last week of May. Lingering bloom still scented the air, but more pleasing was the promise of fruit which was then in many cases beyond the embryo stage. Without blossom there cannot be fruit, but the bloom itself is no guarantee of a bountiful harvest. Frosts, insect pests and disease all work in opposition to the farmer's will, and only after the petals have fallen to the ground and the young fruit, well set, clings tenaciously to the branch will a modest grower predict a crop. One of the oldest and one of the best known of the growers in that district expressed the 1915 prospects as follows: "Apples, fair; pears, light; plums, heavy; cherries, fair; small fruits, fair." These predictions are, of course, subject to nature's will, but at present the promise is there.

With some of the largest growers pears are trumps. In that part of Ontario they have left

the peach industry almost entirely to the sister district across the arm of the lake to do with it as they will. However, in the production of apples, pears, sour cherries and small fruits they will consider no second place. Lying, as the producing area does, part way between the two largest cities in Ontario their advantage on the market is enhanced through proximity, and when the improved highway, now under construction, links Hamilton and the Queen City the writer makes bold to predict a busy stream of motor trucks placing fruit and vegetables, fresh from the orchards and gardens of the Burlington District, at the door of the consumer or dealer.

Little the busy man of urban surroundings knows of the trials of the fruit grower. Fertilization and cultivation are only two factors in the operation of growing saleable fruit. Visitors during the last week of May would see the fine mist of spray projected towards every tree, while the mechanism of the gasoline engine thumped and thumped and got hotter and hotter. After all precautions have been taken to encourage size and to secure perfection in the fruit, comes the harvesting, the packing, and last of all that oft-times discouraging feature of marketing. Scientists have developed practical and fairly efficient methods of controlling insects and fungous diseases; learned men have determined ways and means of feeding and fostering plants so they will yield abundantly; experts can show the grower what to discard and what to pack in attractive containers, but Science, Wisdom and Experience combined have not yet inaugurated a system of marketing through the efficiency of which either producer or consumer has ceased to regret after the transaction, the scantiness of his purse.

Influences have been at work which have, to some extent, solved the marketing problem in this locality. As early as 1831 a few growers combined to sell their products in a co-operative manner. Without the lapse of a single season this organization has done business for over thirty years. It has an unique record for stability and efficiency. Theorists have frowned upon it because no member deposited money or bound himself by note or bond. Disciples of co-operation have presaged for this movement an inevitable calamity because each grower packed his own fruit, used his own brand and retained his identity. It was the first body of growers in Canada who united to handle fruit in a co-operative manner; simplicity was the watchword, right-dealing and promptitude was the motto, and in spite of the lack of conformance with co-operative laws it stood the test, because the spirit was there. The society has only included about twenty-five members, but the organization has, no doubt, assisted the whole district through its effort to reach different markets, standardize packs and improve on the older methods of buying and selling goods. Other men and other means have contributed to the general advance of science and practice in that locality, but this fraternal effort with the spirit of co-operation has been a strong factor and a third-of-a-century record is proof of its usefulness. The Old Country market has been exploited by the Burlington growers with considerable success, especially with apples and pears. Although shipping is encompassed with a little more uncertainty than usual, Britain still rules the seas, and the growers look forward in 1915 to another season's trade with the Mother Land.

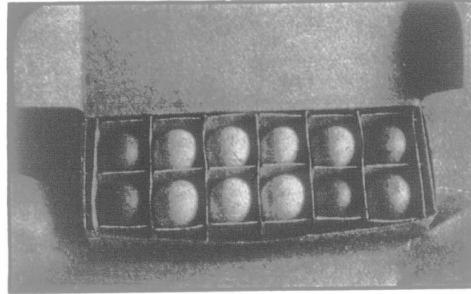
Fruitgrowing with its filler systems and intercropping may be considered intensive, but the growing of vegetables demands greater intensity of culture and concentration of labor. A twenty-five acre plant is enough to engage the attention of the owner and efforts of many hands. This fertile district on the shore of Lake Ontario bears the resemblance to the departmental plant to a marked degree. Onions, lettuce and many garden crops may now be seen growing side by side, while a little later the more tender kinds will end their hardening process in the cold frames, and find themselves exposed to wind and weather in the fields. Then the color scheme will be complete and the effect inimitable.

When every rood of ground is clothed with growing vegetables and berries, the odor of which excites the palate and it in turn finds sympathy beyond, the gardener may well be termed a servant of the Department of the Interior whose "job" is sure despite any change in Government. He is ministering to the inner wants of man, and his success depends upon his services.

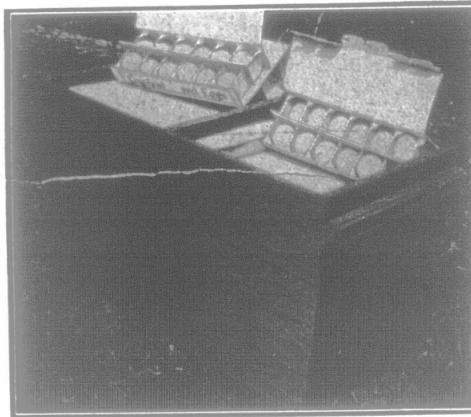
Many are the wagon loads of fresh vegetables that go from the Burlington District to the Hamilton market. They sell there on their merits. One grower who has secured his customers and finds marketing easy, attributes his success to the fact that the surface layer of his package depicts the contents beneath. If the exposed product is not what the buyer wants he goes elsewhere, but he never digs down or empties out the box to ascertain the character of the man through his manner of packing. This grower has conducted his business in a straightforward manner, and his reputation is at stake with every article he sells. This man, we trust, is not the only upright grower in the Burlington District. For aught the writer knows all are the

same, and the instance is only cited to emphasize the necessity of straightforwardness in the marketing game. The buyers may vary in their ideals, but one thing they desire in the producer is trustworthiness.

Let us not consider for one moment that all the luscious fruits and vegetables found upon our tables were produced with little effort. Soil and climatic conditions are responsible in part, but nature is varied in its way, so kind sometimes



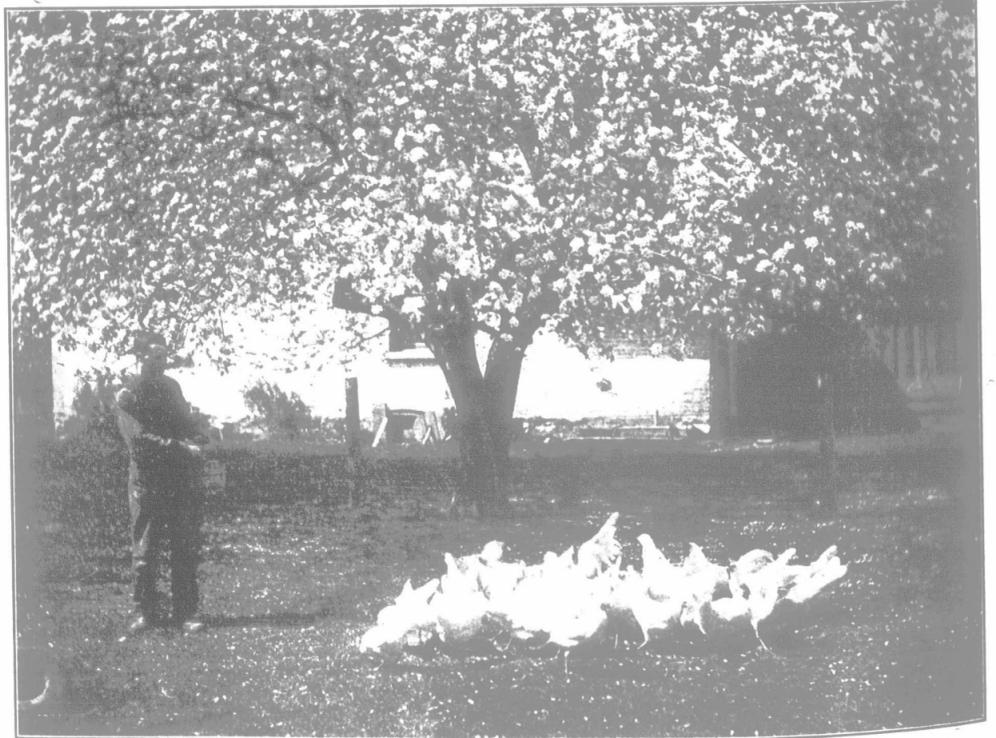
A "Two-six" Carton for One Dozen Eggs.



Cartons in a Thirty-dozen Case.

Cartons pack very conveniently into a case of this size.

but yet so stern. The grower must be resourceful, alert, energetic. In one berry patch could be seen kindlings and wood ready to be transformed into a heavy smudge that might dissipate the frost. Another grower was uncovering potatoes where he had spent several hours on a previous night piling soil upon the plants, while others were asleep. In a raspberry plantation nearby the owner complained of some of the canes failing to leaf out. Upon examination it was found that the snowy-tree cricket had laid its eggs in the canes, and the young larvae were



Chickens and Fruit Make a Good Combination.

getting in their destructive work. Others were spraying; not only fruit growers but vegetable growers as well, for the blight has become so common on the celery that such precautions must be taken.

The frost which did such damage on the night of May 26 was rather lenient in this district. Near the lake little damage could be detected, but farther back a few tomatoes, recently set, found the atmosphere rather cool. Growers were not complaining of any serious loss; some fruit had been touched but there was still a fair amount uninjured. Adversity, although not welcome, is overshadowed by the prospects and the rewards of living in a community like the Burlington District. The process of time has wrought there peculiar conditions of its own making, and now farmers are taking advantage of them in this paleozoic basin of an ancient world.

POULTRY.

Speeding Up the Farm Hen.

The major portion of Canadian farms of 100 acres or over could maintain enough hens to return a net profit of \$100 annually. This could be done as a supplementary enterprise, and it should not entail additional hired labor or an appreciable outlay of money. Corn fields, orchards, and most hoed crops are a suitable place for poultry to forage. Shade, insects, worms and grubs are all provided free. Where the colony-house system is used the hens and chickens can easily be transported from place to place so that the many acres of the farm will be growing chickens in addition to the general farm crops.

A famous journalist once said: "Out of every seven who go into the poultry business, seven fail." Since the time of this utterance considerable information has been gained regarding poultry, and disseminated broadcast over the country. This advantage, which present-day poultry-keepers enjoy, is not sufficient, however, to allow the faddist or the wealthy man to establish a large poultry plant and make profits without personal supervision and previous knowledge regarding poultry. The cause of many failures of large plants is the lack of experience and information which the operator has at his command. Expensive buildings and full grain bins will not bring success. The manager of the plant must have a practical and thorough knowledge of handling poultry, as theories fail when disease, insects and pests make their attack. However, on the 100-acre-farm where the poultry can be moved annually as the crops are rotated these dangers are reduced to a minimum, but the keeper of the flock must have an interest in them, else the profits will be small.

At the Ontario Agricultural College 341 hens and pullets were experimented with from the first of October to September 1 of the following year. The results showed the average cost per dozen eggs for 11 months to be 13.08 cents; the average cost of feeding each bird per month, for 11 months, was 10.88 cents; the average number of

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eggs per bird for 11 months amounted to 115.8, while the average amount of feed consumed per bird (males included) in 11 months was: grain, 68.9 lbs., or 6.2 lbs. per month; milk, 81.6 lbs., or 7.4 lbs. per month. More recent work with 266 pullets for 11 months, beginning with November, resulted in an average egg-cost per dozen of 11.5 cents; the average cost of feeding each bird per month for 11 months was 10.6 cents; the average number of eggs per bird for 11 months was 127.7, while the feed consumed amounted to 6.2 lbs. per month of grain, and 6.3 lbs. per month of milk. The following are averages for three years:

Average cost per dozen eggs for 11 months, 12.1 cents. Average cost of feeding each bird per month (males included) 11 months, 10.6 cents. Average number of eggs per bird for 11 months, 122.6. Average amount of feed consumed per bird (males included) 11 months: grain, 67.6 lbs., or 6.1 lbs. per month; milk, 78.1 lbs., or 7.1 lbs. per month.

These figures are given to show the average egg production, and the average amount of food consumed. In one experiment were 266 pullets, and in another 341 hens and pullets. In both experiments 5 different breeds were included. This is sufficient data to show the cost of producing one dozen eggs. Let us now see what their market value might be.

In Prince Edward Island on December 31, 1915, over 500 members sold their eggs through co-operative egg circles. The average gross price per dozen to the circle was 26.5 cents. The average net price to members was 25.3 cents. Calculations based upon these figures given for production and marketing show that there should be a profit of 13.2 cents per dozen. From the figures of production given it would appear that a hen should lay in the vicinity of 10 dozen eggs in 11 months. This means a profit of \$1.30 per hen. It should be remembered that cost of buildings, yards, and labor is not included in this experimental work, yet if we deduct that also there would still be a fair profit per hen.

Experimental work with raising chicks has shown that a farmer can, in his fields, raise a four-pound cockerel from 13 pounds or 14 pounds of grain. This amount of grain at \$30 per ton would be worth 21 cents. The cockerel would sell in the market for at least 40 cents, and if fattened it would be worth 60 cents. Several years' figures at the Ontario Agricultural College show that 4 pounds of grain will produce a pound of gain in live weight.

These somewhat extensive figures are given only to prove that with proper and intelligent handling poultry will return as large dividends on money invested as any other class of live stock kept on the farm. Everything may move smoothly until the question of marketing looms up, and then another problem must be solved.

The co-operative egg circle is assisting wonderfully in the disposal of poultry products, particularly of eggs. Those who live near centres of population do not experience the difficulties that impede the progress of the more rural poultryman. With a consuming populace near at hand it is an easier matter to command business, yet, through an organization, people who live more remote from town or village may combine the products of the various farms, and sell quite as successfully as the suburban dweller. For some years the Live Stock Branch of the Dominion Department of Agriculture has encouraged the formation of egg circles. The object is to encourage production of a better quality, and at the same time arouse interest through the success which usually attends such an institution. Where a Farmers' Club or any society exists it is usually quite easy to organize a circle within the parent organization. An egg circle should have its officers like commonly organized associations, and a manager should be hired on a salary or a commission. On the manager depends the success of the organization. It is not necessary that he know how to make hens lay, but he must know a good egg and how to sell it. The manager should be a business man or a man with business acumen.

The eggs produced by the various members are assembled at one center and disposed of from there. Each individual egg is stamped with the number of the member, and other marks to indicate the circle from whence the eggs come. In some cases the product is packed in cartons. One popular container is the "two-six" carton. In large quantities they can be purchased for less than one cent each, and this size packs conveniently into a thirty-dozen egg case. Usually information is stamped on the carton, indicating the eggs as strictly new-laid, telling as well where they were produced, and where more just like them can be procured. The advertising effect of this stamped carton is pronounced. They make a convenient package in which the consumer may carry home a dozen eggs, and when the package is empty the buyer is quite likely to ask for the same brand again. Hotels, restaurants, dining services on transportation lines and the general populace all place confidence in an article that is produced in a systematic way as the egg is that goes to market via the egg circle.

More poultry could be easily cared for on the

majority of Canadian farms. Through an efficient marketing system it will pay handsomely and add to the revenue of the farm. Some member of the family should be responsible for the flock, as "everybody's business is nobody's business" and the poultry will suffer. Establish the chicken department of the farm on a business basis and compare the dividends with those derived from other branches of the live stock. When the capital investment is considered the results will be gratifying.

THE APIARY.

Beekeeping Report and Apiary Demonstrations.

During the latter part of April report forms were sent by the Department of Agriculture to a large number of beekeepers in Ontario. These were filled out and returned, and the following summary of the winter loss, condition of the bees and honey crop prospects for 1915 taken from them. Nine hundred and ninety-three beekeepers reported 37,317 colonies in the fall, and 31,310 colonies in the spring, showing a winter loss of 6,007 colonies or 16.1 per cent. This was largely due to the unfavorable breeding season of 1914, causing many colonies to go into winter quarters with large numbers of old bees; also to the poor quality of the stores, causing granulation, which gives unfavorable results, as in districts where much sugar syrup was fed in the fall the losses are comparatively small. This is the heaviest winter loss reported for some years, and if we were to judge by last year's crop failure following the lightest winter loss reported for years, we would expect a bumper crop. In considering these reports it must be remembered that only one in seven who received the blanks sent reports, also that the inclination is not to report failures but only successes. One hundred additional blanks came back with the statement that the sender was "not a beekeeper" in many cases having lost all of his small apiary without giving numbers which could be used in making an estimate. It has also been learned that some extensive beekeepers have lost heavily without reporting in the regular way. It seems that either the wintering problem has not been entirely solved, even by the specialist, or else he is not always putting all his knowledge into practice. The colonies that survived had an early cleansing flight, and brood rearing started during the warm spell in April. The first reports received indicated that the bees were in a weak condition, but reports that arrived later show the bees to be building up rapidly and in fairly good condition. The honey crop prospects vary considerably in the different districts. In the southern countries, the clover is reported in good condition and the prospects extremely bright. The crop outlook about the Georgian Bay is only fair. Farther east—Ontario and Victoria counties—both condition of bees and crop prospects are poor. In the extreme east the early reports were bright, but later ones show spring dwindling and a darkening prospect of the honey crop. It is impossible to determine with any certainty the honey crop prospect at this date, as a late frost or a prolonged dry spell might cause serious loss, but generally speaking while the winter loss is discouraging, the rapidity of the building up of the colonies, the great quantity of pollen collected, and the generally promising appearance of the clover crop would indicate a favorable season for the beekeepers who have wintered their bees.

Judging by the heavy winter loss, however, and the crop failure of 1914, there does not seem to be much danger of an over-production of honey this year.

Great interest has been shown in the apiary demonstrations conducted throughout the Province under the direction of Morley Pettit, Provincial Apiarist. The attendance at the fifty-five meetings held during the season of 1914, averaged 34, while in 1912 the average was 25. Unexcelled opportunities are offered those present to have their difficulties in bee-keeping explained, and the demonstrator, having the apiary and the equipment at his disposal, is able to illustrate his remarks to great advantage. The meetings are held in the apiaries. Hives are opened, and the working of the colony displayed. Attention is directed to the different kinds of cells, the various stages of the brood, the queen is pointed out, and suggestions made on the activities of the colony. Foul brood, swarming, wintering and requeening are also discussed, and the time is very profitably spent both for the beginner and the experienced beekeeper. The use of models of a wintering beekeeper.

For full particulars write to the Apiculture Department, Ontario Agricultural College, Guelph.

FARM BULLETIN.

Completed Grand Trunk Pacific and the 1915 Crop.

An article in "The Farmer's Advocate" for May 6 gave in fairly complete outline an account of the construction and mileage of Canada's new steel highway, the Grand Trunk Pacific Railway, from Moncton, New Brunswick, to Prince Rupert, B. C., on the Pacific Coast, with the lateral southward from the main line to Ft. William on Lake Superior to tap and feed the Great Lakes traffic. An indication was given of the remarkable speed with which so vast an undertaking was accomplished, and its very high standard in the absence of serious grades and curves and general excellence of construction. Since then additional specific information has been secured in regard to actual traffic conditions. The road has, of course, been in operation for some years between Ft. William and Edmonton, Alberta, and since last fall to Prince Rupert. Though the mountain section is still a little unsettled a regular service three times a week is maintained. The road between Winnipeg and Moncton is popularly known as "the transcontinental." Since last year a local service between Moncton and Lévis, Quebec, has been operated under the management of the Intercolonial Railway. East and West of Cochrane, the junction with the Timiskaming and Northern Ontario Railway, there has been train operations by the contractors under arrangement with the Department of Railways at Ottawa. The entire road is now complete, and it is the intention of the Government to put on a service from Moncton to Winnipeg at a very early date. A car ferry, mentioned in prior article, makes the connection across the St. Lawrence River, from Quebec city to Lévis pending the completion of the bridge at that point. Legislation enacted at the recent session of Parliament puts the Government in a position to take over and operate the portion of the road which is the property of the Grand Trunk Railway Co. between Ft. William and Superior Junction. An outlet from the Transcontinental to the Upper Lakes is thus ensured. Statements have been made that the new road would not be a transportation factor in handling the prospective great crop of 1915, but "The Farmer's Advocate" has the re-assuring information that the road will be in a position to assist in moving this year's Western crop, and thus become at once an important link at this critical time in the affairs of Canada and the Empire. The opportunity of through business thus presented will be embraced by the Government with great satisfaction, and will no doubt be developed with all the resources at its command for the purpose.

Bringing Results.

The following letter shows very clearly the value of "The Farmer's Advocate" as an advertising medium, and the esteem in which it is held by advertisers.

"The Farmer's Advocate," London, Ont.:

Dear Sirs,—The judges have completed their work in awarding the prizes on our recent contest entitled, "Why an Automobile is Profitable to a Farmer."

We believe it is only fair to your journal to state that, although we used twenty-two (22) journals and daily and weekly newspapers in making this announcement, the replies received from "The Farmer's Advocate," of London, considerably outnumbered those received through the avenue of any other newspaper or magazine. Also that "The Farmer's Advocate," of Winnipeg, stands third on the list in point of replies received.

This speaks exceptionally well for the standing of "The Farmer's Advocate," and we trust that the sound, substantial policies which have been so long one of the main factors in upbuilding your present standing in the rural community may continue to indefinitely guide your editor.

Yours truly,

McLaughlin Carriage Co., Limited,
Per, G. W. McLaughlin.

Long-Distance Telephone.

Those who follow closely the advances made in science were interested to read last week that Toronto is now connected directly with San Francisco by telephone. Seventy-five of the leading citizens of the Queen City gathered at the Bell Telephone Exchange to be present at the inauguration of a commercial telephone line from Toronto to Frisco, a distance over 3,000 miles, and messages were exchanged between the two cities, voices being as clearly heard as though the speakers were only ten feet away. A soloist in the Frisco office singing Land o' the Leal, and gramophone records were distinctly heard in Toronto. The estimated cost of talking over this line is \$18 for three minutes.

More Superstition.

Editor "The Farmer's Advocate":

Peter McArthur's complimentary and explanatory reference to the letters you published on superstition has again revived the subject of "Occultism." And as most people have a peculiar interest in this, perhaps you may allow me sufficient of your valuable space to say a few more words along this line. There are a great many things, formerly considered mystical, that have now become clear in the light of science, and no doubt it will yet accomplish much in this direction. But although I am anxious to see everything explained in this way, yet I cannot free myself from the belief that many forces exist which have not and perhaps never will be satisfactorily explained. Perhaps I am biased in my views regarding these things. If so, it is owing to hereditary tendencies, for without doubt several of my ancestors possessed unusual powers or gifts of this order. One of these—my grandfather's sister—was able to foretell certain events, was subject to visions and dreams of prophetic significance, and to experience what is known as mental telepathy or thought-projection. Of course we know that a great many of the public exhibitions of these things are purely methodical and have no deeper origin. But in spite of this fact, and in full realization of my statement, I have no hesitation in saying that I believe there are certain individuals of peculiar organization who actually possess these powers. Consequently I have also come to place some belief in the assumption that the changes of the moon may have some effect on things here. Regarding the moon's relationship to vegetable growth, Mr. McArthur's explanation is very reasonable—although his references are somewhat indirect—and I am pleased that he admits that even in this connection the moon sometimes acts right. Perhaps if it did not have the habit of getting full so often it might conduct itself better all the time. I wish to thank and compliment him for this new thought and the clear manner in which he expressed it. But I am still inclined to think that the changes of the moon may cause some change in the processes of animal life. Farmers here who have watched the results of certain operations performed on live stock at different stages of the moon's development, have decided that the outcome is more favorable if these operations are performed at one particular time. Of course, this may be only coincidence, but it would be interesting and useful to all farmers to know for a certainty whether there is anything in this or not.

It seems strange that Mr. McArthur and I should have the same trouble with a cow at almost the same time. We have a cow that had the bran habit, and it was all our own fault, too.

Some time ago we started feeding her a small mess of bran and intended doing so right along, but—as is the case with most habits—her appetite for bran grew to such proportion as to prohibit its further use. We quit giving it to her altogether. Then you talk about bawling, she did little else but bawl for a day or two. Once in a while she would start nibbling grass, but suddenly she would think of the bran, make a race for the gate, bawl so loudly that you could hear her a mile, and this kept her mouth open so much of the time during the first day, that her lower jaw was hanging down loose the last time I looked at her before going to bed that night. But we cured her. We got a pail, mixed a mess of bran and "bitter aloes" and gave it to her. The action of this cure for the bran habit seems much the same as that of the gold cure for the whiskey habit. For, after taking it, if she started to bawl, all we had to do was to rattle the pail, when she would shake her head in disgust and start off picking grass.

Glengarry Co., Ont. J. B. FERGUSON.

How the Federal Grant Will be Spent in Ontario.

Ontario's portion of the Federal grant to agriculture for the current year is \$266,013, of which nearly one-half goes toward the work being carried on by District Representatives of the Ontario Department of Agriculture. The following is a complete list of the Departments which are to get aid from the grant.

District Representatives, \$114,000; Agricultural College: (a) capital expenditure, \$81,413.64, (b), salaries and expenses of additions to staff and maintenance, \$12,400; O. A. C. Short Courses, travelling and living expenses of winners of acre profit and live-stock competitions, \$1,500; to encourage agriculture and domestic science in High, Public, Separate and Continuation Schools, to be available for grants and for travelling and living expenses of teachers and others in attendance at Short Courses or other educational gatherings, in addition to services, expenses and equipment, and to be paid out on the recommendation of the Department of Education, \$20,000; educational work in connection with marketing of farm products, including organization of co-operative societies, collection, printing and distribution of information on current prices and systems of marketing, \$6,000; stock and seed judging, Short Courses and Institute Lecture Work, \$6,500; Women's Institute Work, including courses in cooking, sewing, etc., \$2,000; Short Courses for Fall Fair and Field Crop Judges, including travelling and living expenses, \$3,000; drainage work, \$6,200; demonstrations and instruction in vegetable growing, \$3,000; demonstration work on soils,

\$2,000; demonstration work in spraying, pruning and packing of fruits, \$4,000; Work in Beekeeping, \$1,500; equipment of laboratory and services of Assistant, Horticultural Experiment Station, Vineland Station, \$2,500; total, \$266,013.64.

To Ship Stock to the Maritime Provinces.

Editor "The Farmer's Advocate":

The Live Stock Association will make a trial shipment of pure-bred live stock to the Maritime Provinces during the third week in June if sufficient applications to warrant it are received by that date. Applications for several animals have already been received. The car will be run upon the same system as those sent to the Western Provinces. It is expected that an extensive trade in pure-bred stock will in this way be developed with our friends down by the sea.

R. W. WADE, Secretary.

Beginning in May with unprecedented activity, most of the effective horse stock of the country has been swept away into the war zone, for the most part, never to return.

A new order from the Department of Agriculture, Ottawa, reads as follows:

"Hay in car lots from the States of Minnesota, North and South Dakota will be admitted, provided each shipment is accompanied by an affidavit that the hay is the product of these States."

The fruit belt never showed better prospects for a big crop than it does this season. Canadians could use to advantage more home-grown, tender fruit and a wide home market should be built up by placing the fruit in the hands of consumers at a price more in keeping with that received by the grower.

If the careless man living on the neglected and poorly-looked-after place could only realize what it would mean to him to "spruce" up there would be fewer eye-sores in our country. It is not all in appearances; carelessness means the loss of the dollars which should go in the profit columns.

One of the amusing side lights of the now famous Barnes-Roosevelt libel trial at Syracuse, N. Y., was the usual warning to the jurymen not to read the newspaper accounts of what was going on. But the justice on the bench, when the newsboys trooped in, coolly procured their sheets and recited himself with the big head lines and what followed there-under. Judges are immune to newspaper prattle.

Toronto, Montreal, Buffalo, and Other Leading Markets.

Toronto.

Receipts at the Union Stock-yards, West Toronto, all told, from Saturday morning to Monday, May 31, were 208 cars, comprising 2,275 cattle, 1,751 hogs, 593 sheep and lambs, 149 calves, and 1,562 horses. Cattle trade slow. Choice butchers', 10c. to 15c. higher. Heavy steers and heifers, \$8.20 to \$8.40; choice butchers', \$8 to \$8.25; good, \$7.80 to \$8; medium, \$7.60 to \$7.80; cows, \$4 to \$7.30; bulls, \$6 to \$7.50; feeders, \$7.25 to \$7.65; stockers, \$5.25 to \$6.25; milkers, \$70 to \$95, and one at \$115; calves, \$6 to \$10. Sheep, \$4.50 to \$7; yearling lambs, \$7 to \$9; spring lambs, \$5 to \$9 each. Hogs, \$9.90 to \$9.95, weighed off cars.

