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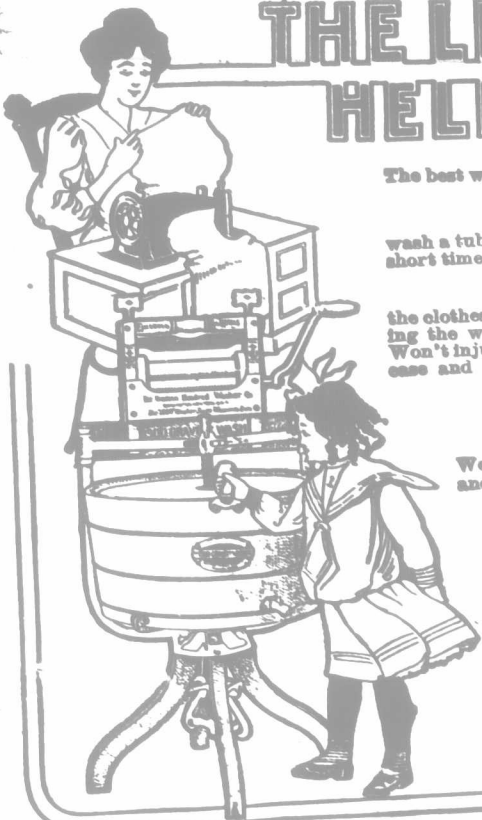
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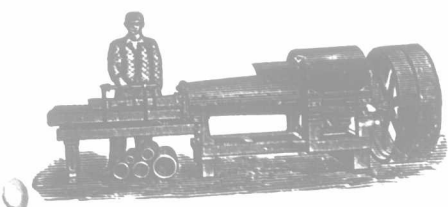
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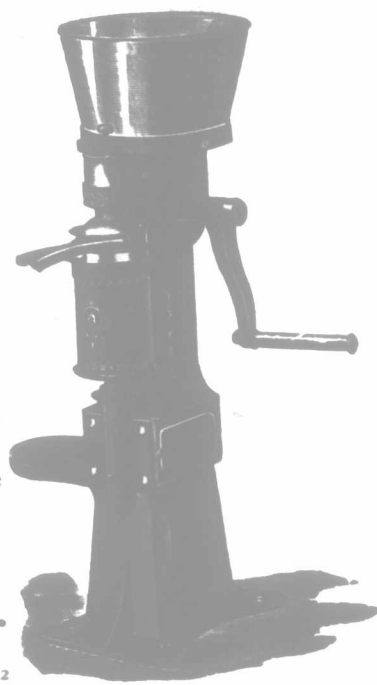
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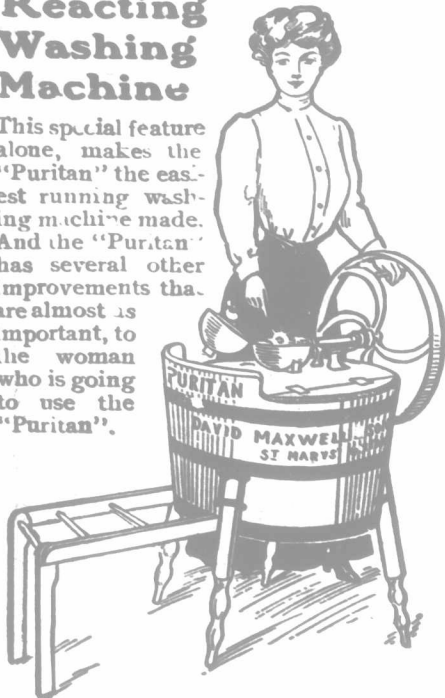
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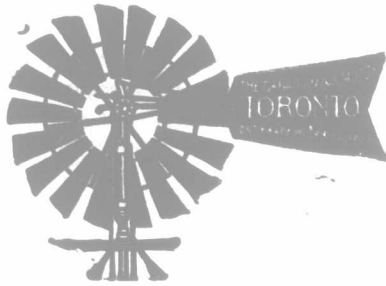
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THE SPICE OF LIFE.

The Child—Are you the trained nurse mother said was coming?
The Nurse—Yes, dear; I'm the trained nurse.
The Child—Let's see you do some of your tricks.

"Yes," remarked the race horse, "all my achievements have been due simply to putting my best foot forward." "Yes," replied the mule. "Now I find that I accomplish most by putting my best foot backward."

"If your mother bought four baskets of grapes, the dealer's price being a quarter a basket, how much money would the purchase cost her?" asked the new teacher.

"You never can tell," answered Tommy, who was at the head of his class. "Ma's great at bargaining!"

The following dialogue may prove interesting to a certain class of people:
Sportsman No. 1—"I was present at the weighing of a thirty-five pound pike." Sportsman No. 2—"I caught a thirty-seven pound pike myself." Sportsman No. 1 (enviously)—"Sorry I didn't hear your yarn first."

"What do you mean by riding behind my automobile?" demanded the angry chauffeur.

"Excuse me, boss," replied Dandy Bumpers, tipping his crownless hat, "but der was a slight grease stain on me starry vest an' I thought de fumes of de gasoline might get it out."

A hearty laugh had gone almost around over the story of the fisherman who, to locate the place on the lake where he had had good luck, cut a nick in the side of his boat.

"Almost around," for the Englishman sat solemn and silent. About five minutes later, however, he awoke, with a roar of laughter, and when asked the trouble, replied:

"Well, wouldn't it be a corking good joke if that fisherman got a different boat the next time he went out!"

An Irishman was one day told to put up a signboard on which were the words: "To Motorists—this hill is dangerous."

Away went Mike with the signboard and placed it at the bottom of a very steep hill. A few days later his employer went to see how the board was put up, and, finding it at the bottom of the hill, sought and found Mike.

"You blooming fool!" he cried, "why didn't you put that sign in the right place?"

"Shure and ain't it?" asked Mike. "Don't all the accidents happen at the bottom?"

Two clergymen were once discussing the process of sermon-writing, when one of them remarked that the only really hard propositions for him were the introduction and the conclusion.

"You remember," he said, "the sermon I preached at the installation of Brother Morley, not long ago? Well, I flattered myself that the exordium and the peroration of that sermon were pretty well done."

"Yes," responded the other divine, with a faint smile, "but, as I remember, they were awfully far apart."

A POSER.

A colored woman was on trial before a southern magistrate, charged with inhuman treatment of her offspring.

Evidence was clear that the woman had severely beaten the youngster, aged some nine years, who was in court to exhibit his battered condition.

Before imposing sentence, his honor asked the woman whether she had anything to say.

"Kin I ask yo' honah a question?" inquired the prisoner.

The judge nodded affirmatively.

"Well, then, yo' honah, I'd like to ask yo' whether yo' was ever the parent of a puffed-up wuthless cullud chile?"

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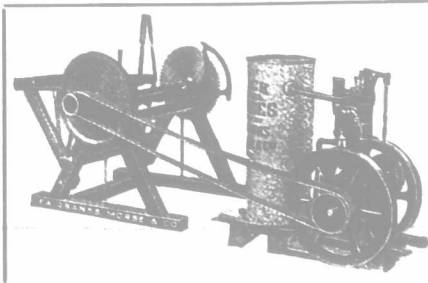
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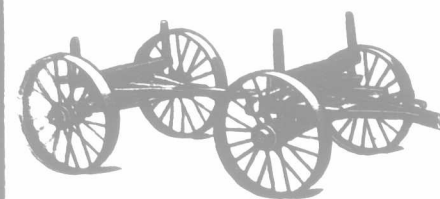
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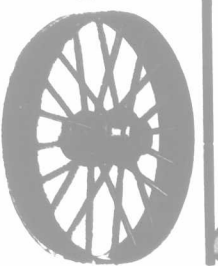
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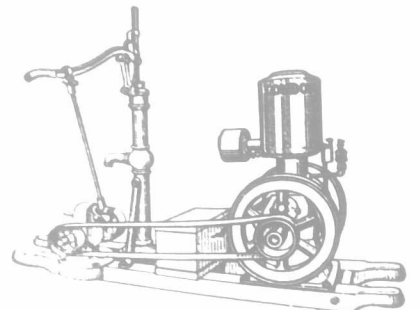
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The Farmer's Advocate and Home Magazine

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Vol. XLIII.

LONDON, ONTARIO, NOVEMBER 19, 1908.

No. 843.

EDITORIAL

FARMING AS AN EDUCATION.

An educated farmer is an educated man. That is to say, he who has mastered the problems of the farm has acquired a stock of knowledge and, what is better, a degree of intellectual efficiency that lift him above the level of the common run of people, and mark him as a man with a developed or educated mind. Education does not consist in a knowledge of reading, writing, arithmetic, geography, history, and the like, however useful and advantageous these subjects may be in an elementary course of study. They are all good, and have their proper place, but it is worth remembering that there are men who, though possessing little of the knowledge commonly taught in schools, are yet educated men. They have acquired knowledge of another character in the world of agricultural, industrial or commercial activity, and, in acquiring it, have trained their minds to a greater degree of efficiency than that of some fellow citizens who had all the privileges of the school. There are problems on every farm which will tax the ingenuity of the greatest intellects to solve to the best advantage. And yet they can be solved. It is a question of bringing thought and study to bear upon them, of reading, conversing, and listening to lectures on agricultural subjects; above all, of cogitation and earnest thought, followed by definite, purposeful action. The drainage of the fields, the tillage of the land, rotation of crops, the maintenance of fertility of the soil, the harvesting and disposition of the crops, the breeding and feeding of live stock, the general business and the science of farming, afford opportunities for the exercise of the best intelligence. Every farm offers its own problems; and, in solving these, the way is open to a most practical and self-satisfying education. Study the problems of your farm.

RAW GROUND PHOSPHATE ROCK AS STABLE ABSORBENT.

Leading American authorities have been strongly recommending the use of raw ground phosphate rock as an absorbent in stables, about a pint to a cow twice a day being the quantity advised. The advantages claimed are twofold: By absorbing the urine, the phosphate insures the retention and application to the soil of some nitrogen that would otherwise escape in volatile gaseous form; and in the second place, the phosphate itself contains an important element of soil fertility—to wit, phosphorus.

There is a good deal of phosphorus in most of our soils, but the usual systems of stock husbandry and grain-raising, as practiced on our farms, tend to deplete the supply, so that on many old-cultivated soils the proportion of this element existing in available form is more or less deficient, resulting in considerably reduced yields of grain and clover. It is thought that deficiency of phosphorus in the soil, and consequently in the feed produced on certain farms, is in a measure responsible for the depraved appetite which induces in cattle the habit of chewing bones, pieces of wood, etc. In some cases of which we have personally been told, it is related that applications of phosphates to the soil have been followed by a cessation of such habit in the cattle. However this may be, we do know that many of our soils are benefited by applications of phosphatic fertilizer, and that on farms where plenty of bone meal or other phosphatic fertilizer is used, more particularly when used along with potassic fertilizers and lime, the yields of grain and clover have been increased.

Now, there are various forms in which phosphorus may be applied to the land, but the cheapest is untreated ground rock phosphate. This material has the disadvantage of being quite insoluble, and hence is but slowly rendered available in the soil. If the raw rock is merely spread on the land, little or no result may be seen for some time, but it is asserted that when this raw ground phosphate rock is mixed with manure, the fermentation forms certain acids that set free or render available the phosphorus in the rock. Thus we see that, not only is it good for the manure to have the ground rock used as an absorbent, but it is also good for the phosphate to be applied to the land in this way rather than alone. When not used in the gutter, it may be mixed with the manure in the pile, at the rate of 100 pounds to the ton.

The use of raw ground rock phosphate as an absorbent in stables is commended by American experts, and approved by such reliable Canadian agricultural chemists as Prof. Harcourt. It is strongly endorsed by the editor of Hoard's Dairyman, who has used it on his farm, and we feel justified in urging Canadian farmers to give it a trial. We have taken the trouble to inquire what would be the cost in Canada, and the well-known and reputable firm, the W. A. Freeman Co., of Hamilton, Ont., inform us that they carry it in stock, and sell fine-ground rock phosphate, carrying about 68 per cent. of bone phosphate, at \$14 per ton in Hamilton. There is reason to believe that on many farms it would prove an excellent investment at this price, and we trust many of our readers will try it and report results.

THE WINTER FAIRS.

The long list of autumn shows having had their day, the coming winter fairs now call for attention from farmers, feeders and breeders. In many respects these winter shows are the most interesting and important. As conducted in Canada, they are essentially educative in design and character, the exhibits being mainly commercial stock, designed for the butcher's market, competing for preference on the basis of suitability for that trade and purpose, the animals in many cases being compared both alive and in the dressed-carriage form, while in the lecture-room, in addresses by expert breeders, feeders and purveyors, the most approved methods in all branches of the business are explained and discussed. The constantly increasing interest manifested by the ever-growing crowds attending these events from year to year, is the best indication that they meet the approval of the people and are being conducted on sensible and sound lines. The International Live-stock Show, at Chicago, while partaking more largely of the spectacular, and less of the practical and educational elements, is certainly the greatest of its kind, and is well worth to the visitor what it costs to attend. There not only is seen breeding stock of the best in vast numbers, in the finest show-yard condition, and representing many breeds, but also finished fat stock of many varieties, in car-load lots, as well as individual entries. The horse-show section of this great event, the dates for which are Nov. 28th to December 10th, also adds greatly to its attractiveness, and makes it the crowning function of its sort on the American continent.

The Maritime Provinces' Winter Fair, at Amherst, Nova Scotia, the dates for which are Nov. 30th to Dec. 3rd, and which is conducted on similar lines to that at Guelph, has steadily improved in character and interest, and the prospect is that this year's event will eclipse all its predecessors. The Ontario Provincial Live-stock, Dairy and

Poultry Show, at Guelph, is slated for Dec. 7th to 11th. The classification of stock in the prizelist for this event has been considerably enlarged and extended, several special classes for amateur exhibitors have been added, a strong staff of lecturers has been engaged, the dairy and poultry sections give promise of being better than ever before, and everything points to a very successful show. The reduced railway rates arranged for these events render the expense of attending moderate, and the favorable season of these shows, together with that for Eastern Ontario, at Ottawa, January 18th to 22nd, will afford a good opportunity for a pleasant and profitable outing for farmers and their families.

THE LATE DR. FLETCHER.

Canadian agriculture has lost one of its best friends by the death, on Sunday, Nov. 8th, of Dr. James Fletcher, Dominion Entomologist and Botanist, Central Experimental Farm, Ottawa. Dr. Fletcher was justly ranked as one of the leading economic biologists of America, while, as a man, his splendid personal qualities had made him a host of friends. Enthusiastic, kindly and sympathetic, with an excellent memory for faces, he possessed the priceless faculty of popularizing his subjects, thus imparting to his audiences and readers a large stock of information in terms which even children could not fail to understand. The value of his work to Canadian agriculture, in the fight against plant and insect foes, cannot be estimated. By lectures, conversation, articles and bulletins, he systematized and disseminated a mass of helpful knowledge which has become woven into the best agricultural theory and practice. His timely identification of the brown-tail moth, which was found in Nova Scotia a year ago last summer, was, no doubt, of great value to that Province in enabling it to fight the pest before it had gained greater headway; and this is but one instance out of thousands where his expert skill and knowledge have served us to good purpose. The economic value of his work alone must be reckoned by the millions of dollars. One of his most admirable traits was his dignified simplicity. "Farmers sometimes address me as the Entomologist and Botanist," he used to say. "I had rather they called me the bug-and-weed man." Especially will he be remembered by the thousands of school teachers who, as students of the Ottawa Normal School, found their greatest delight in trooping after him through woods and over fields, receiving inspiration in nature-study, and useful hints as to injurious weeds and insects.

Dr. Fletcher was born at Ashe, near Wrotham, Kent Co., England, on March 28th, 1852. He was educated at King's School, Rochester, Eng., and came to Canada in the service of the Bank of British North America in 1874. In 1876 he became librarian at the Parliament Buildings, Ottawa, and from 1884 until 1887 acted as Honorary Dominion Entomologist to the Department of Agriculture. In the latter year he was transferred to the position at the Experimental Farm which he held until his death. He filled at different times the offices of president of the Ottawa Field Naturalists' Club, president of the Association of Economic Entomologists, and of the Ontario Entomological Society, and honorary secretary and honorary treasurer of the Royal Society of Canada. He was elected a Fellow of the Linnæan Society in 1886, received the honorary degree of LL. D. from Queen's University in 1896, and attended as delegate the annual meetings of the American Association for the Advancement of Science. He was also the author of many reports and papers relating to insect and plant life in Canada.

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JOHN WELD, MANAGER.

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AMERICAN SUBSCRIBER'S OPINION.

The great majority of subscribers in Canada consider "The Farmer's Advocate" rare value at \$1.50 per annum. We have also a considerable number of readers across the International Boundary who cheerfully pay not only a dollar and a half, but the extra dollar for postage now necessary on papers mailed from Canada to points in the United States. Here is an opinion lately expressed by one of these American subscribers:

"You will please find enclosed \$2.50 for a renewal of my subscription to 'The Farmer's Advocate.' Your paper is certainly O. K. I take a number of others from the States, and they are not in the game compared with yours for good A-1 common-sense reading and instructive matter."—[From J. Arthur Sylvester, Pa.]

DUAL - PURPOSE ABERDEEN - ANGUS.

The desirability of the dual-purpose function among the recognized beef breeds gains increasing recognition. An American advocate of the Aberdeen-Angus urges Doddie breeders to develop the milking function in their cattle. In the coming rise in values and subdivision of farms he foresees the growth of a demand for a dual-purpose as contrasted with a special-purpose beef breed. There are already some good milkers among the Angus, and he thinks that by systematic effort on the part of its breeders the dual-purpose quality of the Black Polled cattle might in a few years be raised to a parity with that of the Red, White and Roans. "Whenever this is accomplished," he says, "the demand for them will be increased a dozen fold."

HORSES.

ARAB HORSES.

Editor "The Farmer's Advocate":

I wish for a little information as regards the Arab horse. Is it noted for its speed, and what are its general characteristics? ARAB.

The Arab horse is the Thoroughbred of the East, just as the English Thoroughbred is of the West. Arabia was the original home of the breed, though now there are a number of strains developed in other countries, particularly Persia and Turkey. They are used to a very considerable extent in Asia, as far east as India.

In color, the Arab is bay. Contrary to general opinion held in this country, probably over 85 per cent. of the breed are dark in color. No Arab horse is ever born white, but always bay, chestnut or dark brown. There are, however, strains in Turkish Arabs, particularly, that are gray or white, but the true Arab is never light in color. The best are bays, with black points.

In general form of the body, there is a beautiful balance of power and symmetry; and, for racing, to which the breed is dedicated, the great general length gives it a long reach or stride. The head is not proportionately small, but beautifully formed, large and broad above the eye, and tapering from the eyes to the muzzle, with a depression or hollow in the face. The nostrils are wide and long, capable of being greatly dilated. The neck is light, but strong and muscular, moderate in length, and arching gracefully from the poll to the withers. The withers are high and long, but too thin. The back is short, the loins broad, well coupled and powerful. The croup is high, the tail set up rather high. The quarters are powerful, being both long and deep; the gaskin full, thighs well let down, and hock clean and large. In front he is much the same, the shoulders long and well developed. The arm is strong and muscular, knees large and square. The legs are well-boned, the feet large and open at the heels.

The Arab horses are noted more for their wonderful powers of endurance than they are for speed. They are used for racing in the East, but events in which they compete are almost always restricted to their particular class or to ponies, for the Arab seldom exceeds 14 or 14.2 hands in height. Given even liberal allowances, the Arab in racing stands no chance against foreign rivals. It is used for polo, but high-class English polo ponies excel it in speed and cleverness. In India they are used to some extent in hunting and steeplechasing, but, as a general rule, are not such clever jumpers as ponies having a strong admixture of English blood in them.

The announcement is made, according to Western advices, that an organization known as the National Breeding Bureau, which is in some way allied to the British War Office, has begun the inauguration of a big scheme of horse-breeding in Canada. The plan of the Bureau is to place Thoroughbred stallions at different points throughout the Dominion, the produce of such sires to be available for the British Army remounts. Col. McLaughlin, who has been in Canada for the past three years, during which time he has been studying horse-ranching conditions in Alberta, is interested in the operations of the Bureau, as is also W. Oswald Brown, of Calgary.

CARE OF WEANLINGS.

An important period in the development of the horse is the first winter of his life. Under fair treatment, the horse grows more in his first year than in any other. In order to making the most of him, it is, therefore, important that the colt be so fed and cared for that it is kept growing constantly. It is only by such care that it can be grown to the fullest size it is capable of being brought to. The first winter is the most critical of its life, as, if it be allowed to lose its foal-flesh, it can never recover it; and, in order to making the best of it, the feeding and management should be such as to retain the good foundation laid by the mother's milk. The foal should be taught to eat oats and bran before being weaned. When cold weather comes, it should have a roomy box stall, and if two are kept together, they will be better for the company. The colt should have been used to being handled when a few days or weeks old, and, if not taught to lead before going into winter quarters, the sooner it is so trained, the better. It is a good plan to keep a comfortable halter on it continuously, with a short shank, say, about six or eight inches long, hanging from it, so that it may be easily caught and handled in its stall at any time, its legs handled, and its feet lifted, so that when they need attention, the colt will make no objection. Standing on the soft bedding and the accumulated manure, the colt's feet are liable to grow long, and should be occasionally shortened, and kept level by means of a rasp. The colts should be turned out for exercise in the barnyard for an hour or two on all fine days, when cattle and older horses are stabled, as exercise is essential to development of muscle and strong bones. There is no more suitable or better feed for the colt, ordinarily, than good clean clover hay, oats and bran, with a carrot or two daily. If treated as above indicated the first winter, it will look after itself in summer, and do well enough on good pasturage. If it is purposed to prepare it for show purposes, it may be more rapidly developed by means of a moderate supply of cow's milk and oil-cake meal, in addition to the clover, oats and bran; but, with such feeding, ample exercise will be all the more necessary, in order to keeping it in the best health and condition.

TEACHING COLTS TO FOLLOW RIG.

Among the many devices contrived for teaching colts or horses to lead behind a rig, perhaps the simplest and one of the most effective is made by taking a long rope, or heavy plow line, and extending it through the halter ring over the back, having a loop act as crupper. The rope can be doubled and one knot made about the middle of the back, and another further back, to form a crupper. By passing one end on each side of the neck through the halter ring, it will remain in place. When the colt pulls back, this rope (which should be tied to the axle or rear part of the wagon) tightens, and the rope device pulling under the tail brings him to his place. One or two pulls generally cures any tendency to rush back. The same treatment will cure a halter-puller in the stable.



Imported Clydesdales.

Reading from left to right: 1. Blythe Baroness (20658), bay, foaled 1905, sire Baron's Pride. 2. Baron's Rose (20659), bay, foaled 1905, sire Baron's Pride. 3. Fairbairn (18398), (12473), bay, foaled 1905, sire Baron's Chief (10971). Owned by J. D. Larkin, Niagara-on-the-Lake, Ontario.

were sold, the price paid for choice exporters at Toronto was \$5.25. Thus, you see how the people of Toronto appreciate high-class beef at a better price than export cattle. Those cattle only received an average of two pounds of meal daily, and three-quarters pound of bran.

In conclusion, by growing Hungarian grass and alfalfa, we can do without mill feeds, oil cake, and also use less meal. A. B. McDONALD.
West Middlesex Co.

AMPLE DIGESTIVE APPARATUS.

A good deal of overdrawn argument is occasionally advanced to the effect that beef cattle cannot be economically raised and fed unless they be of the very low-set, compact, cubical beef type, and of a special-purpose beef breed. As a matter of fact, these models of type do not always prove the most profitable feeders. The big-barrelled steer frequently makes the best gains, and, while an excess of paunchiness means an extra proportion of cheap meat and offal, still the cattle feeder's interest demands a certain departure from the trim-bellied, lathe-like conformation which constitutes the butcher's or the packer's ideal. An experienced feeder remarked to us one day that he never liked to buy a steer that lacked a good middle. Other things being equal, the big-barrelled steer made the best use of his feed. Of course, he was not speaking of those pot-bellied runts which are walking barnyard evidence of insufficient nourishment on poor, bulky food, but of well-grown cattle that have been properly started out in life, and carried along in good thrift right up to the finishing stage.

SWEET-CLOVER HAY FOR LAMBS.

Some ration experiments with lambs at the Wyoming Experiment Station seem to indicate that while sweet clover is of somewhat less value than alfalfa when fed with corn, still it makes a satisfactory feed. Comparing two lots of lambs, one fed alfalfa and the other sweet-clover hay, the former made an average gain of 34.4 pounds in 14 weeks, and the latter 30.7 pounds. The sweet-clover lot ate one-sixth more hay, somewhat more corn, and a small amount of oil meal. The larger consumption of sweet-clover hay was due to the fact that it had been cut late, and was very coarse and stummy. Range lambs liked it from the start, and showed a steady appetite for it.

THE FARM.

TOPPING WITH SHEEP, LOADING WITH FORKS

Editor "The Farmer's Advocate":

In two recent issues of "The Farmer's Advocate," we have read two articles re the harvesting of turnips. Here is the way we have been harvesting our turnip crop for some years past: About Oct. 20th we put our lambs in the field, and by November 1st they have the tops all eaten off, so that part of the work in topping is saved. Next, we do as "Young Farmer" mentioned. We have a common iron harrow, with comparatively short teeth, tie a plank across the harrow, and hitch on the horses, get the whip going, and in a few minutes ten or twenty loads of turnips are lying ready for loading, free of earth and most of the large roots—more so if the weather is dry at the time of harrowing. "Young Farmer" did not say how he loaded his roots, which is a very important part of the work. In most cases it is done with the hands, which is away behind the times. We take a five or a six-toed grape (fork), file the prongs quite sharp, and with the prongs we spear the turnips, often spearing three at a time. This can be done without bending your back. The turnips leave the grape at once when the handle of the grape strikes the wagon box. This method is common in this part now. When first introduced, some of the older men thought the harrow teeth and grape prongs would spoil the root for keeping, but we have not the least fear of it injuring the turnips for keeping purposes. In this way, we can draw in as much in a day as we would in four days following the old style. JAMES E. MANSON.
Lanark Co., Ont.

MANURIAL VALUE FROM VARIOUS FEEDS.

Hoard's Dairyman publishes a table giving the manural value of different feeds, based on greatly reduced and conservative calculations. It estimates the manure from a ton of corn silage to be worth 43 cents; corn stover, \$1.03; clover hay, \$1.96; timothy, \$1.17; ground corn and cob, \$1.80; ground corn, \$2.24; ground oats, \$2.60; wheat bran, \$4.74; cotton-seed meal, \$8.36; linseed meal (new process), \$6.91; gluten feed, \$3.42; and gluten meal, \$4.90. All this, on the assumption that the liquid manure is not permitted to go to waste, or the manure left in piles to leach in the field or in the yard.

THE ENGLISH SPARROW.

Almost anything in the line of birds adds to the beauty of our outlook, especially in the winter months, and one can almost forgive the sparrows' discordant quarrellings for sake of seeing something flying around.

The English sparrow may eat insects, scales and weed seeds, but just at present he is oftener found in the stealing business among the poultry in the scratching-shed, in the granary, and even in the silo stealing the exposed corn, providing he can find his way into these places, and it is a small hole a sparrow can't find and go through. In the summer whole flocks fly to the grain fields and take the top grains from the heads of standing wheat; again and again visiting the fields after the grain is cut, and picking from the shocks; and even after the grain is in the barn it is not safe from them, for they will eat the grain from all the exposed heads and look for more.

I'll leave the mathematician to tell just how many dollars the English sparrow costs the Province each year, and also how many dollars he saves.

A flock of pigeons would add greater beauty to the landscape, to say nothing of their value in filling the pie, than does the English sparrow. The pigeons would not destroy more grain, and would certainly eat a great many weed seeds.

Could the sparrow be banished, would not the chickadee and other birds which are winter residents of our woods become frequent visitors in our gardens and orchards?

In spring will come the robin and the other feathered friends which have wintered in the south, and the sparrow will do his utmost to drive the more useful birds from the territory which through the winter he has illegally possessed. Could he be evicted, would not a greater variety of birds, and greater numbers, find nesting places in the home ground, which at present are forced to escape from his selfish quarrelsomeness. I have seen a pair of bluebirds driven from their selected summer home. No doubt nature students could tell of others.

Sparrow hunts have been successful in destroying large numbers, but owing to the great prolificacy of these birds, one season later sees the number just as large. Persistent shooting, if it does not kill, drives them away, but only for a short distance and a short time. These methods, though useful, are too spasmodic and unorganized to lessen the number very much throughout the Province. Could not an organized scheme for their destruction be planned? Not organized simply in one small locality, but wider and more far-reaching, extending from township to township, and district to district.

The plan here suggested would begin in the school section, among the school children, and during the summer months. It is a plan for the destruction of the eggs of the English sparrow. Some would-be benefactor might offer first, second and third prizes for the schools, say in each township, that could show the greatest number of eggs collected. Some children might be tempted to smuggle in the eggs of other birds, but the teacher should teach the scholars to distinguish the nest and egg of the English sparrow, and while one sparrow's egg might count one point, the egg of any other bird brought in should count ten points off. Each day the teacher would count the eggs, enter them in her book, and destroy them, or, if preferred, they might be blown and strung on cords and used as wall decoration, until the final egg had been laid and brought in. To still further stimulate the boys and girls in this work, the trustees might offer a prize to the boy or girl in each school whose total number was the highest in the season. The prizes in all cases most appropriate would be some of the many nature books on the market. These would help the pupils to know the birds and to love them, and to desire to see them in their natural surroundings.

If no one offered prizes, one school might compete against its nearest neighbor, and a field day be arranged, when the losers would treat the winners. Every plan has some objections. It seems less cruel to destroy a new-laid egg than to shoot the full-grown bird. Encouraging children to destroy birds' nests—even English sparrows' nests—may not seem right to every person.

Climbing trees and barn rafters is good exercise for the muscles, but some parents might prefer the English sparrow to the torn clothes, to say nothing of possible broken limbs. If we get the grown people interested they may provide long light ladders, and take a hand in helping the boy or girl to win, while defeating the English sparrow. M. E. GRAHAM.
Middlesex Co., Ont.

THE DAIRY.

DUTY OF PATRONS IN WINTER.

Those in close touch with the dairy industry of Canada continually emphasize that what is required to further improve the quality of cheese and butter is a supply of raw product in prime condition. Long experience and dairy-school training are two agencies that have resulted in competent makers, at least in the leading dairy districts. The work of dairy superintendents and instructors, as they are variously called, does much to ensure a uniformity of product and to remedy defects. With this recognized efficiency in the manufacturing end, the patrons must rise to the occasion, accept advice from instructors, makers and fellow patrons of the district, and do everything in their power to provide a supply of milk or cream free from defects.

During the winter months opportunities are at hand for acquiring the necessary information as to the condition in which milk and cream should reach the factories, and how to deliver it in that condition. Every friend of the dairy industry is anxious to know the proper methods connected with every operation with which he has to deal. There are numerous meetings for the discussion of dairy problems which can be reached with the expenditure of little time and money. If the questions are not discussed sufficiently those in charge are always willing to answer questions or explain any point.

Provided it is found impossible to attend meetings, the agricultural press meets the requirements in treating the questions of vital interest and answering questions. In any event the reading of editorials and contributed articles is an important adjunct in the work of dairy education.

But those dairymen who are enthusiastic must not be content to attend meetings and read. The regrettable feature as regards perfecting any branch of the farming industry is that those who are the cause of imperfections are slow to attend meetings and do little or no reading. It is the duty of the progressive to approach their more or less backward neighbors and do all possible to have them attend one or more meetings and subscribe for first-class agricultural journals. The most successful makers do what they can to remedy matters, but various difficulties arise which prevent them covering their districts. Occasionally patrons become antagonistic and refuse to listen to the solicitations of the maker. These men may be approached by a prosperous neighbor more readily than by any other person. Such missionary work done in a locality benefits the patrons of the factory as a whole, by improving the quality of the product and ensuring higher prices.

Between now and next spring there is ample time for the local missionary campaign. Do what is possible to have a large attendance at meetings, and also to have every patron read and study; then note the result in higher returns from the factory next season.

PROBLEMS OF THE DAIRY.

By Laura Rose.

THE COW AND THE STABLE.

Each season brings its own peculiar difficulties in the dairy business, but in the winter months difficulties multiply, and are hardest to overcome.

Not long ago I was staying at a farm home. The goodman of the house said to me, "You haven't seen my cows yet." Now, usually, I am always ready to go to see the stable and the cattle. This time I allowed the cold to be sufficient excuse to remain indoors. Why? I wanted to enjoy the cream and butter, and "What the eye doesn't see the heart doesn't grieve over." I had the intuition that if I saw the stable and cows my relish for the cream and butter would suddenly diminish.

I know it is hard to keep everything as one would like, but certainly a greater effort should be made to have the cow stable more sanitary. Many people have grown so used to bad conditions that these do not shock them as they should. If some terrible scourge would suddenly arise as a result of the carelessness in the dairy stables, it would prove a blessing. Then men would be up and doing, instead of being content to walk around and through the mire.

Sweep down the cobwebs; whitewash the ceilings, walls and mangers; have the floors tight and dry on which the cows lie. Make such provision as to give the cows plenty of fresh air without causing a direct draft on them. Beware of the dark stable; it is sure to harbor dirt and disease. Groom the cows just as regularly as you do your horses. It helps to keep them clean and healthy.

No matter how pure and abundant the food and water supply may be, if the stable be dark, dirty and ill-ventilated the cows cannot remain long in good health. The health of the animal is of paramount importance. It is certainly a most repulsive thought to take a fluid which comes direct from the inside of a diseased animal and use it as a staple article of diet. The pure-milk movement is one of vital interest to us all.

Many of the bad flavors found in winter are

due to thoughtlessness. The milker takes the pail and goes to the barn, sits down to milk in the stable that has been tightly closed all night. To make conditions worse, some one begins to clean out the stable and another to fill the mangers with hay. The streams of milk carry much of this foul air filled with hay dust and manure odors into the pail, and we have as a result the familiar "cowy" flavor in the milk.

The udder and flanks should be wiped with a damp cloth, and if soiled should be washed. If a little vaseline is rubbed on the hands it does away with the objectionable habit of wetting the hands. The vaseline also keeps the teats from chapping.

The first streams of milk contain bacteria of the worst form. These should be milked into a small tin and given to the barn kitty. They are bad for the milk, but not likely to harm the cat.

The covered milk pail with only a small opening is growing in favor, and tests of the milk for bacterial content establish its merit in keeping out dust and dirt.

The immediate straining of the milk through several thicknesses of cheese cloth is another essential. It seems unnecessary to speak of the care of the strainer cloth, but when one hears of it being washed in the dish water, and not even rinsed, we venture to suggest that the cloth be first well rinsed in tepid water, then thoroughly scalded and hung in the open air.

Lately I asked one lady at the Pacific Coast, and another in Manitoba, both living on farms, how many cows they had milking, and from each came the same answer, "Oh, I'm sure I don't know, I never go to the barn." That is the tendency of the times—the withdrawal of the women's interest from the barn end of the dairy business. I do not advocate that the women should milk, but I do think they could help much by going occasionally to the barn and seeing how things are done there. The very fact of their looking around and feeling a co-operative interest would be a stimulus to the men to set up a higher ideal of cleanliness. The kindly word of encouragement or helpful suggestion does much toward a permanent improvement.

We women have our share to do in improving the quality of the milk. We must be gravely concerned if the milk is off in flavor. We are too apt to be indifferent, and if that is the case, we must not expect too much of the men.

COOL-CURING ROOMS FOR CHEESE.

Extended experimental work and practical experience in the dairy business confirm the value and importance of improved curing-rooms at the cheese factories, so that through the heated season cheese may be held at a low and uniform temperature. As was stated recently by T. G. Wright, President of the Picton, Ont., Cheese Board, in a letter to the Times of that town, there can be no doubt in the minds of any thinking dairyman that cheese cured in a room where the temperature never rises higher than 58 degrees are superior to those cured in a room where the temperature ranges from 80 to 90 degrees. With proper curing-room facilities there is, also, not the same imperative need to hurry away to the train, boat or warehouse of an exporter, cheese fresh from the presses. Mr. Wright backs up the contention by quoting the reports of leading produce houses in Manchester and Bristol, testifying to the superior condition in which cool-cured cheese arrive in Great Britain over those cured in the ordinary way; and Clement & Sons, of Glasgow, write that they are superior in all respects to other brands from the same district arriving at the same time, and are worth two shillings per cwt. more than others made during hot weather.

Prince Edward County, Ont., has put cool-curing to the test; some nine of the factories—as a rule the larger ones, we believe—being so equipped, and the system would, undoubtedly, have stood a better show of being extended but for the discouraging attitude of buyers, who do not make sufficient discrimination in favor of the cool-cured cheese. The advance of about 1/4 of a cent per pound paid the first season cool-curing was inaugurated has been diminishing towards the vanishing point, but even yet Mr. Wright points out that for the cheese of June, July and August sold at Picton, nearly \$850 more was received than if there had been no cool-cured cheese on offer, by comparing Picton prices with those of an adjacent board, where only the ordinary cured cheese are marketed. The Prince Edward County dairymen are deserving of still more substantial encouragement at the hands of the trade in their determination to improve the quality and maintain the reputation of their cheese, as they were led to believe would be the case when urged to make the requisite improvements.

What the adoption of cool-curing facilities means can best be illustrated by an example, and for the benefit of its dairy readers generally, "The Farmer's Advocate" gives the accompanying plan and description of the factory, with typical cool-curing room and ice chamber, at Cherry Valley, refitted some three years ago at an outlay of about \$1,000.

Curing-room 26x32 ft. Beginning with a trench two feet deep, filled with cement grout, 2x1 inch studding, 2 1/2 feet apart, is placed on the 12-inch plank sills, and an alternate row midway, so as to leave a foot space between, which is subsequently packed tight full with planing-mill shavings. On the outside of the studding is nailed tongue-and-groove matched siding, and then two thicknesses of waterproof Neponset paper, and, lastly, on the outside common bevelled siding, dressed and painted. Inside the studding is inch tongue-and-groove lumber, then two thicknesses of paper, lined up with spruce, matched and dressed. The ceiling is constructed in the same way, and the whole interior given a coat of alabastine. The floor is smoothly-finished cement concrete. There is a heavy cold-storage door between the drying-room, into which the cheese are placed for 24 hours after being taken from the presses, and the curing-room proper.

The outside opening of the curing-room is 26x30 inches, and about four feet above the floor, large enough to roll out the cheese to the wagons. It has triple doors, the center one being hinged at top, to fall into place after each cheese passes out, to exclude the warm air. The three double windows in south end are small—16x22 inches—and just below the ceiling. Between the curing-room and the ice box or chamber, are two openings at the floor and two near the ceiling, about 10x12 inches each, and regulated with slides, the lower pair admitting the cold air, which, as it grows warmer, rises and passes back through the upper openings into the ice box, to be cooled down again. They are located about 4 ft. from the sides, and 12 feet apart.

The ice box, 20x20 ft., is sided up in the same way as the curing-room, except that on the inside there are three thicknesses of boards. Then it is strapped and boarded, leaving a one-inch space for the free circulation of air. The site for the floor is filled in with earth and gravel to within six inches of the floor proper, and then from 4 to 6 inches of cement grout, and on this are laid 2x4-inch scantlings on edge, two feet apart, and filled between with coal-ash cinders, well tamped down. On this is laid one-inch matched flooring, with a fall of one inch in ten feet to gutter on one side. Over the boards is laid a covering of well-soldered galvanized iron. A 1/2-inch pipe, trapped outside to exclude air, is soldered in and extends through the wall to drain away the water from melting ice as the season advances. On the galvanized-iron coating are laid 2x4-inch scantlings every two feet towards the gutter. Upon these crosswise and flat are laid 2x4-inch scantlings, four inches apart. The extra layer of scantling are for the purpose of holding up the ice, permitting a circulation of air and allowing drainage. The ceiling is made like the curing-room ceiling, including the one foot of shavings. The only opening is a trapdoor in the ceiling, through which the ice is lowered, being first hoisted from sleighs by rope and tackle with horse to a door in the gable end, where the box dumps itself and the ice slides down an incline to the trapdoor in the center of ceiling. Ice from the adjacent lake is cut in 18-inch blocks, 500 or 600 blocks being required for a 200-ton remake of cheese. The interior of the ice box received a heavy coat of paint, and the galvanized iron at bottom was flushed up about 10 inches at the side. The ice should be well chinked with the broken ice; or, better, flooded each evening as the broken ice is being filled in sharp, frosty weather, so that the mass will be compact right up to the ceiling and close to the walls. The floor and ceiling are on a level with those of the curing-room. The ice chamber should be from 1/2 to 3/4 the size of the curing-room. In their construc-

tion the owner, W. S. Blakely, in the main, followed the plans issued by the Dairy Commissioner's Branch in the Dominion Department of Agriculture, and the results have been most satisfactory, in giving control of the temperature down to 54 degrees, and greatly improving the character of the cheese as compared with the curing-room formerly in use. The room in north-east corner, with special vats and separators, is used in connection with the whey-butter enterprise. Taken all together, the factory is not only commodious, but convenient and compact, and a credit to its owner.

