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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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International Agricultural
Institute of Agricultural
Publications Branch

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

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VOL. XLVII.

LONDON, ONTARIO, MAY 23, 1912.

No. 1026

Feed Your Children Lots of Wholesome Bread Make it with PURITY FLOUR so it will be more nutritious

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

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

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



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

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

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Reminder: On account of the *extra* strength and *extra* quality of PURITY FLOUR *more* water must be added than ordinary flour requires for making bread. For best pastry results *more* shortening is needed.

Add PURITY FLOUR to your grocery list right now.



PURITY FLOUR

"More bread and makes better bread"

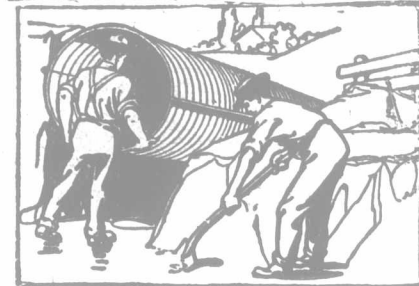
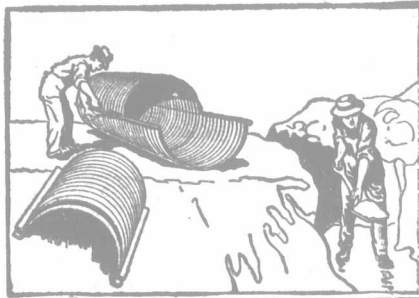


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The above two pictures tell the whole story of installing a frost-proof, time-proof Pedlar Nestable Culvert.

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and get a free sample of Pedlar Corrugated Culvert by return mail. The non-corroding galvanized Toncan metal, and the strength of the sample, will tell you the whole story. Send to our nearest office below. Good culverts make good roads.

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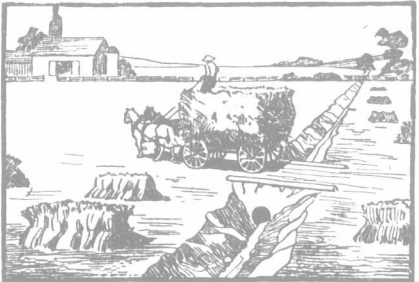
TONCAN METAL

8 ins. to 7 ft. sizes

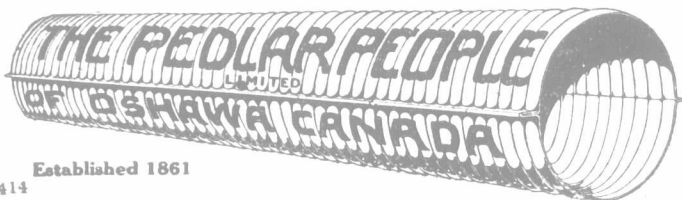
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because it is the most reliable, simple, durable and economical engine on the market.

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Fruit Trees, Shrubs, Bushes and Plants, there's nothing to equal

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Requires but one pumping to empty entire contents of tank. Automatic lever valve stops flow of liquid while going from one plant to another. Easy, light, compact, tested to stand 5 times the pressure required to expel liquid. Two nozzles, with hose attachment for spraying small trees. Write for catalogue. THE EUREKA PLANTER CO. Limited, Woodstock, Ont.

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Deputy of the Minister of the Interior.

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Write at once for this valuable book. It contains information that every farmer should have regarding the sanitary housing of dairy cows. It explains every fundamental of correct construction and gives proper dimensions and arrangements. It describes lighting, ventilation, stable floors, and their construction, and contains suggestions about sites, exposures, appearance, design, drainage and inside equipment. Besides, you will find in this book a number of practical barn plans and other information that may point the way to your saving many a dollar. We have designed many of the finest and most modern dairy barns in this country and this book is based on our long experience and expert knowledge in dairy barn construction. The book contains in concise, clear and condensed form, information necessary to any farmer who is planning to build or remodel. Understand, we send you this book absolutely free without any obligation on your part—just for answering these few questions: Do you intend to build or remodel? How soon? How many cows have you? Will you want a litter carrier? Will you want a hay fork outfit? Send to-day.

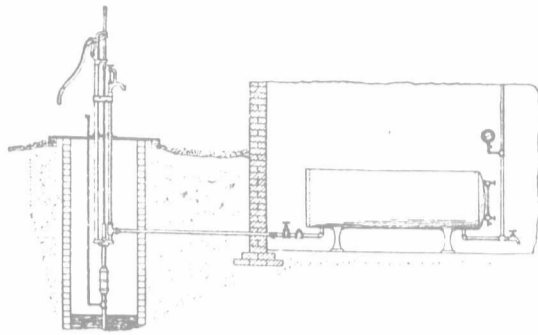
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CHIMES AND PEALS
MEMORIAL BELLS A SPECIALTY
FULLY WARRANTED
McSHANE BELL FOUNDRY CO.,
BALTIMORE, Md., U.S.A.
Established 1866



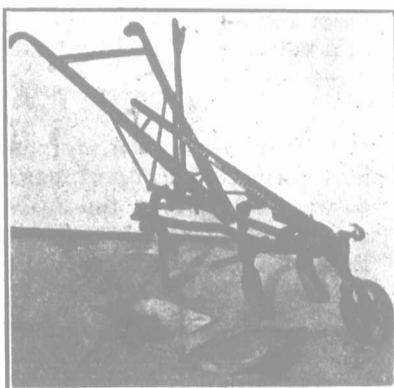
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Heller-Aller Pneumatic Water Supply System



THE HELLER-ALLER CO., WINDSOR, ONTARIO

solves the problem and makes it possible to have running water anywhere in the house, stable or yard, for all domestic purposes, and for fire protection. The cost is so low that almost every country resident can afford to install it. Operated by windmill, electric motor, gasoline engine or by hand power. Write for information.



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Bruce Agricultural Works, Teeswater, Ont.

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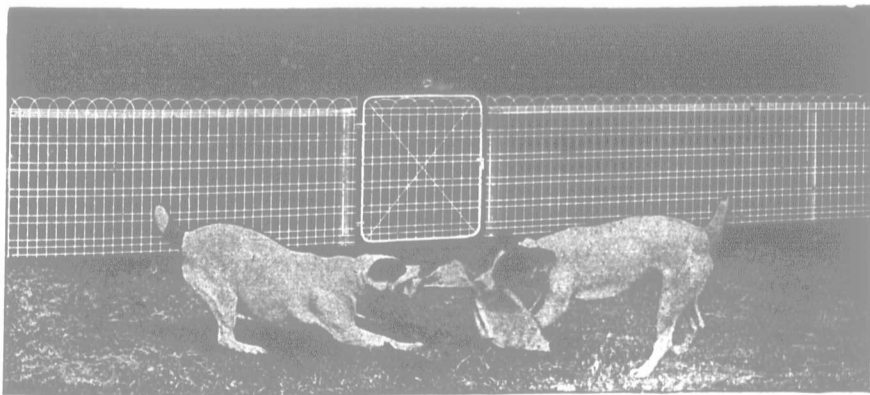
Ask for pamphlet "Reasons Why"

MOVE TO CHILLIWACK BRITISH COLUMBIA

On the Sunny Pacific slope, where the winter lasts one month, and where the farmer receives larger returns on his investment than anywhere else in Canada. Write for free illustrated booklet.
Sec'y Board of Trade, Chilliwack, B. C.

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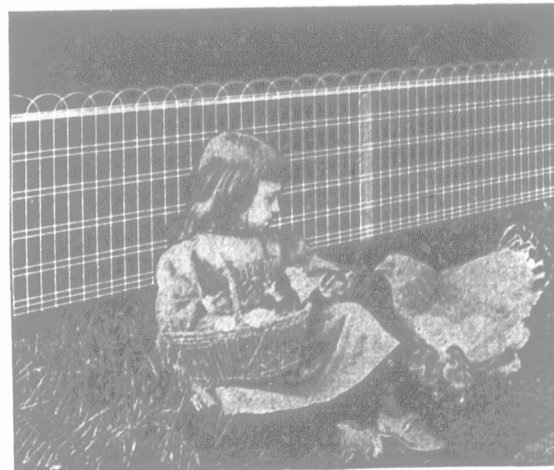
We have sold hundreds of miles, especially of the 42-inch width and you will find this "Page Acme" Fence doing service all over the country.

Write us to-day for the Page Catalogue of "Acme" Fences. If you need fence of any kind, remember the Page Catalogue shows it to you at Factory Prices—scores of fences of the best quality.

Send to-day for the Page Catalogue. This catalogue shows all kinds of Lawn and Farm Fences, Fence Material, Iron Fences—everything you possibly can need in this line at moderate prices. Write to-day for the Page Catalogue.

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Stumping Powders

USED FOR

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MAKE THE BEST BUTTER

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The De Laval Cream Separators are undeniably and indisputably capable of producing a better quality of cream than any other separator or skimming system, thus enabling the production of a better quality of butter.

HIGHEST AWARDS ALWAYS

Year after year, for more than twenty years, all highest butter awards of importance have been made to De Laval exhibits, as was the case at the Paris and St. Louis World's Expositions, and has been the case in every annual contest of the National Buttermakers' Association since its organization in 1892.

At the last great National Dairy Show in Chicago, October-November, 1911, all highest cream and butter awards were again made to De Laval Separator produced exhibits.

The production of the best cream and butter is as important as the use of a cream separator at all, and any De Laval agent will be glad to explain WHY the De Laval separator excels in this as in other respects, which a De Laval catalogue will likewise help to do, and will be gladly sent to anyone for the asking.

DE LAVAL DAIRY SUPPLY CO., LIMITED
173 WILLIAM ST., MONTREAL 14 PRINCESS ST., WINNIPEG

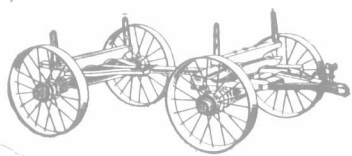


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These Wide-Tire Steel Wheels are so constructed that they roll smoothly over the roughest roads, without tiring your horses. And they are absolutely accident-proof—yet cheaper than ordinary, wooden wheels.

T-A Wide-Tire Steel Wheels & Handy Farm Wagons

Our Handy Farm Wagons are built low—making them easy to load and unload—and are especially designed to meet the requirements of the man who wants a light, strong wagon for all kinds of work on the farm. Let us send you our catalogue. It will give you complete information.



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The coat that keeps out all the rain



TOWER'S FISH BRAND REFLEX SLICKER

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YOU CAN'T GET WET
MADE FOR SERVICE SATISFACTION GUARANTEED
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Reliable help for the farmer

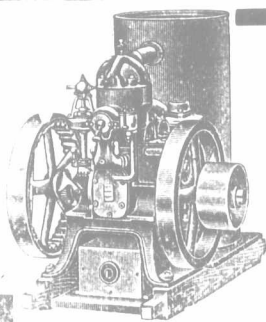
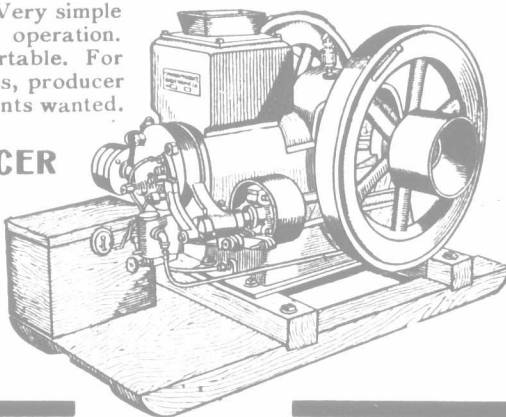
Farm labor is scarce. Wages are high. All the more need for a **BARRIE ENGINE**. Soon pays for itself in time and labor saved. Grinds grain, shells seed corn, pumps water, cuts straw, threshes beans, saws wood, drives churns, separators and washing machines. Does many other things, too.

BARRIE ENGINES WORK LONG

hours without getting tired. Very simple in construction. Reliable in operation. 3 to 100 h.-p. Stationary or portable. For gasoline, distillate, natural gas, producer gas. Write for catalogue. Agents wanted.

The CANADA PRODUCER & GAS ENGINE CO., Ltd.
Barrie, Ontario, Canada

Distributors:
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Canada Machinery Agency,
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This Engine Runs on Coal Oil

Every farmer can afford an Ellis Coal Oil Engine. They give far more power from coal oil than other engines do from gasoline. They are safe, as well as cheap; no danger of explosion or fire.

The strongest and simplest farm engine made; only three moving parts: nothing to get out of repair. Anyone can run it without experience. Thousands of satisfied customers use these engines to grind feed, fill silos, saw wood, pump, thresh, run cream separators, and do dozens of other jobs. Cheaper than horses or hired men. Fill up the tanks and start it running, and no further attention is necessary; it will run till you stop it.

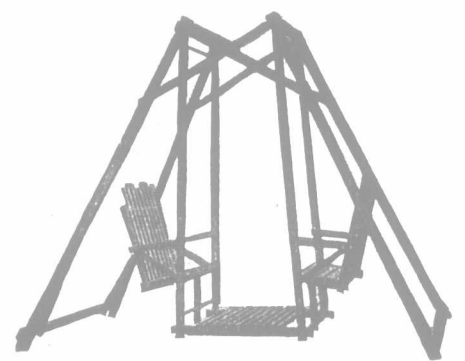
FREE TRIAL FOR 30 DAYS You don't have to take our word for it. We'll send an engine anywhere in Canada on Thirty Days' Free Trial. We furnish full instructions for testing and work. If it does not suit you send it back at our expense. We pay freight and duty to you. We'll even get it back if you don't want it.

Absolutely guaranteed for 10 years. Write for free catalog and opinions of satisfied customers. Specify territory.

15 Horse power
Pay duty and Freight **Ellis Engine Co., 94 Mullett Street**
DETROIT MICH.

A REAL SUMMER NEED

The Stratford Lawn Swing



Just the thing for your Lawn or Garden. It is fine for the youngsters and a source of enjoyment for the grown-ups too. It is inexpensive and is built solid and strong.

Write us for Booklet "A" which tells all about this and other Summer and Out Door Furniture.

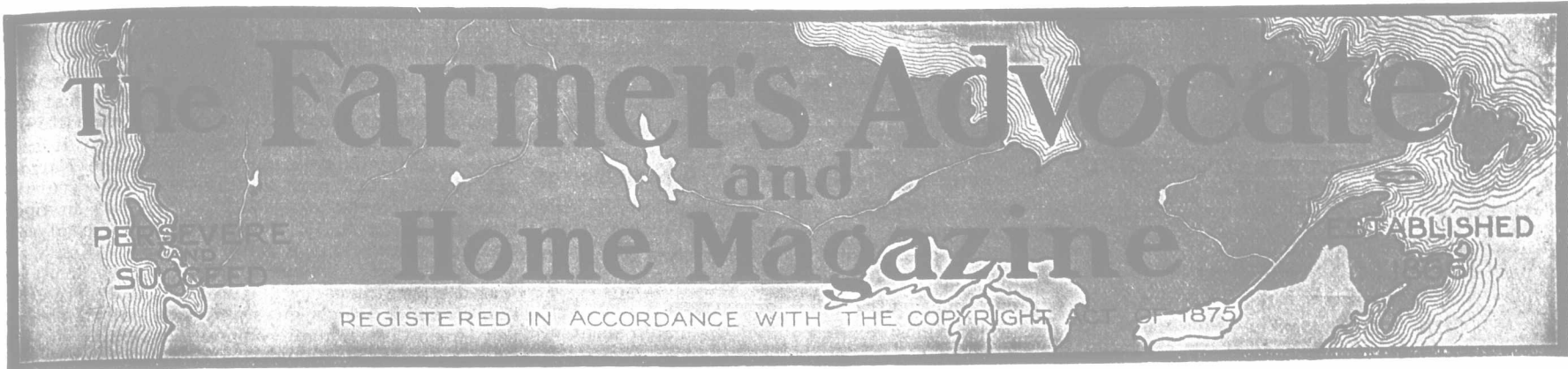
THE STRATFORD MFG. CO.
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MERCHANTS PRODUCE CO.

Butter Eggs Poultry Honey Beans Apples Potatoes, etc.

Our constantly growing trade demands large supplies of choice farm produce. We need yours. Write for weekly market letter.

57 Front St. E., Toronto
Established 1899



EDITORIAL.

Good seeding weather, a fine tilth and ample moisture in the soil, are the preliminary harbingers of a big crop.

While it is generally considered that roots are an expensive crop to grow, with labor so scarce, it is also conceded that they are one of the best system regulators for the stock, especially the younger animals during the winter months. Even where silage is abundant, roots are a valuable adjunct to the ration. A few mangels or turnips can be profitably grown on most stock farms. Anything which tends to advance the growth and general health of young stock cannot profitably be done without. The extra labor in caring for the roots will be more than repaid in stock returns.

How thick to plant corn for ensilage, is an important question which usually confronts the silo-user. That many acres are planted too thick to make the best quality of feed is undeniable. At the same time, we incline to the opinion that, considering both yield and quality, a somewhat thicker seeding is advisable than when the corn is grown for early husking. For the latter purpose, three or four stocks in hills 42 x 44 inches apart are enough. For ensilage, we intend this year to plant an average of about five kernels of ear-tested corn per hill, in hills check-rowed 42 inches each way.

Merging of banks is now the order of the day. First thing we know we shall have a tightly-organized money trust, serving the interests of Big Business first, while smaller customers kneel before the banking magnates, hats in hand, beseeching the favor of occasional banking accommodation, which will be granted, or not, according to the exigencies of the Big Business aforesaid. Developments of this kind will soon make us wonder whether our much-lauded system of branch banks is, after all, the best thing for the country, notwithstanding its admitted advantages. At all events, there is great and growing need for a system of Government inspection of all our banks, and a well-informed public will insist upon it with a voice so strong and so insistent that Parliament will have to sit up and take heed.

Eliminating fruit and vegetable crops, the greatest opportunity open to Canadian farmers to-day is the chance of reducing feed bills by growing alfalfa. Sow it this year on your summer-fallow, instead of wheat. A good catch of alfalfa on land suitable to it is worth half a dozen crops of wheat. Seeding alfalfa in July on well-drained and thoroughly-cultivated fallow is likely to prove a success over large areas of Southern Ontario, however it may prove in other latitudes. We do not say that summer seeding is preferable to spring seeding on clean land, but we strongly recommend it for land which requires cleaning. While alfalfa is usually supposed to be a more exacting crop than red clover in regard to the conditions necessary for successful seeding down, there are instances where the opposite proves true, as in the case of a correspondent who reports success with alfalfa last year, but failure in getting a catch of red clover. For one thing, the alfalfa appears to stand drouth better, as many farmers noticed during the exceptional season of 1911.

Average and Possible Production.

Every business man, if he has any interest in his vocation, desires to have it known as the greatest business of its kind in the country. Manufacturing plants are rated according to the size of their output, and their managers are never content until this has reached its fullest capacity. Likewise, no agriculturist should be satisfied until every available foot of soil on his farm is doing its utmost toward increasing the production of that farm. Keeping down production may raise prices, but the man who has the lowest production suffers most, because there are always those who put forth every endeavor to get large yields, and, anyway, a large production is better for all concerned. Where does your farm stand in point of production? Is it below average, average, or at the highest possible point at which increase can be profitably made?

In looking over the statement of the average yield of the various crops in Canada during 1910 (not last year, which was unfavorable), one is struck with the low returns. While these compare very favorably with those of our neighbor to the South, and are generally believed satisfactory on the whole, when one considers just what might be, the results leave a doubt in the mind as to the value of the methods followed on many farms in the country. The average yield of wheat was only 16.14 bushels per acre; oats, 32.79; barley, 24.62; rye, 18.35; peas, 16.93; buckwheat, 26.77; mixed grains, 33.76; flax, 7.97; beans, 22.21; corn for husking, 57.00; potatoes, 147.14; turnips, 402.36; hay, 1.82 tons; fodder corn, 9.38 tons.

Under the best treatment, wheat yields anywhere from thirty to fifty bushels to the acre, and forty bushels is a common turn-out on good soil with the best growers. What does this mean? At an average of 16.14 bushels, a large percentage of growers must be producing far less than the average, for we know that many are producing far more. Wherein does the profit lie for these? And what is to hinder them from economically increasing returns by following approved methods? Wheat after wheat, year after year, without fertilizer of any kind, cannot but deplete the soil and cause light crops, which bring down the average. The grower of the heavy crop benefits at the expense of the producer of these poor crops; then, why not grow on each acre sown the heaviest crop that the soil will possibly produce? Canada's wheat in 1910 was worth \$112,973,000, at 16.14 bushels per acre. At 40 bushels, and the same rate per bushel, it would have brought \$279,858,736, or a difference of \$166,885,736 annually in this crop alone. If the price had been slightly less, the bulk of the growers would still have benefited.

Oats, perhaps the most widely-grown crop in Canada, shows equally striking results. The average yield in 1910 of 32.79 bushels per acre, is not in comparison with the possibilities of our soil. Sixty bushels is quite a common yield, and often 75 and 100 bushels per acre are harvested.

Barley, with a yield of 24.62 bushels per acre, is, like the two former, not giving the highest possible returns. Forty bushels of this crop is a very common yield, and 60 is often obtained. What must be the yield of the poorest crops, which when reckoned with these high yields bring the average down to a little over 24 bushels per acre?

Other grain crops show like results. Even the

fodder and root crops are in the same rut. Turnips, 402.36 bushels per acre, when 800 to 1,000 bushels are grown on many farms. Fodder corn, 9.38 tons per acre, when 15 tons grow on many acres.

These figures should stimulate to greater efforts. Either large areas are devoted to crops entirely unsuited to the soil and climate, or the methods used in cultivating them are wrong. Which is the case? Thousands of farms are producing crops far above the average, and thousands must be far below the average. The managers of these latter have reason to apply a little thought to this matter. If the land does not produce good crops of what is being grown, surely it is more suitable to other crops. Grow the crops adapted to the soil and climate, and grow them under conditions of fertility, tilth and cultivation which tend more towards maximum production than towards average or minimum output.

Tile Drainage Cost and Benefits.

There are two outstanding facts about tile drainage: The cost and the benefits are both larger than popularly supposed. The cash outlay for tile is a small proportion of the cost. One and a third to one and a half cents a foot will generally buy the tile, except where long mains are required, but there is, in addition, the labor of hauling the tile, laying out the system, digging the trenches, and laying and covering the tile. This, when time is counted at full wages and board is allowed for, may and usually will run the labor cost up to fifty cents a rod, or more, equal to about three cents a foot, depending a great deal upon the nature of the subsoil, the skill of the ditchers, and the rate of wages in vogue; also, the time of year when the work is done.

Perhaps a few figures from our own experience may be of interest. Upon taking possession of what is now called "Weldwood," we decided to summer-fallow and tile about three acres on each side of a fall-plowed field, to be seeded to alfalfa in the fall. Notwithstanding that the land was kept well cultivated, the excessively hot, drouthy weather which set in by the time the O. A. C. staff had surveyed the field and turned in the map, we were waiting for, dried the soil out considerably, and made the digging hard. We found, moreover, that the farm had a rock-ribbed foundation, the subsoil under the ridges being exceedingly hard and stony. We also found that ditchers were about as plentiful as hen's teeth, and these inexperienced ones then available would only work by the day. What with hard digging and poor diggers, the total labor cost of excavating and laying the first hundred rods was nearly a dollar a rod. This was prohibitive, and the men were discharged. Afterwards, we got hold of some skilled ditchers, who finished the job at thirty-five cents a rod for digging the ditch, laying and blinding the tile, the men boarding themselves. Even at this, we had to regard their interests by departing somewhat from the specifications on the map, running mains around through the hollows, instead of in bee-lines, as the contour of the land would have permitted. Averaging the whole cost of the drainage work, some of which was, for reasons explained, much higher than it should have been, but counting in every item, even to the foreman's time in laying out the system, stretching grade lines, etc., and figuring time of men and teams hauling tile and plowing in dirt, not forgetting, either, the half-days' and half-hours' jobs

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL
IN THE DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

Agents for "The Farmer's Advocate and Home Journal,"
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cementing tile outlets, and so on, we arrive at the following figures:

Total cost for thoroughly draining some seven acres of land, including a long, expensive main, with outlet through neighbor's property, was \$346.58, or about \$49.50 per acre. Cost of tile per rod of drain, 26 cents; total cost of labor, men and teams per rod of drain, 82 cents. Of course, with the outlet already provided, and experience gained concerning the particular conditions of this farm, by choosing expert men and favorable seasons for work, we hope to reduce the cost of future work to somewhere around thirty-five dollars per acre, this being for thorough drainage, knolls, as well as hollows.

Now, as to results. While thirty-five dollars per acre seems a large amount to add to the cost of a farm, we believe it is really one of the best investments a farmer can make, providing he can get hold of the capital. On the land where we did the most expensive tiling last summer, there is now as pretty a growth of alfalfa as one could wish to see. Scarcely a plant has been winter-killed. This cannot be said of the undrained land alongside. One season's return in alfalfa from such land will go far to wipe out the cost of tiling, even under the unfavorable conditions of unskilled ditchers working in midsummer. By the way, in certain veins of fine, silty clay and sand mixture which pocket and channel the subsoil of this farm, we found free water in the awful heat and drouth of last July—this, too, on land with a good surface slope. What must be the condition of such soil in a wet season? There is no economy in putting a lot of expensive fertilizers, whether barnyard or commercial, into waterlogged soil with a cold bottom. Drainage is the beginning and about one-half the remainder of good farming. How often we see a wet farm partly tiled, the worst spots being done first,

with these drained hollows ready for seeding in spring from one to three weeks earlier than what was formerly ready first! To realize full returns on draining already done, one must then go to work and tile the higher land, which now delays the seeding and interferes with the working of the partly-tiled field. While freely granting the general economy of draining worst places first, we believe one should plan his system so as to permit the subsequent tiling of the high lands without much extra labor or expense. To this end, we would strongly counsel the employment of the drainage experts sent out from the Ontario Agricultural College, Guelph, and Macdonald College, of Quebec. First get a system and a map, then work to it as closely as conditions permit. It will not cost you over ten dollars, or thereabouts, in time and money together, and the map of your farm would be worth having, apart from drainage purposes altogether; while, in ultimate saving of tile and labor, and in the greater efficiency of the system laid according to it, the survey may easily be worth ten, twenty or a hundred times its cost. Drain, but drain systematically.

The County Farm Expert.

The County Agriculturist idea, which germinated and flowered in the Province of Ontario, has caught the popular fancy in the United States, where a scheme has been projected, with a \$1,000,000 gift from a Chicago firm, to put an expert agriculturist in each of one hundred selected counties. In time, it is hoped that the plan will be so developed as to put a specialist in every county of every State in the Union. Just as we have seen, in some Ontario counties, the project contemplates the organization of farmers' clubs, county displays of farm products, the promotion of agriculture in the schools, county committees on crop improvement and other matters, and, in short, to effect the co-operation of the commercial, agricultural and educational forces of each county. With fair prospect of becoming law, what is known as the Page-Smith Bill, is also now going through Congress, which will appropriate funds for the expense, in equal share with each respective State, the agricultural college of which will select a specially-trained agricultural expert as adviser and demonstrator in the business of farming. Whether the United States will work out as successfully the details of so gigantic a scheme, as has been done on a more modest scale in Canada, remains to be seen.

University Agricultural Training.

"The need of relating our present school system more closely to agricultural life has been brought very forcibly of late years to the attention of the Provincial (Ontario) Government, and various steps in that direction have been taken, with greater or less timidity. Now, at the suggestion of the Department of Education, and for the purpose of training High School teachers in agriculture, it is proposed by Toronto, McMaster and Queen's Universities that a special course in agriculture be introduced, the student to spend the first two years upon the regular University course, but the last two to be taken up at Guelph, after which the successful student would be able to write B. S. A. after his name, and would be competent to teach agriculture in Ontario's High Schools. The proposal is well meant, but 'The Farmer's Advocate' contends that it begins at the wrong end, and that at the most we could only hope to turn out agricultural theorists, whose practical knowledge of farming would be so limited as to give them very scanty qualifications as teachers. The editor of 'The Farmer's Advocate' urges that a practical knowledge of farming is an absolute necessity for one who would pose as an expert, and he proposes, in lieu of the new plan, that our present Agricultural College be enlarged to meet the new demand. In view of all the facts of the case, and considering that our University classes are now altogether too crowded for proper efficiency, the suggestion of 'The Farmer's Advocate' deserves the serious attention of the Government."—The Canadian Guardian.

Telephones in Canada.

Of all forms of modern mechanism, probably none has done so much to reduce physical exertion, except of the vocal cords, and expedite business, as the telephone. Comparatively, it seems but yesterday since a member of "The Farmer's Advocate" staff was talking, some 35 years or more ago, over the first telephone put in operation by Prof. A. G. Bell between some place in Brantford and his adjacent country home, but now the world is wired thickly with local and long-distance lines. Naturally, a live country like Canada, which gave practical birth to this new form of human communication, has very widely developed its use. In this connection, it is interesting to note the appearance of the first report from J. L. Payne, Comptroller of Statistics in the Department of Railways, Ottawa, on the telephone interests of Canada. Owing to obvious difficulties in the collection of information for an initial report, it does not profess to be as complete and useful as it will be made in future years. A good many of the smaller companies failed to report, and in other cases statements were incomplete. In all, however, returns were received from 537 organizations, classified as follows: Government, 3 (Alberta, Saskatchewan and Manitoba); municipal, 25; stock, 308; co-operative, 101; partnership, 18; and private, 82. In the Western Provinces the separate organizations are gradually being merged under Government control. A large number of the joint-stock organizations are classified as "rural," and their capitalization is usually small, and operating expenses light. They have had their development within the past ten years, and have multiplied with great rapidity. The capital liability reported amounted to \$21,527,374.55 in stocks, and \$18,516,607.74 in funded debt; total, \$40,043,982.29. Of this, \$18,981,630.37 is credited to the Province of Quebec, but this large amount includes the Bell Telephone Company, which has its headquarters in Montreal. The gross earnings reported amounted to \$10,068,220.03, and the operating expenses to \$6,979,045.06; the net earnings, without taking into account proper deductions for interest on bond liability, taxes, etc., \$3,089,174.97. The gross earnings were equal to \$33.25 per telephone, or \$14.64 per mile of wire, and the operating expenses \$23.05 per 'phone, or \$10.15 per mile of wire. The equipment of telephone companies in 1911 was represented by 302,759 telephones, the urban mileage being over five times that of the rural. In the latter respect Ontario ranks highest, with a mileage of 29,098. Of the 'phones, 174,994 were operated by central energy, properly described as automatic, and 127,765 by magneto, operated by turning a little handle at the right. The total number of employees were reported at 10,425, to whom was paid \$915,636.14, or only 13.1 per cent. of the operating expenses.

HORSES.

A small grass field near the stables is a handy place in which to pasture the work horses. It saves time.

Be careful of the young foal after the heavy rains that he doesn't contract a cold from lying on the damp ground. Colds bring on scours, often fatal.

Do not fail to return regularly to the stallion all mares that are being bred. This is where many make a failure of horse-breeding—a failure which is often wrongly blamed to the mares or stallions.

Fed alfalfa in reasonable rations of from ten to twenty pounds a day, livery horses may be kept in vigorous thrift with a small additional quantity of grain, and thus a saving be made of twenty to thirty per cent. in cost of maintenance. In the alfalfa districts there may be found many liverymen who, having had experience with alfalfa hay, feed their horses little of anything else. In the last few years there has been a growing demand for alfalfa hay for southern towns and cities.—From Coburn's "The Book of Alfalfa."

Grass for the Horses.

Of all the farm animals, none enjoy a bite of young grass more than the horses. During the spring seeding, if stopped at the end of a field, they are quick to get a mouthful of the grass if opportunity permits. A taste of the sweet, palatable grass seems to spoil their appetite for dry feed, which they do not relish as well during the spring months as at other seasons. Many horses are content with grass the year round. True, a horse will eat tender grass cannot do as much real work as one on dry feed, but there is no doubt better for the animal's system than a

spring renovating, accomplished without drugs, but rather by a liberal use of nature's best animal food, pasture grass. Grass acts as a mild laxative to the horse, but is sufficiently marked in its action to remove all waste material from the animal's digestive tract and tone up the system. Care must be taken in turning horses that are being worked daily to grass, and there is no better time for this than Sundays. Keep the horse in the stable Saturday night, and turn him out on Sunday morning. He is rested, is not overheated and fatigued, as on the night after a hard day's work, and is in a better condition to make good use of the new feed. A tired, worn-out, overheated animal often gives trouble when turned on pasture grass from indigestion. Stable all the work horses at night, after their first day on grass. As the nights get warmer and the rush of work becomes less strenuous, and the horse is more accustomed to the grass, he can be left out, but should be housed during cold, damp or wet nights. Of course, when required to work, grain and a little dry feed are necessary. It is a mistake to think that horses can be called upon to do hard work without grain, even if grass is abundant.

The Mare at Foaling, and the Care of the Colt.

Foaling time should be prepared for by giving the mare regular exercise or light work, and a liberal supply of food of good quality during the whole period of gestation, but especially during the last few months. All breeders have noticed that the mare used in this way usually produces a stronger, smarter foal than the one which has been pampered and kept in idleness, from the mistaken idea that sustaining herself and foetus is quite sufficient work for her to perform. As the period of parturition approaches, special attention and care should be given. It is well to work or exercise her gently every day until definite symptoms of approaching parturition are noticed. As the period of gestation is variable in different individuals, and often in the same mare in different seasons, we cannot tell with reasonable certainty when parturition will take place. In round numbers, eleven months may be said to be the average period, but observation has taught us that this is by no means constant, and that the period varies from ten to thirteen months; hence, it is wise to be prepared for the event at any time after ten months.