REVIEW OF LAST WEEK'S MARKETS

The total receipts of live stock at the City and Union Stock-yards for the past week were:

	City.	Union.	Total.
Cars	30	426	456
Cattle	316	3,810	4,126
Hogs	692	8,409	9,101
Sheep	165	582	747
Calves	110	689	799
Horses	165	2,293	2,458

The total receipts of live stock at the two markets for the corresponding week of 1914 were:

	City.	Union.	Total.
Cars	8	337	345
Cattle	82	4,263	4,345
Hogs	218	7,837	8,055
Sheep	94	645	739
Calves	58	1,078	1,136
Horses	—	39	39

The combined receipts of live stock at the two markets for the past week show an increase of 111 car loads, 1,046 hogs, 8 sheep, and 2,419 horses; but a decrease

of 219 cattle and 337 calves, compared with the corresponding week of 1914.

Considering the season of the year and the late, large receipts, the deliveries of live stock at Toronto markets for the past week were liberal. This was especially so for cattle and hogs. Trade was as nearly a repetition of the previous week as it could be. Fat cattle prices were steady at about the same values. Heavy steers, even when of choice quality, were slow sale, while choice quality butchers' steers and heifers were good sale, at prices ranging from \$8.15 to \$8.40. The best loads of heavy steers sold at \$8.25 to \$8.45; and several loads were bought at \$8.30 to \$8.35. One choice steer 1,450 lbs. brought \$9, which was the high price of the week. Another lot of 3 steers sold at \$8.80, but these were extra quality, being as good as many of the prize animals at the last Christmas Fat Stock Show. The steer that sold for \$9 was fed by farmer R. McGill, of Ravenna, Ont. The 3 steers sold at \$8.80, weighed 1,580 lbs. each, and were fed by farmer George Moore, of Hibbert Township. The bulk of the good cattle sold at \$8 to \$8.25. Feeders were not in as great demand but prices remained steady, as the number on sale was not as large. Milkers and springers sold readily at steady prices, as the demand was again greater than the supply. Veal calves sold at about the same values as in our last report. Sheep and lambs were a little lower in value. Hog prices are steadily advancing, and the ten-cent hog is almost in sight once more.

Butchers' Cattle.—Choice heavy export steers, as we used to designate them, sold at \$8.25 to \$8.45; choice, light-weight butchers' steers and heifers sold at \$8 to \$8.40; the bulk of these going at \$8.15 to \$8.30; good, at \$7.80 to \$8; medium, \$7.50 to \$7.75; common,

\$7.30 to \$7.50; choice cows, \$7 to \$7.25; good cows, \$6.75 to \$7; medium, at \$6 to \$6.50; common, at \$5.50 to \$5.75; canners and cutters, at \$4 to \$5.25; choice bulls, at \$7.25 to \$7.50; medium bulls, \$6.50 to \$7; common bulls, \$5.50 to \$6.25.

Stocks and Feeders.—Good to choice steers, 800 to 900 lbs., sold at \$7.40 to \$7.65; medium, 700 to 800 lbs., at \$6.75 to \$7.25; stockers, 500 to 650 lbs., at \$5.60 to \$6.25.

Milkers and Springers.—Choice fresh milkers and forward springers, sold at \$80 to \$100 each; good to choice, \$70 to \$80; medium, \$60 to \$70; common, at \$45 to \$55 each.

Veal Calves.—Choice calves, \$9 to \$10; good, \$7.50 to \$8.75; medium, \$7 to \$7.50; common, at \$5 to \$6.

Sheep and Lambs.—Light-clipped sheep, \$5.50 to \$6.50; light, unclipped, \$6.50 to \$7.50; heavy, clipped sheep, \$4.50 to \$5.50; heavy, unclipped, \$5 to \$6.50 spring lambs, \$5 to \$9 each for the bulk of sales.

Hogs.—Values at the beginning of the week were \$9.65 weighed off cars, and at the close of the week \$9.85 to \$9.90, and in one instance on Thursday \$10 was reported.

TORONTO HORSE MARKET.

No horses were bought for army purposes during the past week. All the different sale stables report the market for horses as being dull, few sales being effected, and these at steady values.

BREADSTUFFS.

Wheat.—Ontario, No. 2, \$1.42 to \$1.44, outside; Manitoba, at bay ports, No. 1 northern, \$1.61; No. 2 northern, \$1.58; No. 3 northern, \$1.56.

Oats.—Ontario, No. 2 new, white, 59c. to 60c., outside; Canadian Western oats, No. 2, 66½c.; No. 3, 64½c., track, bay ports.

Rye.—\$1.17 to \$1.20. Buckwheat.—77c. to 79c., outside. Barley.—Ontario, No. 3, 76c. outside. American Corn.—No. 2 yellow, 79½c. track, lake ports; Canadian, No. 2 yellow, 79c.

Peas.—No. 2, \$1.60 to \$1.65, car lots, outside; very scarce. Rolled Oats.—Per bag of 90 lbs., \$3.40 to \$3.50.

Flour.—Ontario, winter, 90% patents, \$6, seaboard. Manitoba flour—Prices at Toronto were: First patents, \$8.10 in jute; strong bakers', \$7.40 in jute; in cotton, 10c. more.

HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, No. 1, \$17 to \$17.50; No. 2, \$15 to \$16. Straw.—Baled, car lots, \$7 to \$8.

Bran.—Manitoba, \$26 in bags, track, Toronto; shorts, \$28; middlings, \$33 to \$35.

COUNTRY PRODUCE.

Butter.—Prices declined during the week. Creamery pound squares, 31c. to 32c. lb.; creamery solids, 29c. to 30c.; dairy, 25c. to 27c. per lb.

Eggs.—New-laid eggs have also declined slightly, selling at 21c. to 22c. per dozen.

Cheese.—New, large, 20c. lb.; twins, 21c. per lb.; old, 22c. per lb.

Honey.—Extracted, 11c. to 12c. per lb.; combs, per dozen sections, \$2.50 to \$3.

Beans.—Primes, \$3.30 per bushel; hand-picked, \$3.60 per bushel.

Potatoes.—Ontario, car lots, per bag, track, Toronto, 35c. to 37½c.; New Brunswick, 47½c. to 50c. per bag, track, Toronto.

Poultry.—Live-weight prices: Turkeys—17c.; hens, 14c. to 15c. per lb.; spring chickens, 45c. per lb.; squabs (no demand).

HIDES AND SKINS.

City hides, flat 14c.; country hides, cured, 13c. to 14c.; country hides, part cured, 12c. to 13c.; country hides, green, 12c.; calf skins, per lb., 14c.; kip skins, per lb., 12c.; sheep skins, \$1.50 to \$2; horse hair, per lb., 38c. to 40c.; horse hides, No. 1, \$3.50 to \$4.50; wool, unwashed, coarse, 15c.; wool, unwashed, fine, 17c.; lamb skins and pelts, 15c. to 25c.; tallow, No. 1, per lb., 5 1/2c. to 7c. We cannot give any further wool prices for a few days on account of the embargo.

FRUITS AND VEGETABLES.

Strawberries are coming in in large quantities, and are generally of good quality, selling at 14c. to 16c. per box. New vegetables, that is the imported ones, are also coming in more plentifully. Wax beans, green peas, cucumbers, cabbage, carrots, beets and new potatoes.

Asparagus has been rather scarce during the past week on account of the cold weather, and is now selling at \$1.50 per 11-quart basket. Canadian hot house tomatoes have been a slow sale the last few days, declining to 16c. to 18c. lb. Cucumbers, too, are slow at \$1.25 per 11-quart basket. Apples.—Spys, \$5 to \$5.50 per barrel; pineapples, \$2.50 to \$2.75 per case; bananas, \$1.90 to \$2.25 per bunch; grape-fruit, \$2.75 to \$3.25 per case; lemons, Messina, \$2.75 to \$3 per case; California, \$3.25 to \$3.50 per case; oranges, \$3.25 to \$4 per case; strawberries, 14c. to 16c. per box; beets, 50c. per bag; new, \$1.50 to \$1.75 per hamper; cabbages, new (imported), \$2.75 to \$3.50 per case; celery, Florida, \$2.25 to \$2.50 per case; onions, \$2.75 to \$3 per 100-lb. sack; Texas Bermudas, \$2.25 to \$2.50 per 50-lb. case; parsnips, 50c. per bag; turnips, 60c. per bag; leaf lettuce, 20c. to 40c. per dozen bunches; potatoes, Ontario, 50c. per bag; New Brunswick Delawares, 60c. per bag; seed potatoes, 80c. to 90c. per bag.

Montreal.

Live Stock.—The price of cattle is certainly high at the present time, though what is causing the strength is difficult to say. Offerings, of course, are very light, and this naturally furnishes a strengthening influence. At the same time, the demand for cattle is considerably less than usual at this time of year, and this would affect matters in the opposite direction. The quality of stock offering is very poor, butchers saying that almost no real choice steers have been on the market for a couple of weeks. Nevertheless, as high as 8 1/2c. per lb. was paid for steers, this being for good to fine stock. Ordinary steers sold at 7c., and butchers' cows and bulls ranged generally from 7c. down to 4 1/2c. Sheep and lambs are coming forward more freely now that lambing season is over, and the market was slightly easier as a consequence. Sheep were purchased at 5c. to 6c. per lb., this being for good yearlings, while spring lambs were sold at \$4 to \$7 each, according to quality and size. A large number of calves were on the market, and prices were about steady, at \$2 to \$5 for common, and up to \$10 for the best. Hogs continued in fairly good demand, and packers took everything offered at 10c. to 10 1/2c. per lb. for selects, weighed off cars. Horses.—There was no interest in this market so far as concerns the customary trade. Some buying is always going on, doubtless for army purposes. Prices were unchanged, as follows: Heavy draft horses, weighing from 1,500 to 1,700 lbs., were quoted at \$250 to \$300 each; light draft, weighing from 1,400 to 1,500 lbs., were \$175 to \$225 each; small horses, \$175 to \$250; culls, \$50 to \$100 each, and fancy saddle and carriage animals, \$300 to \$400 each. Dressed Hogs.—The market for dressed hogs was generally firm and prices scored an advance. Supplies were not very large, and this has affected the market. Potatoes.—The market for potatoes was moderately active, and prices continued at the recent low level of 42 1/2c. per 90 lbs. car lots, track, for Green Mountains. In a jobbing way prices were 10c. to 15c. above these figures. Honey and Syrup.—Maple syrup was unchanged, at 70c. for 8-lb. tins, and up to \$1.25 for 13-lb. tins. Sugar was 10c. to 11c. per lb. White-clover comb honey was 15c. to 16c. per lb.; extract-

ed, 11c. to 12c.; dark and strained, 8c. to 9c. per lb.

Eggs.—The quality of stock was not quite as good as formerly, and the tendency of prices was to decline. As a matter of fact, straight-gathered stock was available last week at 22c. in wholesale lots, while selected were 24c. to 25c., and No. 2 stock was 20c. Consumption keeps up well.

Butter.—Last week prices of butter came down considerably. Grass goods came along freely, and the quality of butter was excellent. Finest creamery sold at 28c. to 28 1/2c. per lb., while fine creamery sold at 1/2c. below these figures. Second quality was quoted at 26 1/2c. to 27 1/2c. Even these prices were high for the time of year, and possibly were in part due to the high price of cheese.

Cheese.—The market for cheese was firm as ever, and it is expected that prices may go even higher than heretofore. At the country boards the bidding was brisk, and exporters evidently want the stock. Prices were about steady. Finest white and colored cheese was quoted at 18 1/2c. to 19c. per lb. Finest Eastern was 18 1/2c. to 18 3/4c., with undergrades at 1/2c. less.

Grain.—Oats were very firm, and prices advanced. Local No. 2 white oats sold at 66 1/2c. to 67c.; No. 3, 65 1/2c. to 66c.; No. 4, 64 1/2c. to 65c. per bushel, ex stores. Canadian Western were 67c. for No. 3 and extra No. 1 feed. No. 1 feed was 66c., and No. 2 feed 65c. American No. 3 yellow corn was 81 1/2c., and Manitoba barley 73 1/2c. to 74c. Beans were steady, at \$3.25 for 1 1/2-lb. pickers; \$3 for 3-lb., and \$2.90 for 5-lb. Cheaper stock was \$2.75 in car lots.

Millfeed.—Bran was \$26 per ton in bags; shorts, \$28; middlings, \$33 to \$34 per ton. Mouille was \$37 to \$38 for pure, and \$35 to \$36 for mixed, bags included.

Hay.—No. 1 pressed hay, Montreal, ex track, was \$21 to \$21.50 per ton; No. 2 extra was \$20 to \$20.50, and No. 2, \$19 to \$19.50.

Hides.—Quality was fairly good. Beef hides were steady, at 17c., 18c. and 19c. for Nos. 3, 2 and 1 respectively, and calf skins 18c. per lb. Sheep skins were \$1.75 each; horse hides, \$1.50 for No. 2, to \$2.50 each for No. 1. Tallow was 6c. per lb. for refined, and 2 1/2c. for crude.

Seeds.—Dealers quoted \$8.50 to \$12 for timothy per 100 lbs., and \$17 to \$22 per bushel of 60 lbs. for red clover and alsike.

Buffalo.

Cattle.—Cattle trade was satisfactory last week, regardless of the fact that values went off a shade on shipping steers. These sold from steady to a dime lower, but the demand was strong at the decline, and the forty-five to fifty loads were cleaned up readily. On butchering cattle, it was a steady market on the choice grades, while a medium and commoner kind brought a dime to fifteen cents lower prices, the decline effecting especially grassy cows and bulls. Load of Canadian steers, with three weighty heifers in, sold at \$8.50. This represented the best price for Canadian cattle, but choice shipping steers out of the Dominion would no doubt have sold most satisfactorily. Best shipping steers offered sold up to \$9, a load of long yearlings also bringing this price. Best in the handy butchering steer line ranged from \$8.30 to \$8.50, and the demand for choice to prime butchering steers and handy heifers was not fully met. Some authorities are of the opinion that there is too wide a margin between the weighty steers and the handy kinds, and expect to see good-weight steers ascending in prices. Buffalo of late weeks has had an especially good outlet for shipping steers of any class. All of the Eastern order buyers have been on the market, and they have patronized Buffalo liberally. As a matter of fact, shipping steers held back on account of the quarantine, have taken on excellent fairs, and steers out of this market have proven most satisfactory killers of late weeks. Butchering grades generally have not proven so satisfactory, although some very desirable handy steers have

been coming of late weeks, but not any considerable number. Grass cows are beginning to run on goodly numbers, and sellers are prepared to see these go to a lower range. Some of these grassers show pretty good fat, as a result of which the prices on the grain-fed classes are being pulled down somewhat. Grass bulls are declining in price with grass cows. An effort is being made to obtain permission from the Dominion of Canada to allow shipments from clean territory—Michigan, for instance—to pass through. It is insisted that the disease is well in hand now, and that no hazard is offered by allowing live stock out of Michigan, for instance, to be run through the Dominion, as previously. Receipts last week figured 3,850 head, as against 3,933 for the previous week, and 3,150 head for the corresponding week last year. Quotations: Shipping steers—Choice to prime, \$8.50 to \$9; fair to good, \$8 to \$8.25; plain, \$7.25 to \$7.75. Butchering steers—Choice, heavy, \$8.50 to \$8.65; fair to good, \$7.50 to \$8; best handy, \$8.25 to \$8.65; yearlings, \$7.75 to \$8.75. Cows and heifers—Prime weighty heifers, \$7.50 to \$8; best handy butcher heifers, \$7 to \$7.50; common to good, \$6 to \$6.75; best heavy fat cows, \$7 to \$7.40; good butchering cows, \$6 to \$6.50; medium to good, \$5.50 to \$6; cutters, \$4.50 to \$5; canners, fair to best, \$4 to \$4.25. Bulls—Best heavy, \$6.75 to \$7; good butchering, \$6.50 to \$7; sausage, \$6 to \$6.75.

Hogs.—Liberal receipts at all marketing points on the opening day of last week resulted in a little break in prices. At Buffalo there were 100 cars, and all good-weight grades sold generally at \$7.85, with pigs landing at \$7.75. Receipts after Monday were light, and the market reacted. Tuesday, heavies sold at \$7.95 and \$8, with all other grades bringing from \$8 to \$8.10; Wednesday's sales were made at \$8 and \$8.05; Thursday, a few Yorkers and pigs reached \$8.25, with bulk going at \$8.15, and Friday the general price for all grades, including pigs, was \$8.15. Roughs sold anywhere from \$6.50 to \$7, and stags mostly \$5.50 down. Receipts last week totaled approximately 26,900 head, as against 33,513 head for the previous week, and 30,400 head for the same week a year ago.

Sheep and Lambs.—Prices showed a break last week, sheep, which were hit the hardest, selling on the lowest level of the year. On the opening day of the week, dry-fed lambs sold from \$10.85 to \$11, and the next four days the range on these was from \$10.50 to \$10.65. Grassy stuff was badly neglected, and in some cases the greenish kinds undersold the dry-feds by as much as \$1.50 per hundred pounds. During Monday's early session choice wether sheep sold from \$8.25 to \$8.50, handy ewes made \$7.50, and the heavy ones went from \$7 down. After Monday, however, the sheep trade was in a demoralized condition, and before the week was out buyers got top wethers at \$7.50, handy ewes on Friday's market could not be quoted above \$6.50, and the heavy, fat ewes, during the latter part of the week were hard to place above \$5.58. Receipts last week show a grand total of approximately 10,350 head, being against 13,372 head for the previous week, and 16,200 head for the same week a year ago.

Calves.—Top veals the first four days of last week sold mostly at \$9 and \$9.25, few reaching \$9.50, and Friday, under a light supply and red-hot Eastern demand, the best lots were landed at \$10. Culls, \$8 down, and grassers, \$4.50 to \$6. Receipts last week numbered 4,000 head, week before there were 3,707 head, and for the same week a year ago the run numbered 3,050 head.

Cheese Markets.

New York, State whole milk fresh specials, 16 1/2c. to 17c.; average fancy, 16 1/2c. to 16 3/4c.; Belleville, 18 1/2c. and 18 11-16c.; Utica, N. Y., 16 1/2c. and 16c.; Madoc, 18 13-16c. and 18 1/2c.; Woodstock, 18 1/2c. bid; Napanee, 18 9-16c.; London, bidding 17c. to 17 1/2c.; Alexandria, 18 1-16c.; Pictou, 18 1/2c.; Vankleek Hill, 18 7-16c.; Kingston, white, 18 7-16c.; colored, 18c.; Brockville, 18 1/2c. bid; Iroquois, 18 1/2c.; Perth, 18 1/2c.; Montreal, finest Westerns, 18 1/2c.; finest Easterns, 18c. to 18 1/2c.; St. Paschal, Que., 17 1/2c.; Stirling, 18 13-16c.; Campbellford, 18 1/2c.; St. Hyacinthe, Que., 17 1/2c.

Chicago.

Cattle.—Beeves, \$6.90 to \$9.25; Western steers, \$6.10 to \$7.90; cows and heifers, \$3.25 to \$8.70; calves, \$6.50 to \$9.35.

Hogs.—Light, \$7.40 to \$7.70; mixed, \$7.35 to \$7.70; heavy, \$7.15 to \$7.60; rough, \$7.15 to \$7.30; pigs, \$6 to \$7.40; bulk of sales, \$7.50 to \$7.65.

Sheep and Lambs.—Sheep, native, \$7.40 to \$8.40; lambs, native, \$7.75 to \$10.10.

Gossip.

Henry M. Douglas, in ordering change of advertisement, writes that he has moved his place of business from The Queen's Hotel, Meaford, to the Central Hotel, Elnvale, where he intends to continue dealing in Clydesdale, Percheron, French Coach, and Hackney stallions. Mr. Douglas leaves this week for Alberta with a small shipment.

Hewitt—It took the suffragette parade three hours to pass a given point. Jewett—Were there many women in line? Hewitt—Not so very many, but they had to halt every time they approached a dry goods store.—Chicago News.

"Dinah, did you wash the fish before you baked it?" "Law, ma'am, what's de use ob washin' er fish what's lived all his life in de water?"—Philadelphia Leader.

Dennis—Good mornin', Mrs. Murphy, an' is Pat at home, sure? Mrs. Murphy—Sure, where are your eyes, Dennis Dinny? Isn't that his shirt fornenst ye hangin' on the loine!

Fond Mother (proudly)—An' do ye no think 'e looks like 'is father? Sympathetic Neighbor (cheerfully)—An niver ye mind that, Mrs. McCarty, so long as 'e's 'ealthy.

The Man—Of course, you understand, dear, that our engagement must be kept secret? The Woman—Oh, yes, dear! I tell everybody that.—New York American.

Nautical—"I hear Jones the sea-captain," said Uncle Eben, "is most always mighty easy interested." "Yes, he took her for a mate, but she was a skipper."—Princeton Tiger.

"What makes the trust magnate look so worried?" He has just read that the American farmer is very prosperous, and he feels that he must have overlooked something.—Houston Post.

"De man dat likes to hear hisself talk," said Uncle Eben, "is most always mighty easy interested."

"Oh, say, who was here to see you last night?" "Only Myrtle, father." "Well, tell Myrtle that she left her pipe on the piano."

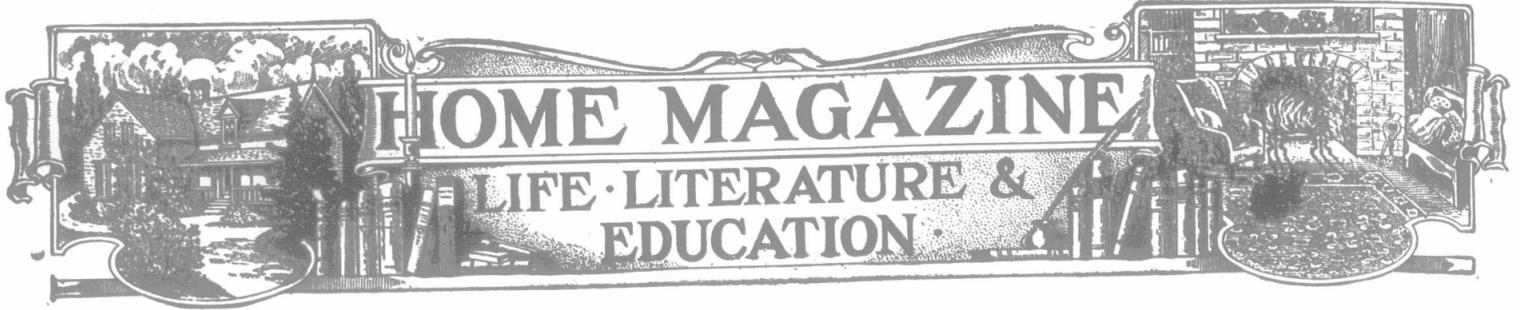
"Mother, am I really the image of you, or was that lady that called on you just tryin' to hurt my feelings?"

"Jones tells me he has just started a bank account for his new baby." "I see; a fresh-heir fund."

Wise Guy—"Ever see a close race?" Utter Nut—"Sure! I spent three months in Scotland."

Owens—"My landlord has ordered me out because I can't pay my rent." Bowns—"Glad I met you. So has mine. Let's change quarters."

On the Wrong Side.—Pat, who was left-handed, was being sworn in as a witness in the West Side Court of Denver, Colo. "Hold up your right hand," said the judge. "Up went Pat's left hand. "Hold up your right hand," commanded the judge, sternly. "Sure and I am, yer honor," declared Pat. "Me right hand's on me left-hand side."—The Advance.



Written in June.

By Frank Browne.

I long for the sweep of the English hills,
The brown of the heath and the hedge-
rowed way;
And the long, dewed grass, where the
cattle stray,
Fragrance of herb and the sun-kissed
rills;
Fields that have flower, and gardens old,
Old in the dream-sweet dusk of years—
To-day, to-day, if the truth be told,
My heart has tears.

Why is it, why is it, ye wake in me,
Pulse of a land that is far away?
Is not this land wide-flung as gay
With bloom as the land that breaks the
sea?
There the curfew swings when the fields
are dark,
And the bats fly low 'neath the moon's
pale rim,
The meadow at morn is blithe with the
lark—
I hear not him.

The Making of Birds.

By Katharine Tynan.

God made Him birds in a pleasant
humor;
Tired of planets and suns was He.
He said: "I will add a glory to sum-
mer,
Gifts for My creatures banished from
Me!"

He had a thought and it set Him smil-
ing
Of the shape of a bird and its glancing
head,
Its dainty air and its grace beguiling:
"I will make feathers," the Lord God
said.

He made the robin; He made the swal-
low;
His deft hands molding the shape to
His mood,
The thrush and the lark and the finch to
follow,
And laughed to see that His work was
good.

He Who has given men gift of laughter,
Made in His image, He fashioned fit
The blink of the owl and the stork there-
after,
The little wren and the long-tailed tit.

He spent in the making His wit and
fancies,
The wing-feathers He fashioned them
strong,
Deft and dear as daisies and pansies,
He crowned His work with the gift of
song.

"Dearlings," He said, "make songs for My
praises!"
He tossed them loose to the sun and
wind,
Airily sweet as pansies and daisies:
He taught them to build a nest to
their mind.

The dear Lord God, of His glories
weary—
Christ our Lord had the heart of a
boy—
Made Him birds in a moment merry,
Bade them soar and sing for His joy.
—From "Flower of Peace."

The Mosque of St. Sophia.

With Rheims cathedral gone, the Cloth
Hall at Ypres destroyed, bombs falling
upon Venice, and precautions being taken
to guard Rome against destruction from
the clouds, it begins to seem as though
there will be few architectural master-
pieces left in Europe for the sightseers

of the future to admire or derive inspira-
tion from, and as the great drive in the
Dardanelles goes slowly forward one be-
gins to wonder whether that almost
Asiatic city, Constantinople, with its
domes and minarets, shall in any wise
escape.

Among all the monuments of that
Oriental metropolis, none is so renowned
as the great church of St. Sophia. The
present edifice is the third church built
upon the site, the two which preceded it
having been burnt through the vicissit-
udes of early wars. As it stands, the
mosque has for its foundation the Chris-
tian church built by Justinian the Great,
and dedicated on Christmas Day, 538, a
great auditorium 250 feet in length and
235 in width, divided into nave and
aisles by great pillars, of which there
are 40 on the ground floor and 60 in the
galleries. Eight of these pillars, placed
at the corners of the nave, are huge
shafts of porphyry which once belonged
to the Temple of the Sun at Baalbek.
They were carried to Rome by Aurelian,
and finally given to Justinian by a lady
named Marcia, to be placed in this
church "for the salvation of her soul."

Above the center of the vast building,
and beginning 179 feet from the floor, is
the huge dome, which is the most con-
spicuous feature of the rather huddled
and disappointing exterior. The original
dome fell during an earthquake in 558,
and the restored dome was made 25 feet
higher, so that its present dimensions
are 107 feet diameter, 46 feet depth.
Its base is pierced by 40 arched windows,
and it extends into semi-domes and yet
more semi-domes, so that, as described
by an enthusiast, "the nave is covered
completely by a domical canopy which,
in its ascent, swells larger and larger,
mounts higher and higher, as though a
miniature heaven rose overhead. For
lightness, for grace, for proportion, the
effect is unrivalled."



The Mosque at St. Sophia, Constantinople.

The four minarets were added by the Turks when the ancient Christian church
was metamorphosed into a Moslem mosque.

The walls of the building were origi-
nally quite covered with beautiful de-
signs in colored marbles connected by
wonderful mosaics, but when, in 1453,
Constantinople became the capital of the
Ottoman Empire and the church was re-
modelled to suit Moslem needs, some of
the mosaics were destroyed. Many,
however, were preserved through the
order of a Sultan with an artistic soul,
who caused them to be covered with
matting before they were plastered over.
Should the mosque survive the catastro-

phes almost inevitable with the impend-
ing attack upon the city, so that it
passes once more out of Moslem hands,
these mosaics will again see the light
of day.

Browsings Among the Books.

THE LEGEND OF THE PETIT HOMME
ROUGE.

From "Paris Past and Present," by
Henry Haynie. Fred. A. Stokes,
Publishers, New York.