WHEY SWEETER—CANS EASIER TO WASH.

Editor "The Farmer's Advocate":

At the last meeting of the Norwich Gore Cheese Factory patrons it was unanimously agreed to that the milk should be pasteurized. Thus you can see my experience has not been a long one, but so far the results obtained have been highly satisfactory.

The whey, after being treated, is returned in a very sweet condition, and remains so until it is fed. As to the improvement made in the feeding quality, I'm not at present prepared to say. But this much is true, the cans are returned in a sweeter and purer condition than has been the case heretofore; and although we are paying our maker five cents per cwt. of cheese for this extra treatment of the whey, I for one do not wish to return to the old method. C. H. CARROLL. Oxford Co., Ont.

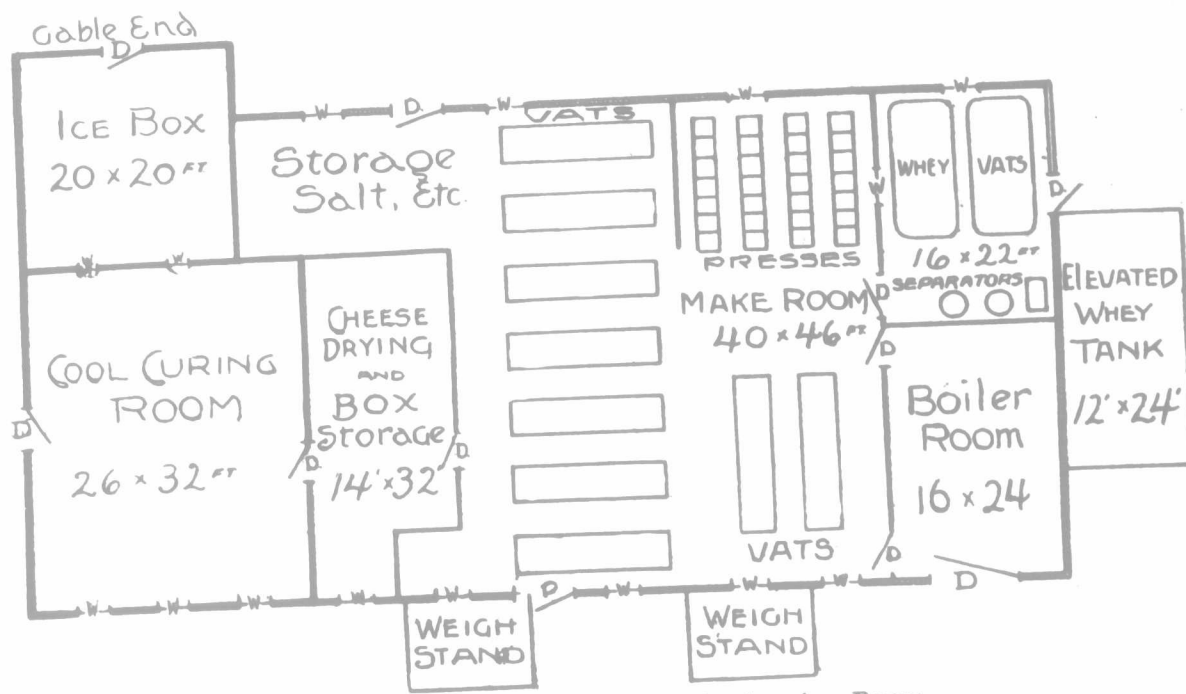
GARDEN ORCHARD.

INSECT LIFE DISCUSSED BY EXPERTS.

Bugs and their relatives, as found by those who have to do with growing crops, were discussed from various standpoints at the 45th annual convention of the Entomological Society of Ontario, held at Ontario Agricultural College, Guelph, on November 5th and 6th. Though the attendance was not large, interest was keen. The reports and many of the papers were of a practical nature, and sound advice in fighting insect foes to farm and garden crops was given.

The newly-appointed officers are as follows:—President, Dr. Jas. Fletcher, Ottawa; 1st Vice-President, T. D. Jarvis, B.S.A., Guelph; 2nd Vice-President, Dr. Walker, Toronto University; Secretary-Treasurer, J. E. Howitt, B.S.A., Guelph; Curator, L. Caesar, B.S.A., Guelph; Librarian, Dr. Bethune, Guelph. Directors for Districts—A. Gibson, Ottawa; C. E. Grant, Orillia; R. S. Hamilton, Galt; C. W. Nash and J. B. Williams, Toronto. Auditors—J. W. Crow, B.S.A., and S. B. McCready, B.A., Guelph. Delegate to Royal Society of Canada—A. Gibson, Ottawa.

The reports on insects of the year by Messrs. Nash, Williams and Grant elicited discussion on those pests that have been most prominent among the workers of destruction. No depredations by new arrivals were noticed, but some old-time enemies made their presence felt. The aphides on turnips, cabbage and allied plants were among those that did greatest damage. The dry autumn favored their reproduction. Many growers had been known to try spraying. Soapsuds was spoken of as the only practical solution used as spray when cost was considered. The remedy advised, however, was a close watch early in the season and the destruction of colonies before they had spread. The codling moth, though not serious in the central and northern portions of the



Plan of Cheese Factory and Cool-curing Room.

Province, had been injurious in other parts, particularly in the Niagara Peninsula, where about 75% of the fruit was said to be damaged in some orchards. The lesser apple worm, so called, had been found in a few localities, but no serious damage was reported. The apple maggot had done serious injury in Prince Edward County, and in near-by districts along the north shore of Lake Ontario. A certain remedy prescribed was having hogs or sheep in the orchard to eat the fallen fruit.

The tiny pear and apple-blister mite, that causes brown or black spots on the under side of the leaf had done much to lessen the production of fruit by depriving the trees of the power to produce plant food. A ready and effective remedy was found in spraying with lime and sulphur or kerosene emulsion in spring, when the buds begin to burst. The scale insects had not spread much, although San Jose scale was reported for the first time from Dresden. Many new treatments had been tried, but the trend of the discussion pointed to a unanimous verdict in favor of lime sulphur. Oyster-shell scale was said to be combated in Ontario County by the use of Gillet's lye. Mr. Casar, of the College, promised to test the treatment if possible this fall.

Dealing with malformations in fruits, insects were mentioned as the chief cause; apples and pears frequently were distorted by wounds made by one insect or another. The plum curculio was blamed for a large share. Leaf bugs also did part of the damage.

In reporting on insects and their work, Dr. Bethune referred to the increased tendency of farmers and fruit-growers to write to the College, or send specimens. The Hessian fly had been found in Norfolk, Brant and Essex counties. The precautionary measure was delay of sowing fall wheat until after the middle of September. The one-time dreaded pea weevil had been greatly reduced, and if fumigation with carbon bisulphide were practiced it could be exterminated. The potato-blister beetle had caused anxiety in some northern sections. This could be controlled by using arsenical poisons, but the larvæ were beneficial in that they destroy the eggs of the Colorado potato beetle.

Wireworms and white grubs had demanded attention in many sections. Short rotation of crops was recommended. For the latter when found in lawns, the treatment was a drenching with kerosene emulsion, followed by liberal watering. Some had exterminated the pest by drenching the lawn with water every evening for a week.

In the harvested crops some had reported the granary weevil, which could be destroyed by the use of carbon bisulphide. Millers had been called upon to fight the Mediterranean flour moth. Fumigation by hydrocyanic acid gas killed the insects, but not the eggs.

In dealing with the topic, "The Interpretation of Nature," Dr. E. P. Felt, of Albany, N. Y., said that the proper study of mankind was the study of man, the world and the fulness thereof. A difficulty in studying entomology was found in the various forms in which an insect appears. It was necessary to be able to identify the common destructive pests in all stages; then followed recommendations, giving due consideration to crops attacked, nature of season and other conditions. The address was made more interesting by the use of lantern slides, showing the various stages of insects, and the work done by bark beetles, scale insects, leaf beetles, tussock moths, codling moths, and others of economic importance.

"The Farmer's Wood-lot" was the subject of an address by Rev. Dr. Fyles, of Levis, Que. The value of mixed growth, as found in the original covering of the land, was referred to, and Canadians were urged to seize every opportunity of planting trees in waste places, as well as for shade, ornamentation and fruit production.

Farmers, fruit-growers and gardeners were urged by Prof. W. Lochhead, Macdonald College, P.Q., to study insect life more diligently. Each one should be able to identify those pests that attack his crops, the injuries done by the various insects, the characteristics of the chief orders of insects, and the effect of cultural methods in controlling insect life. Co-operation was what was needed. If business men paid as little attention to losses as the farmer does, they would go bankrupt in a very few seasons. The Entomological Society was endeavoring by annual meetings and reports to teach all to attend to the insect business, but the most effective work was being done through agricultural colleges.

Considerable attention was paid to the work being carried on in the United States in importing parasitic insects to combat the gypsy and brown-tailed moths. W. R. Thompson outlined the nature of the work done. Dr. Bethune read a paper from Dr. L. O. Howard, of Washington, D.C., in which it was pointed out that 57 species belonging to the Hymenoptera, Diptera and Coleoptera orders had been imported. Seven had acclimated themselves with native plants and indicated establishment. Ultimate success seems promising, but too rapid results should not be anticipated.

A NEW FARMERS' PACKING COMPANY.

The Port Milford Packing Company, with a capital stock of \$25,000, held and paid up by some 62 Prince Edward County, Ont., farmers, recently finished, in their splendidly-equipped new factory overlooking South Bay, an arm of Lake Ontario, and a fine shipping point, a pack of some 30,000 bushels of tomatoes. Prices per bushel to the growers ran as high as 27 cents, but declined as supplies became heavier, through the unfortunate destruction by fire of another large factory in the vicinity. The shareholders of the new Farmers' Factory have the priority over non-stockholders in the supplying of tomatoes. Next year other products will be canned, and if equal to the tomatoes they will be good. The President of the concern is A. McKee, and the Manager, D. J. Love. The stockholders elect five directors, and these in turn choose the officers to run the business. The company is independent of the Canadian Cannery Association. A large number of hands were employed during the canning season, wives and daughters from the adjacent farms earning excellent wages, in addition to the outside help employed, and living in cottages erected for the purpose. The produce of the factory is loaded on lake boats direct from the storehouse. The officers of the company were highly commended for the condition of things in the factory by the Government inspectors, under Meat and Canned Foods and the Ontario Factories Acts.

BIG CROP OF LARGE SQUASH.

In truck-gardening districts in particular, and more or less generally throughout Canada, squash of different kinds form a comparatively important crop. In recent years many farmers have grown squash for the milk cows, and claim satisfactory results.

On the farm of Wade & Son, of Lambton Co., Ont., last season, an excellent yield of high-class



Prize Squash.

Grown by C. A. Wade, Lambton County, Ontario.

mammoth field squash was produced. They were grown on a dark, sandy soil, liberally treated with well-rotted barnyard manure. Thorough cultivation was practiced as long as it was possible without injuring the vines. All weeds were kept down. This fall the crop harvested averaged eight squash to a vine. All were of great size, and many could be said to be enormous. A 280-pounder won first prize and a special at the West Lambton Fair.

POULTRY.

THREE GOOD PLANTS FOR POULTRY-KEEPERS.

I.—GIANT RUSSIAN SUNFLOWER.

Whilst spending a day at the Oka Agricultural Institute, La Trappe, Que., in charge of Trappist Fathers and lay instructors, between Ottawa and Montreal, on the bank of the Lake of Two Mountains, the large flock of fowl there, its location, and the simple and economic methods in vogue in the poultry plant attracted my attention, and led me to investigate somewhat.

In the midst of A-shaped colony brooder-houses, I noticed half an acre of Giant Russian sunflower, where about 2,000 fowl gathered at certain hours.

Asked how he liked the "Giant," with its only one but large flower, the poultry manager of the establishment emphatically replied, "Oh! it is a godsend! Poultrymen could not dream of a more all-round useful plant, especially for chicken-growers. These were sown very late last spring. Still, see their length, and the bulk of the flowers and seeds!"

In fact, the median length of the plant seemed to be 9 or 10 feet, and I measured quite a few of 13 feet. Some flowers were 18 and 20 inches in diameter, and I found one of 22 inches, full of heavy seeds. I took a photo of these, with students standing on one another's shoulders, to compare the length of the stalks.

"But what importance do you attach to height and length?" I asked the manager.

"The longer the plant is, the more leaves it bears, and in the fall, when the stalk has grown up large, I need quite a lot of leaves for forage or green food," was the answer.

And he explained to me that early in summer, the sunflower already provides shade for young chickens, and keeps providing it thicker and thicker as the heat grows stronger. "And good shade, too," the gentleman added, "as no grass and hardly any weeds will grow under the large leaves of the sunflower. Therefore, chickens can run under early in the morning, and even after showers, and not be interfered with by dampness or dew, as the soil is clean, free from grass and weeds. In fact, shade can be kept so dense that neither sun nor rain will easily reach the ground right under the leaves.

In the fall, when cooler days come, the lower leaves are gradually taken from the plant, run through the straw or root cutter, dampened with skim milk or slop-water from the kitchen, powdered with bran, and served to chickens, hens, ducks, etc., which are all fond of the stuff; in fact, relish it. They even prefer it to cabbage leaves.

As the days grow cooler in the fall, and the stock's appetite larger, more and more leaves are abraded from the stalks, and so the sun's rays freely enter the plot, and reach the soil exactly when they are needed—that is, when the fowl wants all the decreasing heat of the autumn sun.

By the end of October, stalks and flowers only are left, but some seed has already been fed to moulting birds, and more is served when the weather becomes cold and damp.

The remainder is stored and fed on very cold winter days, as the seed is oily, and therefore heating.

In short, this plant furnishes: (1) In the summer, shade, and also protection from dew in the runs; (2) in the fall it lets the sun shine on the flock, and supplies it, also, with good and abundant green food; (3) during moulting-time, and during winter, it provides heating food in the form of rich, oleaginous seed; (4) if the soil is naturally damp and low, the strong stalks and large bulk of leaves of the plant will likely dry the soil and the atmosphere in the premises to an appreciable extent.

On a portion of the plot I mentioned, the sunflower had been grown for three consecutive years, and seemed to be nearly as good and productive as the first year. It is true the stalks in the fall are dried, and used as fuel under the poultry-house boiler, and the ashes returned to the land in the spring, with a few other cinders and an addition of lime. The poultry manager claims that the droppings of the birds, left on the soil during summer, contain a sufficient amount of phosphates to keep the land fairly supplied with that fertilizer, although the sunflower is an exhausting plant.

II.—RAPE.

I also noticed a fine flock of Pekin and Aylesbury ducks, white geese, etc., several times in the day, marching in file up and down the hill from the river below, to a plot of rape above, and from the rape to the river again. They must have performed the journey ten times that day, filling themselves up with rape, and coming back to the river for a bath and exercise, and returning to the rape.

"Ducks and geese are extra fond of rape," says my poultry friend of La Trappe. "They will leave anything for it, and you can fatten them on it nearly as well as you can fatten sheep. Put them in a rape field, away from the water, and add a little mash, very little animal food, and you will have them fairly fat when you close them up for just a few days to finish them for the market. This rape here was not sown for them, but as a catch-crop around the apiary, after the buckwheat had been harvested. It is nearly five acres from the duck's yard, but as soon as they had once tasted the rape, I could not keep them from it, despite the hill and also the good food I may give them here below. Turkeys and hens like rape, also."

III.—JERUSALEM ARTICHOKE.

In the yards of the older hens one student was digging Jerusalem artichokes, which I supposed were allowed to grow there for shade, but I found out another object as I took the hoe myself and dug one of the three-foot-square bunches of stalks, or "quincees," as the French student said. I gathered from it exactly one bushel of tubers, whose size varied from that of a hen's egg to a duck's egg. The student, in only fairly good English, explained to me the feeding value and the economical qualities of the artichoke, he called topinambour.

I was then convinced that the topinambour, or Jerusalem artichoke, was a third good and profitable plant for fowl.

I now hope readers of "The Farmer's Advocate" will not grudge me if I make my story a bit longer just to show them how their paper is appreciated abroad amongst good people of another language.

As I arrived the student I alluded to had the

right technical word ready in his mind, he needed one. I asked him how he got these scientific names of things here, that is, in words? "I get these names in an Ontario paper," was the reply.

"The college takes 'The Farmer's Advocate,' then?"

"O! Not only the college! More than three-fourths of the students here subscribe to 'The Farmer's Advocate,' and discuss it every Saturday evening at the meeting of the debating club."

I rather felt that the little French-Canadian student was politely giving me blarney, but I forgot the incident.

...later, when the mail came in to the post-office, I saw the dignified and well-known postmaster—he is the originator of the "La Trappe" ginseng gardens—I saw the courteous postmaster every visitor likes to talk to, handle such a bunch of "Farmer's Advocates" that for a moment I labored under the illusion of being in the post office of an Ontario rural district, thickly populated with English-speaking farmers; and when I saw what amount of "Advocates" went into the college box, I understood my little French poultry friend had only spoken the truth.

TRAVELLING FARMER.

THE FARM BULLETIN.

The frequency with which bank robberies have occurred in Ontario and Quebec of late gave rise to a discussion at the annual meeting of the Canadian Bankers' Association in Toronto last week. The city police do good work, but constables in rural sections are not sufficiently experienced to follow up cases of safe-blowing. This is another fact pointing to the advantage of Provincial forces of rural police.

Fruit, Flowers, Vegetables, and Honey.

The annual foregathering of fruit-growers, vegetable-growers, florists and apiarists occurred in Toronto last week in connection with the Ontario Horticultural Exhibition, held this year in the St. Lawrence Arena.

The Horticultural Exhibition opened auspiciously on the evening of Thanksgiving Day, with a large attendance, while four conventions, representing the various horticultural interests concerned in the show, were held at various points in the city. All these events have been covered by the regular editorial staff of "The Farmer's Advocate," and a concentrated extract of the information elicited, as well as a concise review of the proceedings, will appear in this and subsequent issues.

HORTICULTURAL CONVENTION.

The third annual convention of the Ontario Horticultural Association, held in the City Hall, Toronto, last week, gave a great impetus to the civic-improvement movement, whereby Ontario's homes in cities and towns, and rural parts of the Province, will be made more beautiful, and the Province more attractive for all classes. In order to make the desirable improvements possible, legislation has been suggested to control the bill-board nuisance and the erection of advertising monstrosities; to require that no dogs shall run at large in town or city, and that telegraph and telephone poles be placed underground. Another feature of the convention was the faith expressed in the ability of the press to help in the good work of home beautification, by making the facts and methods of procedure public.

The President of the Provincial Association, in opening the convention, dwelt on the important educational benefit to the common people, and pointed out that national happiness depended on several small satisfactions. The efforts of the local horticultural societies comprising the greater association would lead to friendly rivalry locally, and to co-operation on the whole. The chief aim was the development of homemaking and the production of homes that would put an end to boys and girls imagining they could find more congenial surroundings elsewhere.

The report of the secretary, J. Lockie Wilson, showed that the societies were making substantial gains. Returns from over 40 societies indicated that only 9 had decreases, and these were only slight. The most noticeable gains were Ottawa, from 385 to 1,010, and St. Catharines, from 426 to 701. Other societies increased the membership over 50 per cent., and a few 100 per cent.

The treasurer, H. B. Cowan, reported a balance on hand of \$152.30, as against \$86.10 a year ago. This did not include the expenses of speakers to the convention. To an oversight in the Department of Agriculture, in preparing the estimates, was attributed non-receipt of the customary grant of \$100.

The officers elected for the ensuing year are: President, Maor H. J. Snelgrove, of Cobourg; 1st Vice-President, R. B. Whyte, of Ottawa; 2nd Vice-President, Roderick Cameron, of Toronto; Secretary, J. Lockie Wilson, Department of Agriculture, Toronto; Treasurer, H. B. Cowan, of Peterboro. Honorary Directors—W. B. Burgoyne, of St. Catharines; Professor Hutt, of O. A. C., Guelph; and Prof. Macoun, of Central Experimental Farm, Ottawa. Directors for Districts—Rev. A. H. Scott, of Perth; W. Jeffers Diamond, of Belleville; Miss M. E. Blacklock, of Toronto; A. Alexander, of Hamilton; Jas. Mitchell, of Goderich; Geo. W. Tebbs, of Hespeler; J. S. Pearce, of London.

Figures showing the membership and expenditure of societies, given by W. B. Burgoyne, of St. Catharines, told the merits of the amendments to the act in reference to Horticultural Societies. Forty-three societies had an increased membership of 2,012, or an advance of forty-five per cent. It was suggested that the Department of Agriculture give further assistance to horticultural work by increasing the annual grant from \$8,000 to \$12,000.

A paper prepared by—J. E. Watson, of Ottawa.

and read by S. Short, gave the results of increased enthusiasm in the Capital City, after the revised Act gave an opportunity to augment the funds by working hard for larger membership. Business men could be induced to join, but they expected to be treated in a business way, and not as though horticultural work were a fad. A live and businesslike executive was a necessity. All progressive citizens had the interest of the city or town at heart, and would join if they knew the situation. For this reason the newspapers must be won, and their support insured. Every up-to-date paper or journal aided such laudable work, and gave space freely. With such a system of directing efforts, Ottawa's membership jumped from 385 to 1,010 last year.

In the discussion following, J. P. Jaffray, of Galt, dwelt on the importance of doing work that

PLANT-BREEDING.

"Scientific Plant-breeding," by H. H. Groff, of Simcoe, proved to be an interesting topic. Observation was said to be one of the essentials to success, while a well-directed imagination had much to do with obtaining the end sought. In any event, it meant hard and persevering effort. The effects of light, heat, soil, moisture and food supply, as well as the individual characteristics of the plant, had to be considered. Mr. Groff characterized this as the age of hybrids, where man is developing new and valuable varieties by the use of well-known plants from wild and cultivated areas. The instability of form recognized in all life was made use of by the breeder to produce something better than had been grown. Characters were transferred, but chances of obtaining duplicates were slight. When the desirable type was secured, it could be reproduced by cuttings, or grafts. To show the change of demand, Mr. Groff stated that, while customers used to request, "Send no reds," the higher shades of that color were now sought after, and he had refused \$10 for a single corymb of a popular red gladiolus.

As a new departure, Mr. Groff had devoted some time to corn-breeding, with the object of getting an ear averaging 5 to 7 inches in length, so that canners can put up corn on the cob for table use at any season. Already he had satisfactory results, and hoped to supply the necessary. In all his work his object had been to supply the largest possible quantity of high quality at the lowest possible cost.

A chart for the ordinary town or city lot, or a residence on any property where a similar area is given to house and surroundings, was presented by Roderick Cameron, Assistant Park Commissioner, of Toronto. Desirable arrangements of house, walks, drives, trees, flowers, etc., were given, with the precautionary advice to avoid straight lines.

WINDOW BOXES, BASKETS AND RUSTIC STANDS.

The usefulness of window boxes, baskets and rustic stands in brightening up the homes in city, town or country, was dealt with by Wm. Hunt, of the Ontario Agricultural College. Boxes could be made at slight expense out of ordinary inch lumber. Dark olive-green paint should be applied on outside and two inches down the inside. Such box, if well cared for, would last nine or ten years. Imported cork bark made an attractive covering for the box, but native barks could be used to advantage.

In order to give good appearance for the entire season, it was necessary to have strong plants in rich soil. Rich loam or rotted sod, with a liberal admixture of well-rotted manure and bone



Sunflowers Grown for the Poultry.

Giant Russian Sunflower in the Poultry Plant, and Poultry Students at La Trappe, Que.

would enlist the children of the district as helpers in the interests of horticulture. In his town, great good had resulted from this distribution of seeds and the planting of school gardens. The value of town councils in beautifying towns or cities was small, compared with that of a permanent parks board. Secretary Wilson dealt severely with the scanty space and little attention paid to the great horticultural show and conventions by Toronto papers. Comparatively unimportant events could be spread over half a page, where these great meetings had to be passed by with a few inches, or at most a column. Representatives from Goderich, Guelph, St. Catharines, and other points, assured the delegates that every newspaper in their communities was anxious to secure copy dealing with the work of horticultural societies. There was not a local paper in the Province that would not assist the society.

meal, furnished the necessary food. Many find it wise to put an inch of the manure near the bottom of the box, as reserve food late in the season. In planting, arrange for color effect and height, with tall growers at the back. In watering, it was well to apply such quantities as would reach the bottom and begin to run through the drainage holes each time.

Earthenware hanging baskets always should have saucer bottom. Wire hanging-baskets were easily constructed from common wire netting and moss, by banking the latter around the inside of the basket, with the green toward the wire, and filling in with rich soil.

Rustic stands were of various forms. Iron or wood or wire could be used to advantage. In many cases, tree-stumps or posts could be turned into lovely rustic stands at very little expense.

The main guide to plants used was their power to withstand conditions under which they would be grown. Some thrive in shady places, but would not stand hot sun. On sunny or slightly shady positions, the plants included canna, salvia, geranium, nasturtium, coleus, irisene, verbena and creeping Charlie. For very sunny position, cacti, agaves, century plant, aloes, and other succulent plants. For shaded position, palms, dracenas, fuchsia, begonias, ficus alastica, asparagus, plumbosus, crotons, sweet peas, climbing nasturtium, lobelia, nasturtium, German ivy, tradescantia, and asparagus sprengeri.

It was pointed out by R. B. Whyte, of Ottawa, that window boxes had much to do with making London, England, one of the most attractive cities it had been his pleasure to visit. The buildings on every street were decorated on first, second and third story windows.

KEEPING BULBS AND TUBEROUS PLANTS.

The best methods of keeping summer-flowering bulbs and tuberous plants, formed the subject on which J. McP. Ross, of Toronto, gave an interesting talk. The grower must know the nature of his plants, and the climatic and soil conditions under which nature produced them. The main point was to dig up bulbs and tuberous plants when the tops were dead, and store in a cool, dry cellar. In furnace-heated cellars there was a danger of overdrying. For this reason, it was well to pack them in sand. Always avoid excesses of heat or cold, moisture or dryness.

Lilies and all plants of this family, placed in the ground over winter, should be in well-made and high beds, to give perfect drainage. Also, there should be a liberal mulch for protection.

In an interesting discussion following, many questions regarding bulb-planting were brought up. In answer to a question regarding the advisability of holding bulbs over a season before planting, H. H. Groff, of Simcoe, stated that he planted all the first season. R. B. Whyte, of Ottawa, cited an instance of where his bulbs, held over, had given an abnormal return.

TUB PLANTS.

Half-hardy tub plants for ornamentation of grounds in summer, and the method of protecting during the winter season, were dealt with by Roderick Cameron. Tubs were not so satisfactory as caskets made of common chicken netting. These could be lined with moss, and filled with good soil. In spring, basket and all could be planted, and the plants would thrive better than with endless watering during the summer.

In winter they could be taken up, basket and all, and stored in a deep cellar in which was placed about three feet of soil. Before the plants were planted in their winter home, this should be saturated with water, and no more added until they were taken outside in spring. It was possible that the plants would freeze, but under such circumstances they should be in total darkness. If such were the case until the frost left, there was no injurious effect.

ENGLISH GARDENS AND PARKS.

An eight-weeks' pleasure trip through England last summer gave R. B. Whyte, of Ottawa, an interesting topic for Canadians. In talking on horticultural conditions there, he pointed out that all walks, gardens and parks had a finished appearance. Wild flowers were conspicuous, but not of great variety. One of London's most important horticultural features was the number of parks of huge size, as well as the smaller ones dotted here and there all over the city.

Great interest was taken in Mr. Whyte's description of Temple Gardens, and the great annual spring horticultural show held there. The tastes of exhibitors differed greatly from those of exhibitors in Toronto. Plants in great variety and rare beauty were in evidence in all departments.

Strawberries were a revelation. The average size was equal to a fair-sized Fameuse apple, and had quality as commendable as its size. Nothing he had tasted in Canada was equal to the English strawberries. Prices range from 3s. 2d. down to 1s. or thereabouts in a day at different points. Gooseberries, in size and variety, were an important part of the fruit crop. In Kent County alone a large area was devoted to gooseberry production. On one occasion he saw peaches on sale

at 37c. each. These were home-grown fruit, before the imported stock had arrived.

CIVIC IMPROVEMENT IN ONTARIO.

That the civic-improvement movement is making satisfactory progress, was evidenced by what Prof. H. L. Hutt, of Ontario Agricultural College, Guelph, had to say, and by lantern slides showing the results of a campaign of only a few seasons, as well as ideal grounds and surroundings. In the United States a regular Civic Improvement Association had been at active work for several years. There were 22 members in different parts of Canada.

From organization during recent years in Ontario, steady, and even rapid, progress had been noticed. Cement walks and steps, removal of fences, nicely-kept lawns and flower-beds, systematic planting of trees, and various other features, were clear evidences of good work done.

Continuity of action through parks board or council committee was urged, in order that all labor on streets and avenues should be done to best advantage, and proper varieties planted in the proper place. Where towns and cities had acted systematically, specially-noticeable results were conspicuous.

Among the means of furthering the good work, citizens were urged to organize, to make good use of the press, to interest the children, to seek co-operation of other organizations, to arrange for suitable lands, to establish a local nursery for supplying the requirements of the citizens, and to urge every citizen to do his share.

The development of a perennial border during the past ten years, was the subject on which W. T. Macoun, Horticulturist, Central Experimental Farm, Ottawa, gave a valuable talk. Precautionary advice for beginners formed the major part of the address. In order to have continuous bloom throughout the season, large clumps had to be avoided. Bulbous plants were necessary for early spring display, but if these were spread too widely in a single place, a gap would appear later in the season. Small clumps, and more of them, was the better plan. In this way, other plants coming on later, planted near, would fill in the gap.

Recommendations for planting for effect throughout the summer, included Iceland poppy, peach-leaved campanula, dwarf larkspur, and white Rocket, in addition to the perennials commonly grown. All could be grown from seed, and they were desirable particularly for mass effect. Interested persons were advised to secure a copy of a descriptive bulletin on herbaceous perennial plants, prepared by the speaker, and almost ready for distribution. In it, over 2,000 species and varieties were mentioned, and descriptive notes given.

In accordance with a letter from J. Horace McFarlane, the great civic-improvement enthusiast, of Harrisburg, Pa., in which he suggested that the Ontario Horticultural Association join with the American Civic Improvement, a motion for affiliation brought a unanimous approval. It was also decided to send Prof. Hutt and J. Lockie Wilson to the annual convention in Pittsburg during the week of Nov. 16th.

VEGETABLE - GROWERS' CONVENTION.

The one-day's session of the Ontario Vegetable-growers' Association was full of enthusiasm and interest. Delegates from the various branch organizations and other progressive growers from different parts of the Province, showed their appreciation of the work of the Executive and those who took part in the convention. Onions, tomatoes, and numerous other crops, as well as the use of fertilizers in obtaining higher yields, and the fighting of insect and fungous pests, proved to furnish interesting material for thought and discussion.

The President, R. H. Lewis, of Hamilton, in pointing out that the object of the Association, as well as this convention, was education, suggested that special attention be devoted to forming new branch associations. A visit to the Ontario Agricultural College last season revealed the fact that the work done at that institution in the interests of vegetable growers was very much superior to that being undertaken a few years ago. For many staple vegetable crops, however, it was necessary to have an experimental farm in a more southerly district. A good start had been made at the Jordan Harbor station.

EARLY SEEDING ONIONS.

The work contemplated for 1909 was dealt with by Thos. Delworth, of Weston. A series of experiments to determine the best dates of seeding for onions had been conducted. In many sections the practice was to sow as early in spring as the ground could be fitted. Others argued that, by delaying the seeding, a crop of weeds could be killed, and a more rapid germination insured. Reports from a dozen enthusiasts who undertook the test, showed that the established practice of early sowing was the most remunerative. A Weston experiment gave 142 pounds marketable onions from May 6th sowing, 120 pounds from May 9th sowing, and 32 pounds from May 30th sowing. At Humber Bay seed sown on May 9th gave 142

pounds, that sown on May 14th gave 150 pounds, and that sown on June 2nd was absolutely valueless, not one seed in twenty germinating. At Jordan Harbor, May 5th sowing yielded 142 pounds, May 15th sowing 53 pounds, and May 25th sowing 51 pounds. In every case, the quantity of the two early crops was greatly superior to the late-sown crop. Guelph, Ottawa and Chatham growers had similar results.

The intention was to continue the onion experiments, and also to launch out with other vegetables. It had been arranged to test home-grown cauliflower seed, and compare the returns from those of imported seed, but it was found impossible to secure the seed.

Secretary J. Lockie Wilson, in giving his report, dealt happily with the history of vegetable-growing from the long-gone ages to the present, and urged all market growers to procure only first-class seed, and use brains in their garden work. Legislation regarding the non-warranty clause found on seed packages and in catalogues and penalizing seed vendors who disposed of seed going below 60 per cent. vitality were a necessity.

TESTING SEED OF VEGETABLE CROPS.

The Provincial Association now comprised nine branch organizations, and a total of about 400 members. A prize offered for best secretary's report of the work done by local branches was won by F. F. Reeves, of Humber Bay. Complaints as to worthless or inferior garden seeds being on the market, led to a suggestion from the growers that the Ontario Agricultural College be asked to test seeds and publish results before the time of seeding, in order to protect growers. The matter had been taken up with the College authorities, but nothing definite had been arranged.

In the ensuing discussion, it was claimed by prominent vegetable-growers that it was as necessary to have legislation dealing with cauliflower or other vegetable seeds as it was to compel merchants to guarantee clover seed. Under present conditions, the seeds were low in vitality, and also not true to name. If it was impossible for firms to get high-grade seed, they should at least be compelled to state on the package what per cent. would germinate, so that the grower would know what he was sowing, and not lose his crop, as frequently was the case.

ONION-GROWING IN UNITED STATES.

A trip through the United States during the past season, in the interests of vegetable-growing, furnished A. McMeans, of the O. A. C., Guelph, with interesting details regarding the onion-growing industry. Several States of the American Union were devoting 2,000 to 4,000 acres annually to this crop, and obtaining an average yield between 300 and 400 bushels to the acre. In fourteen States, the total yield from 17,818 acres was 5,571,450 bushels, or an average of 312 bushels to the acre.

As to practices in growing, there was little difference, in some regards, from the common practice in Canada. They were pulled and thrown in rows in such manner as to have tops cover the bulbs, and not left more than four or five days. Special care in drying and storing was taken. Color was the main feature desired, size being sacrificed for ideal color. A very successful Michigan grower had muck soil two to four feet deep, and thoroughly underdrained. This was top-dressed with manure. His yield frequently went 700 bushels to the acre. A machine was used for topping. The cost of weeding ranged from \$7 to \$18 an acre, depending on the season, his motto being to keep the ground clean from year to year, and to use only well-rotted manure or high-grade fertilizer. Seed was raised on his own farm, 160 pounds being produced this year from the use of 85 bushels of bulbs.

Another Michigan grower used a four-row seeder, and put seed in drills 13 inches apart, at the rate of four pounds to the acre. His total cost for 110 acres totalled about \$100 per acre, the yield being between 400 and 500 bushels per acre. Other interesting information included the application of 40 tons to the acre of barnyard manure, and a cost of \$1.00 per acre for wheel-hoeing. Many had to go over the onion field seven times or more, and frequently had an expenditure of more than a dollar each time. In onion sections in the vicinity of Leamington and Scotland, Ontario, the crops had been looked over, and notes taken. As yet, there were no definite data as to the onion production of the Province. Last year Leamington growers shipped 25 cars, and Scotland (Ont.) 65 cars. This year's crop was slightly greater.

W. G. Carter—Would you consider it possible to grow onion seed in Canada?

Mr. McMeans—Seed is grown across the border under very similar conditions. Great care is required in selecting bulbs from which to grow the seed.

IRRIGATION OF VEGETABLES.

In discussing the effect of irrigation on the growth of vegetable and small fruits, Professor W. T. Macoun pointed to the prominence of a lack of water supply during the past season. It

was necessary to have a...
 tion to hold the maximum supply...
 table-growers practiced deep...
 and were careful to give...
 conserve the moisture; but even with...
 conditions there was no doubt but that a...
 supply would give far greater returns.

Sources of supply of water, and methods of distribution, were dealt with fully. In Ontario, it was considered that comparatively numerous floodings, and not too much at a time, would give better results than thorough and infrequent soakings given in many parts. Figures given from tests in New Jersey showed that increased yields resulted from the irrigation of many crops.

Reports from several Ontario enthusiasts who had practiced irrigation on a small scale showed some to have had most encouraging results. W. W. Weaver, of Chatham, had found a yield of potatoes on irrigated ground about three times that on similar soil unirrigated, while sugar beets had been increased 30 or 40 per cent.

HON. JAS. S. DUFF.

The importance of vegetable-growing was dwelt on by Hon. Jas. S. Duff, Minister of Agriculture, who attended the afternoon session. This association was characterized as representing the most important of the horticultural interests. It was possible to do without flowers, and also without fruits, but no man cared to do without vegetables. He approved of the enthusiastic work done by the Provincial Association in discussing the various problems that confront the gardener. Half the difficulties in vegetable production were said to be due to insect ravages. The market for garden and bush-fruit products was widening rapidly, and every possible precaution must be taken to insure the maximum returns. The hearty support of the Provincial Department, as far as it was possible, was promised the vegetable men in their good work.

The tariff question was touched on by W. O. Sealey, M. P., of Hamilton, who considered that the producers of garden and farm products should be protected to as great an extent as the manufacturers.

FERTILIZER EXPERIENCE.

The value of commercial fertilizers in the production of vegetables and small fruits, dealt with by A. McKenney, B. S. A., representing the Department of Agriculture in Essex High School, showed that the results of numerous experiments carried on this year were unsatisfactory. In many instances the results were contradictory, while in a few cases an experiment contradicted itself within itself. Of 23 tests, 17 gave positive and 6 negative results. Those who cared to use fertilizers must go slow, and a continued experiment on the same soil for a number of years was necessary before they could be sure whether or not the fertilizer was of real value. In 1907, among growers in Essex County, results, generally speaking, were excellent; this year they were uncertain. J. L. Hilborn, of Leamington, F. F. Reeves, of Humber Bay; Thos. Delworth, of Weston; J. W. Rush, of Humber Bay, and others, stated that the outcome of their experiences had been just as Mr. McKenney said. Mr. Delworth tested two sacks for a fertilizer firm, and found no difference in the crop produced, while Mr. Reeves said that five years' experience taught him to advise vegetable-growers to spend no money on commercial fertilizers. For a season or two, Mr. Rush had excellent results, but this year the fertilizer gave no returns.

TOMATO CULTURE.

In dealing with the tomato industry in Canada, A. G. Turney, of Guelph, stated that in 1891 there were 800 acres devoted to growing this crop for canning factories. In 1908 the area had increased to 8,000 acres. The total value of the crop in 1901 was \$190,000, while \$27,000 went to growers. In 1908 the value had increased to over \$1,500,000, and the growers got over \$400,000. This year Ontario has 50 canning factories.

The difficulty with the grower was in not using stout, strong plants for setting out. Pot plants could be secured at \$7.00 per 1,000, while ordinary plants ranged from \$2 to \$3 per 1,000. Many growers used inferior plants on poor soil, and then neglected cultivation, and allowed the surface soil to become baked. The more progressive growers, however, used good strong plants, on rich soil, liberally treated with barnyard manure, and gave thorough cultivation throughout the season.

Cutworms were a serious enemy. These could be combated by late fall and early spring plowing, and by the use of Paris green in bran mash, using 1 ounce Paris green to 3 1/2 pounds bran, and enough sugar in the water to sweeten a reasonably thick mash.

Estimates as to the cost of producing tomatoes ranged from \$35 to \$75 an acre. In order to increase the net returns, it was necessary to increase the yield. In Ontario, the average yield was about 175 bushels per acre. It should go over 300 to leave a reasonable profit for the grower.

W. C. McCalla, of St. Catharines, said the

... depended on local conditions. ... for horses and men, and laying ... proprietor, a 400-bushel crop ... \$70 to \$75 per acre. On his ... not apply 25 tons of manure, as ... because of too great growth of ... His experience with fertilizers had been ... An old peach orchard, from which the trees were taken the previous year, had received twelve loads of manure, was put in corn, then in potatoes, and then in wheat, and seeded to clover, which was plowed down before peach trees were again set out the following year. Tomatoes were planted between the peach rows. For actual land given to tomato crop, a four-acre field averaged 695 bushels to the acre, or, counting driveways and headlands, 600 bushels to the acre. Potash and phosphoric-acid fertilizers were found to pay.