When the mare is to foal in the field, it is well to have her alone, as other horses are liable to excite her, and may cause trouble. It is also wise to select a field without open water or swampy places. Most mares foal in the stable, in which a roomy, well-ventilated and well-lighted box stall should be provided. It is unsafe to allow a mare to foal when tied, as she is unable to give the foal the necessary attention; and even when it is strong enough to require no special attention, it is very liable to walk into the stall of another horse, and, while looking for nourishment, to be injured or killed. The stall should be thoroughly cleaned out daily, the floor swept and sprinkled with slacked lime before fresh straw is spread. The lime is a good disinfectant, absorbent and deodorizer. It destroys germs that are liable to cause trouble. Other means of disinfection, as whitewashing, washing with a 5-per-cent. solution of carbolic acid, etc., are also wise, but if the lime be freely and daily applied, other precautions are seldom necessary. The stall should be as large as possible, and contain no feed boxes or mangers in which the foal might drop in case the mare foaled while standing.

The ordinary symptoms of approaching parturition are familiar to all breeders. The abdomen becomes more pendulous, the mamma enlarge, the teats become distended, and in many cases a little of the fluid exudes and becomes dessicated or dried, like a small portion of wax; the muscles of the croup become less prominent, the lips of the vulva enlarge, and in many cases become slightly parted, and in some cases a viscid discharge is noticed. These, we say, are the "ordinary symptoms," but they are not always noticed, and in many cases none of them well marked. The appearance of wax on the teats is often absent, and in some cases appears only a few hours before parturition, but usually two or three days, and sometimes a few weeks. In some cases the teats do not fill at all until after delivery, and even the mammae are sometimes only slightly enlarged. Some mares carry their fetuses very lightly, and even the pendulous condition of the abdomen is not well marked. We claim that it is wise to keep close watch upon a mare that is about to bring forth young, but when we know that definite symptoms of approaching parturition are often absent, and that the period of gestation is so variable, we are forced to admit that in many cases the attendant does not know when to watch. The symptoms of immediate parturition are an excited, nervous condition of the animal which is more marked in a primipara, or a mare

producing her first foal, than in others). Labor pains are evidenced by uneasiness, probably the mare lying down, elevation of the tail, and straining more or less well marked. These pains are spasmodic, and in most cases progressive; that is, the periods of ease between pains become less, and the periods of pain more severe and prolonged, until the act is accomplished, which is sometimes only a few minutes, and sometimes lasts for hours. In rare cases there are "false labor pains," more or less severe, and then passing off and not reappearing for a variable length of time, as a few days, or longer.

While, in a large percentage of cases, watching is not necessary, the mare producing and attending to her foal without extraneous assistance, there are many cases that have proved fatal to foetus or dam, or both, that might have been prevented if an intelligent person had been present to rectify conditions or assist, or send for an obstetrician, if necessary. The person in attendance should be intelligent and careful; he should recognize that one of the most critical periods of the mare's existence is approaching, and, of course, it is also a critical period for the foal. The mare is liable to lie down with her hind quarters so close to the wall that there is no room for delivery, in which case the attendant can either move her a little or force her to rise. It, of course, is wise for the attendant not to interfere, unless such is necessary. In most cases with primipara, and often with mares that have bred before, it is wise for him to keep well out of sight of the mare, but in such a position that he can observe her, as his presence is apt to increase her excitement; while, in rare cases, the presence of a person well known to the mare appears to have a quieting effect.

In some cases delivery is very easy, and the foal is born enclosed in the membranes or after-birth. If this is not ruptured and removed from the foal's head at once, it will suffocate. Instinct is supposed to teach the mare to rupture this with her teeth, but it must be done promptly, and she often lies for a few minutes after delivery, and when she rises it is too late.

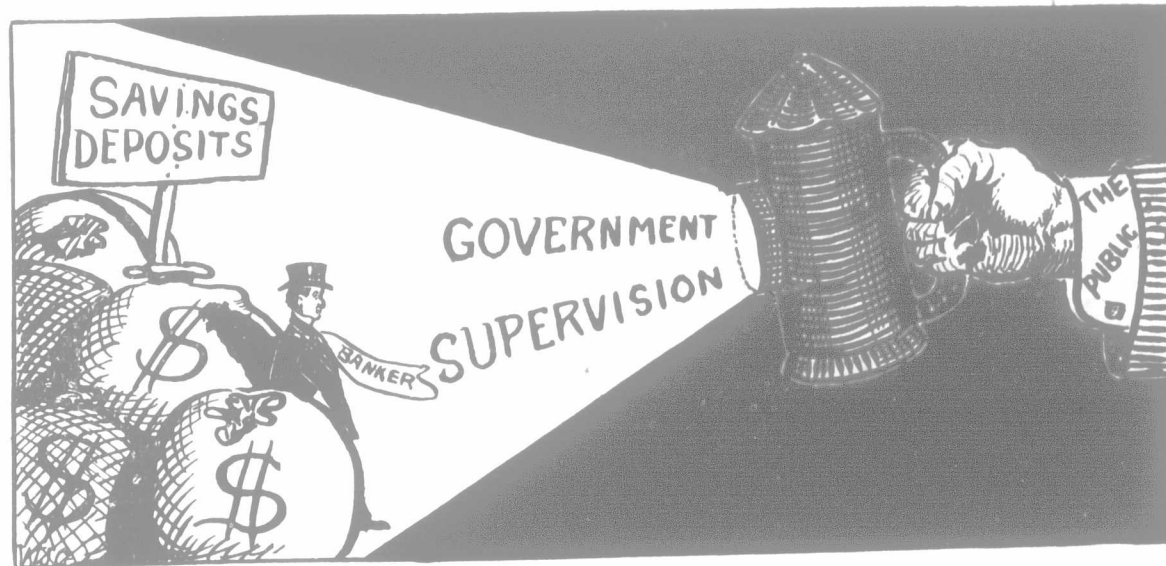
The attendant should be supplied with a knife and a strong, thick cord or string that has been soaked in a 5-per-cent. solution of carbolic acid, and also with an antiseptic liquid, preferably a solution of bichloride of mercury, 15 grains to 8 fluid ounces of water. A ten-per-cent. solution of formalin, carbolic acid, or one of the coal-tar antiseptics, will answer the purpose. If the umbilical cord be not severed during parturition, it should be tied about an inch from the abdomen with the sterilized string, and severed about an inch below that by a scraping motion of the knife, and in any case dressed as soon as possible after with the antiseptic solution, and three or four times daily afterwards until the umbilical opening has healed. This is a precaution to prevent joint-ill. If labor pains have been present and well marked for some time, and no appearance of delivery is indicated, or if part of the foetus is visible, but no further indication of delivery, the presence of an attendant is necessary, and it is his duty now to interfere and ascertain what prevents delivery. The trouble will be either too great volume of the foetus, compared to the calibre of the genital passage, a lack of sufficient expulsive force, malpresentation of the foetus, or obstructions in the genital passage. It is the duty of the attendant to ascertain what the cause is. If the presentation be normal and the passage normal, sufficient traction should be applied to the foetus to effect delivery. This traction should be applied during the expulsive efforts of the dam, unless she be so exhausted that she ceases to try, in which case traction must be given, irrespective of maternal efforts. When the cause of non-delivery is malpresentation of the

foetus, or a diseased condition which increases its volume, as ascites or dropsy of the abdomen, hydrocephalus or dropsy of the brain, or abnormal condition of the genital passage, the attendant, after examination, must decide whether he has sufficient knowledge and skill to rectify the abnormality and deliver; and if not, he should secure the services of an obstetrician as soon as possible. In such cases, the difference between neglect to assist or unskillful interference, and prompt, skillful interference, means the life of foetus or dam, or both.

As soon as expedient after birth, the afterbirth and all wet and soiled litter should be removed, and a fresh supply of clean litter, preferably short or cut straw, should be provided. Efforts should be made to get the dam on her feet and to attend to the foal. If she refuses to do this, the attendant should wipe it dry with cloths or wisps of straw. If the foal be strong, it will soon rise and commence to search for nourishment, in which case it is not wise to interfere, unless the dam be cross, in which case it is necessary to apply a twitch, and in some cases get assistance to control her until the foal nurses. If the foal be weakly, and not able to rise, it should be assisted to its feet in about two hours after birth and guided to the teat, and care should be taken to see that it gets nourishment every hour until able to help itself. If the afterbirth has not been expelled in at most five or six hours after delivery, an obstetrician should be sent for. As soon as the foal has been attended to, and sometimes even before, the mare should be given a drink of water from which the chill has been removed, and this followed by a feed of bran and chopped oats, dampened with warm water, and, of course, if the weather be cold, she should be kept comfortable and excluded from drafts or other conditions that might cause a chill. She should be given at least two weeks' rest from work after delivery, and fed well on milk-producing, laxative food. When the mare is to be bred again, the common practice of breeding the ninth or tenth day after foaling usually gives good results. Theoretically speaking, this may be said to be a mistake, as it appears unreasonable to expect the uterus to have regained its normal condition in so short a time, but the results may be said to justify the practice; and when a mare shows oestrus in eight to ten days after parturition, it is good practice to breed her, unless there be a vaginal discharge or some laceration that has not healed, in which case it is usually wise to not breed her until the next period of oestrus.

CARE OF THE FOAL.

As with the mare, in a large percentage of cases, the foal will take care of itself, and no extraneous interference is necessary. At the same time, it is probably wise for the attendant to examine the foal, and at least take the precautions mentioned to avoid joint-ill. This disease is due to a bacillus that gains entrance to the blood through the navel opening either during or after delivery. The germ exists in the earth, the stable and, in some cases, doubtless is present on the skin or in the hair of the dam, and may come in contact with the umbilical opening during the act of parturition. Hence, the early application of a strong antiseptic, as a solution of bichloride of mercury, 15 grains to an ounce of water, will probably destroy the virus before it gains the circulation, and the frequent application until the part is healed tends to prevent infection after birth. While this precaution is not necessarily effective, the disease seldom occurs where it has been taken. The attendant should examine all external openings to see that they are normal. He should carefully observe the excretions. If urine be not voided in a few hours after birth, a catheter should be passed to break down a false



Let Us Have the Light.

He should not object, and our sleep might be easier.

membrane that prevents its escape from the bladder. In all cases it is a wise precaution to see that the meconium (the contents of the bowels at birth), which exists in dark, almost black, lumps, of about the consistence of putty, are voided. Retention of this material causes the death of many foals. The lumps are often so large that the foal has not sufficient expulsive power to expel them. The administration of purgatives to cause their expulsion in most cases complicates matters, as the trouble exists in the rectum, and medicines given by the mouth have practically no effect upon the contents of the rectum; hence, by liquifying the contents of the small intestines and increasing peristaltic action, without removing the obstruction, complications must arise, and in such cases, if the meconium be expelled, diarrhoea is likely to occur as the result of the medicines given. On general principles, it is wise to avoid giving even small doses of laxatives or purgatives to a newly-born foal. In cases where milk has escaped from the mare for a few days or longer before foaling, the first milk, which is called colostrum, and has a laxative action, is lost, and the administration of about a tablespoonful of castor oil to take the place of the colostrum, is advisable; but in most cases the safer way is to remove the meconium mechanically. The attendant should cut the nail of the forefinger, oil it, and insert it into the rectum, and carefully remove all the fecal matter he can reach. Follow this by the injection of 4 to 6 ounces of equal parts of raw linseed oil and warm water, well agitated to insure mixture, or 1 part glycerine to 4 parts water, or even warm water containing a very small percentage of soap. This removal of the meconium should be repeated every four or five hours, until the faeces that are passed are yellow, which indicates that the meconium has all been expelled and the faeces formed from milk are passing. This is a precaution that should be taken in all cases where spontaneous free passage of the meconium is not noticed.

If from any cause diarrhoea occurs, prompt attention is necessary in order to save the colt. In such cases the diarrhoea should be checked promptly. The common practice of administering castor oil or other laxatives, with the idea of removing from the intestines some irritant which is causing diarrhoea, has, in the experience of the writer, generally been unwise. In such cases, 40 to 60 drops of laudanum, given in a little of the dam's milk every four hours, or even three hours if the case be urgent, until diarrhoea ceases, will generally be effective. If the patient be very weak and refuse to nurse, it must be sustained by administering a few ounces of the dam's milk, to which has been added a stimulant of say a tablespoonful of whiskey, about once every hour. If the colt be too weak to stand, and at the same time the secretions and excretions be normal, it should be helped to its feet and assisted to nurse about every hour, until it can help itself. If it refuses to nurse when held up, there is little chance for it, but even in these cases the administration of milk out of a bottle or with a spoon in some cases is successful.

Especially, when the dam is required to work, it is well to teach the foal to eat as early as possible. A little trouble will soon teach it to take a little chopped oats or oatmeal from a man's hand, and as it acquires the taste will take more, and at two or three weeks of age will eat out of a vessel or feed-box. This assists greatly when the dam is away for several hours at a time in the field. We think, of course, that it is not wise to allow the foal to follow the dam all day in the field; neither is it safe to allow it to nurse when the dam comes to the stable, probably quite warm, after half a day's work. In such cases some milk should be drawn and the mare allowed to stand for a few minutes before the foal is allowed to nurse. We should have stated earlier that it is a wise precaution to thoroughly wash the mare's mammae and teats with an antiseptic, as a 4-per-cent. solution of creolin or other coal-tar antiseptic, and wipe dry before the foal be allowed to nurse at first. This is with the idea of removing any injurious germs that may be on the gland or teats.

In case the mare should die during parturition or soon afterwards, or have no milk, or be vicious or from other causes can not or will not nurse the foal, the problem of rearing it becomes a somewhat serious matter. If another mare that has recently foaled and has the foal, or is able to rear two, can be persuaded to adopt the orphan, of course, it is the better plan. Some claim that a freshly-calved cow often makes a satisfactory foster mother, and it might be worthy of a trial. The ordinary method is to rear the foal on cow's milk, and this can be done if the necessary precautions are taken. It is well to select a cow that has recently calved, if possible, and also, when possible, give the foal the milk from some special cow. Cow's milk contains more fat and less sugar than a mare's milk, and, in order to simulate nature as nearly as possible, the cow's milk should be diluted with one part water to three parts milk, and a tablespoonful of granu-

lated sugar added to each pint of this mixture. It should always be given at about 100 degrees Fahr. It can be given out of a bottle with a rubber nipple, or the foal taught to drink out of an open vessel, which is generally considered the better method. For the first two or three days the foal should be fed from $\frac{1}{2}$ to 1 pint of this, according to size of foal and its apparent appetite, every hour, then the amount allowed and the intervals between meals gradually increased, until four meals daily are all that will be necessary. The foal should be taught to eat finely-chopped oats or oatmeal as soon as possible, and in most cases it is safe to allow it all of this that it will eat; but if it be noticed that it will eat more than it can digest, without showing distress, of course, the amount given should be limited. When grass is procurable, the milk and grain ration should be supplemented by it, preferably picked by the foal in field or paddock; but if this be not expedient, fed out of a manger or on floor of box stall. It is probably needless to say that exercise is necessary, or at least very desirable.

... WHIP.

Veterinary Prescriptions for Farm Use.

ASTRINGENTS.

Astringents are medicines that contract living tissue, hence check discharges. When given internally, they check discharges from the mucous membranes, and are indicated in excessive mucous discharges from any organ. Some medicines not really astringent exert astringent actions; for instance, opium arrests mucous secretion, chalk exerts a dessicant or drying action; hence, while neither is astringent, each practically acts as such. For cases of diarrhoea, the following gives good results:

Powdered opium—2 drams.
Powdered catechu—4 drams.
Prepared chalk—4 drams.

Mix with a pint of cold water, and administer as a drench, or put into a capsule, and administer every four or five hours until diarrhoea ceases. The above is the dose for an ordinary-sized horse or cow; for smaller animals, the dose should be in proportion to size. In chronic nasal discharges, as in case of nasal gleet, the sulphate of copper, given in 2-dram doses two or three times daily, gives good results in the larger animals.

STYPTICS.

Styptics are medicines that check bleeding. When bleeding is taking place from a large internal vessel, the administration of medicines has no effect, but when from quite small vessels, as in cases of bloody urine or bloody milk, it is different. The tincture of iron, given in 1 fluid-ounce doses, mixed with a little cold water, two or three times daily, probably gives better results than other styptics. Small animals, of course, are given doses according to size.

ANTISEPTICS.

Antiseptics are given in cases of blood-poisoning, or where this condition is anticipated. The hyposulphite of soda is a cheap non-irritant and tolerably reliable antiseptic. It is given to the larger animals in 4 to 6 dram doses, three times daily. Probably there is no better antiseptic than carbolic acid, but it must be carefully used; 30 to 40 drops, diluted in at least one-half pint of water, may be given to the larger animals three times daily.

TONICS.

Tonics are medicines that increase appetite and general tone. The best results are obtained by a mixture of vegetable and mineral tonics. For the larger animals, the following is largely used: Sulphate of iron—3 ounces.
Powdered gentian—3 ounces.
Powdered mix vomica—3 ounces.
Mix and make into 24 powders, and give a powder three times daily.

STIMULANTS.

Stimulants promptly but temporarily increase the action of the heart and nervous energy. They are given in cases of exhaustion from any cause, when the circulation is weak and nervous energy low. The different liquors act well, the dose, of course, depending upon the percentage of alcohol they contain. Sweet spirits of nitre is one of the most reliable stimulants given to the larger animals in 2-ounce doses, diluted with water, and given every two or three hours, as needed. Aromatic spirits of ammonia in 1-ounce doses, diluted with water, given in like intervals, also, acts well.

SEDATIVES.

Sedatives are the direct opposites to stimulants, and should be given only in cases of

the heart's action is full and bounding. The condition of the circulation should always be ascertained before administering a sedative, as, if given when the heart's action is weak, it may prove fatal. Blood-letting is the most direct sedative. Of medicinal sedatives, aconite is the one mostly used. It is generally used in what is commonly known as "Fleming's Tincture of Aconite." Of this, the dose for the larger animals is about 15 drops, well diluted with water, and repeated every two or three hours until the desired action is established. It would be wise to leave the administration of sedatives to those who have a technical knowledge of their actions and indications.

VERMIFUGES.

Vermifuges or vermicides are medicines that cause the expulsion of worms from stomach or intestines. For the larger classes of animals, the following is a favorite prescription for an adult, ordinary-sized patient:

Sulphate of copper—3 ounces.
Sulphate of iron—3 ounces.
Tartar emetic—3 ounces.

Mix to make into 24 powders; give a powder every night and morning, and follow the last powder by a purgative.

Oil of turpentine, commonly called "spirits of turpentine," is a good vermifuge. It should always be given after the patient has fasted for ten or twelve hours, and is generally mixed with six to eight times its bulk of raw linseed oil or sweet milk. For the larger animals, the dose is about 2 fluid ounces; sheep and pigs, $\frac{1}{2}$ to $\frac{1}{4}$ fluid ounce; dogs, 10 to 30 drops. For dogs, better results are usually obtained by giving areca nut after fasting, the dose being 2 grains for every pound of the animal's weight.

FOR BLOATING.

In cases of the formation of gases in stomach or intestines, called tympanitis or bloating, the oil of turpentine probably gives better results than any other drug given by the mouth. It is exceptionally valuable in cattle and sheep, in which the gases exist in the rumen or paunch, into which the medicine is directly introduced. Even in horses, where the gases often exist in the large intestine, it gives good results. It should always be well diluted with raw linseed oil, or, when that cannot be obtained, with sweet milk, melted butter or lard, or even with water, and kept well shaken. The dose for horses and cattle is 2 to 3 fluid ounces; sheep and pigs, $\frac{1}{2}$ to $\frac{1}{4}$ fluid ounce. The dose may be repeated in two hours, if necessary. Carbonate of ammonia, or bicarbonate of soda (baking soda), acts fairly well when oil of turpentine cannot be procured. Of the former, about 1 ounce is given to the larger animals; of the latter, about 2 ounces, diluted with water.

... WHIP.

Kindness Rather Than the Whip.

Editor "The Farmer's Advocate":

Having seen an inquiry in "The Farmer's Advocate" regarding the breaking-in of a mare which got the habit of kicking when the trace touched her leg, I venture to give my experience with an exactly similar case. An attempt was made to break her in as a three-year-old by hitching her to a wagon, but when turning the tongue touched her leg, and she kicked over it, broke it, the harness and, in fact, everything within reach, finishing up, finally, in a woven-wire fence. From this the teamster extricated her, tied her to a fence post, and proceeded to "lick the tar" out of her with a big black-snake whip. After that she was allowed to go idle for about six months, no attempt being made to break her in all winter. In the spring she was hitched to the plow, and liberal use made of the same whip, with the result that she kicked on the least provocation. It was, in fact, hardly safe to go near her when she was hitched up. That spring she was only worked for about a week, and then allowed to run loose on pasture all summer, until it was found necessary to work her for fall plowing.

While she was in the pasture field, I had often gone up to her and petted her, and had always found her gentle and, in fact, rather anxious to be petted; so I decided, when I was told to work her, to try the "kindness" treatment. I hitched her up one morning and took no whip. She started up without trouble, contrary to all the warnings I had received, kicked once or twice when the trace came tight round her leg, but soon settled down to work as well as any horse. That same day, in the afternoon, I hung my lines on the lever of the plow and walked behind, as the weather was cold and also I wanted to try the "kindness" treatment for the rest of the fall and all this spring, without any trouble.

Naturally, I am a firm believer in the kindness treatment, and am of opinion that a whip should very rarely be used, and never in moments of anger.

A GREEN SCOTCHMAN.

Green's Coll. Man.

How Sore Shoulders Have Been Cured.

By way of variation from the usual line of advice telling how to prevent or treat sore shoulders in horses, we reproduce from our Western contemporary the subjoined communication, by J. P. Aitcheson, of Manitoba, relating how such troubles have actually been cured, and offering some very common-sense suggestions to teamsters. While not necessarily endorsing everything he says, we commend the article for careful perusal, emphasizing at the outset one point he makes, namely, that different cases require widely different measures. We might also state that, by way of a lotion for toughening the skin and treating swellings, the one so often recommended in these columns is hard to beat. It consists of sulphate of zinc and acetate of lead, one ounce each in a pint of water. For applying to raw spots before putting on the collar, there is probably nothing better than the standard oxide-of-zinc ointment, procurable at any druggist's. The simplest remedies are usually best. The emphasis placed by Mr. Aitcheson on snug-fitting collars and hames, and on moderation when putting horses to work in the spring, is not a whit too strong. Horses by the tens of thousands are being worked in collars that are too large or otherwise ill-fitting, and a proper fit of collars and hames very frequently ends a chain of trouble. The quoted article follows:

"Sore shoulders are quite common; in fact, all too common at this time of the year, and it also goes without saying that in many cases ignorance is the cause. The writer has in mind a case of a friend coming to him about five and a half years ago and asking advice about a mare with sore shoulders that refused to heal. The remedy advised was a new collar, not so wide, and of the Sweeney pattern. When seen six months or so later, and asked about the mare, the reply was, 'Fine, sores healed right away when I got the new collar.'

"I have had horses with just common raw sores that were easily healed when given attention; others that seemed to break out in pimples on the shoulders, these enlarged, broke in time, and healed easily; another had a sort of tumor that bothered more or less all one summer. At last it was lanced, a tumor cut out, and with care and attention, this soon healed, but the horse was idle at a very valuable time, in the fall. In another case of a little different nature, the lump was blistered, this was afterward lanced and a seton inserted, and after a period of two or three weeks' idleness, the horse put to work. I believe, in some cases where tumors form, the cause can often be traced to a certain amount of poison of some sort entering through a small abrasion of the skin. Generally speaking, sores are caused either by scalding or by the collar pinching the skin, and sometimes by another horse biting him on the shoulder, or it may be an ill-fitting collar or improperly-fitting or adjusted hames.

"A proper-fitting collar is an absolute necessity, but a properly-fitted hame is just as necessary. One make of hames in common use a few years ago would fit no collar. I believe the steel hame is a big improvement on the ordinary wood-hame.

"To cure a sore shoulder, remove the cause, which is sometimes difficult for a man of limited experience to do. I cured a team that was bothered with pimples, which afterwards broke and then healed, by putting on deer-hair pads. In the case of a scald, if noticed in time, a raw sore can be avoided sometimes by bathing well with the following mixture, slightly warmed and giving one day's rest: Vinegar, one pint; saltpetre, one-quarter pound; the whites of three eggs; shake well before using. Sometimes a cure can be effected by merely putting on a pad and using almost any of the prepared gall cures, or carbolic and water, one to ten. Apply the carbolic water with a rag, and about ten minutes after apply a light dressing of vaseline. I once cured a nasty case of sore neck in the following way: There had been a sit-fast, and this was removed with a pair of blacksmith's pulling pincers. The remedy was simply dry sulphur dusted in the sore before harnessing, then a small box of it was carried in the vest-pocket and some dusted in three or four times every half day; at night the sore was washed with warm water, to which carbolic soap had been added. Then a little carbolic water was put on, and that finished that day. The horse worked every day except Sundays, and the sore healed rapidly, and all that was used was the sulphur, as above, and a zinc safe in the collar.

"To avoid sores, clip your horses to prevent profuse sweating, and work colts all winter, giving them all the light work possible to get them accustomed to the harness. See that none of your horses are overdriven the first few days, watch their shoulders, stop and lift the collars quite frequently. Even if the horses are in the field for eight hours the first few days, if they do a small half-day's work they are doing enough.

To avoid sores, your collar must fit your horse, and your hames fit your collar; a poor-fitting collar and a badly-fitting hame make a horrible combination. Did you ever wear a badly-fitting shoe and then put on a pair of tight rubbers and start out to walk ten miles? Just try it once and then think of the poor horse with that combination, who cannot tell you how he suffers. Horses 'hit the collar' in so many different ways that it is rather difficult to lay down any hard-and-fast rule to go by in fitting collar and hames. Sometimes the draft should be raised a little, sometimes the reverse, if the collar is just a little wide and it happens to be well worn, draw your hames in a hole at the top, and draw as tight or tighter, if possible, at the bottom. A safe rule for any man to follow when buying a new collar is to take your horse to the harness shop and have him fitted properly; for remember, collars for horses are, like boots for men and women, made in different widths. Because your horse takes a twenty-one-inch collar, it does not necessarily follow that any twenty-one-inch collar will fit him. Your horse may want a full sweeney or a half sweeney; they are more expensive, but think of the horse's comfort, not your purse, for in most cases he is the willing lad that makes your money. Never, under any circumstances, buy a collar that is too wide, and when buying, remember that a collar will stretch a good inch in length after it is worn for a time—at least a long-straw will—I have had no experience with the short kind. If your collar is too long, get a zinc safe and put in the top. I have seen an inch or more cut off the top, and the collar sewn up, but I always considered this a vicious remedy. Never allow the collars to be changed from one horse to another when working satisfactorily. Always buckle your collar on taking it off, as this tends to retain the collar in its proper shape. Sometimes a good horseman will get a horse that has been through bad hands, and it seems impossible to keep his shoulders right. For such cases I believe nothing can approach the 'humane collar.' They are a crazy-looking affair, but I can assure the most sceptical that they are all right. A horse can draw as much and apparently as easy case of a friend coming to him about five and a half years ago and asking advice about a mare with sore shoulders that refused to heal. The remedy advised was a new collar, not so wide, and of the Sweeney pattern. When seen six months or so later, and asked about the mare, the reply was, 'Fine, sores healed right away when I got the new collar.'

How to Improve the Horse.

Improvement in the average quality of horses rests with the mare-owners, and the sooner they come to realize and to appreciate the value of, and to demand the services of good, sound, pure-bred stallions, the more certainly and rapidly will the general average of our horses be improved. It is intensified inheritance, resulting from many generations of breeding the best to the best, using no outcrosses, and always with the same ideal and purpose in mind, that enables the pure-bred to stamp his characters upon his offspring. The grade with two, three or four top-crosses lacks this intensified inheritance of characters, and his diversified inheritance precludes his use as a sire. These are facts, not theories.

That the foregoing is a true state of affairs, the Circular of the Kansas State Agricultural College, from which it is taken, cites the case of a recent farm sale, where colts rising three, uniform in quality, ready to do considerable work this season, sold at an average of \$76 per head. Colts rising two averaged \$46. The sires of these colts were ordinary grade stallions whose service fees ranged from \$6 to \$9. Weanlings from the same mares, but from a very excellent pure-bred stallion, standing for \$15, sold for \$101, this being \$25 per head more than those rising three years old brought, due entirely to the influence of a good sound pure-bred sire. The service of a grade or scrub stallion is expensive, if given free of charge. On the other hand, do not breed to a stallion simply because he happens to be registered.

The same pamphlet urges horse-breeders to beware of stallions hereditarily unsound, for it is just as unprofitable to raise unsound horses as it is to raise scrub horses. Such unsoundnesses are physical characteristics, and as such are transmitted to the offspring. Seek and patronize the stallion in which there is combined soundness, good individuality, and good breeding. All these must be combined to insure success. The good sound, pure-bred stallion is a public benefactor; the scrub stallion is a public nuisance.

The following unsoundnesses should be carefully avoided: (1) Hereditary unsoundnesses, involving highly-organized structures, such as defects of vision (cataract, amaurosis, periodic ophthalmia), roaring, heaves, ridgeling, and string-thalnia; (2) hereditary unsoundnesses, characterized by bony enlargements—bone spavin, ringbone and sidebone; (3) hereditary unsoundnesses involving

softer structures—bog spavin, thoroughpin and curb; (4) unsoundnesses not quite so strongly hereditary—rheumatism, melanotic tumors, cribbing and weaving; (5) poor conformations of all kinds.

To What Stallion Shall I Breed?

Too many men, offering as an excuse that they are too busy, fail to have any well-thought-out plan relative to the breeding of their mares. As a consequence, suddenly realizing, in the midst of their spring's work, that this or that mare should be bred within the next few days, they search to find where the nearest stallion is located, avail themselves of his services, and give the subject little or no thought until the foal arrives. Then they generally find themselves the proprietors of puny colts, become disgusted, and, declaring their dissatisfaction with the breeding business, abandon it.

There are several factors which a man should weigh well in the selection of a sire for his colts. The type must be carefully considered. There is a market outlet for drafters, saddlers, coachers, roadsters, and various other sub-classes. The particular outlet which each farmer may have may be a determining influence in his selection of type. Draft horses are work horses, and their value to a large extent depends upon their ability to fill this demand. Saddlers, coachers and roadsters are to a large extent pleasure horses, though the roadster and saddler also serve as laborers. As a consequence, more emphasis in these classes is put upon beauty, style, attractive action, schooling and manners. The farmer who is so situated that he may train, develop and market horses of these classes may find it more profitable to produce them, but generally it will be found that the production of work horses is better adapted to general farm operations.

Often the type of mares which one has determines the type of stallion to which he shall breed. If one's mares are of draft breeding and character, it would be next to folly to cross upon them stallions of the other types, and the reverse is equally true. One may, however, dispose of his mares, replacing them by others of the type which he prefers to breed. If one has a decided preference, this would probably be his best course of procedure. Whatever the situation, a man should never, in the execution of his work, lose sight of the importance and value of type, and of sticking to it.

Having settled the matter of type, the question of breed faces the horse-owner. Generally, the breed does not matter. There are ardent adherents for all the breeds. Each breed has some particular adaptations, but they have all been pretty well tried out in this country, and, provided they are superior individuals of approved market type, the breeder may largely follow his own personal preference in the selection of breed. It is also absolutely essential, however, that the stallion be of excellent individuality. There have been mediocre stallions that have sired excellent progeny, but they were distinctly exceptions.

Though the breed is not essentially important, breeding is. The stallion that is used as a sire should be pure-bred. Horse-breeders have been very much slower than other breeders to recognize the merit and importance of purity of breeding in sires. The man who claims to be a progressive dairyman, yet who used a scrub or grade bull, does not generally get much recognition outside of his own family circle as an intelligent dairyman. The scrub or grade bull has been given a long farewell. But the horsemen have not advanced thus far. Before farmers can hope to raise successfully good horses of approved market type, they shall have to cease patronizing grade horses. Grade stallions frequently are good individuals, otherwise they would not be kept entire; but, because of their impurity of breeding, when coupled with grade or scrub mares, there is a preponderance of inferior blood, which insures the inferiority of the majority of colts thus produced.

If there were more pure-bred stallions within the country, for the sake of the horse-breeding industry it would be well to debar all stallions of impure breeding from public service. Because of their lesser value, their owners can generally afford to offer them for service cheaper and at more lenient rates; thus they perniciously compete against pure-breds. Some plan whereby they would be gradually eliminated and replaced by pure-breds would surely be of great benefit to the industry.

Yet, there are men who stoutly maintain a preference for grade stallions as sires. This is hard to account for. Generally, at the bottom of such a choice is the foundation of cheaper service. Because a man can save five or ten dollars on a service fee, is poor defence of such a policy. Back of the pure-bred, providing he is a good individual (and that should always be insisted upon) is a long and strong line of individuals of superiority that have passed from generation to generation its legacy of vigor,

strength, endurance, size and type. Back of the grade one goes but a very few generations until he reaches the slough of the mongrel world; from this source comes the inheritance of the progeny of the grade stallion. When the size, type, quality, endurance, and most of the points of importance are in favor of the son of the pure-bred sire, there can be little reason for saving five dollars on the service fee. It is a frequent opinion that grade stallions are more enduring, that they are more vigorous, and have greater vitality than pure-breds. This is sometimes true. Pure-breds are too often over-pampered, too closely stabled, given insufficient exercise, and otherwise abnormally and unreasonably treated, so that their vigor, health and fertility is seriously affected. This is no fault of the horse or of his breeding. On the other hand, the scrub stallion is put to work, frequently has to rough it, gets plenty of exercise, fresh air, and is seldom overfat; consequently, he is full of vigor, and is fertile. Then, too, these scrubs or grades are tenacious of life; they have that virtue frequently, if no other. The bronchos of the West, the Shetland and Iceland ponies, and in truth, all those types that have not been fully matured and developed, show that tendency of life which we call vigor. But with the vigor of the scrub goes his deficiencies and his mongrel inheritance. Most men see their merits, but forget their accompanying weaknesses.