The Place du Carrousel is about as
well known as any open square in Paris.
Everybody has been in it, not particu-
larly to visit it, for aside from the Gar-
betta monument and a pretty little patch
of shrubbery, with a few flowers, sur-
rounded by an iron fence, there is noth-
ing whatever in the place worth men-
tioning. The buildings of the Louvre,
of the Pavillon de Flore along the
Seine, and of the Pavillon de Marsan
along the Rue de Rivoli, where the Min-
ister of Finance is to be found, present
a good effect. Here and there are
statues in niches of great men who once
lived in France. Over some of the doors
are emblems of royalty, while by the
grand arcades through which all sorts of
vehicles are rushing into the Place de la
Comedie Francaise, one sees the
Napoleonic "N's" that have been left
untouched by a people who do not seem
to worry any now about things remind-
ing them of empire or monarchy. At
night, electric lamps perched high up on
slender poles, cast powerful lights and
dark shadows on a square courtyard
filled with ghostly souvenirs of a past
which was only too often terribly im-
portant. The Place du Carrousel is a
large open space lying between the build-
ings of the old Louvre and the ground

only speak, they might bear witness to
many stirring events in French history.

The name "Carrousel" comes from the
Italian word "carosela"—"a little
chariot." Originally, the square was a
stretch of open ground lying outside of
the city walls, with a lane running
through it to the river. Tournaments
were very common in France until after
Montgomery killed Henry II., which acci-
dent led to their being done away with
in favor of chariot races and equestrian
exercises made up of allegorical represen-
tations of some famous event in the
history of the Prince in whose honor
they were given. These displays were
called "carrousels," and the first one
ever given came off in the courtyard of
the Louvre, while Henry IV. was King.
The same monarch gave another on the
Notre Dame Bridge, while his successor,
Louis VIII., gave at the time of his
marriage a carrousel which nearly bank-
rupted him and the entire Court.

When Louis XIV. ascended the throne,
all that part of the present Place du
Carrousel which was not covered by a
sort of "shanty town" lay along the out-
skirts of the city. Until the beginning
of the seventeenth century it had been a
marshy strip of ground belonging to no-
body in particular, where the street
scavengers emptied their garbage carts,
and where Courtiers went to fight duels.
In the year 1620 it was enclosed with a
wall and laid out as a garden for the
use of Mademoiselle de Montpensier, who
occupied one wing of the Chateau des
Tuileries. That wall was pulled down
during the reign of Louis XIV., the gar-
den became a public square, and a few
years later the King gave here certain
carousal fetes, which lasted three days,
and cost him one million two hundred
thousand livres.

There exists a tradition that the
Louvre, the great square and the Tuil-
eries palace, when it existed, were haun-
ted by a spectre called Petit Homme
Rouge. The appearance of this spectre
was always followed by a National mis-
fortune, civil commotion, revolution,
public disaster, or death of the head of
State. When Catherine de Medicis built
the Tuileries, she took forcible posses-
sion of other people's property, including
a butcher's shop, the owner of which was
known among the neighbors as the "Lit-
tle Man in Red." This butcher became
the accidental witness of some of the
amorous exploits which took place in the
new Chateau, and to insure his silence
the queen's mother had him decoyed into
a subterranean passageway which con-
nected the Tuileries with the Louvre,
where he was murdered. Thereupon the
spirit of the poor fellow took up its
abode in the garret of the Tuileries, and
ever since then he has been a herald of
death or misfortune to its occupants.

In the latter days of the reign of the
"Grand Monarque," the Petit Homme
Rouge showed himself to Louis XIV.
Followed ruinous and disastrous war,
the death of the Duke de Bourgoyne and
his wife within six days of each other,
then the King's own death, leaving the
crown to an infant, and the people to
the mercy of a profligate regent during
a long minority.

Louis XV. was called by his people,
"Le Bien Aimee," when he first mounted
the throne; but they came to hate him
more than they had ever hated any of
his predecessors. His reign was a long
one, but one day he met the "Little Man
in Red," and soon afterward he caught
the smallpox and was ere long carried
to Saint Denis.

It may have been that Louis XVI., who
had to pay with his head for all the
tyrannical doings of his ancestors, also
saw the butcher's ghost the first night
after he slept in the Tuileries, when the
mob had forced the Royal family to

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move into Paris from Versailles, but the legend does not tell us so.

On the 20th of June, 1792, the sans culottes gathered in the Place du Carrousel, and forced their way into the palace of the Tuileries. For six long hours the Royal family were forced to witness a defile of the vilest scum through their rich apartments. The King and Queen were seated at the council table; while the Princess Elizabeth sat beside her sister-in-law, who held the young Dauphin in her arms, and from time to time stood him on the table for the people to look at. One fellow, as he passed, took off his red cap and placed it on the head of the infant Prince, who began to laugh and amuse himself by peeping out from under it at the crowd; whereupon Santerre, noticing that this baby incident was putting the rabble into a good humor, brutally shouted: "Take off that cap!"

Among the spectators of the extraordinary scene was a young lieutenant of artillery, who, as he walked away when all was over, quietly remarked, "With three cannon planted at the palace door I could sweep the Place du Carrousel of all this canaille in five minutes." That officer, Bonaparte by name, was destined to be the immediate successor of Louis XVI. in the Tuileries, and only three years later he had opportunity to show the effect of skillfully handled guns on a mob, when, from the steps of the Church of Saint Roch, he cleared the same place and put an end to the Reign of Terror.

The event of the 20th of June was but a rehearsal for the tragedy of the 10th of August, when a Paris mob again attacked the palace. The gallant defence of the Swiss Guard, their massacre, and the flight of Louis XVI. and Marie Antoinette to seek safety at the bar of the convention, is an oft-told tale. A few days later a newly-invented instrument called the guillotine, was set up in the center of the square, just about the spot where the small triumphal arch erected by Napoleon now stands, and began its work of cutting off the heads of those who displeased, the Revolutionary leaders. All the executions of the earlier days of the Revolution took place there.

After he became Emperor, Napoleon I. was the hero of many splendid pageants which passed through the Place du Carrousel. . . . then, one morning the tri-color flag was hauled down from the Pavillon de l'Horloge and the white flag of the Bourbons was hoisted in its place. A few days later Louis XVIII. entered the Tuileries.

The short revolution of 1830 made the place lively once more, but that "carrousel" ended with the enthroning of Louis Philippe, and soon he was visited by the spectre of Le Petit Homme Rouge. Tallyrand died; the Duke of Orleans, heir to the crown, was thrown out of his carriage and killed.

In 1848 another tidal wave swept through the Place du Carrousel, and Louis Philippe fled to England for safety. He never returned to France, but hardly was he out of the country when a man whom he had kept in exile returned to his native land and began to fish in the troubled waters of French politics. Louis Napoleon soon had the Imperial crown on his head, and he bore it for nearly twenty years. He embellished the Carrousel by giving it its present appearance and by restoring the Triumphal Arch as it now stands.

But in the midst of the "glory" that was shed over France by this the last of the Bonapartes, the red spectre made another appearance: followed the disastrous war with Germany, the surrender of the Emperor, the flight of the Emperor, the horrors of a siege, the terrors of a commune. But that last appearance of the Petit Homme Rouge was also followed by the establishment of the Third Republic, which grows stronger and better as it grows older, and which has brought prosperity to the French nation.

Sweet Pea Culture.

By Robt. B. Dale.

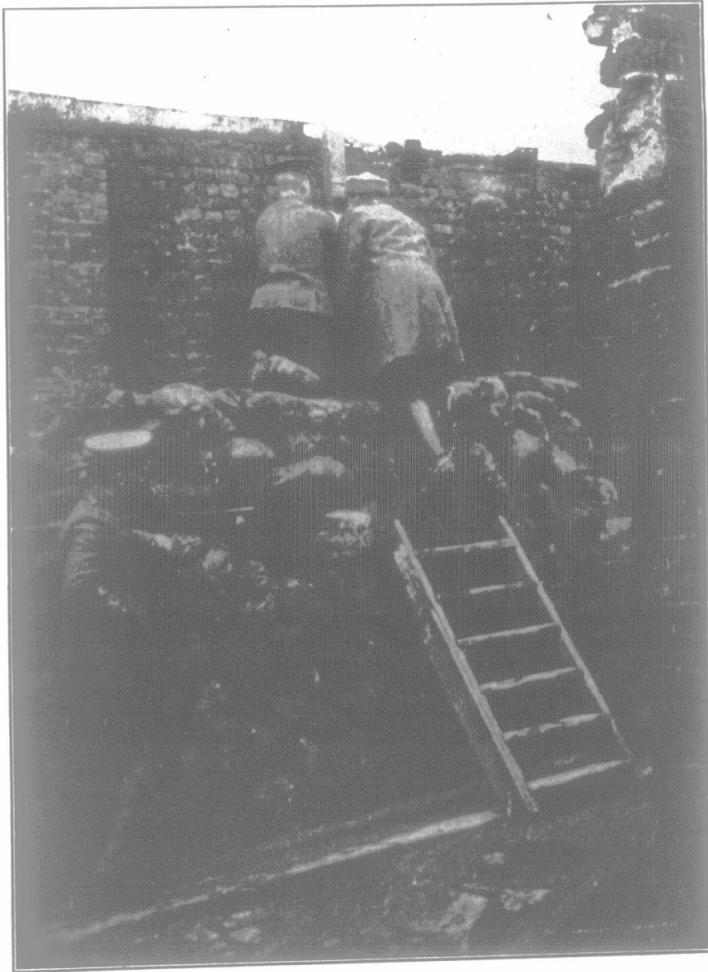
The sweet pea may justly be called the queen of annuals. Its beauty and grace of form, delicacy and variety of color, sweetly subtle perfume, its hardiness, above all, the length of its flowering season, are striking qualities which account for the affection with which it is regarded. During the last ten years the sweet pea has become so popular in

America, as well as in Great Britain, and so many useful manuals on its culture have been written by practical florists, that it is difficult to say anything which others have not touched upon.

This charming flower came from the sun-kissed island of Sicily. In its native home it enjoyed a warm climate, tempered by the humidity of the Mediterranean breezes. It is not, however, the only islander that has born transplanting well, and who contrives to thrive in more rigorous climates than that of its own "tight little island." We read that an ecclesiastic in that country about 200 years ago first sent seed to his friends in England and Holland. So we see that a useful function of modern horticultural societies was anticipated long ago. No very great progress in its culture appears to have been attained until the last forty years or so, and, in a work of gardening called "The Florists Guide," published in 1857, the height of sweet peas is given as from three to four feet. The modern books hold out hopes of ten or fifteen feet of glorious flower-bedecked vines.

Whether we determine to have one row

his kitchen garden, where, at a depth of three feet there was no sign of the rich loam giving out. After this, I believed in the truth of the saying, "Wherever in the world you find anything good, you find a Scotchman sitting down beside it." With such a garden, we wonder less at his success, for most of us cannot scrape quite so deeply without exhausting the paystreak. A good plan is to mark out the proposed row at least three or four feet wide, dig out the first two spits, throwing them on separate sides of the trench. The bottom spit is then turned over, and any stones that may be met with are removed. The bottom of the trench is then spread with a layer of farmyard manure, about three inches in depth. This is thoroughly dug into the soil so as to induce deep rooting. On the top of this comes a liberal sprinkling of bone-meal, say two or three ounces to the yard. The trench is, then gradually filled up with soil, with alternate layers of good rich farmyard manure and bone-meal, using the soil from the second spit first, and keeping the good soil for the last. At least a day should be allowed for settling, longer, if



Using the Periscope.

The periscope is one of the most important factors of the war. By means of it observations may be taken without exposing the men.—Underwood & Underwood.

or a dozen in our garden, it is important that we should plant the best seed to be had. There are a number of growers who make a specialty of sweet-pea seed, and if we purchase from those who have won their spurs on the exhibition stand, we can have some assurance of success.

PREPARATION OF THE GROUND.

You may have very fair results from planting your seeds in the spring, in ground that has had merely ordinary good cultivation, but it is satisfactory to the enthusiast to know that no flower responds more delightedly to kind treatment.

In 1911, the London Daily Mail offered a series of valuable prizes for the best bunch of sweet peas. The result was a magnificent exhibition of thousands of bunches. The first prize was £1,000, and both it and the third prize were won by a Scotch clergyman, the Rev. D. Denholm Fraser. Mr. Fraser has written a charming and exhaustive little book on sweet peas. He tells us that the winning blooms were grown in

possible; the surface is then raked smooth. A good sprinkling of soot is beneficial as a top dressing, both before and after sowing.

TIME TO PLANT.

Many growers recommend fall planting, but this should be delayed in Canada as late as possible, the idea being to have the seeds in place, but growth checked, until, at the earliest possible moment in the spring, they may be ready to go ahead. The writer's experience in two seasons of fall-sown sweet peas is that, on the whole, they do well and are in bloom two or three weeks before those sown in the spring. Last year I planted a row the first week in December. While, however, they will stand a good frost even after they are up some inches, they are apt to suffer if severe frost catches them after a spell of earlier warm weather, so that it is well to plant the bulk of the crop in the spring. In order that this may be done as soon as the snow is off the ground, the soil should

be prepared in the fall in the manner before described, and left in a rough state over winter. With the aid of a line, a small furrow is opened and the seeds are planted from two to four inches deep, and from four to six inches apart. Devotees of the old method of sowing thickly in the manner of growing mustard and cress for salad, are gradually disappearing as the benefits of thin culture are seen. Each variety should be carefully tagged with the name or number for identification. To economize space the seeds are often planted in double rows a foot apart, but the single row affords more room for roots, and with more air and light the plants will thrive better.

As an alternative for fall planting, and in order to secure early flowers, many growers plant their seeds in pots in a cool greenhouse so that the plants may have a good start and be ready to put out in May or June. Very good results were obtained this year from a few sown in pots sunk in a hot-bed. They will bloom about the same time as those planted in the fall. As soon as the seedlings are three or four inches high they should be kept in an upright position with small, twiggy boughs until strong enough to seize the more permanent supports.

Constant cultivation should now proceed between the rows as close to the plant as can be done without injury. As the soil is rich, there will also be a constant crop of weeds to remove.

SUPPORTS.

Various supports are recommended. Some growers prefer long branches with plenty of twigs, placed in the ground inclining outwards, so that looking at the row from the end it appears to be "v"-shaped. This is in order to better support the top growth. Wire poultry netting is an excellent substitute for sticks, using two lengths of four-foot netting. As it can be used year after year, it is a cheap mode of support. We have found very satisfactory a support made by using stakes two inches square, from eight to ten feet high, and planting them firmly in two rows a foot apart, allowing eight feet between each pair of stakes. The stakes at each end of the row should be well guyed. Strong twine is then carried along outside of each row of stakes by means of screws or double-headed tacks. Screws are preferable, as the string can be tightened between each stake more readily. The rows of string are placed from four to six inches apart. If found necessary, a third series of strings can be used by attaching them to cross-bars on the stakes about one foot apart. If the string is stout, and is taken down and put away dry in the autumn, it should last several seasons. As we have had about 200 yards of peas supported in this way, we find such little economies profitable. The rows should be from five to six feet apart in order to allow of proper cultivation and spraying between them.

MULCHING.

As soon as warm weather commences, a heavy mulch of well-rotted manure should be spread on each side of the rows, and well worked in around the roots of the plants. This will not only keep the ground from getting baked by the sun, but as watering is carried on its manurial value will be great. A second mulching should be applied a month or six weeks later.

Many of the first flower-buds fall off without opening, and when we have been eagerly waiting to feast our eyes on the new beauties of the season, this is somewhat disappointing. However, our alarm is soon dispelled by the subsequent abundance of bloom which the later buds unfold. By the end of July, the only question is how to keep the peas picked, with such magical rapidity do they appear every day upon the vines. On no account must pods be allowed to form if a long flowering season is expected.

MANURING.

After flowering is well under way, the vitality of the plants must be kept up by the application of liquid manures about once a week. It is advisable to use half a dozen kinds, using a different kind each time. The following are useful:

Nitrate of soda, 1/2 to 1/3 an ounce to a gallon of water.
Sulphate of potash, 1 ounce to a gallon of water.

Sulphate of ammonia, $\frac{1}{2}$ an ounce to a gallon of water.

Infusions of soot, Guano, poultry, cow or stable manure, diluted to the strength of weak tea. Put some of the substance in a small sack in a barrel of rainwater, allow it to soak for several hours, and pound with a rake or other garden tool. It may then be applied with a watering-can as desired. During hot seasons we found more response to animal than artificial manures.

WATERING.

We are not satisfied unless blooms are produced with stems from 10 to 18 inches in length, and with flowers from $1\frac{1}{4}$ to $2\frac{1}{2}$ inches across the standard. We cannot get this class of sweet peas unless they have plenty of moisture both above and below the ground. A regular supply of water will tide them over a spell of drought, but no artificial watering will take the place of a sufficiently moist atmosphere. However, if we do not neglect them during the adverse period of drought, when we can no longer take pride in their appearance, if we do not lose patience, we shall find them after a good heavy rain once more returning to their spring-like form. If you have a copious supply of water in your hydrant and can stand the expense, a system of galvanized-iron piping arranged along the rows with holes drilled in the piping every six inches and a hose coupling attached to one end of your system, will do away with the labor of watering a large number of peas. We have only tried this on a single row, but found it a great labor-saver.

SHADING.

Nearly all varieties are benefited by shading during the height of summer. Even in England this is found necessary for such varieties as orange and scarlet. For some of these a very short exposure to the direct rays of the sun is sufficient to disfigure the bloom. Our awnings were made of light-weight factory cotton, sold at about $7\frac{1}{2}$ cents a yard, and a yard wide. By means of brass rings sown on both edges about three feet apart, it was arranged to slide on stout supporting wires. These were arranged over the row by means of cross-bars with screw hooks to hold the wire. The cross-bars were attached to the stakes supporting the trellis-work at an angle of about twenty degrees, and so that the west side, from which the hot afternoon rays of the sun would strike the row, would get most protection. On the approach of rain, of course, it is most necessary to slide off your awning, which can be done in a few minutes.

INSECT ENEMIES.

The only serious insect enemy the sweet pea has is the green fly, and he can be kept in control by spraying with whale-oil soap and water, or in bad cases with kerosene emulsion.

CUTTING SWEET PEAS.

In cutting the blooms, a pair of fairly long sharp scissors should be used, and a supply of thread rubber bands is handy for bunching. If on cutting a spike, it is found that the flowers are more or less wound round with tendrils from adjacent vines, do not attempt to pull the spike by the flower end, for in most cases you will break the spike. Seize it by the butt end, pull steadily, and it will be found that in most cases the impending tendrils will break without damage to bloom. Peas should be cut early in the morning or in the late afternoon, and, if possible, when there is no dew or rain upon them. Place in water as soon as cut. If it is intended to ship some distance by rail, allow them to stand over night or several hours in water. When ready to pack, wipe the stems dry; by no means attempt to wrap the stems in wet material of any kind. The water the stems have absorbed will be sufficient to keep them fresh for several hours, but the blooms will assuredly be spoiled, especially in hot weather, if allowed to be wet. Therefore, pack them perfectly dry. Simply wrap the ends of the stalks in a little oiled paper, and wrap your bunch in half a sheet of tissue-paper. Pack in a wooden box with sufficient firmness to prevent movement in transit.

SELECTING VARIETIES.

There are thousands of varieties of sweet peas. About half of these are the newer Spencer or waved varieties, de-

scendants of their famous ancestor, Countess Spencer, first introduced at the exhibition of the British National Sweet-Pea Society in 1904. The amateur who has only a limited space may feel rather perplexed in choosing from many lists of these beautiful flowers which might be made up.

Sweet peas require, no doubt, constant attention during the season, but what other flower is there, to which you can go day after day for nearly four months and always be sure of an abundance of bloom? If one does not undertake their culture on too ambitious a scale, the labor will be one of love, and well repaid by the health and joy it will bring with it. At this moment when the world resounds with the din and crash of arms, it is a relief to ponder for an hour on the silent marvels of nature. Though the sweet pea thrives in the trenches, though it waves its glorious banner over well-ordered rows, like the serried ranks of infantry, though like tiny air-craft, its blossoms are flung on high, we may survey this army without fear and in peace, for it bears, as the Rev. W. T. Hutchins said fourteen years ago, "A standard which is friendly to all nations."

Fashion Dept.

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. Price ten cents PER PATTERN. If two numbers appear for the one suit, one for coat, the other for skirt, twenty cents must be sent. Address Fashion Department, "The Farmer's Advocate and Home Magazine," London, Ont. Be sure to sign your name when ordering patterns. Many forget to do this.

When ordering, please use this form:

Send the following pattern to:

Name

Post Office.....

County

Province

Number of pattern.....

Age (if child or misses' pattern).....

Measurement—Waist, Bust,

Date of issue in which pattern appeared.....



8657 Gown with Gathered or Plaited Skirt, 34 to 42 bust.



8655 Circular Flounced Skirt, 24 to 30 waist.



8661 Shirred Dress for Misses and Small Women, 16 and 18 years.



8662 Easy Bodice, 34 to 42 bust.



8654 Girl's Three-Piece Petticoat, 8 to 14 years.



8674 Child's Box Plaited Dress, 4, 6 and 8 years.

Hope's Quiet Hour.

The Value of Reproof.

He that hateth reproof shall die.—Prov. XV: 10.

He that refuseth reproof erreth.—Prov. x: 17.

Poverty and shame shall be to him that refuseth correction: But he that regardeth reproof shall be honored.—Prov. xiii: 18 (R. V.).

"This morning I read an editorial in the newspaper which declared that the 'masses in Germany refuse to believe anything but the official news from Berlin. English and French newspapers are circulated, but their reports, so contradictory of German pretences, are passed off as bluff and lies. The German public is perfectly willing to turn deaf ears to anything its Government wishes unknown. . . . In the closing days of the war we shall see whether this outwardly tough and unyielding front Germany displays covers weakness at the core, or whether a nation's will and knowledge may be manipulated without it losing in real strength in adversity."

The wise man warns us that "it is not good to eat much honey: so for men to search their own glory is not glory." We are all liable to make mistakes, all need reproof at times. It is a sad thing for a man to be so proud and haughty that neither friend nor foe dares to tell him unpleasant truths. It is so easy

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for us to shut our eyes to our own faults. Our selfishness, laziness, cruelty, or conceit, don't look nearly as ugly to ourselves as they do to others. If we saw them in all their deformity we should be filled with horror and fight against them with real purpose of victory, instead of submitting to them with careless indifference.

To shut one's ears to reproof, whether it be offered by a friend or an enemy, is the height of folly. To greedily drink in the sweetness of flattery, believing all the pleasant things people say to us, and turning our attention entirely to our good points, will certainly result in spiritual decay and death. Our Lord has told us that the children of this world are wiser in their generation than the children of light. They are quick to notice any small defects in their business methods, and set themselves resolutely to fight against them. For instance, a "chain-store" with fifty branches was using more wrapping-paper than was absolutely necessary. The central management did not consider this a "trifling" leakage, but set itself to remedy it. All the clerks were told to be careful in their use of wrapping-paper; and it is stated that thousands of dollars were saved in a short time as a consequence. The central management of a big business concern has reason to be very grateful when attention is drawn to any defect. We often see posted up this notice: "If you are satisfied tell others; if you are dissatisfied tell us"—or words to that effect.

Now, this principle of the value of reproof needs careful handling. It wants to be balanced by the value of approval, or it will depress and discourage people. We all know the value of encouragement. It is very disheartening and depressing to work faithfully and receive no reward but cold silence or unjust blame.

A newspaper that sets itself up as a critic and a judge, hitting everybody right and left, does much harm and very little good. For one thing, its criticism carries no weight, because everybody knows that its ambition is faultfinding, and that if it can discover no faults it will invent some. It is much the same with individuals. Some people are so severe in their criticism of others that their reproofs carry no weight.

But, in spite of all this, we shall all do well if we heed the advice given in our texts. Instead of getting irritated when told of a fault, let us look honestly and prayerfully into the matter. Very probably the criticism may throw light on a weak spot in our character. Then we can fight clear-sightedly, and be better men or women because friends or foes have shaken our self-satisfied peace, which was comfortable, but dangerous.

On an occasion of national peril Ahab, the king of Israel, willingly asked the advice of four hundred timeserving "prophets," because he knew they would eagerly say what he wanted to hear. But Jehoshaphat, the king of Judah, was not satisfied with this chorus of approval. He wanted an honest man who would tell the truth—pleasant or otherwise. Ahab unwillingly said that there was such a man to be found, "but I hate him," he exclaimed, "for he doth not prophesy good concerning me, but evil." He preferred the sweet flattery of the many to the stern warning of the one—and lost his life in consequence.

"Faithful are the wounds of a friend; but the kisses of an enemy are deceitful." Did you ever wonder why the meek and gentle JESUS spoke with such terrible sternness to the spiritual rulers of His people, telling them straight to their faces that they were liars and hypocrites? It was because He loved them, and wanted to open their eyes to their awful danger. He was like a surgeon who, with merciful frankness, tells a cringing sufferer that he has internal cancer, and must choose between the knife or certain death.

We all need to be shaken out of our self-satisfaction and shown our weakness and sin, that we may place ourselves unreservedly in the hands of The Good Physician. We all need to say with Jeremiah: "O LORD, I know that the way of man is not in himself; it is not in man that walketh to direct his steps. O LORD, correct me, but with judgment; not in thine anger, lest Thou bring me to nothing."

It is Satan who whispers to us that

we are "no worse than our neighbors," or plays on our conceit by suggesting that we are better than many who make great professions of religion. It is the Holy Spirit Who convices us of sin. We are not to measure ourselves against our neighbors, but compare ourselves with the Perfect Man.

It is said that when Marie Antoinette was going to her wedding she commanded that all cripples, beggars, or other sad sights, should be removed from the road. She wanted to forget that there was any misery in the world, and tried to build present happiness on voluntary blindness. So we may try to be comfortable now by refusing to look at our weakness and sin—but, if we shut our eyes, the weakness and sin will grow stronger. It will be better in the end if we face our own errors, accepting reproof and turning it to account, instead of hurrying to offer excuses as Adam did. "Who can understand his errors? cleanse Thou me from secret faults," was the wise prayer of a humble-minded king. He was the darling of his people, and whatever he did pleased them; but he fixed his eyes on the holiness of God, and could not fail to see how far from perfect his own life was.

Prayer is our great weapon, but it is not a machine-gun. We must put ourselves into each petition, working as well as praying. A man, who had idled away his time during the year, prayed for success in his examination. Well, was it for him that he failed; for prayer would be an injury instead of a help if it encouraged us to sit down helplessly when called upon to exert ourselves, if it were a charm to ward off the consequences of our sinful action or lazy inaction. Let us take correction bravely, knowing that although it may be bitter medicine it is far more wholesome than continual admiration.

The Beaver Circle

OUR JUNIOR BEAVERS.

[For all pupils from the First Book to Junior Third, inclusive.]

Li'l' Chicken.

Yo' come in an' take yo' rest,
Li'l' chicken!
Sun's a-sinkin' down de west,
Li'l' chicken!
Yo' is tired a-runnin' roun';
Snuggle under mammy's down—
Dis de bes' place in de town,
Li'l' chicken!

Mr. Mink he dreadful sly,
Li'l' chicken!
Soon he'll be a-comin' by,
Li'l' chicken!
Let him ketch ol' rats an' mice;
Yo' for him is far too nice.
Dere, yo's snug; now hush-a-byes,
Li'l' chicken!

Mr. Owl hoot in a tree,
Li'l' chicken!
Let him hoot; he won't skeer me,
Li'l' chicken!
Let him skipper t'rough de wood,
Whar he b'longs; an' if he should
Come down hyar, I'll flog him good,
Li'l' chicken!

Daddy Coon he come an' sniff,
Li'l' chicken!
But he's gone off in a tiff,
Li'l' chicken!
Ol' Brer Fox he creep an' creep,
Shut yo' eyes an' don't yo' peep!
Mammy'll watch; yo' go to sleep,
Li'l' chicken!

Dear Puck and Beavers,—I would like to become a member of your Circle. "The Farmer's Advocate" has come to our house for about forty years. I have a mile to go to school. My teacher's name is Mrs. Thomas, and we like her very much. I live on a farm on the right bank of the St. John river, about ninety miles from St. John, N. B. We grow quite a lot of apples, strawberries, raspberries, gooseberries, and currants. Wishing your paper and Circle every success, I remain yours truly.

VICTORIA L. GILMAN (age 9).
Fredericton, N. B., Box 90.

Dear Puck and Beavers,—Here has come a little Beaver who would like to join your Circle. My father has taken "The Farmer's Advocate" ever since I can remember. We all enjoy reading the letters of the Beaver Circle. When "The Farmer's Advocate" comes I always turn over to the Beaver Circle to see if there are any riddles. I have a sister and a brother. My little sister has had curvature of the spine, and has had plaster of Paris jackets on ever since she was three years old; she is eight now. I have a little kitten. I go to school, and I am in Grade Six. I like going to school. Our teacher's name is Miss Beryl Beck. My home is close to a lake. I have two miles to go to church, and two miles to school. I am what you call a book-worm. I have read a great many books. I wish some of the Beavers would write to me. I hope the w.-p. b. isn't hungry when this letter arrives. I will close with a riddle.