F. Fuller, of London, considered that it was impossible to have ground too rich for early tomatoes. For late crop, also, it was impossible, if the plants were well started before they were set out.

Jas. Guthrey, of Dixie, a pioneer gardener of Toronto district, applied manure the previous year for potato crop, in order to get a good yield of tomatoes. If he applied manure in the spring, he would get too much tops for all varieties except Dwarf Champion, a short-growing sort.

INSECTS AND FUNGI.

Insects and fungous diseases, of the usual species found in market-gardeners' crops, were dealt with by T. D. Jarvis, B. S. A., of O. A. C., Guelph, who urged all to become acquainted with the pests. Suitable text-books for reference were mentioned. Essentials in avoiding the pests included the keeping down of weeds, the cleaning up of rubbish, the destruction of crop-remnants, the rotations of crops, and the practice of forms



The Late Dr. James Fletcher.

of cultivation that would destroy the pest that was common. The use of fertilizers gave the plants a start, and equipped them to combat attacks. A new fungicide, which may also act as an insecticide, had been recommended. It consisted of resin 2 pounds, sal-soda crystals 1 pound, and water 1 gallon. This should be boiled until it is a clear brown color. Then, for sal-soda, asparagus, spinach and onions, 40 gallons of Bordeaux mixture should be added, and for other plants, 80 gallons. Aphides had been troublesome on many crops, but a parasite had been found attacking this pest, and promised to exterminate it.

MEMBERSHIP FEE REDUCED—OFFICIAL ORGAN DISCONTINUED.

A resolution, proposed by Thos. Delworth, suggested that it would be in the interests of the Association to change the constitution, making the membership fee 50 cents, instead of \$1.00, and that the sum of 10 cents be forwarded by the branch association to the Provincial organization. It was also stipulated that that part of the constitution referring to an official organ be changed, leaving it optional with the individual as to whether or not he subscribed for a paper, but advising all members to read suitable agricultural papers. Both clauses were carried unanimously.

Last season's tests in connection with the work of vegetable-growers had given good results. A resolution from W. W. Weaver, of Chatham, asked that the tests be carried on again in 1909, to take in more species, and to be started earlier in the season, in order to give experimenters an opportunity to test their seeds. This was carried.

The demand for home-grown seed for the vege-

table garden, and the facts that there were no data as to what varieties would ripen early and suit best for seed production, and that it was out of the question to depend on the average grower to go to the expense of investigating the problem, brought resolutions requesting Government aid. The Provincial Government will be asked to see what can be done in this regard at Ontario Agricultural College and at Jordan Harbor. The Dominion Government, also, will be requested to institute a series of experiments to ascertain what vegetable seeds can be produced in Canada.

ONTARIO FRUIT-GROWERS' CONVENTION.

The 49th annual meeting of the Fruit-growers' Association of Ontario was held in the British Welcome League Hall, Toronto, November 10th to 11th. A meaty two-day programme had been arranged, and the President, A. W. Peart, of Burlington, deserves special commendation for the punctuality and discretion with which it was carried out.

In his presidential address, Mr Peart congratulated the association upon an increase of over 200 in the membership during the year. During the past two or three years, he said, there had been deep and bitter complaints by apple-growers with regard to the ravages of the codling moth. At a meeting of the Executive last spring it was felt that something ought to be done in this direction. Accordingly, some hundreds of circulars were issued, embodying the methods and practices of three of the best sprayers in the Province, and the result of following out the suggestions thus broadcasted was a growing hope that the moth might be controlled. In the Burlington district this year the ravages were the worst he had ever seen, especially among Baldwins, in some orchards of which the ground was literally covered with wormy apples.

Last year the Provincial Department of Agriculture had instituted a series of fruit institutes, consisting of one-, two- and three-day meetings, held in various parts of the Province. The programmes has been well arranged, embracing a logical development of the subjects from soil to marketing, and the institutes proved very successful and satisfactory.

The finances of the association were in good condition, there being a large balance on hand, which was well, seeing that the association expected next year to entertain the American Pomological Society.

Reference was made to the exhibits of fruit that had been made at such large exhibitions as the Winnipeg Industrial, the Franco-British, and Toronto Exhibition, the effect of which must be to advertise Canadian fruit-producing capabilities to good advantage.

In some respects the season's record of the fruit industry had been exceptional. In the early part of the season the rainfall had been heavy, but in August a prolonged drouth set in, so that while the fruit attained a very fair size up to the middle or the end of August, from that time on its growth was not up to the mark, resulting in considerable undersized fruit, especially in uncared-for orchards.

A GRAY FUNGUS ON APPLES.

An apparently new kind of fungus had been noticed on the Greening apples. It was a grayish fungus, and was observed adjacent to the stem, whereas the spot fungus is usually most in evidence at the blossom end. Some of the affected fruit had been shipped in boxes and barrels, but the fungus developed so badly as almost to wipe out any profit from the sales. He understood that an American authority had classed this whitish fungus as a secondary development from the scab; however this might be, it appeared to be a new visitor.

PRICES AND CROPS.

The apple crop, upon the whole, had been light, especially of winter apples. Pears, plums and peaches had been average to good. Grapes aggregated a large yield, although the average per vine had not been heavy. Small fruits were fair. Prices for fruit did not rule high, but, on the whole, considering crop and prices, fruit-growers have done fairly well.

STEADY GROWTH.

Since 1891 the fruit-growing industry of Ontario has made steady growth. From 1891 to 1901 the output of fruit had been doubled, while from 1901 to 1908 the acreage had increased at the rate of 2 per cent. per annum. We have untold possibilities in the way of soil and climate for future expansion of the industry. As regards knowledge, we are still groping along, the industry being in an experimental stage, and it is not well to dogmatize conclusions. Many practical problems are still engaging our attention. The ideals of the association should be based on integrity, intelligence and industry. Upon these three factors, moral, mental and physical, rest the future success of fruit-growing.

NEW SEEDLING FRUITS.

Under the order, "Report of Standing Committees," W. T. Macoun, C.E.F., Ottawa, was

down on the programme to report for the committee on new fruits. A letter from Mr. Macoun explained that the death of Dr. Jas. Fletcher had prevented the writer's attendance. A resolution, moved by C. L. Stephens, of Orillia, and seconded by E. D. Smith, Winona, was passed at this stage, expressing the high appreciation in which the deceased was held, and conveying a message of sympathy to his family and co-workers on the Central Experimental Farm staff. Mr. Macoun's report was then read by Harold Jones, of Maitland. A few weeks after the last annual meeting of the Ontario Fruit-growers' Association, a circular had been prepared and sent to a large number of papers in Canada, setting forth that during the past three hundred years many varieties of fruits have originated in Canada, some being of great merit. A large number have been recorded, but up to the present no complete list of Canadian fruits had been published. It being desirable to prepare as complete a list as possible before the task becomes too great, the Horticulturist of the Central Experimental Farm requested assistance by all interested parties, by sending particulars as to new fruits which should be recorded. In response to the request quite a number of fruits had been sent in, a few of which were quite promising. Among them we note a handsome seedling apple of good quality and Fameuse type—season evidently through January—very promising if proving to be a better keeper than McIntosh; seedling from A. E. Bellman, Bowmanville, Ont.; also one from Wm. Chambers, Carnarvon, Ont.; a promising large-fruited seedling, thought to be hardy as Duchess, but larger, and said to seldom have an off year in bearing; flesh and flavor somewhat like Gravenstein. Scions obtained from Thos. C. Robson, Allsaw, Ont. (now of Alberta). Golden Crown was a large, roundish, pleasant-flavored, sub-acid winter apple, said to be a seedling of a large imported apple; seed planted about 1880; apple grown by Adonijah Marks, Clifton, P.E.I. Tree hardy, growing on a hill exposed to northwest, said to be better bearer than Yellow Transparent; resembles Grimes' Golden. Henry White is the name of a promising apple received from R. Schwerdtfeger, Morrisburg, Ont. Season mid to late winter; fruit somewhat resembling Princess Louise in appearance, flesh and flavor. Jacob Red was a medium, roundish, yellow-fleshed, firm, juicy, mid to late winter apple, of attractive appearance, also received from Mr. Schwerdtfeger.

Of plums, the first noted was Joseph, an Americana seedling, of the largest size, attractive in appearance, and one of the best in quality. It came up in 1904 in garden of Joseph Rowley, Sr., Cumming's Bridge, Ont.; flavor sweet, rich and good; quality good for an Americana. From Wm. Judge, Orangeville, Ont., a promising clingstone plum, somewhat between Yellow Egg and Coe's Golden Drop in shape; medium to above in size; flavor rich; quality good. Another good seedling, sent by Mr. Judge, was much like Lombard in outward appearance, but darker in color and better flavored.

From Jas. Tarry, Tarry's, B.C., was received a promising plum, sweet and of good flavor, not very rich, but of good size, belongs to Domestica group.

A cherry seedling, from Emil Anstad, Trail, B. C., was grown from a seed planted in 1898 by Mr. Anstad. A good cherry, evidently a Big-gereau; fruit large and heart-shaped; a juicy, sweet, pleasant-flavored clingstone; season evidently late July.

Mention was made of 17 new seedling currants from C. L. Stephens, Orillia, Ont., and 10 new seedling gooseberries from P. Barrett, Truro, N.S.

The attention of Canadian nurserymen was drawn to the importance of having a larger list of the Americana plums. There is an immense tract of territory through Central and Eastern Ontario, Quebec and New Brunswick where the European sorts do not succeed, but where the Americanas can be grown successfully. Some of the most promising sorts not now found in the catalogues of our nurserymen are Bixby, Mankato, Admiral Schley, Brackett and Oren.

At the Central Experimental Farm, in addition to those trees resulting from hand pollination, they have about 2,000 seedlings resulting from natural cross fertilizing, and of these about 434 have fruited. This year 411 seedlings were bearing, of which 249 were fruiting for the first time. Some very promising apples have been obtained. A list of eighteen names was mentioned, for description of which those interested were referred to the annual reports of the Experimental Farms. Other fruits are also being originated, but in smaller numbers than apples. Several promising new black currants, originated by Dr. Saunders, have recently been introduced.

A. D. Harkness, of Dundas Co., was inclined to question the wisdom of planting the Americana plum extensively. He had 24 trees of Wolf, Hawk-eye and Stoddard which he was going to take out, the fruit being so astringent. Prof. H. L. Hutt, another member of the committee on new fruits, said he had received few new seedling apples this year, but some other good fruits, among which was a peach from Essex Co. This

was something like the Crawford, but did not appear to possess outstanding virtues which should cause it to displace other varieties in cultivation.

ANOTHER OPERATION ON THE CONSTITUTION.

Once more the constitution of the association required amendment. In 1906 a long and rather warm discussion arose over the changes then proposed, re-election of directors. The amendment adopted at that time provided that the four oldest directors be dropped off each year, and that four new men be elected to take their places. It was foreseen by a few that this would not always work automatically, as the total number of directors (13) is not a multiple of the number annually retired (4). This year the snag was encountered. Of the necessary quota of retiring directors, two had been elected in 1902 and one in 1903, but four men had been elected in 1906, and the question was what one of the four should give way to the rest. The matter could easily have been settled this year by a voluntary retirement, but the difficulty would be bound to recur. An amendment was, therefore, passed, to provide that no director may serve more than three years consecutively on the directorate, but after one year's lapse a former director may be eligible for re-election.

REPORT OF CO-OPERATIVE COMMITTEE.

Jas. E. Johnson, of Simcoe, Ont., reported for the co-operative committee, which had met in Guelph on February 6th, and again in Toronto on February 20th. The spring work consisted particularly in getting together a circular, giving a full list of firms handling such supplies as spraying materials, pumps, hose, chemicals, etc., together with wholesale prices for same. All the co-operative associations in the Province were sent copies of this circular.

The committee also investigated various systems of bookkeeping for co-operative associations, looking particularly into the one which was explained to the Fruit-growers' Association at their last annual meeting. It was found that the cost of these business systems as used in ordinary commercial work was too great to allow of their being used generally by the association.

During the summer a pamphlet was issued, giving the names of co-operative shipping associations in the Province and their secretaries, and the probable output for 1908. This pamphlet was circulated largely at the Winnipeg Exposition and to various fruit dealers and other parties applying for the same in Ontario. The pamphlet contained also information in reference to the general work of these associations.

A recommendation was further made to the Department of Agriculture, that an instructor in barrel packing be appointed to visit the various associations. This recommendation was adopted, and Mr. Backus, of St. Catharines, looked after this work.

TRANSPORTATION MATTERS.

W. H. Bunting, of St. Catharines, Ont., said nothing very definite had been accomplished by the Transportation Committee during the past year, their plans having been disarranged by the death of the Chairman of the Railway Commission, and consequent disorganization of that body. Then, too, owing to the high price of fruit last year, it was not possible to make out so strong a case for the grower as in some other years. The committee were, however, assembling facts and data for subsequent use. The greatest present grievance was the express business, though it was satisfactory to note that in some cases better accommodation had been provided at shipping stations. He understood that the privilege had now been granted shippers of assembling shipments at divisional points and sorting up cars. During the past year or so growers had experienced a hardship in regard to distributing goods by express. At St. Catharines, for instance, they had been forced to abandon express and ship in carload lots. This was detrimental to the interests not only of producers, but of consumers in the smaller places.

E. D. Smith voiced the astonishment of growers to find that the express companies had virtually raised their rates by increasing the weight at which the fruit baskets of given size were estimated. It was near the end of the season before they got back to the old system. Mr. Smith complained strongly of the rates to distant points, which were so high that Ontario growers were losing the Northwest market for fruit. We must either get higher tariff, he said, or lower transportation rates, and as the former seemed out of the question, effort should be concentrated on a reduction of shipping charges.

Wm. Armstrong, of Queenston, Ont., urged that with a reasonable rate they could send vegetables from Niagara Township to Toronto. He quoted a letter from a transportation official, quoting a rate of \$1.00 from Queenston to Toronto, via Hamilton, on a 6-basket consignment of vegetables, weighing, approximately, a hundred pounds.

L. A. Hamilton, of Lorne Park, Ont., gave the express company credit for a great improvement in the express service to the Clarkson Fruit-growers,

of which he had voiced an emphatic complaint last year. Many of the grievances had been removed, and they were receiving practically an express service at a low freight rate. They were now up against a further difficulty with regard to local transportation in Toronto.

FRUIT MARKET IN TORONTO.

H. St. C. Fisher, of Queenston, Ont., reported for the committee representing the association with regard to fruit-market facilities at Toronto.

For the past few years Ontario fruit-growers have been shipping their fruit to Toronto under very unfavorable market conditions, until this year, when the facilities for handling it have been greatly improved. A year ago the convention of this association took the matter up with the Toronto City Council, and in consequence a committee of fruit-growers was appointed to confer with the Council, to see whether something could be done for the fruit-growers in this respect, whereupon the City Council appointed a committee to meet the Fruit-growers' committee and a committee representing the commission men of the city. It was also decided to call in the transportation companies interested, and deal with the matter in a businesslike way. The committees met at the City Hall from time to time to discuss ways and means. The whole matter was sifted down in such a way that they have now a greatly-improved fruit market. The Grand Trunk Railway deserve credit for the way in which they have improved the fruit-market facilities in Toronto. It seems that the City Council are inclined to wait until the water-front question is settled before they undertake to build a fruit market, to which all the transportation companies will have access on equal terms, and the speaker suggested the appointment and retention of a standing representative fruit-market committee until such has been accomplished.

The old Great Western station at the foot of Scott Street (now known as the Scott St. Fruit Market), where nearly all the fruit that has come into this city for several years past has been handled by the commission men, has been renovated in such a way that there now is probably four times the floor space as a year ago; a new floor has been put down, the roof repaired, electric lights have been installed, and the whole interior whitewashed. It is understood to have cost the G. T. R. something like \$4,000.00 to make the necessary repairs.

But there is need in Toronto for one of the finest fruit market buildings on the continent. Toronto has the best market for choice fruits in Canada. The population is composed largely of genuine Canadians, who love things Canadian, and who are willing and able to pay a high price for a first-class article put up in first-class shape. The St. Lawrence Market, where all the farmers' products are handled in this city, is a market that farmers should be proud of. Fruit-growers should extend their efforts until they get exactly what they want in the shape of a fruit market. The City Council are willing to do their part, and if they wish to hold the fruit trade, they must as soon as possible build a suitable market, to which all transportation companies will have access on equal terms.

The Canadian Express Co., working in conjunction with the Michigan Central and Grand Trunk Railways, have the past season done much toward landing the fruit shipped from Queenston Station in the market without delay, and in a marketable condition. They have a superintendent in Toronto who is thoroughly familiar with the conditions as they exist all along the line, and he is to be thanked for procuring better shipping facilities this year than there ever were before.

The Dominion Express Co., working in conjunction with the Niagara Navigation Co., did their part at the shipping end of the line, but when the fruit landed in Toronto there was absolutely no decent place on the wharf for the men to handle it, so that it had to be loaded from the fruit trucks to wagons or drays, carted across the railway tracks to the fruit market, and then unloaded into the market. The same is true of the fruit that is shipped from St. Catharines and vicinity to Toronto. Fruit-growers know that the oftener their fruit is handled before the market is reached the less it is worth, so all these things go to show that the fruit market conditions in the City of Toronto can yet be greatly improved upon.

BROODS OF THE CODLING MOTH.

Quite an animated discussion on the codling moth and its control occurred on Tuesday afternoon. President Peart set the ball rolling with a few introductory remarks. Entomologists claim there are two broods of codling moth in his section, and over Western Ontario generally, but his own opinion was that when once they start in brooding they continue until it freezes up—in other words, that there is a continuous brood. The successive stages of the insect are egg, larva or worm, pupa and mature insect or moth. As instancing how rapidly it passes through the latter stages, Mr. Peart said that he had banded his trees on a Tuesday, and examining them the following Monday had found that the worm had entered beneath the band, changed to pupa, then

to a moth, and escaped, leaving the hole in the apple. Later in the convention Prof. Lochhead, of St. Donald College, explained that the caterpillars mean by a single brood is that a certain particular insect will not complete the cycle of its existence and pass through a generation more than once in the twelvemonth. An insect that has two broods a year is one that completes its cycle of existence and passes through two generations within a year. There are two broods of codling moth in some parts of Ontario, but the dates when they pass through their successive stages are affected by seasonal conditions; and, moreover, the insects of a brood will not all pass the same stage at one time. In fact, the two broods may to a certain extent overlap each other, thus giving the appearance of continuous brood.

A further ray of light was shed on this vexing subject by Prof. M. B. Waite, Pathologist of the U. S. Department of Agriculture, who remarked, incidentally, in the course of his evening address, that his co-worker, Prof. Quaintance, in charge of the Entomological Branch of the U. S. Department, had lately established the fact that some of the injury commonly supposed to be due to late broods of the codling moth was really caused by another insect, called the plum moth, which makes a comparatively shallow hole into the apple.

IRRESPONSIBLE APPLE BUYERS.

The subject, "Commercial Spraying of the Apple Orchard," was handled briefly by a number of speakers. Mack Smith, an apple buyer, who is also interested in orcharding, remarked that apple buyers are about the biggest pack of suckers in the world. They start in July and chase and worry a farmer to death to buy his apple crop. After the orchard is contracted, the farmer has insufficient or no interest in how it turns out. He believed there were a larger percentage of irresponsible apple buyers than of any other class of business men. The Old Country financiers who back them were understood to be shutting down on these men. If they were shut down harder it would be a good thing for the industry, as they would then inspect more closely and buy better fruit. The speaker asserted that an acre of good apples, if properly attended and looked after, would produce as much as any other ten acres on the ordinary farm.

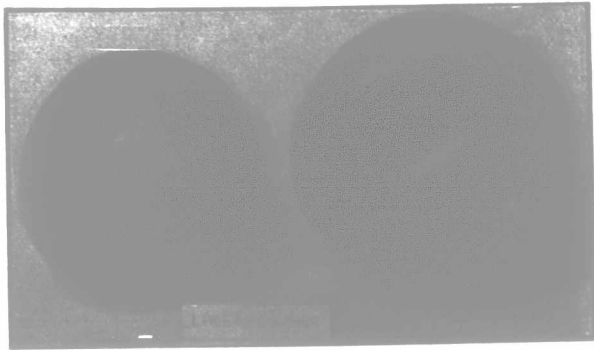
COMMERCIAL SPRAYING.

Coming to his subject, Mr. Smith named four important pests of the orchard for which spraying was necessary: San Jose scale, codling moth, oyster-shell bark-louse and fungus. The codling moth he considered the greatest evil, and the easiest to handle. He has practiced banding his trees, and also spraying. Formerly he had been disgusted with spraying for the moth, but hearing an address by Jas. E. Johnson, of Simcoe, he was impressed by it, and resolved to follow this method. Mr. Johnson advocated three sprayings: (1) Before the buds had swollen; (2) after the buds had swollen; (3) just as the blossoms dropped. Mr. Smith in his practice had omitted one of the early sprayings, but gave two thorough ones this year. In 1906 and 1907 his orchard had been sprayed by a commercial sprayer, a man who made a business of it. This year the owner superintended it himself. As for results, he instanced his Ribstons. In 1906 he packed 44% firsts, 35% seconds, and had 19% culls; in 1907 he had 29% firsts, 24% seconds, 37% thirds, and 10% culls; in 1908, 80% firsts, 20% seconds, and practically no culls; in fact, there were not half a dozen bushels of culls in the carload, and, moreover, it was the finest car of Ribstons he had ever packed. Mr. Johnson advocates only three sprayings, and uses an excess of bluestone and lime, while as an insecticide he uses both Paris green and white arsenic along with the Bordeaux. Emphasis is laid on spraying just after the blossom falls, while the young fruits are still erect and the little sepals at the blossom end are standing out forming a little basin. The idea is to fill that little basin in the blossom end with a poison, so that it will be ready there when the moth goes to lay its egg. Now, in the case of Mr. Smith's Ribstons this one spraying alone insured freedom from codling moth, but in his Baldwins, Spies and Greenings he had quite a few wormy apples, and was inclined to think one or two later sprayings were necessary to cope with the later brood, and he also thought it important to use some more powerful insecticide than Paris green. Travelling extensively through New York State, he had found arsenate of lead being used. The arsenate was still to be seen adhering to the fruit, and did not readily wash off. Next year he proposes to spray four times, and possibly five: (1) During the dormant season for fungus; (2) as buds are opening; (3) as blossoms drop; (4) when apples are size of marbles, and if the season proves hot and dry, would spray a fifth time, using arsenate of lead. He anticipated no danger of disfiguring the apples, and would use about 4 pounds arsenate of lead to 100 gallons water.

D. Johnson, of Forest, Ont., in a very practical address, repeated his experience in spraying, but as this is familiar to our readers, we need not go into details. In their district they have been using the regular Bordeaux formula, and it has

given excellent results, orchards which were at one time covered with worms and infested with scab being now clean with very little scab and few worms. Moreover, he had used Jas. E. Johnson's mixture, and takes it quite as well, if not better, than the one he had been using. Contrary to the usual teaching, he uses a nozzle which will send a spray up with force, rather than a very fine mistlike spray, as recommended by the orthodox. The spray must be strong enough to reach the tops of the trees.

Growers are too much inclined to leave spraying to their hired help, who seldom look after it as it should be done, said Jas. E. Johnson, the man who has been the means of revolutionizing orchard practice in Norfolk Co., Ont., and whose spraying formula and instructions have been followed with marked success by quite a few orchardists over the Province. Before spraying, study what you are to spray for; secondly, study how



Apples Grown on Tree Sprayed with Home-made Lime-Sulphur Mixture.

Note that fruit is clear and free from scale.

to control those specific fungous or insect pests, and then spray thoroughly at the right time. The precise stage at which the spraying is done is one of the greatest secrets. A day's delay may in some cases mean the ruination of a crop; occasionally, if the first opportunity is not taken advantage of, rain may delay the work for days. Some growers undertake to spray too large an orchard with a single outfit. With one ordinary hand pump he would not attempt to spray over 10 or 12 acres. A power outfit might, perhaps, handle 15. If an orchardist has larger areas than these, he had better have two or more pumps.

TUSSOCK MOTH IN ORCHARDS.

Mr. Johnson has been in the habit of spraying three times: first in the dormant season for fungus, second for the bud moth, and the third time especially for the codling moth. A fourth now seems necessary, to combat the tussock moth, which gave them considerable trouble in their district last year. In reply to a question, Prof. Lochhead informed the audience that the tussock



Apples Grown on Tree Sprayed with VI. Solution.

Showing scale on the fruit.

moth caterpillar hatches out in May, and remains in the caterpillar stage until about the middle of July. In the western part of the Province it is earlier than in the east. From observations in New York State, Mr. Johnson feared it was going to be a hard pest to fight. It appears to begin eating the young foliage, and following that up gnaws into the apples, some fruit showing only a slight scar and some quite a defacement. Spraying for this would appear to be necessary about two or three weeks after the blossoms fall.

BOTH ARSENIC AND PARIS GREEN.

Mr. Johnson then described his spray formulae. For the codling moth he uses 1 pound white arsenic, 3 pounds sal soda, and 1 pound Paris green to 250 gallons water, combined with the Bordeaux mixture. The idea of using both arsenic and Paris green he could not explain, except on the ground that the quality of the Paris green

could not always be relied upon, and in such cases the arsenic supplied a double chance of accomplishing the work. In using this combination he had simply followed the formula as he had obtained it in New York State, and from it he had had excellent results.

To show the importance of spraying at the right time, the speaker stated that this year one orchard sprayed a week late had 75% of apples affected with the codling moth, while in the other not 2% were affected. As soon as the petals fall get the calyx end of the young fruit filled with spray mixture.

OYSTER-SHELL BARK-LOUSE.

Will spraying for San Jose scale kill the oyster-shell bark-louse, was a question voiced by G. C. Caston, in reply to which A. M. Brown, of Wyoming, Delaware, asserted positively that lime-sulphur washes applied for San Jose will destroy the oyster-shell bark-louse.

A resolution passed at a later session, requesting that the Yellows and Black-knot Act of Ontario be amended, by including the disease known as little peach. It was also proposed that legislation be enacted making spraying compulsory for the codling moth.

Over the rest of the programme we may pass lightly, reserving many of the papers and discussions for subsequent use, when they will be more seasonable, and when space will permit their use more in extenso. Prof. Wm. Lochhead gave three papers—one on the apple maggot, one on the blister-leaf mites, and a third on the black canker. The handling of the strawberry plantation was treated in an address by S. H. Rittenhouse, Jordan Harbor, Ont., and discussed by a number of other experienced growers. Prof. R. Harcourt, O.A.C., Guelph, addressed the association on "Observations on the Use of Fertilizers in German Orchards." While the Germans do not pretend to have arrived at such definite conclusions regarding the use of fertilizers in orchards as in grain and other crops, owing to the length of time it requires to conduct experiments with trees, still they are devoting themselves to a conscientious study of the problem. Meantime, fertilizers are quite largely employed by German fruit-growers. Prof. Harcourt's lecture will be given in full.

Prevalent fungous diseases of Ontario orchards were discussed in a lengthy but very instructive limelight-illustrated address by Prof. M. B. Waite, Pathologist, U. S. Department of Agriculture. The information given in this address also will be published later in our columns; likewise the open discussion on commercial status of our standard varieties of fruits, and the address of Prof. Chas. F. Wilson, of Cornell University, Ithaca, N. Y., on "Results of Orchard Surveys in New York State."

TENDER FRUITS SHIPPED IN COLD STORAGE TO BRITAIN.

J. A. Ruddick, Dairy and Cold-storage Commissioner, Ottawa, addressed the convention on the shipment of early apples and tender fruits to Great Britain. It was conceded that there was

a large market in Britain for our early apples, pears and peaches, if landed in good condition. The action of the Dominion Department of Agriculture in undertaking to guarantee to certain steamship companies payment for space in cold-storage chambers, to be given up wholly to shipments of fruit, had resulted in some experimental shipments this year, and, while the prices realized had not been very satisfactory to the growers, it was encouraging to note that the fruit arrived in fine condition, and the receivers were very well satisfied. Every consigner but one who reported on the matter at all emphasized the importance of packing desert apples in boxes, and recommended the wrapping of very early apples. Mr. Ruddick read considerable correspondence expressing approval of the fruit, and offering various suggestions. Among others he read a letter, written October 13th, in which the statement was made that as English and French peaches were then practically finished, Canadians arriving after that date should make satisfactory sales. To indicate the possibilities of the British fruit market, he referred to a correspondent who spoke of peaches retailed at 10 cents apiece. After that he could easily understand the astonishment of the members of the Scottish Agricultural Commission, when offered all the peaches they could eat while visiting in the Niagara District.

SPRAYS FOR SAN JOSE SCALE.

A feature of the Wednesday afternoon session were the "Observations on Fruit Conditions," by several of the District Representatives of the Provincial Department of Agriculture. A. McKenney, B. S. A., of Essex, took the opportunity of dis-

Discussing a series of spraying experiments which are being conducted by the Provincial Department of Agriculture. The object of the work is to test different spraying mixtures as they come upon the market, or, in fact, to test any mixture which is claimed to be an effective remedy against the San Jose scale. Six distinct experiments were carried on during the past season, covering the following spray mixtures, viz.: Crude oil, two different emulsions of crude oil, ordinary boiled lime-sulphur, Niagara Brand concentrated lime-sulphur, and VI. Solution.

The crude oil proved to be a very dangerous remedy. Although effective against the scale, there was great danger of destroying the trees; in fact, every tree in the experiment which was sprayed with the pure crude oil was so badly damaged that it is hardly likely that they will recover. However, when the quantity of crude oil was reduced and emulsified, the effect was much better; there was no burning of the foliage or bark, and the majority of the scale were killed, the fruit being quite free from scale when harvested in the fall.

This is, however, the result of but one year's experiments, and it will be necessary to watch the effect of the oil upon the condition of trees, in order to find out whether a continued use of the oil will have an injurious effect upon them.

Excellent results were obtained from the use of the boiled lime-sulphur, applied April 13th to apple trees badly affected with the scale. The trees and fruit were almost entirely free from such at the time of picking.

The Niagara Brand concentrated lime-sulphur mixture was applied April 29th to sixteen apple trees, nearly all of which were heavily encrusted with scale. This mixture comes already boiled. It is diluted, and applied cold. The strength used in these experiments was one gallon of lime-sulphur to eleven of water. The mixture proved very effective as a remedy for San Jose scale. A comparison of the trees sprayed with this mixture with those sprayed with the boiled lime-sulphur seems to indicate that, as far, at least, as these two experiments are concerned, the homemade and prepared mixtures are about equal.

This same mixture was tried as a summer remedy, applied June 25th, at a strength of one gallon of the mixture to 50 gallons of water. This strength seemed to have very little effect upon the young scale, which were running at that time. Applied at a strength of one gallon of the mixture to 25 gallons of water, considerable effect could be noticed; many of the young scale were killed, and there was no injury to the leaves, so far as could be seen. However, as only one tree, which had been formerly used as a check, was sprayed, they are not prepared to state anything definite regarding the summer spray.

The other proprietary mixture tested was the VI. fluid, of which a great deal has been heard during the past year. Twenty-five apple trees, badly encrusted with scale, were sprayed upon April 11th, and again upon April 13th, with the mixture, at a strength of one gallon to 100 gallons of water, this strength being recommended by the manufacturers. The results obtained from the use of this mixture were very disappointing. Several observations were taken of the trees at different times throughout the season, and at no time could any difference be distinguished in the condition of the scale upon the trees that were sprayed and those that were left unsprayed as a check.

The apples sprayed with VI. were, at the time of picking, literally covered with scale, and were worthless for any purpose. It might be that effect would be obtained if the VI. mixture were used at a much greater strength. However, according to the results obtained from the experiments conducted this year, using the strength recommended by the manufacturers, it proved worthless as a remedy for San Jose scale.

BLACKROT CANKER.

R. M. Winslow, B. S. A., representative of the Provincial Department of Agriculture in Prince Edward Co., Ont., has been doing some valuable investigational work regarding the black rot and canker. We summarize his address:

The black-rot fungus, which, by causing cankers on the tree, black rot on the fruit, and leaf-spot on the foliage, is one of the most serious diseases in Prince Edward County orchards, and is widespread and serious enough to warrant attention throughout the apple sections of the Province.

The cankers are familiar on the trunks of younger trees and the limbs of matured ones as blackened and roughened dead areas on the bark. A single canker may cause the death of all that part of the tree or branch above the point of infection. Control will, in all probability, be secured by (1) cutting off or digging out and burning badly diseased branches or trees, and the prompt removal of rot-affected apples as they fall; (2) cutting out of small or medium-sized cankers on the trunks, followed by disinfection of the wound; (3) keeping the bark whole by preventing sunscald and other injuries; (4) re-heading of old trees where the upper branches are diseased, and the trunk and main branches in good condition; (5) keeping trees healthy, vigorous and clean; (6) spraying

to prevent further infection by use of Bordeaux or lime-sulphur wash, before the buds swell in spring, and Bordeaux mixture after the blossoms fall, and again ten days later.

GEORGIAN BAY DISTRICT CONDITIONS.

R. S. Mortimer, B. S. A., reporting from Collingwood, said that if one were to depend upon the statistics at hand regarding the acreage of orchards in the Georgian Bay District, information as to establishment of cold-storage plants, canning factories, evaporators, apple-butter factories and cider mills, he might conclude that this section was one of the most distinguished fruit districts of the Province. However, while there are numerous orchards, varying in extent from one to forty acres, the spirit of the fruit-growers is not what it might be; their zeal seems to have been allowed to flag. The cause was attributed, in part, at least, to the system of selling to the apple-buyers, which has resulted in reduced prices and profits. What was needed to revive the industry was a concern to handle the products, and deal honestly and fairly with the growers, and he believed they now had such a concern in the co-operative organization known as the Georgian Bay Fruit-growers, Limited. With new ideas introduced, with the stimulus and help resulting from the co-operative association, and with the natural advantages possessed by this region, the Georgian Bay District should one day be classed as one of the best fruit-growing sections of the Province, if not as the premier one.

J. H. Hare, B. S. A., of Whitby, stated that a serious difficulty in Ontario County was the black-rot canker, though it was not so bad as in Prince Edward County.

NURSERY CONTROL.

Robt. Thompson, of St. Catharines, reported for the committee on nursery control. The committee of fruit-growers, in conjunction with representatives of the nursery interest, had drawn up a draft act, to be suggested to the law-makers. It was admitted to be a compromise, but Mr. Thompson thought that its passage might lead to stricter regulations in time. The draft act proposed to license nurserymen with an annual license, and contained provisions against misnaming stock and substitution of varieties without consent of the purchaser. Clause 6 read that, "Any nurseryman, or agent of any nurseryman, shall be liable for damage in the common courts of the Province, within twelve months after the trees come into bearing, where fraud can be shown in the substitution of varieties, or sale of stock untrue to name." The proposed act also called for publication of the names of persons or firms engaged in the nursery business, by the Provincial Department of Agriculture, and suspension or cancellation of the license in event of evidence that the holder of a license had sold nursery stock contrary to the provisions of such act.

In discussion, it was objected that the stipulation that action must be entered within twelve months after the tree came into bearing should not have been included, the point being raised, in this connection, that some varieties do not invariably evince their true characteristics in the first year or two of bearing. It was also urged that the onus of proving fraud should not be imposed on the grower, but that failure to supply trees of the proper variety should be sufficient ground for reimbursement. Another speaker noted the absence of any specification as to soundness or health of the trees. However, the resolution was passed in the innocuous form, as drafted.

PACKING AND PACKAGES.

The above was the subject of a practical and pointed address by Elmer Lick, of Oshawa, who deplored the carelessness of the apple-packing gangs. On several occasions he had employed boys who had been on such gangs, and it had taken months for them to understand that an apple was something like an egg, and not to be handled like a potato or turnip. To a proper solution of the marketing problem, we must have some system that will insure the personal interest of the producer in getting his fruit to market in good condition. In their co-operative association at Oshawa there is a man who last year sold 126 barrels of apples, mostly Ben Davis, and received \$25 for them. This year he took care of his fruit, and sprayed (using arsenate of lead), and has scarcely any wormy apples, while, in the Horticultural Exhibition, in St. Lawrence Arena, he had first on barrel and first on pyramid. As to cost of packing, Mr. Lick was not sure whether it was cheaper or not to pack in a central packing-house, but it was possible to pack more apples in a better way, and with less skilled labor and superintendence. We ought to have better barrels, and he preferred basswood for heads.

VENTILATION OF APPLE BARRELS.

Joseph Beattie told of his experience in giving ventilation to the apple barrels by boring holes in the staves. In a year, four holes were bored around the edge of each barrel, and four near each end of the staves, not the heads. This year he bored two 1/2 inch holes near the edges of four of the staves, and four of each barrel in the

either side of the bilge. The intervening edge of the stave was split out, leaving four such slits in each barrel. Apples shipped during warm weather in these ventilated barrels, both this year and last, arrived in the pink of condition, while fruit shipped in barrels not so ventilated did not ship nearly as well.

The use of a comparatively large package for tender fruits was recommended by Major H. L. Roberts, of Grimsby, because of the freedom from damage in shipment. The 24-quart berry crate was taken as an example for desirable size and weight. Collapsible crates were suitable, if the cost was not so high as to remove the profit from fruit-growing.

MARKETS.

Production and distribution, as the two main features of the fruit industry, and an even supply, at a reasonable price, leaving a fair profit for the grower and all who handled it, was the theme of F. G. H. Pattison, of Winona, in his discussion of markets. Too many growers did not pack properly. Travelling inspectors on duty at points of shipment were suggested. Three or four men for four months in the year would protect the public and assist the grower. The Fruit Marks Act was said to be a dead-letter, as far as basket fruit was concerned.

Of the various markets for fruit, the commission system demanded attention. Former conditions, whereby the commission man kept the bulk of the returns, and returned the balance to the grower, resulted in too many commission men.

The order-and-quotation system, carried on by local buyers, followed, and proved to be a system that brought greater returns to the producer. For a time, improved quality went with this system, but of recent years many growers had not acted fairly. The result was an arrangement whereby uniform quotations were sent out by the various order-and-quotation men.

Sales through co-operative associations, first established at Burlington, Ont., in 1883, had proved successful. Many now existed in different parts of the Province. They were doing a good work, not only in obtaining high prices, but in educating the growers in fruit culture and in packing. It also afforded a very favorable outlook for the future of the average fruit-grower, if good managers were placed in charge. The way of a large central organization, with the local associations co-operating, to control the sales, was anticipated.

The growers' side of the question was upheld by A. McNeill, Chief of the Fruit Division, Ottawa, who said that special inspectors had been at work this season, and he could assure the delegates that not ten per cent. of the product shipped could give any cause of complaint because of wrong packing, or any other defect. The Government could not be expected to look after any man's business. The policy was to watch for dishonest packing, and to warn the offender. If wrong practices continued, he was fined.

WESTERN MARKET FOR ONTARIO FRUIT.

A Western market for Ontario fruit was dealt with by J. W. Crow, B. S. A., of the Ontario Agricultural College. Figures received from Winnipeg showed that the quantities received in that city in a year were, 48 cars of strawberries, 430 cars of tomatoes, 680 cars of peaches, pears and other small fruits, 600 cars of oranges, and over 1,000 cars of apples. From Ontario, the shipments were 83,500 barrels of apples, 220 cars of tomatoes, and 73 cars of peaches, pears and cantaloupes. This showed that a market of considerable proportions had opened up in Western Canada. The increased shipments from Ontario to the West had been 50 per cent. in the last five years.

If growers were to find a continued development, they must grade, pack and ship properly. The average citizen of the Prairie Provinces was pleased with the fruit shown at Winnipeg Exhibition by the Ontario Department of Agriculture, but the complaint was that such fruit was not ordinarily placed on Winnipeg or other Western markets. If high quality and modern packing were the rule, the Westerners would buy Ontario fruit in greater quantities. Figures from Winnipeg fruit dealers indicated that 50 per cent. came from the United States, 35 per cent. from Ontario, and 15 per cent. from British Columbia. Ontario shipments, by freight, reached Winnipeg in five or six days, while from British Columbia seven days or more were required, and from the western parts of the United States considerably longer time. For express, too, the time taken showed Ontario to have the advantage.

The experience of E. D. Smith was that the Western market was developing rapidly. If plums could be placed there in good condition, and at a lower freight rate, which would permit of lower selling price, enormous quantities would be consumed. The Westerners were the best people on earth to pay a good price for fruit of high grade. Boldly, he advised those who pursued nothing but the Western markets to go slow, and have arrangements made for selling before large shipments were made. He considered

that plums of keeping quality, which could be marketed there in great quantities.

Regarding pre-cooling fruit, Mr. Crow instanced a shipment from Oregon to New York. The fruit was packed in boxes being out into the car, and the car was kept at a temperature during the trip lasting about 15 days, was but 2 degrees. If such system of pre-cooling were combined with proper packing, the bulk of Ontario fruit could be placed on the Western market, and sold at figures that would insure a fair margin for the Ontario men.