In the choosing of a sire, then, one must stick to his chosen and best-adapted type; he must ever demand superior individuality, and with equal determination he must demand purity of breeding, if the very best results are to be obtained.

PROF. J. A. McLEAN.

Mass. Agricultural College.

LIVE STOCK.

Provide the pigs which are running in the paddock with a shelter from the hot summer sun.

No animal which is not of high quality should be kept for breeding purposes. Quality is the guide of the feeder, the butcher and the consumer.

When purchasing new stock of any kind, care should be taken that no animals not in good health or showing weak constitutions be added to the present stock.

The male lambs of the grade flock should be castrated. Wethers sell for higher prices than rams, feed more readily, and are not so difficult to handle in the pastures.

Avoid keeping too many pigs in one pen or paddock. It is a rule with all classes of live stock that large numbers kept together make success more difficult to attain.

The wise shepherd always keeps a young flock. To do this, some ewes must be turned off annually. Unprofitable breeders, and old ewes not raising lambs can be profitably disposed of during the flush of grass.

The higher the development of the herd, the more difficult is the task of selecting a suitable sire for it. Breeders are always aiming towards improvement through the sire, and, as the herd gradually rounds into form, closely approximating the perfection at which they are aiming, the chance of a margin of superiority in the bull becomes less and less.

Some knowledge of hogs and their rearing is essential, but an inexperienced man with an open mind may accomplish more. He has many sources of information, his neighbors and other breeders who have had practical experience, the standard and current literature on swine, the work of the state agricultural departments and stations, the agricultural press, meetings of breeders, fairs, exhibitions, and others. No one knows a thing about swine husbandry, but anyone who is open to knowledge can find abundant opportunity to learn. An excellent principle worth remembering in connection is that wrong practices, and acquired, are difficult to overcome, just as wrong traits bred into a herd require a long time for eradication. Slow, but sure, is a good motto for the swine-breeder.—[From Coburn's "Swine in America."

Rape as a Pasture Crop.

Editor "The Farmer's Advocate":

The usefulness of many crops which are well suited to growing in Ontario is unknown to a large number of farmers, hence many useful crops are not extensively cultivated. Rape may be numbered amongst this class. It was clearly demonstrated, during the drouth of last summer, that the farmer cannot afford to depend upon his clover and hay fields alone for pasture. Fields which are intended for haying purposes during the following summer should not be pastured too closely in the fall. If pastured too closely in the fall, and then no protection left, the stand will be weakened by many plants dying. In some parts of the Old Land it is the practice never to pasture fields which are used for hay purposes. This may be wisdom, or otherwise, but one thing certain, in these districts the hay crop is usually very good. Then comes the necessity of additional pasture crops being sown. One of the many good pasture crops is rape.

If the commendable practice of using a complete rotation is carried on, rape can be easily worked in. Rape does especially well after sod, so it will be seen that rape can be used to advantage after sod has been plowed down in mid-summer. If no rotation is used, it can be grown anywhere. It is often thought advisable to plow down a crop which has not made a strong stand, but in many cases it is left because the owner does not wish to lose one season with any of his fields, and does not know of a suitable crop which can be grown in such an emergency. In such cases, a catch-crop, such as rape, millet, cow-pease, or vetches, should be grown.

Rape can be sown any time, from early in spring till late in August. It is, therefore, well suited to sowing as a catch-crop or after the hay field has been plowed. If moisture is lacking, the seed should be sown immediately the ground is sufficiently cultivated so that little or no moisture is lost by evaporation. The seed can be sown either broadcast or in drills. If sown broadcast, four or five pounds of seed per acre must be used, whilst only two or three pounds of seed are required when sown in drills. One advantage that is to be gained by sowing in drills is that the crop can be cultivated and hoed, keeping down all weeds, and thus it takes the place of a hoe-crop. Many farmers do not wish to summer-fallow because they lose one season, but the control and eradication of weeds must be obtained by some method. A very good way is to plow early, cultivate thoroughly, and, as the season advances, sow rape. By this method the benefits of a summer-fallow are obtained, without the loss of one season.

When pasturing this crop, care should be taken to prevent animals becoming bloated. Bloating often takes place when the animals are hungry and the rape is wet. When cattle are pasturing rape, it is thought advisable to allow them access to some old pasture. This helps to prevent bloating.

Rape can be fed, with good returns, to any of the smaller farm animals, as sheep or pigs. Under no circumstances should it be fed dairy cows. If fed to dairy cows, it readily taints the milk, and a very poor, undesirable butter is then obtained. Butter from cows which have been fed on rape can easily be detected by the prominent odor and taste which are always present.

O. A. C., Guelph. N. STANSFIELD.

Where Results Clash.

Animal breeding is a science only partially understood by the most observant and studious men engaged therein. The best breeders have an ideal in mind toward which they are ever aiming, but which they are seldom if ever privileged to attain. To further their chances in the pursuit of their cherished type and conformation, a distinct breed is generally selected, and each animal is a pure-bred of an approved type. Year after year, by the use of the very best sires of the best type of the breed, progress is made toward the perfect ideal in mind. Such progress is slow, for the laws of variation and heredity are not to be disposed of in a generation—no, not in any number of generations. No animal is distinct within itself. It must have something in common with some of its ancestors. Many breeders, because of this continual outcropping of undesirable characteristics which predominated in some ancestors of their animals, or to satisfy a whim, or for the sake of curiosity, or from mere carelessness, resort to cross-breeding.

Cross-breeding is the mating of animals of two distinct breeds. Time was when cross-breeding was advantageous. In the days prior to the formation and establishment of our well-known breeds of live stock, when the stock was all of a somewhat mixed origin, and defective in many respects, much was gained by the introduction of different blood. The element entered into the business of establishing breeds to conform to their various ideals, and the result that, after years and years

of breeding, in-breeding, line-breeding, outcrossing and cross-breeding, many distinct breeds have been established, each with its own peculiar size, conformation and qualities. These qualities have been gradually intensified for generations, until, when two animals of a certain breed are bred together, the owner has a reasonable assurance that the offspring is going to conform in a very large degree to the type of its sire and dam.

There are surely breeds enough of all the classes of stock from which to select. But somehow there is a tendency on the part of many stock-owners to resort to violent crosses in breeding, hoping to get a "go between" better suited to their individual conditions than either of the breeds used in the mating. A misfit usually is the result. Here is where a serious clash of results appears. The breeder looks for all the desirable characteristics of both to be prominent in the result of the union, forgetting that in such a case of the crossing of breeds bred for years with a separate and distinct purpose in view, that the undesirable features are far more likely to be prominent in the offspring, and that new qualities, mostly unsuited for the purposes wished, are almost sure to result from the blending of the individual good qualities of each parent. It is a case of the result of years and years of work in establishing distinctive breed characteristics in two breeds coming together in a final clash for supremacy, many of the best of them being ruined, and the undercurrent of common qualities gaining the upper hand, resulting in a very common or "scrub" animal, a hopeless misfit, undoing the work of decades of scientific breeding. Undesirable variations inevitably follow the practice of cross-breeding, and the tendency is toward retrogression. The greater the contrast in the breeds, the stronger is the tendency to revert to primitive types, owing to the war of the best characters upon each other.

Grading is not cross-breeding. It is the use of pure-bred sires of a distinct breed generation after generation, to the improvement of the stock. The sire being pure-bred, has his good characters established to such an extent as to be prepotent in a marked degree when crossed with the grade females. Thus, the tendency is ever toward improvement.

The only place where cross-breeding can be profitably resorted to is in the making of new breeds. We surely have enough breeds now to suit all; therefore, no cross-breeding should be followed. Warfield says that the method of grading, as a subordinate department of cross-breeding, has been found to yield such excellent results that it is likely long to remain the popular process of bettering the character of market cattle.

Development Depends on Pasture

Shaw, in his well-known book, "Animal Breeding," says that, as a rule, the more sparse the pastures, the smaller the breed which they maintain. This arises, first, from the less quantity of food required to maintain a small animal; second, from the less effort required by the same to carry about its less ponderous body in search of food; and third, from the greater ease with which, in consequence, it travels over the relatively large area to gather the food of each meal. In consequence, small breeds can oftentimes maintain themselves in the pink of condition when large breeds of the same species would go on short supplies. When heavy breeds are put upon sparse pastures, they deteriorate not only in size, but also in useful qualities. Rich pastures, and those level in character tend to make small breeds larger when grazed upon them; hence it is usually considered more profitable to stock such pastures with breeds that are already large. But, while large breeds cannot be maintained on sparse pastures without supplementary food, it does not follow that a small breed will not prove profitable on rich pastures. Again, pastures intermediate in character are best adapted to sustain animals intermediate in size, and this fact should be duly regarded in choosing breeds to put upon these.

The character of the pastures exercises no small measure of influence on what may be termed special development of certain parts of the body. When the pastures are rugged, there is an increase of development in the fore parts of the body. The muscles of the forearm and certain other parts of the front quarter being much used in climbing, are strong. There is also decrease, more or less, in the development of the hind parts of the same, notwithstanding that the muscles of the thighs remain large. But too much should not be made of such decrease, since so much depends upon the degree of the climbing.

The relations, also, between the relative proportions of bone and flesh are more or less altered by the character of the pastures. Those deficient in line cannot maintain a sufficiency of bone, hence breeds reared upon them are certain to deteriorate in size and in other useful qualities, notwithstanding that the grasses may be abun-

dant. Such are some of the pastures of the upland regions of some of the Southern States. Kentucky has long been famed not only for the abundance of its blue-grass pastures, springing out of a soil rich in lime, but also for the robust development in form and limb of the animals which feed on these. The pastures of the downs in the south of England, which are short, and sweet, and greatly nutritious, produce an abundance of flesh, but without any excess in bone.

The finer the pastures, the finer the grain of flesh produced. Pastures coarse in character produce flesh coarse in fibre, though it may be abundant. What are known as chalk soils are proverbial for the fine quality of flesh which they produce. The greater the variety of the pastures and the more numerous the aromatic plants which they contain, the more highly-flavored is the meat. In this fact is found one explanation of the high character of the meat of the mountain breeds of sheep, and also of the cattle that feed upon the slopes of the mountains. The same is true of meat grown on certain of the Western ranges. These pastures, however, are usually less succulent than those of the mountains, and the meat, in consequence, is less juicy.

The richer and the more succulent the pastures, the more superior the quality of the wool which they produce in sheep. Such pastures stimulate the circulation concerned in the nourishment of the wool, and also the action of the glands which lubricate it. As a result, the fibre of the wool is strengthened, its length is increased, its lustre is improved, the yolk in it is ample. Its appearance, externally, and especially when the fleece is opened, is healthy and attractive. The fact is also significant usually a short staple of wool and denseness in the same are oftenest found on pastures short and fine, and more length of staple and less density upon pastures more rank and coarse. But caution should be exercised in weighing these questions, lest too much stress shall be laid upon the influence of pastures on the wool, rather than on that of breeds and breeding.

THE FARM.

A Forceful Kent County Pioneer.

The meeting with men who have made their mark in the community in which they live, is one of the privileges which a news-gatherer has a much greater opportunity of enjoying than most men. At every convention or gathering whose proceedings he is detailed to report, he is sure to run up against men of force, who have won their way through adverse conditions and come off conquerors. In the struggle, some oddities of manner or speech may have developed, but the real gold beneath the surface can easily be detected. To be favored with the friendly acquaintance of any of these rugged old stalwarts is an honor and a privilege, indeed.

To such a character, "The Farmer's Advocate" representative at the Tilbury Corn Show was introduced when he met Chas. Agar, of Kent County. This was in the hall where the annual meeting of the Corn-growers' Association was to be held, and a half hour or so before the meeting began. The mutual friend who introduced us was a corn-grower himself, an eager-faced, clever talker, and, like most conversationalists, quite fond of talking, but he at once had to take second place; Mr. Agar had the floor. Mr. Agar is a tall, elderly man, with a strong face, but he dearly loves a joke, and is usually surrounded by a ring of men laughing uproariously at his witty sallies, which are whimsical in the extreme. While in his company, the "Advocate" man was kept nearly all of the time in a state bordering on explosion. But when he is in earnest, as he was on this occasion, he is in earnest, indeed.

"It makes me smile," said he, "when I hear of people who claim to have started the practice of turning hogs into the corn field to fatten them. A certain farmer, who first tried this easy method some twelve years ago, thinks he was the leader. Why," said Mr. Agar, "it was a year or two before my son married—and that was twenty-one years ago—that I first turned hogs into a corn field loose. That must have been twenty-two or three years ago. Yes, sir, I had been at it for years before these other fellows ever thought of trying it."

"I'll tell you what made me first think about that way of doing. I had a sow that had eleven pigs, and she lost them all but three. Well, I put her and the three little pigs into a back pasture, next to a field of corn, and one of these little pigs used to break into that corn, and I never could stop him. I managed to keep the others out, all right, but this one little rascal beat me. Well, when I came to kill those pigs, that barrow pig that could go into the corn field whenever he had a mind to, which was pretty nearly all the time, weighed two pounds more than either of the others. I thought about that quite a little.

"The next fall my neighbor got into considerable trouble financially, and to help him out I bought his hogs that I was wanting to buy hogs, but he was afraid that they would be seized along with other property, and he would get nothing out of them if he kept them, and he asked me if I wouldn't buy them, and so I did. Well, I had that year two little fields of corn of four acres and a half each, and a ten-acre field, besides. I put these hogs that I had bought—they were good big shoats—into one of the 4½-acre corn fields, and when they were through with it, I sold them and cleared \$18 an acre. You follow me, now?" here queried Mr. Agar of "The Farmer's Advocate" man. "Oh, yes," was the reply. Mr. Agar seemed to suspect, however, that his attention needed a little prodding up. But, being assured that the press-man was really quite wide awake, Mr. Agar went on. But, as if in preparation for another piece of hard work, he first gave his shoulders a peculiar hoist, almost level with his ears—not a shrug nor a jerk, but a somewhat slow, steady lift—and then dropping them suddenly, exactly as if taking a fresh grip of something lower down, he proceeded. The query regarding "The Farmer's Advocate" man "following him," and the subsequent shoulder movement preparatory to a fresh start were repeated several times at crucial points in the course of the conversation, and much amused that worthy, but need not further be referred to.

When asked if \$18 an acre was a satisfactory return, Mr. Agar said: "Yes; it was a 60-bushel crop, you know. I husked the other 4½-acre field, and that was what it yielded, and the two pieces were as near alike as could be.

"But I want to tell you," continued Mr. Agar, about the crop of oats on that ground the next year. Where the hogs had run, they yielded 60 bushels an acre, instead of 40 bushels, as on the other field. I was pleased with that, you may be sure, and" giving a slow half-wink, "I had my eye on an extra fifty cents an acre that might be coming the year after.

"I have kept up the practice of hogging corn down ever since, knowing that it is profitable, in spite of the apparent waste." (This method of fattening hogs has lately become quite general in these western counties). "But I laugh yet when I think of how neighbors passing along the road, and seeing the pigs helping themselves, used to send word to me that my hogs had broken into the cornfield.

"Hogs at liberty in a field do not waste corn. They will reach up and pull off an ear or break down a stalk to get it, and eat it up clean before seeking another.

"I tell you those hogs just picked up money for me. Before I began that style of farming, I was just living from hand to mouth. I had only a fifty-acre farm, and it was heavily mortgaged, and we lived in a little log house. Things are different now." (Mr. Agar is now not only known throughout a wide neighborhood as a good farmer, but as a prosperous man financially. "I once bought a 50-acre farm for \$2,800. Had it for eight years, and in only one of those years did I sell less than \$1,000 worth from it. I sold the place itself for \$3,500.

"I once had 25 acres of corn, for which I was offered \$25 an acre. Instead of selling, I turned hogs into it, and netted just \$666. The most money I ever got in one year from the sale of hogs was \$3,800. Had 70 acres of corn and 240 hogs that season. Fattened them all on the 70 acres. I don't mean to say that those hogs were all raised on my place. I bought about \$800 worth just when they were ready for fattening, I remember." Then, as the memories of those days came back to him, he added: "Say, we had a great pig-killing once that year. Six of us killed, scalded and dressed ninety-six hogs in one day. Almost up to packing-house style, wasn't it?"

At this point the chairman called the assemblage to order, and the news-hunter said to Mr. Agar, "I'll see you after the meeting and get the rest of the story." "All right," said he.

After the session ended and the crowd was almost gone, Mr. Agar was observed moving in a sort of sideways, hesitating fashion towards the door. "Hello!" called out the man with the pencil and note-book, "you were going to tell me something more, you remember." When, after a little hesitation, he came slowly over, he said, with considerable emphasis: "If I'd ha' known you were a reporter, I wouldn't have been talking to you the way I did. I thought you were one of the corn-growers around here." His abashed feeling soon subsided, however, and he continued his interesting tale with little more ado.

Going back some years further than where I started before, I well remember once selling 500 bushels of shelled corn to a grain-dealer, of Chatham, at 27 cents a bushel. After I had hauled some of it in, he told me that I would have to take it back, as it was a little mouldy. I hauled it home again. There was nothing else for me to do. It was pretty tough, but that is what made a name of me. I traded 50 bushels of that corn for a sow, which I afterwards bred. And I traded 100 bushels for a sow with nine pigs.

When I got through with that corn, I had netted 50 cents for every bushel. I have never sold a bushel since. Some years I have bought a good deal. One season I had 125 little pigs, and to keep them a-growing paid \$20 per ton for shorts, and afterwards bought 500 bushels of American corn, at 80 cents a bushel. I could have got Canadian corn for 60 cents, but it was soft and light that year, and not so well worth its price as the American. That year I got \$2,800 for hogs. I never was one of those who wanted the duty kept up on corn. We should feed all we raise, and more.

"We don't feed hogs any more. Have changed our style of farming completely. In fact, I really do not farm at all. My son has the business, and my share of it is mostly that of looking on. But, like so many others, we now make a specialty of tobacco-growing, and that crop, to be successful, requires to be well fertilized. We now grow about seven acres of the fragrant weed, ten acres of sugar beets and thirty acres of corn every year. The corn is cut with the binder, and is fed in the bunch, or sheaf, to steers which run loose in a shed enclosed on three sides. These steers are bought in the fall and fattened on corn and clover hay, and sold for export in spring. The manure they make is hauled out every fortnight, and is used for the tobacco crop. We feed corn night and morning, and hay at noon. The aim is to have each steer get about 40 ears per day. We reckon that each acre of corn should fatten a bullock.

"Tobacco is quite a money crop. Our returns from it this year were \$800."

There is sound reason in the advice so frequently dealt out to farmers, that sudden changes usually result in loss. But the reverse is the case when brain-work is brought to bear and the question in all its bearings is carefully thought out, as was evidently done by Mr. Agar and his son.

T. B.

Some Catch Crops.

Most districts have been held back this season by backward weather conditions, and seeding in many localities was delayed until late. Late seedings almost invariably increase the acreage of hoed crops, buckwheat, millet and catch-crops. Rather than sow the common spring cereals at too late a date to insure the best success, these other crops are resorted to, and properly so. It is doubtful if, in localities where corn is a success, there is any more profitable crop for the farm. A large acreage of corn means abundance of fodder next winter. Hoed crops generally are profitable in the long run. They insure feed for the winter months, and while they require considerable labor, properly attended to, they place the land in better condition for growing future crops.

Buckwheat is a crop which is gaining ground in Canada yearly. According to statistics, the acreage devoted to this crop in Ontario during the past five years was over fifty per cent. greater than that of the five previous years. The lateness at which it can be sown allows of more time to prepare the soil, which is a valuable consideration when labor is so scarce and the season late. The better preparation of the soil does away with a large number of weeds, and the crop which comes on afterward grows so thick that the weeds remaining have a very poor chance of amounting to anything. It is one of the best smothering crops known, and under profitable conditions gives a good yield of grain, which, when mixed with other grains, makes a very suitable feed for farm stock, especially pigs. Some seem to have the idea that buckwheat does not require that the soil be worked, but, as is the case with every crop grown, if it is worth growing at all, it will repay well for a little extra care in soil preparation. Before sowing buckwheat, work the land thoroughly as a summer-fallow, using the plow, cultivator and harrow to best possible advantage. The last week in June or the first week in July is early enough to put in the seed under most circumstances, and this permits of very thorough soil preparation, indeed. From three pecks to a bushel per acre is a good seeding of this crop under average conditions.

The new seeding to clover and grass is not too promising in many sections, and a crop to take its place will be called into commission in many cases. Millet is perhaps the most widely-grown crop for this purpose. This is another crop which does well sown late in the season, and so is very valuable, as it gives a chance to wait until thoroughly satisfied that seeds are not going to be a crop worth leaving before plowing up. As for buckwheat, it is well to prepare the land well for this crop. Plow it a fair depth, and thoroughly work the top with the cultivator and harrow until time to sow. This crop can be sown, with fair prospects of success, from the middle of May until the middle of July; the latter, however, is too late for highest yields, which usually follow when seeding is done about the first week in June. If sowing for hay, it is necessary

to sow rather a large amount of seed broadcast, in order to keep the growth from becoming too coarse. For this purpose, sow from one-half to one bushel per acre, the thicker seeding being preferable. Millet likes a damp, rich soil; and when the land is very dry, it is sometimes advisable to drill it in, to insure even germination.

Bean Insects and Diseases.

The bean is a crop which is growing in favor with farmers in districts where it can be successfully grown. True, it is not considered very important in many parts of the country, yet Kent County, Ontario, has an annual acreage of over 26,300 acres, and Elgin County plants over 8,000 acres. There are thousands of acres upon which beans might be grown, especially in South-western Ontario.

Of the insects attacking the crop, the bean weevil (Bruchus obtectus), pale-striped flea-beetle (Systene Blanda), and the cutworm, are the worst. The bean weevil is, in the adult form, a small, grayish-brown beetle, considerably smaller than the ordinary pea weevil, and oval in shape. The larvæ pass their entire life in the bean. The injury is done to a great extent in stored seed, which is sometimes destroyed by the pest. Young plants are also affected. The pods of beans attacked by the pest show warty projections and black specks—a condition which interferes with the sale of the seed. This pest has been common in some parts of the United States, and has been occasionally seen in this country. The remedy is simple and effective. Whenever the insect is found, the beans should be fumigated immediately after they are harvested and threshed. Place them in a barrel or tight bin, and put in a dish on the top of the beans, one ounce of carbon bisulphide for every 100 pounds of beans. Close the receptacle tight, and allow to remain for 48 hours. Large bins have been fumigated by use of an iron pipe shoved down in the bins and filled with the carbon bisulphide.

The pale-striped flea-beetle sometimes does damage when the young bean plants are not doing well, owing to unsatisfactory soil or weather conditions. This is a very small, striped beetle, with light-brown wing-covers. The injury done is by the upper and lower leaf-covering being eaten away, leaving a shot-hole appearance, often entirely killing weak plants. Burning all rubbish in the autumn destroys many adult beetles, and keeping weeds in check destroys many of the larvæ as they mature on the roots of these. Spraying is scarcely practical, but effective.

Cutworms have been discussed in recent issues of this journal. The poisoned-bran mixture is one of the best remedies. Scatter this among the plants in the evening. Late fall plowing is beneficial, as it destroys many of the larvæ.

Three diseases of beans do much more damage than the three insect pests. Bean antracnose and bacterial blight are particularly destructive, while rust does little damage. The antracnose, scientifically known as colletotrichum lindemuthianum, is the worst enemy of the bean. It attacks all parts of the plant, beginning with the first leaves of the seedling, and continuing until the stems, pods and seeds are affected. Seedlings become black and die. Reddish-brown spots appear on the leaves and stems, and rusty, black, sunken spots on the pods where it is most serious and most easily recognized. The mycelium of the fungous penetrates into the pods and attacks the seed, causing it also to become spotted. The remedy is to sow beans free from the disease, which means that care must be taken in seed selection. The disease enters the seed through the pods, hence, if clean pods are selected, clean seed is assured. Hand picking of the seed is resorted to. To prevent spreading the disease in the field, carefully avoid working amongst the plants when they are at all wet. Destroy all crop refuse, as the disease may be carried over the winter in the decaying tops. Spraying with Bordeaux mixture has been found beneficial in patches, but on a large scale is scarcely practical.

Another disease, the bacterial blight, produces brown, dead, papery areas on the leaves, which often spread over the entire surface. Spots appear on the pods, but they are not so dark as in antracnose, and the beans themselves are sometimes discolored. This disease is carried over winter in the soil or rubbish, and is best kept from the straw may be burned, or returned to the field on which it grew, to prevent its spreading to other fields. Insects should be kept in check, as they carry the disease. It is possible to never plant beans on a field the year after the disease has been noticed on them.

Bean rust is seldom serious, and can be controlled with ease by burning the straw and thorough spraying with Bordeaux mixture.

Bean insects and diseases may be prevented by using care and the best of cultivation methods.

The Injurious Meadow Mice.

Meadow mice have appeared in certain localities in such vast numbers that they inflicted serious damage upon many of the products of the husbandry. It has not been a rare thing in Great Britain and on the Continent. North America thus far has been comparatively free from such extraordinary irruptions of meadow mice, and yet, during the last few years, serious ravages by them have been reported in the United States and Canada. They seem to be increasing to a serious extent from year to year. The damages have usually been confined to limited areas and to special interests, and have only slightly affected the general welfare. But the habits of meadow mice are everywhere much the same, and a serious outbreak of the pest in this country is not only possible, but, in view of the continued short-sighted destruction of their natural enemies, is extremely probable.

The number of living species is large, 165 having been recognized, of which about 78 are North American. The several species differ much in size. In length of body, some are nearly as small as the common house mouse, while others are nearly as large as the common rat. While the tail is usually very short in proportion to the body, the various forms differ much in this particular.

Notwithstanding, meadow mice are much alike in manner of feeding and nesting; in other respects marked differences in their habits have been observed. Some of them prefer high and dry ground, and others live in low, moist places; some remain in forests, and others on the open prairies; some, like moles, make long burrows under the surface of the soil, while others construct runways on top of the ground. Most of the species live where there is considerable moisture, and a few are almost as aquatic as the closely-allied muskrat.

The nests of meadow mice are composed of compact bunches or balls of grass-blades, placed in depressions in the ground or shallow burrows; or, if the ground is very moist, supported on grass stems five or six inches above the wet surface. They are so light in structure that, after a storm, a day's sunshine will dry them out; and yet they are so warm that the animals pass the coldest season snugly housed in them under the snow. In these nests the hairless young are produced and nursed. When the mother is suddenly disturbed, she slips away from the nest, often carrying the young mice attached to her mammae, to return promptly when the premises are again clear.

The breeding season of meadow mice extends over most of the year, except midwinter of the coldest latitudes. The number of litters produced depends largely upon the character and length of the winter. It is certain, too, that the number of young at birth varies with the character of the season. A few species produce habitually from two to four at a litter, but other species bring forth eight to eleven. Most of the species have four to six litters in a year.

The common meadow mouse is one of the most prolific of the North American species. If six young, the average litter, are produced at a birth, and four litters in a season, and if no enemy or disease checks the multiplication, the increase would be appallingly great. A single pair and its progeny would in five seasons amount to over 2,000,000. This calculation is conservative, being based on the theory that the young of one season do not breed until the next year—an assumption that is likely to be incorrect, for the animals mature very quickly, and the young born in the spring would probably breed in the fall of the same season. If a thousand pairs of meadow mice survive a winter in any locality, it is easy to understand how, after two or more seasons of uninterrupted increase, they might become a menace to agricultural interests.

Investigation of the food of rodents is difficult, because of the finely-ground condition of the stomach contents, and usually the nature of the food can be determined only in a general way. In summer, the principal food of meadow mice is green vegetation and unripe seeds of grain and grasses. In winter, grain and bulbs and other roots are usually eaten, but sometimes the bark of various trees becomes a staple food. It is mainly in winter that apple orchards and young forest plantations suffer from the depredations of these animals. Such attacks are not always due to severe weather, which deprives them of their ordinary food, for they often occur during mild, even winters. The depredations seem to result rather from the excessive numbers of the animals and the consequent scarcity of food, which makes them so voracious that they eat practically any available substance.

It is well established that each acre of a meadow will support 21 to 23 mice in the summer, and 10 to 12 in the winter. It is not surprising, therefore, that a meadow which has been infested by mice for several years will be found to be almost entirely bare of grass and other vegetation.

our country is incalculable, and is a steady drain upon the resources of the farmer.

The mice do a great deal of damage to meadows and pastures. The common meadow mouse is usually the offender in these cases, although the prairie meadow mouse also causes considerable loss in the West. Both of these mice work under the snow in winter, burrowing along the tops of the succulent roots of clover and other plants, and sometimes destroy entire meadows, which have to be plowed up and resowed. Such damage usually occurs where a thick growth of grass is left in the field in fall. Closely-mowed or closely-pastured fields are not usually badly injured by mice.

The meadow mice are destructive to market gardens. Strawberry fields are especially liable to attack, because of the mulch used to protect the plants themselves. These mice destroy seeds in the garden, hotbed or cold-frame, potatoes in the ground, and many other growing vegetables. In the fall they destroy beets, turnips, carrots, parsnips, cabbage, celery, apples and potatoes, when piled on the ground or stored in pits. The depredations may to a great extent be prevented by the careful burning of weeds and other trash which harbor the pests.

The destruction of corn and wheat in the shock by meadow mice is common, and growing crops—wheat, oats, barley, rye and buckwheat—are often cut down and eaten. The damage to standing grain is most noticeable when it is nearly ripe, but fully-matured grain also is eaten.

Meadow mice have been known to almost wholly destroy large nurseries of young apple trees. The animals usually inflict the damage by burrowing under the snow and girdling the tree just at the surface of the ground. Some species burrow below the ground, and, like the pocket-gopher, eat the roots of trees, thus completing their destruction.

One of the chief causes of the recent great increase of the smaller rodent pests is the persistent destruction of the birds, mammals and reptiles that habitually prey upon them.

Among the wild mammals that are known to prey upon meadow mice are wolves, lynxes, foxes, badgers, raccoons, opossums, skunks, minks, weasels, and shrews. Among birds that feed on meadow mice are hawks, owls, crows, shrikes, cranes, herons and bitterns.

Next to insects, mice form the most important item in the food of snakes. Meadow mice are most easily obtained, but other mice and, indeed, most of the small rodents, are eaten. The important service of snakes in the interest of the farmer is not generally understood or appreciated, but an inherited and deeply-rooted prejudice induces thoughtless people to destroy them whenever possible, and for no other reason than because they are snakes.

The value of domestic cats and of dogs in destroying mice is well known, and many of these animals learn from experience to prefer the large meadow mice to the species found in houses and barns. The great objection to the utilization of cats to check the inordinate increase of field mice is that, when cats take to roaming the field and forest they soon learn that song-birds are more toothsome than mice, and turn their attention largely to the pursuit of such birds. In thus destroying birds, cats much more than offset their value as mouse-catchers.

At one place an experiment was tried by placing some wheat poisoned with strychnine at the base of some badly-damaged trees. This was done late in the evening, and on the following morning a considerable number of dead meadow mice and white-footed mice were found. The poisoning experiment had proved so effective that the owner of the orchard set his men to distributing poisoned wheat throughout the orchard, with the result that within a few days nearly all the mice had been killed. An exceptional circumstance in connection with these poisoning operations was that no dead birds were found in the orchard during their progress. Remarkable as it may seem, short-eared owls, hawks and crows fed freely upon the poisoned mice and rabbits without injury. Tree sparrows, juncos and quail were common, and it is strange that all should have escaped the poisoned baits. In distributing poison, too much care, however, cannot be used to avoid the destruction of valuable birds.

In the use of strychnine for poisoning field mice, an ounce of strychnia sulphate is used to each half bushel of wheat. The strychnia is dissolved in a pint of hot water, and a pint of heavy sugar syrup is added. The combined wheat and liquid are then stirred until every grain is wet, when the mass is allowed to stand in the mixing vessel for twelve or more hours before it is distributed.

Another way of destroying mice with poison, without endangering the lives of larger mammals and birds, is to introduce the poisoned bait into the middle of short pieces of drain pipe which have an internal diameter of about 1 1/4 inches. The pipes are then laid on the ground near the burrows of the mice. To prevent displacement of

the bait, it may be put into the pipes after they are in position. Meadow mice readily enter these drains and find the bait. T. A. TEFET, Chautauqua Co., N. Y.

Alfalfa vs. Red Clover.

Editor "The Farmer's Advocate": As I have been experimenting with alfalfa a few years, I will give my experience to others who are looking into the alfalfa question. I have had some limited experience with feeding alfalfa as hay to cows, also as green feed for pigs, and judge it to be one of the cheapest feeds a farmer can get hold of, taking into consideration the total cost of producing it.

I have heard it said, and have read in papers, that alfalfa will grow where red clover will grow. I experimented in that line twice. The first was red clover and alfalfa side by side, the result being that the alfalfa was a good stand, with three cuttings, the first year after seeding, and red clover was found on half the ground. Secondly, in the spring of 1911 I sowed twelve acres of oats, seeded down with 6 pounds alfalfa, 4 pounds red clover, and some timothy and alsike, and the result is the alfalfa must have all come up, but red clover fails to show its appearance on the greater part of the field; alfalfa is all over. I think if I had seeded 15 pounds of alfalfa seed to the acre I would have had an exceptionally good stand. Another thing worthy of mention is that I sowed this seed with oats sown as usual. I also sowed eleven acres of pure alfalfa with a nurse crop of one bushel of barley to the acre; the previous year had been to hoed crops. Got a fairly good stand, except on about three or four acres of hard-pan soil, where it is not so good; but I know by experience that red clover would not grow there, either.