What goes up when the rain comes down? Ans.—Umbrella.
I will close now and leave room for the other Beavers.

VIOLET MOODY (age 11).
Big Lake, Manitoulin Island, Ont.

Dear Puck and Beavers,—This is the first letter I have written. As I am an interested reader of the Beaver Circle I thought I would write to you. I go to school. My teacher's name is Miss M. McMullen. I like her fine. I am seven years old. I am in the Junior Second Class at school. I got the highest number of all on my exams. My number was 225; that was the total number. I got on all right with them. I have two sisters and one brother. My youngest sister's name is Mary, my oldest sister's name is Eleanor, and my brother's name is Franklin. We have a little pup. Last year it got ran over with the milk-wagon and had his leg broken, but we bandaged it up, and it got better. Franklin has a girl's bicycle; he likes it fine. My oldest sister can ride it. I will close now as my letter is getting long.

MARJORIE HAM (age 7, Class II.).
R. R. No. 1, Conway, Ont.

Dear Puck and Beavers,—This is my second letter to your Circle. My other letter was not in print. I live on a hundred-acre farm and am close to the school. My teacher's name is Miss Katie Pulling, and I like her fine. For pets, I have a dog named Toby, and three cats. My grandfather keeps bees; he has about thirty hives. My school took part in the school fair, and I am taking eggs. I am in the Third Book, and am thirteen years old. We have about fifteen old sheep, and over twenty little lambs this year. I will close with a riddle, hoping to see this in print.

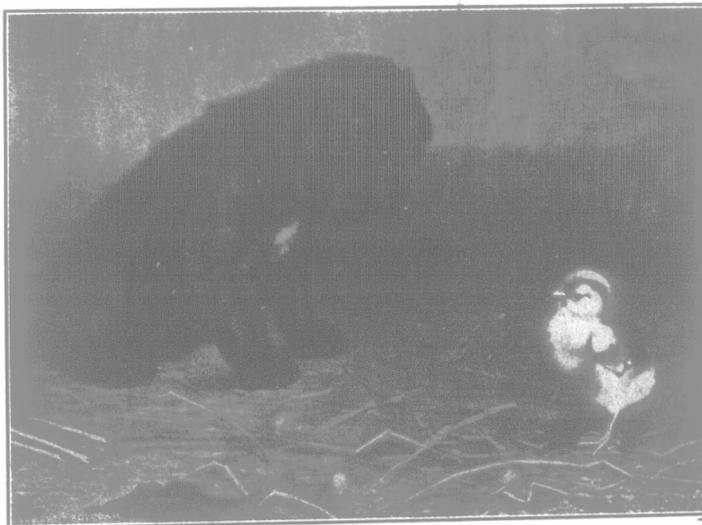
What is it dogs never do? Ans.—Bite holes in their own pants.

MADELINE HENDERSON.
R. R. No. 5, Strathroy, Ont.

Dear Puck and Beavers,—This is the first time I have written to your Circle, and I hope I will see my letter in print. I have read the letters of other Beavers, and became interested in them. My teacher's name is Miss Katie Dooner, and I like her very much. I have two pet kittens, Ted and Tad, and one puppy, Freckles. As my letter is getting long, I will conclude.

MELANIE LACY (age 9).
Eganville, Ont.

Dear Puck and Beavers,—My home is in Glenburnie, Ont. As my father takes your paper, I have been reading some of



Who Are You?

There was once a man who said that he had never done anything wrong, so he was advised to stand in the only empty niche of the church—the other niches were filled with figures of the saints. When we are tempted to "fire up" under reproof, let us remember that we are not yet quite on a level with the glorified saints. The friends or foes who disapprove of our conduct may possibly be right. In any case it is the part of wisdom to examine carefully our weak places, instead of wasting our time in exulting over our strong points. The value of thorough plowing will be discovered in good time.

"Patient the wounded earth receives the plough's sharp share,
And hastes the sweet return of golden grain to bear;
So patient under scorn and injury abide,—
Who conquereth within may dare the world outside."
DORA FARNCOMB.

A Thank Offering.

I acknowledge with thanks the dollar sent as "a thank offering" by a reader of the Quiet Hour. It has already brought help to a needy family, and the hard-working mother was very grateful to her unknown friend.

HOPE.

Dere de mornin' 's come at last,
Li'l' chicken!
Young Mis' Hawk she sailin' past,
Li'l' chicken!
Did you sleep well t'rough de night?
Oh, I slep' a pow'ful sight!
Guess I know! We's both all right,
Li'l' chicken!
—W. F. McCauley, in The Century.

Junior Beavers' Letter Box.

Dear Puck and Beavers,—I thought I would write to your charming Circle. My father has taken "The Farmer's Advocate" for quite a long time. I have a brother and a sister; their names are Max and Boneta. Max has the measles now, and I am expecting to get them soon. For pets we have two pups; their names are Tip and Jack. Their mother died, so we raised them by filling a bottle of milk and putting a rubber nipple on it. We are going to have a school fair next fall. I took a setting of eggs, asters, and potatoes, and hope they do well. Well, I guess I will close with a riddle.

What is the dirtiest thing in a kitchen? Ans.—A clock; because it never washes its hands or face.

MARGUERITE FEATHERSTON (age 8).
Freeman, Ont.

the letters written by boys and girls of my own age, and enjoy them very much. If you will kindly print my letter in your Beaver Circle, I will write you again about my home and pet animals. Trusting you will grant me this favor.

MARGARET REID (age 9).

Glenfurnie, Ont.

Dear Puck and Beavers.—I would like to join the Circle. My father has taken "The Farmer's Advocate" for as long as I can remember. I have for pets a dog named Mack, and a white cat. I go to the school which I am in now. The weather is fine outside, and the leaves are on the trees. The roads are dry now and we have lots of fun. Our teacher's name is Mr. Holland, and I like him fine. I must close now, wishing the Circle every success.

WILLIS VAN EGMOND.

R. R. No. 1, Clinton, Ont.

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.]

The Pioneer War Nurse.

Dear Ingle Nook Friends,—I think my mind is still running on nurses. Since the nurses' graduation of which I told you—perhaps because she was mentioned there—Florence Nightingale has come before me again and again, and so this, perhaps, is the reason why I ask you to think of her, with me, to-day.

If you do anything very, very startlingly wicked, or very, very startlingly good, your name goes round the world. Florence Nightingale was among those who did something outstandingly good, and so her name has circled the globe, and will continue to circle it from generation to generation, so long as the need which brought forth her peculiar ministrations in any wise exists.

She was born in Italy, on May 12th, 1820, near the city of Florence, from which circumstance was derived her name, and, following her, no doubt, the names of the countless "Florences" who have since wended their way through the world. Her childhood, however, was passed in Derbyshire, at her father's fine estate, Lea Hurst. There she was instructed in all the arts and refinements at that time considered suitable to a young English lady of wealth and culture, but from the very first she was a somewhat difficult quantity to reckon with. She was but a tiny tot when she first gave evidence of a very determined little will, and an outre taste which would persist in expressing itself in all sorts of unaccountable ways. For instance, it is told of her that when she should have been at school she was coddling in her pinafore "discarded sparrows, sorry-looking kittens, everything that was forlorn and four-footed!"—a source of exasperation truly to immaculate and conventional governesses.

As the child so the woman: To the end of her days, Florence Nightingale never ceased to revolt against hampering traditions which dared to try to stifle her powers. So it has been with all women of marked personality and genius.

At eighteen, however, the first real occasion of distress presented itself. Sufficiently pruned, it was hoped, accomplished beyond most girls of her time Florence was taken up to London and presented at Court, where, no doubt, she acquitted herself quite creditably. More important to her, however, was a meeting with the noted prison reformer, Elizabeth Fry, with whom she was persistently nosing about in all sorts of smelly and out-of-the-way asylums, prisons, and hospitals, critically observing the inadequate nursing and lack of sanitary provisions that then prevailed, and listening to her new friend's comparisons with the methods of the Continent. On her return home, fired with renewed zeal that had been kindled within her, she was

for beginning at once to nurse the sick poor on her father's estates, the signal at once for the raising of barriers. For in that day was it not absolutely unthinkable that any young English lady should demean herself by engaging in work about a sick-bed? "Curiosity," not benevolence nor scientific inquiry, was held to be the motive of those who did so; but then that was in the benighted period in which to do any useful work whatever was considered lowering to England's gentlewomen.



Florence Nightingale.

Like all other pioneers, Florence Nightingale had her mountains to overcome, but she never hesitated, her strong will and forceful personality now carrying her over every obstacle. The following year she was taken on her "finishing-off" trip to the Continent, but instead of devoting herself to the amusements that fashionable folk follow, she spent most of her time studying the nursing methods of the various hospitals, a work to which the next nine years of her life were chiefly devoted.



Nurses Going into St. Paul's Cathedral.

Memorial service for Florence Nightingale.

Finally she decided to take a course of training herself, and in 1851 entered Pastor Fliedner's great hospital at Kaiserwerth, near Dusseldorf, on the Rhine. The earnestness with which she entered upon the work may be judged from the following entry in her diary, her marching orders to herself: "I would say to all young ladies who are called to any particular vocation, 'Qualify yourself for it, as a man does for his work. Don't think you can undertake it otherwise. If you are called to

a man's work, do not exact a woman's privileges—the privilege of inaccuracy, of weakness—ye muddleheads!" And so faithfully did she live up to her ideal that when she was graduated from Kaiserwerth, Pastor Fliedner was ready to say that no one had ever before passed so distinguished an examination, or shown herself so completely mistress of what she had learned.

Subsequently Miss Nightingale studied under the devoted nuns of St. Vincent de Paul, in Paris, and it was probably due to these periods of training, first in a Protestant, then in a Roman Catholic institution, that when her great call to go to the Crimea came to her, she chose her body of nurses impartially, so far as religious denomination was concerned.

HER GREAT OPPORTUNITY.

After returning to England, Miss Nightingale busied herself with many undertakings, and was in the midst of establishing a home for sick governesses in London when, at the age of thirty-four, her great opportunity came to her. On March 28th, 1854, England and France declared war against Russia, and before fall, through the natural vicissitudes of war and an appalling negligence in regard to sanitary measures, conditions in the Crimea were only to be described as frightful; wounded men were inadequately cared for, the soldiers were without even necessities and decencies, let alone comfort, and as a consequence sickness swept through the troops disastrously.

Torn with sympathy and indignation, Miss Nightingale wrote to the Secretary of War, the Right Hon. Sidney Herbert, asking that she might be permitted to take a party of nurses to the Crimea, and, oddly enough, her letter crossed one from him asking her to do that very thing. The result was that, after some delay due to red tape, she left England on the 21st of October, taking with her thirty-four efficient nurses. Wrath fell upon her head because she had dared to include a number of Roman Catholics in the party; she was charged with unitarianism and indifference; but once more she proved herself ahead of her time by paying no attention whatever to the objections. Her business was to look after people's bodies, she said, not to trouble herself about their religious convictions.

The nurses arrived at Constantinople on the 4th of November, the eve of Inkerman, just in time for the terrible winter campaign, could conditions then, indeed, be worse than those that already

Eighty per cent. of those whose limbs were amputated died of gangrene. The sick-list amounted to more than 13,000. In the Turkish barracks on the Bosphorus there were two miles of sick-beds in double file along the corridors. Rats were all over the place, and ran over the helpless patients."

To make matters worse, before long cholera broke out and 10,000 men died of it. Water, we are told, lay a foot deep in camp; horses could not drag enough provisions over the impassable Russian country; so that both men and animals died of exposure and hunger, and the very air was poisoned from the dead.

When Miss Nightingale entered the Barracks Hospital at Scutari she found 2,300 patients in the wards; within a few weeks she had 10,000 on her hands, but she set about the work with the executive ability which was one of her strongest traits, her first step being to establish a laundry and a kitchen in which sanitary cooking might be carried on. "Her work was as epochal," says the New York Tribune, "as that of Lister and Pasteur in therapeutics; it not only made possible, but assured the subsequent achievements of military nursing and hygiene."

Early and late she was at her post. "She worked like a workman," says a biographer, "like a workwoman, like a Commander-in-Chief, like a ministering angel, and always like a Titan." In the winter of 1855 a soldier wrote of her, "When all the medical officers have retired for the night, and silence and darkness have settled down upon those miles of prostrate sick, she may be observed alone, with a little lamp in her hand, making her solitary rounds." . . . And yet another: "To see her pass is happiness. She would speak to one, and nod and smile to many more, but she could not do it to all, you know. We lay here by hundreds, but we could kiss her shadow as it fell, and lay our heads upon the pillow content again."

—Work, endless work, and yet perhaps the greatest worry to this devoted woman was not the fact that her frail body could scarcely live up to the strain, but the constant difficulty of overcoming hindrances set by medical and military officials. Without hesitating, however, she cut red tape when necessary, and in the face of friction, carried out her plans for reorganizing the hospital management in her own way. It is only fair to state, however, that when the good effects of her system became apparent, her word became law. In one and a half years, it is recorded, she had succeeded in reducing the death-rate in the hospitals from 60 per cent. to a little over 1 per cent.

In the spring of 1855 she was prostrated with fever, but remained at Scutari until Turkey was evacuated by the British on July 28th, 1856. When she was preparing to depart, the Admiralty offered her official passage on a ship of the line, but she was too great a woman to care anything about pomp or show. Declining the offer, she took passage on a little French packet as plain "Miss Smith," and so arrived in her native country.

HER SUBSEQUENT LIFE.

In England, Miss Nightingale was welcomed as a national heroine, and a fund of £50,000 was raised for her by a grateful public. To this was added £2,000, the result of a concert given in her honor by the famous singer, Jenny Lind. But Miss Nightingale refused to keep any of the money for herself, asking that it might be devoted instead to the establishment of a Home for Nurses.

This Home and Training School, in connection with St. Thomas Hospital, was a pioneer for the world, the nucleus from which were developed better training-schools the world over. Its establishment was one of her great works. She also was influential in founding the Red Cross Society, and wrote several books on nursing, which are regarded even to-day as authoritative.

For the last forty years of her life Miss Nightingale lived in a tall, gray house on South street, a quiet off-shoot of the more fashionable Park Lane in which London's belles and beaux were wont to drive. Her own especial suite of rooms was at the front of the house, with windows opening upon a balcony, and commanding a view across to Hyde Park, and from here she loved to look forth on the world which now she could

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seldom enter, for her health had been broken by the fever of the Crimea, and for the last thirteen years of her life she was unable to leave her bedroom. Strange thoughts, perchance, flitted through that tranquil mind as, from her little spot of vantage, she looked forth on the pageants that passed within her vision, catching glimpses of the Jubilee and Diamond Jubilee Processions, and then of the great solemn funeral of Queen Victoria.

Yet the long forty years of retirement were not without work and interest, nor was the quiet little lady with the silver hair ever permitted to pass out of the world's grateful recognition. Queen Victoria admired her greatly, and "wished they might have her in the war office"; Ministers and Governors-General waited upon her; during the American-Civil War Americans consulted her regarding sanitary arrangements for the battle-field and care of the wounded, as also did the Germans during the Franco-Prussian War. By Queen Victoria she was appointed a Lady of Grace of St. John of Jerusalem, and King Edward bestowed upon her the Order of Merit, an honor never before conferred upon a woman. When she was eighty years old the London Council conferred the freedom of the city upon her, and it was characteristic of her that she insisted that the scroll should be enclosed in a plain oak box instead of in the customary gold case, so that the difference in value, several hundred pounds, might be given to the poor. But perhaps most of all the "Lady of the Lamp" enjoyed the visits of nursing sisters who came to her in uniform, as she liked to see them. A constant visitor, also, was Lady Herbert, of Lea, widow of the Minister of War who had secured her mission to the Crimea.

Miss Nightingale always kept in close touch with the social and political movements of her time, and so great was her enthusiasm that at the time of the Russo-Japanese War, when the Russian cannons that had roared fifty years before were again roaring, she "longed to go to Manchuria." She was also much interested in the district-nurse movement, and in the establishment of the Victorian Order of Nurses in Canada.

During the last years of her life she always received visitors in bed, and was described by those fortunate enough to meet her, as a "beautiful old lady," with a smooth, white brow, and few wrinkles, who invariably wore a white-lace cap—a little old lady who talked very sweetly, with occasional flashes of the old-time fire and wit. Her room was always filled with flowers, and she often remarked that her first impulse toward recovery when down with that fateful fever in a hut on the heights of Balaclava, was stirred by a bunch of freshly-gathered flowers brought to her by a friend.

More remarkable than the flowers, perhaps, was a long, low book-case, crammed with blue-books and official reports, whose contents she followed with business-like interest.

THE LAST DAYS.

As her birthdays neared the centary mark, each was the occasion for messages, flowers, and gifts, sent from Emperors and folk of high degree all over the earth. King Edward was one of those who did not forget her, and so great was her regard for him that she was not told of his death. When, on her ninetieth birthday, King George sent her a congratulatory message, it was read to her as coming from "The King."

On the 14th of August, 1910, the brave soul slipped quietly away. The Dean of Westminster asked that her body might be given a place of honor among the tombs of the nation's heroes in the great Abbey; but she had requested that she might be buried in the little churchyard near her girlhood home in Derbyshire.

Thus it was that for Florence Nightingale there were two funeral corteges: As her body left the quiet house in South street and was slowly borne towards the Waterloo Station, the sentries at Buckingham Palace presented arms, and the traffic of London stood still to do her honor, but even more sympathetic, perhaps, were the additions of aged countryfolk who drifted into the procession as the quiet country graveyard of East Wellow was neared,—aged country folk who had known her in her youth, trudging along the grass-grown way, or driving conveyances "aged as themselves." And while this pathetic scene was on its way, another was taking place back in the great city, where the doors of the great church of St. Paul's were thrown open to a public assembly to hear the memorial service of the "Lady of the Lamp,"—nurses in procession, people of high and low degree, old soldiers who had been touched by her gentle hand in the hospitals of the Crimea.

Neither love nor marriage was ever mentioned in connection with Florence Nightingale, yet she has been called "Britain's Best Beloved," and her offspring has been the healing of countless thousands.

Among the many maxims laid down for the guidance of nurses by this pioneer of their profession stands primarily her opinion that "A good nurse must be a good woman with sympathetic insight." She never ceased to emphasize that the chief duty of a nurse is to learn what to observe, how to observe, and how accurately to state the result of observation. A patient's life, she never wearied of saying, must often depend on the report given to the doctor by the nurse. She also strove to impress upon the young women in training who came under her influence, that they must be prepared to be teachers as well as nurses, that they must "teach without seeming to teach" in all matters concerning sanitation and public health. . . . Common sense must be a characteristic of nurses, and quickness of intellect. "When the great painter, Fuseli," she used to say, "was examined as to how he mixed

his colors, he replied, 'With brains, sir,' and the good nurse, if she is asked how she nurses, can often only answer, 'With brains and heart, sir, and with training and practice.'"

In all her life and in all her writing, Florence Nightingale revealed herself as a woman of rare clarity of vision, full of cleverness and sympathy, and fired with the will to service. She has had a vast audience and a vast following, for in her sphere she revolutionized a world.

[To those who may be desirous of learning more of this great woman may be recommended Kinglake's biography of her, also a recent work, "The Life of Florence Nightingale," by Sir Edward Cook, published by the Macmillan Pub. Co., New York.]

The Lady of the Lamp.

Whene'er a noble deed is wrought,
Whene'er is spoken a noble thought,
Our hearts, in glad surprise,
To higher levels rise.

The tidal wave of deeper souls
Into our inmost being rolls,
And lifts us unawares
Out of all meaner cares.

Honor to those whose words or deeds
Thus help us in our daily needs,
And by their overflow
Raise us from what is low!

Thus thought I, as by night I read
Of the great army of the dead,
The trenches cold and damp.
The starved and frozen camp—

The wounded from the battle plain,
In dreary hospitals of pain,
The cheerless corridors,
The cold and stony floors.

Lo! in that house of misery
A lady with a lamp I see
Pass through the glimmering gloom,
And fit from room to room.

And slow, as in a dream of bliss,
The speechless sufferer turns to kiss
Her shadow as it falls
Upon the darkening walls.

As if a door in heaven should be
Opened and then closed suddenly,
The vision came and went,
The light shone and was spent.

On England's annals, through the long
Hereafter of her speech and song,
That light its rays shall cast
From portals of the past.

A Lady with a Lamp shall stand
In the great history of the land,
A noble type of good,
Heroic womanhood.

Nor even shall be wanting here
The palm, the lily, and the spear,
The symbols that of yore
Saint Filomena bore.

—Longfellow.

Things to Eat.

Whole Wheat Bread.—1½ pints whole wheat flour, 1 rounding teaspoon soda, 2 level teaspoons cream of tartar, 1 teaspoon salt, ¾ pint cold water. Sift the dry ingredients together, then add the water. Stir well, place in a greased tin, cover with buttered paper, and steam for one hour over constantly boiling water. Remove from the steamer and bake ¾ of an hour in a slow oven.

Fig Bread.—Two cups bread dough, 6 dessertspoons butter, 2 cups sugar, 1 cup milk, 2 cups flour, 1 lb. figs, 1 lb. seeded raisins, 1 teaspoon salt, 3 heaping teaspoons yeast powder, spices to taste. Mix with the risen bread dough the sugar, butter, milk and spices. Sift together the flour, yeast powder, and salt; add them, with the raisins and figs cut into small pieces. Divide into buttered bread-pans and let rise, then bake.

Fried Salt Pork.—Cut salt pork in thin slices and gash the rinds crosswise. Dip in cornmeal and flour, using two parts cornmeal to one part flour. Cook in a hot frying-pan until crisp and browned. Take from the pan and strain the fat. Put 1½ tablespoons of the strained fat in a saucepan, add 2½ tablespoons flour and stir until well blended, then pour on gradually, stirring all the time, 1 cup milk. Bring to boiling point and add salt and pepper, 1 tablespoon butter, and 1½ cups hot, boiled potato cubes.

Cornstarch Pie.—Beat the yolk of 1 egg with 1 cup sugar and 1½ tablespoons cornstarch wet with a little milk. Put all into 1 pint boiling milk, stirring constantly until a nice custard. When merely warm, flavor with lemon and put in a baked crust. Finally, spread a meringue over and brown in the oven.

Cocoanut Pie.—Use above recipe, but add half of a ten-cent package of prepared cocoanut to the mixture.

Cocoanut Bread Pudding.—Cut a small stale loaf into one-third-inch slices. Spread with butter and cut in halves crosswise. Pack in a buttered pudding-dish, sprinkling each layer with shredded cocoanut, using about ¾ cup in all. Beat 3 eggs slightly and add ¼ cup sugar, ¼ teaspoon salt, and 1 quart milk. Strain and pour into a dish. Cover and let stand one hour. Bake in a slow oven 45 minutes, keeping covered the first 20 minutes. Serve hot with creamy sauce.

Creamy Sauce.—Work ¼ cup butter until creamy, and add 1 cup powdered sugar gradually, while stirring and beating constantly, then add 2 tablespoons rich milk or thin cream, little by little. When the mixture is of a very creamy consistency, flavor with ¾ teaspoon vanilla and ¼ teaspoon lemon extract.

Substitutes for Meat.

During warm weather many people lose their appetite for meat. When this occurs it is very foolish to try to eat it, as foods that are repulsive certainly do not seem to do the body as much good as those that are enjoyed, but, since meat is one of the chief protein-containing foods, it cannot be left out of the diet with safety unless other proteid foods are used to take its place. If this is neglected the body suffers, as protein is necessary to build up muscular tissue as well as to aid in producing energy.

The chief proteid foods, leaving out meat, are: Bread, cereals (including macaroni), eggs, cheese, nuts, beans, peas, lentils, and by preparing these in various ways, an appetizing diet may be kept up throughout the summer without using any meat at all.

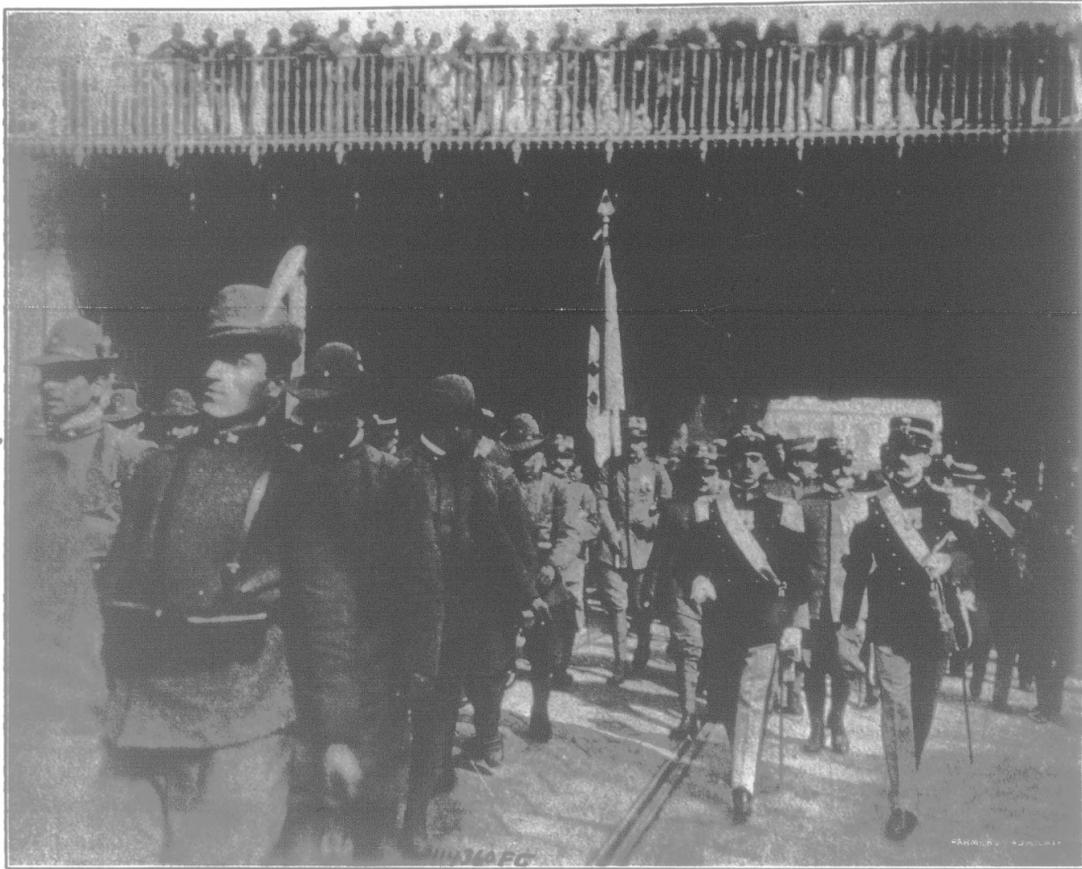
It must be remembered, however, that enough meat substitute must be eaten to make up for the lack of meat, as otherwise health cannot be maintained. A working man, for instance, must eat three eggs to take the place of the meat he would eat for an ordinary dinner. If, however, beans, etc., be served also, two eggs may be sufficient.

THE LEGUMES—BEANS, PEAS AND LENTILS.

Beans have been called the "poor man's beef," and there are many ways of serving them, plain boiled, "Boston baked," in croquettes, in soup, and as a salad. Lima and broad Windsor beans make a pleasant change from the ordinary kidney beans, now and again, while the climbing "scarlet runner" variety, while not so good when ripe, is excellent for "green beans" if used when young and



French Infantry Marching to the Trenches.
Note the length of their bayonets. Underwood & Underwood.



Italian Alpine Troops Marching Through a Border Town.

They are being cheered by the bystanders on the bridge overhead.—Photo, Underwood & Underwood.

tender. It is rather remarkable that this bean is not more widely known as a food. It is so easily grown that it may be planted as a screen for unsightly fences, walls, etc., anywhere, and so prove its use for both beauty and food.

It should be remembered that in cooking dried beans, peas, or lentils, the cooking should be so thoroughly done that the starch granules will be thoroughly swollen and burst, otherwise the food will be indigestible. The best way is to first soften the legume by soaking it for eight or more hours. By this, after vigorous stirring, many of the skins, which are somewhat indigestible, may rise to the top, and may be skimmed off. In cooking beans for soup, the skins may be removed by putting the boiled beans through a sieve. Split peas and lentils, of course, being already freed from their skins, present no such difficulty. After soaking the legume, the water should be changed before boiling. If the last water is previously boiled and poured off from the sediment it will usually be soft enough to soften the legume without adding any soda, which is likely to injure the flavor. After boiling the beans, peas, or lentils, they may be made into a thick puree to which butter, pepper and salt are added, or the beans may be baked with fat pork and a little molasses. It is quite necessary to add butter or fat to any of these dishes to supply the fat that would naturally be present in meat.