RESOLUTIONS.

The committee on resolutions asked that the thanks of the fruit-growers be tendered the Grand Trunk Railway Company for renovating and enlarging the Scott Street freight sheds for the storing of fruit on arrival in Toronto. Another resolution read: "That the Dominion Government be asked to appoint additional fruit inspectors, whose duties it would be to look after the interests of the producers of tender fruits."

A vote of appreciation at the manner in which President Peart had presided over the various sessions, was carried unanimously.

GREAT HORTICULTURAL DISPLAY.

Some idea of the extent of the fifth annual Ontario Horticultural Exhibition, held in Toronto last week, can be gained from the fact that there were approximately 2,000 entries tabled or benched in the various fruit classes, 1,053 square yards of space, covered with flowers and plants, and 424 square yards devoted to one of the finest vegetable displays ever seen in Canada. "Neat and artistic arrangements of high-class products" was the unanimous opinion of visitors. The value of such a collection of horticultural products in educating growers to strive to supply goods of higher quality, and in letting consumers see what Ontario soils can produce in the way of delicacies cannot be gainsaid. The verdict of all who pay an annual visit to this great function was that the display of 1908 was superior to that of former years in extent and quality. The management, too, deserve great credit for the bright and attractive appearance given the St. Lawrence Arena on this occasion, and for the excellent musical programme that was rendered while the products of the soil were being scrutinized.

FRUIT EXHIBIT.

The superior quality of this season's apples, as seen on the tables, was a surprise to many, and particularly to those not acquainted with Ontario's apple-growing districts. In many cases the specimens were sufficiently highly colored to indicate that they had been treated to a sunbath under glass; but such was not the case. The favorable season, combined with advanced methods in every operation connected with their production, resulted in making this staple fruit so attractive. The box and barrel display was particularly strong. Each exhibition reveals the fact that gradually Ontario growers are becoming adept at packing apples and pears. In the opinion of P. J. Carey, who judged in these classes, four-fifths to nine-tenths of the pack could be improved upon but little. In a few cases it was found necessary to place the prize on what could not be considered the best fruit, because of defective packing. As a rule, however, the man who does not pack well is a poor sorter. Occasionally a man forgets quality in devoting his attention to neat and scientific packing. One grower packs with the boxes sitting on edge, and thus gives lack of uniformity to a section display; others in nailing down the lid on a box put nails in the edge; some leave the packages too slack, but none could be credited with over-filling.

In process among the districts, this year's palm goes to Norfolk County. The Norfolk people led in quantity, quality, packing, and, in fact, in everything that goes to make fruit-growing successful. Baldwin, Spy and King were perfection. The Norfolk Fruit-growers' Association's display, arranged under the supervision of Manager Jas. E. Johnson, of Simcoe, was the most interesting feature of the exhibition. It was not competing for a prize, the object being simply to let buyers and others see that this county was capable of producing apples second to none in the world. The Norfolk men have succeeded, and next season they are bound to find the fruit of this association more strenuously sought after than ever before. The display comprised 60 varieties, but leading commercial varieties were given prominence throughout. Huge Alexanders proclaimed the home of this wonderful collection in forming the word "Norfolk." Pyramids, plates and neatly piled borders aided in making this the greatest apple display ever seen in Ontario.

The Central Experimental Farm, of Ottawa, had an attractive collection of seedlings and fruits of various kinds. Fruit experiment stations in Ontario, though not so much in evidence as they were at some of the previous shows, had some fine fruit on the tables. A. E. Sherrington, of Walkerton, and G. C. Caston, of Craighurst, each had creditable displays. County exhibits again proved

to be a strong feature, though other counties showed only an effort to advertise their fruit-producing capacities. The Ontario Agricultural College was conspicuous with a display of insect and fungous diseases, and the injuries done thereby.

Awards were made for boxes and barrels by P. J. Carey and H. W. Dawson, of Toronto. The competition was so close that minor details frequently had to be taken into account in deciding where the cards should go. The results were:

Export or foreign market varieties; barrels ready for shipment: Baldwin—1, Jos. Gilbertson, Simcoe; 2, Norfolk F.-G. A.; Simcoe; 3, Jas. E. Johnson, Simcoe. Ben Davis—1, Oshawa F.-G. A.; 2, Chatham F.-G. A.; 3, Frank Dempsey, Albany. Golden Russet—1, W. C. Oughtred, Clarkson; 2, Chatham F.-G. A.; 3, J. B. Guthrie, Dixie. Greening (R. 1)—1, Jas. E. Johnson; 2, W. H. Dempsey, Trenton; 3, Oshawa F.-G. A. King—1, Norfolk F.-G. A.; 2, Jos. Gilbertson; 3, Jas. E. Johnson. Spy—1, Jas. E. Johnson; 2, Jos. Gilbertson; 3, Norfolk F.-G. A. Stark—1, W. C. Oughtred; 2, Oshawa F.-G. A.

Domestic or home market varieties; barrels ready for shipment: Blenheim—1, Brown Bros., Humber Bay; 2, W. C. Parker, Humber Bay; 3, Oshawa F.-G. A. Gravenstein—1, Oshawa F.-G. A. Ontario—1, J. B. Guthrie, Tolman—1, Norfolk F.-G. A.; 2, Oshawa F.-G. A.; 3, J. B. Guthrie, Roxbury Russet—1, Oshawa F.-G. A. Any other variety—1, Norfolk F.-G. A.; 2, Oshawa F.-G. A.; 3, Norfolk F.-G. A.

Export or foreign-market varieties; standard boxes ready for shipment (unwrapped): Baldwin—1, R. Thompson, St. Catharines; 2, W. G. Watson, Dixie; 3, F. G. Stewart, Homer. Fameuse—1, W. G. Watson; 2, W. H. Dempsey, Trenton; 3, Brown Bros., Humber Bay. Golden Russet—1, W. G. Watson; 2, Jos. Gilbertson; 3, Brown Bros. Greening (Ithode Island)—1, F. G. Stewart; 2, Norfolk F.-G. A.; 3, W. G. Watson. King—1, W. G. Watson; 2, Robt. Thompson; 3, Jos. Gilbertson. McIntosh—1, W. C. Parker, Humber Bay; 2, Oshawa F.-G. A.; 3, C. L. Stephens, Orillia. Spy—1, Jos. Gilbertson; 2, Jas. E. Johnson; 3, W. G. Watson.

Domestic or home market varieties; standard boxes ready for shipment (unwrapped): Blenheim—1, W. G. Watson; 2, Brown Bros.; 3, Oshawa F.-G. A. Gravenstein—1, R. Thompson; 2, J. B. Guthrie; 3, Jos. Gilbertson. Ontario—1, J. B. Guthrie; 2, Brown Bros. Ribston—1, Norfolk F.-G. A.; 2, J. B. Guthrie. St. Lawrence—1, W. G. Watson; 2, Oshawa F.-G. A.; 3, J. B. Guthrie. Any other desirable variety—1 and 2, Norfolk F.-G. A.; 3, Oshawa F.-G. A.

Export or foreign-market varieties; standard boxes ready for shipment (wrapped): Fameuse—1, W. G. Watson; 2, Robt. Thompson; 3, Norfolk F.-G. A. Gravenstein—1, R. Thompson; 2, Norfolk F.-G. A.; 3, Jos. Gilbertson. King—1, Jos. Gilbertson; 2, Oshawa F.-G. A. McIntosh—1, W. C. Parker; 2, A. D. Harkness; 3, Oshawa F.-G. A. Spy—1, Norfolk F.-G. A.; 2, Jas. E. Johnson; 3, Jas. Gilbertson. Wealthy—1, Oshawa F.-G. A.; 2, J. B. Guthrie; 3, David Whyte, Woburn.

For cones, 17 inches in diameter, the awards made by Alex. McNeill, of Ottawa, showed the prizes to be distributed among Norfolk F.-G. A.; W. G. Watson; G. C. Caston; J. B. Guthrie; Brown Bros.; Oshawa F.-G. A.; R. Thompson; W. H. Dempsey; A. D. Harkness, of Irena; David Whyte of Woburn; and C. L. Stephens, of Orillia.

The placing for plates was done by W. F. W. Fisher, of Burlington. Prizewinners included Messrs. Watson, Thompson, Guthrie, Brown Bros., Stephens, Gilbertson, Parker, Caston, Johnson, Dempsey, C. W. Chaland (Marburg), R. W. Thomson (Ellesmere), N. A. Brown (Eglington), W. H. Stephen on (Oshawa), J. G. Michael (Brooklin), C. A. Bennett (Burlington), Iains Craig (Ingersoll), and W. H. Stainton (Oshawa).

Pears and grapes were judged by Murray Pettit, of Winona. The prominent winners were: A. M. Smith, of Pt. Dalhousie; R. Thompson; F. G. Stewart, of Hamer; J. B. Guthrie; G. A. G. Robertson, of St. Catharines; M. A. Read, of Pt. Dalhousie; Wm. H. French, of Oshawa; Thos. Delworth, of Weston; A. E. Tenbroeck, of St. Catharines; A. W. Peart, of Burlington; T. G. Bunting, of St. Catharines. For fancy packages of grapes and boxed pears, the awards were distributed among Messrs. Thompson, Robertson, Stewart, Guthrie, Smith, Tenbroeck, Bunting.

For display of fruit in commercial packages, exhibited by an agricultural or horticultural society, or fruit-growers' association, table space limited to 60 sq. ft. for each exhibit, the awards were: 1, Norfolk F.-G. A.; 2, St. Catharines Cold-storage Association; 3, Grantham F.-G. A.

For display of fruit not in commercial packages, exhibited by an agricultural or horticultural society, or fruit-growers' association, table space limited to 60 sq. ft. for each exhibit, prizes were placed: 1, St. Catharines Cold-storage Association; 2, Grantham F.-G. A.; 3, Norfolk F.-G. A. For display of apples not in commercial packages, exhibited by an agricultural or horticultural society, or fruit-growers' association, table space limited to 60 sq. ft. for each exhibit: 1, Norfolk F.-G. A.; 2, Oshawa F.-G. A.; 3, East Simcoe Agricultural Society, Orillia.

HIGH-CLASS VEGETABLES.

An extra favorable season in most of the vegetable districts, and a careful selection to meet the requirements of the adept judge, resulted in high quality throughout the vegetable section of the show. The exhibitors were comparatively well scattered over the Province, including growers from Weston, St. Catharines, Leamington, Guelph, London, Woodbridge, Middleport, and various points in the vicinity of Toronto. None came from the east, possibly because of the dry fall.

The products of the garden were nicely arranged for effect, the long tables of cauliflowers, cabbage, onions, potatoes, etc., being very pleasing. Never was such an array of cauliflowers seen in Toronto. Onions, carrots and potatoes too were strong. There were 30 exhibitors of cabbage and 21 of celery.

Geo. Syme, of Carleton West, and R. H. Lewis, of Hamilton, made the awards. Following is a list of the chief prizewinners: Wm. Harris, J. W. Rush, Brown Bros., Jas. Dandridge and F. F. Reeves, of Humber Bay; J. B. Guthrie, and W. G. Watson, of Dixie; Chas. Plunkett, of Woodbridge; John McKay and Chas. McKay, of Todmorden; R. McKay, of Norway; Thos. Delworth, of Weston; Ed. Brown, of Wychwood Park; Thos. Benstead, of Strathroy; A. McInnes and Frank Whitehall, of London; John Creighton, of West Toronto, and F. W. Krouse, of Guelph.

Specials were awarded as follows: Collection of cauliflower—1, R. McKay; 2, Chas. McKay; 3, Brown Bros. Collection of salads—1, Brown Bros.; 2, J. W. Rush; 3, F. F. Reeves. Township of Etobicoke, special—Brown Bros. Collection of onions—W. Harris. Collection of potatoes—1, W. Harris; 2, Chas. Plunkett; 3, Brown Bros. Township of York, special for celery—1, W. Harris; 2, Brown Bros.; 3, F. F. Reeves. York County Council, special for collection—1, W. Harris; 2, J. W. Rush; 3, Brown Bros. Steele-Briggs, special for cauliflower—1, Chas. McKay; 2, John McKay; 3, R. McKay.

HEALTHY FLOWERS AND PLANTS.

Flowers and plants of all varieties, all shapes and sizes, and all colors, had the major part of the credit for transforming the arena into a beauty spot. Chrysanthemums were lacking in numbers, but this deficiency was at least partially made up in quality. The hot weather of September seems to have hurt the buds in some greenhouses, and left former strong competitors without a supply fit for the Ontario competition. Jennings, of Brampton, carried off most of the prizes. In carnations the cards were distributed amongst R. Jennings and the Dale Estate, of Brampton, and A. Houle and S. A. Frost, of Toronto. Once again was the Dale Estate to the front with roses. American Beauties were, perhaps, not as good as in former years, but some of the other varieties, such as Richmond, were strong and healthy, and of rich color. J. H. Dunlop, of Toronto; E. Saunders, of Bedford Park, and W. Muston, of Toronto, also were prominent winners. T. Manton, of Eglington, won on flower banks, and also on best decorated dining-room table, as well as in some of the sections for special plants; his delicate orchids being very attractive. A new begonia, which was obtained by crossing Gloria de Lorraine and the Tuberous-rooted, and which has proved to be a fair winter bloomer, was admired by many. The awards in flower classes were made by W. Hall, of Montreal, and Chas. Tidy, of Toronto.

HONEY IN EVIDENCE.

Judging from the display of honey, Ontario beemen have had a most successful season. Comb honey, liquid honey, granulated honey, beeswax and various features of the bee industry were in evidence. The winners included Geo. Laing, of Toronto; D. Anguish, of Lambeth; F. W. Krouse, of Guelph; H. G. Sibbald, of Claude; John Timbers, of Cherrywood; J. H. Thompson, of Britannia, and R. F. Holtermann, of Brantford.

PRESERVED FRUITS.

There was a fair display of canned goods and preserved fruit. Prizes were won by Mrs. F. A. DeJotee, A. E. Tenbroeck and R. Thompson, of St. Catharines; Mrs. J. B. Guthrie, of Dixie; F. G. Stewart, of Homer; S. Morningstar, of Goderich; Mrs. T. Delworth, of Weston; Miss E. G. Gregory, of Pt. Dalhousie; Mrs. W. H. French, of Oshawa; M. E. Martin, of Toronto; J. L. Hilborn, of Leamington; Mrs. W. A. Emory, of Aldershot; Mrs. J. H. Sparling, of Bowmanville, and David Whyte, of Woburn.

ONTARIO BEEKEEPERS' ASSOCIATION.

The adulteration of honey, the diseases of bees, short-cuts and mechanical devices in the apiary, marketing of honey, and educating the market, were some of the leading features of the Provincial Convention of Beekeepers, whose sessions were held in conjunction with the Horticultural Show in Toronto last week. The attendance was a live, representative one, and beemen who missed it cheated themselves. The lecturer of the convention was A. C. Miller, of Providence, R. I. He is not only a practical beeman, but also a careful scientific experimenter, who handles tongue-tying

scientific terms with an ease that makes his meaning clear and inspires confidence in his knowledge. Messrs. House, Hershiser and Clark, of New York State, also added much to the helpfulness of the sessions.

STRICTER LEGAL DEFINITION OF HONEY RECOMMENDED.

Of the many valuable addresses, one of the most important was on the adulteration of honey, by Prof. A. McGill, Chief Analyst of the Inland Revenue Department, at Ottawa. With some simple laboratory apparatus, he demonstrated to the convention chemical tests for the purity of honey. He mentioned some of the more common adulterants, and advised that this association recommend a much more complete legal definition of honey than at present exists. Adulteration is rare among producers, but there are certain manufacturers who are putting upon the market imitations, labelled dishonestly, though not illegally. The stricter definition might get at these fellows; and, as A. C. Miller suggested, we might apply the rule they have in the United States—not allow them to use the word "honey" at all on their label. The resolution passed by the convention is as follows:

"Recognizing the importance of legal definition in the case of honey, this Association respectfully recommends the adoption of the following definition, as embodying the present state of our knowledge regarding Canadian honey. Honey is the product of the work of bees operating on the nectar of flowers and other saccharine exudations of plants, and contains not more than 25 per cent. of water, or more than 10 per cent. of sucrose (cane sugar) nor less than 60 per cent. of invert sugar. It does not give a blue color with iodine (absence of starch syrup), nor a red color with aniline acetate (absence of artificial invert sugar), nor a dark color with Ley's reagent (ammoniacal sugar), nor a marked precipitate of dextrin on adding large excess of alcohol (absence of glucose syrup)."

FOUL BROOD AND OTHER BEE DISEASES.

Of equally vital importance, from the other end of the business, is the matter of bee diseases, particularly foul brood. All the inspectors of Apiaries reported quite a lot of the disease scattered through the country, but they seem to be doing good work, not only in stamping out disease, but in educating the smaller producers by this contact with live men. The convention expressed its appreciation of the help the Ontario Department of Agriculture is giving this most important industry, and thought that, like the Thanksgiving turkey, it suggested "more." Every person who owns bees should know the symptoms of foul brood and its treatment, both of which have been frequently described, and should constantly watch for it. Now comes black brood, whose progress through an apiary is so rapid that it may be undetected in the fall, and have 100 colonies practically wiped out before next June. It is said to be more easily treated than American foul brood, but it is so fearfully rapid when once started that prevention is far more important than cure. That, also, is easy, according to Mr. House. Simply requeen all black bees with Italians. While black bees are an easy mark for the disease, Italians fight it, and clean up their own combs.

SIDE-LIGHTS ON MARKETING.

That one is farthest from the market who has nothing salable, said Mr. Miller, on the above subject, to show that a profitable article must be of extra quality and cheaply produced. Uniformity of flavor, package and label are much to be desired to hold a retail trade. Blending flavors is practiced to a considerable extent, but with our fine Canadian flavors, that is hardly necessary. Salesmen are born, not made, yet much can be done by every man to increase the sale of honey in his own neighborhood. Jobbers are not a reliable source of information regarding prices. The price committee in this Province has done much for the beemen in that line. They get crop reports as early as they can, then advise as to the probable price; and in the several years they have done this, have seldom missed. In this connection, R. F. Holtermann read a paper on the increase of importation of honey into Canada. He showed some alarming figures as to the tremendous increase of this importation in the last few years, and pointed out that, at the price at which so-called British honey was being sold, there must be something shady about the way in which it is got through the customs.

IMPROVED MACHINERY.

The best in this line is the gasoline engine for the extractor, and the uncapping machine. Re the former, Mr. D. Nolan said he would as soon go back to the nonreversible extractor as go back to the hand-turned extractor. A one-horse engine can be procured from some of our Canadian manufacturers at a cost of from \$65 up. The uncapping machine is recommended by those who have used it as being not only a saving of time, but a means of keeping combs perfectly straight. System said Mr. Miller, is one of the bee-

keeper's assets. Every man must have his system, and whatever ideas he gets at conventions or elsewhere must be fitted into that system. It pays to have special clothing cool and airy, yet closed at wrists and ankles to keep out bees. Then, there are clipping scissors, smoker and hive-tool. To get supers, etc., from the yard to the house, he recommended the litter-carrier principle, with overhead track. Hives should not sit close to the ground in spring; the damp air that settles close to the ground is injurious.

OFFICERS ELECTED.

President, Wm. Couse, Streetsville; First Vice-President, W. J. Craig, Brantford; Second Vice-President, Dennis Nolan, Newton-Robinson; Secretary, P. W. Hodgetts, Dept. of Agriculture, Toronto; Treasurer, Martin Emigh, Holbrook; Auditor, J. H. Thomson. Directors.—District No. 1, A. Dickson, Lancaster; No. 2, A. A. Ferrier, Renfrew; No. 3, A. M. McLachlin; No. 4, R. Lowey, Cherry Valley; No. 5, Jas. Storer, Lindsay; No. 6, Wm. Couse, Streetsville; No. 7, J. M. Switzer, Orangeville; No. 8, Jas. Armstrong, Cheapside; No. 9, W. J. Craig, Brantford; No. 10, D. Chalmers, Poole; No. 11, W. A. Chrysler, Chatham; No. 12, D. Nolan, Newton Robinson; O. A. C., T. D. Jarvis, Guelph.

In a paper on "Measures to Prevent Swarming," Mr. O. L. Hershiser, of New York State, applies the principle that a colony having a queen of the present season's rearing will not swarm, and requeens all stock at the opening of the season by queens reared from his best stocks in fruit bloom. He says: "None will doubt that these young, vigorous queens will more than repay all the trouble and expense of their rearing in the additional strength and productiveness of the colony. We have here a practical and effective plan of swarm control—one that requires no extra devices or special hives, with not much work, and that done out of the busiest season."

Some members doubted the sureness of the rule laid down, that the presence of a young queen prevents swarming.

REVISION OF AMERICAN STANDARD OF PERFECTION.

The American Poultry Association has issued a general invitation to every fancier who has at any time bought a Standard of Perfection, to offer criticisms of said Standard, and make suggestions for its improvement. Communications may be sent to Fred L. Kimney, Morgan, Park, Ill., and will be by him referred to the Revision Committee of 1910, which meets in April, 1909, and suggestions and criticism should reach the Secretary by that time, or earlier.

U. S. CROP REPORT.

The Bureau of Statistics of the United States Department of Agriculture has made preliminary estimates of the production of the principal crops of the United States, a summary of which, with comparisons, is as follows:

Crop.	1908.	Av. 5 Yrs.
Corn, bush.	2,642,687	2,574,143
Winter Wheat, bush.	425,940	413,188
Spring Wheat, bush.	234,080	244,517
Total Wheat	660,026	657,705
Oats, bush.	789,161	916,931
Barley, bush.	167,482	144,426
Rye, bush.	30,921	30,419
Buckwheat, bush.	15,648	14,602
Flaxseed, bush.	25,717	26,808
Rice (rough), bush.	22,718	
Potatoes, bush.	274,660	286,674
Hay tons	67,743	59,907
Tobacco, pounds	629,634	722,744

The above crops, which represent approximately 70 per cent. of the value of all farm crops, are this year, in the aggregate, about 3 per cent. greater than in 1907, and 2.4 per cent. greater than the average of the preceding five years.

Statistical data relating to other crops on November 1st, with comparisons, are as follows:

Crops and Nature of Data.	1908	1907	1906
Apples production, per cent.	43.4	32.1	69.1
Grapes	82.2	78.4	83.3
Pears	73.3	41.3	74.3
Cranberries	55.1	78.2	84.8
Sugar Beets	86.0	90.4	95.5
Oats, av. weight, measured bush.	29.8	29.4	32.0

VICTOR H. OLMSTEAD,
Chief of Bureau

Ontario is being represented at the annual meeting of the American Association of Farmers' Institute Workers, in Washington, D. C., by President Crochman and Prof. C. A. Zavitz, of the Ontario Agricultural College. The President also will attend the convention of the Association of American Agricultural Colleges and Experiment Stations, and Professor Zavitz the annual meeting of the American Society of Agronomy. Prof. B. Harcourt, of the Department of Chemistry, is an attendee at the meeting of the American Association of Agricultural Chemists, also at Washington.

GROWING ATTENDANCE AT N. S. AGRICULTURAL COLLEGE.

The fourth session of the Nova Scotia Agricultural College, at Truro, commenced on November 3rd. At the time of writing there were enrolled forty students, most of whom are from Nova Scotia, but also a few representatives from New Brunswick, Prince Edward Island, and Great Britain. Three years ago, the College opened with an attendance of 15, which, considering the fact that the agricultural constituency is not large, was thought to be a good beginning. As the present enrollment of forty promises, in the course of the term, to be increased beyond fifty, it is evident that the College is making a healthy growth. The Maritime Provinces are not so essentially agricultural as are the Western Provinces, and, moreover, the young men have strongly tended towards other callings than agriculture. Considering this, it must be regarded that the present enrollment at the Agricultural College is a most satisfactory one.

The most difficult matter to overcome in securing an attendance at the College is the labor problem. In consequence of scarcity and high price of labor, many a student who would otherwise enroll has to remain at home.

The Short Course, held in January, in a large measure meets the needs of this class of men. Last year, one hundred and seventy-five students enrolled in this course; and, for the next course, which begins on January 5th, the enrollment promises to exceed the two-hundred mark.

SITUATION WITH CANNERS.

Are Canadian canning companies dealing fairly with producers of the raw product, with the retailers and with the consumers? For years past complaint has been raised by retailers that canned goods were not supplied them at reasonable cost. At the same time, vegetable growers were being paid starvation prices, the companies advancing their figures per bushel of tomatoes little, if any, on the plea that increased running expenses would not permit it.

In this connection, the results of the investigations into the canning industry, conducted at Ontario Agricultural College, Guelph, during the season just closed, are interesting. With man-labor at \$1.50 per day, and tomatoes charged at 25c. a bushel, the College men have been able to can at a cost of approximately 16 cents a gallon can. It has also been found possible to average six one-gallon cans from one bushel of tomatoes.

Large canning companies, with extensive plants, and with woman-labor, should be in a position to can tomatoes as cheaply as it can be done at Guelph. But what is the situation? Wholesale quotations run from 26 cents up above 30 cents. Three-pound cans are supplied retailers at from \$1.00 to as high as \$1.27½ a dozen. Under these circumstances, consumption is restricted, and the grower of vegetables given a limited market, without increased returns to make up for increased cost of labor and capital on hand of higher value.

SPEAKERS FOR ANNUAL CHEESE-FACTORY MEETINGS.

The Ontario Department of Agriculture and the Dairymen's Associations of Eastern and Western Ontario have been much gratified at the results following the attendance of special speakers at annual meetings of cheese factories during the winter of 1907-08. Dairymen have been more particular this year in following cleanly methods in the production of milk, and have used greater care in cooling and delivering it to the factories. The Department is prepared to continue the assistance offered to dairymen last year, by again sending special speakers to the annual meetings upon certain very reasonable and easy conditions. Applications for assistance at meetings in Eastern Ontario should be sent to G. G. Publrow, Chief Dairy Instructor, Kingston; and for Western Ontario to Frank Hens, Bank of Toronto Chambers, London, Ont.

FAIR DATES FIXED.

Nov. 28th to Dec. 10th.—International Live-Stock Exposition, Chicago.
Nov. 30th to Dec. 3rd.—Maritime Winter Fair, Amherst, N. S.
Dec. 2nd to 10th.—National Dairy Show, Chicago.
Dec. 7th to 11th.—Ontario Provincial Winter Fair, Guelph.
Jan. 18th to 22nd.—Eastern Ontario Live-stock and Poultry Show, at Ottawa.

E. H. Reed, B. S. A., who has represented the Ontario Department of Agriculture in Victoria County, with headquarters at Lindsay, has resigned, to go to Regina, as representative for Saskatchewan of the Dominion Seed Branch. He succeeds Harris McFarlan, B. S. A., who has cast his lot with the Garton Seed Co., to represent them in that Province. E. D. Eddy, B. S. A., of the Seed Branch, Ottawa, will attend to the duties in Saskatchewan until Mr. Reed can arrange to go west.

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MARKETS.

TORONTO.

LIVE STOCK.

At West Toronto, on Monday, November 16th, receipts numbered 1,790 cattle, quality fair; trade good for best quality, but slow for common. Exporters, \$4.50 to \$5; prime butchers', \$4.70 to \$4.90; loads of good, \$4.40 to \$4.60; medium, \$4 to \$4.30; common, \$3.50 to \$3.75; cows, \$2.50 to \$3.75; canners, \$1 to \$2; feeders, \$3.40 to \$4; milkers and springers, \$30 to \$65 each; calves, \$3 to \$6.25 per cwt. Sheep, \$3.25 to \$3.50 per cwt. Lambs, \$4 to \$4.50 per cwt. Hogs, \$6.25, fed and watered; \$6 to drovers, f. o. b. cars country points.

REVIEW OF LAST WEEK'S MARKET.
Total receipts of live stock last week were: 384 cars, 5,867 cattle, 4,398 hogs, 9,803 sheep and lambs, 113 calves, and 89 horses.

The percentage of good cattle was a little higher than it has been for some time, although the bulk of deliveries were of the common to medium qualities. Trade was generally good, with prices firm, at last week's advance, with good cattle being eagerly sought after.

Exporters.—Export steers sold at \$4.60 to \$5.10, and dealers stated that they would have paid \$5.25 for well-finished cattle. Export bulls sold at \$3.75 to \$4.50. There were two very excellent quality bulls on the market that cost \$1.40 and \$4.60 in the country.

Butchers'.—Prime picked lots were scarce, and sold at \$4.80 to \$5; loads of good, \$4.40 to \$4.60; medium, \$4 to \$4.30; common, \$3.50 to \$3.80; cows, \$2.50 to \$3.75, with a few choice cows good enough to export, at \$4; canners, \$1 to \$2.

Feeders and Stockers.—There has been a steady demand from farmers and dealers for good quality steers, 950 to 1,050 lbs. each, at \$3.40 to \$3.75, and a few choice steers brought as high as \$4; stockers sold from \$2.25 to \$3.25, and some of inferior quality at \$1.75 per cwt.

Milkers and Springers.—Receipts were moderately large, of medium to good cows, but prime quality cows are scarce. Three dealers from Montreal being on hand, all wanting supplies, caused a

market of prices from \$45 to \$65 and two or three brought \$70; some light cows, \$30 to \$38 each.

Calves.—Receipts moderate, with prices steady, at \$3.50 to \$6.25 per cwt.

Sheep and Lambs.—Receipts were large, with prices easy, especially for lambs. Few for export, sold at \$3.25 to \$3.40; range, \$2.25 to \$2.50 per cwt. Lambs sold from \$4 to \$4.50 for the bulk, with a few selected lots of ewes and wethers at \$4.00 per cwt.

Hogs.—Receipts moderate, with market steady during the week, at \$6 for selects, fed and watered at the market, and \$5.75 to drovers, f. o. b. cars at country points.

Horses.—Trade on the horse market remained quiet, with prices about the same as quoted last week. J. Herbert Smith, of the Union Horse Exchange, reports having sold 75 horses during last week, and stated that there was some enquiry from Northwest and lumber-camp dealers. Drafters sold at \$160 to \$180; general-purpose and d-livery horses, \$140 to \$160; drivers, \$100 to \$150; serviceably sound, \$40 to \$60.

BREADSTUFFS.

Wheat.—No. 2 white, 90c.; No. 2 red, 89c.; No. 1 mixed, 89c. Manitoba—No. 1 northern, \$1.08; No. 2 northern, \$1.05, lake ports. Rye—No. 2, 78c. Peas—No. 2, 85c. Oats—No. 2 white, 38c.; No. 2 mixed, 38c. Barley—No. 2, buyers, 53c.; No. 3X, 54c.; No. 3, 53c. Corn—No. 2 yellow, 87c. Bran—Car lots, in bulk, \$21.50 to \$22. Shorts—Car lots, in bulk, at Toronto, \$23 to \$24. Buckwheat—No. 2, 58c. Flour—Ontario, 90 per cent patent, sales, \$3.50 for export; Manitoba patent, special brands, \$6; second patents, \$5.40; strong bakers', \$5.30.

COUNTRY PRODUCE.

Butter.—There was little change in the butter market, excepting that receipts were, if anything, a little larger, on account of many cheese factories having closed. Creamery pound rolls, 26c. to 28c., with Locust Hill brand at 30c.; creamery solids, 25c. to 26c.; separator dairy, 21c. to 25c.; store lots, 22c. to 23c.

Eggs.—New laid, 28c. to 30c., and scarce; cold storage, 24c.

Cheese.—Market practically unchanged, at 13c. for large, and 14c. for twins.

Honey.—Receipts fairly large, prices steady, at 10c. to 11c.; combs, \$1.75 for buckwheat, and \$2.25 to \$2.50 and \$2.75 for good to choice white clover.

Potatoes.—Market a little firmer, at 58c. to 63c. for car lots, on track at Toronto.

Poultry.—Receipts, the largest in several years; prices easier, as follows: Dressed turkeys, 12c. to 13c.; geese, 8c.; ducks, 9c. to 10c.; chickens, 7c. to 9c.; fowl, 6c. to 7c.; live poultry, about 2c. per lb. less.

Hay.—Baled, in car lots, on track at Toronto, \$10.50 to \$11.

Straw.—Baled, in car lots, on track at Toronto, \$6 to \$7.

Beans.—Market unchanged, at \$1.80 to \$1.90 for primes, and \$1.95 to \$2.05 for hand-picked.

HIDES AND WOOL.

E. T. Carter & Co., 85 Front street East, Toronto, have been paying for No. 1 inspected steers, 60 lbs. and up, 9c.; No. 2 inspected steers, 60 lbs. and up, 8c.; No. 1 inspected cows, 8c.; No. 2 inspected cows, 7c.; country hides, cured, 7c.; calf skins, city, 12c.; calf skins, country, 11c. to 12c.; horse hides, No. 1, \$2.75; horse hair, per lb., 29c. to 30c.; tallow, 5c. to 6c.; lamb skins, 50c. to 60c.; deerskins green, 10c. to 12c.; raw furs, prices on application.

SEED MARKET.

The William Rennie Seed Co. report the seed market still dull, with no foreign business or demand. Prices unchanged, as follows: Alsike, fancy, \$7 to \$7.25; No. 1, \$6.50 to \$6.75; No. 2, \$6 to \$6.25; red clover, \$4.50 to \$5; timothy seed, \$1.30 to \$1.60.

FRUIT MARKET.

Apples are selling at \$1.50 to \$3.50 per bbl., the latter price being for Spies. Winter pears are worth from 30c. to 65c. per basket; grapes, 30c. to 60c. per basket.

BRITISH CATTLE MARKET.

London cables for cattle 12c. to 13c. per lb., dressed weight; refrigerator beef is quoted at 11c. to 14c. per lb.

MONTREAL.

Live Stock.—Exports of live stock from the port of Montreal during the first week of November amounted to 3,243 head of cattle and 1,117 sheep, against 4,853 cattle and 316 sheep the previous week.

Owing to the scarcity of choice stock on the local market last week, exporters who wished to purchase were compelled to pay full prices, notwithstanding the weakness of the British markets. Poorer stock, however, was plentiful and on the easy side. Choicest sold at 5c., the greater part of the fine stock, however, selling at 4c. to 4c. per lb.; good, 4c. to 4c.; medium, 3c. to 3c.; common, 2c. to 3c., and inferior as low as 1c. per lb. The demand for lambs was more active and a good trade was done, at 5c. to 5c. per lb. for choice and 4c. less for good. Sheep were also firm and about 4c. up, at 3c. to 4c. per lb. for best and 4c. less for culls, mixed lots of sheep and lambs being about 4c. A fair trade was passing in calves, and prices ruled firm at 4c. to 5c. per lb. for choice, and 3c. to 4c. for lower grades. In hogs, selects sold at 6c. to 6c. per lb., weighed off cars.

Horses.—Heavy draft horses, weighing from 1,500 to 1,700 lbs., \$250 to \$300 each; light draft, 1,400 to 1,500 lbs., \$200 to \$250; good blocks, 1,300 to 1,400 lbs., \$175 to \$200; small or inferior, 1,000 to 1,100 lbs., \$100 to \$150; broken-down horses, \$50 to \$75, and choice saddle or carriage horses, \$300 to \$500 each.

Dressed Hogs and Provisions.—Owing to the decline in the price of live hogs, the market for dressed, while still quoted at 9c. to 9c. per lb., was easy in tone, and it would not be surprising to learn shortly of a slight decline. Demand for barrelled pork is moderately good, at \$23.50 to \$26 per bbl.

Poultry.—Turkeys are selling here, retail, as low as 15c. and 16c. per lb., so that farmers receive somewhere from 12c. to, possibly, 14c., according to the quality of the stock. The market should brighten up very soon.

Potatoes.—Some Delawares sold at 78c. Single loads of Green Mountains sell at around a cent per lb., while single bags bring about \$1 per bag.

Eggs.—32c. is being paid for choice, fresh-laid. Fall eggs, taken from cold-store, are selling here at 22c. for No. 1, 26c. for selects, and 30c. for boilers, but the quality is very questionable. The market is quite firm and demand very good.

Butter.—Fancy October creamery was held here at 27c. to 27c. in wholesale lots; 28c. in smaller lots, and about 28c. to 28c. for single packages. Current makes could be had at about 4c. under these prices. Owing to a cent advance in country on Saturday, dealers advanced prices about half a cent here on Monday.

Cheese.—Market was, perhaps, a fraction easier, even for choicest October makes. These were being sold here at about 12c. to 12c. per lb. for Quebecs, 12c. to 12c. for Townships, and 12c. to 12c. for Ontarios. Most of these October makes have already reached this market. Novembers a fraction less than choicest.

Grain.—No. 2 buckwheat easier, selling at 58c. per bushel, track; good yellow corn, 72c. to 77c., basis Montreal, according to position in the country. The market in oats was firm, at 44c. to 45c. per bushel, store, for No. 2 Ontarios, one cent less for No. 3, and yet a cent less for No. 4. Manitoba oats, 45c. to 46c. for No. 2, and 44c. to 45c. for No. 3, and for No. 1 feed.

Mill Feed.—Dealers are now prepared to pay only \$21 per ton for bran, shorts being still \$24 to \$25, either Ontarios or Manitobas. Occasional sales of cotton seed are made at \$33 per ton, in ton lots, and of oil cake at \$32, and gluten meal at \$25.

Hay.—Choice hay scarce and firm, lower grades being plentiful and steady in price. No. 1 timothy is 50c. up, at \$12.50 to \$13 per ton; No. 2, extra, \$11 to \$11.50; No. 2 ordinary, \$10 to \$10.50; clover mixed, \$9 to \$9.50, and clover, \$8 to \$8.50.

Seeds.—Dealers feeling the market in preparation to commencing buying operations in a month or so.

Hides.—Dealers paying 7c., 8c. and 9c. per lb., for Nos. 3, 2 and 1 beef hides, respectively.

TO RENT ANNANDALE FARM TILLSONBURG, ONTARIO, CAN.

consisting of 220 acres of land under cultivation, free from stumps; 280 acres pasture land and orchard of choice fruit; stabling for about 150 head of stock, and piggery capacity for 200 hogs.

The bright possibilities of the tenant of Annandale Farm are probably more widely known than that of any other farm in the Province. It was brought to perfection as a model for mixed farming under the personal attention of the late E. D. Tillson, Esq., and more recently under the control of Mr. Geo. Rice as a breeder of Holsteins, and the farm has continued to stand out as one of the finest private farms in the Dominion.

The barns and other buildings embody the most modern ideas. The diversity of the soils, the perfect water supply, the nearness to first-class schools and business college and the splendid shipping facilities to five cities, coupled with the establishment here of Borden's Condensed Milk Factory and the Tillsonburg Pork Packing Co., should make Annandale Farm especially attractive from the tenant's viewpoint.

For full particulars address:
THE E. D. TILLSON ESTATE, LIMITED, TILLSONBURG, ONTARIO.

CHICAGO.

Cattle.—Steers, \$4.60 to \$7.75; cows, \$2.85 to \$5; heifers, \$2.50 to \$4.60; bulls, \$2.50 to \$4.50; calves, \$3 to \$7.25; stockers and feeders, \$2.50 to \$4.65.

Hogs.—Choice heavy shipping, \$6.20 to \$6.25; butchers', \$6.10 to \$6.20; light mixed, \$5.65 to \$5.90; packing, \$5.65 to \$6.15; pigs, \$4.25 to \$5.50; bulk of sales, \$5.85 to \$6.20.

Sheep and Lambs.—Sheep, \$4.65 to \$5; lambs, \$4.75 to \$6; yearlings, \$3.85 to \$5.25.

BUFFALO.

Cattle.—Prime steers, \$6.50 to \$6.75. Veals.—\$5.75 to \$8.25.

Hogs.—Heavy, \$5.90 to \$6; a few, \$6.10; Yorkers, \$5 to \$5.75; pigs, \$4 to \$4.90; stags, \$4 to \$4.50; dairies, \$5 to \$5.75.

Sheep and Lambs.—Canada lambs, \$5.75 to \$5.90.

CHEESE BOARD PRICES.

Belleville, Ont., 11 13-16c. to 11c. Brockville, Ont., 11c. bid. Kingston, 11c. to 11c. Napanee, Ont., 11c. Picton, Ont., 11 13-16c. St. Hyacinthe, Que., cheese, 11c.; butter, 27c. Chicago, Ill., cheese, 12c. to 13c.; butter, creamery, 22c. to 29c.; dairy, 19c. to 25c.

GOSSIP.

AYRSHIRES BY AUCTION.

An introductory sale of Ayrshire cattle from Hampton Stock Farm, at Hampton, New Brunswick, is advertised on another page in this issue to take place on December 3rd, when 9 young bulls, 3 to 16 months old, including prizewinners at leading Maritime fairs, 2 yearling heifers and several mature cows will be offered. The young stock are sired by Imp. Netherhall Nobleman. Catalogues may be had on application. The date has been arranged in order that advantage may be taken of the reduced railway passenger rates to the Maritime Winter Fair at Amherst, N. S.