Alfalfa is grown experimentally by neighboring farmers, with good results, while fields of seeds are plowed this spring, as would be the case with mine if alfalfa weren't there. Anyone may inspect my field. I'll guarantee he'll agree with me.

Now, last, but not least, comes the feeding value, which has been proven by experimental farms and progressive dairymen; it is unequalled by any other crop. In seeding to alfalfa, the old points should not be overlooked. Have the land rich and dry, and the catch can't miss. Oxford Co., Ont. E. R.

The Control of Insect Pests in Canada.

The Division of Entomology of the Experimental Farms Branch of the Dominion Department of Agriculture, Ottawa, has recently issued a bulletin, by Dr. C. Gordon Hewitt, Dominion Entomologist, on "The Control of Insect Pests in Canada."

An account is given of the history of the war against insect pests in Canada, and of the manner in which insect pests have invaded the country as it has been gradually opened up and cultivated. The manner in which the Dominion and Provincial Governments are endeavoring, by legislation, and other means, to prevent the introduction of insect pests into Canada, and the increase and spread of those pests already here, is described. An interesting summary of the various lines of work undertaken and carried on by the Division of Entomology at Ottawa is given, and the general public will no doubt be surprised at the many problems which come within the scope of the Entomologists, who are called upon to deal with insects in their relations to all the varied activities of man; insects affecting farm crops, fruit-growing, forest and shade trees; insects attacking man's possessions and infesting houses, attacking domestic animals, and finally affecting the health of man. All insects, however, are not injurious, and the work of the Entomologist includes bees and beekeeping and the study of parasitic and other enemies, which may be of assistance in obtaining control of insect pests.

Copies of this publication, Bulletin No. 9 (Second Series), Experimental Farms, may be obtained from the Publications Branch, Department of Agriculture, Ottawa.

Wheat Shortage in France.

The high price of wheat and the scarcity of the supply are causing considerable apprehension in France. The French Government has decided not to suspend the tariff of 7 francs (approximately \$1.40) per hundred kilograms (approximately 220 pounds), but it may prolong from two to three months the period in which wheat may be imported free, on conditions that an equivalent weight of flour is exported from France by the importer before the expiration of that period. This will temporarily relieve the market. In the meantime, bread has risen in price, and heavy wheat orders have been placed in Argentina, Canada and Australia.

THE DAIRY.

Selling Cream on Grade.

A few years ago, the general impression throughout the Prairie Provinces was that the output of butter was of very inferior quality; in some parts, still, the quality is not such as finds a ready and regular market at top prices. The men in charge of the creameries credited the inferiority of manufactured product to the fact that the raw material was inferior. The natural question then was: Why not pay for the cream according to its quality?

In Alberta, the grading of cream was undertaken in 1910. According to the report given by Dairy Commissioner Marker at the annual convention of creamerymen a few weeks ago, the innovation has developed no serious complications liable to the system being discarded. On the contrary, both buttermakers and patrons of the creameries seem to be thoroughly satisfied. Doubtless, occasionally there is a patron who objects to his supply being graded low, but, on the whole, the grading system has been satisfactory.

foods, it should be more used. But as yet it is not generally used, because it is not understood and appreciated.—[From Coburn's "The Book of Alfalfa."

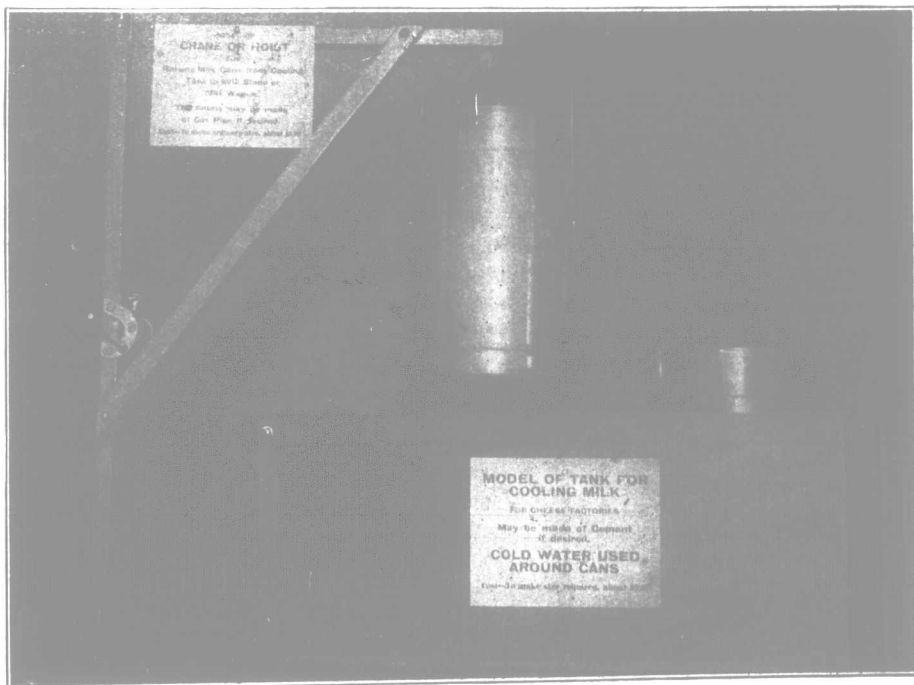
Convenient Hoist and Milk-Cooling Tank.

Patrons of cheese factories realize the necessity for cooling milk during warm weather, if the right quality and the greatest quantity of cheese is to be made from the milk. It is necessary that the night's milk be cooled to 65 degrees. Patrons cannot expect the cheesemaker to make from over-ripe or tainted milk a good "average" or the finest quality of cheese. Before many days the weather will turn warm, and at once some of the milk will arrive at the factory in an over-ripe or sour, perhaps tainted and gassy condition. This may easily be avoided if each patron will build a tank of wood or cement in which the milk cans may be placed and surrounded with cold water. A large number of patrons cool the milk, and all patrons should do so in justice to the others, to the cheesemaker, the cheese-buyer, and the consumer, who pays high prices for the product.

One of the excuses offered by some patrons for not putting the cans of milk in the cooling tank is that, as 30-gallon cans are used, it is difficult to raise the cans from the tank to the milkstand or to the hauler's wagon. Several simple methods have been devised for this work, such as a track and pulley or a long pole over a post, with attachments to hold the can.

The accompanying illustration shows a very simple hoist or crane for lifting the cans from the tank. It is neat, durable, and easily constructed. The crane gear consists of a large and small gear wheel, with shafts through holders which are bolted to the upright. A wood roller is placed on the large shaft on which the rope winds. A "dog" is attached to a large gear wheel to hold the load at any point. The woodwork may be made at the farm, and, by securing the two gear wheels, the parts are easily assembled by a blacksmith.

With such an outfit, sweet, cool milk may be delivered to the factory in the warmest weather. F. HERNS, Chief Dairy Instructor for Western Ontario.



Model of Milk-cooling Tank.

For patrons of cheese factories. May be constructed of wood or cement. Cold water used around the cans.

Saskatchewan dairy authorities have decided to follow suit. After a season's educational campaign, in 1911, cream sent to Government creameries will this year be paid for on practically the same basis as prevails in Alberta.

Manitoba as yet has seen no organized effort at paying according to quality. Individual creameries have adopted a scale of prices for sweet cream and for sour cream under two classes. The general move on the part of the patron, however, has been to ship to a particular creamery only if he is given what he considers absolutely satisfactory treatment; if he is not satisfied, he sends his product to another creamery. The consequence is that the average creameryman hesitates about being very severe in his grading, lest he should create a feeling of ill-will.

Cream grading appears to be as sensible as wheat grading. The man who does not take care of his cream and furnish it to the manufacturer in good condition, is no more entitled to the top price than the man with feed wheat is entitled to Number One Northern price. The great trouble is that cream, a perishable commodity, is shipped too far, and it deteriorates to an appreciable extent after it leaves the shipper and before it reaches the creameryman. This is where Alberta and Saskatchewan, with Government creameries, are in a position to place the dairy industry on a plane several degrees above what can be looked for in Manitoba for some time. The grading system has wrought wonderful changes in the quality of cream supplied by patrons, and also in the production of a quality of butter that catches high prices on a market that will not accept low-grade products.—The Farmer's Advocate & Home Journal, Winnipeg.

Milk producers who know it best concede that alfalfa is an invaluable feed in the dairy, closely akin to wheat bran in results, and usually much less expensive. In the average small town or city there is about one cow for every ten or fifteen people. Therefore, in a town of one thousand population there will probably be seventy-five to one hundred cows. If alfalfa will increase the quantity of their milk and butter-fat, giving a product at a lower cost than the concentrated

is placed on the large shaft on which the rope winds. A "dog" is attached to a large gear wheel to hold the load at any point. The woodwork may be made at the farm, and, by securing the two gear wheels, the parts are easily assembled by a blacksmith.

POULTRY.

Bad Poultry Practices.

There are several bad practices on the part of the majority of farmers which seriously mitigate against the quality of their goods, according to A. G. Gilbert, Poultry Manager at the Central Experimental Farm, Ottawa. Among these are:

- First.—Non-appreciation of what a strictly new-laid egg means.
Second.—Holding back eggs until he has a sufficient number to make it worth while taking them to market. Meanwhile the eggs stale.
Third.—Keeping his fowls in ill-constructed and unsanitary poultry houses. Very frequently both hens and houses are lice-infested or suffer from disease.

A point brought out at a committee meeting of last year in connection with this third point, was the great demand by the hospitals, particularly by the tuberculosis hospitals, for strictly new-laid eggs, as they are considered a specific in cases of incipient tuberculosis. The virtue in such eggs is for the reason that they are strictly new-laid by well and cleanly fed hens. Hence, they are highly nutritious. Now, if lice are allowed to first take the nourishment from the blood of the hen, it is not likely that she will lay as nutritious an egg as one laid by a hen entirely lice free. It is too common on the part of farmers to have ill-constructed houses, and to allow both houses and hens to become infested with lice. This fact has such an important bearing on the nourishing quality of the egg that it is worth

while bringing it to the attention of the committee. I emphasize this, because the evidence given before this committee goes to the farmers in all parts of the country, and they will undoubtedly benefit by paying attention to this point.

Fourth.—Another drawback is the lack of appreciation of variety in the composition of the daily ration. A lack of variety leads to egg-eating, eggs being laid with soft shells or no shells at all, and to feather eating, which are two most discouraging vices. Overcrowding of the poultry houses is also an incentive to the vices named.

Fifth.—Another bad practice is having late-hatched chickens. As a result, the pullets, instead of laying in October or early November, do not do so until late in January or February, when the season of best prices is over.

There is a fact in connection with the select trade that I should like the farmers to more fully appreciate than they do, and it is, that the producer who wins a reputation for supplying the best eggs and the best quality of poultry is not likely to lack customers. On the other hand, the producer who sells stale or doubtful eggs is not likely to be certain of a customer. If he takes in a customer once, he is not likely to do the same person again. He is not in a position to say, "My eggs will prove their worth and so stand by me."

Sixth.—Another point in which the average farmer is frequently remiss is neglect in caring for his chickens at an early age, particularly during the first five or six weeks of their existence. If the wish is to have plump chickens to go into the fattening pen, the chickens must be well cared for from the time of hatching.

Poultry Pointers.

Editor "The Farmer's Advocate":

The time is here when we should be at work hatching and rearing those pullets for next winter laying, to replace the old fowls and start in with new stock. If you want to secure the highest prices for your eggs, you must produce them when fresh eggs are scarce, in the fall and winter months. And you should start with young and healthy birds, feed them for egg production, give them wholesome grains, and make them scratch for it. A litter of chaff or straw some 8 inches thick on the floor is a good way to promote exercise. Throw small grains or seeds through the litter, that the fowls may find something to scratch for. I am a strong believer in making hens scratch. It promotes exercise and likewise health among the flock. Mangels split in halves, and tied some 15 inches from the floor, are another good exerciser. At this time of year milk should be quite plentiful, and should be given to the fowls in clean receptacles; also, a little fresh meat— $\frac{1}{2}$ ounce to each bird about three times each week. The attendant must not overlook the necessity of good grit; a quantity should be before the fowls at all times; also, a place for the fowls to dust themselves. Dry earth or sand is good, with a few ashes mixed in. The sun should shine on the dust-bath if it can be so arranged.

At this time of the year each henhouse or coop should be thoroughly overhauled, cleaned, and disinfected with some good insect powder. A good way is to close the doors and windows and make the house as air-tight as possible, then burn sulphur in an old tin pan or kettle, set in a larger one to guard against fire. This will certainly destroy all the insects and vermin that are at present in such a house, and will for some time to come prevent others coming. Don't allow the fowls to enter the house while the fumes are still circulating, as it has a poisoning effect upon the birds. However, when your reason tells you that the sulphur fumes have penetrated every crack and crevice in the building, you may then throw open the doors and windows again. But don't stop here; finish by giving the house a thorough cleaning. Take every moveable article out into the air, then sweep all the dust and dirt from the walls, ceilings and floors. When this is done, go over the entire walls and ceiling with hot whitewash, and apply freely to the crevices and knot-holes, for here is where the vermin mostly harbor. Don't be afraid of dripping the floor; whitewash is a splendid disinfectant. Go over the roosting poles with kerosene, and then whitewash the dropping board. After this is done, clean all the old straw or other nest material from the boxes, and replenish with a fresh supply. Don't forget to whitewash the nests inside, and to let them dry out well before replacing with new material. You might add a small quantity of insect powder to each bucket of whitewash, and use it, and does its work more successfully. When the floor is given a fresh supply of litter, it should be replaced with clean nest lining, and the water containers and grit boxes refilled, the house should be ready for the flock. But you must go a step further in order to insure a real clean-up. The fowl should be thoroughly dusted with some good insect powder before being allowed to enter the building again. This is extra caution to prove the results

more successful. Part the feathers of each bird and dust the powder well into the skin, that the vermin may come in contact; under the tail and wings, and around the fluff of the leg. When this is done, and the fowl re-enter the building, you will see that they appreciate the change; they will sing, they will scratch and strut about, apparently with pride, talking in hen language about the change in affairs. This should make you feel better at heart, if you are a person who fancies his or her flock. More eggs, health and contentment will be the result. If the fowl are kept in yards, the yards must be also cleaned. A good way is to plow or spade the earth up in each yard, to a depth of say seven or eight inches, then sprinkle lime over the upturned surface. Repair the fences, netting, etc., and here, again, whitewash the fences; it will give a bright, cheery appearance, and serve as a disinfectant, as well. Don't forget to provide shade for the flock during the long, hot days of summer; it is necessary to their health.

(MRS.) L. HEATHERINGTON.

York Co., Ont.

GARDEN & ORCHARD.

Topical Fruit Notes.

MANY PEACH BUDS WINTER-KILLED.

Now is a good time to go over the pear orchard and cut out any blight that may have been missed during the winter pruning. The orchard should be gone over at intervals, also, during the summer, and the least sign of blight cut out at once, as the bacteria will be rapidly spreading throughout the cambium during the growing season from every point of inoculation. Cut well below the blighted part—at least a foot—and disinfect the wound, and the tools after every cut, preferably with a corrosive sublimate solution, using 1 part corrosive sublimate to 1,000 parts of water. A cheap sponge, nailed to a two-foot stick, such as a shortened broom-handle, makes an excellent swab to apply this disinfectant. It is a drastic poison, and should be handled with care. Burn the blighted branches at once.

Young strawberry plantations should have been planted to get advantage of May showers. It is to be hoped that planters will have more success than last spring, which proved so disastrous to young plantations, but even under the best circumstances care should be used. First, young, strong, vigorous plants, preferably from plantations that have not fruited, should be chosen. Then, the land should be in a state of clean and mellow tilth, using, preferably, a warm, quick soil that is retentive of moisture. Be careful, in planting, not to bury the crown of the plant nor to expose the roots. Then follow throughout the first season with clean and shallow cultivation, removing all blossoms, and placing the runners so as to form a matted row. Our main cropper in the Niagara district is the Williams, with Nichols and Bederwood grown for early varieties, Dunlap and Glen Mary for midseason, and, in the Oakville-Clarkson district, some Gandy as a late variety. The Williams is far from being a perfect berry, but its excellent shipping and canning qualities make it the favorite at present.

The damage caused by the severe cold of last winter is now becoming evident. I think it is safe to say that over half the peach buds have been frozen. Some orchards in more exposed locations will have no crop at all; others, in more protected locations, will have a full crop. Varieties seem to have been affected without any rule, the supposedly hardy being damaged, whilst the tender survived in some instances. Raspberries and blackberries have suffered severely from freezing back of the canes. Plums, grapes and pears are showing up well. Strawberries, especially those that were mulched, are O. K. Here is an opportunity for an interesting investigation. Last winter should prove a good test for our tender fruits, and the chance to map out its effects should be taken advantage of in every fruit district.

A public fruit auction has been started in Toronto, with a directorate composed of representatives of the established commission houses, that is, the object is at first to deal only with foreign fruit, as it is thought that the present conditions, it would be impossible to handle domestic fruit in this manner, and no doubt, but when a large commission house organization is necessary for the promotion of our crops, but it seems to be a

ganization is just another corporation to take a little more profit off the producer or add a little more cost to the consumer. One wonders if this auction will limit its sales to its own members or the legitimate jobbers of the city, and exclude the retailers and consumers. As their profits as jobbers depend upon their sales to retailers, it is hardly likely that they will allow a retailer to purchase under equal advantages. In other words, will the auction regulate prices? and for whose benefit will it regulate them?

There are three factors, at least, directly concerned with the crop itself, which have made towards those instances which we know of successful co-operative fruit-selling. One is that a fruit of one kind or class is generally dealt with, such as oranges, apples or grapes, in contrast to a medley of fruits, as found in general fruit-growing. Another is that such kind of fruit is more or less a good keeper—that it is has qualities suitable for holding, shipping and storage. And the third is that the fruit is limited to certain regions because of limiting factors of soil, climate, markets, etc., which allows of concentration of control to a considerable degree. This latter factor may savor very much of monopoly, but just as the basis of co-operative fruit-selling is the local association, so the successful culmination is the central sales agency which controls distribution, prices, advertising, standardization, etc., and which, to be markedly successful, should control a greater part of the district's output. For what is the difference between several local co-operative associations competing in the same market, without central control, and several growers or dealers doing the same thing? A "glut" or cut in prices is as possible in one case as the other.

The past two weeks have witnessed a wonderful changing picture of color in the blossoming of the tender fruits and the gradual unfolding of leaves through their various tints of green. It is the promise of spring to the fruit-grower. Most of us have enjoyed this profusion of decorative effect, which is the outward show of spring, but how many have realized what a tremendous evolution of energy was necessary in each tree or bush to push forward the bud, open the blossom and expand the leaf? This energy-development is so silent and unseen, but it must appear to us of marvellous extent, when we contemplate the work done. We talk much of producer and consumer, but here we have the true producers in the plant kingdom. They use the raw-food material—the simple chemical elements of soil and air—to produce the organized food for the animal kingdom. The farmer and fruit-grower becomes the middleman when he distributes his products to his city brother—products produced through energy developed in the plants.

W. R. D.
Wentworth Co., Ont.

THE FARM BULLETIN

Limiting Varieties.

Editor "The Farmer's Advocate":

Having noticed several articles in "The Farmer's Advocate" in regard to potatoes, and the advantages accruing to farmers when only one variety is grown in a district, as shown in the difference in prices between the potatoes grown in the Eastern Provinces and those grown in Ontario, I thought that the action of the directors of the Camden Agricultural Society might be of interest.

At the last meeting of this society, held in Dresden, Ont., on the 27th of April, last, a motion was carried that all the potatoes on the prize list be struck out, and that prizes of \$5, \$3 and \$2, with a special prize of \$5 (given by R. D. Black, manager of the Dominion Bank) added to the first prize, be given for a variety of potatoes, to be decided on by a committee composed of the President and Secretary, after procuring necessary information.

The committee decided that the Rural New Yorker was the best variety for this district.

Kent Co., Ont. ONE INTERESTED.

[Note.—Undoubtedly, there are far too many varieties of potatoes grown in Ontario at the present time. A few of the best varieties selected and grown exclusively in each district would be a good move towards increasing yields and at the same time procuring higher prices, because of greater uniformity in color, shape and size. In most districts of Ontario it is practically impossible in any season to get any considerable quantity of potatoes of a uniformity which permits of being placed together in large quantities for shipping purposes. The Rural New Yorker is a good variety, and should do well. There are a number of other first-class market potatoes, and if each grower would select what they believe to be the best variety for their locality, better results would surely attend potato-growing.—Editor.]

Spraying.

By Peter McArthur.

Last night I had only three hours' sleep, and all on account of that orchard. After the unexpected and wholly unseasonable snowstorm, the weather turned cold, and the signs all pointed to a sharp frost. An hour after sunset the thermometer registered thirty-four degrees above zero—just two degrees above the freezing point. I began to worry at once. I have seldom been more interested in anything than I am in that orchard, and it is not entirely because I am hoping for a profitable crop. This is the first time I have ever had a chance to follow closely the art of fruit-producing, and I am profoundly interested in the work because of the light it throws on man's partnership with nature. Mr. Clement has undertaken his share of the task in such a hearty fashion that I do not want to have anything interrupt us until the demonstration has been completed. So, as I said, when frost threatened I began to worry. It seemed as if the whole experiment might be defeated by a slight change in temperature. Every few minutes I went and consulted the thermometer, and it was slowly but surely edging closer to the danger-point. Not knowing what to do, I decided that I must do something. It was impossible to get after the experts at that hour of the night, and I was perfectly willing to do anything, however foolish, to save the buds so that our work of apple-producing might go on. Racking my memory for something that would give me guidance, I remembered having read somewhere that the vine-growers in France, when threatened by frost, build fires in their vineyards. On mentioning this, someone remembered that one hard summer, in pioneer days, one of our neighbors saved his corn from a June frost by lighting all the brush heaps and stumps in his fields, and that year he was the only man in the district who had corn. Someone else remembered having heard that out West they sometimes save part of their crop by making smudges that will lay a blanket of smoke over the fields. Of course, I hadn't seen anything in the bulletins or farm papers about that sort of thing, but I didn't hesitate. I was perfectly willing to do a dozen fool things, if one of them would by any chance protect the buds from frost. It didn't matter to me if I lit a torch that would cause laughter from Niagara to Lambton. I am getting used to being laughed at, and, as a very prominent Canadian educationalist wrote when a fellow professor lost his pet dog,

"Vot did I told him? I dunno!
I neffer said a vort!
For ven von's leetle dog vos dead,
A leetle more don't hurt."

A little more laughing wouldn't hurt me any, so I hunted up a bundle of rags and the coal-oil can and started for the orchard. Up to that time I had been rather ashamed of the fact that, owing to the rush of work, we hadn't been able to clear away the brush that had been pruned from the trees, but last night I was glad it was still there. It was in neat piles, anyway, and that made it handier to get at. As there was not a breath of air stirring, I selected a spot in the middle of the orchard, where I would not be in danger of scorching any of the trees, started my fire of rags and oil, and began to pile the green brush on it. In a few minutes I had a bonfire that would have been big enough to celebrate a victory of the people over the Big Interests. The night was so still that the flame and smoke went straight up into the air. But there was not enough smoke. Going to the stable, I got a forkful of wet straw and carried it to my bonfire. After throwing it on the fire, I had an excellent illustration of what Milton meant by the phrase:

"Cast forth
Redounding smoke and ruddy flame."

In a few minutes there was a most satisfying blanket of smoke hanging over the trees and rolling through their branches. Of course, I knew that there was no frost as yet, but I had demonstrated to my own satisfaction that if it did come, I could make all the smoke that was necessary. By this time it was almost twelve o'clock, so I set the alarm for three a. m., and turned in with an easy conscience. It is always just before sunrise that a frost strikes hardest, and I would get up and be ready for it. At three o'clock the alarm went off with a wholly unnecessary jangle, and after I had explained to the aroused and protesting family what the rumpus was all about, I took a peep at the thermometer. The mercury stood exactly at the freezing point. In a few minutes I had four bonfires, half smothered with wet straw, throwing up clouds of smoke. By the time the dawn began to appear in the east, the thermometer had shaded below the freezing point, and water in a pan by the door was slightly coated with ice. This made me redouble my efforts, and I certainly did get up a

glorious fog. If those buds could be saved, I was going to save them. I kept up the good work until six o'clock, when the sun's heat began to be felt. Then I had breakfast and waited for Mr. Clement, like a little curly-headed boy who had done all his home-work. I forgot to mention that to-day was the day decided on for the second spraying of the trees.

When Mr. Clement finally came, I couldn't wait to get his horses unhitched until I had told him what I had done, and what do you think? He just roared and laughed! Now I don't think that's fair. Scientific farmers have no business laughing at the rest of us. It is their business to do fussy things and let us laugh at them. Still, he wasn't so very bad about it. He soon let me see that what amused him was my enthusiasm about the work. He assured me that the situation might have been one where what I had done would have been exactly the right thing. At this stage, however, there is little danger of the blossoms being destroyed by frost. It is usually a frost that comes after the fruit is set that causes trouble, and, if two weeks from now there should be a cold snap, I would be doing exactly the right thing in making a blanket of smoke for the trees. It was very kind of him to spare my feelings in this way, but still I wish he hadn't been quite so much amused, and that his eyes didn't twinkle every time the matter was referred to during the day. Although I am getting pretty thoroughly seasoned, I still have feelings.

At last I am beginning to understand the theory of spraying. Of course, I had read all about it, and had listened to Mr. Clement's explanations, and, though everything seemed reasonable, the real purpose of the work did not rightly get across to me until to-day. One has to go through the work to fully understand its significance. I find that among many people the idea prevails that the three different sprayings are given so as to do the work thoroughly, and the result is that many have the impression that missing one application doesn't matter much. I now see that this attitude is entirely wrong. Each spraying is done for a perfectly distinct purpose. The first spraying is meant to kill the oyster-shell bark-louse, fungi, and things that weaken the vitality of the trees. Its purpose is to act as a tonic that will enable the tree to begin the season strong and healthy. The spraying we did to-day kills the leaf-curl worms and bud-worms, so that the blossoms will have a chance to develop and be properly fertilized. It is to-day's spraying that makes it possible for the fruit to set properly. Mr. Clement showed me the larvae at work on the leaves and blossoms, and it was easy to realize what havoc they could do if not checked at once. They could easily destroy a large proportion of the blossoms, so that there would be a small showing of fruit. To-day's spraying will probably do more than anything else to insure a bountiful crop of apples. The buds were merely showing pink, and as yet had not been injured by their enemies. As the blossoms in the orchard are abundant, there should be plenty of fruit, and the next spraying, which will be given in about ten days, when the blossoms are falling off, will kill the codling moths and give us fruit that will not be wormy. I know that all this is perfectly familiar to readers of "The Farmer's Advocate," but the point I want to make is that, although I had read all about it, the true purpose of the different sprayings did not get hold of me until I had gone through the task of actually doing the work. I would have been just as ready as anyone else to skip one of the sprayings if I felt too much rushed; but now I know that they are all equally important, if one is to have a good crop of perfect apples.

I don't care even if my bonfires were not needed, and if I did lose a few hours' sleep, I have done a whole lot of more foolish things than that, and got away with them by simply looking solemn. Moreover, I have more than once lost a night's sleep, and it wasn't always by sitting up with a sick friend, either. Any time during the early summer, if you waken up before daylight and see a big light in the sky down in this direction, you needn't imagine that somebody's buildings are being burned. It will probably be me having bonfires in my orchard. Mr. Clement admitted that it would be all right, and I don't care a bit if he did grin a little at the time. We are going to make a success of that orchard if it is humanly possible, and I had my reward for last night's exploit in another way. I had a chance to hear the wonderful concert of the birds that greets the dawn, long before even the most industrious of us humans is stirring. But I am not going to say much about that just now. I am too much hurried to deal with anything so poetic. It will serve as a subject for a special article later on.

Bills Passed to Benefit Agriculture in Nova Scotia.

The more important Acts passed by the Legislature of Nova Scotia, aiming at the encouragement of agriculture during the session of 1912, were as follows:

"An Act to encourage settlement of farm lands in Nova Scotia," "an Act for the encouragement of horse-breeding in Nova Scotia," "an Act to assist the purchase of power ditching machines," "an Act to further facilitate the incorporation of farm, fruit, produce and warehouse associations," "an Act to authorize the expenditure of Dominion aid for agriculture," and "an Act respecting the construction, of permanent materials, of smaller bridges and culverts on public highways."

The Act to encourage settlement on farm lands empowers the Government to borrow a sum of money not exceeding \$200,000, to be used for the purpose of assisting settlers to raise money with which to purchase farm lands. According to the Act, the Government may enter into an agreement with a loan company for the following purpose, viz.: Whenever a loan company will agree to advance to a farmer, on a first mortgage of farm lands and buildings thereon, on terms approved by the Governor-in-Council, an amount up to at least 50 per cent. of the value of such lands and buildings, the Government may arrange to advance to such persons an additional amount, not exceeding, however, the difference between 50 per cent. and 80 per cent. of such appraised value.

Residents of the Province, as well as settlers, have alike the opportunity to make use of the provisions of this Act, but the intention of the Act is largely to encourage the immigration of settlers into the Province. Many of the best settlers who come to Nova Scotia have been tenant farmers in the Old Country, and have been in the habit of paying rent from year to year. These men often have working capital of a little more than \$1,000 or \$2,000. With only that amount of money at their command, it is difficult for them to secure as good properties as they should in the Province, more especially as, under conditions at present prevailing, it is almost impossible for these men to raise any appreciable amount of money on a farm which they may propose to purchase. But under the conditions of this Act to encourage settlement, such men, if they and their property are approved by the inspectors of a loan company, may borrow 80 per cent. of the total value of the property. This provides such men with the opportunity to commence life in the country of their adoption under favorable circumstances, and ought to lead to a much larger settlement of Nova Scotia farm lands.

The Act to encourage horse-breeding deals with the enrollment of stallions. Briefly, it requires that no person, firm or company shall offer for use any stallion in the Province, unless the description and pedigree of such stallion have been enrolled, and a certificate of such enrollment issued by the Department of Agriculture. Stallions are to be enrolled under three schedules, as follows: (a) pure-bred, (b) grade, (c) cross-bred. The first two are perfectly clear, but under form (c) are enrolled all those stallions sired by grade stallions or whose sires and dams are pure-bred, but not of the same breeding. In other words, the term cross-bred, as used, includes mongrels. It is required that each bill and poster issued by the owner of any stallion under this Act shall contain a copy of the stallion's certificate, so that the public at large may, at sight, know whether a certain stallion is pure-bred or grade or cross-bred. In a word, stallion-owners are required to label their stallions. This Act, it is understood, is a preliminary measure, intended to pave the way for more thoroughgoing legislation which will ultimately make the pure-bred sire king in Nova Scotia. For the time being, all stallions may receive certificates, but it is manifest that the Act will arouse public sentiment to a greater appreciation of the pure-bred sire. This Act comes in force in January, 1913.

The Act to assist the purchase of power ditching machines authorizes the Government to expend a sum not exceeding \$1,000 annually for the purpose of assisting any persons, corporations or agricultural societies to purchase a power ditching machine, to be used for the improvement of lands for agricultural purposes. Two years ago the Government of Nova Scotia purchased a traction ditcher, which has given such excellent satisfaction that a number of farmers have become interested in bringing more machines into the Province. These machines are expensive, and, under special conditions prevailing in Nova Scotia, it is difficult to make them as profitable to their owners as they would be in a country where the farms are larger and the lands more level. Such Government assistance is, therefore, very timely. Already, one company, known as the Pictou County Ditching Co., have purchased a machine, and will receive assistance under this Act.

The Act to further facilitate the incorporation of farmers' fruit, produce and warehouse associa-

tions was passed for the purpose of enabling those co-operative farmers' fruit, produce and warehouse associations, some of which were incorporated under the regular "Nova Scotia Company's Act," but the majority of which were incorporated under a special Act of Legislature, passed in 1908 to facilitate the incorporation of farmers' co-operative societies, to form themselves into a "Central Company" for the purposes of buying, selling, warehousing, etc., fruit and other farm produce. There are now some 25 co-operative fruit-growers' companies in Nova Scotia, each of which is doing business privately. It has been found, however, very advantageous to organize one large central association, including any of these smaller companies who might wish to join, and to do business under this central company. A fairly extensive beginning was made last year, and, as a result of this extensive co-operation, many advantages were gained in regard to shipping, buying, selling, etc. No more important measure, intended for the encouragement of agriculture, was passed during the season of 1912 than this bill, which was passed to facilitate the incorporation of central associations.

The act to authorize the expenditure of Dominion aid to agriculture was passed in order to empower the Province to receive this money from the Dominion Government under a special agreement, so that it shall not form part of the consolidated revenues fund. The amount received by Nova Scotia this year will be \$34,288, of which \$3,000 is to be spent in assisting agricultural societies, and the balance in erecting a building at the Nova Scotia Agricultural College.

The Act respecting the construction of bridges, culverts, etc., on the public highways, is of great interest to farmers. According to this Act, the Government is empowered to borrow a sum not exceeding \$500,000 to be spent upon the construction of permanent material for culverts, crossways and smaller bridges, along the highways of Nova Scotia. In previous years the Government has constructed all larger bridges in the Province, and, as a result, Nova Scotia is well equipped with substantial bridges over all the larger streams. Under the Act passed in 1912, it is proposed to carry this work down to the smaller bridges, crossways, etc., and this appears to be a very sound policy, for it means that such work as is done out of funds provided by this special appropriation will be of a permanent character, and will provide for permanent drainage of roadsides, and so prepare the way for any future provisions that may be made either by governments or municipalities or private citizens for the improvement of the roads of the Province.