Dried legumes, it has been found, furnish more protein and energy than almost any food material except cereal grains. Green peas and green beans are not so nutritious, but contain a fair value, and are useful for flavor and bulk. They should always be cooked in just as little water as possible, as if much water has to be drained off, the medicinal mineral salts present in all green vegetables are wasted.

Lentils, it may be remarked, may be bought from any well-equipped grocery store, and are very nutritious. They may be cooked exactly like split peas. Here is one recipe:

Lentil Croquettes.—Soak $\frac{1}{2}$ cup of lentils or split peas over night. Cook until soft, about 2 hours. Drain and press through a ricer or mash fine. Add 1 cup bread crumbs, 1 egg, $\frac{1}{2}$ tablespoon melted butter, a few drops of onion juice, salt and pepper. Cool and shape into croquettes. Roll in crumbs, then

in egg, then in crumbs, and fry in deep fat. Lentils also make excellent soup, if prepared exactly as split-pea soup.

CHEESE.

Cheese is among the most important of the nitrogenous or proteid foods. "No ordinary article of diet," says a pamphlet issued by the Sanitary and Economic Association, Glasgow, "contains so much nutriment as cheese; 65 per cent. of good, rich cheese, represents pure nutritive matter—it contains a much larger percentage of tissue-forming material than even lean meat; it supplies

as much heat-producing material as fat meat; it is only surpassed by ham in its tissue-building properties."

To be digestible, however, cheese must be well masticated, and it should always be eaten in combination with bread, or some other food. As it is one of the most concentrated of foods, too much of it must not be eaten. It is solely because of over-eating in this respect that so many people think they cannot eat cheese.

Here are some recipes for combination dishes that may prove useful:

Cheese Pie.—Cut two-thirds of a small

loaf of bread in thin slices and remove the crusts, then cut the slices in halves crosswise. Arrange a layer in a shallow buttered baking-dish, cover with a layer of soft, mild cheese, cut in thin slices, and sprinkle with salt and paprika. Repeat. Beat 2 eggs slightly, add 1 cupful milk and pour over the mixture. Bake in a moderate oven for about 35 minutes.

Cheese Sauce (to be used as a dressing for vegetables).—Grated cheese 2 $\frac{1}{2}$ ounces, butter 1 tablespoonful, 1 cup milk, a little flavor, seasoning to taste. Put milk, butter and cheese in a saucepan and stir until it begins to boil, then add flour to make a thick sauce.

French Rarebit.—Cut 3 large slices of bread, measure 3 tablespoons butter, 5 tablespoons grated cheese, 1 $\frac{1}{2}$ cups milk, 1 $\frac{1}{2}$ eggs. Butter the bread and cut into inch squares. Fill a buttered baking-dish with alternate layers of bread and grated cheese. Moisten with a mixture made of the milk and eggs, and season with salt, pepper and mustard. Bake in a moderate oven until the mixture sets like custard and browns on top.

Savoury Potatoes.—Six or eight boiled potatoes, 2 ounces grated cheese, 1 dessertspoonful butter, 1 cup milk, pepper and salt. Mash the potatoes, add pepper, salt, milk, butter, half the grated cheese. Mix well and put into a greased pie-dish. Sprinkle the remaining cheese over the top, and brown in the oven.

EGGS.

Eggs contain considerable quantities of protein, also fat and mineral substances. The methods for cooking them are legion, but perhaps none are more popular than the time-honored methods, boiled or poached. In either boiling or poaching, it should be remembered that the cooking should be slow enough to cook the white into a soft jelly, not into a hard opaque mass which is quite indigestible. For this reason, the three-minute method of boiling is not good. It is better to cover the eggs with boiling water, cover, and set back for ten minutes. Do not let the water boil when poaching eggs. Have it boiling hot when the eggs are put in, cover closely, and leave until the whites are set. A poacher will be found useful to keep the eggs from running together, but if one is not at hand, a little vinegar added to the water will be found helpful.

Eggs with White Sauce.—Make a rich, white sauce, with rich milk or thin cream, flour and butter. Mix it with hard-boiled eggs chopped coarsely, and serve on buttered toast.

Eggs with Macaroni.—Boil 2 ounces



Italian Bersaglieri Cycle Regiment on Their Way to the Austrian Frontier.

Photo, Underwood & Underwood.

Silver Gloss LAUNDRY STARCH

means perfect starching, whether used for sheer Laces, dainty Dimities, delicate fabrics, Lace Curtains or Table Linens.



"Silver Gloss"

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AT GROCERS

The Canada Starch Co. Limited

macaroni for ten minutes, then drain. Add 1 pint milk, and let simmer for 15 minutes. Next mix with a slightly-beaten egg or two, put all in a greased pie-dish, grate a little nutmeg over the top, and bake for half an hour.

Custard Pudding.—Two eggs, 1 table-spoon sugar, 1 pint milk, a little nutmeg. Beat the eggs well with the sugar, boil the milk, and when boiling stir it to the beaten eggs. Pour all into a pudding-dish, grate a little nutmeg over, and bake 1/2 hour in a moderate oven.

Egg Salad.—Arrange lettuce on individual dishes, and place thick slices of hard-boiled eggs upon it in the form of a daisy. In the center, place a ball of cream cheese. Serve with salad dressing.

Hard-boiled Eggs.—When eggs are to be used hard-boiled, they should be boiled for half an hour, as this brings them past the leathery stage and makes them more digestible.

Devilled Eggs.—Split hard-boiled eggs in two lengthwise, take out the yolks and mix with salad dressing, refill, and serve on lettuce. A little finely-chopped ham, parsley, olives, or anything one chooses, may be mixed with the yolks if liked.

The Dollar Chain

A fund maintained by readers of "The Farmer's Advocate and Home Magazine" for (1) Belgian Relief; (2) Soldiers' Comforts; (3) Red Cross Supplies.

Contributions to the Dollar Chain from May 21st to May 28th, are as follows:

Amounts over \$1.00 each:
"A Scott Township Farmer," Uxbridge, Ont., \$25.00; "M. and C.," Durham Co., Ont., \$3.50; Mrs. Herbert R. Harris, Amherstburg, Ont., \$2.00; John Hammond, Branchton, Ont., \$1.50; Jas. Urquhart, Martintown, Ont., \$2.00.

Amounts of \$1.00 each:—
James Bauman, Elmira, Ont.; "A Friend"; C. E. Bonnycastle, Campbellford, Ont.; "A Sympathizer," Ingersoll, Ont.; "A Friend," Parkhead, Ont.; "Reader of The Advocate," Guelph, Ont.; P. McArthur, Walton, Ont.; Nelson Peterson, Ruthven, Ont.

Amount previously acknowledged from Jan. 30th to May 31st...\$1,321.50
Total to May 28th.....\$1,363.50

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

A negro mammy had a family of boys so well behaved that one day her mistress asked:
"Sally, how did you raise your boys so well?"
"Ah'll tell yo', missus," answered Sally. "Ah raise' dem boys with a barrel stave, an' Ah raise' 'em frequent."

News of the Week

Ontario has appropriated \$120,000 for Belgian relief.

Upwards of 30,000 Italians may leave Canadian ports to join the colors in Italy.

The Montreal steamship Norwenna was torpedoed, shelled and sunk off the coast of Wales, with a loss of one killed and three injured.

Grapes, tomatoes, and tender vegetables, suffered heavily because of the frosts last week.

Thirty-six young airman are in training in the Toronto Aviation School. The first detachment will go to the front at an early date.

Up to the present, 56,000 officers and

The Ontario Government Says:



In Ontario Government Bulletin No. 206, entitled "Dairying on the Farm," this advice is given:

"In choosing a separator it is advisable to select one that is simple in construction, strong, durable with reasonable care, and having all parts which come in contact with the milk easily washed."

The writer of this bulletin might readily have had the

Standard

Cream Separator in mind, for he chose three of the points on which the STANDARD is unbeatable. The simplicity of the STANDARD is a mechanical triumph. Its durability is insured by the use of the highest-grade materials, exact manufacturing methods, rigid inspections, running tests at the factory, splash oil system, etc. Its bowl and discs contain no crevices or places that are hard to clean. Washing them "as clean as a tea cup" is no trick at all.

But there are other reasons for selecting the STANDARD—reasons of close skimming, of larger profits. But we cannot go into details. Our latest cream separator booklet does that in a way that cannot fail to open a dairyman's eyes. Send for a copy.

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SPRAY PUMPS

You want a Spray Pump with sufficient capacity at slow speed, that has force to throw a fine spray the full distance and a good agitator to keep the mixture stirred and prevent clogging. To get the best equipment and a Spray Pump that has won awards in competition against the world, get an—

AYLMER SPRAYER

It has all the attachments, a nozzle for every requirement. Is built strong, and easy to operate. IT LASTS. You don't have to get a new Spray Pump every season or two when you buy an Aylmer.

YOU NEED THIS---GET IT NOW

This outfit consists of ten feet of hose, two Bordeaux nozzles, one brass stop-cock, one Y, one long extension rod, without barrel.....\$15.25

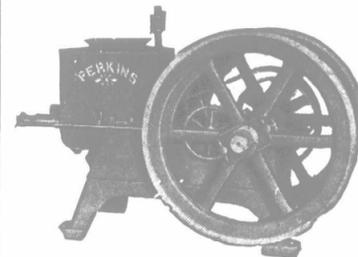
For lined bamboo extension rod, in place of iron rod, add \$1.50
Barrel extra \$3.00.

Shipped freight prepaid anywhere in Ontario.

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IT WILL PAY YOU TO INVESTIGATE



Why be without a gasoline engine, when you can buy a

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high-grade engine so reasonable? You take no chances when you buy a "PERKINS." We give you the privilege to try them before making settlement. The "PERKINS" is built to furnish power for the modern farm, and will do it without tinkering and fussing. They are the simplest and easiest started engine on the market, also the lightest on fuel consumption. This means considerable to you. Try one of them and be convinced. Write us to-day.

Perkins Windmill & Engine Co.
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Have You The MOFFAT COOK BOOK

—the Cook Book that 12000 Canadian housewives wrote. Mailed post free for 25 cents

THE MOFFAT STOVE CO., LTD., Ontario

"1900" Gravity Washer

Sent free for one month's trial.

Write for particulars.

"1900" WASHER COMPANY
357 Yonge Street, Toronto, Ontario
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ARTS EDUCATION MEDICINE
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CHEMICAL MINING
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A Real Woman Abhors



the appearance of masculinity. Nothing accentuates this more than to have one's lip, chin, cheeks, brows or neck disfigured with

Superfluous Hair

We have had over 20 years' experience in successfully treating this and other facial blemishes, including moles, warts, and more satisfaction in each case.

Write to-day for descriptive booklet "F" and sample of toilet cream.

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Smooth, Hard, Clean-cut.
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Sugar
Buy St. Lawrence Granulated Pure Cane Sugar in original packages, and get pure, clean, perfect sugar.

Richards
QUICK NAPHTHA
THE
WOMAN'S SOAP
MADE IN CANADA

OTHELLO

"THE WONDER WORKER"
TREASURE RANGE



Synopsis of Canadian North-West Land Regulations

THE sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. Applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the District. Entry by proxy may be made at any Dominion Lands Agency (but not Sub-Agency), on certain conditions.

Duties—Six months residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, on certain conditions. A habitable house is required except where residence is performed in the vicinity.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price \$3.00 per acre.

Duties—Six months residence in each of three years after earning homestead patent; also 50 acres extra cultivation. Pre-emption patent may be obtained as soon as homestead patent, on certain conditions.

A settler who has exhausted his homestead right may take a purchased homestead in certain districts. Price \$3.00 per acre. Duties—Must reside six months in each of three years, cultivate 50 acres and erect a house worth \$300.

The area of cultivation is subject to reduction in case of rough, scrubby or stony land. Live stock may be substituted for cultivation under certain conditions.

W. W. CORY, C.M.G.,
Deputy of the Minister of the Interior.

N.B.—Unauthorized publication of this advertisement will not be paid for.—64388.

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Good Quality Cream

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GALT CREAMERY, Galt, Ontario

Alma (Ladies) College

Attractively situated. Picked faculty.

For prospectus and terms write the Principal
R. I. Warner, M.A., D.D., St. Thomas, Ont. 64

men have been sent from Canada to assist the mother country in her great struggle.

The United States ship Nebraskan was torpedoed and sunk off the south coast of Ireland on May 25th. No lives were lost.

Austrian reserves between the ages of 43 and 50 are being mobilized.

The German note in answer to the protest of the United States in regard to the sinking of the Lusitania was handed to the American Ambassador on May 30th. It declares that the Lusitania carried guns, ammunition, and Canadian soldiers, and so justifies the act, placing the blame on the British Government. The United States regards the explanation as unsatisfactory, and will protest further.

During the week some successes have been reported by the Allies. East of Festubert the British troops pierced the German lines on a front of more than three miles. They have also succeeded in holding Ypres, and so blocked the German advance towards the channel ports in that direction. The second battle of Ypres, in which, as in the first (Langemarck) Canadian troops took part, is regarded by Sir John French as one of the fiercest of the war. . . . In the meantime the French have been trying to force their way towards Lille, and terrible fighting has taken place along their lines near La Bassée, as also in what is known as "labyrinth," a coal region in Northern France where the Germans have mounted guns among the pits and quarries. During the week the Germans again resorted to the use of poisonous gas on the Western front. . . . The Italians are continuing their drive into the Trentino and towards Trieste, and some collisions have taken place with the Austrians in the Tyrol. Farther to the northward the desperate struggle of the Germans to re-take Przemysl from the Russians still continues. . . . From the Dardanelles there is little to report save the driving of the Turks from seven lines of trenches. It is reassuring to learn that comparatively few men were lost by the sinking of the British ships Triumph and Majestic, the total list being 3 officers and 60 men known to be killed, and 42 missing. During the week the British submarine E-11 sank a Turkish vessel in the Sea of Marmora, also a supply ship, and finally made way as far as the harbor of Constantinople, where it discharged a torpedo at a transport.

The following is the personnel of the new British War Cabinet:

- Herbert H. Asquith (L.), Premier and First Lord of the Treasury.
- Lord Curzon (L.), Lord Privy Seal.
- Sir Edward Grey (L.), Foreign Secretary.
- Sir S. Buckmaster (L.), Lord High Chancellor.
- Lord Crewe (L.), President of Council.
- Reginald McKenna (L.), Chancellor of the Exchequer.
- Sir John Simon (L.), Home Secretary.
- Bonar Law (C.), Colonial Secretary.
- Earl Kitchener, Secretary for War.
- Austen Chamberlain (C.), Secretary for India.
- McKinnon Wood (L.), Secretary for Scotland.
- Arthur J. Balfour (C.), First Lord of the Admiralty.
- Walter Runciman (L.), President Board of Trade.
- Walter Long (C.), President Local Government Board.
- Arthur Henderson (Lab.), President Board of Education.
- Winston Churchill (L.), Chancellor Duchy Lancaster.
- Augustine Birrell (L.), Chief Secretary for Ireland.
- Lord Selborne (L.), President Board of Agriculture.
- Lewis Harcourt (L.), First Commissioner of Works.
- Sir Edward Carson (L.), Attorney-General.
- David Lloyd George (L.), Minister for Munitions.
- Lord Lansdowne (L.), Minister for Pensions.

The Latest Pressure Tank System

Why not have a W. C. in your house?
Why not have Bath and Basin in your house?

L. E. S. System

We furnish the above System with Hand Pump, Power Driven Pump and Gasoline Engines.

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At Lot 7, Con. C, Guelph Township, 5 miles north of Guelph City, on WEDNESDAY, JUNE 23rd, 1915

Commencing at 1 p.m. sharp. I will sell by Auction, positively, with reserve: 28 head of registered Hackneys, Stallions, Mares and Fillies. Prize winners and Champions at Toronto, Ottawa and Guelph. Matched pairs, singles and saddlers. Brood Mares with foals at foot to be sold with their dams. Terms: 10 months on approved joint notes, 6% per annum off for cash. For catalogue write— J. R. THOMPSON, - Box 235, - Guelph, Ont. JAMES McDONALD, Auctioneer. R. L. TORRENCE, Clerk.

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With Purina Chicken Chowder will keep your chicks busy and happy.

At your dealers.

Always in Checkerboard Bags.

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Live Broilers

We are open for shipments of live spring broilers and for live poultry from now on. Highest market prices paid, according to quality. Write us for quotations. Prompt returns, and crates promptly returned.

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Wholesale and Retail Poultry, Game, Fish, Eggs and Vegetables

348 Dorchester St. W., MONTREAL

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BARRON'S Famous layers S.C.W.L. Stock imported direct. \$2 per J5. J. Hollingsworth, Milton Heights, Ont.

BIG PROFITS for farmers, from imported strain Buff Orpingtons, Winter-layers—pair weight, 23 lbs., 11 oz. Half-price sale. Cockerels, \$5.00; laying hens, \$2.50. E. C. Cattle, Weston, Ontario

WHITE Wyandotte eggs, \$1.50 per setting, from four choice breeding pens. Choice pullets, \$2 each. Address Weldwood Farm, Farmer's Advocate, London, Ont.

WHITE Weandottes, Martin strain; pure white blocky birds, excellent layers. Eggs—Dollars per fifteen; safely packed. Allan McPhail, Galt, Ont., R. No. 4.

WHITE Orpington baby chicks, 25c., 35c., 50c. each. Eggs—\$2, \$3 per 15. Best strains. Rev. W. J. Hall, Newmarket, Ont.

EGGS FOR HATCHING

S. C. White Leghorns, bred from heavy laying and prize winning stock, \$1.00 per 15 a hatch, guarantees \$1.50 per 100.

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OXFORD County Farm for Sale—Hundred acres known as the John Spearman Homestead; five miles west of Ingersoll, on the River Road. Two houses, bank barn, windmill; plenty of water. Ida M. Spearman, Mt. Clemens, Mich., R. R. 3.

WANTED to hear from owner of good farm for sale. Send cash price and description. D. F. Bush, Minneapolis, Minn.

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FOR SALE: The formula or recipe for the best preparation you ever used for killing the "Ponto Bug" (hard or soft) without injuring the plant. Can be used with equal success on berry bushes, etc. Is also a valuable fertilizer. Made and sold over my own counter. The 1st year 200 lbs., the 5th year over 5 tons. This is no fake, but a genuine offer. Price \$1.00. For full particulars apply

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We meet any competition for GOOD QUALITY CREAM. We have the experience, the capital, and the market connection in the largest city in the Province. Prompt remittance. Cans supplied. Charges paid. References: Any shipper or any banker. It will be worth your while to ship us.

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Where are you shipping now? And what are you getting for your cream? We want more individual shippers and more men to gather cream for us. Write for our proposition.

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Hundred and twenty acres adjoining Hamilton village, main road north of Bowmanville, Durham township, with nine-roomed dwelling, bank barn, drive house, poultry house, pigsty, six acres orchard, Spring creek, close to schools, churches and good roads. Sixty dollars per acre.

JOHN FISHER & CO., Toronto, Ontario
Lumsden Building

EXCELLENT STOCK FARM FOR SALE

15 miles from Hamilton, 100 acres, large barn, good drive sheds, brick cottage, frame house for hired man. Gas on farm. Apply: Box 11, Farmer's Advocate, London

Wanted

—Herd, 10 or 15 fresh milk cattle. Reply, giving full particulars and terms.

Box B, Farmer's Advocate, London

CORRUGATED IRON

Galvanized, Rust Proof
Made from very finest
sheets, absolutely free
from defects.

Each sheet is pressed, not
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fit accurately without waste.
Any desired size or gauge,
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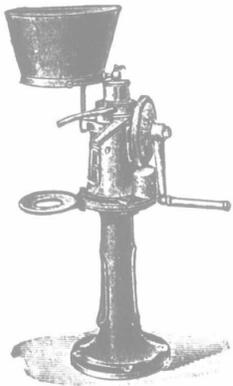
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Manufacturers
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Toronto, Ont. St. John, N. B.

skins cleanest
—therefore
brings you most
profit from your
milk.

Is the easiest
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erate and clean
—saves time.

Costs least
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That it will
do even more
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booklet "A"
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Better still—
try our machine
on your own
farm free of
charge.

How to be Good.

The essence of Goodness is to do some-
thing, to labor, to achieve some end; and
if Goodness is to exist, the world pro-
cess must begin again.

Doctor Knew—"My doctor told me I
would have to quit eating so much
meat."

"Did you laugh him to scorn?"
"I did at first; but when he sent in
his bill, I found he was right."

The Windrow.

Elbert Hubbard, who perished with
the Lusitania, began life as a
farmer, and worked subsequently as
shepherd, miner, printer, newspaper
reporter and dramatic critic before un-
dertaking the publishing venture, of
which the outcome was The Philistine
and Little Journeys. His publishing
plant and "Roycroft" shops at East
Aurora near Buffalo, also the houses of
his workmen, were modelled after the
ideas of the great William Morris, and
have long been a Mecca for sightseers in
the Eastern United States. . . Charles
Klein, the playwright, who also was
drowned, was the author of many suc-
cessful plays including the famous "The
Lion and the Mouse."

People who rebel at living in our
rigorous northern climate should read
articles recently published by Professor
Cattell and Prof. E. Ellsworth Hunting-
don in Popular Science Monthly, in
which the fact is emphasized that only
in northern regions is the maximum of
industry, thrift and even genius reached.
In New Zealand and Basutoland the
whites are shown to drift almost in-
variably into shiftlessness, inability and
lack of desire to work. The same con-
dition is noted in the Bahamas and
other southern islands, while even the
Southern United States are regarded as
"climatically unfitted for the develop-
ment of a high grade of ability."

In regard to the Bryce report on Ger-
man atrocities in Belgium the New York
Independent says: "Addressed in fact
to the neutral nations, as in form to
the first Lord of His Majesty's Treasury,
this report will have its widest circula-
tion, and its profoundest influence in
America. Viscount Bryce, Sir Frederick
Pollock and Mr. H. A. L. Fisher, are
known here personally to a wide circle
of our most thoughtful citizens, and
generally through printed works that
have had an almost unexampled circula-
tion. The other members of the com-
mission—Sir Edward Clarke, Sir Alfred
Hopkinson and Mr. Harold Cox—are
gentlemen in all ways qualified to share
with Viscount Bryce and Sir Frederick
Pollock in so responsible a task. Their
findings will be accepted by the open-
minded as the closest approximation to
the truth of history that is humanly
possible. No one who values his own
reputation for intellectual integrity and
moral sobriety will henceforth deny that
the charge of wanton inhumanity—mon-
strous, ingenious, unsparring—has been
proven against the ravagers of Belgium
and the invaders of France. In village
after village non-combatants by hundreds
without discrimination of age or
sex, have been put to death, without so
much as the shadow of evidence of any
guilt to condemn them; little children
and the aged have been butchered like
cattle in shambles; women of every age
have been ravished. . . In all centuries
outrages have been an incident of war,
and no nation has been guiltless. This
humiliating fact admitted has no bearing
upon the present case against the Ger-
man Government. For, as Viscount
Bryce rightly insists, the overshadowing
fact among all the data here presented
is the amazing evidence that the atroci-
ties reviewed, have been committed
in pursuance of a deliberate policy
planned and executed by the German
Government. It has not been a case
of soldiers 'getting out of hand.' The
deeds of which they are convicted have
been committed under orders, direction
and supervision. This is the crowning
infamy."

Russia has ordered 2,000 freight cars
from a Canadian company which re-
ceived her order for \$83,000,000 worth

HUNDRED-CENTS-TO-THE-DOLLAR MONEY

will be demanded from you when you buy a piano. Why
not, for your part, demand hundred-cents-to-the-dollar
piano value? You are entitled to the full pur-
chasing power of every dollar you spend—
and you get it when you buy a

SHERLOCK-MANNING 20th Century PIANO

"Canada's Biggest Piano Value"

Your money—\$100 less of it—buys superior piano quality—
an instrument containing the highest grade action, hammers
and strings that money can buy.

Canadian families to the number of 1,200 bought Sherlock-Manning
instruments last year, and each
saved \$100 by our direct-to-user
methods and prices.

Let your cash buy all piano
value. Not a dollar of it should
be spent for a name only. We
are willing and anxious to prove
our claim to give "Canada's Big-
gest Piano Value"—a beautifully
toned, handsomely cased instru-
ment, backed by an unflinching ten-
year guarantee—all for \$100 less
than you'll pay for the same value
anywhere.

Ask Dept. 4 to send you
our Art Catalogue L.

Colonial—Style 70

Sherlock-Manning Piano Co.

LONDON (No street address necessary) CANADA 74



COOK IN A COOL KITCHEN

DON'T swelter over a hot range this summer. The
NEW PERFECTION Oil Cookstove keeps
your kitchen cool and clean and does away with all the
ash-pan, coal-hod drudgery of the coal range.

THE NEW PERFECTION lights like gas, regulates like gas,
and cooks like gas. It is gas stove comfort with kerosene oil.
NEW PERFECTIONS are sold in 1, 2, 3 and 4 burner sizes by
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GIVES
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2,000,000
HOMES"

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BRANCHES
IN
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FREE to potato growers.
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No excuse for not spraying well
and often. Four rows at once,
thorough coating on leaves
and stalk. An acre in 20
minutes. Profits sure.

Can you afford to
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NCE, Clerk.

r. Sale—Hundred acres
rman Homestead; five
River Road. Two
ill; plenty of water.
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owner of good farm for
rice and description.
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TTENTION
or recipe for the best
or killing the "Potato
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1st year 200 lbs., the
is no fake, but a gen-
full particulars apply
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Ontario

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or GOOD QUALITY
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Limited
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arm For Sale

adjoining Hamilton
downmanville. Dap-
ommed dwelling, bank
house, pigsty, six
sk, close to schools.
Sixty dollars per acre.

R & CO., Ontario

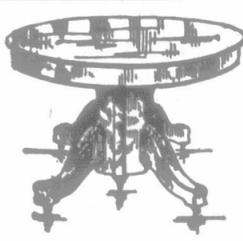
ARM FOR SALE
60 acres, large barn,
ottage, frame house
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ocate, London

15 fresh milk can-
g full particulars and
vocate, London

of shrapnel, and 2,000 more from another company. She is also negotiating for rails and bridge steel. Orders for 5,000,000 shrapnel shells have been given by Great Britain and France to the American Locomotive Company and others, while the Westinghouse Manufacturing Company is to manufacture rifles, for which 1,000,000 are already under contract. In the Hopewell Powder Works, Virginia, 6,000 persons are to be employed, and 2,000 in a plant near New Brunswick, New Jersey, which is to be devoted to the manufacture of gun cotton. Large orders for tents, picric acid and sulphuric acid, canned meat, etc., have also been placed in the United States.

In "Stead's Review" (Melbourne) the editor summarises the great aid the United States has rendered the Allies in the European War. After pointing out that the Colonies are putting 150,000 men or more in the field, he asks, "Who is doing most to end the war—we or America?" The "we" is, of course, the Colonies. And continues:—The following list of a few of the main articles which the factories of the United States are turning out for the Allies tells its own tale:

- 1,100,000 rifles.
- 300,000,000 cartridges.
- 15,000,000 lbs. of explosives.
- 50,000 revolvers.
- 1,500 machine guns.
- 200 armoured motor cars.
- 900 six-inch guns.



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Our method of supplying directly from factory to buyer leaves out all useless expense, bringing the furniture to your home at least cost possible. Write us for our large

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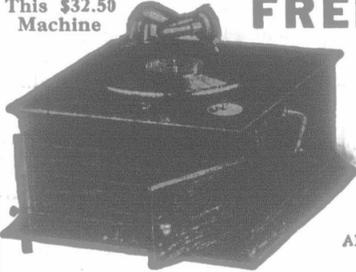
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We have a limited number of these splendid \$32.50 Talking Machines to place, FREE. Fill in and mail the coupon below and get details at once. This is an unequalled offer, without strings. You are not asked to sell anything, to canvass or work for us. Act quickly and get

This \$32.50 Machine



FREE Operaphone

Plays any make of disc records and has pure, unrivalled tone. Same style and size in any store would cost you exactly \$32.50, yet we give it FREE.

USE THIS COUPON

The Canadian Mail Order House
Box 207, - London, Ont.

Without obligation to me, send full particulars re \$32.50 Operaphone, FREE.