Messrs. J. Crouch & Son, La Fayette, Indiana, importers of Percheron, Belgian and German horses, write: "At the coming International Live-stock Exposition, to be held in Chicago, commencing November 28th, we will have our usual large and splendid exhibit. We expect to have not less than eighty head of high-class Belgian, Percheron, and German Coach stallions and mares. Among them are a great number of horses that won prizes at the big shows in Europe this summer, and at the leading State Fairs and Stock Shows in this country this fall. We were among the first American buyers in Europe this year, and got the finest selection to be had. Our inquiries this season seem to be for a better class of stallions. Buyers are more particular, and we do not believe a greater lot of horses ever crossed the ocean than we can show you. We invite our friends and customers to visit our headquarters while in Chicago and allow us the pleasure of showing them through. We price our horses as low as any responsible firm can afford, and give a reasonable guarantee and make terms to suit."



Life, Literature and Education.

Dr. Amyot, Bacteriologist of the Provincial Board of Health for Ontario, speaking before the Progressive Club, in Toronto, recently, referred to milk as the "greatest medium in the world for culturing bacteria." This word, to the wise, from such an authority, should be sufficient.

"A man, a visitor from the country, was found unconscious in his room at the Daly House this morning, with the gas turned on." This item, from a recent Toronto paper, is one which, unfortunately, is duplicated in the daily news reports many times every year. It seems almost incredible that, at this stage of the world's history, everyone does not know enough about gas to understand that it must be turned off, not blown out. One would think that the repeated accounts of such accidents would be warning enough, but alas, there are those who do not read even the newspapers. If rural teachers took the matter in hand, and remembered to instruct the children upon this point while teaching the principles of ventilation and hygiene, many a catastrophe might be averted. Gas, like fire, is a good servant, but a bad master, and death is usually the price paid for ignorance in regard to it.

The newspapers, of late, have been recounting, with more or less gusto, the details of a great international auto-race in the United States, with prizes ranging from a \$5,000 gold trophy to divers cash prizes, aggregating \$8,000. Incidentally, the question suggests itself as to why there should be such a craze at the present day for mere speed. Men forge forward in automobiles, goggle-eyed, gaze fixed on the road, at a mad rate which utterly precludes the enjoyment of the peaceful scenery or little homely incidents by the way—and, imagine they are having a grand time. . . . Sherrings and Tom Longboats stretch their legs and run, making so many miles in so many minutes. The contest is a mere matter of legs, of muscle; not even cool questions of judgment, to the same extent as in archery or target-practice, are a necessity, and yet the country goes wild over the winning of the Marathon race. . . . Lou Scholes wins the Diamond Sculls, and one of the largest cities in the Dominion—a city which would scarcely pause from its work to hurrah for an Osler or a Rutherford, or a Graham-Bell, which would scarcely recognize even Edison himself by more than an invitation to speak at the Canadian Club—turns out en masse to greet him.

True, really great men—men who do things worth while for the people now and for all time—do not want to be received with a blare of trumpets; they rather shrink from public receptions and the gaze of the multitude. But the point is this, that the difference of appreciation shows a lamentable weakness in the people them-

selves. Brawn, in conjunction with mental power, is a goodly thing; brawn, when put to a good purpose, even at the direction of someone else's brain, is a goodly thing; but, after all, what would the world be were it not for the thinkers, the men who have invented, and discovered, and applied, and made life a better, nobler and healthier thing for the world's great millions? . . . In our zeal for the Spartan, let us not forget the Athenian. . . . In our sympathy with the players and "rooters" at a baseball match, let us not pause to admire, now and again, the spirit of the youths who sat at the feet of Epictetus and Socrates, and which is not all extinct, even in this twentieth century. There are still men, perhaps more than we think, who have not given up the search for wisdom and truth.

A young girl who "ran away from home," and was found in one of our Canadian cities, with a sad tale of youthful depravity to tell, turns out to be a "Home" girl, although bearing her foster-parents' name. This is but one more example to illustrate the foolishness of conferring the family name upon children from such institutions. No doubt, numbers of them are to be depended upon, have sprung from a stock respectable, though poor, and will bring nothing but credit upon the name they have assumed. Upon the other hand, since there is no possibility of tracing the genealogy of such waifs back, there is always the risk of taint. More often than not, what is "bred in the bone" may be depended upon to "come out in the flesh," and the safest way to safeguard the family name is, ostensibly, to reserve it to those to whom it legitimately belongs.

Acting under instructions from Dr. Hodgetts and the Attorney-General, Colonel McCrae, Chairman of the Guelph Township Board of Health, not long ago swore out an information against the corporation of the City of Guelph for creating a public nuisance by running sewage into the River Speed, and it was shown that the establishment of filter-beds was the only means of effectively combating the evil.

The River Speed is not the only waterway in Canada despoiled by such conditions. There is many another which, flowing pure and clear until a city is reached, passes below it a thing of filth and pollution, contaminating alike to man and beast. A river as it should be is one of a farmer's most valuable assets, providing at once drainage for his land, water for his stock, and the rich pasturage which usually grows beside a waterway, to say nothing of its scenic value, and the associations which, as long as life shall last, shall congregate, in the minds of the children of the family, about memories of the old swimming-hole and skating-path. All told, it adds hundreds of dollars to the value of any farm, and increases the chances for selling it, that be desired—many times over. When polluted by the filth of a city, however, every advantage disappears, and value is depreciated, rather than increased, by its presence. Our waterways should be jealously guarded, and

if cities will not voluntarily attend to the proper disposal of their sewage, they should be made attend to it. The comfort and sanitation of the country is by no means less important than that of the town.

Three hotelmen in one small city in Ontario were fined heavily for selling liquor on election day, contrary to the Elections Act, and several others were fined for purchasing it. Such procedure is eminently right and proper. No small percentage of wrong-doing in our country exists because of laxity in the enforcement of laws—laxity due, possibly, in a majority of cases, to the wilful blindness of those into whose hands has been placed the responsibility of seeing that the law is upheld. Query—Does it never occur to those of the latter who find themselves thus wilfully or weakly negligent, that the only course to be taken in honor by the public official affected with such excessive tenderness of heart is resignation? When a man is too weak or too partial to enforce the law which he has been entrusted with enforcing, it is surely time for him to make way for someone who can and will do it.

The local-option campaign is again under way in Ontario, about seventy municipalities being already listed for the fray. In connection with the subject, a quotation from a writer in *New York Independent*—a man who, while seeing all the evils of drink, makes no secret of having been caught in its toils, and of having patronized blind pigs, etc., in nearly every State in the Union—may be interesting. Referring to the fact that liquor can be obtained in almost every prohibition town in the United States, he says: "All such facts as these will be seized by friends of the saloon to show that prohibition is a failure, to my mind, however, the proof is just the contrary. My common sense tells me that drinking is less in the blind pig town in the wide-open town. All that social side of saloon-life which I depicted in my other article, all those features which make the saloon the 'poor man's club,' all the sitting about for hours at cards, and the almost continuous treating which makes these long sessions so productive of drunkenness, all those late hours in the saloon, with lights, killings and thefts, are eliminated in the box stall or a livery stable or the prescription room of a drug store. There is no attraction in any such place except the drink itself. The social side of the drink problem is practically eliminated, and only the physical one remains, knowing as I do that the treating described in my other article is responsible for a very great part of all drunkenness, my reason tells me that, wherever drinking is forced into the blind pig, intoxication must be reduced. It is not law, but law enforcement, that counts."

The Governmental system of official house-cleaning evidently proceeds on the vacuum plan, as the result of disclosures in connection with the Department of Marine and Fisheries, Quebec, has already resulted in suspension from office of two members

of the agency, with a possibility of subsequent dismissal. Captain O'Farrell, Government Light-house Inspector, and several other employees emphatically deny having ever received money in any irregular way, and threaten action for damages against Mr. F. X. Droulet, the chief informant; nevertheless, though these may be guiltless, the investigation, which is proceeding briskly under Mr. Justice Cassels, and Mr. George Watson, K. C., reveals much which may well cover those connected therewith with confusion, one of the especial forms of graft revealed being the acceptance of moneys, as bargain-closers, from contractors to whom the officials of the Department gave orders for goods.

Judging from an impartial viewpoint, there is no course which will strengthen the hands of either political party so surely as the persistent weeding out of iniquity wherever found, even to the undoing of many of its own ranks. The great body of the people, disgusted with trickery and self-seeking that has too long polluted almost every department of Government and business, are crying out more and more for civic righteousness. As Dr. Herridge, of Ottawa, in his Thanksgiving sermon, expressed it, "The moral sense of the country demands house-cleaning wherever it is needed, either to the right or to the left of the speaker's chair," and that demand must yet be met. . . . In this connection, the recent action of the Westmount Liberal Club, in adopting a resolution to request that steps be taken against corruption in politics, and that such measures as necessary be taken to insure the maintenance of the best ideals of public life, must meet with the endorsement of every honest man, whatever his party in politics may be. May we have more of such resolutions, and may they bear much fruit.

The Kaiser's indiscretions in conversation have of late been leading to issues which must teach His Majesty that even the august Emperor of a realm as powerful as Germany has less freedom in many respects than the most humble artisan in his dominions. Not long ago, his garrulity in regard to matters connected with the South African war set Britain by the ears, and a timely warning was conveyed to His Majesty by his own subjects that he should exercise more discretion in future. A later instance seems evident in the fact that the interview with His Majesty, announced to appear in *The Century*, has failed to materialize. The *Century's* representative obtained the interview—very much of an interview, if deductions may be made—it was printed, and the sheets partially bound, when, presto! the magazines are loosened again, the questionable portion removed and burned, along with the proof sheets, while the plates are melted. Obviously, such precautions have been taken only at the express demand of the German Government, and under fear of the provocative still further of European complications should the article appear. Examining up to the situation, the *Century's* representative remarks: "There is a strong feeling in favor of more freedom of expression of personages in power, and it is one of the world-wide

sentiment that the voice of the people must rule, and the sovereignty must speak in regard to serious matters, as the collective wisdom of the people may permit. The 20th Century, indeed, bids for more than not only the presentation of the Gospel to all nations, as foreseen by the Laymen's movement, but also the death of the Absolute Monarchy. . . . Persia has arisen and won, albeit on an unstable enough foundation as yet—a constitutional government; Turkey, within the past fortnight, has held elections for her first representative legislation; Russia and China are clamoring in a protest which must be respected when the masses have been educated into unity of demand and effort; Germany is compelled to call her sovereign to order. Whether in a Limited Monarchy or Republic, the great man of the future must be he who best understands, best interprets, and best meets the spirit of the great populace.

The Collingwood, the most powerful British battleship yet completed, and the sixth of the Dreadnought class added to the navy, was launched on November 7th. Incidentally, the query suggests itself as to whether this tremendous extension of fleets can halt with anything short of the bankruptcy of the nations which indulge therein. Some time ago, Great Britain was willing to consider the question of limitation of armaments, but the movement was blocked by Germany, upon whom, therefore, chiefly rests the responsibility for this ceaseless multiplication of battleships. So long as Germany keeps on adding to her navy Great Britain cannot stop; peace, indeed, depends upon her "going one better." Indeed, speaking in the House of Commons, on Nov. 12th, Mr. Asquith stated that the Government intends maintaining the navy at a strength ten per cent. greater than the combined strength of the two next strongest naval powers. And so millions of money must be thus locked up, practically dead, and the heavy burden of maintenance laid upon the people, in order that tragedies more costly, more unbearable still may be averted.

PEOPLE, BOOKS AND DOINGS.

Professor Rutherford, for nine years Macdonald Professor of Physics at McGill, but now in England, has, during his experiments with radioactivity, succeeded in detecting an atom.

Rev. Dr. A. E. Burke, of Alberton, P. E. I., who is well and favorably known among the readers of "The Farmer's Advocate," as well as from end to end of the Maritime Provinces, has been appointed President of the Catholic Missionary Society Extension Branch, at Toronto.

Victorien Sardou, the eminent French dramatist, is dead. He wrote many dramas, the most famous of which are "Madame Sans Gene," and "Robespierre."

Dr. James Fletcher, entomologist and botanist at the Central Experimental Farm, Ottawa, died last week. Dr. Fletcher was an enthusiastic and thoroughly-competent scientist, and his loss will be great, not only to the large circle of friends which his geniality and manliness won for him, but also from an economic standpoint to the Dominion of Canada.

Count Zeppelin, inventor of the Zeppelin airship, has been decorated by the Kaiser, having had conferred upon him the Order of the Black Eagle.

Dr. William Osler has published a book, "An Alabama Student, and Other Biographical Essays," which proves him a literary man and philosopher, as well as one of the most eminent physicians of the day.

Czar Ferdinand of Bulgaria, who is said to be in constant dread of assassins, has organized a personal secret police of 430 men and 50 women.

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THE VOICE OF THE PEOPLE.

OLD-AGE PENSIONS.

By Frank Richards, J. P.

The advocates of old-age pensions heartily appreciate any effort on the part of the Dominion Government to ameliorate the condition of people in the evening of life.

Few persons will blame the Government for being overcautious, by simply bringing in, in the first instance, merely an annuity scheme, to be contributed to by the people. But it is, nevertheless, the duty of those who believe it to be the duty of every person to have the means to exist, to persevere in the demand for an old-age pension measure, as now in force in New Zealand. Every individual man and woman in the Dominion of Canada has an absolute right to participate in the benefits to be derived from the public lands, forests, and mines. Therefore, a portion of the profits should be set apart for old-age pensions. Two million acres of public lands have been set apart in British Columbia for a university. Why cannot the same method be adopted with the Dominion lands for the benefit of the aged?

We have been told that we must not expect more from society than it can give; especially that we must not expect contrary things. But, in protecting the lands, forests and mines, so that a portion of the benefits derived are set apart for the aged, instead of falling into the hands of millionaires, it can hardly be said that we are asking too much.

It is, however, our duty to show:

1. That, by granting, say, a pension of \$3.00 per week to every man and woman in the Dominion, upon reaching the age of 65 years, it is a safe measure to adopt.
2. That the most successful old-age-pension scheme in the world has been in force for ten years in New Zealand, in a colony containing less than one-sixth of the population of the Dominion.

Before doing so, it may be stated that all the progressive parties in England are strongly in favor of old-age pensions, which was passed by a large vote given in the House of Commons.

The British Government is paying, from January 1st, next, \$1.25 per week to men and women upon reaching the age of 70 years. The Earl of Rosebery attacked the measure in the House of Lords, and regretted its pauperizing effect upon the people. Whenever the proposed recipient of an old-age pension is other than a statesman, soldier, judge or policeman, the granting of the pension has the effect of making him a pauper, if we may credit the contentions submitted. Are not each of these Government officials paid the full value of their service at the time of their employment? If so, why should they be paid a pension any more than the ordinary citizen, who often works harder for less money? But, to finally and successfully controvert this argument, it may be as well to quote from the tenth annual report of the New Zealand Government on old-age pensions:

"Wealth of Pensioners."—The amount of accumulated property owned by pensioners is as follows:

Freehold	\$1,689,697.05
Leasehold	142,526.95
Life Interest	97,271.60
Cash	276,018.35
Stock, furniture, etc.	468,615.80
	\$2,674,159.75

The total annual income earned by pensioners is \$527,281, and by their husbands and wives (not themselves pensioners), 111,253.

The total net property owned by pensioners represents an increase of

\$173,169 on last year's figures, while the income of pensioners has decreased by \$6,334.

The average amount of property held by each pensioner, after the deduction of mortgages, is \$168.00, as against \$159.00 in 1907, and \$138.00 in 1906.

The average amount of income earned per pensioner is \$38, as against \$40 in 1907, and \$39 in 1906.

Of the 13,569 pensioners on the roll, no less than 2,605 have benefited by the provision in the 1905 act increasing the allowance from \$242 to \$727 on property whereon a pensioner resides, and which produces no income.

The effect which the operation of the old-age-pension measure has had on the annual expenditure for outdoor relief in New Zealand has been remarkable. When the act came into force, in 1898, the outdoor relief amounted to 32½ cents per head of European population. Within ten years it has been reduced nearly 50 per cent. It is now 17½ cents.

Further, the relationship existing between the department and the pensioners, on the one side, and the magistrates, whose duty it is to hear applicants for pensions, has been of a harmonious character, and in no case has it been necessary to exact the full penalties by law for misrepresentation respecting means or age.

Finally, to settle the question of pauperizing, it may be quoted that, out of 7,384 males enjoying the benefits of the act, for the year ending March 31st, 1908, there were 6 accountants, 2 architects, 1 auctioneer, 4 bookkeepers, 2 chemists, 4 civil engineers, 2 clergymen, 53 clerks, 3 commercial travellers, 1 creamery manager, 1 dentist, 15 drapers, 1 draughtsman, 403 farmers, 5 plowmen, 1 goldsmith, 10 hotelkeepers, 3 journalists, 1 law clerk, 9 master-mariners, 5 mining agents, 14 music-teachers, 4 phonographers, 1 post-master, 3 schoolmasters, 3 solicitors, 1 station manager, 5 surveyors, 13 teachers, 5 veterinary surgeons, 1 wine-spirit merchant.

There were represented on the roll 246 different occupations. There were 1,071 miners, 3,353 laborers.

Among the 5,528 females on roll at the same date, there was 1 deaconess, 28 dressmakers, 1 governess, 158 nurses, 3 postmistresses, 2 sisters of mercy, 1 teacher.

There were 20 occupations, among which are noted 5,157 persons engaged in domestic duties.

Now, in reference to the matter as it applies to Canada:

The population of New Zealand is 937,578, and may be said to be living under similar conditions to that of ourselves.

In New Zealand, on the 31st of March, last, there were 13,569 persons on the old-age-pensions books; 1,740 new pensions were granted, but there had been 1,189 deaths, which, with 239 cancellations, made the total increase in number only 312 over the previous year. The percentage of pensions to the population, eligible by age, is 29 per cent. In the year 1905-6, the pension was increased to \$2.42 per week. The increase of pensioners in that year was 812; in the succeeding year, 675. The total excess of those on the roll on the 31st of March, 1902, is 793.

There are 657 Maoris (natives of New Zealand) on the roll. The number of pensioners receiving the full old-age pension of \$126 per year is 10,774, or 79 per cent. of the whole.

Out of 7,487 pensioners who were admitted on the roll in 1893 and 1899, 2,476, or 33 per cent., are still drawing the pension, as against 38 per cent. last year.

Out of 1,189 deaths this year, 337 are original pensioners. There are 1,856 more male pensioners than female. Of the natives, the females exceed the males by one.

The majority of claimants apply at the age of 74 years; next in number, the ages 73 and 75. Eighty of the pensioners are 90 years of age. There are eight of the age of 96 and over. Two are over 100.

Those of British extraction number

89 per cent.; 538 are of the minimum age, while 48 are 80 years. Since the act came into force, there have been 33,598 claimants, and 25,617 pensions were granted.

In 1903 a new system of investigation was inaugurated, and since that time 11,158 claims have been received, and 2,611 rejected. During the last year, there were 2,327 claims, and 613 were turned down for more definite information as to age and income. Twenty-three per cent. of the total claims lodged have been rejected. Previous to 1903, 78 per cent. of those who applied were granted; since 1903, the percentage has dropped to 72 per cent.

The total cost of administration since coming into force, ten years ago, is \$1.69 per hundred dollars pensions paid out, the gross payment being \$10,027,210.

On March 31st, 1899, the average liability of the Government was \$82.53 per head of 7,443, a total of \$617,497. At the same period in the present year it was \$119.06 per head of 13,569 pensioners, or a total of \$1,616,699.

The increase for past year is only \$35,191, against \$63,370 for the previous year.

It is fortunate that we are in possession of such accurate knowledge regarding actual experience spreading over a period of ten years in New Zealand. We may, therefore, fairly judge what is likely to be the experience of a country like Canada, a population similar in manners, mode of life and general conditions.

It would be fair to argue that, if the liabilities of New Zealand are multiplied by seven, we would not be underestimating our own, seeing that we have barely six times the population of that colony.

The Quiet Hour.

OUR FATHER'S TREASURES.

The earth is full of Thy riches—Ps. 104 : 24.

Your Father knoweth what things ye have need of—S. Matt. 6 : 8.

When we are inclined to look on the dark side of life, and expect evil to be lying in wait for us, we should do well to read the 104th Psalm, which is a glorious reminder of God's careful and wise provision for each of His creatures. It describes how He sends the water through the valleys for the wild asses; how He provides grass for the cattle and herbs for man, trees for the birds to nest in, and high hills as a refuge for the wild goats. The young lions seek their meat from God, and the leviathan has the sea provided as a great playground "to play therein." All, both small and great beasts, wait upon God in sure trust that He will "give them their meat in due season." And, because they stand with their eyes upon the Great Father, they accept His gifts with the simplicity of little children. "That Thou givest them they gather. Thou openest Thine hand, they are filled with good." And we hardly need to be told that we are of more value than many sparrows, and more than a child in his father's house needs to be assured that he is more tenderly cared for than the cattle in the stable. If the animals find special provision made for them, according to their various needs, man finds more than the bare necessities of life. There is not only "bread which strengthened man's heart," but also "wine that maketh glad the heart of man, and oil to make his face to shine." Why should we not be glad and joyous as happy children, growing up in our Father's house, under His wise and tender care? He is rich, His treasury is inexhaustible, and He knows what things we have need of. Of course, He will give us—He is giving us—just those things, and no other. No good thing that He has provided for us can go astray. If we miss it, then it must be because we have taken a road of our own choosing. As Mrs. Whitney says:

"Out of God's mails no letter is lost." How often we allow ourselves to fret and chafe because a letter does not arrive. And yet, if that expected letter is really good for us, God is pledged to see that it is delivered—if we are trusting our lives in His hands as dear children.

Perhaps you wonder why, if the Father is so rich, He allows many of His dearest children to be so poor. But don't be too sure that they are poor, even when they seem to be so. It is possible to have a great deal of money, to be clothed in purple and fine linen, and fare sumptuously every day, and yet to be terribly poor in the great things which no money can buy. Sometimes a millionaire, tossing restlessly on his hemstitched linen, would eagerly exchange his outward luxury for the sweet, restful sleep which no money can buy, and which is of priceless value. Many mothers who are called rich by the world are poor with a terrible poverty, for their sons and daughters are filling each day with new sorrow; while many, who are supposed to be poor, can look with glad pride on the children who are growing up like olive branches round about their table. Love and goodness are not for sale. Let us realize the wonderful truth that we are God's dearest treasures, and that all His inexhaustible riches are ours. He is giving us—to-day—the very thing we need. Surely we can trust His judgment better than our own. If He said, "You may go yourself into My treasury and take whatever you like," we might go in and look about, reaching out to grasp this or that heart's desire. Then, if we were wise, we should refuse to choose, not knowing what the effect on our eternal future might be. We should come out and say to our Father, "Not my will but Thine be done," and leave the choice unreservedly in His hands—which is exactly where it is at present.

It is a very strange thing that people should think the expression, "Thy will be done," pledges us to accept painful things only. If a trustful child should say to an earthly parent, "I will allow you to decide everything for me, and give me only what you think will be good for me," he would hardly expect to be treated with harshness. The pleased parent would make his days as happy as possible, not forgetting, though, the needful training and discipline which are a preparation for the important after-life.

Why do we take short-sighted views? An earthly father who allowed his child to waste all the precious years of youth without study or discipline, would be terribly unkind. The weak, uneducated nature, so foolishly treated, would be no match for the task of manhood. Such a child might well reproach his father—all the more if he were very wealthy, and able to give him all necessary education and advantages to fit him, according to his ability, for the future. Our life on earth is childhood in our Father's house. Here we are trained and educated for the wonderful future which lies beyond the veil of death. Our Father never considers expense if only His children may grow strong and wise and beautiful with the lasting beauty of holiness. How can He grudge any other expense, when He spared not His own Son?

"All His treasures are brought out, all His riches are outspread, outpoured, without stint, or scruple, or jealousy, or fear—the riches of His grace wherewith God, Who is rich in mercy, hath abounded towards us, for His great love wherewith He loved us, that He might show the exceeding riches of His grace—riches which no present happiness can exhaust, but which it will occupy all the coming ages to consider, and admire, and enjoy—riches which have no limit, since they are to continue their outpouring until we are filled with the fullness which belongs to the invisible God himself."

So, when our Father is forced to take away the gilded toys we want

to play with, because they are crowding out the real gold of life, which is spiritual and eternal. As a little girl once said: "I know that father will not go to heaven; he will never be able to leave the shop." It would be a sad thing for any of us if our Father should allow us to become so absorbed in shops, or clothes, or housekeeping, or farming, as to crowd out the greater things and make us quite unable to understand and enjoy the life after death, where these things will be priced at their true value.

Let us try to enter intelligently into our Father's far-reaching, far-seeing plans for us. He wants to make us great, and greatly useful in influencing other souls. Can we not accept each gift from His hand as it comes each day? It is certainly the grandest gift His treasury contains that we are able to use and assimilate at present.

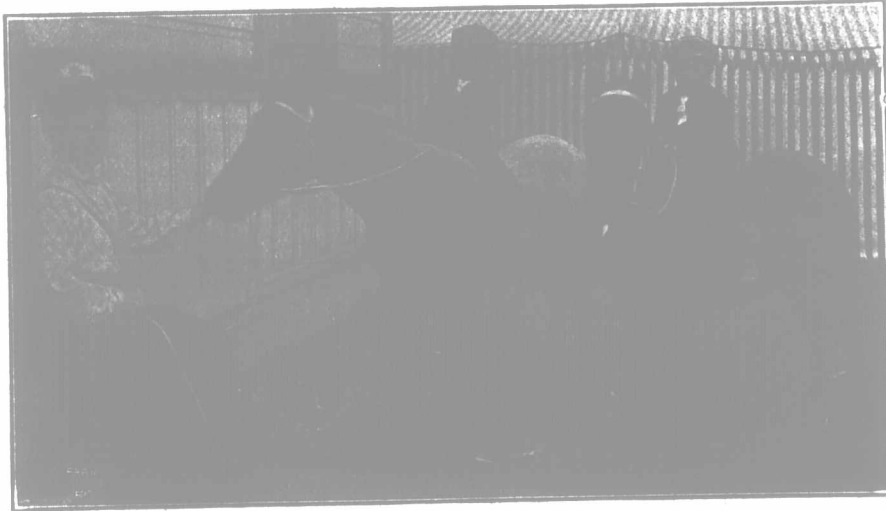
"Couldst thou in vision see
Thyself the man God meant,
Thou never more would'st be
The man thou art, content."

HOPE.

THE TEMPTED CHRIST.

(Heb. 4: 15.)

"In all points tempted like as we,"
Dear Lord,
What consolation doth that word afford;
To know, when all our needs we bring in prayer,
That Thou didst, once, our human nature bear.



Tommie and Johnnie Lloyd-Jones.

With their ponies, which won first and second prizes at Toronto Exhibition this year.

For with sinister cunning, and a subtle art,
The tempter sought to win Thy guileless heart,
When faint and weary, in the wilderness,
Close on Thy steps his wily legions pressed.

For only evil spirit could devise
Such base allurements in such shining guise;
And only strength Divine so well could meet
The treacherous foe, and all his wiles defeat.

Oh, brave, strong heart! so human, yet Divine;
The fiery trial, the victory, too, was Thine.
And Thou who didst withstand the tempter's power,
Can succor us in every trying hour.

Oh, tender heart! that still our weakness sees,
And still is touched by our infirmities,
Thou art our great High Priest, and ever must
Keep that which we've committed to Thy trust.

M. CARRIE HAYWOOD,
Corinth, Ont.

Children's Corner.

SOME NEW GAMES.

Viola Richardson (age 12), Oakwood, Ont., asks for some new games. I am afraid she will be beginning to think I have forgotten all about it, but she will forgive me when I tell her that it took a very long time to find enough that seemed good. However, here are some, and if you all like them, I may tell you how to play some more another day. Perhaps some of you can send in some good ones too, but if you do, you must be careful to make your explanations very clear.

(1) Nouns and Verbs.—Here is a good game for the older girls and boys; a small blackboard and some chalk is necessary in playing it. All sit about in front of the board, and someone is chosen to take the chalk. He or she writes a list of nouns on the board until a mistake is made, when another tries it. If any boy or girl keeps on too long a halt is called, and a trial is made with verbs, adjectives, etc.

(2) Fly Feather.—Get a small downy feather and place the chairs for the players in a circle. The feather is then blown into the air, and each player, by blowing it, tries to keep it from touching himself or herself. The person it falls upon pays a forfeit, as does also the one who blows it outside of the circle.

(3) The Four Quarters of the Globe.—The players sit in a circle, and one stands in the middle. The one in the middle then takes a handkerchief and throws it over the head of another, calling out "Europe!" If the one called on cannot name some place in Europe

This is the way we iron our clothes,
So early Tuesday morning."

The dance is again resumed, and at the next pause they sing:

"This is the way we scrub the floor,
etc.,
So early Wednesday morning."

For Thursday they make the motions of sewing, singing:

"This is the way we mend our clothes,
etc.,
So early Thursday morning."

For Friday they pretend to sweep, and sing:

"This is the way we sweep the house,
etc.,
So early Friday morning."

For Saturday they sing:

"Thus we play when our work is done,
Our work is done, our work is done,
Thus we play when our work is done,
So early Saturday morning."

THE BEST LETTERS.

The first of the following letters, although not altogether faultless, was so well composed, so well written, and so neat, with such care in spelling, punctuation and paragraphing, that we decided at once to give the writer a prize, so are sending to Miss Muriel a book, Kingsley's "Water Babies" . . . I hope you will like it, Muriel, and that some day you will write us a composition about it.

Dear Puck,—For some time I have been a reader of the "Children's Corner," but this is my first letter. When I saw the questions on New Zealand in the last paper, I thought I would write, as not long ago I read some very interesting things on that country.

In the first place I would like to say that I think a good name for the Club would be "Our Boys and Girls' Club," meaning "The Farmer's Advocate" Boys and Girls. And I would like to tell you, too, that I think it would be nice for you to choose a subject every month for us to write about. I would like the Club to be interesting and instructive.

New Zealand is a British colony, and, like Canada, is self-governed. These large islands are in the Central and Eastern Pacific Ocean, and form one of Great Britain's greatest colonies. When the Panama Canal is completed, New Zealand will be the first land touched by the new route from Europe and America to Australia; and the magnificent harbors of that dominion will be the ports of call for many of the greatest ocean liners. The way to reach it now from Halifax would be to sail down the Atlantic round Cape Horn and across the Pacific.

New Zealand has a few cities and a number of large towns. Auckland, a city on the coast, has a very valuable harbor, and many large ships call there. There are also four large towns on the coast, namely, Wellington, Dunedin, Napier and Nelson. The towns are not all on the coast; there is one important inland town, Queenstown. This large town is not, like some of our towns which are sometimes dirty, with narrow streets, but is full of scenery, with wide, shaded streets, and situated on a hill.

This dominion is formed of many islands, but only two of importance, which extend over a thousand miles in latitude. The population of New Zealand has reached its million mark. The occupations of the people are principally raising sheep for wool and mutton, and cultivation of roots, grain and fruit. Last year New Zealand exported produce—wool, gold, frozen meat, butter and cheese—to the value of more than \$100,000,000.

For the traveller and health-hunter New Zealand is a country of pleasure and profit. There is as much to be seen in this wonderful island group, of mountains and forest, geysers and hot mineral springs. There are lakes and mountains to make a dozen lakes and mountains considered to be the most beautiful in the world's hot islands.

There are many islands that have the same name as New Zealand. All over the world there are islands and broken by

lakes of all sizes and shapes, some of them, some lying still and calm in the heart of a great forest, others springing from mountains, fed by glacier streams, some of strange colors, geysers leaping up their margins, and steaming hot little rivers running down to swell their waters.

It is the lakes and mountains that give New Zealand its chief landscape value.

The country of New Zealand is covered with boiling springs and geysers, and even a hole made in the ground by a walking stick at once becomes a tiny fountain of hot water.

The natives of New Zealand are called Maoris. They are dark, like Indians. When cooking they make use of the hot springs and cook over them, so they do not use matches or fuel there.

This is all I know about New Zealand. Hoping this letter is not too long, I remain, your friend,

MURIEL PERKIN (age 11).
Rothsay, Ont.

Owing to the difficulties of navigation to Cape Horn, the more usual route is to go via the Mediterranean and Suez Canal.

Dear Puck,—I am a granddaughter of one of your oldest subscribers of this paper. Grandpa has taken it since 1866, and papa has taken it 11 years. I am also a reader of this department, but I have never written a letter before. I have thought of it before, and have even had the letters written, but did not send them.

I noticed some questions about New Zealand, so I am trying to answer them.

1. New Zealand is composed of two islands, which are in the Pacific Ocean.

2. They belong to the British.

3. If I were to sail from Halifax to New Zealand I would take this route: Go south a ways on the Atlantic, then turn west and you will reach the Nicaragua Canal. Go through it, then you enter the Pacific Ocean. Going southwest, after a long journey, you will reach the islands called New Zealand.

4. Two of the most important cities are Christchurch and Dunedin.

5. I had an uncle and aunt live there for three years. They lived at both these places; they just came home a year ago last September. They liked it very well, but they said they would just as leave live in Canada. I have seen many odd presents given to them by friends. One of my cousins bought a cork hat like they wear there. It is made of cork, then covered with cloth the color of cork, which is quilted. To look at this you would think it heavy, but if you were to put it on your head it is as light a hat as you could want to wear.

I have seen pictures of the natives that would make you laugh. Their faces were all tattooed with different colors. I am sure they would make you frightened if you were to meet them. I only wish I could show you some. These islands are very warm all the year around; they grow hundreds of acres of turnips there, and then they herd sheep on them. They don't need to put them in barns at all. Well, I have written a long letter now, so guess I will close, as I don't want to take up all the room. A riddle:

What do you do to make a cat purr?
Ans.—Rubberneck.

CATHERINE McCALLUM (age 11).
Iona Station, Ont.

I should have said that I meant "sailing without transference." Large ocean steamers cannot as yet pass from the Atlantic to the Pacific at Panama, and if one went that way one would have to leave the steamer and take another at the other side of the isthmus. Several Circleites said they would "go through the Panama Canal." What is the matter with that answer?

Your letter is very interesting, Catherine, but you were not as careful about your periods, etc., as Muriel. We corrected your punctuation before sending your letter to the printers, as we do not like to see mistakes of that kind in print. However, you wrote a very nice little letter.

Dear Puck,—As I do not know who you are, unless you would be St. Nicholas, but I hope you will soon come out of your den, as I would like to see you and scud through the leaves for a frolic. Now, you wanted to know something about New Zealand: New Zealand is a

country which is much like Canada. Most of its people are of British origin; some are from New Zealand, called Maoris, and of the Maori, or brown race. They are dressing in summer. Those who remain are fairly civilized. Some of the members of Parliament are Maoris.

Railways connect all the principal cities and towns. A large coasting trade is done by steamers.

The two principal cities are Wellington and Auckland.

New Zealand is in the South Temperate zone. When we have summer here, they have winter there.

There is much fertile land; all the common grains are grown there.

New Zealand is a great grazing country, and immense herds of cattle and flocks of sheep are raised. Wool is by far the most valuable export; preserved and frozen meat is next in value.

THOMAS HOLLAND (age 11).
Beechwood P. O., Ont.

Glad to meet you, Thomas. Can't you coax out some more of the boys? The girls are having things about all to themselves.

THE BEST LETTERS FROM THE YOUNGER CHILDREN.

Mamie Baker has won the prize for the best letter written by children of ten years of age or under. We are sending her a copy of "Alice in Wonderland."

Mamie Baker's Letter.

Dear Puck,—It is not very easy writing to a stranger, but I hope in the future to become better acquainted. I am not sure whom I am addressing, a lady or a gentleman, but think by the peculiar name it must be a gentleman, and a jolly one, also. I believe you must be Irish, as you take such an interest in our corner, as I believe all Irishmen are fond of children.

I must say I am fond of the Children's Corner. I have three brothers, and we all watch for the postman to bring "The Farmer's Advocate." I am the only girl in our home. I have not many pets, just a cat, and I call him Toney. My mamma gives me a great deal of praise for my work, she says I am a great help to her.

I am looking forward for my old friend Santa Claus to visit me at Xmas. I at one time thought Santa's present would be a piano, but papa would like me to play a piece on the organ first, so likely he will tell him when to bring it.

Now, Mr. Puck, I should like to win the prize. Do you think that sounds selfish of me? Hoping to see this in print, at least, Yours truly,

MAMIE BAKER (9 years old).
Bennington P. O., Ont.

THE HONOR ROLL.

Only the very best letters have been published, but the following have got into the Honor Roll, and so may be fortunate enough to have their letters published the next time they write: Grace Totten, Essex Co., Ont.; Dolly Gothorp, Waterloo Co., Ont.; Kate McCullough, Middlesex Co., Ont.; Myra Harding, Middlesex Co., Ont.; Gladys Troup, Welland Co., Ont.; Eva Scott, Oxford Co., Ont.; Clara Blakely, Prince Edward Co., Ont.; Lauretta Elliott, Middlesex Co., Ont.; Jennie Kerr, Perth Co., Ont.

When writing be sure to tell your age every time.

THE STARS ARE EVERYWHERE.

The summer comes, and the summer goes, Falls the leaflet and fades the rose, But summer or winter, in bloom or blight, The sky is above, with its worlds of light—
For the stars are everywhere!

Over the streets of the crowded town, Over the woods and the desolate down, Wherever a foot may chance to fall, The steadfast shining is over all—
For the stars are everywhere!

O, lonely pilgrim, along life's road, Through shadow bearing thy weary load, Thou canst not wander so far astray, But a light shall brighten about thy way
For the stars are everywhere!

"THE FARMER'S ADVOCATE" FASHIONS.



6131 Plain Blouse or Shirt Waist, 32 to 42 bust.

To be made with long or three-quarter sleeves.

Plain blouses, such as this one, are to be extensively worn this season. They will be made from washable material, from the pretty washable flannels, from taffeta and from various other materials. They will be utilized both for entire gowns and for odd blouses, and this model is an exceptionally desirable one, for it affords opportunity for embroidery, for braiding with soutache or with fancy braids or for any trimming of the sort. If a slightly more dressy effect is wanted the sleeves can be cut off in three-quarter length.

The waist is made with front and backs and the sleeves, that are cut in one piece each. There are wide tucks over the shoulders which conceal the armhole seams, and whether the sleeves are made in full or three-quarter length they are finished with straight cuffs.

The quantity of material required for the medium size is 3 yards 24, 2 1/2 yards 32 or 2 yards 44 inches wide, with 2 yards of banding to trim as illustrated.



6150 Girl's Over Dress, 8 to 14 years.

To be worn over any guimpe.

There is no style of dress that suits the younger girls more perfectly than the one in guimpe style. It not alone is charmingly youthful and becoming, it is also practical; for the guimpes can be made from washable material, and in sufficient numbers to mean frequent change, and every mother knows that it is the sleeves which soil and wear out, while the rest of the dress is in good condition. This model will be pretty made from cashmere, from challis, from light-weight serge, from wool taffeta, or any similar material, and it also can be utilized for the washable dresses that so many girls wear within doors during even the coldest weather. The blouse is trimmed after a novel fashion, being laced together at the front with pretty ribbons, and is finished with shaped bands at the armholes, these bands forming very narrow sleeves. If something a little more elaborate is wanted the bands could be of some contrasting material, as silk, satin or velvet. Or plaid material would be pretty for the dress with the trimming bands of plain, or, if plaid material is used throughout, the bands could be trimmed with rows of soutache or narrow velvet ribbon.

The dress is made with the blouse and

skirt, which are joined by means of a belt. The skirt is straight, laid in backward turning plaits, and the blouse consists of front and backs, fitted by means of shoulder and under-arm seams. The shaped bands are arranged over the neck edge and the narrow sleeves, or trimming bands, are joined to the armholes. The belt is prettily finished with a pointed strap at the center front.

The quantity of material required for the medium size (12 years) is 6 1/2 yards 24, 4 1/2 yards 32 or 3 1/2 yards 44 inches wide.



6130 Girl's Over Dress, 6 to 12 years.

The dress that is worn over a guimpe is one of the prettiest included in the younger girl's wardrobe, and this season is being shown in an exceptional number of attractive designs. This one is extremely charming, yet perfectly simple, and can be made from challis, as illustrated; from cashmere, from chiffon Panama cloth or any similar simple wool fabric, or from pongee or some material of the sort if a more dressy frock is wanted. In this case the blouse is trimmed on its edges, and the trimming is extended over the center front of the entire dress, but whether this last shall be used or omitted is entirely a matter for individual taste to decide. The dress can be worn over any guimpe, and its essential features are found in the graceful lines and perfect simplicity of cut.