These are the more important Acts passed in the session of 1912 for the purpose of aiding and improving the condition of the farmer in the Province of Nova Scotia. It is evident, from the nature of these, that the Government of Nova Scotia is alive to the interests of agriculture in the Province, and that, as a result, continued progress may be looked for.

States Broadening Demonstration Work.

By direction of Secretary Wilson, of the U. S. Department of Agriculture, the work of the Bureau of Animal Industry in the South is to be carried to the farmer through the efforts of the State, district and county demonstration agents of the Bureau of Plant Industry. The valuable work of the Bureau of Animal Industry in tick eradication is proving of considerable importance in connection with the farm demonstration work. The agents in the farm demonstration work, on the other hand, are in a position to do a great deal toward assisting the tick eradication work.

A plan has therefore been effected which provides for co-operation between the forces of the Bureau of Animal Industry and the Bureau of Plant Industry, in placing before the farmers of the South the important facts connected with tick eradication. The arrangement further provides that the same general plan shall be followed in connection with the dairy work of the Bureau of Animal Industry and the animal-husbandry work, especially that which has to do with hog-raising. In connection with the boys' corn clubs, it is proposed to encourage the organization of hog-raising contests and pig clubs. The demonstration agents have faced the boys of the South greatly interested in the question of what to do with their corn when they have no use for it. If they can get more money for it by taking it to pigs, they are going to do so. A number of the boys have already won prizes in county fairs, in connection with hog raising contests. The Bureau of Animal Industry will cooperate with the demonstration agents in the matter of organizing poultry clubs, egg clubs, and similar work with the girls' clubs. The bill, together with the forces of the Department, as indicated above, is expected to result in much good, in giving the farmers of the South practical information along the lines of animal industry and plant industry. The Department is arranging, also, to carry work of this kind into the Northern States.

Backward Season in P. E. Island.

Up to the second week of May, very little had been done at planting. The weather was still cold, and most of the land too wet for cultivation. The grass had hardly started, and even sheep were still on their winter feed. Clover on the new meadows has kept the ground well, where it was not pastured off last fall. Keeping the stock off newly-seeded meadows seems to be the great secret in getting the clover plant to winter safely. In every case we have noticed where the clover is winter-killed, it was for the want of a covering of last fall's growth, which would have held the snow and prevented heaving of the surface from alternate freezing and thawing. It is a false economy, still largely practiced, this pasturing of newly-seeded meadows. A week or so in seeding does not make much difference here, as we seldom have heat enough to produce growth till the latter part of May, and our observation is that more mistakes are made in stirring the ground while too wet than by waiting longer till it is in proper condition. More attention than ever is being paid by our farmers in procuring good seed for all their crops. The teaching along these lines that has resulted from the "Seed Department" and our local seed shows has had this effect, and we believe the average production per acre on very many farms has been materially increased, as well as the average price of the produce from being of a better quality.

Prices here for farm products are perhaps the highest ever obtained. A very considerable quantity of seed oats has been shipped out, at a price of from 60 to 70 cents per bushel. Ordinary feed oats are worth about 55 cents. Potatoes are now going forward in quantity at 60 cents a bushel. Beef, pork, butter and eggs are at the highest point ever reached here. Horses are in brisk demand. The outlook for agriculture is bright. The one drawback is the scarcity of farm laborers. The lure of the big West has taken so many of our young men away, but, with better agricultural methods and better transportation in sight, we hope to see a change that will keep more of them at home in future.

At the last session of our Legislature our road system was remodelled. A roadmaster has been appointed for each school district, who collects and lays out the road tax, and whose duty will be to see that the roads are kept in as good condition as possible at all times. We look for better roads as a result. A more vigorous agricultural educational policy is also promised as a result of an additional fund from the Dominion for that purpose. Fox farming has already got to be a very large and important industry here, and very many companies have become incorporated recently to still further extend the breeding of foxes and other fur-bearing animals. It is reported that this spring's crop of young black foxes has been disappointing; in some ranches there has been no increase. The sheep industry is on the increase here again, and a tax on dogs amounting to \$1.00 on males and \$3.00 on females, has been enacted. This, it is hoped, will tend to lessen the number of useless curs kept in the country.

W. S.

Where Potatoes and Eggs are Plentiful.

Potatoes are plentiful in Antigonishe, one farmer sold over sixty bushels to one merchant—good-looking potatoes, at that; large, and reported dry; mostly Carmans; other farmers are shipping their potatoes to Cape Breton, mainly to the Sydneys.

It is expected that some fine poultry will be shown at the local exhibition next fall. Some of the local poultry fanciers have been importing settings of eggs from the States and Ontario. One poultryman has imported so far four or five settings of White Orpingtons—new around here; others, the Leghorns and Plymouth Rocks. The only fault that is found is the packing; the eggs are generally packed in cardboard boxes, and, as a consequence, a few are broken in transit. The Morgan egg basket is also used by some of the Ontario poultry shippers, but some of the eggs in these were broken, likely due to careless handling. A clerk (grocery) lately, while taking in eggs, weighed different lots (a dozen in each), and found Leghorn eggs as heavy as any, weighing thirty ounces per dozen. Eggs are still 20 cents per dozen, and plentiful.

J. H. M.

Antigonishe Co., N. S.

The United States Department of Agriculture has created that all horses imported into the United States must have a certificate from a competent official of the district in which the horses have been located for six months that no contagious disease has existed among the horses of the district during the preceding year. All horses coming from other continents must also be accompanied by an affidavit that they in transportation have not passed through any district in-

fectured with dourine (maladie du coit), or any other contagious disease affecting horses or animals of their kind. These latter horses are also required to pass inspection at port of entry.

New Holstein Friesian Secretary.

The Live-stock Branch of the Dominion Department of Agriculture loses a careful, methodical and very efficient servant in the person of W. A. Clemons, who has left Government service to go back to the land, keeping in touch with practical agriculture through his modern-equipped 85-acre farm, while taking charge of the office of the Holstein-Friesian Association of Canada, which has long outgrown present accommodations, and will now be removed to the town of St. George. Many prominent breeders have urged him to return to this work, of which he had charge from 1894 to 1900. Of late years it has been performed by his sister, Miss Clemons, though the name of their father, G. W. Clemons, stood on the official records as Secretary of the Association.

During the past seven years, Mr. Clemons, Jr., in his work of examining and affixing the Department of Agriculture's seal to the pedigrees issued by the National Records Office, has inspected and approved for the Minister nearly a quarter of a million certificates of some forty different breeds. In connection with this work he has handled, incidentally, all kinds of English, Scotch, French, Belgian and American certificates of registry, and has acquired a familiarity with the work of registration in all countries that has seldom or never fallen to the lot of any other man. The rapidly-growing Record of Merit, Record of Performance, literary and other work of the Holstein-Friesian Association offers a wide field for useful service, and he hopes to be able to accomplish something along this line. This large and flourishing breed society is to be congratulated upon having its records in such good hands, as well as upon the prospect of securing quarters suitable to the increasing work of this public-business organization.

Toronto-to-London Crop Outlook.

As far as might be judged at this early date in the growing season, the field-crop outlook along the line of the Grand Trunk between Toronto and London, via Hamilton, is for the most part favorable, with possibly one exception. The fall-wheat area does not appear to be large, and many fields are decidedly patchy. Here and there a good one is to be seen, but these are the exception. For reasons before stated, a number of meadows are not as strong as might be desired, but these and the pastures have time to pick up, and prospects are for more abundant supplies of fodder than heretofore. Pastures, though late, are making a vigorous start, and in many years the spring grains, such as barley and oats, have not started growing so evenly and so well. In so far as moisture supply is concerned, probably not in ten years has the saturation of soil been so thorough and evenly distributed. There seems to be a large acreage of spring grains sown, and also being prepared for corn and roots. Judging by reports from seedsmen and from growers, there will probably be an increased area of potatoes planted because of the high prices, but it would be just as well not to overdo the crop. Stock did not appear last week to be out on the pastures very numerous, indicating that the counsels given in "The Farmer's Advocate" are probably being heeded, which will tell favorably on the grass later on. Dandelions are nearly everywhere disputing with grass for possession of the soil, and cover scores of large fields like a cloth of gold, but there the semblance ceases.

The better-orchard propaganda is gaining ground, but very slowly, as a rule. The really properly-cared-for apple plantations heighten by way of contrast the ill-condition of the majority. The era of bare improvement ought now to be succeeded by an orchard reform all along the lines. Between Hamilton and Toronto evidences multiply of intensive farming and activity in fruit and vegetable-growing. What were once large stock or general farms are now split up into smaller lots, and are supporting in comfort large numbers of people.

Near Clarkson Station, Messrs. P. W. Hodgetts and A. P. Westervelt, of the Provincial Department of Agriculture, make their homes on a 43-acre plantation devoted to the production of high-grade fruits and vegetables. D. T. Elderkin was formerly associated with them in the enterprise, which has proved highly satisfactory. The returns are chiefly from apples, strawberries and pears, and various crops of fancy vegetables such as early potatoes, onions, sweet corn, etc. The train service to Toronto is excellent, which makes residence there entirely feasible, as well as pleasant for hard-worked office men, and a comfortable separate home for foreman and help has solved satisfactorily the latter problem. There has thus far been no difficulty experienced in securing extra pickers during the strawberry season and other times of rush work. There were numerous news-

paper reports of serious damage to fruit buds by the frosts a couple of nights some ten days ago, but these do not seem to have been justified. Last week there was more fear because of the cool and constant rains on the blossoms, washing out the pollen and preventing the bees and other insects from doing their necessary work.

Royal Commission on Education.

Recent newspaper reports from Ottawa, to the effect that the report of the Royal Commission on Industrial Training and Technical Education would be out in June were entirely premature and incorrect. The outside inquiry on this continent, Great Britain and Europe was concluded some time ago, but in the compilation and preparation of the mass of material gathered for publication, a great deal remains to be done, and additional sessions of the members of the Commission will yet be held to work out the all-important conclusions to be drawn, and recommendations to be made to the Ottawa Government. In a general way it may be concluded that the latter will be favorable to technical education, in which agriculture, as a dominating fundamental industry of Canada will necessarily and largely share, though no specific indication has yet been given as to what the findings of the Commissioners will be. The report, which will probably be ready about August, should be a guide as to the further federal aid to the Provinces for educational purposes, and a help in solving the problem of adjusting the conditions between the two. However, the needs of technical education and industrial training, rural and urban, are steadily and clearly taking shape in the public mind, and the report will crystallize them. Provincial authorities will naturally shape their educational policies to the requirements of the people, and Federal authorities being willing to co-operate in some advisory or co-operative capacity, and to supplement what is now being done with substantial aid, the procedure will assuredly be found to further the highest and best development of the country as a whole.

The chairman, Dr. Jas. W. Robertson, has recently returned to Ottawa to give his close attention to the supervision of the report. While in the West, he delivered a long-promised address before a large gathering of appreciative university people in Winnipeg, on "The Cultural Value of Vocational Training." Returning, he visited Wisconsin, where he looked over the remarkable campaign of extension work radiating from the University City of that State, and also made a survey of the educational processes in vogue in Illinois, with very marked results.

Crop Conditions in Canada.

A bulletin of the Census and Statistics Office, issued May 18th, makes the following report on the crops and live stock of Canada:

The area sown to winter wheat last fall was reported as 1,097,900 acres, of which 797,200 acres were in Ontario and 300,700 acres in Alberta. From reports of correspondents at the end of April, it is estimated that about 31.50 per cent. of this area has been winter-killed, the proportion being 28.72 per cent. in Ontario, and 38.50 per cent. in Alberta. This represents a total deduction from the area sown of about 345,000 acres (229,000 acres in Ontario, and 116,000 acres in Alberta). The average condition of winter wheat on April 30th was 72.62 of a standard (71.24 per cent. in Ontario, and 76.80 per cent. in Alberta). From these figures, it is calculated that the yield per acre from winter wheat in 1912 is likely to be about 20 bushels per acre, or 13 per cent. less than the average yield of the three years 1909-11, viz., 23-33 bushels per acre, provided that average conditions prevail between now and harvest.

In the Maritime Provinces, spring seeding on April 30th had only begun here and there, most of the ground being still under snow. Very little progress had been made by the same date in Quebec, the amount of seeding done representing not more than about 3 or 4 per cent. In Ontario, about 15 per cent. of the total seeding was completed, but this applies chiefly to the western and southern parts of the Province. In the Northwest Provinces, the wet condition of the ground, coupled with cold weather and the small amount of fall plowing completed last year, has caused seeding operations to be somewhat backward. In Manitoba, 50.13, in Saskatchewan 71.54, and in Alberta 61.26 per cent. of the seeding of spring wheat was completed by the end of April; and, of total seeding done, the percentage proportions were, Manitoba 36.63, Saskatchewan 49.30, and Alberta 51.50.

Nearly 14 per cent. of the hay and clover meadows have been winter-killed, and their average condition is represented by 74.63 for all Canada, the figures for Quebec being 50, for Ontario 80.46, for Manitoba 88.49, for Saskatchewan 87.82, for Alberta 95.60, and for British Columbia 97.72.

The report on the condition of live stock shows a high average for the Dominion, being over 90 per cent. of a standard. West of Ontario the figures exceed 90 for all descriptions of live stock. In Ontario, for milk cows and other cattle, in Quebec for horses and milk cows, and in Prince Edward Island for milk cows and other cattle the percentage figures of condition fall below 90, the range being from 83

ARCHIBALD BLUE,
Chief Officer.

Potato Growers Warned.

A note of warning has been sounded from Ottawa in regard to the very dangerous potato disease that has been brought to Canada in tubers imported from Europe during the present year. The disease, which is known as potato canker, was recently discovered in an imported shipment. To warn Canadian farmers against the danger of planting imported seed, the Director of the Experimental farms has issued a leaflet known as "Farmers' Circular No. 1," prepared by H. T. Gussow, the Dominion Botanist, which contains the following points:

1. The only way in which the disease can be introduced is through the planting of affected tubers.
2. The use of diseased tubers for seed may, in the worst cases, result in the complete destruction of the entire crop.
3. When once introduced, the disease germ infests the soil for a period of eight years, which means that for at least eight years no sound potatoes can be raised on land thus infected.
4. None of the known remedies for other plant diseases will prevent the appearance of the disease.
5. The disease is spread readily through infested soil, carried by wind, animals, farm implements, old bags, or other means.

Attention is called to provisions under the Destructive Insect and Pest Act, which show that, to use or sell for seed potatoes imported from Europe is illegal. Copies of this Farmer's Circular may be obtained by applying to the Publications Branch, Department of Agriculture, Ottawa, Ont.

H. L. Hutt, Professor of Landscape Gardening at the Ontario Agricultural College, and R. B. White, of Ottawa, ex-president of the Ontario Horticultural Association, leave next month on a visit to Great Britain, where a special study will be made of various aspects of the subject of civic and home improvement. In a land where such perfection in adornment has been attained by means of the growth and arrangement of plants, flowers and grass, Prof. Hutt expects to return fortified for future work with a wealth of suggestion and inspiration.

The committee of the Dominion Sheep-breeders' Association, consisting of A. P. Westervelt, Secretary; Col. D. McCrae, Col. R. McEwen, R. H. Harding, and C. M. MacRae, of the Dominion Livestock Branch, met in Ottawa on Friday last, completing arrangements, as announced in last week's "Farmer's Advocate," for the working out of plans for the advancement of the sheep industry in Canada, including the purchase of pure-bred rams and grade ewes for disposal in the Maritime Provinces and British Columbia. Mr. Westervelt has received from the Federal authorities a \$15,000 check from the unexpended appropriation of last year to finance the scheme. The preliminary visit to the outlying Provinces by members of the committee will probably be made next month.

GOSSIP.

Our readers are always interested in farm implements and appliances. In another column in this issue will be found the advertisement of the Hilborn Company, Ayr, Ont. The Improved Oxford Gang Plow advertised, is said to be a leader. Two-furrowed plows help solve the labor problem. This firm also manufactures a full line of plows, barrows, harrows, pulpers, etc. See the ad., and write for booklet.

INVESTIGATING INFECTIOUS ABORTION.

Dr. F. Torrance, D. V. S., of Winnipeg, Man., has been appointed by the Dominion Government to spend some time in England studying at first hand what has been found out about infectious abortion. Dr. Torrance has already gone forward on his mission, and will prepare a report which will undoubtedly be of great assistance to live-stock interests in this country.

Geo. D. Fletcher, Green Grove Stock Farm, Binkham P. O., Ont., writes: We have reduced the price of our S.-C. White Leghorn eggs (advertised in the Poultry column of "The Farmer's Advocate") for the remainder of the season. My Short-horns advertised are in good condition, and I have never had a better lot of heifers to offer. My imported bull, Spectator 50094, is a high-class animal. He was one of the many good ones imported by W. D. Flatt, Hamilton. His breeding is choice, and he has proved himself a choice stock bull. He will weigh about 2,200 lbs. in his present breeding condition, and is a long-

bodied, smooth-fleshed, good-quality bull, on short legs. He has now turned eight years old, but never was more useful, as he is both sure and active. He sold for \$600 when young, and I price him now at \$175. A bargain for some person.

A CHANCE TO PURCHASE HOLSTEINS.

An unreserved auction sale of high-class Holstein cattle will be held at Hill Cliff Stock Farm, four miles east of Salford, C. P. R., and four miles west of Burgessville, G. T. R., the property of W. A. Tackell, Holbrook, Ont., on Monday, June 10, 1912. At this sale, which is to commence at 1 o'clock, some eighty head of cattle, bred from such sires as Prince Albert De Kol, a full brother to the great sire of producers, Lord Roberts' De Kol, and Queen De Kol 2nd's Teake, of especially attractive breeding, will be offered. The sire of the present herd-header, Dutchland Sir Hengerveld Maplecroft, has over 100 daughters in the A. R. O., and some 30 eligible sons. The females of the herd are of the heavy milking class. Two-year-olds give 40 lbs. per day, and aged cows up to 70 lbs. Perhaps the most attractive female to be offered is a cow with 75 per cent. of the same blood as Helbon De Kol, which has a record of 31.54 lbs. butter in seven days. All these cattle have been bred with special attention to production and form, and this sale, which will be held, rain or shine, offers an opportunity for dairymen and breeders to get some real good stock. Trains will be met at station on day of sale. See advertisement in another column, write for catalogue, and plan to attend this sale.

QUESTIONS AND ANSWERS.
Miscellaneous.

ENFORCING PAYMENT OF DEBT

A writes to B stating that she is in trouble over making up some money by a certain date, and asking B to lend her a few dollars, promising to return it in about two weeks. It has run along into months, and as B has written her a threatening letter, are there any grounds upon which B can take steps to make her pay the amount she owes him?
Ontario. INQUIRER.

Ans.—He can sue her for it. Then, and after having obtained judgment, he could have her examined as a judgment debtor.

CURING PORK.

Can you advise me what is a good way to cure spring-killed pork, to keep through the summer? Also fall-killed pork?
W. T. C.

Ans.—There are many good methods of curing pork. See article, "Home-curing of Meat," on page 1935, of "The Farmer's Advocate," issue of November 30, 1911. Also article on page 527, of the issue of March 21, 1912, on "Home-cured Bacon and Ham." These explain several good methods. One method often used is dry salting. In this method it is customary to thoroughly rub the meat with salt and pile it on a table and allow it to stand for a few days, when it is again re-rubbed and sprinkled with salt. This must be continued until the meat is cured through, and the only way to ascertain this is cutting and tasting. In wet salting a brine is made and the meat placed in this. A good strength is one

which will float an egg. The meat may be left in this until it is cured through, then it may be hung up and smoked.

CONTRACT OF HIRING.

If A hires to B for a year, in the meantime B's housekeeper leaves, causing inconveniences to A, thus trouble arises between A and B, can A leave by giving B one month's notice, and collect wages for time served?
Ontario. A SUBSCRIBER.

Ans.—He is not legally entitled to do so.

CUTTING CORN.

When you are cutting corn with the hoe, do you drop it in bunches, say, three or four hills together, or do you let it fall as it will?
A SUBSCRIBER.

Ans.—It is much handier and nearly as easy to place the corn in piles about the size of an ordinary sheaf. Several hills may be placed together.

LIGHTNING RODS FOR BARN.

We have two barns adjoining, L fashion, one running 16 feet on the other, and both roofs are connected. Water pipes run down at one corner of each barn. One runs into a well, and the other into a tile drain in the ground about two feet. These barns are roofed with galvanized steel. Do they need lightning rods?
J. H. W.

Ans.—Barns roofed with galvanized steel, if properly grounded at each corner, are reasonably safe from lightning. It would be better to put heavily-galvanized wire, not less than 1/2-inch in diameter, from each corner of the eaves down into the ground until it reaches permanent moisture. Be sure to connect the wires with the roof, and place them about eight or ten feet in the ground.

THE CANADIAN BANK OF COMMERCE

ESTABLISHED 1867

Capital, paid-up, \$15,000,000.
Reserve, \$12,500,000.

The Canadian Bank of Commerce extends to farmers every facility for the transaction of their banking business, including the discount or collection of sales notes. Blank sales notes are supplied free of charge on application.

Accounts may be opened at any branch of the Canadian Bank of Commerce to be operated by mail, and will receive the same careful attention as is given to all other departments of the Bank's business. Money may be deposited or withdrawn in this way as satisfactorily as by a personal visit to the Bank.

MARKETS

Toronto.

At West Toronto, on Monday, May 20, receipts of live stock numbered 186 cars, comprising 3,476 cattle, 1,359 hogs, 615 sheep, 119 calves, 18 horses; quality of cattle good; trade firm, at steady prices. Exporters, \$7.25 to \$7.75, and one load of steers \$8; bulls, \$5.75 to \$6.50; choice steers, export weights, for butchers' purposes, \$7.10 to \$7.35; loads of good, \$6.75 to \$7; medium, \$6.40 to \$6.70; common, \$6 to \$6.30; inferior, \$5.50 to \$5.80; cows, \$4.50 to \$6.40; milkers, \$4 to \$7; calves, \$4 to \$8.50. Sheep—Ewes, \$6.50 to \$7.25; rams, \$4.50 to \$5.50; yearling lambs, \$8 to \$8.75; spring lambs, \$5.50 to \$7 each. Hogs, fed and watered, \$8.85, and \$8.50 f. o. b.

REVIEW OF LAST WEEK'S MARKETS
The total receipts of live stock at the City and Union Stock-yards last week were as follows:

	City.	Union.	Total.
Cars	234	254	488
Cattle	2,843	3,907	6,750
Hogs	5,856	4,675	10,531
Sheep	1,001	252	1,253
Calves	1,532	65	1,597
Horses	2	94	96

The total receipts of live stock at the two markets for the corresponding week of 1911 were as follows:

	City.	Union.	Total.
Cars	241	223	464
Cattle	3,352	3,691	7,043
Hogs	5,020	2,639	7,659
Sheep	2,187	855	3,042
Calves	964	183	1,147
Horses	2	53	55

The combined receipts of live stock at the two markets for the past week show an increase of 24 carloads, 2,872 hogs, 450 calves, and 41 horses; but a decrease of 293 cattle and 1,789 sheep, compared with the same week of 1911.

It will be seen by the above figures that receipts of live stock were liberal, more so than many of the dealers anticipated. At the Union yards on Monday the receipts of cattle especially were large, 3,137, which was 71 more than for the corresponding day of 1911. Three American firms had buyers on the market for export cattle, and there were buyers from Montreal, Ottawa and Hamilton, as well as all the local wholesale butchers and abattoirs. Together, they caused a good, steady trade, at prices which were no higher than the previous week, that is, for farmers' fed cattle. There were seven loads of distillery-fed steers, and bulls fed by Lunness & Halligan, at Walkerville, Ont., three loads of which were bought by Swift & Co., at \$8 per cwt., which is 25c. higher than any previous record this season. The farmers' fed cattle were no higher, and while there was a good demand, yet it was not strong enough to absorb all the offerings, as there were 250 cattle still unsold at the close of the market, which had to be carried over, some of which were still unsold on Thursday. The main reason for this was that many of these cattle had been bought by drovers and one or two commission dealers

at prices which were considered prohibitive by the export dealers. The same conditions prevailed at the City market, and there was not a single day that a clearance was made at either market, showing plainly that cattle have been bought at higher prices in the country than the existing conditions of the trade would warrant.

Exporters.—About 700 cattle were bought for export during the week. Steers weighing 1,200 to 1,300 lbs., sold at \$7.50 to \$7.62; 45 export bulls, 1,800 lbs. each, sold at \$6.40.

Butchers.—Steers of export weights, \$7.10 to \$7.35, and one extra choice lot at \$7.50; loads of good butchers', \$6.85 to \$7.10; medium, \$6.50 to \$6.75; common, \$6 to \$6.50; inferior, \$5.25 to \$5.90; cows, \$4 to \$6.50; bulls, \$4.50 to \$6.50; canners' cows, \$2.50 to \$3.50.

Stockers and Feeders.—Feeders, 800 to 900 lbs., sold at \$5.75 to \$6.25; stockers, 500 to 750 lbs., sold from \$4.75 to \$5.50.

Milkers and Springers.—The bulk of the milkers and springers sold from \$50 to \$65 each; two or three extra quality cows sold at \$70 and \$75, and a six-year-old Holstein brought \$100. Common cows sold at \$40 to \$45 each.

Veal Calves.—Receipts were liberal, with market firm all week. Prices ranged from \$4 to \$8 per cwt., the bulk selling from \$6 to \$7 per cwt.

Sheep and Lambs.—Receipts were larger, and prices for sheep about 50c. per cwt. cheaper. Ewes, \$5.50 to \$6.25; rams, \$4 to \$5; yearling lambs, \$7.50 to \$8.50; spring lambs, \$4.50 to \$7 each, some few choice heavy lambs bring \$8, \$9, \$10, and one lamb brought \$12.

Hogs.—Prices have gained strength all week until \$9 was reached for selects, fed and watered at the market, and \$8.60 to \$8.65 for hogs f. o. b. cars at country points.

Horses.—The Wednesday's auction sale at the Union Horse Exchange was one of the best of the season, especially for heavy draft horses, several loads of choice stock leaving these barns for different points of the Dominion. Messrs. P. J. Brennan, Ottawa; H. Dupuis & Son, of Hull, Que., each bought a carload of draft horses. C. McKinnon, of Port Arthur, shipped one load of light horses. Several of the city firms also bought choice, heavy horses, viz.: S. Phillips, planing mills; Bishop Construction Company; Gunn's Limited; Northern Transfer Company; J. M. Gardhouse, of Weston, bought part of a load of extra heavy-weight horses for shipment to Vancouver, B. C. The Farmers' Dairy got several wagon horses. Many other buyers got several good horses to ship to the following points: Brampton, Fort William, Port Robinson. Prices ranged as follows: Drafters, \$225 to \$260; general-purpose, \$150 to \$210; express and wagon horses, \$160 to \$225; drivers, \$100 to \$150; serviceably sound, \$30 to \$90 each.

BREADSTUFFS.

Wheat.—No. 2 red, white or mixed, \$1.05 to \$1.06, outside; Manitoba No. 1 northern, \$1.11; No. 2 northern, \$1.08; No. 3 northern, \$1.05, track, lake ports. Oats—Canadian Western oats, extra No. 1 feed, 50c.; No. 1 feed, 49c.; track, lake ports; Ontario No. 2, 49c. to 50c.; No. 3, 47c. to 48c., outside points; No. 2, 50c. to 51c., track, Toronto. Rye—No. 2, 85c. per bushel, outside. Peas—No. 2, \$1.15 to \$1.25 per bushel, outside. Buckwheat—72c. to 73c. per bushel, outside. Barley—For malting, 87c. to 88c. (47-lb. test); for feed, 60c. to 65c. Corn—American No. 3 yellow, all rail from Chicago, 85½c. Flour—Ontario ninety-per-cent. winter-wheat patents, \$1 to \$1.05, seaboard. Manitoba flour—Prices at Toronto are: First patents, \$5.70; second patents, \$5.20; strong bakers', \$5.

HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, No. 1 per ton, \$22; No. 2, \$20.
Straw.—Baled, car lots, track, Toronto, \$10 per ton.
Bran.—Manitoba bran, \$25 per ton; shorts, \$27; Ontario bran, \$25 in bags; shorts, \$27; car lots, track, Toronto.

COUNTRY PRODUCE.

Butter.—Market about steady. Creamery pound rolls, 27c. to 28c.; creamery solids, 25c.; separator dairy, 15c.; store lots, 22c.

Eggs.—Strictly new-laid, in case lots, 24c. per dozen.

Cheese.—New, 16c. per pound; old, 17c. to 18c. per pound.

Honey.—Extracted, 13c. for No. 1 clover. Combs, none offering.

Poultry.—Receipts light. Dressed turkeys, 20c. to 22c.; chickens, 18c. to 20c.; spring chickens (broilers), 40c. to 45c. per lb.; fowl, 14c. to 16c.

Potatoes.—Car lots of Ontario potatoes, \$1.80 per bag, track, Toronto; Delaware, \$1.85 to \$1.90; English, Irish and Scotch, \$1.60 to \$1.70.

Beans.—Car lots are quoted as follows: Hand-picked, \$2.60 to \$2.70; primes, \$2.50 to \$2.60, track, Toronto.

TORONTO SEED MARKET.

Following are the prices at which re-cleaned seeds are being sold to the trade: Alsike No. 1, per bushel, \$15 to \$15.50; alsike No. 2, \$13 to \$14; red clover No. 1, per bushel, \$15 to \$15.50; red clover No. 2, per bushel, \$13.50 to \$14.50; alfalfa No. 1, per bushel, \$11 to \$12; alfalfa No. 2, per bushel, \$9.50 to \$10.50; timothy No. 1, per cwt., \$17.50 to \$18.50; timothy No. 2, per cwt., \$15.50 to \$16.50.

HIDES AND SKINS.

Prices for hides and skins at Toronto for the past week: No. 1 inspected steers and cows, 12½c.; No. 2 inspected steers and cows, 11½c.; No. 3 inspected steers, cows and bulls, 10½c.; country hides, cured, 11½c.; green, 10½c.; calf skins, 13c. to 16c.; sheep skins, \$1 to \$1.45 each; horse hides, No. 1, \$3.25; horse hair, per lb., 33c.; tallow, No. 1, per lb., 5½c. to 6½c.

FRUITS AND VEGETABLES.

Apples.—Spies, \$5.50 to \$7 per barrel; Baldwins, \$3 to \$4.50; Ben Davis, \$4 to \$5; Russets, \$3 to \$4.50; Canada Reds, \$3 to \$4. Onions, Egyptian, per sack, \$3.50; oranges, navels, per case, \$3 to \$3.50; parsnips, per bag, \$2; turnips, per bag, 85c.; Florida grape fruit, per case, \$5 to \$6; carrots, bag, \$2; cabbage, case, \$2.50 to \$3; beets, per bag, \$1.50; celery, per case, \$2 to \$2.50; cucumbers, per hamper, \$2; North Carolina strawberries, 14c. to 15c. per quart, by the case; evaporated apples, 10c. per lb.

Montreal.

Live Stock.—In the local market there was a firm tone. The American markets are all very firm, and supplies are apparently insufficient to satisfy the demand. Because of this, prices have been advancing in the country and the stock-raising centers, until it is now difficult to get many really choice steers at less than 8c. per lb. here, the range of prices being, however, 7½c. to 8c. Fine stock is held at 7½c., good at 7½c., and even 7c., while medium quality sells at 6½c. to 6½c., and common at as low as 5c. There was a time when choice cattle would not bring more than 5c. per lb., so that 5c. for common means quite an item for the farmer. The market for sheep and lambs is firm, and mixed lots sell at 6c., ewes being 6c. to 6½c., and bucks and culls being 5c. to 5½c. per lb. Lambs sell at 7½c. to 7½c. Calves range all the way from \$1.50 for common stock to \$8 each for good. There is a somewhat easier tone in the market for hogs, and the result is that prices have declined fractionally, and selects are quoted at 9½c. to 9½c. per lb., weighed off cars, Montreal.

Horses.—Demand is not very active, and prices continue steady, as follows: Heavy draft horses, weighing from 1,500 to 1,700 lbs., \$300 to \$350; light draft, 1,400 to 1,500, \$225 to \$300; light horses, 1,000 to 1,100 lbs., \$100 to \$200, and common, broken-down animals, \$75 to \$100. Choice saddle or carriage animals, \$350 to \$500.

Dressed Hogs.—There was a fair demand for dressed hogs, and prices are 13c. to 13½c. per lb. for selects.

Potatoes.—There were quite a few potatoes offering the past few days, and prices were, if anything, lower. It is claimed that Green Mountains can be had at \$1.70 per 90 lbs., carloads, track, Montreal, while P. E. I. stock can be had at about \$1.35 or \$1.40. This stock can be had at an advance of 20c. per 90 lbs., when bagged and delivered in loads.

Syrup and Honey.—There has been a very fair trade in maple syrup, in wood, at from 7c. to 7½c. per lb., and in tins at 6½c. to 7c. each, while sugar is selling at 19c. to 11c. per lb. White comb

JOINT SAVINGS ACCOUNTS

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These are very convenient household accounts.

Bank of Toronto

Incorporated 1855

honey sells at 10½c. to 11½c., and extracted at 8c. to 10c. per lb., while dark sells at 7c. to 8c. for comb, and about the same for extracted.

Eggs.—The market holds very firm, and packers are taking everything in sight. It would appear that eggs will be very dear next winter. At the present time, round lots are selling here at 23c. to 23½c. per dozen, and at about a cent more in smaller quantities, while seconds are about 5c. less than straights.