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Canada's Favorite Sugar since the days of the Pioneer



CANADA'S pioneer sugar refiner was John Redpath, who in 1854 produced "Ye Olde Sugar Loafe"—the first sugar "made in Canada".

Redpath

Redpath Sugar has been growing better and more popular ever since. When there seemed no further room for improvement in the sugar itself, we made a decided advance by introducing the *Redpath* Sealed Cartons.

These completed a series of *individual packages*—2 and 5 lb. Cartons and 10, 20, 50 and 100 lb. Cloth Bags—which protect the sugar from Refinery to Pantry, and ensure your getting the *genuine Redpath*.

Get Canada's favorite Sugar in Original Packages.

CANADA SUGAR REFINING CO., LIMITED, MONTREAL.

130

- 40 nine-inch guns.
- 4,000,000 steel arrows.
- 50,000,000 feet of lumber for railroads.
- 6,000,000 kegs of horse shoes.
- 5,000,000 pairs of socks.
- 60,000 tons of steel for shrapnel shells.
- 5,000,000 yards of cloth for uniforms.
- 1,000,000 aluminium canteens.
- 6,500 motor wagons.
- 8,000 kitchen wagons.
- 1,000,000 blankets.
- 2,000,000 pairs woollen gloves.
- 3,000,000 pairs of boots.

In addition, great quantities of overcoats, trousers, underwear, barbed wire, steel, knapsacks, cotton, duck for tents and stretchers, and, in fact, huge supplies of everything an army needs. Georgia is practically denuded of its famous mules, and more than 150,000 horses have been secured.

To help feed the gigantic armies the Allies now have in the field the exportable surplus of the greatest wheat crop in record has been poured across the Atlantic. At the end of last year it is estimated that at least £60,000,000 worth of munitions of war and material for the armies had been manufactured, or was in process of making, in the United States. By this time it is safe to say that that amount has been increased to £100,000,000! And the magnificent work of the American Commission has saved the people of Belgium from starvation.

The most sensational court trial of this year in the United States was recently concluded at Syracuse, N. Y., where Wm. Barnes, a prominent Republican politician sued Ex-President Theodore Roosevelt for \$50,000 damages for describing the plaintiff as a corrupt political boss or words to that effect. The jury after being out 42½ hours brought in a verdict for Roosevelt amid scenes said to be without a parallel in American court history. An appeal will be taken. For weeks Syracuse, more than anything else, resembled a big Presidential convention.

Madness of the Moon.

By Josephine Daskam Bacon.

Continued from page 892, May 27 issue.

A strange whitish bulk that glimmered through the thinning foreground, too big for even a big boulder, too symmetrical and quiet for a waterfall, tempted Caroline on, and she pressed forward hastily, lost in speculation, when a sudden odor foreign to the woods stopped her short at the very edge of a little glade, and she paused, sniffing curiously.

A man, bareheaded, with grizzled curly hair, turned suddenly, not ten feet from her, and stared dumfounded at her, his twisted, brown cigar an inch from his lips.

The torn-out sleeve of her nightgown had bared one side of her waist; the great rent that slit the lower half of the garment left one slender leg uncovered above her white knee. A spray of wild azalea wreathed her dark, tumbled hair, and Rufus, his plumed tail curled around her feet in the shadow, and his green eyes flaming, might have been a baby panther. She leaned one hand on the rough bark of a chestnut and gazed with startled eyes at the man; it seemed that the forest must swallow her at a breath from a human throat.

He lifted one hand and pinched the back of the other with it till his face contorted with the pain.

"Then there are such things!" he said, softly; "well, why not?"

He moved forward almost imperceptibly. "If I were younger, I should know you were not possible," he muttered. "but now I know that I have never doubted you—really."

Again he took a small step. Caroline, paralyzed with fear and embarrassment, for she thought he was merely teasing her a little before he punished her—his pleasant, low voice and whimsical manners brought her back suddenly to the ordinary world and the stern facts of her escapade—shivered slightly, but did not attempt flight.

"It was this extraordinary night that brought you out, of course," he went on, again slightly shortening the distance between them, "you and the little cub. It was a moon out of five thousand."



Let's make a Jelly Roll—
 With FIVE ROSES flour.
 Its Strength and Fineness holds your batter
 together in the long, well-greased pan.
 Bakes evenly.
 Smooth Texture—soft, golden Crumb,
 spongy, porous, yielding.
 No holes or lumps to vex you.
 And when you turn it out on the damp
 napkin hot and savory, and you spread the
 under side with "jell"—
 It doesn't get soggy or crumbly.
 Roll it gently, carefully.
 Not a crack—not a break.
 Perfect Smoothness—a Perfect Roll—Yeast.
 Bake anything, make anything.
 Use FIVE ROSES—bread and pastry.
 Melting puff paste—flaky pie crust—crink-
 ly fritters—toothsome rolls.
 FIVE ROSES for anything—everything.
 Be flourwise.

Five Roses Flour

Not Bleached



Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED, MONTREAL

and, I admit. Do you live in that chestnut?"

With a sudden agile bound he covered the space between them and seized her by the shoulder.

"Aha!" he cried, "I have—good heavens, it is a child!"

"Of course I am—I'm Caroline," she murmured, writhing under his grasp.

He pulled her out into the little glade.

"Oh! you're Caroline, are you?" he repeated, thoughtfully; "dear me, you gave me quite a turn, Caroline. Where did you come from—the big house?"

"I came from a long way," she said briefly. "I was—I was taking a walk. Where do you live? Don't you ever go to bed?"

The man chuckled.

"I have been feeling adventures in my bones all day," he said, "and here they are—a child and a cat. If you will come with me, Mademoiselle, I will show you where I live."

He led the way gravely to the dim, white object, and Caroline perceived it to be a tent, pitched by the side of a spring that poured through a tiny pipe set into the rock. The tent flap was tied back, and she saw inside it a narrow cot, covered with a coarse blue blanket, a roughly made table spread with a game of solitaire, and a small leather trunk. On the further side of the tent there smoked, in a rude, improvised oven of stones, a dying fire. Above it, under a shelf nailed to the tree, hung a few simple utensils; two or three large stumps had been hacked into the semblance of seats.

To one of these stumps the man led Caroline, and, seating her, he turned to the shelf above the fire and fumbled among the pots and pans there, producing finally a buttered roll, a piece of maple sugar, and a small fruit tart.

"You must be hungry," he said simp-

From The Fountain Head

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 All in fast washing colors. Catch the next Mail and address—

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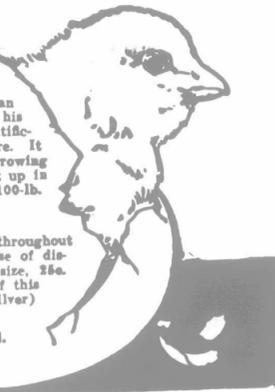
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Pratts White Diarrhoea Remedy is so successful that we authorize our dealers throughout the world to refund the purchase price in case of dissatisfaction. Extra large box, 50c.; small size, 25c. Write your name and address on margin of this ad., tear out and send 10c. (stamps or silver) for "The Poultryman's Handbook."

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When Writing Advertisers Mention The Advocate

ly, and Caroline ate greedily. After he had brought her a tin cup of the spring water, he selected a brown pipe from a half dozen on the shelf and began filling it from a leather pouch that hung on the tree.

"Now let's hear all about it," he said easily.

"I am running away," said Caroline abruptly. At that moment it really seemed that she had planned her flight from the hour that left her, tear-stained and disgraced, in her little bed.

"They didn't treat you well?" he suggested, picking out a red ember from the coals on the point of a knife and applying it to the pipe.

"I'm not to wear my knickers any more," Caroline said, with a gulp, "and my bathing suit has to have a skirt. I've got to stop p-playing with the b-boys—so much, that is," she added, honestly.

The man turned his head slightly.

"That seems hard," he said; "what's the reason?"

"I'm 'most twelve," said Caroline; "you have to be a young lady, then."

"I see," the man said. He looked at her thoughtfully. "I suppose you would look larger in more clothes," he added.

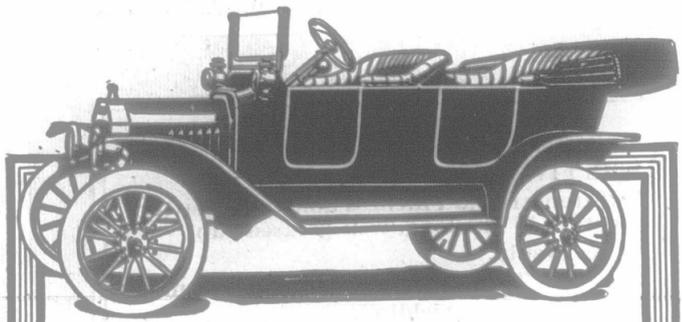
"That's it," she assured him, "I do. That's just it."

"And so you expect to avoid all this by running away?" he asked, settling into his own stump seat. "I'm afraid you can't do it."

Caroline set her teeth. He regarded her quizzically.

"See here," he went on, "I wish you'd take my advice in this matter."

They confronted each other in the starlight, a strange pair before the dying fire. The moon had gone, and the stars, though bright, seemed less solid and less certainly gold than before. A cool breeze swept through the wood and



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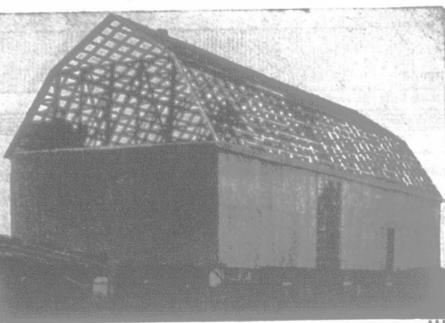
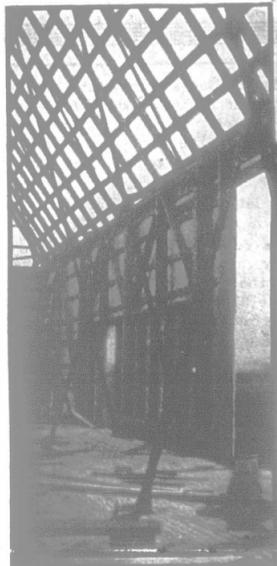
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Farmer's Advocate

When Writing Please Mention Advocate

Caroline shivered in her torn nightdress. The man stepped into the tent and returned with a long army cloak. This he wrapped round her and removed to his seat, with Rufus on his knee.

"My name," he said, "is Peter. Everybody calls me that—just Peter. I don't know exactly why it is, but a lot of people—all over—have got into the way of taking my advice. Perhaps because I've knocked about all over the world more or less, and haven't got any wife or children or brothers and sisters of my own to advise, so I take it out on everybody else. Perhaps because I try to put myself in the other fellow's place before I advise him. Perhaps because I've had a little trouble of my own, here and there, and haven't forgotten it. Anyhow, I get used to talking things over."

A gentle stirring seemed to pass through the woods; the birds spoke softly back and forth, a squirrel chattered. Again that cool wind swept over the trees.

"Now, take it this week," the man went on, puffing steadily; "you wouldn't believe the people just about here who've asked for my advice. I usually camp up here for a week or so in the summer—the people who own the property like to have me here—and the first day I unpacked up comes a nice girl—I used to make birch whistles for her mother—to tell me all about her young man. She brought me that spray of honeysuckle over the pipes—grows over the front gate. She wants to marry him before her father gets to like him, but she hates to run away. 'Would you advise me to, Peter?' she says. And I advised her to wait."

"Then there's my friend the blacksmith. He lives in a queer little house with dormer windows under a hill, just off the country road. He's got a new baby, and he was afraid it wouldn't pull through. He knew I'd seen a lot of babies—black and red and yellow—and he wanted my advice. 'Peter, what'll I do?' he says, 'what'll I do?'"

"Why, just wait, Harvey. He'll live. Just wait," I told him."

Caroline listened with interest. He might have been talking to his equal in years, from his tone.

"Then, oddly enough," he continued, "here's my old friend in the big house up yonder—and she is old—and what do you think she's worried about? She's afraid she won't die! 'Oh, Peter,' she says to me—she's fond of me because I'm the same age of a little boy of hers that died—it seems to me that I can't wait, Peter! What shall I do? she says. And I tell her to wait. 'Dear old friend,' said I to her last night, 'it will come. It's bound to come. Just be patient.'"

He paused and knocked his pipe empty.

"Now, as to your case," he said, "I know how you feel. I'm sorry for you—by the Lord, I'm sorry for you! But what's the use of running away? You'll keep going on growing up, you know. It's one of the things that doesn't stop. You can't beat the game by wearing knickers, you know. And then, there'd come a time when you'd want to quit, anyhow."

She shook her head. "Really, you would," he assured her, persuasively. "They all do."

"That's what Uncle Joe says," she admitted, "and Aunt Edith. She changed her mind, she says—"

"Are you talking about Joe Holt?" Peter demanded.

"Yes—do you know him? He lives in a big white house with wistaria on the side," Caroline cried, joyfully.

"I was a senior when he was a freshman," said Peter. "Then he's taken the Washburn house."

"Do you know Aunt Edith, too?" asked Caroline.

"Yes," said Peter, after a pause, "yes, I know Aunt Edith—or used to. But I didn't know she—they were up in this country. I haven't seen her—them for a good while. Does—does she sing yet?"

"Oh, yes, but not on the stage any more, you know," Caroline explained. "I see. Does she sing, I wonder, a song about—Oh, something about 'my heart'?"

"My heart's own heart," you mean," Caroline said, importantly; "yes, indeed. It's her encore song."

"I see," said Peter again.

He looked into the fire, and there was a long silence. After a while he shook his shoulders like a water-dog.

"Now, Caroline," he said briskly, "here's the way of this business. You can't wear knickers until you're one of the boys, and you can't be one of the boys until you wear knickers. Do you see? So you don't get anywhere."

Caroline looked puzzled. She was suddenly overcome with sleep, and the old familiar names and ways tasted of home and comfort to her soul.

"You're too nice to be a boy, Caroline," said Peter, leaning over her and brushing her azelea-crowned hair tenderly with his lips. "If you persist in this plan of running away to be a boy, some boy, growing up anxiously, somewhere, will never forgive you! Take my advice, and wait—will you? Say, 'Yes Peter.'"

"Yes, Peter," Caroline murmured drowsily.

"Good girl! Then I'll take you home with my little donkey. I don't believe they've missed you yet. You have come four miles, though, you little gypsy!"

He disappeared behind the trees, and Caroline nodded. Later she woke sufficiently to find herself and Rufus on the blue blanket on the bottom of a little donkey cart; Peter stood by the gentle, long-eared head.

"Thank you, Peter," she murmured, half asleep, "and you'll see Aunt Edith, won't you?"

"I don't believe so," he said, very low. "Not yet. Tell her Peter brought you back. Just Peter. But he can't come yet. Get up, Jenny!"

They wound out by an old wood road. A cool spiciness flowed through the green aisles, and as the tiny donkey struck into a dog trot, the man striding easily at her head, a faraway cock crowed shrilly and the dawn gleamed white.

Gossip.

GOOD DEMAND FOR ABERDEEN-ANGUS AND SOUTHDOWNS.

Robert McEwen writes "The Farmer's Advocate" to say that notwithstanding the present conditions he finds trade brisk in all lines of stock. He states that Aberdeen-Angus cattle are in great demand, and that he finds difficulty in supplying the many orders for bulls which the breeders now desire in order to produce the early-maturing butcher animal for local trade. Two very nice young heifers went to Haldimand for the starting of a new herd, and young bulls went to the counties of Bruce and Elgin. Southdown sheep, like the cattle, are in great demand, and sales have been made to parties in the States of Maine and Kentucky, and a pen of five wethers went to the Ohio State Agricultural College. A full supply of fitted-for-show and also breeding rams and ewes is ready for the market. He also states that he finds a ready market for collie pups, both on the American and this side. A nice lot are now ready for distribution.

Three bulletins recently issued by members of the Nova Scotia Department of Agriculture which are of particular interest to farmers, as well as their families, are now available for free distribution. The first one is on "The Manufacture of Dairy Products on the Farm," by W. A. McKay, and includes a practical discussion of the operations of ice cream manufacture, and also contains a concise description of the methods for testing milk and cream for butter-fat.

The second bulletin on "Drainage," by B. H. Landels, is a well-illustrated bulletin on this important feature of farm practice. There is included in it a good description, illustrated by photographs, of methods of draining by means of the plow and spade, and also by the use of power machines. The pages dealing with the manufacture of tile are also very valuable. Anyone who contemplates undertaking drainage work on his farm should apply to the Agricultural College for a copy of this bulletin.

The third is a reprint from the Report of the Secretary for Agriculture for 1914, and consists of 160 pages of reading matter on "Poultry Raising," prepared by J. P. Landry. This Poultry bulletin deals with every phase of poultry-raising, and should be in the library of everyone interested in poultry in the Province.

DAIRY SHOW

That there purpose cow beautiful J. Beaty, near done much heavy-milking but they co day he has of the best Canada. A have won 5 Guelph and classes. T won cham them is the ner of cha lbs. of 4.7- the enviable the general the month 1,500 lbs. Second to her stable She freshen the month heifer calf w fat test Beauty won two-year-old She also w Ottawa in days 85.8 Kentucky R the Guelph three-year-o famous sire too, has a sired by I tioned are herd as a v ing are pro month from average ha beginning o in the herd test of ov have been have qualif year they s since Janu over 1,000 great pro nice type, heavy, well calf to the bull, Darlin the Agricul Prof. Day. chased for Victor 987 Champion, 5th, with 9,000 lbs. Thistle. markable s qualities. perfect in sale is Boy, by of Butterc is 10,000 fleshed bull other red also by Rose, whic records, bu Here an bulls for t sire. For out of the dams.

Quest

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Editor "T In your quires how wooden y lumps of Three or will clean

Ans.—W simple ren

Gossip.

DAIRY SHORTHORNS AT JANEFIELD FARM.

That there is such a thing as a dual-purpose cow is abundantly proven at the beautiful Janefield Farm of Wm. J. Beatty, near Guelph, Ont. Mr. Beatty has done much travelling searching for big, heavy-milking Shorthorns. He got them, but they cost considerable money. Today he has what we believe to be one of the best herds of dairy Shorthorns in Canada. Among them are eight that have won first prizes in dairy tests at Guelph and Ottawa in the Shorthorn classes. Three out of that eight have won championships. Included among them is the great cow Lady Robins, winner of championship honors at Ottawa last winter, giving in the three days 180 lbs. of 4.7-per-cent. milk, and reaching the enviable position of eleventh place in the general standing over all breeds. In the month of January she gave over 1,500 lbs. milk, and is still going well. Second to her in the Ottawa test was her stable mate, Verchoyles Blossom. She freshened on January 3, and during the month gave 1,200 lbs. She has a heifer calf which is for sale. Her butter-fat test is 4.05 per cent. Braemar Beauty won her class at Guelph as a two-year-old and as a three-year-old. She also won the three-year-old class at Ottawa in January, giving in the three days 85.8 lbs. of 4.4-per-cent. milk. Kentucky Rose 40th also won first in the Guelph test, both as a two- and three-year-old. She is a daughter of the famous sire, Imp. Butterfly King. She, too, has a heifer calf which is for sale, sired by Imp. McIntosh. Those mentioned are only a fair average of the herd as a whole. The twelve now milking are producing a revenue of \$120 a month from the cream sold, and this average has been maintained since the beginning of the year. There is not one in the herd but has an average butter-fat test of over 4 per cent. Those that have been in the official R. O. P. test have qualified up to 10,000 lbs. This year they are nearly all in the test, and since January 1 several are averaging over 1,000 lbs. a month. With this great production they are exceptionally nice type, and many of them carry a heavy, well-balanced fleshing. All are in calf to the richly-bred Dairy-Shorthorn bull, Darlington Major (imp.), owned at the Agricultural College, and imported by Prof. Day. Lately Mr. Beatty has purchased for service the ideal bull, Braemar Victor 98751, a son of Imp. Braemar Champion, and out of Scotch Thistle 5th, with a record in R. O. P. test of 9,000 lbs. She is out of Imp. Scotch Thistle. This bull should prove a remarkable sire of dairy type and milking qualities. He is an extra nice type and perfect in his lines. In young bulls for sale is the red yearling, Bonnie Boy, by Village Shah, and out of Buttercup, whose R. O. P. record is 10,000 lbs. This is a splendidly-fleshed bull, and nice in his lines. Another red yearling is Village Marshall, also by Village Shah, dam Roan Rose, which is also in the R. O. P. records, but her record was not at hand. Here are two particularly attractive bulls for breeders wanting a dairy-bred sire. For sale are also several heifers out of the heavy-milking and high-testing dams.

Questions and Answers.

- 1st—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this 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 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 enclosing.

Miscellaneous.

Lime to Remove Scum.

Editor "The Farmer's Advocate":
In your issue of May 6, C. L. S. enquires how to take the green scum off a wooden water trough. I use a few lumps of stone lime to freshen the water. Three or four lumps the size of a teacup will clean out all the green scum.
H. J. M.

Ans.—We are pleased to publish these simple remedies.

Questions and Answers.

Veterinary.

Itchy Legs.

Heavy mare has some kind of an itch on her front legs, below the knees. I often notice her biting her legs.

J. D.

Ans.—Itchy legs are not uncommon in heavy-legged horses, especially those with bone of poor quality. Give her a purgative of 10 drams aloes and 2 drams ginger, and follow up with 1½ ounces of Fowler's Solution of Arsenic three times daily for a week. Make a solution of corrosive sublimate 20 grains to a pint of water. Heat this to about 110 degrees Fahr., and rub well into the skin twice daily until itchiness ceases. V.

Unthrifty Cow.

Cow did not do well all winter. About three weeks ago she produced a calf one month before full term. She has not gained any since, and lately shows symptoms of brain trouble. When being milked she holds her head out straight, and when in the stable rests it on the manger. She eats well and chews cud, but is in poor condition. W. J. E.

Ans.—Mix three ounces each of gentian, ginger, nux vomica, and iodide of potassium. Make into 24 powders, and give her a powder every night and morning. Feed well, and allow her out on grass for a few hours daily. If necessary, repeat the prescription. V.

Questions and Answers.

Miscellaneous.

Tuberculosis in Cattle.

Would you kindly publish, through the Question and Answer columns of your paper, the following information on suspected tuberculosis in a herd of cattle:

1. Will one cow contract the disease from another in the pasture field?
2. Is the beef of such cows fit for use?
3. Is the butter affected by the germ, and is it fit to be eaten?
4. Will the calves contract the disease if fed from milk of tuberculous cow?
5. Will pigs or horses contract it if wintered in the same stable?
6. What is the incubation period of the germ?
7. What are the first symptoms of the disease?

Ans.—1. It is possible.
2. As a general thing, tuberculosis does not affect the muscles, and if meat is properly cooked humans might not contract the disease from a tuberculous animal, yet veterinarians are stationed in all abattoirs to detect tuberculous carcasses and see that their destruction is complete. Tuberculous meats are not considered fit for human use.
3. Heim, Leser, Bang, Roth, and others, have shown that dairy produce such as whey, cheese and butter, from tuberculous cows, may transmit the disease, even after a lapse of from one to four weeks.
4. Yes. This way of transmitting the disease is a quite common cause of the spread of tuberculosis. The proper method of raising calves from a tuberculous herd is to separate the calf from the dam, if the dam is tuberculous, as soon as born, and rear it on pasteurized milk, or from the milk of a healthy cow.
5. It is possible that pigs may contract the disease when housed in this way, but it is probable that the horses will not.
6. The information obtainable on this phase of the subject is not explicit.
7. The symptoms of tuberculosis vary according to the location of the disease. If it is in the glands of the throat it is suggested by their enlargement. If the disease is in the lung tissue there would be, after it is sufficiently advanced, coughing, and perhaps difficult breathing. If the disease is in the liver it cannot be readily distinguished until it is far advanced. In the udder, the disease manifests itself by the organ becoming firm or hard, and when the tissues are sufficiently broken down, the milk from that quarter will be changed in appearance. Sometimes it is thick and contains pus; sometimes it is thin and watery.

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Our customers themselves will prove this to you. Hear what they have to say.

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Dear Sirs,—The windmill I bought from you a few years ago is a perfect machine. It is as good as new and does all my pumping, and I believe it is the strongest, easiest running windmill built.
Yours very truly,
JOHN SLATER.



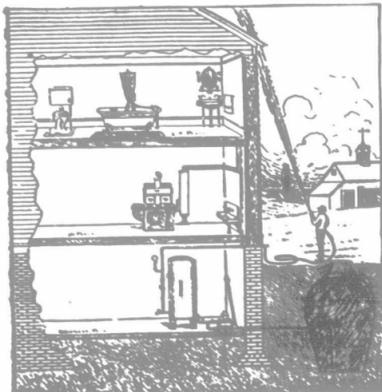
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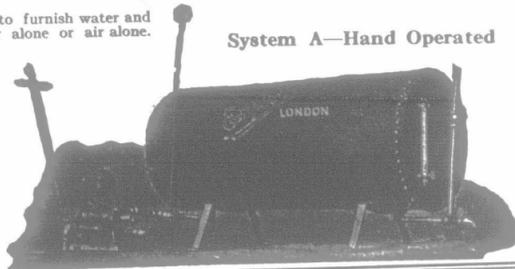
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Questions and Answers.

Miscellaneous.

Taxation—Veterinary—Polling Place.

1. A owns a lot which he lives on in unorganized territory, and also an island in river that runs past lot. Island is not part of lot, but is cleared and cultivated. Can school trustees and road commissioners collect taxes for island, as A has no bridge or road to island?

2. Is it against the law for a farmer or other man, not a qualified veterinarian, to castrate colts or other animals, and charge for his services? If so, what is the penalty?

3. In a municipality there is an incorporated town which is totally within the boundaries of the municipality. Would it be legal to have polling-place in municipal elections in this town, or is it necessary to have it outside the limits of town? A. D. Ontario.

Ans.—1. We think that, for all that appears from the statement of case, the island property is liable to taxation for support of school, and for municipal purposes generally.

2. No; provided he does not pretend to be, or use any name, title, addition, abbreviation or description implying or calculated to lead people to infer that he is, or is recognized by law as, a Veterinary surgeon, within the meaning of The Veterinary Surgeons' Act, or that he possesses a diploma legally entitling him to use the title "Veterinary Surgeon"—having regard to the provisions of the Act. The penalty for so wrongfully assuming the title of Veterinary Surgeon is \$25 to \$100, recoverable under The Ontario Summary Convictions Act.

3. It would not be legal to have the polling-place—that is to hold the election—in the town; it must be held in the township municipality.

How Many Hides Has a Cow?

Sole leather is not adapted to soft, tufted upholstery of automobiles and furniture.

Hides must be split into thin sheets to produce upholstery leather.

The two lower, fleshy grainless sheets are coated, embossed and sold as "genuine leather." That is why so much "leather" upholstery cracks, rots and peels so quickly.



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It is the ideal material for recovering your couches, davenport, dining chairs and morris chairs.

Fabrikoid averages twice the tensile strength of coated splits. It is waterproof and gives the appearance and "feel" of the best grain leather.

Sample of either quality free. Mention your dealer's name. Or if you send us 50c, we'll send a large working sample 18 inches by 25 inches, sufficient, to cover a chair, etc. Write us today.

DU PONT FABRIKOID COMPANY
 "Fabrikoid" is made in Canada. Dept. 502 Toronto

Questions and Answers.

Miscellaneous.

Gasoline or Ram for Pumping.

1. What would a gasoline outfit for pumping water cost?
2. What would a hydraulic ram cost to supply water to a house?
3. What would a ram big enough to supply water to house and barn cost?

J. L. U.

Ans.—You have given no details as to the amount of water required, so it is impossible to give a definite estimate. However, the following may be taken as approximate amounts:

1. A gasoline outfit complete would probably cost from \$100 to \$150.
2. A ram for the house only would probably cost in the neighborhood of \$50.
3. Ram for house and barn would probably cost from \$75 to \$100.

W. H. D.

Turkey Sick.

I have a turkey hen that has been ailing all spring. She sits around with head down and eats little. We think she has mated, but has not laid any eggs yet. At times, when we lift her up, we notice a clear liquid come from her mouth which has a strong odor like bile. Can you tell us what is wrong, and give a cure? X. Y. Z.

Ans.—I would be inclined to believe that the turkey in question has some digestive trouble, that she has eaten something which was eatable but not digestible, and which has soured in the crop. As treatment, I would suggest holding the bird with the head downwards and trying to remove as much of this material as possible which runs from the mouth. In the course of a short time the crop could be emptied almost entirely. Following this, feed the bird rather sparingly for a few days on light food, such as bread soaked in milk and squeezed dry, and give plenty of green food, such as grass, clover, etc., and gradually change to the grain ration if grain has been fed previously. Keep the bird out of doors, and allow it all the exercise which it will ordinarily take. We have not had any experience with this trouble among turkeys, but have known it to appear occasionally among other fowl, and we take it for granted that the same general rules for cause, treatment, etc., might apply in each case. A. C. M.