It consists of the overblouse and the skirt. The shoulder edges of the overblouse are joined for a portion of their length, but fall apart prettily over the sleeves, and the under-arm edges can be seamed for their entire length or left open a portion of the way as liked. Also the neck can be made with a square or V-shaped outline. The skirt is circular and the two are joined by means of a belt.

The quantity of material required for the medium size (10 years) is 3 1/2 yards 24, 3 yards 32 or 2 1/2 yards 44 inches wide, with 7 yards of banding.

The above patterns will be sent to any subscriber at the very low price of ten cents per pattern. Be careful to give Correct Number and Size of Patterns Wanted. When the Pattern is Bust Measure, you need only mark 32, 34, 36, or whatever it may be. When Waist Measure, 22, 24, 26, or whatever it may be. When Misses' or Child's pattern, write only the figure representing the age. Allow from one to two weeks in which to fill order, and where two numbers appear, as for waist and skirt, enclose ten cents for each number. If only one number appears, ten cents will be sufficient.

Address: "Fashion Department," "The Farmer's Advocate," London, Ont.

A wealthy Irish lady, whose summer home is situated near a garrison town in Ireland, once sent an invitation to Captain Armstrong to take tea with her, saying, "that the pleasure of Capt. Armstrong's company is respectfully requested," etc. To her astonishment she received by an orderly the following note: "Enlisted men Jones and Smith have been detailed to do guard duty, but the remainder of Captain Armstrong's company accept with pleasure Mrs. Weyler's polite invitation."



"Black Knight" Stove Polish

does away with all the dirty work of keeping stoves clean. No mixing—no hard rubbing. "Black Knight" is always ready to use—shines quick as a wink—and puts on a bright, black polish that delights every woman's heart. Equally good for Stoves, Pipes, Grates and Ironwork.

If you can't get "Black Knight" in your neighborhood, send name of dealer and 10c for full sized can.

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HAMILTON, Ont. 10A

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Have you ever thought why your hair is falling out? It is because you are starving your hair. If this starvation continues, your hair will continue to fall.

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is assuredly the ideal remedy for poor hair and sick scalps. You will realize this if you use it. \$1.00, express paid.

Hair Rejuvenator restores gray and faded hair to former color in ten days. Not greasy or sticky, contains nothing harmful, clear as water. For hair less than half gray, \$1.00.

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The chance of a lifetime for a live dairyman. Milk nets \$2 per 100. Over 100 acres excellent land. Well-built house. Silos. Barn for 40 milk cows, and other stock. Running water. Near station, post office, school and churches. Write and arrange for early visit before snow comes.

P. O. Box 953, Montreal, Que.

SUBSCRIBE FOR "THE FARMER'S ADVOCATE AND HOME MAGAZINE."

Current Events.

The election in Newfoundland has resulted in a tie.

The Pope, on November 9th, celebrated the fiftieth anniversary of his entering the priesthood.

One hundred and fifty people were drowned by the sinking of the steamer Taish, on the coast of Japan, recently.

An application for land grants has been made to the Ontario Government by the veterans of the rebellion of 1885.

An unsuccessful attempt upon the life of Sir Andrew Fraser, Lieutenant-Governor of Bengal, was made by a Bengali last week.

The Dominion Iron and Steel Company, Cape Breton, has received a large order for steel rails from the Government of New South Wales, Australia.

Germany has abandoned her demand on France for an apology for the imprisonment of German subjects in Morocco, and it is hoped that the war cloud has again passed.

The first sod in connection with the construction of the Hydro-Electric Power Commission transmission line in Ontario was turned on Nov. 18th, but the towers will not be erected until spring.

The Dutch population in South Africa have asked that a large British garrison be kept in the country. The request is looked upon as a most happy indication that the much-feared racialism is dead.

The National Association of Manufacturers for the United States have calculated that before January 1st more than 500,000 men will have been added to the original industrial force of the country.

The election of representatives in Constantinople for the new Turkish Parliament took place on November 9th. According to agreement, of the ten members of the city, five are Mussulmans, two Armenians, and one a Jew.

A series of successful experiments in hurling projectiles from dirigible balloons took place at Berlin, Germany, recently, in preparation for the time when aerial warships will be factors to be reckoned with in international complications.

The Ingle Nook.

The other day a friend handed me for perusal an article in an American magazine, written by a physician. It was entitled, "The Woman of Nerves," and, with a wild hope that my friend meant nothing personal by the presentation, I immediately "fell to." I found the argument somewhat as follows: that woman is guided more than man by her feelings, her intuition, and her instincts; that she places more importance upon trifles; "is responsive to the workings of little things that man wots not of, is prone to brood over matters that are not worth while, and to grow moody over things that are inconsequential"; and that as a result she is likely to grow introspective and to improperly rate her own importance, taking slights often when they are not meant, being disposed to think that no one appreciates her efforts, to dwell much on her defeated aims and ambitions, and, on the other hand, to plume herself accordingly on a little praise.

The whole thing struck me as being a little hard on women, for, although "women of nerves" were especially referred to, the statements were so sweeping as to include practically all of the sex.

To begin with, I may not be fully qualified for the discussion of this question. We women, you know, who are out in the world hoeing our own row are supposed to have no nerves. We must take our places side by side with men in the business world; we must expect no petting or especial deference because we are women; and by and by I really believe we begin to think about things pretty much as men do. We think of our work rather than ourselves; we grow to like short, serviceable skirts, and fairly loose, comfortable clothing, better than trailing skirts and fluttering laces—at least we like to wear them better—and we prefer dens furnished in tan and brown—where one can throw one's hat on the table and put one's feet on the cushions, if one likes—to drawing-rooms in old rose and pale blue. Possibly we lose a little of the timidity and "eternal feminine" which are considered such attractive attributes of the fair sex, but, since we must stand on our own feet, we gain a little also in solid comfort and ease of mind. There is one thing sure, if we don't learn to live "out of ourselves," and if we do keep on being timid and fearful, and dependent, and self-conscious, there is likely to be but one fate for us—nervous prostration. And who wants nervous prostration?

I rather think the great majority of farm women resemble the business woman in respect of this independence. Their work, the necessity of being able to meet emergencies, develops independence.

At the same time I suppose there are women on the farms as well as elsewhere who correspond exactly to those described by the critical physician. And there may be times, too, when even we women who flatter ourselves on our equanimity, seem constrained to give way a bit to nerves. Not one of us, perhaps, who cannot remember having an attack, more or less deplorable, at some time in our experience. We may not have thought we were "the whole thing," nor expected attention, nor fancied ourselves slighted over nothing, but we are almost sure to have had our irritable times, when every little thing annoyed us, and when we were ready to cry (or—fight?) on the slightest provocation. Not long ago I had occasion to make a few hours' journey by rail. To begin with, I was very tired, so I settled myself down for a good rest. Then that train-boy appeared. I did not object to the boy—he was a tidy lad enough—but it was his smile that exasperated. The moment I caught sight of it, it reminded me of Mona Lisa, and if there is a physiognomy I detest it is that of Mona Lisa. I know a girl who keeps "one" at the foot of her bed; she is trying to teach herself to like it. If it weren't so unladylike I should feel much more like using it as the "Three Men in a Boat," "to say nothing of the dog," used the tomato can. To me there is nothing but inscrutable sarcasm in the Mona Lisa smile. I can stand sarcasm—out and out jolly, good-humored sarcasm like Thackeray's is adorable—but inscrutable sarcasm is of different quality. Mona Lisa to others may be "wholly fair," but to me the sight of her acts as ptomaine of the nerves, if one can imagine such a thing.

Well, my boy with the smile, the inscrutable, down-at-the-corner perennial smile, that wouldn't and didn't come off, fairly haunted that coach. He paraded it every twenty minutes. You resolved not to look at him, and yet when his eternal "Bananas, oranges, peaches!" "Salted peanuts, chocolates, butter-scotch!" began at the end of the car you looked up to see if the smile were still there. It was.

It spoiled the whole journey for me. No matter what else I tried to think of, it would obtrude. By and by I hated myself, and it, and everything else almost; and yet the fault was not the poor boy's, but mine—a pure case of nerves. In such a condition, under greater provocation, I should no doubt have been thoroughly touchy, and disagreeable, and even more miserable and unwise for myself. As it was, I could form some idea of what a chronic disarrangement of nerves must be like.


THE WORLD'S BEST
CREAM SEPARATORS
KING OF THEM ALL

Are built more thoroughly, skim more cream, run with less power and have more practical improvements than all other makes combined. U.S. Cream Separators have been built for the past 17 years by a company having

Forty Years' Experience

in the manufacture of dairy appliances and nothing but the best material obtainable and highest class of workmanship possible are contained in their construction. No dairyman can afford to be without our beautifully illustrated, large catalogue No. 110. Send for it to-day.

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Canadian warehouses at Montreal, Calgary and Winnipeg.



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116 Humorous Recitations, 15c.
20 Humorous Dialogues, 15c.
150 Songs with music, 15c. 1243
Famous Dramatic Recitations, 15c.
By mail, postpaid, 2 books for 25c.; 4 for 50c.

Useful Novelties Co., Dept. E., Toronto, Can.

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10 Cows and Heifers.

In calf to or sired by the medal bull at London and Ottawa fairs, 1908. Attractive prices to quick buyers. Special terms to anyone taking three or more. Write at once.

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ABERDEEN-ANGUS CATTLE!

FOR SALE: Some of the best strains. Several fine heifers; also cows and a couple of bulls. Apply: **MANAGER,**

GRAPE GRANGE FARM, CLARKSBURG, ONT.



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock. **TERMS**—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

WANTED—A good farm hand. One that can milk. Apply: K. R. Birkett, Brantford.

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WANTED—A THE DELHI TANNERY Hides, Skins and Furs to tan for Robes, Coats and Gauntlet Mitts, etc. Tanned soft and pliable. Never get hard. B. F. BELL, DELHI, ONTARIO



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WANTED—Egg collectors. Prices low. Satisfaction guaranteed. Write for particulars. W. D. Dyer, Brantford.

POULTRY—Rhode Island Reds, \$2.00 each. Emerson Tufts, W. D. Dyer, Brantford.

POULTRY—Rhode Island Reds, five dollars per dozen. None better. Write for particulars. W. D. Dyer, Brantford. No birds after Xmas.

Sale Postponed

THE AUCTION SALE OF SHORTHORN CATTLE BELONGING TO
Dr. T. S. Sproule, M. P., Markdale, Ont.

Announced on another page in this issue, has been postponed. Date and full particulars will be given in a later issue.

Important Introductory Sale of AYRSHIRES.

To introduce our stock to the public, we have decided to offer by auction,
THURSDAY, DECEMBER 3, 1908, AT 2 P. M.

9 Young Bulls, 3 to 16 mos. old; 2 Yearling Heifers, and Several Mature Cows. Included in the bulls are the 1st and 2nd prize winners at the leading shows of the Maritime Provinces in 1908. All the young stock is bred from our imported bull, Netherhall Nobleman. The date follows immediately after the Amherst Winter Fair. For catalogue, now ready, write:

C. W. Stockton, Auctioneer, Hampton Stock Farm, Hampton, N. B. A. McPherson, Manager.

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Fourth year in the market, and every machine sold doing good work. Simple in construction and operation. Suitable for block-making for a single building or for a regular block-making business. A moderate-priced machine; compact and portable. No power required. Has suited every purchaser, and will please you. Western shipments made from our Winnipeg warehouse.

Write us for catalogue.



Address Dept. O, THE JAS. STEWART MFG. CO., Ltd., Woodstock, Ont.

Subscribe for "The Farmer's Advocate and Home Magazine." \$1.50 per Year in Advance.

There is not a bit of use of telling a bundle of nerves that she must not be nervous. Anyone who has had anything to do with a nervous woman knows that. But there is one cure which is well-nigh infallible, provided no organic trouble is at the root of the malady—that is a complete change of interest, anything, in fact, which will take the subject completely out of herself. Whether this be a good long visit, a trip, some new kind of work, a dozen other things, is immaterial; the point is that she must be led willy-nilly to forget herself and her little grievances completely.

Many physicians now believe worrying or "stewing" creates a veritable poison in the body, and everyone who has ever given way to it can vouch that it deranges digestion and upsets the appetite. An optimistic frame of mind, if it can be induced, is the best corrective, and, as the writer of the article referred to argues, it can be induced. "Happiness and contentment," he says, "are qualities of the mind, and if they do not come naturally, must be cultivated. Happiness is not a matter of locality or association to any marked degree." He prescribes, in addition, pure air, nourishing food, and plenty of out-door exercise; but these are only aids, though important ones. The fundamental condition of happiness, he considers, is interest in one's work or surroundings.

We cannot always change our work at will, but can we not awaken a renewed interest even in what we may have looked upon as the same old grind? Can we not introduce some new method, or improvement, or experiment, or even a resolution to do our work better than ever before?

When you really think of it, can any work (I do not speak of over-work), which requires the least bit of thought or skill, be wholly uninteresting? And with the variety that comes in housekeeping, especially farm housekeeping, should anyone feel that life is not worth living? I do not think so, unless nerves, or some unhealthy, morbid state of mind has gained the ascendancy. When you think of the lives that some people put in, in some of the big factories, perhaps ten, twenty, thirty years spent in slipping a wheel on a pivot, or some such thing, the difference must appear.

Will not some of you write us your opinions on this subject of "nerves" and their antidote? Have you been nervous? If so, in what did you find your cure? D. D.

POWER LOT

A Story of "Down East."

BY SARAH McLEAN GREENE.

(Rights of publication secured by the Wm. Wald Co., Limited, London, Ont.)

CHAPTER XXIV.

Sea Gulls Embrace.

I took the story of the refunded money up to Rob next morning. "You owe me only 'fifty' now," I said.

"I owe you—" said the lad; well, I won't tell what he said. But it isn't so hard giving up, and piloting your chickens along to pick up the fattest of the corn, when they turn a face and spirit towards you like Rob's.

I was willing to make my faith in Gar' Tee-bo's protestations of innocence discretionary, but I was determined to find out whether "Grief" knew anything of the dastardly plot against Rob. I meant to search that maiden's soul for lurking crime. On my return to the River settlement I came easily upon Cuby, fresh and handsome, doing the week's washing in the shed of the Tee-bo cabin.

"How d' do, Cuby?"

"Halloo, Jeem."

"You did your part mighty fine last night, Cuby—wonderful. You are an actress and no mistake." "Wal!" said Cuby, deftly wringing out one of Tee-bo's flannel shirts, a deep blush on her downcast face. "I'm vary glad you lak' how I done it."

"By the way, Cuby," I continued bluntly. "Did you know that your father and Bate sailed over to Waldeck just after Rob and I did the other day?"

"So?—Jeem," she said, lifting to me a pale face that I knew on the spot and the instant to be an honest face. "They mek to me as how they go feeshin'."

"Do you—honest—care anything about Rob Hilton, Cuby? Tell me, now."

"Me—I want them not to hurt heem. I am good, Jeem Tur-ban, though always you hate me and mek a mock at me." She shook out the wrung garment viciously, as though she would have liked to slap me in the face with it. But her voice and eyes carried a suspicion of dammed-up tears.

"I see you do care for him, after all," said I.

"Heem!" She threw the wrung and shaken garment to a near-by line; it snapped my ear stingingly in passing, but it landed on the line as smartly as if a boy had thrown it. "Heem, the gre't stupeed lunk-a-head. Heem! Loaf him!" she laughed, and her perfect teeth glittered in a way that actually suggested to me that their bite might not be pleasant.

"Who do you love, then?" I said.

"Who? Oh, you, mebbe," she retorted, her eyes burning annihilation of me, her passionate face white with wrath. "You! That is it! It must be. How could it be halp? You air so han'some, so genteel, so loafy—an' you mek so to mind your own becness! Oh, vary sure it must-a be you!" She laughed, and her laugh was musical, even when she was in a spasm of scorn and rage.

"That is not polite," I answered, as if I had been deeply hurt. "I did not think you would be so unkind to a man who was created plain and rough; to throw his ugliness back in his face, and laugh at it. I did not think it of you, Cuby."

She burst into tears. "Oh, Jeem, it is not me w'at laugh at you. It is you mek a laugh on me."

She bent over her tub again, and her tears mingled with the suds, falling over cheeks dewy as a baby's, and from long, dark lashes that hid sedulously the storm of shame and sorrow in her eyes. Now was she indeed "Grief"; and still the actress was mounting in her, her lip began to curl, and the clothes in the tub to dance a jig suggestive of rising passion.

"Well, who do you hate, Cuby?" I made haste to say, by way of deflecting her emotion into some safe and congenial outlet.

"Jeem, I cross-a my heart"—she performed that action solemnly, her bright, wet eyes meeting mine steadily—"I am getting hate of them two."

"Ah, your father and Bate?" "Hush!—yes. I am getting hate to be 'round here. They dreenk—awful. They fetch home a lot of the dreenk, that tam' they mek' to go feeshin'. Jeem, tell-a me, where was it they go—an' they fight on Rob? An' heem one poor lunk-a-head."

"Rob Hilton is brave enough to distinguish himself in any war men ever fought, Cuby. Rob is more of a soldier than you think."

"Keep you heem, then. I want heem not. I want nevaire to go up on that hill an' have that Ma'y Sting'ree runnin' in and makin' a preach at me. Me—I rather to die."

"Then, maybe you love Bate?"

"Mebbe you are a fool," she retorted, the stout pillow case she had been wringing clearing my head by the fraction of an inch on its impetuous way to the line. "Bet' Sting'ree!—be tam to heem!—w'at have the audass' to knock me 'gin the side o' my house, till I draw the gun on heem, an' he run. Would I shoot, look you! By tam, I would shoot heem!"

The tears were decidedly exhaling in the bright flame of Cuby's eyes.

"Well, now, look here," I said,

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If you want to invest your money in something that is safe, the value of which is practically a fixed quantity, and that will yield you a good rate of interest—we advise you to put your money in mortgages.

Banks pay but little interest on deposits—they are safe of course, but surely not any safer than a GOOD mortgage that pays you so much more.

We would like to hear from either large or small investors who like to know what their money would earn for them invested in a good mortgage.

Our firm has been doing business as Investment agents for nearly forty years.

Our accumulated knowledge and experience is at your disposal.

We are always pleased to answer correspondence.

John Stark & Co.

STOCK BROKERS AND INVESTMENT AGENTS

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unable to keep back a smile, her oaths were so incongruous with her baby-sweet lips; "look here, Cuby, you and me are old friends—and you know who's to be trusted. Old Jim Turbine will keep your secret. You are afraid to stay here—"

"I did not say I was afre'd."
"True, but you hate the atmosphere round your home here. You hate them, and you'd be glad to get away and get quit of it all. And so many of the boys round here have been trying to pay court to you. Sure, you love someone. Who is it, Cuby?"

"Whan I tell heem," she replied, with bitter emphasis, "his old greeze-top 'll be layin' more years than as one in the tomb o' the daid folks," and the mate to the pillow case took me a clean swat across the eyes, and there stayed, wet and heavy.

I laughed as I disentangled myself. Cuby laughed, giving me a sidelong glance from her viciously-renewed exercises over the washtub.

"I thought you could throw," I reproached her; "but you are like all girls, silly and weak." I sighed and took the doughty pillow case over to the line, where I hung it up neatly with clothespins; in the same manner I suspended all the articles that has been hurled thitherward with such force by Cuby, not omitting the kitchen towel, which took me ferociously in the neck while I was in the very midst of these travails.

"Do you know what 'spunk' means?" I said, coming back to Cuby.

"It means," she answered promptly, "that I am brev'."

"It does so. All of that. You can go right up to the head."

"Ah no, Jeem, I go furdur 'n as that. My mother, she went an' drown herself long tam' ago bifore I rimmer, but they tell-a me. She was brev'. When she lak' it not to leave any longer, she go sweem out—very far—where there is no trouble to her any more. Ah, she was brev', an' me—I care not. I am brev' also; an' I loaf-a the water. It mak' me happy to sweem out vary, vary far, an' nevaire come back where it is all trouble to me, an' some—that I did once lak'—come an' mek' a laugh at me."

"You love the water? So do I. You ought to marry one of the sailor lads, Cuby."

"I shall nevaire marry," replied Cuby. "I use to thenk eef I did to marry it mus' be a man w'at has a boat an' goes a-feeshin'. I could not loaf any other—me. But I shall nevaire marry."

"There's Bingham Teazler, for one, says he asked ye twice over last time his boat was in," said I, rather harshly; for I resented the look of composed martyrdom that had suddenly spread itself over Cuby's capricious and beautiful features.

"Is it your beezness, Jeem," inquired Cuby sweetly, "to go aroun' tellin' folks who they shall marry? I thought you had a boat and went a-feeshin'. I did not know you had change' your beezness. Me—I should thenk you would be a-shem' of yourself to go aroun' on such beezness, lak' a ol' hen, fooss, fooss, fooss—"

"My business is sailing and fishing still. Only once in a while there's a little devil of a wildcat ashore that is more than old hens can manage; she needs a big man to train her. She's a vixen and a torment, and a whole handful. I've got more folks to look after and more things on my hands now than I know what to do with. But here's another—a 'married' woman, too—that ought to be behaving herself respectably.

Cuby laughed.
"Married! I would tell anybody go mind their beezness eef I was married to them only so leetle as I am married to Rob Heelton. Get away, you, from my father's house. You are stupeed. You hev' no bre'ns. It is a peety, for somtam' I thenk I lak' you—it is a peety God have giv' you no bre'ns."

"Well, you have got to promise me one thing before I leave here; you won't go drowning yourself or swim-

The Value and Economy of Bovril

BOVRIL is a very concentrated preparation, and contains all the stimulating and flavoring qualities of beef plus the Fibrin and Albumen.

These elements give to BOVRIL its high nutritive value, and differentiate it from meat extracts.

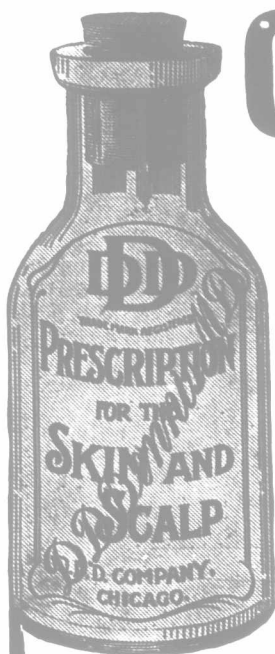
BOVRIL is so rich in food value, and its nourishment is so easily absorbed that, when used in cooking vegetables, preparing stews, ragouts, soups, etc., it renders the use of a large quantity of meat unnecessary, at the same time building up a reserve of health and strength in the system.

A 1-lb. bottle of BOVRIL will make 50 portions of good nourishing soup at a cost of 3½ cts. a portion.

For giving strength and vitality to the system and warding off colds, grip and other ailments BOVRIL is without an equal.

Order from your dealer. The 1-lb. bottle is the most economical. 103

HAVE YOU SECURED ONE OF "THE FARMER'S ADVOCATE" PREMIUMS



CURE THAT AWFUL AWFUL ITCH!

Why go on suffering nameless tortures, day and night, week after week, month after month, from itching, burning skin diseases?

A cure has been found—a cure that works quickly and certainly—that gives INSTANT RELIEF the moment it is applied, and soon drives away the disease entirely.

Just apply a few drops of D. D. D. Prescription—a simple, clean liquid, made of Oil of Wintergreen and other vegetable extracts. The first application cools and soothes the tortured skin, and instantly relieves the almost unbearable itching.

After a very few applications you will notice the eruption disappearing as well as the itch, and soon the skin is white and clean again—the cure is complete.

Trial Treatment Free!

Don't wait another day! Get relief at once. Let us send you a large size bottle of D. D. D. to prove how quickly it will drive away the torturing itch and cure any form of skin disease. We want to send you this 25c. trial bottle, because we know it will do you good, and you will be anxious to buy more to complete the cure. We are so sure of this that we are willing to supply the medicine free and pay part of the cost of packing and mailing. All we ask is that you send 10c. to pay part of the shipping expense and show that you are really interested. Isn't it worth 10c. to find the instant relief that D. D. D. gives—and the permanent cure?

Just Sign the Coupon

and send it to us to-day, enclosing only 10c. We will send you the trial bottle illustrated here by return mail—prepaid. Also a valuable pamphlet which gives directions for treatment—bathing, diet, exercise, etc. for eczema, pimples, blotches and every known kind of skin disease. Sending for this free trial bottle puts you under no obligation; whatever to buy anything.

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Without any obligations on me please send by return mail, postpaid, your free bottle of D. D. D. Prescription, also free pamphlet on skin disease. I enclose only 10c. for postage and will say I have never tried D. D. D. Prescription.

Name.....
Address.....
Name of Druggist.....

ming out too far, you little she devil? I know you will keep it if you promise. Now look me straight in the eyes—will you promise?"

"Get away from my father's house, and go you mind your beezness. For I will not promise you not'ing—no, I will not."

"Promise," I said, striding toward her, and I took both her hands, holding her at arm's length. The little hands were helpless in mine.

Her fearless, wild eyes smiled at me.

I never knew just how it was done, but in that instant I held her at arm's length no longer. I held her in my arms, and I kissed her with a fierce will on her sweet, rebellious lips.

"Promise me, Cuby."
"Jeem, I promise-a you," she said.

(To be continued.)

SOLITUDE.

I praise the Frenchman, his remark was shrewd.

How sweet, how passing sweet, is solitude!

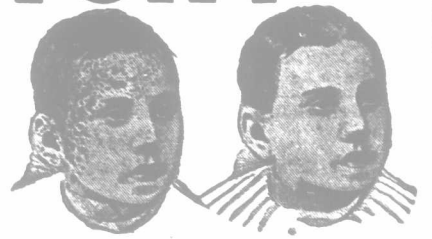
But grant me still a friend in my retreat,

Whom I may whisper, solitude is sweet.

—Cowper.

Hyker—Bronson tells me he is taking mud baths now.

Pyker—Why, I thought he was out of politics.



Stella Hartman Aged 5 years, 8 months
Stella Hartman Aged 5 years, 10 months
(From photographs by C. A. Steiner, photographer at Galveston.)

These pictures show the results of two months' treatment with D. D. D. Prescription. My daughter had suffered for years with terrible skin trouble, all kinds of doctors and remedies having failed. My heartfelt thanks for D. D. D. M. A. HARTMAN, Galveston, O.

Some of Your Own Neighbors perhaps have testified to D. D. D. We have hundreds of letters telling how this remedy has brought instant relief and soothed and healed the burning skin. Here are some of them:

Mrs. D. McGillivray writes from Nanton, Alberta, September 3rd,—

"Your letter to hand of recent date. I must thank you for so kindly inquiring about my order and also the child. I am glad to say I received the three one dollar bottles of D. D. D. and two cakes of Soap safely and am delighted with the result of both prescription and Soap. The Soap is all that is required to complete the treatment. The little boy of 2 years and a half is to all appearances cured of the dreadful Eczema.

My baby girl at two months broke out with the same rash and I treated her with D. D. D. and am perfectly satisfied she is cured to our great joy. I feel sure it is a splendid remedy for all skin diseases and can highly recommend it. I will be glad to recommend it to any one suffering with skin trouble."

Mrs. John Sanders writes from Griswold, Manitoba, September 12th.—

"When I sent for six bottles of D. D. D. I had one of the worst cases of Eczema on my face. I only use 1c. bottles when they were clear of Eczema. The four bottles I have left will be of use for hives and insect bites. It is a grand remedy to have in the house at all times. Wishing you all success with D. D. D."

Mrs. R. E. Johnson, of Hespeler, Ont., writes every body to hear of it.

Your preparation has cured me of my general skin trouble. I tried two doctors and trying to do it myself. It was from what states I was in. It was so worse, and as the doctors only should hear of it so they would not hear of it.



Your Little Girl Can Do The Washing WITH THE "New Century" Washing Machine

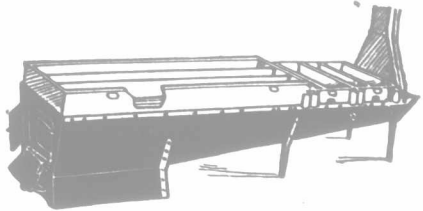
It's far easier than churning or running a sewing machine. No rubbing—no work. Just turn the handle for 5 minutes and the clothes are washed—snowy white. Has a strong wringer stand that allows the water to drain right into the tub.

Price delivered at any railway station in Ontario or Quebec—\$9.50.

Our booklet tells how to turn wash day into child's play. Write for free copy. 33

Bowdell Mfg. Co. Limited, Hamilton, Ont.

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CHAMPION EVAPORATOR.

Catalogues on application.
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Sportsmen, Fishermen, Hunters, Naturalists and others seeking to better themselves by learning a great profession. The wonderful art of Taxidermy, so long kept secret, can now easily be learned right in your home during your spare hours. No need to give up your business.

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Great Book FREE! Our beautiful, illustrated book, "How to Learn to Mount Birds and Animals," and our handsome Taxidermy Magazine absolutely free to all who write. Stop depending on a job. Have a profession. Write today, N.W. School of Taxidermy, Omaha, Neb.

DR. T. S. SPROULE'S SHORTHORN SALE.

An event of far-reaching importance to the farmers and breeders of Shorthorn cattle in Ontario, is the dispersal by auction, on Wednesday, November 25th, at Markdale, of the entire herd of 45 head of Scotch and Scotch-topped Shorthorn cattle, the property of Dr. T. S. Sproule, M. P., rendered necessary by the continually increasing Parliamentary and other duties of the Doctor, which leaves him practically no time to look after the interests of his large herd of Shorthorns. The herd is essentially a dual-purpose one, among which are a few of the low-down, thick sort, belonging to the Flora tribe, the others tracing to Beauty (imp.), Lady Jane (imp.), and Margaret (imp.), the whole making an exceptionally choice and interesting offering. A large number of them are one-, two- and three-year-old heifers, and some very choice young things will be found in the lot. On the sire's side the herd represents the get of Forrester 30643, Cedarville Chief 26838, Lord Gloster 26995, Magnet 37614, Markdale Chief 47369, and Squire Boy 53305. In young bulls there will be sold Royal Aberdeen, a roan two-year-old, by Imp. Choice Koral, dam Miss Aberdeen, a 'Lady Jane.' Royal Ensign, a red yearling, by Royal Standard 2nd 60822, dam by Lord Gloster. Flora's Chief, a red yearling, by same sire, dam by Village Squire. Royal Chief, a roan two-year-old, by same sire, dam by Village Squire. Then there is a red eleven-months-old, by Trout Creek Choice 57962, dam Annie Stamford, a Toronto winner. Another is a red eight-months-old, by same sire, dam by Imp. Scottish Hero. Still another is a red, same age, by same sire, dam by Imp. Captain Mayfly. A high-class herd-header can be had in this lot.

The World's Biggest Farm.

The "Largest Farm" it can be called is that owned by Don Luis Terrazas, in the State of Chihuahua, Mexico, which measures from north to south 150 miles, and from east to west 200 miles, or 3,000,000 acres in all. On its prairie and mountains roam 1,000,000 head of cattle, 700,000 sheep and 100,000 horses, says the New York Post. The "farmhouse" is probably the most magnificent in the world, for it cost almost \$320,000 to build, and is more richly furnished than many a royal palace. On the homestead alone are employed 100 male servants. The gardens are superbly laid out, the stables more magnificent than those of the German Emperor, and there is accommodation for 500 guests if necessary.

Scattered over the vast ranch are 100 outlying stations, each one of which has charge of a certain portion of the estate. The horsemen, cow-punchers, line-riders, shepherds and hunters number 2,000, and the Terrazas ranch is the only one in the world which maintains its own slaughtering and packing plant. Each year 150,000 head of cattle are slaughtered, dressed and packed, and 100,000 sheep. Don Luis personally superintends the different industries on his ranch, covering many thousands of miles on horse-back during a twelve-month. Don Luis was at one time Governor of Chihuahua, but public life did not suit him; it was too quiet, and he preferred to spend his life riding over the plains and looking after his own enterprises. He is three times as rich as any other man in Mexico.

Don Luis founded his cattle ranch about fourteen years ago, and four years later he sought to import the finest cattle from Scotland and England. But there was a considerable difficulty in the way. The import duty on foreign cattle was so heavy that it was impossible to bring over animals in quantities sufficient for his purpose, so Don Luis appealed to the Mexican Government, pointing out the absurdity of restricting importation of good stock into the country, and succeeded in getting the import tax repealed.

Five years ago Terrazas installed on his ranch four big reservoirs, costing \$500,000, besides which there are 300 wells scattered over the huge farm, some of them going down to a depth of 500 feet. These wells, the water from which is raised by means of windmills, cost another \$500,000. Every kind of grain is grown, and Don Luis is constantly experimenting in the raising of different "foods" for supplying the wants of his immense herds during the rainless season.

GOSSIP.

If You Are Lost in the Woods.

Let the man who is lost in the woods be very careful not to over-exert himself. His chief dangers lie in panic and over-exertion, and, though he may be in a great hurry to find shelter, I must warn him to go slowly. Two miles an hour, on an average, through the snow in the woods, is all that a man in his condition will be able to stand without over-fatigue and its attendant dangers, overheating and perspiration. By exercising caution, a man may live through a week of what he is undergoing. To make this article brief, however, we shall suppose that he regains the road by the afternoon of the first day. He doesn't yet know, of course, just where he is. He should examine the tracks of the person who last passed that way. It being afternoon he must follow in the direction taken by the last passing vehicle or team, as shelter will be nearest in that direction. Had it been morning he would have taken the opposite direction, as whoever made the tracks must have come from the place where he obtained shelter the previous night.—From "Lost in the Woods," by A. B. Carleton, in the Outing Magazine for November.

Elsa—The paper says that the bride was unattended.

Stella—That notice was written up in advance of the wedding; but it was a good guess: the bridegroom failed to show up.—Huck.

A Glimpse at Ancient Agriculture.
How the Way Was Paved for the Seedsman.

Though the farming industry is as old almost as the human race itself, the craft of the commercial seed merchant did not come into existence till about a couple of hundred years ago. In a lecture of much historic interest Professor Wilson, B.Sc., dealt with this subject of "The Advent of the Seedsman" before a meeting of the Dublin Seed and Nursery Employees' Association, in the Royal College of Science, Dublin, a few weeks ago. His discourse on this theme, says the Irish Farmers' Gazette, was mainly concerned in outlining the development of agriculture from the earliest times of crudeness and simplicity, through the gradual changing periods in which it reflected the social and political life of the altering eras, until it attained towards the eighteenth century a modern complexity and, so to speak, a "many-sidedness" which not merely warranted but absolutely demanded the rise of specialists in various departments of agricultural activity. Thus briefly, in the abstract, was the origin of the seed trade. In unfolding the story of this agricultural progression the lecturer, assisted by some lantern slides, greatly interested his hearers.

The farming to which the lecturer first introduced his hearers was that practiced over the greater portion of Northern Europe, including Great Britain, about 1,500 years ago and earlier. Apparently this was an age of small holdings, for we were told that the land surrounding the villages in which the natives usually congregated and lived, was divided on the Communist system, and each man had his three acres for himself. It was fairly distributed, too, as to avoid any individual securing a monopoly of a rich patch of ground each person's three acres were made up of three single-acre plots in different portions of the divided area. Their crops were not very numerous, viz., wheat, oats or barley, beans and peas, and the general practice was to let the land lie fallow once every three years in order that it might be cleaned, the "rotation" followed being grain first year, beans and peas second year and fallow third year. Flax-growing engaged the attention of the women folk to a limited extent, and down by the river sides willows were cultivated for basket-making purposes. As can be realized in those earlier times forests abounded on all hands, and in these the live stock, such as sheep and pigs, were turned loose to graze. They were, however, driven in upon the stubbles when the crops were removed, and the autumn, therefore, was the best time of the year for the animals in question. The plowing and other farm work was, of course, accomplished by means of oxen, and, as these had to put in their daily task, their feeding was more generously attended to, and they received the benefit of a pasture field. In those old days they evidently did not believe in putting a premium on laziness, and in order to make every man hurry up with his harvest, it was a recognized custom that when there was not more than one field of produce unsecured, the hungry animals from the forest would be turned in on the stubbles; in other words, the man who was so dilatory and careless that his crops were still out when all his neighbors had gathered theirs in, ran the risk of having a hoard of ravenous pigs or sheep admitted to his patch in common with the rest of the land. So long, however, as two or more men's crops were out the animals were excluded, and this fact was, it is fancied, availed of by the primitive subtlety of those days, as a kindly-disposed neighbor could generally be induced to purposely delay the drawing in of his harvest and thus save the situation for one whose work was backward.

This seems to have been the condition of farming for some centuries, until, owing to the inherent tendency in man to squabble with his fellows, it began to be a fashionable pastime for one village to pick a quarrel with a neighboring village, and to settle their disputes, not by arbitration, but in the more orthodox, if less humane, "mortal-combat" style. The millennial order of things was reversed and plowshares were beaten

(Continued on next page.)



PERFECTION Seed & Grain Separator
(Patented 1900)

The best and latest mill for cleaning and grading all kinds of Seed and Grain.

See nearest Agent or write for Catalogue to
THE TEMPLIN MFG. CO., FERRIS, ONTARIO

LEARN TO MAKE MIRRORS!

No capital. Big profits. Easy home work for anyone. Send 2c. stamp for particulars. Address:
S. C. ROBINSON, 1538 386 Queen West, Toronto, Ontario.

FREE!
Valuable Premiums Given Away Free!

Herewith will be found the picture of a Castle on a hill and some old iron. At first glance, no one would notice anything else, but by close observation and perseverance two full figures and five faces can be found. The figures are those of a King and a Queen and the five faces those of the Princess and Princesses.

Can you find them? It is not easy, but by patient and perseverance, you can probably find them all.

If you find them all, you are entitled to your choice of any one of the premiums mentioned below, provided you comply with a simple condition about which we will write you as soon as we have received your solution to the puzzle.



It is not necessary to write up a letter. Simply mark X with a pencil on each one of the full figures and five faces, then write your name and address on the blank below very plainly, cut out the advertisement and return it to us. We will write you at once telling you about the condition that must be complied with.

The condition mentioned above does not involve the spending of one cent of your money. This is an excellent opportunity to obtain a handsome and useful present. Do not delay, write to-day. It is possible you may secure this advertisement again. Only one present is given in each locality. So if you wish to have one, be the first to apply and state which present you would like to receive.

LIST OF PREMIUMS.

- Ladies' or Gents' Gold Plated Watches
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Name _____

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Do not fail to write your name and address very plainly.
DO NOT SEND ANY MONEY.

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PLEASE MENTION THIS PAPER.

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WINTER FAIR

GUELPH, ONT.,

PRACTICAL
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Entries close, for live stock and seeds, Nov. 21st; for poultry, Nov. 23rd.
The lectures will be of particular interest and value to all farmers.

SINGLE-FARE RATES ON RAILWAYS.

For prize lists, entry forms or programmes apply to the Secretary.

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Parliament Buildings, Toronto.

Salary—\$75 to \$150 a month.

Wanted—Brakemen and Firemen

We teach and qualify you by mail. Course simple, practical and thorough. After eight or ten weeks' study we guarantee to assist in getting you a position on any railway in Canada. The first step is writing for our booklet.

THE DOMINION RAILWAY SCHOOL,
Dept. C. Winnipeg, Man.

Clydesdales and French Coachers, Imp.

Scottish and Canadian winners, stallions, mares and fillies. The Clydes represent the blood of such noted sires as Baron's Pride, Up-to-Time, Royal Favorite, Ethiopia and Acme. They combine size, quality and action. The French Coachers are a big, flashy, high-stepping lot, and are winners in both France and Canada. Our prices are right, and our horses as good as the best. Long-distance telephone.

ROBT. NESS & SON, HAWICK, QUEBEC.

Clyde Park Imp. Clydesdales I have on hand for sale several imported Clydesdale stallions and fillies, also 3 foals. Parties wanting something extra well bred and of the big-quality kind should write me. They will be sold at a right price, and on terms to suit.

ALEX. F. McNIVEN, ST. THOMAS, ONTARIO.

IMPORTED SHIRES

At their St. Thomas stables, the John Chambers & Sons Co., of England, have for sale stallions and fillies from their noted Shire stud, high-class representatives of the breed. Correspondence so invited.

Address: **DR. C. K. GEARY, St. Thomas, Ont.**

QUESTIONS AND ANSWERS. Miscellaneous.

PROPORTIONS OF SAND AND CEMENT.

Will you please give me the right proportions of sand and cement for making blocks for chimney-building, to be 12 by 16 and 8 inches thick? W. N.

Ans.—One part of first-class Portland cement to five of clean, coarse sand, should make a strong block.

WORMS FOR IDENTIFICATION.

I am sending you, under separate cover, a bottle with some worms, which I got in my water trough in cleaning it out. It is a drilled well. In looking at them through a glass, I found them a curious-looking worm. As several of my cows have a cough, I thought they might have got lodged in their throats and cause them to cough. I enclose a stamp for reply. State if dangerous, and what remedy to get rid of them?