Butter.—Market a fraction firmer on the strength of the purchases by New York. However, the market is irregular, and here and there excessive prices are still being granted. Locally, dealers quote 26½c. to 27c. wholesale, for best, and about a cent less for seconds, while dairy is quoted at 21c. to 22½c., and rolls at 22c. to 23c. Americans are still apparently taking Canadian makes.

Cheese.—The market holds firm, and Westerns are quoted here at 13½c. to 13½c. per lb. Exports are 25,000 boxes to date.

Grain.—Oats have advanced to 55½c. and 56c. per bushel for No. 2 Western, ex store, carloads, Montreal, No. 1 extra feed being 52½c. to 53c.; No. 1 feed being 51½c. to 52c., and No. 3 Canadian Western being 50½c. to 51c., and No. 2 feed oats being 50c. to 50½c.

Flour.—Demand for flour showed very little change, and prices are steady, at \$6.10 per barrel for No. 1 Manitoba patents, in wood, and \$5.60 for seconds, and \$5.40 for strong bakers'. Choice winter-wheat patents are \$5.25 to \$5.35, and straight rollers \$1.80, in wood. Bags are 30c. per barrel less.

Millfeed.—The market is still active all round, and prices firm, at \$25 to \$26 per ton, in bags, for bran, and \$27 to \$28 for shorts. Middlings are \$29, and pure grain mouille is \$34 to \$38, while mixed mouille is \$28 to \$32.

Hay.—Market steady. No. 1, \$19 to \$20; No. 2 extra, \$18.50 to \$19; No. 2 good, \$17 to \$17.50; No. 3, \$16 to \$16.50, and clover mixed, \$15 to \$15.50.

Seed.—There is no change in the market, save that there is a good demand. Prices are steady, at 14c. to 19c. per lb., and red clover and alsike, 22c. to 26c.

Hides.—Quality improving and demand steady. Prices unchanged. Lamb skins are 10c. each for spring, and \$1.10 for yearlings. Beef hides are 11c., 12c. and 13c. per lb. for Nos. 3, 2 and 1. Calf skins are 16c. and 18c. per lb., and horse hides are \$1.75 for No. 2, and \$2.50 for No. 1.

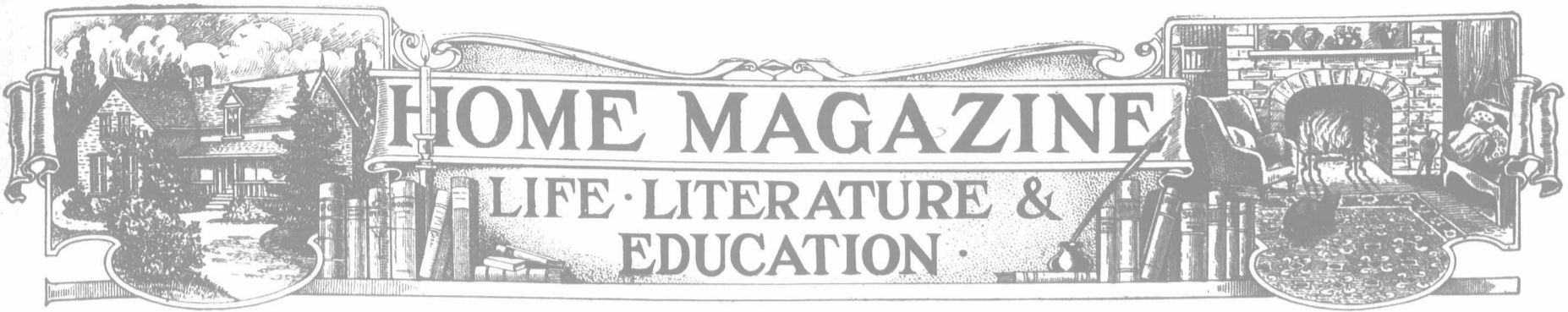
Buffalo.

Cattle.—Prime steers, \$8.50 to \$8.75; butcher grades, \$5 to \$8.25.

Calves.—Cull to choice, \$6.50 to \$9.50. Sheep and Lambs.—Choice lambs, \$8.25 to \$8.50; cull to fair, \$6 to \$8; yearlings, \$6.75 to \$7.25; sheep, \$4 to \$6.25.

Hogs.—Yorkers, \$8.10 to \$8.25; pigs, \$7.25; mixed, \$8.25 to \$8.30, heavy, \$8.30 to \$8.40; roughs, \$7 to \$7.30; stags, \$5.75 to \$6.25.

(Markets concluded on page 990.)



HOME MAGAZINE
LIFE · LITERATURE & EDUCATION

Little Trips Among the Eminent.

HOGARTH AND HIS IMMEDIATE PREDECESSORS.

[With acknowledgments to Allan Cunningham, Lorinda Munson Bryant, Encyclopedia Britannica, etc.]

If Holbein's was the first name of eminence among the painters of Britain, it was also, for many years, the last. In those days, as has been noted, the very livelihood of the artist depended greatly upon royal, and consequently noblemen's patronage. Henry VIII. had, for the sake of his own glory, smiled upon and richly rewarded Holbein. During the confused years that followed his death mere painters were wholly forgotten, nor, indeed, when Elizabeth came to the throne were conditions, so far as the artists were concerned, very much better. They soon found out that the "Virgin Queen" was far too penurious to encourage art in general, although, indeed, she was ready enough to have her own portrait painted from time to time, and little wonder, if she believed the stories these wily brush wielders were wont to tell her. The Queen, as history has recorded, was very plain, and yet, notwithstanding the unwieldiness of the loads of ornament and the huge ruff and fardingale with which she was accustomed to adorn herself for her portrait sittings, the painters invariably succeeded in representing her as quite more than tolerably good looking. Even so, so vain was she that, as Raleigh tells us, upon one occasion she ordered all portraits of herself to be burned, and, in 1563, issued a proclamation forbidding all save "especial cunning painters" to draw her likeness.

Few enough were there of these, however, in the England of her time, although, towards the close of her reign, Hilliard and the painter of miniatures, Oliver, began to achieve some distinction, these two being (since Holbein was not of British birth) the earliest English-born men who have any claim to the name of artist.

During the reign of Charles I. the outlook was somewhat brighter. Again was the sovereign interested in works of art, and again was the royal favor bestowed upon men who could produce them. Charles knew good work when he saw it. He made Inigo Jones his chief architect, and if he chose for his commissions in art the foreigners, Rubens and Vandyke—both of whom spent some time in England—rather than native artists, the work of the foreigners justified his choice and set a new standard for England. In all, during the time that he spent at the Court of Charles, Vandyke alone painted over 200 pictures, chiefly portraits of royal and noble personages.

During this period George Jameson, a Scotchman, was the only British artist who appears to have devoted much time to art; then the Civil War began, in course of which even those pictures that had been bought or painted at home were greatly decimated. Hundreds of them, chiefly religious, were burned by the Puritans, many others were sold abroad, and although Cromwell when he came into power put an end to such sales, the majority of the works of real merit that still remained were destroyed by the great fire at Whitehall Palace.

Sir Peter Lely's is the next name that figures on the list of artists in Britain, but, although he spent some years on the Island, he too was a foreigner. He it was who painted the famous picture of Cromwell, on which he was requested by the Protector to "put the warts." His flattery of the ladies and statesmen at the Court of Charles II. met with less objection.

Following Lely came the very indiffer-

ent Thornhill, and then from an unexpected quarter—as geniuses usually appear—arose the first really great, wholly British artist, Hogarth. No artist like Hogarth had appeared before him; none like him has appeared since. Artists had heretofore attempted to paint merely beautiful things. Even in portraiture the aim had been chiefly to flatter the subject, and so to curry favor and bring many commissions. The age was profligate, London was one of "the most licentious of cities, yet it had entered no artist's head to fancy that he might, by the representation of his brush, do aught to stem the tide of filthiness. As one of Hogarth's biographers has said, "Painters had been employed hitherto in investing ladies of loose reputation with the lines of heaven, and turning their paramours into Adonises." Then came Hogarth—"one who dipped both in the lake of darkness and held them up together to the scorn and derision of mankind."

"A blue-eyed, honest, combative little man," he had the daring of a hero. With a praiseworthy zeal he determined, through his canvases, to call attention to the festering spots in the social, political and church life of his time, and by ridicule or mere force of the hideousness depicted, to arouse a revolution of feeling against the conditions producing such results.

Some biographers have argued that a previous period of wild dissipation had familiarized Hogarth with many of the scenes that he proceeded to portray; others maintain that, with the express purpose of finding out material for his work, he deliberately made himself familiar with such surroundings. However that may be, the fact remains that, at something over thirty years of age, he began the series of unique canvases which

have made him famous, and which, without doubt, must have exercised some influence upon the thought of his time.

Previously he had been unknown. Born at Bartholomew Close, London, on the 10th of November, 1697, the son of a rather poor schoolmaster and literary hack, his education had been somewhat limited. Probably no amount of opportunity, however, would have made a scholar of him. "My exercises when at school," he says, "were more remarkable for the ornaments which adorned them than for the exercises themselves," and he professes to have felt from early childhood more interest in shows and performances than in lessons: "Shows of all sorts gave me uncommon pleasure when an infant, and mimicry, common to all children, was remarkable in me."

While yet but a lad he was apprenticed to a silver-plate engraver, and so much did this business prove to his taste that in 1720 he set up business, as engraver on silver and copper, on his own account.

For some years, however, his earnings at least were discouraging. "Until I was near thirty," he tells us, "I could do little more than maintain myself," and then he goes on to narrate, with child-like naïveté, a detailed story of unpleasant encounters with churlish landladies and importunate creditors; nor was the struggle rendered any the easier because of the fact that he had married—in secret, and much to her father's displeasure—Jane, daughter of James Thornhill.

The first plate published on his own account was "Masquerades and Operas" (1724), a clever satire on contemporary follies. Two years later he made 12 large drawings for Butler's "Hudibras," which revealed his powers of burlesque, then came 1731—fame, and a modest fortune.

In that year he completed the last of his famous series, "A Harlot's Progress."

The pictures were placed on exhibition, and London stood aghast. Not only were the subjects different and the workmanship better, in many respects, from anything that had appeared before,—Hogarth had had the audacity to paint with utter faithfulness, as characters in his pictures, a number of well-known people about town. With the dissolute Kate Hackaway and Mother Needham appeared one Colonel Charteris and others—high or low, mattered not a whit to Hogarth. So long as he was sure of his facts folk might wear the caps that fitted them. How had he managed the sittings?—that was the question. And then it began to leak out that Hogarth's memory was almost phenomenally retentive, that he could carry not only features but little mannerisms about in his mind's eye for any length of time, helping out as occasion offered by marvellous little sketches rapidly traced on his thumb-nail. All this was wonderful, but—and people shook their heads—for Hogarth had not in his attacks spared those who were powerful enough to work him harm.

So it was. He was threatened, critics lashed him, but he had caught the fancy of the public, and over 1,200 subscribers hastened to put in orders for engravings from the plates. With the proceeds from these and commissions which quickly followed he was enabled to move to a house at Leicester Fields, which he held until his death. Moreover, his father-in-law was now proud enough to acknowledge him, and a complete reconciliation took place.

In the meantime, Hogarth pursued the same ideals. He helped Thornhill to complete some allegorical pictures, was able to take summer lodgings at Lambeth Terrace (the house is still pointed out, and a vine which, it is said, he



The Marriage Contract.

From the series, "Marriage a la Mode," by Hogarth. The young lady has been prevailed upon to accept the disagreeable-looking old suitor who appears in the foreground of the picture.

planted), and all the while he worked away at his series "The Rake's Progress."

From this, however, he achieved less success. The charm of novelty was gone, the prints were by some means pirated before the originals were shown, and Hogarth was obliged to obtain a copyright from Parliament to protect himself.

Other pictures from his brush rapidly appeared, some burlesques, a few merely revolting—he could not paint dignity, nor, indeed, high tragedy. Among the most notable were "Southwark Fair," "Consultation of Physicians," "Modern Midnight Conversation," "Sleeping Congregation," "Scholars at a Lecture," "Strolling Actresses in a Barn," "Marriage à la Mode" (now in the National Gallery), four Prints of an Election, etc. Notwithstanding this amount of work his rewards from a pecuniary standpoint were rather meagre. After the first onrush of surprise he became merely the prophet in his own country. The people, it is true, bought his prints, but the paintings themselves sold for a mere trifle or were not sold at all, the picture dealers seeing no merit in anything so greatly at variance with the conceptions of the old masters.

After a flying visit to France, where he began to sketch one of the gates of Calais, was arrested as a spy and transported to England, he painted one of the most admired of his pictures, "The March of the Guards to Finchley," which he dedicated to the King, George II. The latter, however, paid no attention to it, so in high dudgeon Hogarth sent the painting on to Frederick of Prussia, who sent him a handsome acknowledgment for it.

In portrait painting Hogarth was on somewhat firmer ground; his picture of Garrick the actor alone brought him £200, more than any English artist had ever received for a single portrait. One of the most successful of his portraits, from an artist's point of view, was that of himself with his dog, Trump. This was the picture upon which appeared in one corner a palette bearing a curved line, which he fantastically called "the line of beauty and grace." The device occasioned much discussion and inquiry. Hogarth was called upon to explain himself and replied by a pamphlet, "The Analysis of Beauty," a production which, for the most part, served but to call down ridicule upon his head and put him at variance with the schools.

Finally he gave up portrait-painting altogether. He could not, he said, make "divinities" of all who sat to him, as he was expected to. He could not but be honest, and had the unhappy faculty, so far as his own fortunes were concerned, of seizing on the mind and spirit for his paintings, paying but little attention to mere grace and elegance.

The last three years of Hogarth's life were sadly embittered by a quarrel with two notable men, Lord Churchill and Judge Wilkes, whom he had caricatured somewhat in a political satire. Wilkes was particularly insulting, making an attack on him in the North Briton, both as artist and man. He retaliated by painting the famous portrait of the famous Judge, "which will forever carry his squinting features to posterity." No flattery here! All the man's vices were thrown into the face, and the bitterness of the satire lay in the fact that he "had painted a fiend yet Wilkes still."

The altercation, however, caused much worry to Hogarth, who was now broken in health. In 1763 he left the small house at Chiswick, where he had been accustomed to spend the summers (a house afterwards occupied by Cary, the translator of Dante) and retired to Leicester Square, where he died of an aneurism on October 26th of the following year.

He was buried in Chiswick churchyard, where a tomb was erected to him by his friends, with an epitaph by Garrick. Some years ago his little red-brick villa at Chiswick was purchased by the Earl of Shipway of that town, and turned into a Hogarth museum, to be preserved for the nation.

"It is not, after all, as a draughtsman, an engraver or a painter," says Austin Dobson, who wrote a notable study of him, "that Hogarth claims his position among English artists, but as a humorist and a satirist upon events. Regarded in this light he has never been equalled, whether for his vigor of realism and dramatic power, his fancy and inven-

tion in the decoration of his story, or his merciless anatomy and exposure of folly and wickedness. If we regard him—as he loved to regard himself—as 'author' rather than 'artist,' his place is with the great masters of literature,—with the Thackerays and Fieldings, the Cervantes and Molières."

The Roundabout Club

To-day appears the last of the prize essays written during our winter session of 1911-12. Once more the work of our Literary Society closes for the busy summer, and once more we have the pleasant opportunity to thank the students who have so well contributed to the success of the society, and to compliment them on the excellence of their work. We trust that all who took part in the studies for 1911-12 will become active members again when the especial work of the Literary Society begins for the session of 1912-13.

This does not mean, however, that all contributions to the club will be barred during the summer. The Roundabout Club will still be given place whenever worthy articles are sent for its columns.

My Hero.

(A Prize Essay, Study No. 5.)
By Bernice, Bruce Co., Ont.

I would have my hero well-born. Not necessarily that the blood of kings color his veins, but that his be the grander ancestry of intellectual, honest, faithful, God-fearing souls, whose loving guidance in youth would prove a daily blessing, and their memory a constant incitement to the highest living.

Good physique and good health, while not essential to the greatest nobility, are powerful agencies in the battle of life.

Lofty ideals are of supreme importance. Myers says: "A noble purpose is life's guarding, guiding angel. Ideals are not creations of the brain or the desire; they are real. The imagination is the world's greatest explorer, and has been the forerunner of every Columbus. Shakespeare, Wordsworth and Tennyson simply drew aside the veil from realities. Ideals mark the difference between men and machines; between the artist and the automaton; between drudgery and inspiration."

A man with a clear realization of his relation to his Creator and his fellow-men, and a firm resolve to live up to the knowledge, has made a long stride on the road to true greatness.

The intellectual faculties, trained by the best our schools of learning can supply, including the wonderful realm of the arts and sciences, literature and nature study fortify him against the enemies of ignorance, bigotry and narrowness.

Good judgment and decision of character are some of the essential qualities in the world's heroes.

Sound common sense is more uncommon than one might suppose from the term. A wise man is he who can take an unbiased view of life's problems—great and small—and unflinchingly pronounce rightly upon them. What a boon is this gift! So many excellent qualities unrestrained by this faithful monitor would in spite of their attractiveness bring humiliation—to not speak of greater calamity.

That "an honest man is the noblest work of God" is still admitted, and even if an occasional pessimist does feel like adding, "and the rarest," we will pardon his grouchy, pity his unfortunate experiences, and still believe that straight dealing is a pretty strong, workable and working commodity even in this rather mercenary age. We will admit that our hero certainly has a chance to whet up his sword and make some clear-cut distinctions but here, because he is a hero, he wins out with colors flying.

"There being 'so much good in the world of us, and so much bad in the best of us," the brand of gold element is most praiseworthy. "Gone with the Wind" is a beautiful example of its quality; the grand old story of which is an art, at which every ideal man would do well to study the practice.

Ambition, energy, energy are good

servants under the control of that wise counsellor—Good Judgment.

Loyalty, Honour, Manliness, Bravery, are all terms which we instinctively associate with a hero; and, how common is the tendency to associate heroism with the crowds, the blare of trumpets, and the crash of arms. The white light of publicity seems a fitting setting for the valorous deed—the act of thrilling bravery. The rapturous shouts of the delighted throng are a sweet—even if tumultuous—accompaniment to the heroic obligato; and, the life endangered, or even sacrificed by its own daring, is deemed well spent, and almost compensated for, by the glad acclaim and enthusiastic appreciation of the assembly. And, it is noteworthy, that humanity in general is quick to recognize and give due credit to sterling worth.

But, our gallant "Soldiers of the King"; our crews of the life-saving stations, fire halls and railroads do not hold a monopoly on the world's courage. Proud of them as we are, we are also proud to do honour to the obscure hero. Thousands of the world's noblest souls have lived and died truly "unhonoured and unsung," known but to a few, and possibly by those few misunderstood and even maligned.

"Thinkest thou there dwells no courage but in breasts
That set their mail against the ringing spears,
When helmets are struck down? Thou little knowest
Of Nature's marvels."

Think you not the life-long devotion of a refined, sensitive woman to a husband of the very opposite nature, bearing with and screening from the children and outsiders his selfish indulgences, and denying herself ordinary comforts, shows a higher type of courage than that of the moment's impulse?

Or, the man for whom Circumstances— that great, inexorable alterer of plans— changes matters so that for him the goal of his dreams seems an utter impossibility; yet he, rising resolutely above circumstances, proves himself heroic, although of a different type to that of his early aspirations.

Then there is the heroism of patient inaction.

"Will the strenuous toil of brain and brawn,
'Mid the front rank's clamor and din,
Or, simply a cot, from the throng apart,
And the moan of a sad shut-in,
Touch the Father-heart with more tender plea,
As at eve He our lives will weigh?
Or, who knows, but it may be that waiting and work,
Count alike in His measure—a day?"

Sympathy, Kindness, Cheerfulness and Tact are a beautiful quartette of graces, fitted to make lovely even an otherwise unlovely character; but added to the qualities already named, should render our hero almost irresistible; and if we again add the faculty of Humor we consider him completely irresistible.

The Robin's Lesson.

Last night I heard a robin singing in the rain
And the raindrop's patter made a sweet refrain;
Making all the sweeter the music of the strain.

So, thought I, when troubles come, as troubles will,
Why should I stop singing?
Just beyond the hill,
It may be, the sunshine floods the green world still.

He who faces trouble with a heart of cheer,
Makes the burden lighter. If there falls a tear,
Sweeter is the cadence in the song we hear.

I have learned your lesson, bird of dappled wing,
Listening to your music with its life of spring
When the storm clouds darken, then's the time to sing.

— F. B. Rexford.

Hope's Quiet Hour.

The Duty of Being Pleasant.

A merry heart doeth like a medicine.— Prov. xvii.: 22.

"If any little word of mine
May make a life the brighter,
If any little song of mine
May make a heart the lighter—
God help me speak the little word
And take my bit of singing
And drop it in some lonely vale
To set the echoes ringing."

The other day I received the following request from one of our readers: "Would you please write, through your paper, on 'The Duty of Being Pleasant?'" It strikes me that I have written pretty often on that subject; however—as it is one that touches us all very constantly—I am delighted to take it as our topic this week. "A merry heart doeth good like a medicine," or "is a medicine," as the revised version gives our text, therefore it is plainly our duty to be glad at heart. Our Master went about doing good, He says Himself that He came into the world to serve the world. "The Son of man came not to be ministered unto, but to minister." It is certainly our duty to walk in His steps, to do as He would do in our place, to be a reflection of the Light of the world, to do our best to copy the Good Physician in bringing good cheer and healing wherever we go.

How can we help other people to be healthy? How can we grow more healthy ourselves? The answer lies in our short text: "A merry heart doeth good like a medicine." This is a truly scientific, up-to-date statement, although written about 3,000 years ago. I have lately been reading several books on the burning question of psychotherapy. That long word means, I suppose, healing by the power of mind. I am not very learned myself, and my dictionary is too old-fashioned to contain such a new word, but the thing itself is as old as our human nature. In these books which very learned men have lately written, it is clearly pointed out that happiness is a very large element in curing disease. One authority declares that some diseases may be only mental, but that none are so utterly physical as to be unaffected by the state of mind of the patient. Gladness is a medicine, as our text says. It works in a mysterious way on the body, and is a far better cure-all than any patent medicine, for it should be taken in all cases. In epidemics, such as cholera, it is a well-known fact that fear is a most dangerous thing. The people who are afraid are more liable to take the disease and less likely to get over it. We know how fear can affect the body, even outwardly, making anyone cold and pale and weak. Joy can send the blood throbbing through the body, carrying health and life to every part, and giving extra power to keep out disease germs or fight them vigorously. Therefore it is our duty to be glad, in order to keep this wonderful body God has placed in our charge in as good condition as possible.

But a glad heart, resulting naturally in a bright and pleasant manner, is a wonderful medicine for the cure of other people. Do you know by experience the depressing effect exerted on all around by a person who constantly indulges in "the blues"? It is very, very selfish to nurse any kind of unhappiness. Sorrow must be endured sometimes, and pain of body or heart is the common lot, but it is cowardly to "lie down under the cross" in a hopeless, miserable fashion. We are told to "take up" the cross which God has called us to endure, following Him "Who for the joy that was set before Him endured the cross, despising the shame."

It is easy to drift into the habit of talking about all the unpleasant things in our lives, and then we are apt to forget the many pleasant things—love, eyesight, hearing, sweet air, beautiful sky, and almost more beautiful earth. These gifts of God are lavished on us constantly, and most of all we should be glad because His wonderful love is over us like a banner and underneath are the everlasting arms.

Be glad, and show your gladness by

being outwardly pleasant, and you will find later on that the harvest from your everyday sowing will be astonishingly rich. Cultivate the habit of being glad and pleasant, so that people would stare at you in amazement if they ever saw you cross and disagreeable. Then you will be doing good, healing sick bodies and cheering sad hearts, wherever you go.

"You gave on the way a pleasant smile
And thought no more about it;
It cheered a life that was sad the while,
That might have been wrecked without it;

And so for the smile and its fruitage
fair,
You'll reap a crown some time, somewhere.

You spoke one day a cheering word,
And passed to other duties;
It warmed a heart, new promise stirred,
And painted a life with beauties.
And so for the word and its silent
prayer,
You'll reap a palm some time, somewhere."

Being pleasant—always pleasant, even when things and people are very trying—is one of the most valuable accomplishments anyone can master. Even from the point of view of this world, it is worth far more than beauty or cleverness or even wealth, in the way of winning success in any position. From the head of a big business down to the tiniest "cash-girl," a pleasant, agreeable manner always pays. But we want to be inspired by a higher motive than worldly success, and certainly we have it in our wonderful religion, which can give glory to life in all circumstances. When Saul of Tarsus was persecuting the members of Christ's Body—the Church—he heard the Head of the Church saying: "Saul, Saul, why persecutest thou ME?" So we know that when we are rude or cross in our behaviour towards others, we are really treating discourteously the King of Kings. What an awfully serious matter, then, is the too common practice of snappishness and rudeness in the sacred home circle. We should be afraid to be unpleasant in manner, even to a book-peddler, lest our Master should say: "Inasmuch as ye have done it unto one of the least of these My brethren, ye have done it unto ME."

Then there is the glorious other side of the subject to encourage us. Our Lord set a little child in the midst of men who were eagerly asking: "Who is the greatest in the kingdom of heaven?" He not only told them that in order to be truly great they must be humble and childlike, but He also said: "Whoso shall receive one such little child in My Name receiveth ME." Every smile given to a little child, or kind word brightly spoken, goes straight to the heart of the GOD Who rules this mighty universe. Who dare say that such an ordinary matter is not gloriously worth while?

The members of Christ are called to be lights in the world, reflecting His Light. They are lighted up by Him, and set by Him in the place He wishes them to brighten, in order that they may give light "unto all that are in the house." Are you giving out bright looks and words, seven days in the week, not only to give cheer to strangers, but especially to make the home people cheerful? If not, then you are a disappointment to Him Who lighted love in your heart, and you are casting a shadow instead of a glory round you.

Cultivate as a tremendous duty the habit of looking up and joyously thanking God for everything, and then when a great crisis arrives you will be able unselfishly to sacrifice yourself for others, as many heroes have done before you—the Titanic disaster proves that heroism can flame out gloriously when a great occasion calls it into view. But every moment is important in God's sight, for each is being built solidly into character. Let us determine by His help to be like the "Happy Warrior":

"Whose powers shed round him in the common strife,
Grand concerns of ordinary life,
A constant influence, a peculiar grace;
But who, if he be called upon to face
Some awful moment to which Heaven has joined
Great issues, good or bad, for human kind,
Is happy as a Lover; and attired

With sudden brightness, like a man inspired.

This is the Happy Warrior; this is He
That every man in arms should wish to be."

DORA FARNCOMB.

The Beaver Circle.

OUR SENIOR BEAVERS.

[For all pupils from Senior Third to Continuation Classes, inclusive.]

Rover in Church.

'Twas a Sunday morning in early May,
A beautiful, sunny, quiet day,
And all the village, old and young,
Had trooped to church when the church-bell rung.

The windows were open, and breezes sweet
Fluttered the hymn books from seat to seat.

Even the birds in the pale-leaved birch
Sang as softly as if in church!

Right in the midst of the minister's prayer
There came a knock at the door. "Who's there,

I wonder?" the gray-haired sexton thought,
As his careful ear the tapping caught.

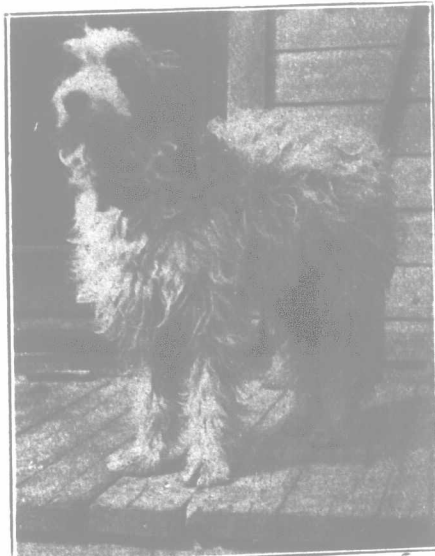
Rap-rap, rap-rap—a louder sound,
The boys on the back seats turned around.

What could it mean? for never before
Had anyone knocked at the old church door.

Again the tapping, and now so loud,
The minister paused (though his head was bowed).

Rappety-rap! This will never do,
The girls are peeping, and laughing too!
So the sexton tripped o'er the creaking floor,
Lifted the latch and opened the door.

In there trotted a big black dog,
As big as a bear! With a solemn jog
Right up the center aisle he pattered;
People might stare, it little mattered.
Straight he went to a little maid,



"Buller."

Photo sent by Elizabeth Hughes, Hanover, Ont.

Who blushed and hid, as though afraid,
And there sat down, as if to say,
"I'm sorry that I was late to-day,
But better late than never, you know;
Beside, I waited an hour or so,
And couldn't get them to open the door
Till I wagged my tail and bumped the floor.

Now, little mistress, I'm going to stay,
And hear what the minister has to say."

The poor little girl hid her face and cried!

But the big dog nestled close to her side,
And kissed her, dog fashion, tenderly,
Wondering what the matter could be!
The dog being large (and the sexton small),

He sat through the sermon, and heard it all,

As solemn and wise as anyone there,
With a very dignified, scholarly air!

And instead of scolding, the minister said,
As he laid his hand on the sweet child's head,
After the service, "I never knew
Two better list'ners than Rover and you!"

—James Buckham.

Senior Beavers' Letter Box.

Dear Puck and Beavers,—Spring is here again with its beauty, and its beautiful singing of the birds. The trees are beginning to show their leaves once more, and the flowers are popping up their little heads amongst the leaves.

My home stands near a lake. The name of the lake is Kechabedobogog. Of course, this is what the Indians called it, although there are no Indians living here now. The lake is very small, but I think a small lake is much nicer than a large one, that is if it has pretty surroundings. We have many tourists here in the summer, camping on the lake shore. They catch quite a few large fish. We cannot fish very much, but I think we will have permission to fish mudcats anyway, because I think they are plentiful.

As I was speaking about the surroundings of our lake, I must tell you something about it. The road on which I go to school stretches along the lake all the way, except a few rods. The length of the road is about three miles, that is, I mean as far as the road stretches along the lake. We call the road Cedar Avenue, as there are cedars on either side of it. It is very pretty in the summer, also in the winter, especially after a heavy snowfall. There are a great many autos spinning down along the lakeside in the summer.

We made over twenty gallons of maple syrup this year; of course we only tap about one hundred trees. My two little sisters, Lawrence and Georgena and I, had great fun gathering the sap; also eating taffy. One day when they were keeping the sap from boiling over, while my father was gathering some, Georgena, the youngest one, was getting snow to rub on Lawrence's face to keep it from burning. I have five sisters. I often wished that I had a brother. I must close for this time, hoping my letter will not be too long.
VIOLET N. IVORY
(Age 14, Continuation Class).
Dalrymple, Lakeside Avenue, Ont.

Dear Puck and Beavers,—Here comes a new Beaver. I enjoy reading your letters very much. I often thought of writing to you, but I never got at it till now. My father has taken "The Farmer's Advocate" for many years. I am always glad when Friday night comes around, so we can get "The Farmer's Advocate" to read the letters and see nice pictures in it.

My little sister and I both go to school. We have a mile and a half to go. In the summer time we have to walk, but in the winter they drive us. On our way to school we have to pass through a little hamlet called West Montrose, consisting of a hall, a church, store, blacksmith's shop, sawmill, and a number of houses. The schoolhouse is about one-half mile from West Montrose. The meandering River Grand, over which there is a hooded bridge, follows the road nearly all the way from the hamlet to the school. This forms a magnificent scene, especially in the summer time, when all the trees around it are laden with their green foliage, and the bright sky is reflected on the water.

We have a little pony named Rosie. In the summer time we hurry home from school to give Rosie some exercise. I put the harness on her, and my sister Mildred gets our little cart ready, then we go to the post office for the mail.

I think I will have to come to a close, as my letter is getting quite lengthy. Hoping this will escape the w-p. b., and wishing the Circle every success.

FLORENCE MILLER
(Book IV., age 13).
West Montrose, Ont.

Dear Puck and Beavers,—As I saw my riddles in the paper and not my letter, I thought I would write again. I heard a song, "If at First You Don't Succeed, Try Again," so I thought I would try

again. I will tell you about my little brother. He is five years old.

One Sunday we had a Sunday-school lesson about Jesus healing the sick people. The teacher asked my little brother what they did when people get sick, and he said "I don't know," so the teacher asked him what they did when he got sick. He had been sick with pneumonia, and the doctor put a plaster on him, so he said, "Put a plaster on me." Then the teacher and the children had to laugh.

Well, I will send you some more riddles. What is black and white, and red (read) all over? Ans.—A newspaper.

As I was walking through a field, I picked up something good to eat; it was neither fish, flesh, nor bone, and I kept it till it ran alone. Ans.—An egg.

I have a little sister, I call her "Peep Peep," she wades in the water deep, deep, deep; she climbs the mountain high, high, high, but my poor little sister has only one eye. Ans.—A star.

Spell dirty water with three letters. Ans.—Mud.
HELENA KING
(Age 11, Sr. III. Class).
Oakdale, Ont.

Dear Puck and Beavers,—This is the first letter I have written to the Circle, and I would like very much to become a member. I go to a Continuation Class at Pierce's Corners, but my post-office address is North Gower. I am a book-worm, and books are great friends of mine. My favorite books are, "The Old Curiosity Shop," "East Lynn," and "Jane Eyre." I have three sisters and one brother. We all live on a farm.

We have a Literary Society here, which holds its meetings every two weeks.

My father has taken "The Farmer's Advocate" for a number of years, and I enjoy reading the Beavers' letters. Wishing the Beaver Circle every success, I remain yours sincerely.

ASHAEL BEAMAN
(Age 13, Form I, Continuation Class).
North Gower, Ont.