Horse in Poor Condition.

I have a Percheron horse eight years old that is very thin in flesh. Last summer I did a lot of work with my team, and this horse got very thin, and towards fall he could not stand a full day's work. I thought with a winter's rest he would gain up and get fat as usual. He had plenty of exercise, but not any heavy work, and was fed well, but he did not get fat. As I wanted to get him in good order before the spring work, I fed him a variety of feeds: good hay, whole and rolled oats, middlings, bran, corn-meal and oil meal. He did not look so bad before seeding, but when seeding was on he fell away very fast, and now he cannot stand a full day's work, but seems exhausted by the middle of the afternoon, even when doing common work on farm. He eats well, and eats plenty. We noticed he passed a large worm about three weeks ago, and thought it was worms bothering him. We gave him medicine for that trouble, and have not noticed any since. Would medicine do him any good, or would turning him out on pasture be better? READER.

Ans.—If the horse has not worms, possibly his teeth are in bad condition. Inspect them, and if there is anything wrong get a veterinarian to put them right. Purge the horse with 8 drams old; also quick salt. Feed a tablespoonful three times a day of equal parts of sulphate of iron, gentian, ginger, and nux vomica, would be helpful. If the horse could be turned to pasture, with grain each day, he would soon recover.

JUNE 3, 1915

Answers.
Pumping.
line outfit for
draulic ram cost
use?
big enough to
and barn cost?
J. L. C.

Horse Owners! Use GOMBAULT'S Caustic Balsam
A Safe, Speedy, and Positive Cure
The safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUSTIC OR FIRING. Impossible to produce scar or blennish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. The Lawrence-Williams Co., Toronto, Ont.

Lump Jaw
The first remedy to cure Lump Jaw was Fleming's Lump Jaw Cure
Fleming's Lump Jaw Cure
Fleming's Vest-Pocket Veterinary Advisor
Most complete veterinary book ever printed to be given away. Durably bound, indexed and illustrated. Write us for a free copy. FLEMING BROS., Chemists, 75 Church Street - Toronto, Ont.

ABSORBINE
TRADE MARK REG. U.S. PAT. OFF.
Will reduce Inflamed, Strained, Swollen Tendons, Ligaments, Muscles or Bruises. Stops the lameness and pain from a Splint, Side Bone or Bone Spavin. No blister, no hair gone. Horse can be used. \$2 a bottle delivered. Describe your case for special instructions and Book 2 K Free. ABSORBINE, JR., the antiseptic liniment for mankind. Reduces Strained, Torn Ligaments, Enlarged Glands, Veins or Muscles, Heals Cuts, Sores, Ulcers. Always pain. Price \$1.00 a bottle at dealers or delivered. Book "Evidence" free. W. F. YOUNG, P.D.F. 258 Lyman Bldg., Montreal, Can.

BLACK FOX RANCHING
And General Fur Farming.
The most profitable and interesting of all industries. Equally attractive to the small investor and the capitalist. Offering the safest and sanest of investments, either as a small privately-owned ranch or as a stock company. Write for free information and book on Fox Ranching. Correspondence solicited. Blake Vannatter, Fur Farm, Georgetown, Ont.

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Special attention given to Patent Litigation. Pamphlet sent free on application.

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CROWN LIFE BUILDING, TORONTO, ONT.

Clydesdale, Percheron French - Coach and Hackney Stallions
bought, sold and exchanged. HENRY M. DOUGLAS & COMPANY Queen's Hotel MEAFORD, ONT.

Dr. Bell's Veterinary Medical Wonder 10,000 give the Wonder a fair trial. Guaranteed for inflammation of the Lungs, Bowels, Kidneys, Fevers, Distempers, etc. Send 10 cents for mailing, packing, etc. Agents wanted. Write address plainly. Dr. Bell, V.S., Kingston, Ontario.

ABERDEEN-ANGUS CATTLE
For Sale, from the imported sire "PRADAMERE."
Apply: A. DINSMORE, Manager "Grape Grange Farm" - Clarksburg, Ont.

Glengore Angus - We have two choice old; also two choice bull calves, 8 months old, for quick sale. For particulars, write GEO. DAVIS & SONS, R. R. No. 11, Erin, Ont. Phone No. 384 Erin.

ABERDEEN-ANGUS CATTLE OXFORD SHEEP
For Sale - Good young show bulls and females, also a few Oxford rams. Thos. B. Broadfoot, Fergus, Ontario. G.T.R. and C.P.R. Please mention "The Farmer's Advocate."

Questions and Answers. Miscellaneous.

Hired Man Breaks Engagement.
I sent to an employment agency for a man for nine months at a certain sum of money. After working about five weeks he wants to leave me with much important work yet to do. I have no other help, and do not know where I can get a man. We have always got along well together. Can he leave me like this, and am I obliged to pay him his wages? If so, what portion of them? C. K.

Ans.—If this man was hired for nine months for a certain sum, he can leave, of course, but he cannot collect his wages for the time he worked until the expiration of the nine months. After that time he can collect pay for the time he worked probably at the rate which he was to receive. If the man hired for nine months, to be paid so much a month, by the month, he can collect at the expiration of the month in which he leaves.

About Enrolled Stallions.

1. Can a man breed his own mares to his own horse if the stallion is not enrolled?
2. Is it lawful to use a horse that a man purchased. As owner of the horse, the man uses his own name, but the enrolment is in another man's name. Is this a fraud? R. H.

Ans.—1. Yes.
2. There is nothing irregular about this procedure. If the horse is properly enrolled, that enrolment will be good for one year, after which time it will have to be renewed. If the horse has been transferred to the purchaser in the office of the Live Stock Branch, Toronto, the man should use his own name both as owner and in connection with the enrolment certificate. We cannot see that there is any fraud in connection with it. Probably the enrolment has not been officially transferred.

Sweet Clover in Summer.

1. I have a field of sod which has been down a long time. Would it do to plow it and sow sweet clover on it?
2. Would I get a crop to cut this year? Would it do to plow sod after haying and sow sweet clover to plow down in the fall? A. T.

Ans.—1. If this land is at all fertile it should be all right to sow clover on this spring-plowed land. It, of course, should be rolled and harrowed thoroughly.
2. If the season is favorable and the soil fertile, it is quite likely that the sweet clover will develop enough to cut this summer. It is doubtful whether clover following grass would be large enough by fall to be of use. However, it will depend very much on the season. Sweet clover makes a rapid growth, and in a warm, moist autumn, it might be quite serviceable for this purpose.

About Millet.

On what variety of soil does millet do best, and how should it be sown and at what time? J. O.

Ans.—Millet will do well on a variety of soils, but it is not a crop for which the best soil and best conditions are generally provided. It is used more as a supplementary crop, or one to be sown when other crops have failed. A loose, friable soil which will retain moisture is, of course, very suitable for millet, as it is for most crops. The land should be thoroughly prepared so the millet seed will germinate quickly, as the vitality of the seed is soon lost. It is wise to sow about 25 pounds of seed per acre. If sown in late June or early July, an early variety will probably be most satisfactory. The Hungarian Grass is a good variety for that season. If seeding be done in May, or about the first of June, a late variety is preferable. Japanese Panic is recommended for that time. On page 804, in the issue of May 13, 1915, a few notes about millet were published.

The peevish youth examined the bill of fare critically for a moment, till he found something that was not on it. "Waitah!" he snapped, "Do you serve lobsters here?" "Y—yessah, boss," the negro assured him. "We serves everybody. What'll you hab?"

PEERLESS PERFECTION
is much heavier and stronger than common poultry netting. Peerless Poultry Fence is built just like our farm fence. It is the best Canada Fence made by Canadians and sold exclusively in Canada.
The Fence That's Locked Together
It's close enough to keep small fowl in and strong enough to keep large animals out. Securely locked together at each intersection of the wires. It's many times heavier and stronger than poultry netting, and being well galvanized, will last many years longer. Top and bottom wires are extra heavy. No top and bottom boards required. PEERLESS Poultry Fence is built so strong and heavy, that but half the ordinary number of posts are required. It gives you real fence service. Think of it—a poultry fence strong enough to withstand the combined weight of two big horses. And that without a top or bottom board either. If you are interested in such fencing, write us. Ask for our literature. We also manufacture farm fence and ornamental gates. Agents nearly everywhere. Live agents wanted in unassigned territory. THE BANWELL-HOXIE WIRE FENCE CO., Ltd. - Winnipeg, Man., Hamilton, Ont.

Clydesdales That Are Clydesdales
Three, four and five years of age, prize-winners and champions at Ottawa and Guelph, up to 2,100 lbs. in weight, with the highest quality and choicest breeding. When buying a stallion get the best, we have them; also several big, well bred, tried and proven sires from 7 to 12 years of age, cheap. SMITH & RICHARDSON, COLUMBUS, ONTARIO

CLYDESDALES AND PERCHERONS
I did not exhibit at any shows during 1914. I am still in the horse business, and at present have the best lot of Stallions and Mares I ever had at any one time, 29 head; 17 Clydesdales and 4 mares, 5 Percheron Stallions and 3 mares; a visit to my stable will convince you I have more high-class horses than can be found in any one stable in Canada and won't be undersold by any dealer in Canada; always a pleasure to show stock to intending purchasers, sale or no sale. T. H. HASSARD, MARKHAM, P.O., G.T.R. Locust Hill Station only 3 miles, C.P.R. Long-Distance Phone.

Royal Oak Clydesdales
Present offering: 5 imported mares (3 with foal by side), 2 yearling fillies (1 imp. and 1 Canadian-bred), 1 Canadian-bred yearling stallion, 1 Canadian-bred 2-year-old stallion, 1 Canadian-bred 6-year-old stallion. Also Berkshire Hogs of either sex, all ages. G. A. ATTRIDGE, MUIRKIRK, ONTARIO P. M. and M. C. Ry. L.-D. Phone, Ridgetown.

Imp.—Clydesdales, Stallions and Fillies—Imp.
We have had lately landed, an exceptionally choice importation of Stallions and Fillies. They have the big size, the clean, flat quality bone and the most fashionable breeding. Our prices are consistent with the times. JOHN A. BOAG & SON, QUEENSVILLE, ONTARIO

JUST LANDED CLYDESDALE STALLIONS JUST LANDED
I have just landed a new importation of Clydesdale stallions, in ages from 3 years up to the big, drafty kind that makes the money. I can satisfy any buyer no matter what the wants; a visit will convince. WM. COLOUHOON, Mitchell, Ont.

Special Price ABERDEEN-ANGUS Imported Cows
We are offering a few of our imported Angus cows with CALVES AT FOOT. Here is an exceptional opportunity to buy some choice stock at special prices. Come and make your own selection, or write us your wants and we will send you descriptions and pedigrees. A few choice Clydesdale teams LARKIN FARMS QUEENSTON ONTARIO Prices reasonable

Elm Park Aberdeen-Angus
We have a few bulls from one to two years. Cows with calves at foot by good bulls, also heifers, different ages. Address: James Dowman Box 14 Guelph, Ontario

1909 Canada's Champion Hereford Herd 1915
For the above six years at the leading shows from Toronto to Edmonton my herd has maintained its supremacy as the champion herd of Canada: American and Canadian bred bulls for sale, the highest attainment of the breed; also cows and heifers. L. O. CLIFFORD, Oshawa, Ontario

Robt. Miller Still Pays The Freight
And in addition he can furnish great, strong, thick fleshed Shorthorn bulls at a price that will surprise you. Many of them bred to head good herds and improve them. Many of them of a kind to get good feeders and great milkers, and all of them low down, thick and smooth with good heads and horns, that will grow into big weights and bring more money in the market than you are asked for them now. Some high-class heifers for sale too. Write for what you want. STOUFFVILLE, ONTARIO ROBERT MILLER.

Shorthorns and Clydesdales
Bulls of serviceable age all sold; have some good ones a year old in September, and are offering females of all ages. Have a choice lot of heifers bred to Clansman = 87809 =. Also four choice fillies, all from imported stock. L.-D. Phone. A. B. & T. W. DOUGLAS, Strathroy, Ont.

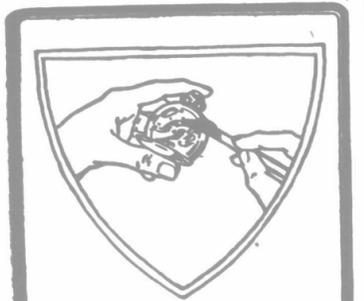
Shorthorns and Clydesdales
We have five young bulls of serviceable age that we will sell at moderate prices. In Clydesdales, we have eight imported mares with foals. We can spare some of these and will sell them worth the money or would consider some good Shorthorn females in exchange. We also have a two-year-old stallion and a pair of good yearling fillies. Station: Burlington Jct., G. T. R. J. A. & H. M. PETTIT, (formerly W. G. Pettit & Sons), FREEMAN, ONT. Phone Burlington

complete would
to \$150.
house only would
neighborhood of
barn would prob-
\$100.
W. H. D.

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sits around with
little. We think
as not laid any
when we lift her
liquid come from
strong odor like
what is wrong,
X. Y. Z.

Condition.
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READER.

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entian, ginger, and
be helpful. If the
d to pasture, with
ould soon recover.



YOU WOULDN'T PUT AXLE GREASE ON YOUR WATCH

THAT would be ridiculous —yet no more so than to use ordinary farm oil on your cream separator. This delicate mechanism requires a lubricant made especially for it. You must use

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BERKSHIRE PIGS

For Sale—Boars and sows, 9 months, 4 months and 3 months, from choice Imported English Stock.

LYNNORE STOCK FARM

F. Wallace Cockshutt - Brantford

Shorthorns For Sale

The Brant County Shorthorn Club offers for sale bulls and heifers of all ages, of the best breeding either singly or in car lots. For information address the Secretary.

James Douglas, Pres. Geo. L. Telfer, Sec
Caledonia Paris, R.R. No. 2

SHORTHORNS

bulls from 9 to 16 months including a high-class herd header dam from an Imp. English Duchess cow; dams are good milkers, priced very low to clear them out before Spring, also a few females.

Stewart M. Graham, R.R. No. 4, Lindsay, Ont
Lindsay C.P.R. and G.T.R. Stations.

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Herd headed by the two great breeding bulls Newton Kingleader (Imp.) 73783, and Nonparle Ramsden 83422. Can supply a few of either sex
KYLE BROS., DRUMBO, ONTARIO
Phone and Telegram via Ayr.

Oakland-60-Shorthorns

A great herd of dual-purpose always headed by selected bulls of the good kind. Present offering is 8 choice bulls from 8 to 14 months, also females. No big prices

John Elder & Sons :: Hensall, Ontario

1854 MAPLE LODGE STOCK FARM 1915

SHORTHORNS AND LEICESTERS

We have sold all the bulls advertised. Have a fine lot of lambs that will soon be ready for sale, all of the usual Maple Lodge quality.

(MISS) C. SMITH - Clandeboye, R. R. 1
Lucan Crossing one mile east of farm.

6 SHORTHORN BULLS

25 females, reds and roans, serviceable, best type and quality, size; cows milking up to 50 lbs
Prices easy

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FLETCHER'S SHORTHORNS

Present offering 3 choice roan bulls fit for service High-class herd headers, and females in calf.
Geo. D. Fletcher, Erin, R.R. No. 1
L.-D. Phone. Erin Sta., C.P.R.

Two Young Shorthorn Bulls

For Sale—good individuals ages 11 and 13 months, from first-class milking dams
T. HARDY SHORE, Glanworth, Ontario

Questions and Answers.
Miscellaneous.

Stallion Refuses to Work.

1. Horse refuses to cover sometimes. What is best to do with him? He is ten years old, and in good shape and healthy.

2. What should I feed him? I have tried several things, but in vain.

G. McK.

Ans.—1 and 2. This is probably due to overwork of the generative organs. Drugs are not to be recommended as a remedy. Allow the stallion to rest from service for a while, and feed on oats and good hay. Give regular and sufficient exercise. Read the article on page 578, in the issue of April 8, 1915. It outlines the care and attention a stallion should receive during the stud season.

Drainage Surveys.

In some farm paper a year or two ago I saw an article stating that the Ontario Department of Agriculture would assist any farmer who required his farm under-drained, to the extent of sending a competent man to survey and lay out the farm, or any part thereof, for the purpose of proper drainage. Please give me some information along this line as to how and whom I should apply.

H. C. B.

Ans.—More recent information than this has been published regarding the services of the Ontario Department of Agriculture. Apply to Prof. W. H. Day, Physical Department, Ontario Agricultural College, Guelph, Ont. This Department will consider your request, and provide a man to do the required work.

Paris Green and Arsenate of Lead.

1. I notice there are two kinds of arsenate of lead on the market, the powdered arsenate of lead and the acid arsenate of lead. I should like to know which is the better to use for controlling the potato beetle?

2. Is a pound of powder equal in poison to a pound of the acid arsenate?

3. About how many pounds of the powdered arsenate should go in fifty gallons of water? I used eight pounds last season of the acid lead arsenate in fifty gallons of water, and found it none too strong to kill the bugs.

4. Which kind is the easier mixed and works best in large spray tank?

5. Is a pound of arsenate of lead equal in poison to a pound of good Paris green?

6. Will the arsenate of lead kill bugs as quickly as Paris green?

7. Which is the easier on the foliage?

R. J. McR.

Ans.—1. It would be hard to discriminate between these two forms of arsenate of lead. The powder is considered to have a larger percentage of arsenious oxide, which is the real poisonous ingredient in Paris green, acid lead arsenate, or the powdered form.

2. Analysis usually shows the powdered form to possess a higher percentage of arsenious oxide than does the acid lead arsenate.

3. The directions for use are usually printed on the container. It would be well to follow them.

4. Some growers say that the paste form or the acid lead arsenate is most easily mixed with water, but manufacturers of the powders do not admit this argument to be true. The claim for the paste is usually exaggerated, as the powder will readily mix with a small quantity of water.

5. No. Paris green usually has about 56 per cent. of arsenious oxide, which indicates the poisonous properties of the article. Lead arsenate usually varies from 13 to 17 per cent. arsenious oxide, but 15 or 16 per cent. is a very good test.

6. No. Arsenate of lead is not so likely to burn the foliage as Paris green, and it will adhere to the plants longer, but Paris green is usually more effective in controlling the potato beetle. About one pound of Paris green to forty gallons of water would do the work, but two pounds of good lime should be slaked and added to it in order to prevent burning.

7. Arsenate of lead is probably easier on the foliage, unless plenty of lime is added to the Paris green.

Deering New Ideal The Binder for Your Fields



A Deering New Ideal binder will give you the best possible results at harvest time. However lodged or filled with green undergrowth your crops are, the Deering binder harvests all the grain.

The Deering binder elevator, open at the rear, delivers the grain properly to the binding attachment. Because the elevator projects ahead of the knife it delivers grain to the binder deck straight. A third discharge arm keeps the bound sheaves free from unbound grain.

The T-shaped cutter bar is almost level with the bottom of the platform and allows the machine to be tilted close to the ground to pick up down and tangled grain without pushing trash in front of the knife. Either smooth section or serrated knives can be used. The Deering knoter needs no recommendation.

The Deering local agent will show why Deering New Ideal binders and binder twine are always satisfactory. See the agent, or, write to the nearest branch house for a catalogue.



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MAPLE SHADE SHORTHORNS



Nine young Bulls around a year old for sale. Sired by Archer's Hope, the winner of First Prize in Aged Bull Class at both Toronto and London, 1914. Archer's Hope is undoubtedly the best individual and the best breeding bull that ever stood at the head of this herd.

WILL. A. DRYDEN, Brooklin, Ont. Brooklin G.T.R. and C.N.R. Myrtle C.P.R.

SALEM STOCK FARM HOME OF THE CHAMPIONS

Many of our Shorthorn bulls are good enough to head the best herds. Others big and growthy that will sire the best kind of steers. Elora is only thirteen miles from Guelph. Three trains daily each way.

J. A. WATT, ELORA, ONTARIO

GLENGOW SHORTHORNS

For this season's trade we have the best lot of young bulls ever bred. Wedding Gifts, Strathallans, Crimson Flowers and Kiblean Beautys, sired by Broadhocks Prime. These are a thick, mellow, well-bred lot. Heifers from calves up.

WM. SMITH & SON, COLUMBUS, ONTARIO

Blairgowrie Shorthorns

Having bought out two Shorthorn herds puts me in a position to have cattle suitable in breeding and ages for all who want to buy. Cows, heifers and bulls all fashionable bred.

JNO. MILLER - C.P.R. and G.T.R. - ASHBURN, ONT.

Scotch—SHORTHORNS—English

If you want a thick, even fleshed herd at 1914 Toronto National Show, and Raphael, Imp., grand champion at London Western Fair, 1913. For sale: 20 bull calves, 9 to 14 months old, several in show form, also 20 cows and heifers.

Mitchell Bros., Props., Burlington P.O., Ont. Farm 1/4 mile from Burlington Jct.

JOS. McCRUDDEN, Manager

"Thistle Ha"

Herd of Scotch Shorthorns. The oldest established herd in Canada is now offering for sale 10 young bulls from 10 to 18 months old. Some good enough to head the best pure bred herds and some suitable to get choice steers. All at very reasonable prices.

JOHN MILLER, CLAREMONT, ONT. Greenburn Stn., C.N.R. 4 miles. Pickering Stn., G.T.R., 7 miles

HIGH-CLASS SHORTHORNS

Honest representation and a square deal is our motto. We have still left some choice young bulls, bred in the purple and beef to the heels. Come and see them.

Richardson Bros., Columbus, Ont. Myrtle, Oshawa or Brooklin

H. SMITH, - HAY P.O., ONT.

12 SHORTHORN BULLS and as many heifers for sale. Write your wants.

You know the Harry Smith Standard.

Woodholme Shorthorns

For a high-class pure Scotch herd header write me; also one Scotch topped out of a 60-lb. dam, a show bull; too every one of these will please the most exacting.

G. M. Forsyth, North Claremont, Ontario, C.P.R.

TOP dress all your crops with Nitrate of Soda alone, no matter what other fertilizers you may have used. 100 pounds to the acre for seeded, and 200 pounds to the acre for cultivated crops will do the work. The increase will yield large profit over the cost.

Our really attractive and interesting books sent free. Write on post card for these money makers

WILLIAM S. MYERS, Director
25 Madison Avenue, New York

AN EVEN BALANCE

It takes 300 lbs. of BRAN to supply as much PROTEIN as is contained in 100 lbs. of **GOOD LUCK BRAND COTTON SEED MEAL**

For Prices and Filling Directions write to **CRAMPSEY & KELLY**

300 LBS. OF BRAN LARGEST IMPORTERS OF COTTON SEED MEAL IN CANADA

Cotton Seed Meal
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CALF MEAL
POULTRY FOODS, etc.

Write for prices.

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HOLSTEIN BULLS

Twelve months and under from R.O.P. and R.O.M. cows and by such sires as "King Segis Pontiac Duplicate" and "King Fayne Segis Clothilde." Settings of Indian Runner Ducks \$1.50 per setting.

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There is a Vast Difference Between Keeping **HOLSTEINS** and just keeping cows. ONE GOOD HOLSTEIN COW WILL DO THE WORK OF TWO OR THREE ORDINARY COWS. You save in feed, housing, risk and labor. Holstein cows milk longer, more per year, and more per life than any other breed. There's money for you in Holsteins.

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Sec'y H.-F. Association, St. George, Ontario

Maple Grove Holsteins

If you are in need of a bull to improve your dairy herd, and want one that you can feel proud of, then get a son of the great King Lyons Hengerveld.—You can buy him right.

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The Maples Holstein Herd

Offers bull calves from sisters of Calamity Snow Mechtild, at 2 years 15,000 lbs. milk, 722 lbs. butter; R. O. P. 2145 lbs. butter 7 days at 3 years. All calves sired by Canary Hartog. Two nearest dams 29.89 lbs. butter 7 days, two grand-dams average 115 lbs. milk in one day. Write: **Walburn Rivers, R. R. No. 5, Ingersoll, Ont.**

THE FAIRVIEW HOLSTEIN HERD offers ready-for-service sons of Homestead Colantha Prince—3 nearest dams average over twenty-nine pounds of butter a week; also daughters from one week to two years old. Priced right.

FRED ABBOTT, MOSSLEY, ONT., R.R. No. 1

Lakeside Ayrshires

The herd is headed by the well-known Auchbraun Seafoam (Imp.) = 45755 =. A few young bulls for sale from Record of Performance dams, imported and home-bred.

Geo. H. Montgomery, Proprietor
Dominion Express Building, Montreal
D. McArthur, Manager, Philipsburg, Que.

High-Class Ayrshires If you are wanting a richly-bred young bull out of a 50-lb.-a-day and over cow, imported or Canadian-bred dam or sire, write me. Females all ages. Prices are easy.

D. A. MacFarlane, Kelso, Quebec.

Questions and Answers.
Miscellaneous.

Onions—Celery—Heating—In-breeding and Towers.

1. On the advice of my groceryman I have planted some common store onions that were badly sprouted. We planted them by pulling or cutting each section apart and planting as usual. What can I expect from them, onions, tops, or seed?

2. Last year I tried celery. I planted it in good, mellow, garden soil, in a trench, spade deep. It all grew to a sort of stalk, and had, one might say, one circle of stems around the top, and nothing else but a top above the hill. I filled in the trench as it grew. By its height I thought I had fine celery, but was disappointed when digging it up to find a pithy stalk. Manure was spread over the garden, but there was very little in the bottom of the trench. I should like to know what to do in order to procure better celery.

3. I want to put a furnace in our house, which is T shaped. There is a cellar under all of it, partitioned in three parts. The kitchen, or bottom of the T, is on the north, but the handiest place for putting wood and furnace is in the west half of the front part. A plumber who saw it says to put the furnace under the kitchen, or pull out center walls, which are made of brick and stone, and place in the center, which we do not care to do unless it is best for heating. Also, to use kitchen cellar for general cellar, being most convenient in summer. Would one heating-pipe in the hall below, heat up-stairs of front part in a common-sized brick house of 25 years' standing?

4. What harm does it do animals to breed a heifer to its half-brother, both being from the same dam?

5. There are towers being built on elevated places from Quebec west. Occasionally there are red lights on the ones we know of in Simcoe and Grey counties. In one section they were said to be for drainage purposes and for observing, while in this district they are said to be for getting the bearing and levels of the country. In still another section they are said to be for an electric railway from Quebec to Lake Huron, and north to Hudson's Bay, I suppose. An explanation in "The Farmer's Advocate" would enlighten a great many of the readers in this part of the country at least.

Ans.—1. If the common onion which is usually used in cooking were planted, the result would be seed. Multiplier onions would give rise to top onions. Dutch sets would give rise to onions in the ground.

2. The cause of pithy stalks of celery may be explained in several ways. Land which is very rich in humus might produce pithy stalks, but it is probable that on this soil that it resulted from an inferior strain of seed. If seed were produced from celery which was inclined to grow pithy, or, in consequence of blight, had become pithy, the product would be inferior. Good garden soil well fertilized should produce a good quality of celery, provided the seed was selected from celery of the same quality. Not very much can be done to forestall this trouble except by thorough cultivation, prevention of blight, and the use of plants which were produced from good seed.

3. If a furnace is to be installed in the house, the heating of the home is the principal object in view. In city homes of ordinary size the furnace is usually in the center of the cellar, and in small houses in country districts this would probably supply very efficient heating. The other alternative is to place the furnace to one side, namely, towards the prevailing winds, which, in this country, are north and west. It would be wise to do a little extra work in the cellar in order to make the heating system efficient, as a poor furnace is a curse in a home. Not knowing the air space in the house, we could not recommend that one pipe placed in the hall below would heat all up-stairs. However, we believe that it would be insufficient. The plumber who looked over the house would be in a better position to advise than we.

4. There might not be any harm re-

DURABLE—Fire grates are three-sided last three times as long. Shaped in the

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Sunshine
Furnace to grind up clinkers when "rocked". See the McClary dealer or write for booklet.

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It preserves ensilage perfectly in all parts. Never needs painting or adjusting. Its hollow vitrified clay tile are impervious to air, moisture and frost. Reinforced by bands of steel laid in the mortar.

Write for a list of Natco owners in your province and for Catalog 4
National Fire Proofing Company of Canada, Ltd., Toronto, Ont.