SUBSCRIBER.

Ans.—The worms sent are a blood-red color, and are the larvae of a large species of midge (Family Chironomidae or the Two-winged flies). These creatures live in mud and decomposing vegetable matter at the bottom of stagnant pools, and are often found in watering-troughs and rain-barrels. The remedy for them is to clean out these receptacles from time to time, as a deposit is often made through the decomposition of leaves and other material that may be blown into them. It is not likely that they have caused the cough in the cows that the correspondent refers to, though some may have been swallowed when these animals were drinking.

C. J. S. BETHUNE.

Guelph.

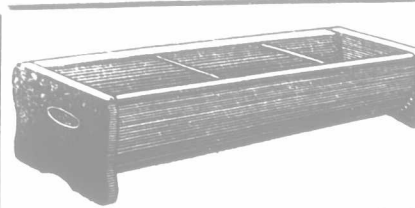
"SAVE THE HORSE" SPAVIN CURE.



American Car and Foundry Company,
13 Broadway, New York.

Troy Chemical Co., Binghamton, N. Y.
Gentlemen—Enclose \$5.00 for bottle "Save the Horse." Send to my firm. Address FRANK BROWN, Greenville, Orange Co., N. Y. I have had a number of bottles and have never known it to fail. The last one cured a rhinoceros. There is no question but what your remedy works wonders. Men have made the statement to me that it is expensive, and I have demonstrated to them several times over that it is the cheapest thing they can get. CLARENCE PRICE.

\$5.00 a bottle, with legal written guarantee or contract. Send for copy, booklet and letters from business men and trainers on every kind of case. Permanently cures Spavins, Thoroughpins, Rhinoceros (except low), Curb, Splint, Capped Hock, Windpuff, Shoe Bol, Injured Tendons and all Lameness. No scar or loss of hair. Horses work as usual. *See us at Exeter, Pa.*
Troy Chemical Co., Binghamton, N. Y., and
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WE MANUFACTURE Hog, Water and Stable
Steel Troughs Troughs, Steel Stanchions, Steel Water Bowls, Single and Double Feed Cookers, Coal Chutes, Steel Cheese Vats, Steel Whey Tanks, Maple Evaporators, all kinds of Steel Tanks—round, square or oblong, Bath-room Tanks, and Barn Steel Cisterns a specialty. Write us, do it now.

The Steel Trough & Machine Co., Ltd.
Tweed, Ontario.

Shetland, Welsh and Iceland Ponies

I have on hand a number of single ponies and matched pairs; all ages; thoroughly broken to harness and reliable in every way.

E. DYMENT, Copetown P.O. and Sta.

into swords, pruning hooks into spears. The fighting man was then evolved as a matter of course, and with his elevation in the village, the population was separated into men of war and men of peace, the former protecting the village and making conquests occasionally, and the latter looking after their farming work on their behalf. Leaders who distinguished themselves received due privileges, and with their growing powers they quickly rose to authority in the land, first by the consent of the people, and afterwards, frequently by the right of might. Then came the taking up by these lords and their thanes of new and bigger stretches of country, into the cultivation of which they forced the service of their villagers or captives taken in war. This continued on during the fifth and sixth centuries until the Feudal times were ushered in. These may have been "the good old times," but we fancy that with all our troubles and distresses we are more comfortable in this year of grace 1908! Nor were the farmers too well repaid for their labors then. Nowadays 40 bushels (about 1 ton) of wheat to the acre is considered a useful yield; indeed in the Co. Carlow this season, it is said, in one case 2 tons of grain were obtained per acre, but in the bygone days about 12 bushels was considered a good return, and that after the expenditure of great labor. The live stock, too, were very poorly fed, and a cow that would give a couple of hundred gallons per acre would likely rank as quite a good thing. In this also we have advanced—a bit.

Things do not appear to have changed much until the 14th or 15th centuries, when more enlightened times began to dawn. An interesting and-to modern minds which lack a reverential respect for things ancient—a rather grotesque series of pictures were shown by the lecturer, representing various farm operations as practiced during the 11th century. These included crude-looking plows, harrows, carts, threshing instruments, etc., while a series of "monthly operations" indicated how the ancients did their work. In January they were plowing; in February, pruning trees; in March, breaking up the soil, digging, sowing and harrowing; in April, leasting; in May, watching sheep (which looked remarkably like our present "horns"); in June, preparing wood for winter; in July, hay-making; and in August, harvesting.

The greatest revolution that agriculture had ever known up to this time was caused when the immortal Jethro Tull came on the scene towards the end of the seventeenth century. He lived between 1680 and 1730, and, as all students of agricultural development in Great Britain know, he was the first to introduce in a practical way the thorough cultivation of the land, though, strange to say, he was not a farmer himself, but a barrister. He experimented with growing grain in rows 18 inches apart, and demonstrated the greatly increased yields that could be obtained. Prior to his time a great advance had been taking place in Holland, where the Dutchmen had discovered turnips (yellow-fleshed variety), red clover, sainfoin and lucerne, which gave a decided flip to farming and helped to solve the difficulty of feeding stock in winter. The turnip had been brought to Britain in 1642, but it was not until Tull and a co-worker named Townsend had shown what could be done by deep and thorough cultivation of the soil that the crop was largely grown. Of course its advent introduced for the first time a four-course rotation such as we know to-day, viz., roots (turnips), grain, clover and grain. The Swede was introduced in 1784 and the mangel about the same time. Things got a further big advance when Smith announced his improved system of land drainage, and rapidly following came the construction of the first threshing machine, adapted from an old flax mill, in 1767, while Smith again did great service by inventing a useful reaping machine in the year 1811.

It was when these various discoveries and inventions had exerted their influence that the seedsman found the time ripe for his advent. Doubtless it was in Holland that the first member of the trade arose, probably as early as 1750, and in Britain the reference from writings of the period is that the seed merchant first appeared in Norwich, which at that time was second only to London in seed. (Continued on next page.)

SCALDED BY BOILING FAT COULDN'T USE HAND FOR A MONTH.

Zam-Buk Gave Instant Relief

An accident in a Toronto home might have had very serious consequences had it not been for Zam-Buk. Miss Martha Green, of 9 Claremont St., in taking a pan of boiling fat from the oven spilt it over her right hand. "The boiling fat ran into the palm of my hand," she says, "and over all my fingers. I was almost wild with the pain. The hand became swollen, and large blisters formed all over the palm and along the fingers. For over a month I was unable to use the hand at all. I tried several kinds of salves and liniments, but the wound seemed apparently no better. It was altogether too severe for these preparations to heal.

"About this time I was advised to try Zam-Buk. I stopped using all other preparations and applied it instead. The very first application soothed my hand and seemed to draw out the fire and inflammation; and as I kept on using Zam-Buk the blisters gradually dried up and disappeared. In a very short time the scald was healed completely."

This is but one instance of the uses to which Zam-Buk can be so advantageously applied. It is equally effective for burns, cuts, bruises, abrasions, sprains and stiffness. It also cures eczema, ulcers, sores, blood poisoning, ringworm, scalp sores, chronic wounds, blackheads, pimples, cold sores, chapped hands, and all skin diseases and injuries. Rubbed well on to the chest, in cases of cold, it relieves the aching and tightness, and applied as an embrocation it cures rheumatism, sciatica, neuralgia, etc. All druggists and stores sell at 50c. a box, or post free from Zam-Buk Co., Toronto, for receipt of price. Three boxes for \$1.25.

Fistula and Poll Evil

Any person, however inexperienced, can readily cure either disease with
**Fleming's
Fistula and Poll Evil Cure**
—even had old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in
Fleming's Vast-Practical
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Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, indexed and illustrated.
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Dr. Page's English Spavin Cure

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle and to remove all unnatural enlargements.

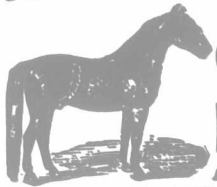
This preparation (unlike others) acts by absorbing rather than blister. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin or money refunded, and will not kill the hair. Manufactured by **Dr. Fredrick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C.** Mailed to any address upon receipt of price, \$1.00. Canadian agents:

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SELLS LIKE SIXTY
\$65
GILSON
GASOLINE
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For Pumping, Cream
Separators, Churns, Wash
Machines, etc. **FREE TRIAL**
Ask for catalog—all sizes

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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 CAUTERY OR FIRING. Impossible to produce scar or blemish. 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 use. Send for descriptive circulars.
The Lawrence-Williams Co., Toronto, Ont.



Radiol



RADIOL TREATMENT
Prolongs the life of a horse's legs. Completely removes by radiation all soft swellings that disfigure and lame a horse, as Sprained Tendons, Windgalls, Bag Spavins, Capped Elbow, Big Leg, Enlarged Glands, etc.
No Blister; No Laying Up; No Hair Removed.
RADIOL TREATMENT fines down a worn horse's legs, and is a certain cure for puffy joints and Sprains, Prevents Filled Legs.
An intelligent use of the "RADIOL Leg Wash" counteracts that daily wear and tear of the legs unavoidable with the horse in constant work, whether training, racing or on the road.
One flask of "Radiol" will make a gallon of valuable leg wash.

Carrierville, Uddington Eng. July 26, 1906.
Sirs—Kindly forward on receipt of P. O. enclosed another bottle of "RADIOL." I have been using it with great success on a Hackney mare with a very bad windgall. I thank the maker for giving you truly. Yours truly, Thos. Preston.

WRITE FOR ILLUSTRATED BOOKS ET AND USES OF "RADIOL." Ask your chemist for "RADIOL." Price \$2 a large flask, or post free from Canadian Agent:
Thos. Reid, 9 St. Nicholas St., Montreal.
Manufactured by The Radiol Co., 215 Westminster Bridge Road, London, England.
U. S. Agents: Messrs. Will I. Smith & Co., 2025 Michigan Avenue, Chicago.

Seldom See
a big knee like this, but your horse may have a hump or bruise on his Ankle, Hock, Stifle, Knee or Throat.
ABSORBINE
will clean them off without laying the horse up. No blister, no hair gone. \$2.00 per bottle, delivered. Book 8 D free.
ALSO: GAITHER, J. H., for mankin, \$1. Gaiter, Wound, Bruises, Varicose Veins, Varicose Utes, Old Sores, Allays Pain. Book free.
W. F. YOUNG, P.O.F., 73 Monmouth St., Springfield, Mass.
LYMAN, SONS & CO., Montreal, Canadian Agents.

3 HACKNEY MARES FOR SALE
O. Sorby, Guelph, Ont.

CLYDESDALES
One 1,750-lb. 2-year-old mare in foal. One 5-year-old mare and one 3-year-old mare.
SHORTHORNS
Two right good yearling bulls left yet, and a lot of heifers cheap. Write, or come and see them.
JAMES McARTHUR, Gobles, Ontario.

Clydesdales, Shorthorns, At Kinellar Lodge we have for sale two 3-year-old Clydesdale fillies, Welsh reg., a big, good pair. Several choice Shorthorn heifers. Nine shearing Cotswold ewes and nine shearing rams. This year's lambs, both sexes. And young Berkshire sows. John I. Balsdon, Markham, Ont., P. O. and station.

Dr. Bell's Veterinary Medical Wonder cures inflammation of lungs, bowels and kidneys. The 20th-century wonder. Agents wanted in every county. Write for terms.
DR. BELL, V. S. Kingston, Ont.

For Sale! Percheron and French Draft Stallions, mares and colts.
Duroc-Jersey Swine, both sexes.
JACOB STEINMAN, NEW HAMBURG, ONT.
Only a stone's throw from G. T. R. depot.

Shannonbank Clydesdales, Ayrshires, Yorkshires.—One stallion rising three years, by Imp. Hopewell. Two young bulls ten months, and some heifers from six months to two years. Yorkshires of both sexes. W. H. TRAN, Cedar Grove, Ont., Locust Hill Sta., C. P. R.

The Trade Council, spread north into Scotland and the Lethbrans soon became noted in connection with the seed business, such men as Lawson and Drummond being pioneers in the industry. They and other leaders sent abroad, near and far, for high-class plants and seeds, which were carefully selected, grown and sold. An impetus was given to the work by the efforts from time to time at hybridization and plant improvement made by Thomas Andrew Knight, Sheriff, Hallett, Goldthorpe, Chevalier and others. Drummond, who started about 1830, attached to his premises a regular museum for exhibits of agricultural improvement, and his premises were a favorite rendezvous of farmers. Perhaps the earliest recorded seed-house in Dublin was Mackey's, which was established in 1770.

GOSSIP.
The annual meeting of the American Cotswold Registry Association will be held December 5th, 7.30 p. m., Live-stock Records Building, Union Stock-yards, Chicago. Cotswold Association sale of registered Cotswolds same day.

The annual meeting of the American Shropshire Registry Association will be held Tuesday, December 1st, 1908, at 10.30 a. m., in the Live-stock Records Building at the Union Stock-yards, Chicago, Illinois, during the week of the great International Stock Show. Richard Gibson, President; Mortimer Levering, Secretary.

The twentieth annual meeting of the American Leicester Breeders' Association will be held in the City Hall, Guelph, Ont., on Tuesday evening, December 8th, at 7 p. m. It is being planned to have a banquet immediately following the business session, with good speeches and music, of which a more complete announcement will be made later. A. J. Temple, secretary.

The Saskatchewan Provincial Winter Fair is slated for March 23 to 26 next. The premium list for the Fat-stock Show, Horse Show and pure-bred cattle sale have all been amended and will be ready for distribution December 1st. All departments of the show are now open to exhibitors in other Provinces. For prize lists and information write the Secretary, Mr. John Bracken, Regina, Sask.


Milk has a curious history in Japan. Thirty or forty years ago it was abhorred. The average Japanese could not induce himself to drink it. But to-day many a household consumes one or two bottles of milk daily, partly because people have begun to like it as a unique and wholesome beverage. "Milk balls," too, are now quite numerous. Butter will probably take much longer to come widely into vogue, because of its expensiveness.

"As would have been noticed in the report," says the Live-stock Journal, "in consequence of the heat of the weather, the results of this year's milking trials and butter tests at the London Dairy Show were not equal to those of most previous years. This was particularly shown in the butter tests, as the quality of the milk suffered still more than the quantity. The highest yield of butter from one day's milk was 2 lbs. 10½ ozs., given by the Shorthorn cow Daisy. This quantity has often been greatly exceeded, and what is most remarkable is that the same cow gave 4 lbs. 4 oz. last year, the top record at any public trial in this country, we believe. The divergence was not due to any considerable difference in the periods of lactation, as the date of calving was July 28th this year, as compared with August 27th in 1907. The milk yield was greatly reduced, that of the first day, from which the butter tests were made, being 51.8 lb., against 61.1 lb.; but the chief cause of the reduction in the weight of butter was a decline in the richness of the milk from the wonderful average of 6.37 per cent. of fat to one of 4.89 per cent.

THE UNION STOCK-YARDS
Horse Exchange
WEST TORONTO, CANADA.
Auction sales of Horses, Carriages and Harness every Monday and Wednesday.
Private sales every day.
Come and see this new Horse Exchange. It will interest you. Also the quarter-mile track for showing and exercising.
HERBERT SMITH, Manager.
(Late Grand's Repository.)




LaFayette Stock Farm
J. Crouch & Son, Props., LaFayette, Indiana.
Largest importers in America of Percheron, Belgian and German Coach stallions and mares. Our last importation of 127 head arrived August 3rd, 1908, and we have in our barns over 200 head of stallions and mares of the above breed, many of them prizewinners in Europe and America, and can suit any buyer in horse, price and terms.
ALL STOCK GUARANTEED. Write us, or come and see us.
Canadian Agent: R. P. WATERS, P. O. Box 283, London, Ont.
J. Crouch & Son, LaFayette, Ind.




Clydesdale Stallions and Mares!
A fresh lot has just arrived, including many prizewinners. Some extra big ones. Prices right. Inspection invited.
DALGETY BROS., LONDON, ONTARIO.
Stables Fraser House. Address correspondence to Dalgety Bros., Glencoe, Ont.




Shires, Shorthorns and Lincolns
At present we are offering a very choice consignment of imported stallions, mares and fillies received from the great Shire stud of R. Moore & Sons, Beaton Fields, Nottingham, England. They are a grand lot, and will be sold at right prices. In Shorthorns we have a number of choice young bulls, three of them show animals; also an excellent lot of females—all ages.
JOHN GARDHOUSE & SONS, Highfield, Ontario.
Toronto, 14 miles; Weston, 3½ miles.
Long-distance phone.




Imp. Clydesdales and Hackneys
To my many friends and patrons: I am starting for Scotland for a new importation about Nov. 1st, and shall select the best available. In future my stables and address will be Markham Village, 20 miles north of Toronto.
T. H. HASSARD, MARKHAM, ONT.



CLYDESDALES AND SHORTHORNS.—Both imported and Canadian-bred, at Columbus, Ont., the Home of the Winners. Our last importation landed in August. They include the pick of Scotland, from such renowned sires as Baron's Pride, Everlasting, Baron of Buckley, Hiawatha, Marsels, Sir Everest, and Prince Thomas. We have on hand over 30 head to choose from, from the above noted sires, from 1 to 6 years old, and including stallions and mares. Correspondence solicited. Call and see them at our barns, Columbus, Ont., before purchasing elsewhere. Our prices are right. Long-distance phone in houses. Phone office, Myrtle station. Myrtle station, C.P.R.; Brockton station, G.T.R.; Oshawa station, G.T.R.
Smith & Richardson & Sons, Columbus, Ont.




IMPORTED CLYDESDALES, SHORTHORNS AND SHROPSHIRE!
I have on hand several Clydesdale stallions, as choice a lot as ever crossed the ocean. Missie, Stamford, Claret and Gem of Balcloch Shorthorns; up-to-date in type and quality. 50 imported Shropshires, 30 ewe and 30 ram lambs from imported stock. Look me up at Toronto Exhibition horse barns. THOS. L. MERCER, MARKDALE, ONT., P. O. AND STA.



IMPORTED CLYDESDALES
My new importation for 1908 has now arrived—stallions and fillies—personally selected. Richest in breeding; highest in quality; with abundance of size and character. Sold on terms to suit. GEO. G. STEWART, HOWICK, QUE.



IMPORTED CLYDESDALES
My new importation of Clydesdale stallions and fillies, landed a short time ago, are an exceptionally choice lot, full of flashy quality, style and character, and right rovally bred. I will sell them at very close prices, and on terms to suit. C. W. BARBER, Gatineau Point, Quebec. "Close to Ottawa."



Clydesdales imported and Canadian-bred. Our mares all are bred to Acme (imp.), the 8th best breeding horse in Scotland in 1907. Four male foals and one filly, all from high-class (imp.) mares, for sale right.
R. M. HOLTRY, Sta. & P.O. Manchester, Ont., G.T.R.; Myrtle, Ont., C.P.R.



Clydesdales and Hackneys Our entry at Toronto Exhibition of Clydesdales and Hackneys is certainly the best we ever brought out. For an extra choice filly, either imported or Canadian-bred, look up our stable on the grounds. HODGKINSON & TISDALE, BEAVERTON, ONTARIO. G. T. R. and C. N. R. Long-distance Phone.



Imported Clydesdales I have still on hand 1 stallion, black, rising 4 yrs., by Carthusian, a Toronto winner; 1 rising 2 yrs., by Baron's Pride; 1 rising 2 yrs., by Danure Castle; 4 fillies, a Toronto first and second prizewinner among them. Every one of these is an extra good animal, and the price and terms are right.
T. D. ELLIOTT, Bolton, Ont.



IMP. CLYDESDALE STALLIONS AND FILLIES.—Our new importation of stallions and fillies are the best we could select in Scotland, particularly well bred, with the size, smoothness and quality that Canadians admire. Show-ring stuff. Come and see them. Will sell on terms to suit. **JOHN A. BOAG & SON, Queensville P. O. Ont.; Newmarket Sta., G. T. R.** Telegraph and telephone one-half mile from farm. Metropolitan Street Ry. from Toronto crosses the farm.



Oak Park Stock Farm Co., Ltd., have at present for sale a choice selection of young HACKNEYS broken to harness, well worth moderate prices. Also 70 choice SHROPSHIRE RAM and EWE LAMBS, all bred from imported ewes, and sired by the best imported rams. Will be sold at times prices.
JAS. J. BROWN, Manager, BRANTFORD

Afflicted for years with a Diseased Liver

Mr. L. R. Devitt, Berlin, Ont., better known, perhaps, as "Smallpox Ben," has used

MILBURN'S LAXA-LIVER PILLS

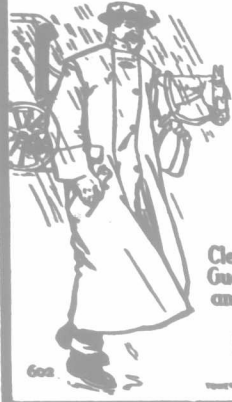
He has also used them for his patients when nursing them, and it is a well-known fact that small-pox sufferers must keep the bowels well regulated.

Read what he says:—"I have been afflicted for years with a diseased liver, and have tried all kinds of medicine, but of no avail until about four years ago I tried your Laxa-Liver Pills, and got instant relief. Since then I have nursed different patients afflicted with small-pox, and in each case I have used your valuable pills.

"My wishes are that all persons suffering with stomach or liver troubles will try Milburn's Laxa-Liver Pills. I will advertise them whenever and wherever I have an opportunity and I hope that if at any time I cannot get the pills, I will be fortunate enough to get the formula."

Milburn's Laxa-Liver Pills are 25 cents per vial or 5 vials for \$1.00, at all dealers or will be mailed direct by The T. Milburn Co., Limited, Toronto, Ont.

THE MAN WHO SWEARS BY THE FISH BRAND SLICKER



is the man who has tried to get the same service out of some other make



Clean - Light - Durable
Guaranteed Waterproof
and Sold Everywhere

ILLUSTRATED CATALOG
FREE FOR THE ASKING

GLENGORE ABERDEEN ANGUS Present offering: One bull 2 years old, and three choice bull calves, and anything in the female line. A choice lot and sold right. **GEO. DAVIS & SONS, ALTON, ONT. Station, C. P. R.**

"Johnny," said a father to his greedy offspring, "you are like a pig. Do you know what a pig is?"
"Yes, sir," answered Johnny, "a pig is a hog's little boy."

A Georgia editor was asked: "Do hogs pay?" He replied: "A good many do not. They take the paper for several years and then have the postmaster to mark it 'refused' or 'address unknown.'"

A certain farmer in Hastings Co., Ont., had been in the habit of growing a few peas each year, but, owing to the bugs, etc., destroying them, had, like a great many other farmers, given up the idea the past few years. However, he decided to again try a few bushels this year. When threshing time came, he called down from the straw mow to the man caring for the bushels to know what the yield had been. On being told five bushels, he replied, "Well, where in the world did that other bushel come from? Why, I only sowed four?"



GOSSIP.

BRIGHTER PROSPECTS FOR SHEEP

A silver lining to the cloud over the sheep trade can now be seen, and it will become brighter from now on. There are good reasons for this belief. The western range receipts will be quite small the balance of the season, and excessive runs of native stock will not be a feature of the trade. Besides all this, consumptive demand is broadening because of colder weather, and the advance in rates for pork and beef. A strong market should be the rule rather than the exception in view of the rather bullish prospects, but it should be remembered that a good thing may be quickly spoiled by congesting supplies or marketing half-fat stock too freely. The latter is most to be feared, as cold and stormy weather is due, and it is under these conditions that such offerings are usually sent to the shambles in greatest numbers.—Chicago Live-stock Report.

SCIENCE BALKED.

The most enigmatical case with which modern biology has to deal is the regeneration of the eye in the tadpoles of salamanders. If the lens be removed from the eye of a young tadpole, the animal proceeds to manufacture a new one to take its place and the eye becomes as perfect as before. That such a process should take place at all is remarkable enough, observes Prof. Edmund Beecher Wilson in his lecture on biology at Columbia University. But from a technical point of view, he adds, this is not the most remarkable feature of the case.

What fills the embryologist with astonishment is the fact that the new lens is not formed in the same way or from the same material as the old one. In the normal development of the tadpole from the egg, as in all other vertebrate animals, the lens is formed from the outer skin or ectoderm of the head. In the replacement of the lens after removal it arises from the cells of the iris which form the edge of the optic cup, and this originates in the embryo, not from the outer skin, but as an outgrowth from the brain.

As far as we can see, neither the animal itself nor any of its ancestors can have had experience of such a process. How then can such a power have been acquired, and how does it inhere in the structure of the organism? If the process of repair be due to some kind of intelligent action, as some naturalists have supposed, why should not the higher animals and man possess a similar capacity?

To these questions biology can at present give no reply.—Current Literature.

EDITORIAL ENTERPRISE.

Booth Tarkington says that in no State have the newspapers more journalistic enterprise than in his native Indiana. While stopping at a little Hoosier hotel in the course of a hunting trip, Mr. Tarkington lost one of his dogs.

"Have you a newspaper in town?" he asked of the landlord.

"Right across the way, there, back of the shoemaker's," the landlord told him. "The Daily News—best little paper of its size in the State."

The editor, the printer, and the printer's devil were all busy doing justice to Mr. Tarkington with an "in-our-midst" paragraph when the novelist arrived.

"I've just lost a dog," Tarkington explained, after he had introduced himself, "and I'd like to have you insert this ad. for me: 'Fifty dollars' reward for the return of a pointer dog answering to the name of Rex. Disappeared from the yard of the Mansion House Monday night.'"

"Why, we were just going to press, sir," the editor said, "but we'll be only too glad to hold the edition for your ad."

Mr. Tarkington returned to the hotel. After a few minutes he decided, however, that it might be well to add "No questions asked" to his advertisement, and returned to the Daily News office.

The place was deserted, save for the skinny little freckle-faced devil, who sat perched on a high stool, gazing wistfully out of the window.

"Where is everybody?" Tarkington asked.

"Gawn to hunt th' daw," replied the boy, without removing his gaze from the distant fields.

SHORTHORNS BY AUCTION

In the Village of Markdale, on

Wednesday, November 25, '08

AT 1 P. M. SHARP.

Dr. T. S. Sproule, M.P., Markdale, Ont.



WILL SELL HIS ENTIRE HERD OF

45 HEAD

of Scotch and Scotch-topped Shorthorns by auction, without reserve. Among which are 7 bulls, pure Scotch and Scotch-topped, from 10 months to 2 years of age. High-class herd headers among them. The females are Floras, Margarets, Lady Janes and others, tracing to Beauty, imp., the whole making an offering of high-class quality, breeding and character. TERMS: 8 months on bankable paper; 5% off for cash. Catalogues.

CAPT. T. E. ROBSON, AUCTIONEER.

We want live AGENTS to sell

REX SUGAR FOOD

To farmers and dairymen and stockmen all over Canada in unrepresented districts. Liberal terms. Young men can make from \$50 to \$100 a month during winter months. **Rex Sugar Food** is not a stock food, but a food for fattening stock. Write us and secure your district before your neighbor gets it.

THE REX SUGAR FOOD COMPANY, WESTON, ONT.

OIL CAKE

J. & J. Livingston Brand

DOMINION LINSEED OIL CO., LIMITED,
BADEN, ONTARIO. 31 Mill St., MONTREAL, QUE.

The finest feed known for stock. Once a user, always a user. Sold either fine or coarse ground. Write:

Aberdeen-

For sale: The right sort, some of them by Klondyke, imp. Drumbo station.

Angus

WALTER HALL,
Washington, Ontario.

Shorthorn Bulls

Ready for service. One will make a show bull. Also young things from Matchless, Crimson Flower, Miss Ramsden, Rosemary, Diamond and Lady Fanny dams, the get of Chancellor's Model. Prices to suit times. Come and see. **Israel Groff, Elmira, Ont.**

Mr. A. I. HICKMAN,

Court Lodge, Egerton, Kent, Eng.

Exporter of pedigreed stock of every description to all parts of the world. During the winter months the export of cattle of the beef and dairy breed will be a specialty. Write for prices, terms, and references.

Scotch Shorthorns

Bell telephone at each farm. Farms only 1/2 and 1 1/2 miles from Burlington Jct., G. T. R.

BULLS: 4 choice yearlings, IMPORTED; 8 yearlings and a number of choice calves of our own breeding. **FEMALES:** A number of cows and heifers forward in calf, including showyard material. Tempting prices. **W. G. PETTIT & SONS, FREEMAN, ONT.**

SCOTCH SHORTHORNS.

For sale: A number of good Scotch heifers, mostly from imp. sire and dam, and bred to imp. bulls. One imp. yearling bull, red, a straight, smooth one. One 9-months bull from imp. sire and dam. One 10-months bull, by imp. sire and from Duchess of Gloster dam. Long-distance phone. Farm 1/4 mile from Burlington Jct. station.

J. F. Mitchell, Burlington, Ont.

Pleasant Valley Herd

Present offering: 7 high-class young bulls by Imp. Ben Lomond = 45160 = (80468) and Bud's Emblem = 53860 =, and good imp. and Canadian-bred dams. Write for particulars and prices, or visit personally.

GEO. AMOS & SON, Moffat Station and P.O. Moffat is 11 miles east of Guelph on C. P. R.



Shorthorn Home-bred Bulls

of the best breeding and quality at attractive prices for the buyer. To see them is all that is necessary. Try to do so if you are in the market. It will pay you.

JNO. CLANCY, Manager. **H. Cargill & Son, Cargill, Ont.**

SUBSCRIBE FOR "THE FARMER'S ADVOCATE AND HOME MAGAZINE."

GOSSIP.

Mr. A. I. Hickman, Court Leet, Kent, England, exporter of pedigree stock of all varieties, makes a change in his advertisement in which he intimates that during the winter months special attention will be given to the selection and export shipment of cattle of the best and dairy breeds, and heavy horses. Mr. Hickman reports a large number of shipments to several countries in the last six months.

The twenty-fifth annual meeting of American Aberdeen-Angus Breeders' Association, the silver jubilee meeting of the organization, will be held December 2nd, at the Exposition Hall on the International Show grounds, Union Stock-yards, Chicago, during the week of the International Exposition. Meeting commences at 7.30 p. m. Sixty head of high-class cattle will be sold at the auction sale during the show. Chas. Gray, Secretary, 17 Exchange Avenue, Chicago, will mail catalogue and information.

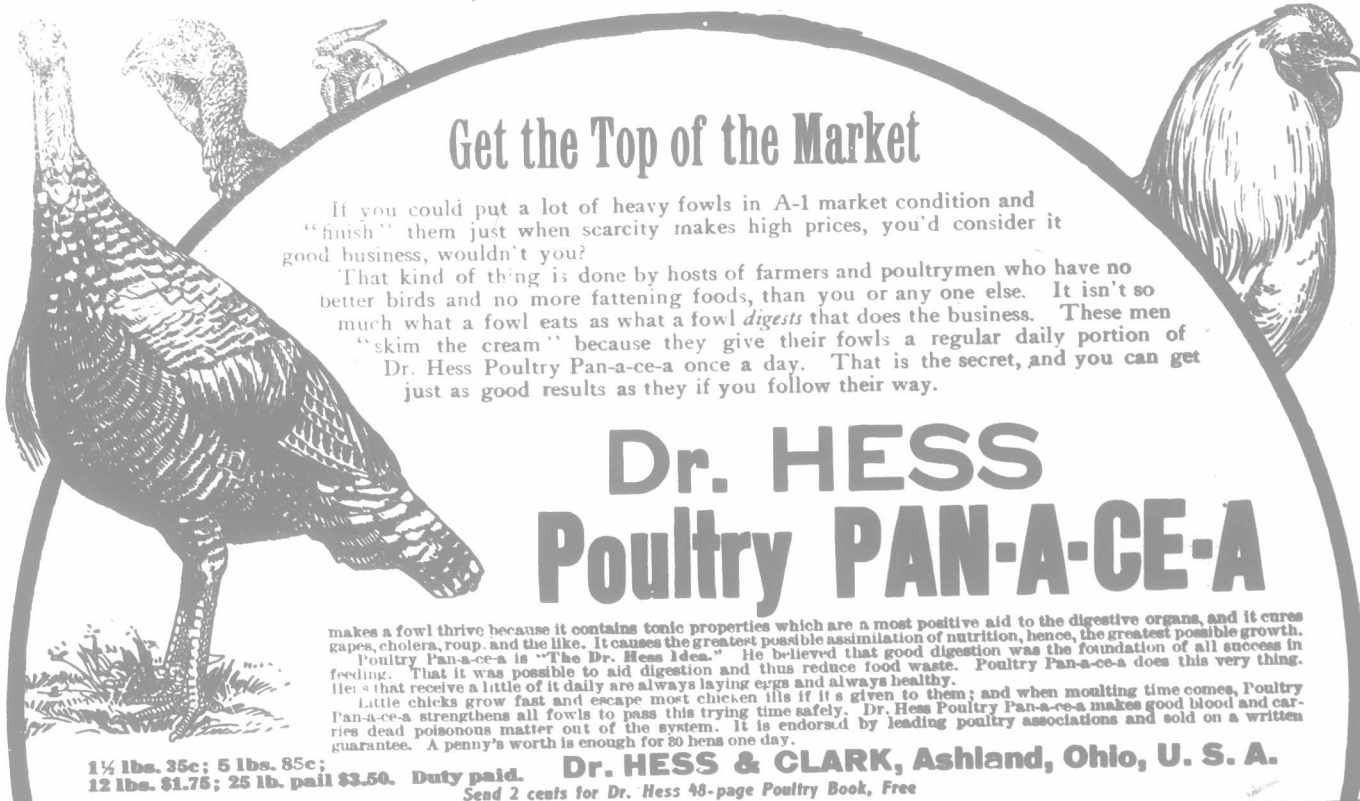
VISIT THE INTERNATIONAL.

The International Live-stock Exposition, held at Chicago from November 28 to December 10, is the supreme court of the year's prizewinners. It is justly styled the show of champions, the show within whose portals the bluest blood of the bovine, ovine and porcine families struggles for supremacy, the exposition whose educational value cannot be over-estimated. Here the foremost breeders, who, by constant study, mutual contact, observation and comparison, have succeeded in producing the best, are giving the world the benefit of their labors. Here the breeder and feeder are shown by actual block demonstration by what method their work can be made more profitable, and the kind of animals the butcher wishes them to supply. These, and the many other object lessons that can only be earned by a visit to this great exposition, make a visit to the International Show a paying investment and is a part of the training of every progressive farmer, feeder and breeder. The National Dairy Show and Horse Show are slated for the same dates at Chicago as above.

The fact of his having attended a previous show does not signify, for new problems are being solved here each year; each year sees the work and achievements of the previous shows surpassed, and at each successive exposition new standards of excellence are brought to the attention of the public. Enquire of your railway agents for reduced passenger rates.

THE SIBERIAN WHEAT FIELDS.

Much discussion has been given to the possibilities of Siberia as a wheat-producing country. It has been claimed that in time this great territory would reinforce Russia, and, as a result of the building of the trans-Siberian railway and the settlement of Siberia by emigrants from Russia who are naturally wheat-growers, a great, new, inexhaustible source of wheat supply would come into existence. A few years ago American farmers and millers were greatly concerned over this Siberian possibility, and many of them feared that, with the opening of the new territory, there would appear upon the scene a fresh competitor for the position of the world's food purveyor. Time passed, the great railway was built, but as yet neither the Siberian miller nor the Siberian wheat-grower has made his appearance in the markets. What this country can do in the way of wheat-production on a large scale is yet to be demonstrated. Possibly the day may come when it will be counted as important in the list of wheat-raising countries, but at present this seems too remote for serious consideration, and the future wheat-fields of the world seem to be extending in an altogether different direction. The Asiatic is becoming a wheaten-bread eater; by the time his taste for the bread of civilization is fully developed, the Siberian miller may find a market in China and Japan for his product, if he is able to compete with the American miller of the Pacific Coast, who is now exploiting this field successfully. As far as Europe is concerned, there seems no prospect, remote or immediate, that Siberian wheat and flour will find its way thither in any considerable quantities.—W. C. Edgar



Get the Top of the Market

If you could put a lot of heavy fowls in A-1 market condition and "finish" them just when scarcity makes high prices, you'd consider it good business, wouldn't you?

That kind of thing is done by hosts of farmers and poultrymen who have no better birds and no more fattening foods, than you or any one else. It isn't so much what a fowl eats as what a fowl digests that does the business. These men "skim the cream" because they give their fowls a regular daily portion of Dr. Hess Poultry Pan-a-ce-a once a day. That is the secret, and you can get just as good results as they if you follow their way.

Dr. HESS Poultry PAN-A-CE-A

makes a fowl thrive because it contains tonic properties which are a most positive aid to the digestive organs, and it cures gapes, cholera, roup, and the like. It causes the greatest possible assimilation of nutrition, hence, the greatest possible growth. Poultry Pan-a-ce-a is "The Dr. Hess Idea." He believed that good digestion was the foundation of all success in feeding. That it was possible to aid digestion and thus reduce food waste. Poultry Pan-a-ce-a does this very thing. Little chicks grow fast and escape most chicken ills if it is given to them; and when moulting time comes, Poultry Pan-a-ce-a strengthens all fowls to pass this trying time safely. Dr. Hess Poultry Pan-a-ce-a makes good blood and carries dead poisonous matter out of the system. It is endorsed by leading poultry associations and sold on a written guarantee. A penny's worth is enough for 20 hens one day.

1 1/2 lbs. 35c; 5 lbs. 85c; 12 lbs. \$1.75; 25 lb. pail \$3.50. Duty paid. Dr. HESS & CLARK, Ashland, Ohio, U. S. A. Send 2 cents for Dr. Hess 48-page Poultry Book, Free

DR HESS STOCK FOOD

Every time a steer, cow, horse or hog, gets a little of Dr. Hess Stock Food in its grain ration, the animal is made stronger to digest and use its food. This is "The Dr. Hess Idea" and the true theory of feeding—make the maximum amount of ration digest and assimilate and gain will be rapid and steady. Dr. Hess Stock Food is composed of beneficial elements—iron for the blood, bitter tonics and cleansing nitrates. It increases milk, hurries fattening and gives good health to all domestic animals. Promoting stock health and condition is also a profitable feature of feeding Dr. Hess Stock Food. Sold on a written guarantee.

100 lbs. \$7.00; 25 lb. pail \$2.00. Smaller quantities at a slight advance. Duty paid. Send 2 cents for Dr. Hess Stock Book, Free.

INSTANT LOUSE KILLER KILLS LICE

Shorthorns!

BELMAR PARC

John Douglas, Peter White, Manager, Pembroke, Ont.

Calves for sale by our grand quartette of breeding and show bulls:

Nonpareil Archer, Imp. Proud Gift, Imp. Marigold Sailor. Nonpareil Eclipse.

Females, imported and from imported stock, in calf to these bulls.

An unsurpassed lot of yearling heifers.

Sunnyside Stock Farm

Bulls in service: Queenston Archer = 48898 =, Trout Creek Stamp = 67660 =. A number of first-class young bulls, red and roan, and a few cows and heifers, for sale. Prices right.

JAMES GIBB, Brookside, Ontario.

Shorthorn Cattle AND LINCOLN SHEEP.

J. A. WATT, SALEM, ONTARIO. Elora Station, G. T. R. and C. P. R.

Females of all ages for sale of the thick-fleshed, low-down kind that have been raised naturally, neither stuffed nor starved. Twenty-five Lincoln ewes, bred to our best imported stud ram, also a few choice yearling rams. Prices very reasonable for quick sale.

J. T. GIBSON, DENFIELD, ONT.

Glen Gow Shorthorns

Our present offering is 9 bulls from 6 to 14 months of age, sired by imp. Ben Loman and imp. Joy of Morning, and out of imp. and Canadian-bred cows. Also a number of very choice heifers. No fancy prices asked. Long-distance phone.

WM. SMITH, Columbus, Ontario Brooklin and Myrtle Stns.

SPRING VALLEY SHORTHORNS.

Our herd is pure Scotch, imp. and home-bred 50 head to choose from. Our present crop of young bulls are the best we ever had. All sired by the great stock bull, imp. Bapton Chancellor. High-class show thngs among them, including this fall Toronto winners. Nearly every one a herd header.

KYLE BROS., AYR, ONT., P. O. and STATION.

Choice Shorthorns FOR SALE!

Some fine young stock, either sex, including some extra heifers from imp. dams, and all got by the Cruickshank (Duthie-bred) bull, Sityton Victor, imp. = 60093 = (87397). Also young Yorkshires, either sex. Address: **JOHN BRYDENE, Milton, Ont.** C. P. R. and G. T. R.

TWO IMP. BULLS of excellent quality.

One 7 months old, sired by imp. Joy of Morning = 32070 =; dam Blossom 2nd. imp. Also heifer calves and young cows, and heifers in calf. And choicely-bred Yorkshires of either sex. Prices very moderate.

GEO. D. FLETCHER, BINKHAM P. O., ONT. Erin Station, C. P. R.