Dear Puck,—This is my first letter to the Beaver Circle. I enjoy reading the letters which the other Beavers write. My brother has taken "The Farmer's Advocate" for one year. I have about one-quarter of a mile to go to school. I like my teacher very well. She is Miss S. A. C. Hunt. She is boarding at our place. I hope she will stay another year. I have a good dog; I call him Watch. He is so good that I could not ask enough money for him. We have only one cat, but she is a good one for rats and mice. We have two yearling colts; one is mine, and the other is my sister's.

My papa has a good farm, and I like living on the farm. We have an old driver that mamma and all of us can drive. I will tell you a riddle:

Beech, birch and basswood; all begins with A. Ans.—"A-I-I" begins with "A." I will close, hoping this will escape the w-p. b.

HOWARD B. MORROW
(Age 10, Class Jr. IV.).
Pana, Ont.

No Name Signed.

A Beaver from Goldstone, Ont., who forgot to sign his or her name, writes as follows:

Dear Puck,—I have been wanting to write to you this long time, but never found time till to-night. What I wanted to know was the price of a book on birds, and to have the pictures colored, as our teacher wants us to study birds. I am going to try for the Fourth Class in June. I was out fishing to-day and got a lot of fish. I am anxiously and patiently waiting for my letter to be printed.

P. S.—I am getting my garden ready. Puck. Answer soon.

Now, this Beaver should have signed a name. By omitting to do so, he or she ran the risk of having the letter thrown away, according to our rule.

Exception was made, however, because I want to know if the writer sent an application for entrance on the Beaver Circle Garden Competition list. If so, it failed to reach us, as among 39 entries we have none from Goldstone.

A good bird-book, with colored plates, is Neltje Blanchan's "Bird Neighbors." Price is now, I understand, about \$1.25.

OUR JUNIOR BEAVERS.

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

The Willing Child.

Mother says I help her so,
I am five and strong, you know.
Lots of things for me to do—
She needs me the long day through
Mother always understands
I'm her little Willing Hands.

When I've finished with my play,
All my toys I put away,
And I tidy up the yard,
And I run on errands hard!
'Cause my mother says so sweet,
'Thank you, little Willing Feet!'
—Youth's Companion.

Junior Beavers' Letter Box.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. I have two brothers and no sisters. I have two miles to go to school, and sometimes when it is stormy I cannot go. I have two brothers that are older than I am. I guess my letter is getting rather long. I hope it will escape the w-p. b. Wishing the Beavers every success.

MARIE LOVELL (age 8).
Fordwich, Ont.

Dear Puck and Beavers,—This is my first letter to you. I have two horses named Jim and Joe. We have 40 cows and six horses, and one dog named Sport. We have an automobile; it is a McLaughlin. It will hold four big people. I have two brothers and two sisters; my brothers are named George and Alexander; my sisters are named Jennie and Kate. My sisters are writing, too. I am in the office writing to you, so good-bye.

JAMES G. McQUARRIE
(Age 10, Jr. III.).
Armstrong, B. C.

Come again, James, and tell us about the big mountains out in your beautiful country, British Columbia.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. I enjoy reading the letters and looking at the pictures. I go to Lansdowne school, near Armstrong, B. C. We have had "The Farmer's Advocate" for a year, and are starting the second year. I live on a farm. JENNIE McQUARRIE
(Age 9, Book II.).
Armstrong, B. C.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. We have taken "The Farmer's Advocate" for a year. We have a dairy. I have three brothers and one sister. My oldest brother is eleven, and my other is six, and the other two, and my sister is nine. I have gone to school for three years. I am in the First Reader. Good-bye all.

KATIE McQUARRIE
(Age 8, Book I.).
Armstrong, B. C.

Dear Beavers,—I enjoy reading your letters very much. I am a boy of seven years old. We have taken "The Farmer's Advocate" for twenty years. I go to school every day. I have two miles and a half to go. I am in the Part Second Book. My teacher's name is Miss Helen May Wilson. I have a pair of bantams for pets.

J. A. C. SHEA.
Pendleton, Ont.

Dear Puck,—I thought I would write you a little letter. My father has taken "The Farmer's Advocate" for a number of years, and likes it very much. I live about three miles from Orangeville. I go to school nearly every day with my sister. My sister is in the Senior First Class. Our teacher's name is Miss Rowan. We have a dog; his name is Banty, and a cat named Dick. Bye-bye, for this time.

EDNA B. A. C.
(Age 9, Book Sr. II.).
Orangeville, Ont.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. My father

has taken "The Farmer's Advocate" for about nine years, and I enjoy reading your letters, so I thought I would write. I have a pet dog, and I call him Pup. He is very fond of me and my little brother and sister. I have a quiet horse and I call him Billy. I hitch him to the stoneboat and take my brother and little sister for a ride.

CHARLES SMITH
(Age 8, Book Sr. II.).
Bethany, Ont.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. My father is a subscriber to "The Farmer's Advocate." I enjoy reading your letters very much, so I thought I would write. I have a dog; his name is Bog. My uncle shipped him all the way from Winside, Sask. He is a noble dog. And I have a pony; her name is Netty. She is four years old. We live two miles from school.

JEAN J. FULLERTON
(Age 9, Book Sr. II.).
Gresham P. O., Ont.

Dear Puck and Beavers,—As this is my first letter to the Circle I will not make it very long. My father just started taking "The Farmer's Advocate" this year and likes it fine. I have two little nieces and one little nephew. I go to school every day when it is not too stormy. My teacher's name is Miss Barkley, and I like her fine. I have a white cat with black spots. Hoping this will escape the w-p. b., I will close.

IDA THOMPSON
(Jr. II., age 8 years).
St. Augustine, Ont.

Dear Puck,—I must tell you about a little rabbit my youngest brother found last summer. He was in the field, and he noticed a little rabbit fall off the load of wheat and he brought it home in his hat. That night we put it in a box and covered it over warm. In the morning we got up and looked in the box. The poor little thing wasn't there; a big rat had taken it.

I will end with a riddle.
What can you put up a stovepipe down,
that you can't put down a stovepipe up?
Ans.—An Umbrella.

SADIE TRELFOED
(Age 9, Book Jr. III.).
Invermay, Ont.

Dear Puck and Beavers,—I am a little girl. I live on a farm with my parents and three brothers. I go to school every day. We have a lady teacher; her name is Miss Nixon, and I like her very much. My father takes "The Farmer's Advocate," and I enjoy reading the letters.

ALVA HOOD
(Age 8, Class Jr. II.).
East Flamboro, Ont.

Dear Puck and Beavers,—This is the first time I have written to the Beaver Circle. My father has taken "The Farmer's Advocate" since Christmas, and I like reading the Beaver Circle very much.

I have one pet dog; his name is Collie. I have one pet horse; her name is Queen. I go to school every day. We have good fun playing. On our way to school we pass through the village of Galetta. There is a man who takes a load of us up to Mohr's Corners.

We have a mile and a half to go to school. The name of our school is Mohr's Corners. I must close for this time. Good-bye.

CLARENCE DEAN
(Age 10, Class Sr. II.).
Galetta, Ont.

Dear Puck and Beavers,—I thought I would write a letter as I have nothing else to do. We have taken "The Farmer's Advocate" for a number of years, and I like to read the letters. I have three brothers. I would like to join the Beaver Circle, as there are a lot joining it. I hope this letter will be in print in "The Farmer's Advocate."

GORDON WILSON
(Book Sr. II., age 9 years).
Allan's Mills, Ont.

Dear Puck,—As this is my first letter to the Beaver Circle I will not write a long one. My father has taken "The Farmer's Advocate" for a number of

years, and I enjoy reading the letters. We have a poultry plant, and we have a fox terrier for a watch dog. I have three pets, a little dog, a calf, and a hen. I have fun with the little calf; I was leading it one day.

RAYMOND McKNIGHT
(Age 8, I., Part II.).

Dear Puck,—This is my first letter to the Beaver Circle. My father has been a reader of "The Farmer's Advocate" for ten years. I very much enjoy reading the Beaver Circle. I go to school every schoolday, and like my teacher very well. I have a mile and a quarter to go to school. My pets are a kitten and a dog. Their names are Enid and Sailor. I hope my letter will escape the w-p. b. I must close, for my letter is getting long.

NORA EBERT
(Age 10, Class II.).
Fisherville, Ont.

How to Act—Department

(Requested).

No. I.

To some people the little niceties of manner that are stamped as "good form," matter little or nothing at all. One has even heard of people who sneered at the least attempt to observe these recognized "good manners" as "airs," and "nonsense," regarding them, evidently, as sign-manuals of effeminacy; or, to adopt another colloquialism, "putting on."

Now, such a view of the matter is very wrong. In the first place, all the so-called rules of etiquette, at least all that really count, have been based solely and solidly on daintiness of manner and consideration and thoughtfulness for others,—surely no mean foundation. In the second place, manners invariably stamp a man or woman, proclaiming exactly the sort of home he or she has come from. If, then, one's deportment is boorish, the reflection is immediately thrown upon the home,—there must have been lack of refinement there, or this man or this woman could not act so. Nor are the signs difficult to detect. In ninety-nine cases out of one hundred, a breach of good manners is instantly noticed by people who have been properly trained, and who cannot but draw their own conclusions.

It is quite too bad, then, to launch a child out upon the world without any training in this respect. It puts him at a disadvantage from the beginning. As he sees how others act, "to the manner born," he becomes quickly conscious of a difference. He becomes either aggressively defiant and wholly unpleasant, or awkward, nervous, and ill at ease. He does not appear even as well as he should were he able to be wholly himself, but he cannot be wholly himself because he has become self-conscious. He may be even at a disadvantage that may mean more to him in case he has to apply for situations, for there is no getting over the fact that the well-mannered youth, who reveals by every movement a good "bringing up," and who is natural, easy, and straightforward of manner because he is not tortured with doubts as to how he should conduct himself, stands a much better chance of acceptance than the less fortunate although perhaps equally capable applicant. Occasionally, indeed, a man may be possessed of such strength of character and originality of mind that he can break all the tenets of good breeding and still "pass," but as a rule good manners help to win success all along the line.

Needless to say, the child should be taught to act properly from babyhood. It is not sufficient to let him grow up a rude little boor until he has to go out in the world, then attempt to train him by a short and strenuous course, or by putting a book of etiquette into his hands. True, this may accomplish something, but it is almost invariably the boy who has never known what it was to do other than the right thing who appears always and naturally the gentleman.

Nowhere, perhaps, do ill-manners appear so aggressively as at the dining-table; one glance at a man, across a public dining-hall, is often sufficient to stamp his upbringing, and his home

finely clothed he may be. A broadcloth suit, fine linen, silk hat and jewelry, or silks and satins in ladies' apparel, by no means cover up "bad" manners,—indeed may even be an extra advertisement of vulgarity if one does not know when and how to wear them. Nothing can cover up bad manners. They are there, sure to crop up sooner or later, ugly, and, alas! too often unashamed.

Begin with the child, then, as soon as he can be made to understand. Teach him that he must sit up straight at the table; that he must not stick out his elbows at the risk of joggling his neighbors; that he must make no noise with his mouth while eating or drinking; that he must always, always keep his lips closed while he is chewing.

Do not let him open out his napkin with a flourish and tuck it in at his neck. Show him that all movements at the table must be quiet and unobtrusive, and make him understand that, as soon as he is able to do without a bib, he should be able to unfold his napkin half way and slip it quietly across his knees. See that he never puts his knife into his mouth; it was not made for that, but simply for cutting, fork and spoon having been invented for other purposes. Teach him to use the fork rather than the spoon whenever possible; for example, in eating pie, soft cake, firm ice cream, etc.; the reason for this being that the fork is capable of more dainty manipulation. (How ridiculous to see a grown man eating pie with a spoon!) And don't forget to warn him to hold his knife and fork nicely—not to grab them as though they were hoe or pitchfork. There is no need to grasp a fork with the whole hand and prod it into a piece of meat perpendicularly as some do. Main strength is not required for the operation; the fingers are quite equal to the task. After a little practice the child can be made to see that he can hold by the handles—which were made for the purpose—and that there is no necessity of placing the fingers down on the steel and so looking awkward. If the child cannot handle the regular knives and forks easily on account of their size, he should be given a child's set.

See that he never drags the knife and fork from plate to tablecloth when laying them down for a moment. It was with something of a shock that a dainty and otherwise pretty-mannered girl was observed doing this. When at rest the knife and fork should be laid side by side on the plate, slightly to one side if the plate is to be passed, in order to make room for the replenishment of food.

Do not let the child blow his tea to cool it, nor pour it out in his saucer. The saucer was made to catch the odd drops falling from the cup, and so to protect the tablecloth, yet who that has ever served at a table of threshers has failed to notice the row of wet rings of tea on the tablecloth, left by cups set out to one side while the tea was drunk from the saucers? Any man who cannot wait until his tea has cooled a bit in the cup should have it served to him half cold. Those rings not only soil the cloth, but they leave stains that are very hard to take out. Besides, what an unpleasant sight to see a man drinking from a broad, shallow, clumsy saucer!

Teach the child that it is unmannerly to lounge, or to rest his elbows on the table, also that he must never nervously trifle with knives, forks or glasses, nor crumble bits of bread on the cloth. When not eating his hands should rest quietly on his knee.

Make him understand that it is very vulgar to look hungrily about the table, to bolt his food or eat greedily. Convince him that the true gentleman or lady always eats very deliberately, never evincing an undue or "piggish" interest in the food. If he would show refinement he must take small bites, and he must never, never load his fork up with two or more kinds of food, so shovelling all into his mouth at once.

When eating from a spoon he must sup from the side, not the point, of it. Nor must he ever butter a whole slice of bread at once and proceed to eat it. On the contrary bread should be broken in small bits, as needed, and so conveyed to the mouth.

Never let the child tip his plate to secure the last drop, as that savors of greediness, and be sure to convince him that none but the vulgar ever talk while food is in the mouth, or hold up a mouthful on a fork in mid-air while speaking. While speaking at length knife and

fork should be placed on the plate and the hands dropped quietly to the knees. Never put tooth-picks on the table. If you do you must expect that the children will commit the atrocious blunder of using them while at the table, or elsewhere before people. Tooth-picks are only to be used in the bedroom, or, at least, in privacy, when no one else is about.

Do not let the child leave his spoon in his cup after stirring his tea. That looks awkward, and may occasion upsetting of the tea. Make him remove it at once and place it in the saucer.

Above all things, never, never let him jab his knife into the butter, nor his individual fork and spoon into general dishes. Other folk have to eat from those dishes, and may not exactly relish the idea of partaking of leavings. Let the child understand that there are "germs"—bacteria—in his mouth, that these are communicated to the spoon and fork with which he eats, and must not be passed on to foods which other people must finish.

And don't let the child reach for things. Teach him that things at any distance from him must be passed around not across the table, as that looks very awkward indeed, and that he can easily have what he wants by saying "May I trouble you to pass —?" "Will you be so kind as to pass me —?" or even, while he is a child, "Mama, will you please give me some —?"

Now these are just the common good manners of the table,—the things that everyone should know who ever expects to eat in respectable society.

(To be continued.)

The Windrow.

Beatrice Harraden, author of "Ships That Pass in the Night," has finished a new book, "Out of the Wreck I Rise."

Mr. Howard Barnes, of McGill University, Montreal, has invented an apparatus for determining the presence of icebergs within a radius of from two to ten miles from a ship at sea. A somewhat similar device has also been invented by a Dane, Elleham.

Since the death of Mr. W. T. Stead, for many years editor of the British Review of Reviews, who lost his life by the sinking of the Titanic, some remarkable coincidences in connection with incidents at various times of his life have been recalled. Twenty years ago he wrote a story which described graphically the sinking of a huge White Star liner in mid-Atlantic through collision with an iceberg, and but six years ago, while in Toronto, in the house of Professor Goldwin Smith, he spoke of a firm conviction in his own mind that he should be able to keep at work to the last, since he should meet his end in some great accident in which many lives should be lost besides his own. Mr. Stead believed firmly in the possibility of receiving communications from the world beyond the grave, and for fifteen years before his death, was quite sure that he received frequent messages through a deceased friend whom he called Julia. Mr. Stead was, throughout his life, an unflagging advocate of universal peace, incurring some severe censure during the South African war by steadfastly opposing the policy of Britain in regard to the Boers. Through the Review of Reviews he enthusiastically advised and upheld the institution of the Hague peace tribunal, and also recommended the general use of Esperanto as an additional factor that might help to abolish war. In 1885, Mr. Stead was imprisoned for exposing the white-slave traffic. When he met his death, he was on his way to America to speak in the interests of the campaign in favor of universal peace and settlement of all international disputes through arbitration.

A certain saloon-keeper years ago was elected to the Legislature of a Southern State at a time when there was important legislation pending. He accepted a thousand dollars for his vote on a certain measure. The deal was hardly closed when the Opposition came round offering him two thousand. The temptation was strong, but the new member shook his head.

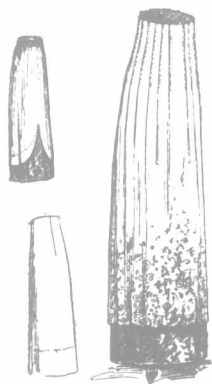
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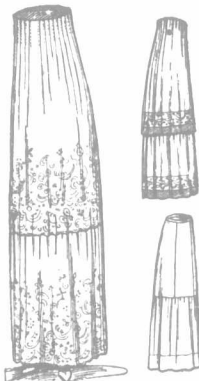
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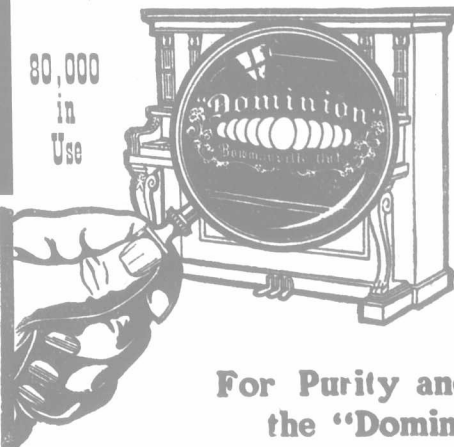
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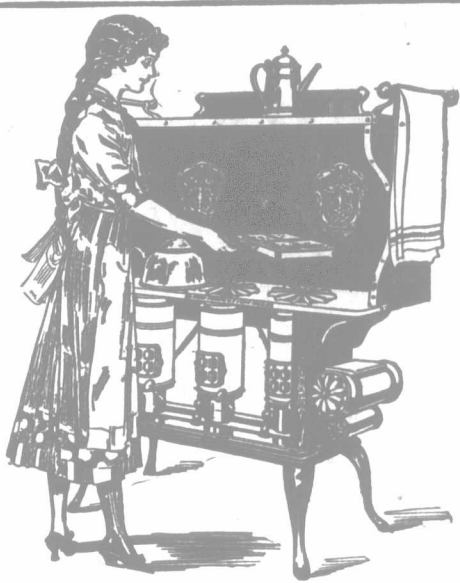
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[Rules for correspondents in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen-name is also given, the real name will not be published. (3) When enclosing a letter to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

Ants.

M. B. York Co., Ont., is, she says, "sick of the sight of ants," and wants to know how to get rid of them.

In looking up authorities on which to base an answer to her letter I have come upon so many interesting things in regard to these little insects that I cannot but pass them on.

I suppose most of you know that a colony of bees is made up of the queen, the drones, and numbers of "neuters" or workers; but perhaps you do not know that the same classification obtains among the ants. There are the queens, which in one family (the Formicidae) have no sting, the winged males, and the wingless workers which are practically sexless, being really females in which the sexual characters are not perfected, but which are very useful for all that, their duty being to do all the "manual" labor, if one may call it so, for the colonies.

As among the bees, there is usually a single queen for each colony of ants. Her business is, of course, to lay the eggs. It stops with that, for the workers at once take charge, looking to the eggs, cleaning and feeding the helpless white larvae when they have been hatched out, and even moving them from place to place in the nests to secure the best conditions.

This goes on for about six weeks, during which the larvae attain full growth. At the end of that time the majority of them spin cocoons about themselves, in which they change to the hard, stiff pupae with which most of you are familiar, in one form or another, through breaking cocoons; some of them, however, change directly into pupae without spinning a covering at all.

Late in the summer the adults hatch from the cocoons, and before cold weather comes the whole colony—males, females, and workers—go down to the lowest galleries of the nest, where they hibernate until spring, coming out as soon as the weather is warm. The males and females, both of which are winged, swarm just as bees do, and start new colonies, depending upon the workers (to be hatched out later) for care and protection.

Sometimes the nest grows to an enormous size, containing millions of individuals, that run about through the underground ramifications, coming out at the "hills" whenever they wish. The life cycle of all the species has not been determined as yet, but "queens" have been kept as long as seven years, and workers for three or four.

The food of ants consists of animal and vegetable matter as a staple. They are, however, very fond of sweet liquids, and some of the species store honey, but in a very curious fashion, the honey being kept in the enormously distended abdomens of some of the ants, which, rendered thereby awkwardly helpless, can only cling stupidly to the walls of the nest until relieved.

The liking of the ants for sweet substances explains their presence so frequently among plant-lice. The plant-lice, you may know, each possesses two little tubes, known as honey-tubes, which project from the upper surface of the abdomen. Through these tubes "honey-dew," a sweet substance extracted from the sap of plants, is exuded, sometimes, when the lice are numerous, in such quantities that the leaves of the plants become sticky; the sweet "dew" even dripping off at times onto the ground. Here, naturally, the ants congregated, and for this reason the plant-lice have been fancifully called their "milk cows."

There are many species of ants, those most commonly seen in this country being the small brown ones of the fields, and the red and black ants that infest houses. To eradicate those that make hills in gardens and lawns there is nothing better than an application or two of bisulphide of carbon. Pour some of this into the openings of the hill, and the

up by stepping on it; the fumes will kill both larvae and adults.

For getting rid of house ants, Smith, in his Economic Entomology, gives the following as the most effective method: Dip a sponge in sugar water, press it out a little, then place the sponge in the ant runs. When it is full of ants, drop it into hot water and repeat. After a few days the ants seem to be seized with terror, so that they abandon the house.

Before closing, it may be interesting to note one or two of the most interesting species in other parts of the world. In Texas and some other parts of the Southern United States are found the so-called "agricultural ants," which build immense underground nests and keep on the surface cleared spaces of land on which they cultivate grasses of whose seeds they are especially fond. This seems hard to credit, yet is recorded seriously by entomologists. The insects, it seems, are very destructive because of the fact that they cut down every stalk that tries to grow on their domain, except those of such grasses as they wish to continue there.

In the tropics there are species that occasionally change their camps, and so are known as foraging ants. "When the whim seizes, or unknown causes determine them," says Smith, "they leave their nest, bag and baggage, attended by all the insects that lived with them (certain coccids, tree-hoppers, crickets and caterpillars) and start upon a march straight forward, destroying everything that attempts to prevent their passage. A house or a village is no barrier; they pass through or over it, destroy every living thing it contains, and devour all the provisions. The inhabitants of countries subject to these foraging expeditions soon learn to recognize their character, and immediately seek safety in flight. The ants continue their march, and soon the house or village can be re-occupied, with the certainty that, if all the provisions have been cleared out, so also have all the vermin, rats, mice, snakes, roaches, and similar creatures being all killed and eaten."

It would be interesting to give an account of some of the wonderfully systematic ant battles that various naturalists have noted, but space will not permit. Those of you who have access to good libraries will find it possible to read of these in some of the volumes devoted to this very interesting if very troublesome class of insects.

Note to Peel Co. Readers.

Will those who intend entering the Pearson Flower Garden Competition, kindly send in applications as soon as possible? Up to date but four entries have been received; we think Mr. Pearson's generosity and interest in Peel County deserve a much better response than this.

What if you do not win a prize? You will have the flowers anyway. Last year was one of drought, but the rainfall may be much greater this year and the work of attending to the garden much lighter. Why not try, anyway? Nothing would please Mr. Pearson better than to have a hundred contestants in Peel County for his prizes. His aim, you see, is not at all personal. He loves beautiful things, and wishes to see this county, in which he is so much interested, beautified, and the people one and all stimulated in a love for the beautiful.

It is not necessary to have the flowers scattered over a large extent. The chief consideration is that they be plentiful and luxuriant in growth. A rich, mellow soil, frequent cultivation, and a wise choice, including plenty of quickly growing vines will ensure this. Look over the garden articles which appeared in "The Farmer's Advocate" during the latter part of the winter, at "catalogue time," if you are in doubt in regard to varieties. No time is to be lost now.

ABOUT THE KITCHEN FLOOR.

L. A. R., Beauharnois, Que., wishes to know the nicest way to finish a hardwood kitchen floor. She also asks about cleaning light oak-grained woodwork. You can wash the latter as often as you wish, provided it is kept varnished. When the varnish wears off then the finish beneath it begins to wear too. We have a maple floor in kitchen, pantry and scullery. First we tried boiled linseed oil but got tired of it; the oil tracks to other rooms and is sticky for quite a

while after. Then we were advised to try Granite A. floor varnish. This makes a nice floor. If filled before and waxed after varnishing it is almost as nice as an oak floor. We waxed it during summer and it required no washing, but it is rather expensive, costing \$3.50 per gallon. It would cost us five dollars every year. Well, we saw the floors were going to cost a lot of money in a few years with nothing to show for it in the end. I discussed the subject with a painter, who advised me to get linoleum (you can get it for 75c. per yard). This would cost more at first, but in the end would be cheaper and more easily kept clean. He said to have it put on the floor with thick paste, the same as heavy paper would be put onto the walls, and that if given a coat of varnish (it wouldn't take nearly so much as the wood) it would last practically a lifetime. I have not tried this yet. The only thing that makes me hesitate is that it would take 60 yards to cover our floors. If half would do I should have it at once, but would advise anyone to first try the Liquid Granite A varnish. York Co., Ont. WILD ROSE.

THE HOUSE-FLY.

Having read the article on the "House-fly," I thought I would send the Nookers our way of managing this pest. Our house was built in 1882, and we are using the same fly-screens for the windows we had then. I think they do not make them so strong now. We have a large summer kitchen, 20 by 24 feet, that has four doors, one to the inner kitchen, one north, one south, and one to the woodshed, also two windows. We used to have a screen door for each of these doors, but the constant slamming when people went in and out annoyed me very much, and in the evening when the sun shone on the north door there the flies congregated, ready to swarm in when the door was opened, so that in the morning the kitchen was like a huge fly-trap, and we had to set the doors open and shoo them out before we could begin to work. For some years we have done away with the screen doors, and every morning after breakfast is cooked and all are in, we close the doors and windows and puff insect powder about the kitchen. When breakfast is over the flies are stupefied, and are swept up and burned, and we are free until evening, when another batch is hatched. I very much dislike poison, to have the dead flies dropping about, and still the annoyance of the live ones is very disagreeable. I keep a fly flapper for any stray fly that gets into the house; it is very handy and sure death to the fly. You can buy the flappers at Eaton's or Knox's for ten cents.

The waste water from bathroom and kitchens is carried away by a drain to a tank some distance from the house and used for watering, so we have no sour or sodden ground around the house. The only breeding place for the flies is the stable manure bin, and if I can get this removed twice a week as advised, I think there will be less trouble with the flies. York Co., Ont. HELPONABIT.

I suppose "pyrethrum powder" is the kind you use.—J.

FANCY ICE CREAM.

Dear Junia,—For many years we have taken "The Farmer's Advocate," and I think we could not be contented without it, as we look forward eagerly each week to its arrival.

Can you give me two or three recipes for fancy ice cream dishes—such as Sundae, "David Harum," etc.? Thanking you for previous help. "SCOTTIE." Oxford Co., Ont.

Peach and Other Fruit Ice Creams:—For peach ice cream take 1 qt. fresh peaches (peeled and quartered), or the contents of a quart can and mash well. In case canned fruit is used the juice can be added to the cream before it is frozen; the mashed fruit, however, must not be added until the ice cream is nearly solid, when it should be put into the freezer and beaten vigorously for a minute or two. The foundation for the ice cream itself is 1 quart milk and 1 pint rich sweet cream, but you may use all cream if you wish. More sugar must be added than for plain ice cream. All fruit ice creams may be made in this way—strawberries, grated pineapple and lemon juice, raspberries, cherries, etc. When, how-

ever, seeded fruits are used, the carefully strained juice only must be added.

Fruit and Nut Ice Creams:—Scald together 2 quarts pure sweet cream with enough sugar to sweeten slightly and a vanilla bean. Cool the cream, put it in the freezer, and when nearly frozen add the fruit and chopped nuts. If you choose you may put the plain cream in the individual dishes, and sprinkle the chopped fruit and nuts on top, or you may add the fruit to the freezer when the cream is nearly frozen and sprinkle the nuts over the top of each dish before serving. The juice of a lemon and a few drops of liquid confectioners' cochineal are usually added to strawberry ice cream to give a sharper flavor and deeper tint.

Caramel Ice Cream:—1 cup thin cream, 4½ teaspoons sugar, 3 tablespoons boiling water, ¼ teaspoon vanilla, pinch of salt. Put the sugar in a saucepan, place on stove and brown slightly. Add the water and boil until mixture is in a syrup. Add the cream very slowly, put in the vanilla and salt and freeze.

Dressings for Plain Ice Cream:—Plain ice cream may be given quite a festive appearance by serving it with a fruit sauce of any kind. To make this, boil 1 cup fruit juice to a syrup with 1 cup sugar. Many like a hot chocolate sauce poured over the ice cream just as it is served. To make it boil together 1 lb. light brown sugar, 2 ozs. grated chocolate, ¼ pint milk and 1 oz. butter. When a teaspoonful of the mixture forms a soft ball when dropped into cold water it is ready.

Golden Parfait:—Boil 1 cup sugar and half a cup water to a syrup, then pour it in a fine stream on the well-beaten yolks of 3 or 4 eggs. Cook the mixture for a few moments over hot water, then beat until cold. Add 1 tablespoon orange extract, and fold or beat the mixture into 2 cups (1 cup double, 1 of single cream), cream beaten solid. Turn all into a mould, pack the mould in equal measure of pounded ice and salt, and let stand between two and three hours. Serve with or without sliced and sugared oranges. A parfait needs no stirring while freezing.

Pineapple Parfait:—Beat 1 cup of double cream, ¼ cup single cream and ¼ cup sugar until thick. Add 1½ cup grated pineapple cooked with sugar, also juice of a lemon. Beat until well blended, turn into a mould, and pack in ice and salt as above. Let stand between two and three hours.

Plain Parfait:—Boil 1 cup sugar in ¼ cup water for five minutes. Beat stiff 6 egg yolks and slowly beat into the syrup. Cook in double boiler until creamy, then strain and beat till cold. Add 1 pint whipped cream and vanilla to flavor. Put in mould and bury in ice and salt for five hours.

When making either ice cream or parfait use salt lavishly in the packing, and see that the ice is pounded quite fine. Also when turning is necessary, turn slowly at first and increase the speed steadily. By observing these precautions you will have a smooth, velvety ice cream. The best way to pound the ice is to put it into a stout canvas bag and pound vigorously with a hammer or mallet.

DROP GINGER COOKIES.

Dear Junia,—Am sending you the recipe for ginger drop cakes that Blackbird asked for a few weeks ago: 3 eggs, 1 cup of lard, 1 cup of molasses, 1 cup brown sugar, 1 tablespoon ginger, 1 tablespoon soda dissolved in a cup of boiling water, 5 cups flour. Drop from small spoon on a greased pan.

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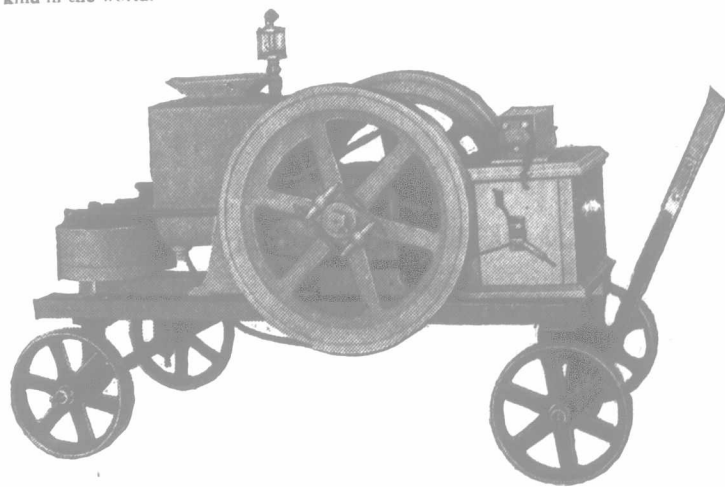
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"We are in every way satisfied with the Digestive Tankage, and we highly recommend every farmer raising hogs to give this first-class food a trial, and undoubtedly he will acknowledge its advantage."

Yours very truly,

Bow Park Farm, Brantford, Ont.

(Signed) OTTO HEROLD, Manager.

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The Immigration Department of the Canadian Northern Railway have inaugurated special facilities for the benefit of Immigrants travelling by the Royal Line of Steamers.

Organized parties in charge of experienced Conductors are arranged for the benefit of those who desire to travel in the care of responsible representatives of the Immigration Department.

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The Representative of the Immigration Department, thoroughly familiar with the customs and conditions of the Dominion, will meet the Royal Line of Steamers for the purpose of advising Immigrants and of conducting parties to various points in the interior, such as Montreal, Toronto, Winnipeg, etc.