HOLSTEIN CATTLE

Canary Mercedes Pietertje Hartog 7th heads our herd. His dam gave 116 lbs. milk in one day and 6197 in sixty days and made 34.60 lbs. butter in 7 days. There are more cows in our herd giving over one hundred lbs. of milk a day than any other in Ontario. We have both bulls and heifers for sale.

D. C. FLATT & SON
R. R. No. 2, HAMILTON, ONT. Long-distance Phone

Riverside Holsteins!

Herd headed by KING JOHANNA PONTIAC KORNDYKE, a grandson of PONTIAC KORNDYKE, and a brother of PONTIAC LADY KORNDYKE 38.02 lbs. butter in 7 days, 156.92 lbs. in 30 days—world's record when made.

J. W. Richardson, R. R. No. 2, Caledonia, Ontario

King Segis Walker whose dam granddam and great granddam have records over 30 lbs., the greatest producing and transmitting family of the breed, I have for sale some of his Sons combining the blood of Pont. Korndyke, King Segis and King Walker, the greatest trio of bulls obtainable. King Segis Walker's oldest daughter with her first calf has just completed a record of 24 lbs. butter in 7 days.

Send for Pedigree and Photo.

A. A. FAREWELL, OSHAWA, ONTARIO

HOLSTEINS At Hamilton Farms For Sale:—cows and heifers in calf to our great, herd sires Prince Hengerveld of the Pontiacs, son of King of the Pontiacs and King Isabella Walker, son of King Walker. If you want a grandson of King of the Pontiacs, write us. We have some splendid bull calves.

F. HAMILTON, St. Catharines, Ont.

Holsteins—You are too late to secure a son of Pontiac Hermes old enough for service; but NOW is the time to secure a calf for next season's work. You can save money by buying NOW. Also one son of May Echo Lyons Segis out of a 15,000 lb. dam.

E. B. MALLORY, BOX 66, R.F.D., BELLEVILLE, ONTARIO

LAKEVIEW STOCK FARM, Bronte, Ont. Breeders of **Holsteins** High-Class

E. F. OSLER, Prop. Offer for sale some choice young stock of both sexes. **T. A. DAWSON, Mgr**

CLOVERLEA HOLSTEINS—Herd headed by Pontiac Norine Korndyke. Our special offerings for this month are two choice bull calves; No. 1 born Nov. 6th, 1914; he is large and straight and evenly marked. No. 2 born Dec. 18, 1914; he is a fine calf, more white than black; he is from an imported heifer whose dam gave 17.98 lbs. butter in 7 days, and his sire's dam gave 116 lbs. milk in one day and 34.60 lbs. butter in 7 days. He is bred right. Either will be priced right if taken soon. Bell Phone. **GRIESBACH BROS., COLLINGWOOD, ONTARIO**

Constitution That Counts in any animal; our herd sires are noted for stamping that in their get and they are breaking the records. Choice young stock for sale. Write for prices.

M. L. Haley, M. H. Haley, Springford

CITY VIEW AYRSHIRES Every cow in this herd has a record. All young stock are from R.O.P. cows, sired by bulls from Record Dams. Bull calves and bulls fit for service; also your choice of females, excepting one and two-year-olds. Write, or come and see. **JAMES BEGG & SON, R.R. 1, St. Thomas, Ont.** 1/2 mile west of city limits.

DON JERSEYS

With 84 head to select from we can spare 5 mature cows, 2 yearling heifers in calf, sired by Fontaine Boyle and bred to Eminent Royal Fern, 4 yearling heifers not bred, and 4 yearling bulls besides a number of 6 months heifers. We never offered a better lot. **D. Duncan & Son, Todmorden, R.R. No. 1, Duncan Sta. C.N.O.**

Brampton Jerseys We are busy. Sales were never more abundant. Our cows on yearly test never did better. We have some bulls for sale from Record of Performance cows. These bulls are fit for any show ring.

B. H. BULL & SON, BRAMPTON, ONTARIO

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15 ⁹⁵
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ABSOLUTELY ON APPROVAL

The bowl is a sanitary metal, easily cleaned. Different from this picture, which illustrates our large capacity machine. Shipments made promptly from **WINNIPEG, MAN., TORONTO, ONT., and ST. JOHN, N. B.** Whether your dairy is large or small, write for our handsome free catalog. Address: **AMERICAN SEPARATOR CO. BOX 3200 Bainbridge, N. Y.**



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Angus, Southdowns, Collies

Special for this month
Collie Pups.
Robt. McEwen, - Byron, Ontario

SAVE \$1.75 on Every barrel of **SALT**

For your stock get "MEDICO"—mix it yourself with common salt. Cheapest and most effective way to kill worms. Write for "Form Destructive" free on request. **MR. COOPER & NEPHEWS, 184 W. Huron Street, CHICAGO**

OXFORD DOWN SHEEP
Shorthorn Cattle, Yorkshire Hogs—Present offering: Lambs of either sex. For prices, etc. Write to **John Cousins & Sons, "Buena Vista Farm" - Harriston, Ontario**

Sheep, Swine and Seed Corn—Young stock of both sexes in Dorset Horn and Shropshire sheep and in Swine: Poland Chinas, Duroc Jerseys, Berkshires and Chester Whites. Also Seed Corn, all varieties. Consult me before buying. **Cecil Stobbs, Leamington, Ont. Phone 284, M.C.R., P.M., & Electric Ry.**

BERKSHIRES AND JERSEYS
Berkshires from prize-winning dams, Guelph and Toronto. Herd headed by Mountain Pat, 1st aged class and champion at Toronto in Aug. and Nov. and at London 1913. Young stock for sale; prices low. **Ira Nichols, Box 988, Woodstock, Ont.**

TAMWORTHS
25 young sows, bred for spring farrow and a few choice young boars, registered. Write for prices before buying elsewhere.
John W. Todd, R.R. No. 1, Corinth, Ontario

Morrison Tamworths and Shorthorns—Bred from the prizewinning herds of England. A choice lot of young sows to farrow in April, dandies and young boars, also choice young bulls and heifers in calf bred by Proud Royalist (Imp.) from extra choice milkers. **Chas. Currie, Morrison, Ont.**

Cloverdale Large English Berkshires
Sows bred, others ready to breed; boars ready for service; younger stock, both sexes, pairs not akin. All breeding stock Imp. or from Imp. stock. Prices reasonable. **C. J. Lang, Burkton, Ont. R.R. 3**

IMPROVED YORKSHIRES
We are offering a few extra choice Brood Sows in pig, due between May 1st and June 15th. These Sows are priced very reasonably, and will sell in short order. We have a few young Boars fit to head any herd. **Pomona Farm, Cobourg, Ont.**

Pine Yorkshires Bred from prize-winning stock of England and Canada. Have a choice lot of young pigs of both sexes, pairs not akin, to offer at reasonable prices. Guaranteed satisfaction.
Joseph Featherston & Son, Streetsville, Ont.

Poland-China, and Seed Corn—Choice stock of any age, either sex, both breeds. A limited quantity of A1 seed corn, White Cap and Leamling. Order early and avoid disappointment. Prices easy. **Geo. G. Gould, Essex, Ont., R.R. 4.**

Elmdale Chester Whites
Choice Stock of various ages; among these a few pairs not akin, nearly 10 weeks of age.
JOHN POLLARD, - R 4, Norwich, Ont.

Elizabethville Tamworths
For Sale—One choice year old boar and a nice lot of young pigs, both sex, 8 weeks old.
Write for price—
POWELL BROS., - Elizabethville, Ont.

sult from this severe in-breeding. Many breeds of stock have been built up through an intelligent and careful use of the practice of in-breeding, yet it cannot be indiscriminately used. If there are any weak points in this strain of cattle which you now have, they are quite sure to be accentuated in the offspring. Furthermore, conditions and weaknesses are liable to crop out that were never noticed before. The results might be all right or they might be all wrong.

5. It is generally considered that these towers are erected in order to supply the Government with information about the topography of the country. They are, of course, being erected by the Government, who will make as much use of them as possible. Information regarding their purpose and use is not widely or willingly distributed.

Questions and Answers. Miscellaneous.

Date for Stallion Enrolment.

Would you please tell me, through the columns of your valuable paper, if it is too late to have a stallion enrolled. If not, to whom should I write?

A SUBSCRIBER.

Ans.—Write to R. W. Wade, Chief of the Live Stock Branch, Parliament Buildings, Toronto.

Dandelions—Trouble With Calves.

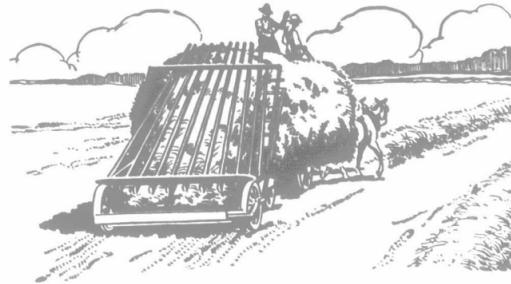
1. Do dandelions come from root as well as seed?

2. We had some trouble with calves this spring which we did not understand. One calf, a month old, and fed on three quarts whole milk, night and morning, and sometimes a little at noon, and good clean hay, bloated. The bloat was not real bad, but the calf did not care about drinking, and for weeks after it seemed dull and not playful like the others, although it ate well. We gave it soda, which seemed to take the bloat down. It laid down most of the time and puffed as though warm. It has never done as well since this sickness. It was a quick drinker, and we thought perhaps that had something to do with the trouble. Another calf which was fed whole milk and got some of the first milking was all right in its bowels for three or four days, and then became constipated. We gave it nothing, and as soon as its bowels moved it scoured badly and passed a lot of blood. We gave castor oil to heal, and some ground cloves and boiled milk. It got well after a week or so, and was all right till a few nights ago, when it was bloated, and in the morning it had scours. It is all right again, and we gave nothing to it. It is almost three weeks old. Could you give cause and remedy for the trouble?

A SUBSCRIBER.

Ans.—1. Fall dandelions reproduce by seed, or by a division of the crowns of the root. The common dandelion has a tap root, of which no part will grow when broken off below the crown.

2. The bloating and diarrhea are probably both due to indigestion. In case of bloating, give sufficient purgative to cleanse the bowels. Where Epsom salts are used, four to six ounces, with two drams of ginger, would be sufficient. With the whole milk feed about one-sixth as much lime water. This may be prepared as follows: Take a small quantity of lump lime and slake it in a pail, then fill the pail with water and allow it to stand. The clear water on top is what one should use. A certain quantity of water will only dissolve so much lime, so there will be no difference in the strength so long as plenty of lime is used. The undissolved lime will settle to the bottom. In cases of severe diarrhea where the patient is not too weak, it is well to give a dose of castor oil to remove any irritant. After this, give two teaspoonsful of laudanum in a little fresh milk every four hours until the diarrhea ceases. After this, in the milk give lime water as recommended for bloat. There is a contagious form of diarrhea, but it usually affects only small calves. In order to be safe, it would be advisable to clean the pens and whitewash the floor and walls. In all cases, see that the pails and utensils are clean.



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These lubricants—each the best that can be manufactured for its particular purpose—carry the guarantee of the oldest oil-refining company in Canada.

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ADAM THOMPSON, R.R. No. 1, STRATFORD, ONTARIO
Shakespeare Station, G.T.R.



BERKSHIRES---Woodburn Stock Farms

We are offering for immediate sale: 25 choice boars ready for service, 25 young sows bred. These are of first quality from our prize-winning herd.
E. BRIEN & Sons, Proprietors - RIDGETOWN, ONTARIO



LARGE WHITE YORKSHIRES

Have a choice lot of sows in pig. Boars ready for service and young pigs of both sexes supplied not akin at reasonable prices. All breeding stock imported or from imported stock from the best British herds. Write or call.
H. J. Davis, Long-Distance Phone, C.P.R., G.T.R. Woodstock, Ont.

DUROC JERSEY SWINE, JERSEY CATTLE

In Duroc Jerseys we have either sex of any desired age, bred from winners and champions of generations back. In Jerseys we have young cows in calf and young bulls, high in quality and high in producing blood.
MAC. CAMPBELL & SON - NORTHWOOD, ONTARIO

NEWCASTLE TAMWORTHS AND SHORTHORNS

Boars and sows all ages, sows bred, others ready to breed, all descendants of Imp. and Championship Stock. Several choice young bulls from 10 to 16 months old and a few calves recently dropped, all at reasonable prices.
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ELMHURST LARGE ENGLISH BERKSHIRES

From our recent importation of sows, together with the stock boar Suddon Torredor we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.
H. M. VANDERLIP, Breeder and Importer, CAINSVILLE P.O., ONTARIO
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Make every negative more valuable by permanently recording, at the time of exposure, the all important date and title. It's a simple and an almost instantaneous process with an

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Whatever is worth while in hand camera photography is found in the Kodak. So simple that the amateur can make good pictures from the very start, using dependable, non-breakable Kodak films with which the camera loads in daylight. The cameras themselves are accurate and reliable in every detail, the lenses are of the highest grade, and the shutters work with a precision that is a mechanical delight. Kodak films may be developed without a dark-room or may be mailed to your finisher—the Kodak printing processes are simple in the extreme. Indeed Kodak has come to mean "photography with the bother left out," and it's less expensive than you think.

The latest Kodak feature is the Autographic idea. A little door in the back is opened and you write on the red paper of the Autographic Kodak cartridge any data that you like—the date or the title of the picture, or perhaps you photograph a friend and then he writes his name on the red paper. Or you can write down the details about the exposure, for future guidance—the condition of light, the shutter speed and the stop opening used. In photographing the children you write down their age at the time the picture was made. In using the Kodak in a business way, there are always details of the utmost importance that can be jotted down which will add to the future value of the photographic record. When the date or title or whatever it may be that is written on the red paper, is exposed for a second or so to the sky the door is closed again, and upon development such writing is found to be permanently imprinted on the film—occupying the intersecting space between negatives.

Whether photography interests you from the business side, or for the home and travel pictures or from the standpoint of the pure pleasure of picture-taking—the camera becomes doubly useful, doubly fascinating if it has the Autographic feature. There's no extra charge for Autographic film, and Autographic Kodaks are sold from \$7.00 up.

Ask your dealer or write us for "Kodak on the Farm," a beautifully illustrated booklet that you will enjoy. There is no charge.

CANADIAN KODAK CO., LIMITED 592 King St. W. TORONTO

Advertisement for Canadian Pacific featuring 'Ideal Vacation Route' with details about reaching Point-au-Baril, French and Pickerel Rivers, Severn River, Muskoka Lakes, Rideau Lakes, and Lake Ontario Resorts. Includes a general change of time for May 30 and contact information for M. G. Murphy.

Advertisement for 'Sunny Brae Yorkshires' featuring 'The Imperial Life Assurance Company's big advertisement in next week's issue entitled "The Groom's Present to the Bride"'. Includes contact information for W. T. Davidson & Son.

Advertisement for Chiclets chewing gum, described as 'Really Delightful' and 'The Dainty Mint-Covered Candy-Coated Chewing Gum'. Promotes 'Make a Corner Cosy' with coupon packages and notes 'Made in Canada'.

Advertisement for 'The Groom's Present to the Bride' featuring a message from the Imperial Life Assurance Company.

Trade Topics. RESUMPTION CANADIAN PACIFIC GREAT LAKES SERVICE. Passenger service via the Great Lakes Canadian Pacific route from Port McNicoll will be resumed commencing Saturday, May 22nd. The service this season will be maintained by the steamers "Keewatin" sailing Tuesdays, "Manitoba" Wednesdays, "Alberta" Thursdays, and "Assinaboia" on Saturdays from Port McNicoll at 4.00 p. m. The "Manitoba" sailing Wednesdays, will also call at Owen Sound each sailing date at 10.30 p. m. Special trains will leave Union Station, Toronto, at 12.45 p. m., arriving Port McNicoll 4.00 p. m. Daily, except Friday. For reservations or other information regarding this service, consult any Canadian Pacific Agent, or write M. G. Murphy, District Passenger Agent, Toronto.

HOMESEEKERS' SPECIAL TRAIN LEAVES TORONTO 10.45 P. M. EACH TUESDAY, COMMENCING JUNE 1ST, 1915. For the accommodation of Homeseekers' and general tourist traffic to Western Canada, through train carrying tourist sleepers and colonist cars will, commencing June 1st, leave Toronto 10.45 p. m. each Tuesday until further notice, running through to Winnipeg. Attention is directed to the remarkably low round-trip fares in connection with Homeseekers' Excursions to Western Canada via Canadian Pacific Railway. Tickets are on sale each Tuesday until October 26th, inclusive, and are good to return within two months from date of sale. Apply to any C. P. R. Agent for full particulars, or write M. G. Murphy, District Passenger Agent, Toronto.

Gossip. Gavin Barbour & Son, Crosshill, Ont., write that through their advertisement in "The Farmer's Advocate" they have sold three Yorkshire sows, the buyers of which have expressed themselves as well pleased with their purchases. More just as good are offered.

As announced in these columns some time ago the Huron & Erie Loan and Savings Co., London, provided the sum of \$500 for an agricultural field crop competition in the County of Middlesex, Ont., this season. The number of entries received has proved very gratifying, and indicates a keen interest in growing the best possible crops. Every township in the county is well represented by well-known and successful farmers. The entries are distributed as follows: Wheat 135, oats 105, corn 83, potatoes, 58, and mangels 50, a total of 431. It is desired that the judging of wheat and oats will be completed early in July. The competition is bound to attract wide-spread interest, and will prove a helpful stimulus to field crop culture.

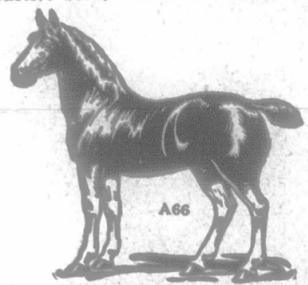
A "cub" reporter on a New York newspaper was sent to Paterson to write the story of the murder of a rich manufacturer by thieves. He spread himself on the details and naively concluded his account with this sentence: "Fortunately for the deceased, he had deposited all of his money in the bank the day before, so he lost practically nothing but his life."

"Your legal department must be very expensive." "It is," sighed the eminent trust magnate. "Still, I suppose you have to maintain it?" "Well, I don't know. Sometimes I think it would be cheaper to obey the law."

A man descended from an excursion train and was wearily making his way to the street-car, followed by his wife and fourteen children, when a policeman touched him on the shoulder and said: "Come along wid me." "What for?" "Blamed if I know; but when ye're locked up I'll go back and find out why that crowd was followin ye."

Make Your Lame Horse Sound, Like This

You Can Do It While He Works. We want to show you that there isn't any affection that causes lameness in horses that can't be cured, no matter of how long standing. We want to send you our instructive book, "Horse Sense" No. 2. We



also want to send you an expert's diagnosis of your horse's lameness free. Simply mark where swelling or lameness occurs on above picture and write us how it affects gait, how long lame and its age. We absolutely guarantee Mack's \$1,000 Spavin Remedy to cure Spavin, Bone or Bog Spavin, Curb, Splint, Ringbone, Thoroughpin, Sprung Knee, Shoe Boil, Wind Puff, Weak, Sprained and Ruptured Tendons, Sweeny, Shoulder or Hip Lameness and every form of lameness. We have deposited \$1,000 in bank to back up our guarantee. Cures while he works. No scars, no blemish, no loss of hair. F. B. Smith, Jamestown, Cal., says: "In regard to my sprained horse, am pleased to state that after using one bottle of Mack's \$1,000 Spavin Remedy, my 24-year old horse is entirely cured." Your druggist will furnish Mack's \$1,000 Spavin Remedy. If he hasn't it in stock, write us. Price \$2.50 per bottle and worth it. Address, McKellar Drug Co., Binghamton, N. Y.

Lyman Bros. Co., Ltd., Toronto, Ont. Distributors to Drug Trade.

(MADE IN CANADA)

SAVE-THE-HORSE advertisement featuring an illustration of a horse and rider, with text 'Trade Mark Registered'.

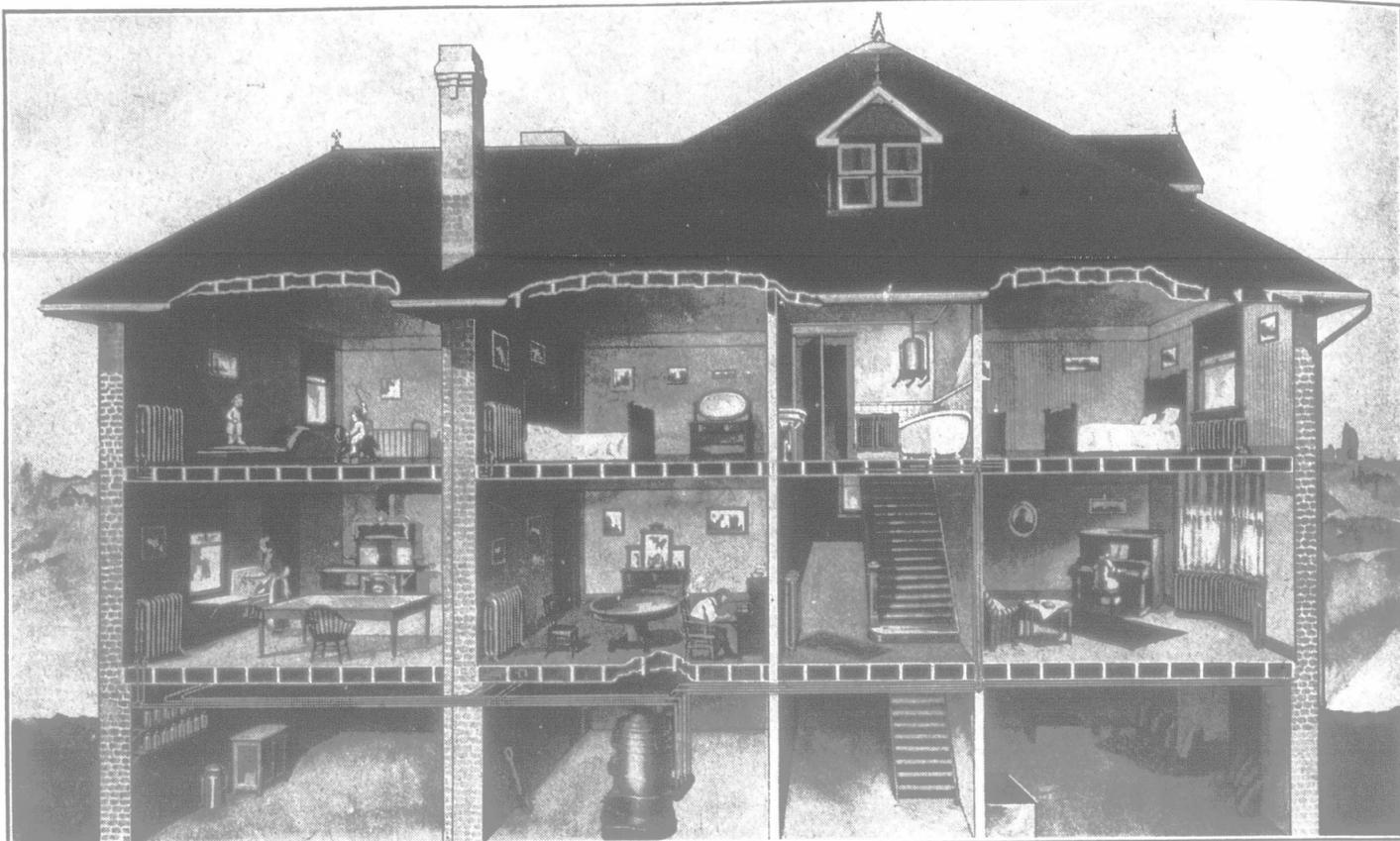
\$575 Profit Made With One Bottle Save-The-Horse

J. Edward Block, M.D., Physician and Surgeon, Campbellsport, Wis., Jan. 11, 1915, writes: "Please mail latest book. Your Save-The-Horse is superior to anything I have ever used. I bought for breeding, a beautiful black Victor mare for \$375. I got her at that price because one hind leg was enlarged twice its natural size. I paid out over \$100 for remedies and veterinary bills, and got no benefit. One bottle of Save-The-Horse spavin remedy removed all swelling permanently, and I sold her for \$950 cash. I have another mare that had tried to race two seasons and couldn't, so last year I sent her to the farm; Save-The-Horse was used for three weeks, we started training, she raced every week, got record of 2:13 3/4 and could trot in 2:10 before season was over." For 19 years, throughout the Whole World, Save-The-Horse has stood up and "MADE GOOD" under every test. Every Bottle Sold with signed Contract-Bond to return money if remedy fails on ringbone, thoroughpin, SPAVIN, or ANY shoulder, knee, ankle, hoof or tendon disease. No blistering or loss of hair. Horse works as usual, but write and we will send our—BOOK—Sample Contract and Advice—ALL FREE to (Horse Owners and Managers—Only.) Address:

TROY CHEMICAL CO., 145 Van Horn St., Toronto, Ont. Druggists sell Save-The-Horse WITH CONTRACT, or we send by Parcel Post or Express paid.

SHIP US YOUR CREAM advertisement from The Berlin Creamery Co., Berlin, Canada. We supply cans and pay all express charges within a radius of 100 miles of Berlin. Send a statement of each shipment. Pay every two weeks. WRITE FOR FULL PARTICULARS.

Cream Wanted advertisement from Valley Creamery of Ottawa, Limited, 319 Sparks Street, Ottawa. We are offering highest prices for cream from any point on C.N.R., C.P.R. or G.T.R., within 175 miles of Ottawa. We furnish cans and pay all express charges. Write for particulars.



Hot Water Heating on the Farm—Why Not?

The Gurney Foundry Co. Limited, Toronto, have devoted much time and thought to the question of making hot water heating practical, convenient and inviting for the farm home.

This side of farm life has not yet had the attention it deserves. Full particulars, illustrations and farmers' letters have been put into a special pamphlet which every reader of the "Farmer's Advocate" is asked to send for to-day.

The average Canadian farm house is far from being a place of genial warmth and comfort for a good five months in the year. It's because the engineering problem of heating the home has been handled from the wrong end. Hot air can't do it. Hot water can. We want to send you the proofs.

The better-class farmer is a business man. He believes in labor-saving devices for farm work, and in housing his stock in clean, warm, comfortable barns. He is just as big a believer in having his own home warm and comfortable, because it pays, and we believe that all he wants is to be shewn the way. The Gurney Hot Water Heating System is now ready to put city-home warmth into your home at probably only a fraction of the cost you thought necessary.

What does hot water heating mean? It means every nook and corner of your home, from cellar to garret, filled with the gentle, natural, even warmth of a beautiful September day. No drafty corners. No chilling halls and stairs. No rooms that stay for weeks so cold that no one can enter them. No rheumatism, colds and misery from barn-like bed-rooms.

Hot water heating by the Gurney System means COMFORT. It means a home the young folks are glad to stay in, that hired help want to work in. It means that no one has to go down stairs and get the stove and range going before the rest of the family dare get up. Old style hot air furnaces mean cumbersome fuel, burnt-up unhealthy air, dirt, noise and waste.

A Gurney Hot Water Heating System raises the value of your property. It saves money in fuel and time handling it. It preserves health. It means COMFORT for you, your women folks, your children, your servants. Better class farmers all over the country are waking up to these facts. We want you to write us today for our pamphlet "City Comfort for Country Homes" and find out for yourself just what it will mean to have city comfort in YOUR home. A postal will do. Address:

Some people think Hot Water Heating is extravagantly costly to instal. It certainly is not, but no matter what it actually costs, it doesn't cost you one cent to find out all about it, and its advantages are so great that you certainly ought to get the facts. The new Gurney book has them.

The Gurney Boiler can be installed to burn either coal or up to 40 inch sticks of cord-wood. It needs no more attention than any ordinary kitchen range. No cleaning ashes and carrying fuel all through the house. Dirt and work saved. The famous Gurney "Economizer" is a device to save fuel and control drafts that is so simple and so effective that your women folks, or any boy or girl, can keep the heat under perfect control.

And you don't need a "water system" to go with the Gurney boiler. All you need to do is to fill up the radiators in the Fall with three or four pails of water and that same water lasts all through until the Spring. You see you put the Boiler in the cellar, and a hot water holder or "radiator" in any or every room, hall-way, etc., throughout the house. Pipes connect these radiators with the boiler and the heat keeps the water circulating all through the system, the hot water going and the cooled water returning to be reheated, over and over again.

Now these pipes and radiators can be very easily installed and the work is so well planned out that the amount of carpentry is inconsiderable. Any home can be equipped.



The Gurney Foundry Co., Limited, 502 to 550 West King Street, Toronto

Also at Montreal, Hamilton, Winnipeg, Calgary, Edmonton, Lethbridge, Vancouver.