J. WATT & SON, Salem, Ontario.

Offer: 1 senior show bull calf; 1 junior show bull calf; 1 two-year-old show heifer; 1 junior yearling show heifer. The above cattle are in show shape, and will be priced reasonable.

ELORA STN., G. T. R. AND C. P. R.

Greengill Shorthorns!

We offer for sale our herd bull, imp. Lord Roseberry, also young bulls and females all ages, either imp. or from imp stock. Prices right. Long-distance phone

R. MITCHELL & Sons, Nelson P. O., Ont. Burlington Jct. Sta.

PLEASE MENTION THIS PAPER.

Willow Bank Stock Farm.

Shorthorn Herd Estab. 1855. Leicester Flock Estab. 1848.

I have a special good lot of rams and ewes to offer. Various ages and show material. Also choice Shorthorns of either sex, any age.

JAMES DOUGLAS, Caledonia, Ontario.

Rowan Hill Shorthorns

The 1908 Toronto grand champion, Royal Chief 65495, heads my herd. For sale are: 3 spring bulls and a few heifers, sired by him, and out of show cows. These are choice young things that are sure to please. **R. F. DUNCAN, Carlisle P. O., Ont.** Caledonia Station, G. T. R., or station 13 Hamilton and Brantford Electric Road.

DEHORN YOUR CATTLE

Wonderful how it improves them. Heifers develop into better milkers. Steers fatten quicker.

KEYSTONE DEHORNER Does it. Cuts clean—hurts little—does not bruise flesh or crush bones. Write for free booklet.

R. H. MCKENNA, Late of Picton, Ont. 219 Robert St. Toronto

DAIRY-BRED

One handsome roan bull, fourteen months old, = 70046 =, and several choice heifers from imported sires, and bred to imported bulls. Come and see them.

Wellington Stouffer, Ringwood P. O., Ont. Stouffville station, G. T. R.

SHORTHORNS!

An extra good seven months' old red bull calf. Also a number of bulls, heifers and calves.

JOHN RACEY, Lennoxville, Quebec.

SHORTHORNS FOR SALE!

I have a dozen young cows and heifers, got by the Brawith Bud bull, Golden Abel (imp.), and in calf to the Bruce Mayflower bull, Royal Bruce (imp.), that I will sell very reasonable. A number of them are out of imported dams, and registered in Dominion and American Herd-books.

R. J. DOYLE, OWEN SOUND, ONT.

HEADACHE.

Burdock BLOOD BITTERS.

What Medical Skill Could Not Do
Was Accomplished with

Burdock Blood Bitters.

If you are troubled with Headache do not hesitate to use B.B.B. It is no new product, of unknown value, but has an established reputation.

COULD NOT WORK.

Miss Marial Wright, Muniac, N.B., writes: "I was sick and run down, would have headaches, a bitter taste in my mouth, floating specks before my eyes and pains in my back. I was not able to do any house work at all and could not sleep at night. Several doctors doctored me but I saw I was getting no help, and on the advice of a friend I got three bottles of Burdock Blood Bitters and they effected a complete cure."

Riverside Holsteins

For sale: Seven young bulls from two to nine months old, out of Record of Merit cows, sired by Sir Pietertje Posch De Boer, whose dam and sire's dam average in official test 25.87 lbs. butter in 7 days, and 87.6 lbs. milk in 1 day.

J. W. Richardson, Caledonia, Ont.

Holsteins & Yorkshires

R. Honey, Brickley, Ont.

All surplus stock of Holsteins sold, except this crop of calves. Ready to book orders for them. Best bacon type Yorkshires, one to six months, both sexes, at moderate prices.

Spring Brook Holsteins and Tamworths.

32 choice young Tamworths from imp. sows, and sired by imp. Knowle King David, of best British blood and Royal winners. Correct type. Holsteins of best strains. Write for what you want, or, better, come and see. Will not exhibit this year. Stock better than ever. A. C. HALLMAN, BRESLAU, WATERLOO CO., ONT.

Maple Hill Holstein-Friesians

Special offering: Two bull calves eleven months old; well bred; in fine condition; now fit for service.

G. W. CLEMONS, St. George, Ont.

Maple Glen HOLSTEINS For sale: Two bull calves born April 28th. One sired by Brightest Canar; dam of calf has 22½ lbs. butter record, over 4 per cent. fat. The other from 19.48-lb. 2-year-old A. R. O. test, sired by a bull with a 22½-lb. tested dam, with 93 lbs. milk 1 day. Also a 4-year-old cow due in Oct., sire's g. dam sister of Carmen Sylvia. G. A. Gilroy, Glen Buell, Ont.

HOLSTEINS Choice bull calves, one to six months old, from high-producing dams. One heifer, 2 years, due in December. White Rocks, Buff Oringtons, one dollar up. David Rife & Sons, Hespeler, Ontario.

Homestead Holsteins Bull calves for sale 8 months old, out of cows with large A. R. O. records, and sired by Count Mercena Posch, whose dam and sire's dam average 25½ lbs. butter in seven days. G. S. F. GRIFFIN, Box 43 Burgessville, Ont.

"Ever been in Siberia?" asked the reporter.
"Er—yes," answered the distinguished Russian refugee. "I took a knouting there one summer."

"Very well, sir," cried Dr. Kwack, after his quarrel with the undertaker. "I'll make you sorry for this."

"What are you going to do," sneered the undertaker, "retire from practice?"

Black Watch

Chewing Tobacco

The big black plug.

2200

GOSSIP.

Results of Rock Phosphate on an Illinois Farm.

Arthur J. Bill, of Illinois, tells the readers of Wallace's Farmer of a striking experience in the use of ground rock phosphate on a farm in that State which came under his observation. We quote the story in his own words:

Mr. Frank I. Mann, a practical farmer and dairyman of Iroquois county, Illinois, has given very thoughtful attention to experiment station data and applied a little agricultural science on several of his fields the past five years, with the following marked results, the general treatment being a half ton of ground rock phosphate per acre.

Eighty Acres Oats.—Treated part, 80 bushels per acre; untreated, 60 bushels; increase, 20 bushels. Cost of phosphate, \$4 per acre; returns from treatment, \$7, besides 92 per cent. of phosphorus applied remaining in the soil safe for future use.

Sixty Acres Corn.—On 40 acres treated, 51 bushels per acre the second year after treatment; 20 acres untreated, 34 bushels; profit over all cost, \$3.50 per acre.

Eighteen Acres Corn on Clover Sod.—Ninety bushels per acre first year; 50 bushels corn (injured by storm) second year; 100 bushels oats third year; 4 tons clover in two cuttings fourth year; 125 pounds phosphorus per acre applied and only half of it used in the four crops. A new application of phosphate was given this field last fall—1,500 pounds per acre.

Eighty Acres Oats in 1907.—Forty bushels per acre, weighing 35 lbs. to bushel; germination test, 92 per cent. Surrounding untreated fields, 25 bushels, weighing 26 pounds, 40 to 50 per cent. germination; second year, 2½ tons clover per acre in first cutting; untreated, 1½ tons.

Eighty Acres Corn.—Sixty-two bushels per acre; untreated, 45 bushels. The part needing nitrogen was given 10 tons of manure per acre in addition to the phosphorus, bringing the formerly low yields up to 60 bushels.

Such are the very profitable and agreeing results in plain farming for one to four years on each of four fields involving more than 200 acres of land. They were secured by a very simple process: First, confidence in the scientist and knowledge of what he is doing for the farmer; second, personal conviction based on definite and intelligent examination of his own conditions; third, following reason into action, doing the deed. And Mr. Mann has no patent on this process. Besides making money, his land is becoming richer instead of poorer under such treatment.

Several samples of soil from this farm were analyzed by Mr. Mann's son at the College of Agriculture, showing a marked deficiency in phosphorus in most fields, nitrogen lacking in only a few places, and no lack of potassium. Small plots in several fields were treated with different elements of plant food. Where phosphorus was deficient, phosphorus added gave increase of yield, and where nitrogen was lacking, nitrogen added gave increased yields, confirming the chemical analysis. The benefits were so marked that whole fields were soon treated with phosphorus and the manure used on those portions needing nitrogen. In some cases narrow strips were left untreated for check strips. The average application of rock phosphate was 1,000 pounds per acre, but this was greatly varied (by opening and closing the drill) according to the apparent needs of the soil in different parts of the field. The results are given at the beginning of this letter.

The recital of these crop yields at the recent Urbana meetings when the Rothamsted soil experiment director visited the University of Illinois, was the one thing needed to closely connect the celebrated soil tests of England and Illinois with the most successful farm practice. Such experience gives great weight to the following conclusions by Mr. Mann:

Whether manuring is scientific depends on the need of the land; if the soil needs phosphorus and not nitrogen, it is not scientific. A man sold a two-ton growth of clover for \$4 per acre because he hadn't time to cut the hay. As his land needed both phosphorus and nitrogen, it would have been profitable and scientific to have added \$4 worth of phosphorus.

(Continued on next page.)

DEERSKINS

E. T. Carter & Co.
84 Front St., E.,
TORONTO, ONT.

CONSIGNMENTS SOLICITED.

Write for Our
PRICE LISTS.
We Pay Express and
Freight Charges.

RAW FURS

Beaver Creek Holsteins—I have at present a few cows and heifers for sale, and three young bulls; all from good milkers. Apply to

ALBERT MITTLEFEHLDT, Etcho, Ont.



LYNDALE HOLSTEINS!

Bull calves out of cows with records of from 18 to 20 lbs., also three heifers coming two, and a number of young cows in Record of Merit, bred to a grandson of Pietertje Hengerveld's Count De Kol. BROWN BROS., LYN, ONT.

The Maple Holstein Herd!

RECORD OF MERIT COWS. Headed by Lord Wayne Mechthilde Calamity, also in the Record of Merit. Nothing for sale but choice bull calves. WALBURN RIVERS, Falden's, Ont.

Only Bull Calves FOR SALE, HOLSTEINS and AYRSHIRES,
Of the best performing strains.
GEO. RICE, ANNANDALE STOCK FARM, TILLSONBURG, ONTARIO.

Now

is the time to buy a bull for service next year, because we sell CHEAPER now than we do next spring. Why not write to us RIGHT AWAY for a BARGAIN in bulls from R. O. M. dams? Or better yet, call and see us.

E. & F. MALLORY,
FRANKFORD, ONTARIO.

Ayrshires from a Prizewinning Herd—Have some nice bull and heifer calves for sale at reasonable prices. For particulars, etc., write to WM. STEWART & SON, Campbellford Stn. Menie P. O., Ont.

FAIRVIEW HERD HOLSTEINS

The greatest A. R. O. herd of in northern New York. Headed by Pontiac Korndyke, the greatest sire of the breed, having five daughters whose seven-day records average 29¼ pounds each, and over 43% fat. Assisted by Rag Apple Korndyke, a son of Pontiac Korndyke, out of Pontiac Rag Apple 31.62 pounds butter in 7 days, and 126.56 pounds in 30 days, at 4 years old. Cows and heifers in calf to the above two bulls for sale, also young bulls sired by them out of large-record cows. Write, or come and inspect our herd. E. H. DOLLAR, Heuvelton, St. Law. Co., N. Y., near Prescott, Ont.

EVERGREEN STOCK FARM offers for sale choice young HOLSTEIN BULLS, from 10 to 12 months old, sired by sons of Mercena 3rd and Tidy Abbeker, each of which made over 27 lbs. of butter per week, and 80 lbs. milk per day. Also choice young females. Write for prices. F. E. PETTIT, Burgessville, Ont.

Centre and Hillview Holsteins

125 head to select from. 35 in the R. O. M. Stock bulls Boncheur Statesman, high official backing, and in close relation to Colantha 4th's Johanna; Brookbank Butter Boy. All nearest dams over 20 lbs. From these sires, out of R. O. M. dams, are several young bulls and a few heifers. Prices right. P. D. EDE, Oxford Centre, Ont. Woodstock Station.

JERSEYS We have the get of Ethel's John, a 75 FOR SALE per cent. Mary Ann of St. Lambert bull; also of Minette's Star, a son of Brampton Minette, Brampton Monarch (imported), Blue Blood, and Financial King. Write for what you want. H.S. Pipes & Son, Amherst, Nova Scotia.

BRAMPTON JERSEYS

CANADA'S PREMIER HERD.—Strengthened regularly by importations from United States, England and the Island of Jersey. We have animals of all ages and both sexes for sale, and the largest herd in Canada to choose from. Write for prices and particulars. Long-distance telephone at farm.

B. H. BULL & SON, BRAMPTON, ONT.

Stonehouse Ayrshires. Stockwood Ayrshires!

36 head to select from. All imported or out of imported sire and dam. For sale: females of all ages. Am now booking orders for bull calves. HECTOR GORDON, Howick, Quebec.

My Ayrshires are producers as well as show stock. For sale are females of all ages. Also my stock bull, Pearlstone, a high-class sire and show bull. Am now booking orders for bull calves. D. M. WATT, ST. LOUIS P. O. & STA., QUE.

Stoneycroft Ayrshires

Choice young bulls and heifers of the very best breeding, combining show and dairy quality. Large Improved Yorkshire Pigs from imported sires and dams, now ready to ship. Stoneycroft Stock Farm, Ste. Anne de Bellevue, Que.

STOCK FOR SALE AT Springburn Stock Farm WILLIAMSBURG, ONT. A number of Ayrshire bulls and heifers of deep-milking strain. 15 Oxford Down shearing and ram lambs. Ewes any age. Prices reasonable. H. J. WHITEKER & SONS, Williamsburg, Ont., Props.

UTILITY GLENORA OF KELSO = 15798 = AYRSHIRES at head of herd. For sale: Females of all ages, and several young bulls, some out of 11,000 lb. cows. Come and see, or address: R. C. CLARK, Hammond, Ont. Railway station, Hammond (G. T. R. and C. P. R.).

CHERRY BANK AYRSHIRES.

I am now offering young bulls and heifers true to type and high in quality. Some with imp. sire and dam; also will spare a few older females. P. D. McArthur, North Georgetown P. O., Quebec, Howick station, Que.

Ayrshires and Yorkshires

Our 1908 importation has landed, consisting: In females, of 3-year-olds, 2-year-olds, yearlings and calves; in bulls, yearlings, calves; dams' records up to 1,100 gals. of milk in Scotland. Write J. Retson, South Quebec. We can furnish full show herds of choice ones. All ages on hand, either imported or home-bred. Milk records of all milkers. Pigs from 3 wks. to 4 mos. Phone in residence.

Hoard's Station, G. T. R. ALEX. HUME & CO., MENIE P. O., ONTARIO.

HOWGLÉN AYRSHIRES! AYRSHIRES

For sale: 75 pure-bred registered Ayrshires, all ages; prizewinners; many imported. Apply to ALLAN P. BLUE, Hickory Hill Stock Farm, Dundas Station and telegraph. N. DYMENT, Clappison, Ont.

Boog Spavin

Cure the lameness and
remove the bunch without scurrying the
horns—have the part looking just as it did
before the blemish came.

Fleming's Spavin Cure (Liquid)
is a special remedy for soft and semi-solid
blemishes—Boog Spavin, Thoroughpin,
Splint, Ours, Clapped Hoof, etc. It is neither
a liniment nor a simple blister, but a remedy
unlike any other—doesn't irritate and can't
be limited. Easy to use, only a little re-
quired, and your money back if it ever fails.

**Fleming's Vest-Pocket
Veterinary Adviser**

describes and illustrates all kinds of blemishes,
and gives you the information you
ought to have before ordering or buying any
kind of a remedy. Mailed free if you write.

**FLEMING BROS., Chemists,
75 Church Street, Toronto, Ontario**

OXFORD DOWN SHEEP AT FARNHAM FARM.

We have 50 yearling ewes, all bred to our im-
ported ram, champion at Toronto Exhibition, 1906,
which we will sell at especially reduced prices for
the next thirty days, in lots to suit purchaser. Also
a few yearling rams and ram lambs by imported
sires. Terms reasonable.

HENRY ARKELL & SON, ARKELL, ONTARIO.
Arkell, C. P. R. Guelph, G. T. R.

Shropshires, Cotswolds

I am now offering a lot of large, well-
covered rams. They weigh from 160 to
200 lbs. each. Also shearing ewes, ram
lambs and ewe lambs, of both breeds,
fitted for showing.

JOHN MILLER, BROUGHAM, ONT.
Claremont station, C. P. R.

Sheep Breeders' Associations

American Shropshire Registry Association, the
largest live-stock organization in the world. Richard
Gibson, President, Delaware, Canada. Address
correspondence to MORTIMER LEVERING,
Secretary, Lafayette, Indiana

Gushing Young Woman (to baronet at
garden party).—Oh, Sir James, I hear
you have an acetylene plant, and I sim-
ply adore tropical flowers!

An industrious clerk who voluntarily
worked overtime was locked in the office.
Who can blame his employers for desir-
ing to retain such an uncommon individ-
ual at any cost?

HOW MRS. CLARK FOUND RELIEF

After Years of Suffering Dodd's Kidney Pills Cured Her.

Pleasant Point Matron Tells Her Suffer-
ing Sisters How to be Free From the
Terrible Pains that Make Life a
Burden.

Pleasant Point, Ont., Nov. 16.—(Spe-
cial).—That most of the ills that the suf-
fering women of Canada have to bear
are due to disordered Kidneys, and that
the natural cure for them is Dodd's Kid-
ney Pills, is once more shown in the case
of Mrs. Merril C. Clarke, a well-known
resident of this place and a prominent
member of the Salvation Army. Mrs.
Clarke is always ready to give her ex-
perience for the benefit of her suffering
sisters.

"My sickness commenced twenty years
ago with the change of life," says Mrs.
Clarke. "My health was in a bad state.
Water would run from my head which
would make me faint. When I came out
of the fainting spells I took fits. I was
bloated till I was clumsy. The pain I
suffered was awful. It would go to my
feet and then to my head. Many doctors
attended me, and I tried many medi-
cines, but nothing gave me relief till I
used Dodd's Kidney Pills. The first box
stopped the fits and seven boxes cured
me completely."

Every suffering woman should use
Dodd's Kidney Pills. They make strong,
healthy Kidneys, and the woman who has
good Kidneys is safeguarded against
those terrible pains that make miserable
the lives of so many women.

blooms per acre and plowed under the
clover.

It is not scientific to grow clover and
sell it from the farm or even to feed it
if nothing is returned to the land.
Clover can restore nitrogen and humus,
but it is a gross feeder on other elements
when it cannot restore.

The science of chemistry proves the ab-
surdity of the great claims that the use
of complete commercial fertilizer on or-
dinary land is scientific. Chemistry dic-
tates that fertilizer should be mixed on
the basis of the elements in the soil.

A proper use of crop rotation is scien-
tific, but science does not support the
idea that any rotation can be depended
on to perpetuate the fertility of the soil.

Much of the land has nitrogen in ex-
cess of crop requirements, because crop
growth is limited by an insufficient sup-
ply of other elements. If those were
applied, much nitrogen might be used
which is now carried away in the drain-
age water. A man who feeds young
stock or milk cows on a corn ration is
not making good use of the foods, but
his loss is not so great as when he sup-
plies his plants with a ration that is as
poorly balanced. We have all seen corn-
stalk growth sufficient to produce 100
bushels, and the yield be not more than
thirty-five bushels. The greatest natural
waste in this country to-day comes from
too wide a ratio in the plant-food ele-
ments of the soil. Science teaches to
economize our resources. (Mr. Mann
found by field test that it did not pay to
add manure to a soil which analysis
showed to be already rich in nitrogen
but low in phosphorus, while he found
an application of phosphorus very profit-
able. Science would apply the manure
to another field in need of nitrogen.)

Science gives economy in showing the
amount of treatment necessary as well as
the kind. A field may have one type of
soil containing 700 pounds of phosphorus
to an acre in plowed soil and another
type with nearly 2,000 pounds. The
treatment that would be sufficient for one
would not be for the other. One field
might require one ton of lime to correct
acidity and another require five tons.

Many farmers yet nearly have hysterics
when anything is said about science on
a farm. They look upon it as a very
complex matter and dream of blast fur-
naces, retorts, laboratories, etc. But
those things are not necessary to apply
science to farming. They may be nec-
essary for someone, but not for the farmer.
His course is a simple and easy one. It
is to take what the experiment stations
have prepared for him; and they make it
so easy for him he doesn't even need a
"shake before taking."

ALL DAIRY SIGNS FAIL.

There was a cow show in the Island
of Jersey last May. One hundred and
twenty-six animals were entered in the
test. The winner made 2 lbs. 11.5 ozs.
of butter in twenty-four hours, and re-
ceived the gold medal for producing the
most butter. The curious fact is that
there was not a man in the show, no
matter how expert a judge he might be,
who would have picked out this cow.
Instead of having a thin neck, she had a
thick one; instead of a long neck, a short
one. Instead of a typical udder, she had
a fleshy one. She was the most beefy
looking cow in the whole number. There
were a dozen cows there which, judging
from the size of the udder, would have
been bigger milkers; and yet this cow
gave 48 lbs. 10 ozs. of milk in twenty-
four hours.

It seems to be about as hard to pick
out a first-class cow by looks as it is to
pick out a first-class man or a first-class
woman. We can find thousands of peo-
ple in the United States who are not
only better looking than President Roose-
velt, but who at first glance would in-
dicate greater ability. There is a gen-
eral conformation that indicates intel-
lectual and moral superiority, but to this
there are exceptions. We once tried to
pick out a preacher in a congregation
and we picked out a somewhat noted
tough.

Nevertheless, it is not wise to pick out
thick-necked, beefy cows, with fleshy
udders, if you want good milkers. There
is more in a cow than appears on the
outside. In this, as in everything else,
"the proof of the pudding is in the eat-
ing." In cows, as in men, the ancient
rule holds good: "By their fruits shall
ye know them."—Wallace's Farmer.

Springbank Oxford Down Sheep

10 superior yearling rams, 1 two-shear ram, 1 imp.
shearing. Good flock headers. 13 choice ram
lambs by noted imp. sire. Prices reasonable.

Wm. Barnet & Son, Living Springs P. O., Ont.
Fergus, C. P. R. and G. T. R.

FAIRVIEW SHROPSHIRE EWES

For sale at very moderate prices.
They were sired by a champion ram.
And are being bred to another champion.
Are of first-class type and quality.
Write for circular and prices.

J. & D. J. CAMPBELL, WOODVILLE, ONTARIO.

I CAN FURNISH JUST NOW A LARGE NUMBER OF EXTRA GOOD Shropshire and Cotswold Rams

A large number of extra good Shropshire and Cotswold ewes, twelve months old.
And a few very high-class Shorthorn bulls and heifers. Any of which will be sold at
moderate prices.

ROBERT MILLER, STOUFFVILLE, ONT.

SHROPSHIRE

Flock of the most approved type. We offer good
animals at reasonable prices.

W. D. MONKMAN, BOND HEAD, ONT.

CLAYFIELD Buy now of the Champion Cots-

STOCK wold Flock of America, 1906. Flock
headers, ranch rams, ewes of different
FARM! ages. All of first-class quality, and
prices reasonable. Write, or call on **J. C. ROSS,**
Box 61, Jarvis, Ont.

MAPLE SHADE FARM

Will sell 24 excellent shearing **SHROPSHIRE EWES**, also 6 thick shearing rams. All are by an im-
ported ram and from imported ewes, and would be splendid sheep for foundation of new flocks. They
are offered at a reasonable price, either in one lot or in smaller flocks. Come and inspect, or write.

JOHN DRYDEN & SON, Brooklin, Ont.
Stations: Brooklin, G. T. R.; Myrtle, C. P. R. Long-distance telephone.

Locust Lodge Leicesters. Bred

for size,
wool and quality. Breeding stock for sale. All
ages and both sexes. Write for prices. **C. & E.
WOOD, Freeman P. O., Ont.** Burlington Jct.
station.

POPLAR LODGE SOUTHDOWNS AND BERK-

SHIRES.—At right prices, 2 aged, 3 shearing rams,
2 ram lambs. Flock headers. Berkshires all ages,
both sexes. Ideal type. Correct description guar-
anteed. **S. LEMON, Kettleby, Ont., P. O.** and
Sta., also Aurora Sta. Long-distance phone.

SOUTHDOWNS AND COLLIES.

Long-distance Telephone.

to good yearling rams, including the first and third
prize winners at London. Also some good breeding
ewes, which must be sold, as the flock is being reduced.

ROBT. McEWEN, Byron, Ont. Ry. Sta., London, Ont.

Maplehurst Herd of Tamworth Swine, Bronze Turkeys, Toulouse Geese, Pekin Ducks, S. C. W. Leghorns.

Tamworths of excellent breeding and ideal bacon
type. Herd won sweepstakes at Toronto and Lon-
don, 1905-6-7-8; winnings at World's Fair, St. Louis,
1904.—sweepstakes aged and junior herd, and two
grand championships. Apply to:
D. DOUGLAS & SONS, MITCHELL, ONTARIO.

Newcastle Tamworths and Short-

horns.—For
Sale: 90 spring pigs, both sexes; boars fit for ser-
vice; sows ready to breed and sows bred to imp.
Cholderton Golden Secret, descendants of Colwill's
Choice and Newcastle Warrior, both Toronto cham-
pions. Also several Shorthorns; females of high
class. Prices right, quality considered.

A. A. COLWILL, Newcastle, Ont.

SUNNYMOUNT BERKSHIRES

Highest standard of type and qual-
ity. For sale: Sows of all ages,
and 4 yearling boars. A grand
good lot. Also younger ones. Pairs
not akin.

**JOHN McLEOD,
C.P.R. & G.T.R. Milton P.O., Ont.**

Willowdale Berkshires!

Won the leading honors at Toronto
this fall. For sale are both sexes
and all ages, from imp. stock on
both sides. Show things a specialty.
Everything guaranteed as repre-
sented. **J. J. WILSON, MILTON, ONT., P. O.**
AND STATION. C. P. R. AND G. T. R.

MONKLAND YORKSHIRES

are the easily-fed, quick-maturing kind. The sort the farmers want.
All ages for sale. 100 sows bred now.


JAMES WILSON & SONS, FERGUS, ONTARIO.

Duroc-Jersey Swine and Leicester sheep.

25 one and two shear
ewes, 3 shearing rams, and this year's crop of ram
lambs. Also sows in pig, and sows ready to breed;
boars fit for service, and pigs ready to wean.

Mac Campbell & Sons, Harwich, Ont.

Large White English Yorkshires



October offering: A
choice lot of boars ready
for service. A number
of good sows bred or
ready to breed. A fine
lot of young pigs. Pairs
and trios supplied not
akin. All the above
from large imported stock from the best of British
herds. **H. J. DAVIS, WOODSTOCK, ONT.**
Importer and Breeder of Shorthorns and Yorkshires.
Long-distance Bell Phone.

OHIO IMPROVED CHESTER WHITES.

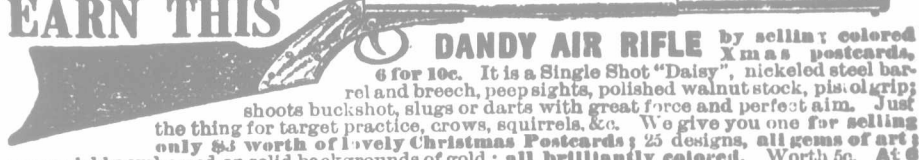
Larg-
est strains. Oldest-established registered herd
in Canada. Young sows in farrow. Choice pigs 6
weeks to 6 months old. Pairs furnished not akin.
Express charges prepaid. Pedigrees and safe de-
livery guaranteed. **E. D. GEORGE Putnam, Ont.**

ELMFIELD 50 young pigs for sale, both

sexes. Young sows bred to im-
ported boar, also sows to Cana-
dian-bred boar due to farrow about 1st October

G. B. Muma, Ayr, Ont. Ayr, C. P. R.; Paris, G. T. R.

EARN THIS



DANDY AIR RIFLE by selling colored
Xmas postcards,
6 for 10c. It is a Single Shot "Daisy", nickel-plated steel bar-
rel and breech, peep sights, polished walnut stock, pistol grip,
shoots buckshot, slugs or darts with great force and perfect aim. Just
the thing for target practice, crows, squirrels, etc. We give you one for selling
only 8¢ worth of lovely Christmas Postcards; 25 designs, all gems of art;
many richly embossed on solid backgrounds of gold; all brilliantly colored. Worth 50¢. At 6
for 10c they go like wild fire. 22-calibre Cartridge Rifle for selling \$5 worth. Send your name
and address plainly written. The Gold Medal Premium Co., Xmas Card Dept. 36A Toronto.

Large English Yorkshires

Pigs of the most approved type, of both sexes, all
ages, for sale at all times. We have more imported
animals in our herd
than all other breed-
ers in Canada com-
bined. We won
more first prizes at
the large shows this
year than all other
breeders combined.
We won every first
but one and all sil-
ver medals and
Bacon prizes at To-
ronto and London
and at St. Louis we furnished all the first-prize hogs
in the breeding classes except two; also supplied both
champions and grand champions. Prices reasonable.

D. C. FLATT & SON, Millgrove, Ont.

CEDAR LODGE YORKSHIRES

100 head of brood sows, imp. and the
product of imp. stock, weighing from 500
to 800 lbs. each. Stock hogs by imported
sires and dams, very large and full of
quality. Young stock of both sexes con-
stantly on hand for sale. Pairs not akin.
Satisfaction guaranteed.

P. O. COLLINS, Bowesville P. O., Ontario
Manotick Sta., C. P. R.

Morrison Tamworths, Shorthorns and Clydesdales.

Tamworths from Toronto winners.
Either sex. Any age. Sows bred
and ready to breed. Pairs not akin.

CHAS. CURRIE, Morrison, Ont.
Schaw Sta., C. P. R.

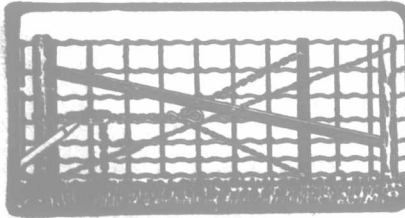
PINE GROVE BERKSHIRES.

Bred from imp. and Canadian-bred
sires and dams, which are of choicest
breeding. Stock, all ages, for sale.
Some imp. in dam. Guaranteed as
represented.

**W. W. BROWNIDGE,
Milton, C. P. R. Ashgrove, Ont.**
Georgetown, G. T. R.

MAPLE GROVE YORKSHIRES

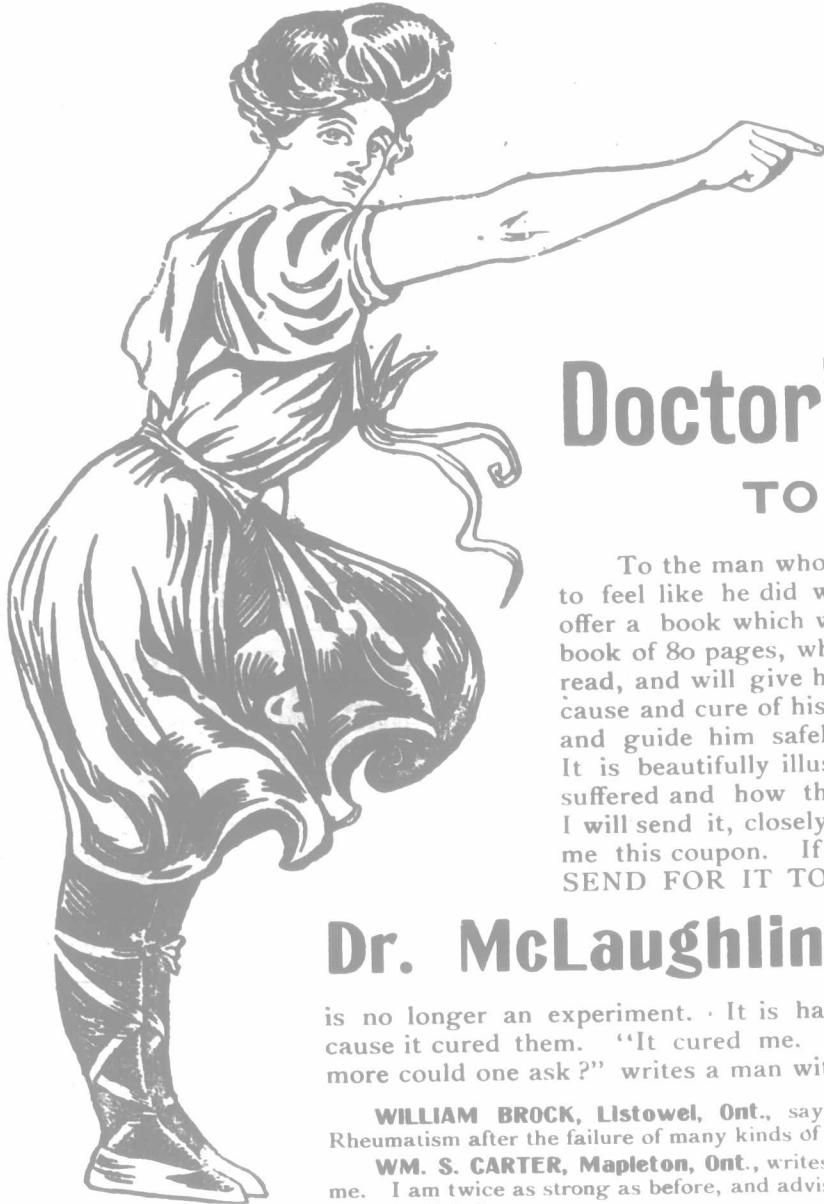
A choice lot of boars fit for service.
A few sows bred and ready to breed.
Young pigs of both sexes and all
ages. We have one type, and that
the most approved. We sell on the
purchaser's approval. Satisfaction
guaranteed. **H. S. McDIARMID,
Fingal P. O., Ont. Shelden Sta.**



HOW TO BUILD A GOOD FENCE

Everyone intending fence building should send for our folder on Erecting Fences. It's full of valuable information on fence building, tells how to erect woven wire fencing quickly and substantially, describes the manufacture of fence wire and has an article quoted from bulletin of U. S. Dept. of Agriculture on concrete post making, showing how these durable posts can be economically made at home. Don't fail to write for a copy. It's free.

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To the man who wants to regain his youth, who wants to feel like he did when he was budding into manhood, I offer a book which will show him the road to happiness—a book of 80 pages, which is brimful of the things he likes to read, and will give him courage and enlighten him as to the cause and cure of his troubles. It will point out the pitfalls and guide him safely to a future of strength and vitality. It is beautifully illustrated. It tells what other men have suffered and how they have cured themselves. It is free. I will send it, closely sealed, without marks, if you will mail me this coupon. If you are not the man you ought to be, SEND FOR IT TO-DAY.

Dr. McLaughlin's Electric Belt

is no longer an experiment. It is hailed by thousands with loud praise because it cured them. "It cured me. I am well and strong as ever. What more could one ask?" writes a man with a heart full of gratitude.

WILLIAM BROCK, Listowel, Ont., says: "Your Belt cured me of Neuralgia and Rheumatism after the failure of many kinds of medicine and many doctors."

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"Your Belt cannot be beaten for curing Weakness and Varicocele."—**D. JANNISON, Steelton, Ont.**

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Get my 80-page book, describing my treatment, and with illustrations of fully-developed men and women, showing how it is applied.

This book tells in plain language many things you want to know, and gives a lot of good, wholesome advice for men.

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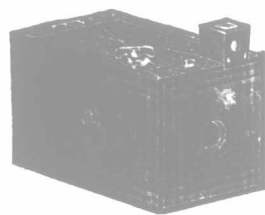
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Take Pictures.



Eastman Kodak.
 Given for Selling XMAS POSTCARDS

6 for 10c.

The Eastman cameras are the best in the world. This one uses films and makes pictures 2 1/4 x 2 1/4. It can be loaded in daylight and is so simple that any boy or girl can make good photographs with it. Taking pictures is a delightful pastime and you can make money at it, too. We give this Genuine Eastman Kodak for selling \$3.60 worth of View Finder (just like the picture), for selling \$4.60 worth of Lovely Christmas Postcards; 25 designs, all gems of art; many richly embossed on solid backgrounds of gold; all brilliantly colored. They are worth 5c. At 6 for 10c you have only to hand them out and take the money. Just say you will do your best to sell the cards and write your name and address plainly. The Gold Medal Premium Co., Xmas Card Dept. A13, Toronto.

One morning, after family prayers, little Kathryn said to her mother: "Oh, mamma, Lois had her eyes open when papa was praying!" Her mother, looking at her keenly, said: "How did you know, Kathryn?" Realizing that she was cornered, she promptly answered: "I heard her wink."

SELF POISE.

Not long ago a young couple entered railway carriage at Sheffield and were immediately put down as a bridal pair. But they were remarkably self-possessed, and behaved with such sang-froid that the other passengers began to doubt if they were engaged.

A young man, however, the next morning, returned in overcoat, and the girl, who had been waiting for him, said: "You are late, my youth, when you were supposed to be with your partner." "By Jove, yes," replied the young man, "but I was in the room's overcoat."

EARN A TEDDY BEAR



Selling Xmas Postcards, 6 for 10c.

This big brown fuzzy bear is the funniest old fellow you ever saw. He looks just like a real live bear, and if you punch him or roll him over he growls fearfully. Just the same, he is always ready for fun, and makes a fine chum. You can get him by selling only \$3 worth of lovely Christmas Postcards; 25 designs, all gems of art; many richly embossed on solid backgrounds of gold; all brilliantly colored. Worth 5c each. At 6 for 10c. They go like wild-fire. Send your name and address, plainly written. The Gold Medal Premium Co., Xmas Card Dept. A13, Toronto.

SUBSCRIBE FOR "THE FARMER'S ADVOCATE AND HOME MAGAZINE."

Scraps.

Under the heading "Scraps," our esteemed English contemporary, The Live-Stock Journal, publishes from week to week many interesting historical, anecdotal and reminiscent paragraphs of a miscellaneous character. For instance, from a recent number we quote the following:

One of the worst and most widespread epidemics known in history was the "murrain," held now to have been a peculiarly malignant form of anthrax, which broke out near Padua, in Italy, in 1711. In those days there was a considerable trade in Dalmatian cattle from the other side of the Adriatic, and one beast of a newly-imported herd strayed. As it was evidently ill, the herdsmen did not take the trouble to go after it, and the sick beast was found by a man employed by a clerical dignitary of Padua and housed with other cattle. The sick beast died a few days later, after infecting all its shed-mates, and all these died, except one in whose neck setons had been placed. The disease thus begun, quickly spread, first over Italy, then into France and Southern Germany. In 1714 it had gained general hold, and spread with fearful rapidity; it reached Holland, where at least 200,000 cattle perished, and thence seems to have been brought to this country; but beyond the fact that our losses were enormous, little has been recorded of the visitation.

The French peasant of an earlier day was a firm believer in charms and talismans to ward off sickness from his beasts. A famous French vet., Mons. Derplas, was once called in to see some cattle suffering from black quarter or quarter-ill. The owner was particularly distressed because he had purchased (for 4s. 4d. and several fowls) an amulet from a "wise man," which was to have ensured the good health of his cattle for ever, and this amulet had been buried with great ceremony at the door of the cow-house. Mons. Derplas was curious to know what the "amulet" might be, and, despite the entreaties of the farmer, who was convinced that sudden death would fall upon all who had part in digging it up, he procured a spade and unearthed it. He found a farthing, a morsel of unleavened bread, and a bit of wax wrapped in a rag of black stuff, which had been cut from a priest's stole!

The Caithness farmers were not much wiser, in that county the approved remedy for this disease was to take the affected beast into a byre, cut out its heart without first killing it, and then hang up the heart in the byre where the other cattle were housed. While it remained there it was contentedly believed the disease could not affect the occupants. The byre or shed wherein the horrible ceremony had taken place could never afterwards be used to house cattle.

The old Teeswater breed of sheep was the largest in England. Four-year-olds were killed, which weighed 55 lbs. per quarter and even more. Mr. Thomas Hutchinson, of Stockton, an eminent breeder and grazier, killed at Christmas, 1779, a wether which scaled 17 st. 11 lbs. (14 lbs. to the stone), with 17 lbs. of tallow. This, says Colley, was the heaviest sheep by several pounds per quarter he ever heard of. The animal was of the "true old Teeswater breed," which was famed for its mutton. These sheep were not kept in large flocks, and could not thrive on poor ground, and the practice was to depasture them in small numbers in small enclosures of the best grass. The enclosures were well sheltered, and the sheep had access to a stack of hay in the winter. The Teeswater ewes were prolific breeders. Mr. Edw. Eddison possessed one which, in the six years, 1772-77, produced twenty lambs, the first nine in eleven months!

AUTHORITY.

"Willie, did you put your nickel in the contribution box in Sunday school today?"

"No, mamma, I ast Eddy Lake, the teacher's son, if I couldn't keep it an' send it for candy, to divide with him, an' he gave me permission."