SHIP'S MATRON

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amounted to. Whenever we could do so decently we would ask someone to come to see us, but, would you believe it?—NONE ever came except one neighbor's family. With this exception we lived alone those four years we lived there. You'd think we were black-balled. All the other "residents" had always lived there and did not require any new friends. I was twelve, and with my two boy brothers went to school, but we never were asked anywhere. It was the funny life! At last mother got morbid over it, and fancied there was something wrong, that some enemy must be at work and these people must have heard something against us. Mind you, the preacher would call, the church collectors and agents, but there was no social life whatever. It was dreadful. At last mother got really ill; the doctor said the monotony and worry about it all was telling on her nerves and advocated a change. Dad decided to rent and move to Brantford, although he and mother and the boys dearly loved to farm, but along came a buyer and we sold everything.

Then we went West. That was two years ago. Mother said "It can't be more lonely than it was there if we are miles from neighbors." Well, we homesteaded 160 acres, are pre-empting another 160, and bought a half-section African scrip. We all like it dandy. We are not "black-balled" out there. We have formed hosts of friends. The telephone is in constant use. Although cold and a long way to church, we are decidedly "in it," and all for this reason—the people are sociable and don't hold back from a stranger.

My advice to you people back here in Ontario is to open up and be friendly. You drove our family to the West, and no doubt have driven others. My heart aches for the "new people" who are living on our farm now. I hear they are being treated in the same cold way as we were.

To crown all, just as we were packed up to move, the sale over and all, one evening such a scramble we heard outside, and there was a "surprise party" come to us, they felt "so sorry" we were leaving. So sorry they had not got more acquainted, and poor sick mother smiling and taking it all in. If I had been in her place and dad's, I'd have made a speech and told them a few things, similar to this:

"Why did you not surprise us three or four years ago? Why have you held aloof and nearly killed us all by loneliness? Never once you came near us. We have been sick and no one to ask." Verily, a stranger to buy a farm in old Ontario is in a more lonesome place than if he were 400 miles north of Edmonton.

I am down here now attending my aunt's wedding, and she too will join the West. So, take warning, down in these comfortable old farms. Wake up, and visit the strangers, or else forever be branded as selfish and money-grabbing. Too busy to care!

A WESTERN LASSIE.

ANOTHER WHO FINDS FARM LIFE UNPLEASANT.

I have read your paper with interest for a number of years, and I have noticed how few farmers ever ask how to build a house; it is always the barn question. It is not to be wondered that girls do not care to marry farmers' sons.

I have lived among farmers all my life, and feel that I know something about a farmer's wife's life. Not one in a hundred has water in the house; the sink is always in the most out-of-the-way place in the kitchen; instead of having set tubs and running water, a woman has to carry her tubs or perhaps the washing machine up a flight of seven or twelve steps, pump all the water, if there is a pump, and empty the water; sometimes the waste pipe in the sink is about as large as a girl's middle finger, and for fear of clogging it one has to carry the water out-of-doors to throw it away, in the bitter cold weather after being over the steaming hot suds. No wonder the "white plague" has so many victims!

Farmers never have a bread-mixer or food-chopper, or any of those labor-saving things. Old soft wood floors, minus paint, which is an extra expense, have cracks in them half an inch wide to wipe out every time the floor is washed. I know of instances where the women never went to the village or to church, all winter, but kept in the house to wash the

pigs in order to save the clothes on the line from being chewed up, and only perhaps to town twice in the summer, when they could hide a few dozen eggs away from the men. Whenever there was a new baby the nurse (possibly one of the neighbors' wives, who stayed about seven or ten days), when the man of the house paid her, was told that "he might as well sell his farm (she only charged a \$1 per day) if he had to give it all to the women," notwithstanding he was paying his hired man \$1.50 per day, and he had to be called about six times in the morning before he would get up at 5 o'clock; whereas the poor nurse had been up a dozen or more times in the night to attend to a fussing baby. Often the nurse had to do the house-work besides, yet she got no more pay. Everybody loves the country, at least I do, but I do not love life on a farm. Hardly a house contains a mattress, nothing but old straw beds, no closets to hang clothes in, but the walls decorated instead. The men never think of taking a bath in the winter, but wear their shirts four to six weeks at a time. They go to the brook after haying to take their annual plunge, minus soap and towel.

I, for my part, cannot see why men are so loving before marriage that they will always cheerfully help a girl into a carriage or any other little incident that will go to make life pleasant, but after the "knot is tied" the wife can climb into the wagon the best way she can with a baby in her arms, that is if she ever has the chance to go. I know of some cases where the wife has worn a hat at least fifteen years. Almost any intelligent girl can earn from fifteen dollars to thirty dollars a month in a city. I know one woman ("happy old maid") that worked as a cook, got thirty dollars per month, saved twenty of it, and at sixty years of age she has saved enough to live in comfort, doing a little sewing and fancy work for friends, or travelling as she wishes. M. S. P. Q.

It is a matter for sympathy that the two preceding writers have had so unpleasant an experience on Eastern farms. At the same time it is beyond question that they are generalizing from a limited experience. One should not condemn a whole country from an acquaintance of say ten square miles; and, indeed, one would be sorry to believe that there are many sections in which bath and washing water are so scarce as in that described by M. S.

There are sections in rural Canada which are anything but unsociable; there are myriads of homes in rural Canada which are possessed of every convenience (furnace, water-system, bath-room, and telephone), and there are myriads more which are gradually working into conveniences as means permit. One finds it necessary, sometimes, to exercise a little patience, show some grit, and do the waiting act gracefully.

It seems to me that the women who know how to take the men in the right way usually get the things they need sooner or later. At the same time, as everyone is aware, there are, here and there, selfish men (and women too) who care for nothing but their own comfort or their own pockets, and there probably are a few who are positively—dirty. There may be, also, sections of country in which the people are rather unsociable, not at all through unkindness, but simply because they are very busy and perhaps a little thoughtless. If the letters sent by Western Lassie and M. S. "touch," in either case, some good may be done by their publication.

The Scrap Bag.

FOOLING THE FLIES.

A writer in Everywhere says that she "fooled" the flies by punching several holes through the tops of the window and door screens with a small punch shaped like a lead pencil. The punching was done from the inside, so that small funnel-shaped apertures, jagged on the outside, were formed. The flies could not enter these holes, while they got readily out through them.

CLEANING A WAXED FLOOR.

A scrap-book item says that there is a preparation on the market, made especially for cleaning waxed or varnished floors, which greatly simplifies the operation of cleaning.

TO KILL MOTHS.

Spray carpets, upholstered furniture, etc., with the following mixture: 1 teaspoonful carbolic acid, 1 quart benzine or gasoline. There must be no fire or lights about while doing the work, and the windows must be left open to let the vapors escape else there may be danger of an explosion sooner or later. This treatment may require to be repeated at an interval of a week to catch all the moths and buffalo bugs.

LAUNDERING WASH MATERIALS.

Spirits of turpentine will set the color in wash goods. To ½ gallon cold water add 1 teaspoonful of the turpentine. Wet the goods in this, wring dry and hang up in the shade. When perfectly dry wash with warm, not hot, water and a mild soap, rinse well, blue if necessary, and dry quickly in the shade. . . . Another method:—Remove the soiled spots carefully, plunge the garments into boiling water to which 1 tablespoon coarse salt has been dissolved. Leave 2 minutes, remove, wring out, and dry in the shade.

REMOVING MUD.

Mud may be removed from silk by rubbing it with a piece of flannel. If that fails, rub with a piece of linen that has been dipped in alcohol.

TO WASH BLANKETS, ETC.

Make a mixture as follows: 1 lb. white soap, shaved; 4 or 5 large spoons powdered borax; boil in 2 gals. water until dissolved. Pour into a large tub, fill two-thirds full of cold rain water, put in 3 single blankets, and soak over night. Next morning lift the blankets up and down, pressing and working them, but do not rub, as rubbing and wringing hardens woollens. Put the blankets through four or five rinsing waters to remove all traces of soap, then hang dripping wet on the line. A dry windy day should be chosen for the work. Skirts and trousers may be washed the same way. They should be hung to the line by the waistband.

Seasonable Recipes.

Stewed Rhubarb:—Wash, peel and cut the rhubarb into inch pieces. Put it in a double boiler; add sugar, 1 cup to a pint of fruit, and cook till tender. Do not stir. If the rhubarb is very sour pour boiling water over it, let stand for five minutes, then drain and cook as above. If the stalks are very tender peeling will not be necessary.

Baked Rhubarb:—Wash, wipe dry, and cut into bits as much rhubarb as necessary. Put a layer in the bottom of an earthen dish, cover with sugar; then keep on adding layers in the same way until all is used. Cover tightly, bake an hour and serve cold.

When either baking or stewing rhubarb it is not necessary to add water, or at most a very little if the rhubarb seems dry, but many consider it an improvement to add 3 or 4 slices of lemon and a teaspoonful of butter.

Rhubarb Custard:—Make a custard as for custard pies, using yolks of 2 eggs, pint of sweet milk, and sugar to taste. Put chopped rhubarb in a deep dish, sprinkle with sugar, pour the custard over, bake, cover with a meringue made of the whites of the eggs beaten stiff with sugar and a little lemon juice. Set in the oven to brown.

Rhubarb Pie:—Stew enough rhubarb for the pie, and while it is still boiling stir into it a heaping teaspoonful of corn-starch mixed with a cup of sugar, 1 tablespoonful melted butter, and the beaten yolks of 2 eggs. Pour the mixture into a baked pie-shell, spread with meringue of whites of eggs beaten stiff with 2 tablespoons sugar. Set in the oven to brown and serve cold.

Gen. Marion Maus has a keen and delicate taste in literature, and at a recent dinner at Vancouver Barracks, discussing a popular novel of little worth, Gen. Maus said:

"The pathos of the book is really pathos. It reminds me of a private's widow. The good woman was about to sell her household furniture, her rugs, related ware, and what not. As she was going over these articles her eyes filled with tears, a host of memories rose to her mind, and laying aside a half-dozen knives, she said: 'Oh, dear! I can't let these go! They've been in poor George's mouth too often!'"

The Scarlet Pimpernel.

A STORY OF ADVENTURE.

By Baroness Orczy.

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(Continued from last week.)

CHAPTER XXII.

Calais.

The weariest nights, the longest days, sooner or later must perforce come to an end.

Marguerite had spent over fifteen hours in such acute mental torture as well-nigh drove her crazy. After a sleepless night, she rose early, wild with excitement, dying to start on her journey, terrified lest further obstacles lay in her way. She rose before anyone else in the house was astir, so frightened was she, lest she should miss the one golden opportunity of making a start.

When she came downstairs, she found Sir Andrew Ffoulkes sitting in the coffee-room. He had been out half an hour earlier, and had gone to the Admiralty Pier, only to find that neither the French packet nor any privately chartered vessel could put out of Dover yet. The storm was then at its fullest, and the tide was on the turn. If the wind did not abate or change, they would perforce have to wait another ten or twelve hours until the next tide, before a start could be made. And the storm had not abated, the wind had not changed, and the tide was rapidly drawing out.

Marguerite felt the sickness of despair when she heard this melancholy news. Only the most firm resolution kept her from totally breaking down, and thus adding to the young man's anxiety, which evidently had become very keen.

Though he tried to disguise it, Marguerite could see that Sir Andrew was just as anxious as she was to reach his comrade and friend. This enforced inactivity was terrible to them both.

How they spent the wearisome day at Dover, Marguerite could never afterwards say. She was in terror of showing herself, lest Chauvelin's spies happened to be about, so she had a private sitting-room, and she and Sir Andrew sat there hour after hour, trying to take, at long intervals, some perfunctory meals, which little Sally would bring them, with nothing to do but to think, to conjecture, and only occasionally to hope.

The storm had abated just too late; the tide was by then too far out to allow a vessel to put off to sea. The wind had changed, and was settling down to a comfortable north-westerly breeze—a veritable godsend for a speedy passage across to France.

And there those two waited, wondering if the hour would ever come when they could finally make a start. There had been one happy interval in this long weary day, and that was when Sir Andrew went down once again to the pier, and presently came back to tell Marguerite that he had chartered a quick schooner, whose skipper was ready to put to sea the moment the tide was favorable.

From that moment the hours seemed less wearisome; there was less hopelessness in the waiting; and at last, at five o'clock in the afternoon, Marguerite, closely veiled and followed by Sir Andrew Ffoulkes, who, in the guise of her lacquey, was carrying a number of impedimenta, found her way down to the pier.

Once on board, the keen, fresh sea-air revived her; the breeze was just strong enough to nicely swell the sails of the Foam Crest, as she cut her way merrily towards the open.

The sunset was glorious after the storm, and Marguerite, as she watched the white cliffs of Dover gradually disappearing from view, felt more at peace, and once more almost hopeful.

Sir Andrew was full of kind attentions, and she felt how lucky she had been to have him by her side in this, her great trouble.

Gradually the grey coast of France began to emerge from the fast-gathering evening mists. One or two lights could be seen flickering, and the spires of several churches to rise out of the surrounding haze.

Half an hour later Marguerite had land-

ed upon French shore. She was back in that country where at this very moment men slaughtered their fellow-creatures by the hundreds, and sent innocent women and children in thousands to the block.

The very aspect of the country and its people, even in this remote sea-coast town, spoke of that seething revolution, three hundred miles away, in beautiful Paris, now rendered hideous by the constant flow of the blood of her noblest sons, by the wailing of the widows, and the cries of fatherless children.

The men all wore red caps—in various stages of cleanliness—but all with the tricolour cockade pinned on the left-hand side. Marguerite noticed with a shudder that, instead of the laughing, merry countenance habitual to her own countrymen, their faces now invariably wore a look of sly distrust.

Every man nowadays was a spy upon his fellows: the most innocent word uttered in jest might at any time be brought up as a proof of aristocratic tendencies, or of treachery against the people. Even the women went about with a curious look of fear and of hate lurking in their brown eyes; and all watched Marguerite as she stepped on shore, followed by Sir Andrew, and murmured as she passed along: "Sacres aristos!" or else "Sacres Anglais!"

Otherwise their presence excited no further comment. Calais, even in those days, was in constant business communication with England, and English merchants were often to be seen on this coast. It was well known that in view of the heavy duties in England, a vast deal of French wines and brandies were smuggled across. This pleased the French bourgeois immensely; he liked to see the English Government and the English king—both of whom he hated—cheated out of their revenues; and an English smuggler was always a welcome guest at the tumble-down taverns of Calais and Boulogne.

So, perhaps, as Sir Andrew gradually directed Marguerite through the tortuous streets of Calais, many of the population, who turned with an oath to look at the strangers clad in the English fashion, thought that they were bent on purchasing dutiable articles for their own fog-ridden country, and gave them no more than a passing thought.

Marguerite, however, wondered how her husband's tall, massive figure could have passed through Calais unobserved; she marvelled what disguise he assumed to do his noble work, without exciting too much attention.

Without exchanging more than a few words, Sir Andrew was leading her right across the town, to the other side from that where they had landed, and on the way towards Cap Gris Nez. The streets were narrow, tortuous, and mostly evil-smelling, with a mixture of stale fish and damp cellar odours. There had been heavy rain here during the storm last night, and sometimes Marguerite sank ankle-deep in the mud, for the roads were not lighted save by the occasional glimmer from a lamp inside a house.

But she did not heed any of these petty discomforts: "We may meet Blakeney at the 'Chat Gris,'" Sir Andrew had said, when they landed, and she was walking as if on a carpet of rose-leaves, for she was going to meet him almost at once.

At last they reached their destination. Sir Andrew evidently knew the road, for he had walked unerringly in the dark, and had not asked his way from anyone. It was too dark then for Marguerite to notice the outside aspect of this house. The "Chat Gris," as Sir Andrew had called it, was evidently a small wayside inn on the outskirts of Calais, and on the way to Gris Nez. It lay some little distance from the coast, for the sound of the sea seemed to come from afar.

Sir Andrew knocked at the door with the knob of his cane, and from within Marguerite heard a sort of grunt and the muttering of a number of oaths. Sir Andrew knocked again, this time more peremptorily; more oaths were heard, and then shuffling steps seemed to draw near the door. Presently this was thrown open, and Marguerite found herself on the threshold of the most dilapidated, most squalid room she had ever seen in all her life.

The paper, such as it was, was hanging from the walls in strips; there did not seem to be a single piece of furniture in the room that could, by the wildest stretch of imagination be called "whole." Most of the chairs had broken backs.

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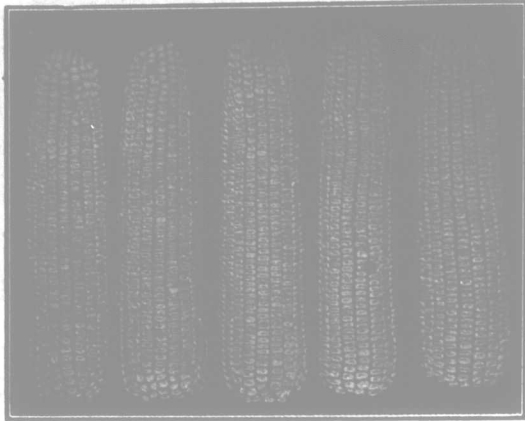
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others had no seats to them, one corner of the table was propped up with a bundle of faggots, there where the fourth leg had been broken.

In one corner of the room there was a huge hearth, over which hung a stock-pot, with a not altogether unpalatable odour of hot soup emanating therefrom. On one side of the room, high up in the wall, there was a species of loft, before which hung a tattered blue-and-white checked curtain. A rickety set of steps led up to this loft.

On the great bare walls, with their colourless paper, all stained with varied filth, there were chalked up at intervals in great bold characters, the words: "Liberte—Egalite—Fraternite."

The whole of this sordid abode was dimly lighted by an evil-smelling oil-lamp, which hung from the rickety rafters of the ceiling. It all looked so horribly squalid, so dirty and uninviting, that Marguerite hardly dared to cross the threshold.

Sir Andrew, however, had stepped unhesitatingly forward.

"English travellers, citizen!" he said boldly, and speaking in French.

The individual who had come to the door in response to Sir Andrew's knock, and who, presumably, was the owner of this squalid abode, was an elderly, heavily-built peasant, dressed in a dirty blue blouse, heavy sabots, from which wisps of straw protruded all round, shabby blue-trousers, and the inevitable red cap with the tricolour cockade, that proclaimed his momentary political views. He carried a short wooden pipe, from which the odour of rank tobacco emanated. He looked with some suspicion and a great deal of contempt at the two travellers, muttered "Sacrrres Anglais!" and spat upon the ground to further show his independence of spirit, but, nevertheless, he stood aside to let them enter, no doubt well aware that these same Sacrrres Anglais always had well-filled purses.

"Oh, lud!" said Marguerite, as she advanced into the room, holding her handkerchief to her dainty nose, "what a dreadful hole! Are you sure this is the place?"

"Aye! 'tis the place, sure enough," replied the young man, as, with his lace-edged, fashionable handkerchief, he dusted a chair for Marguerite to sit on; "but I vow I never saw a more villainous hole."

"Faith!" she said, looking round with some curiosity and a great deal of horror at the dilapidated walls, the broken chairs, the rickety table, "it certainly does not look inviting."

The landlord of the "Chat Gris"—by name Brogard—had taken no further notice of his guests; he concluded that presently they would order supper, and in the meanwhile it was not for a free citizen to show deference, or even courtesy, to anyone, however smartly they might be dressed.

By the hearth sat a huddled-up figure clad, seemingly, mostly in rags; that figure was apparently a woman, although even that would have been hard to distinguish, except for the cap, which had once been white, and for what looked like the semblance of a petticoat. She was sitting mumbling to herself, and from time to time stirring the brew in her stock-pot.

"Hey, my friend!" said Sir Andrew at last, "we should like some supper. . . . The citizen here," he added, pointing to the huddled-up bundle of rags by the hearth, "is concocting some delicious soup, I'll warrant, and my mistress has not tasted food for several hours."

It took Brogard some few moments to consider the question. A free citizen does not respond too readily to the wishes of those who happen to require something of him.

"Sacrrres aristos!" he murmured, and once more spat upon the ground.

Then he went very slowly up to a dresser which stood in a corner of the room; from this he took an old pewter soup-tureen and slowly, and without a word, he handed it to his better-half, who, in the same silence, began filling the tureen with the soup out of her stock-pot.

Marguerite had watched all these preparations with absolute horror; were it not for the earnestness of her purpose, she would incontinently have fled from this abode of dirt and evil smells.

"Faith! our host and hostess are not cheerful people," said Sir Andrew, seeing

the look of horror on Marguerite's face. "I would I could offer you a more hearty and more appetising meal . . . but I think you will find the soup eatable and the wine good; these people wallow in dirt, but live well as a rule."

"Nay! I pray you, Sir Andrew," she said gently, "be not anxious about me. My mind is scarce inclined to dwell on thoughts of supper."

Brogard was slowly pursuing his gruesome preparations; he had placed a couple of spoons, also two glasses on the table, both of which Sir Andrew took the precaution of wiping carefully.

Brogard had also produced a bottle of wine and some bread, and Marguerite made an effort to draw her chair to the table and to make pretence at eating. Sir Andrew, as befitting his role of lacquey, stood behind her chair.

"Nay, Madame, I pray you," he said, seeing that Marguerite seemed quite unable to eat, "I beg of you to try and swallow some food—remember you have need of all your strength."

The soup certainly was not bad; it smelt and tasted good. Marguerite might have enjoyed it, but for the horrible surroundings. She broke the bread, however, and drank some of the wine.

"Nay, Sir Andrew," she said, "I do not like to see you standing. You have need of food just as much as I have. This creature will only think that I am an eccentric Englishwoman eloping with her lacquey, if you'll sit down and partake of this semblance of supper beside me."

Indeed, Brogard, having placed what was strictly necessary upon the table, seemed not to trouble himself any further about his guests. The Mere Brogard had quietly shuffled out of the room, and the man stood and lounged about, smoking his evil-smelling pipe, sometimes under Marguerite's very nose, as any free-born citizen who was anybody's equal should do.

"Confound the brute!" said Sir Andrew, with native British wrath, as Brogard leant up against the table, smoking and looking down superciliously at these two sacrrres Anglais.

"In Heaven's name, man," admonished Marguerite, hurriedly, seeing that Sir Andrew, with British-born instinct, was ominously clenching his fist, "remember that you are in France, and that in this year of grace this is the temper of the people."

"I'd like to scrag the brute!" muttered Sir Andrew, savagely.

He had taken Marguerite's advice and sat next to her at table, and they were both making noble efforts to deceive one another, by pretending to eat and drink.

"I pray you," said Marguerite, "keep the creature in a good temper, so that he may answer the questions we must put to him."

"I'll do my best, but, begad! I'd sooner scrag him than question him. Hey! my friend," he said pleasantly in French, and tapping Brogard lightly on the shoulder, "do you see many of our quality along these parts? Many English travellers, I mean?"

Brogard looked round at him, over his near shoulder, puffed away at his pipe for a moment or two as he was in no hurry, then muttered,—

"Heu!—sometimes!"

"Ah!" said Sir Andrew, carelessly, "English travellers always know where they can get good wine, eh! my friend?—Now, tell me, my lady was desiring to know if by any chance you happen to have seen a great friend of hers, an English gentleman, who often comes to Calais on business; he is tall, and recently was on his way to Paris—my lady hoped to have met him in Calais."

Marguerite tried not to look at Brogard, lest she should betray before him the burning anxiety with which she waited for his reply. But a free-born French citizen is never in any hurry to answer questions: Brogard took his time, then he said very slowly,—

"Tall Englishman?—To-day!—Yes."

"You have seen him?" asked Sir Andrew, carelessly.

"Yes, to-day," muttered Brogard, sullenly. Then he quietly took Sir Andrew's hat from a chair close by, put it on his own head, tugged at his dirty blouse, and generally tried to express in pantomime that the individual in question wore very fine clothes. "Sacrrre aristos!" he muttered, "that tall Englishman!"

Marguerite could scarce repress a scream.

"It's Sir Percy right enough," she murmured, "and not even in disguise!" She smiled, in the midst of all her anxiety and through her gathering tears, at thought of "the ruling passion strong in death"; of Percy running into the wildest, maddest dangers, with the latest-cut coat upon his back, and the laces of his jabot unruffled.

"Oh! the foolhardiness of it!" she sighed. "Quick, Sir Andrew! ask the man when he went."

"Ah, yes, my friend," said Sir Andrew, addressing Brogard, with the same assumption of carelessness, "my lord always wears beautiful clothes; the tall Englishman you saw was certainly my lady's friend. And he has gone, you say?"

"He went . . . yes . . . but he's coming back . . . here—he ordered supper . . ."

Sir Andrew put his hand with a quick gesture of warning upon Marguerite's arm; it came none too soon, for the next moment her wild, mad joy would have betrayed her. He was safe and well, was coming back here presently, she would see him in a few moments perhaps. . . Oh! the wildness of her joy seemed almost more than she could bear.

"Here!" she said to Brogard, who seemed suddenly to have been transformed in her eyes into some heaven-born messenger of bliss. "Here!—did you say the English gentleman was coming back here?"

The heaven-born messenger of bliss spat upon the floor, to express his contempt for all and sundry aristos, who chose to haunt the "Chat Gris."

"Heu!" he muttered, "he ordered supper—he will come back. . . Sacre Anglais!" he added, by way of protest against all this fuss for a mere Englishman.

"But where is he now?—Do you know?" she asked eagerly, placing her dainty white hand upon the dirty sleeve of his blue blouse.

"He went to get a horse and cart," said Brogard, laconically, as, with a surly gesture, he shook off from his arm that pretty hand which princes had been proud to kiss.

"At what time did he go?" But Brogard had evidently had enough of these questionings. He did not think that it was fitting for a citizen—who was the equal of anybody—to be thus catechised by these sacres aristos, even though they were rich English ones. It was distinctly more fitting to his new-born dignity to be as rude as possible; it was a sure sign of servility to meekly reply to civil questions.

"I don't know," he said surlily. "I have said enough, voyons, les aristos! . . . He came to-day. He ordered supper. He went out.—He'll come back. Voila!"

And with this parting assertion of his rights as a citizen and a free man, to be as rude as he well pleased, Brogard shuffled out of the room, banging the door after him.

(To be continued.)

News of the Week.

Three Bleriot monoplanes have been bought by the Mexican Government for use in the Federal army.

Sir Lomer Gouin has been returned to power as Premier of Quebec. He has retained office since March, 1905.

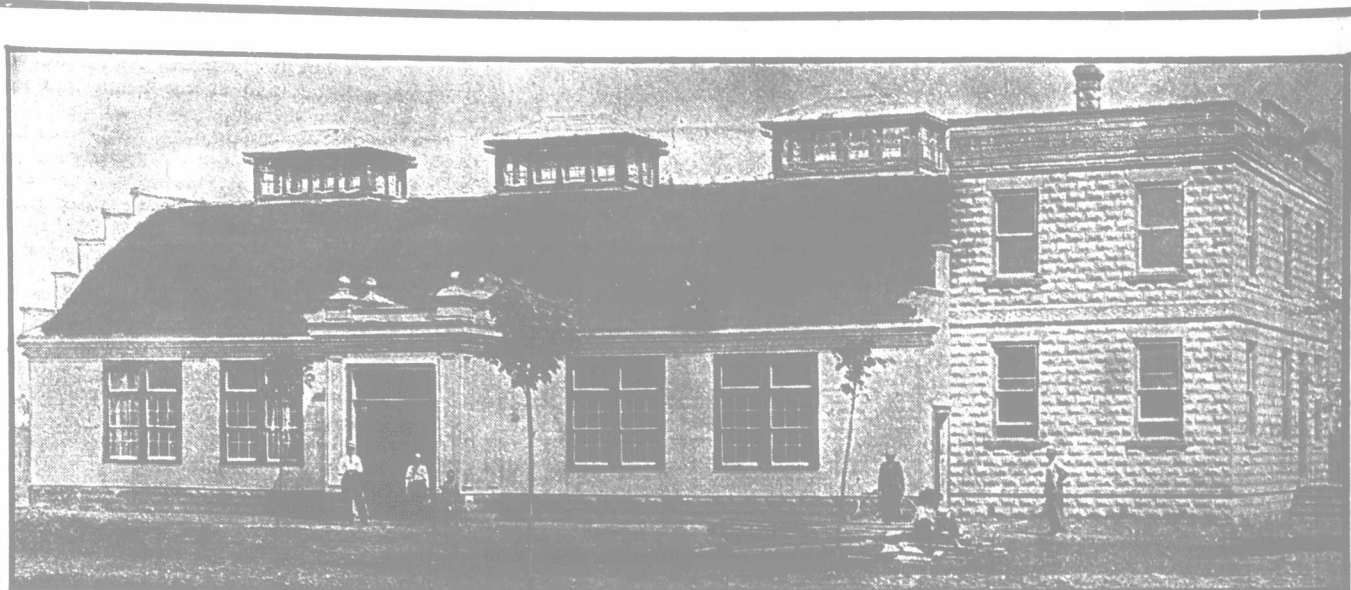
Miss Agnes Deans Cameron, journalist, and author of "The New North," died at Vancouver, B. C., on May 13th.

Affairs at Morocco are again becoming acute, through the objection of the Sultan and some of the tribes to the French Protectorate.

Italian naval and military authorities have succeeded in reproducing the human voice at a distance of 160 miles by wireless telephony.

A Board of Trade Committee, including nine prominent naval architects, has been appointed in London to advise as to the best methods of increasing the safety of ships at sea.

Frederick VIII., King of Denmark, died



BRANTFORD ROOFING
Specified in the Contract

Public Buildings—buildings erected to endure—are logically covered with the best roofing procurable. BRANTFORD ROOFING, on account of its almost indestructible qualities, is very often specified in the contract. The cut shows BRANTFORD ROOFING on the Armouries and Agricultural Hall of Forest, Ontario. Municipal architects, all over the Dominion, specify Brantford Roofing along with slate and iron, thereby testifying to its fire-resisting, element-defying qualities. Here's another fact worth serious

consideration when about to buy roofing. Fire companies quote very low rates on buildings covered with BRANTFORD ROOFING. The reasons for the marked superiority of BRANTFORD ROOFING are very simple. Its body or "Base" is long-fibred pure wool. This is saturated through and through with pure Asphalt—the only mineral fluid that has successfully defied the ravages of the elements for centuries. Fire cannot destroy BRANTFORD ROOFING. Rains, sleet, or snow driven by cyclonic storms cannot penetrate it.

Frost cannot bite into it even during arctic weather. Tropical suns cannot blister or draw it. It is the one durable roofing material.

BRANTFORD (crystal) ROOFING never needs paint. It is vastly superior to wood shingles. Roofing experts are convinced that it excels all metal roofing in the ratio of three to one. And, yet BRANTFORD ROOFING costs but little more than ordinary paper base roofings.

N.B.—Write to-day for our Big Practical Roofing Book. It is free.

FACTORY AND HEAD OFFICES:

Brantford Roofing Co., Ltd., Brantford, Canada

Branch Warehouses: Montreal, 9 Place D'Youville. Winnipeg, 117 Market St.

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"ASK THE MAN WHO HAS ONE." PEASE FOUNDRY COMPANY, TORONTO, ONT.

ONLY EXCLUSIVE FURNACE MAKERS IN CANADA

PAYS FOR ITSELF BY THE COAL IT SAVES

A Bargain—Young Holstein Bull by Canary Butter Baron No. 4054, dam Madonna Clothilde 3rd No. 3957. He is well grown, straight, nice sprung rib and smooth; color black and white; \$50 for quick sale, and I will guarantee him right.

THOS. THIRLWALL, Alisa Craig, Ont.

suddenly at Hamburg on May 15th. His body was taken to Copenhagen, and will be interred on May 24th. The Queen Mother Alexandra and the Dowager Empress Marie of Russia, are sisters of the dead king. Crown Prince Christian, who is forty-two years of age, succeeds his father to the throne.

A scheme described as "the biggest water-supply scheme ever projected in Canada," has been set afoot by the Government of Saskatchewan in an agreement with the C. P. R., C. N. R., and G. T. P., to divert the South Saskatchewan river to supply drinking water to Regina, Moose Jaw, Weyburn, and other towns. It is estimated that the work will cost \$20,000,000.

The meetings of the bankers representing Great Britain, the United States,

Germany, France, Russia, and Japan, to discuss the terms of a loan to China, have been suspended through lack of agreement to the terms demanded by Russia, viz., that her special interests in the North should be safeguarded, and that political control of money advanced to China should take precedence over bankers' control.

Fifteen Model schools will be conducted by the Department of Education this fall. The schools will be opened at Athens, Chatham, Clinton, Cornwall, Durham, Guelph, Kingston, Madoc, Morrisburg, Napanee, North Bay, Orillia, Perth, Renfrew, and Sault Ste. Marie. Those at Madoc and Sault Ste. Marie, where special conditions have arisen, are additions to the number conducted last fall. The school session will begin on September 3rd, and will end on December 13th. Applications for admission must be made

to the Deputy Minister of Education not later than August 15th. The syllabus of courses and regulations is practically the same as that of last year.

UNEXAMPLED COURAGE.

He was the small son of a bishop, and his mother was teaching him the meaning of courage.

"Supposing," she said, "there were twelve boys in one bedroom, and eleven got into bed at once, while the other knelt down to say his prayers, that boy would show true courage."

"Oh!" said the young hopeful. "I know something that would be more courageous than that! Supposing there were twelve bishops in one bedroom, and one got into bed without saying his prayers!"

CANDID.

Doctor—"Do you talk in your sleep?" Patient—"No. I talk in other people's. I'm a clergyman."

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30-cents.

A BEAUTY AND UTILITY STRAIN—Rose and Single-comb Black Minorcas; winners, weighers, payers. Pens are second to none. Eggs: \$1.50 per 15. J. R. Kerr, Milverton, Ontario.

BUFF LEGHORN EGGS—\$1.00 per fifteen. J. E. Griffin, Dunnville, Ontario.

BARRED ROCK EGGS—From good, strong, healthy, vigorous birds, and barred to the skin, mated especially for winter laying, \$1 per 15, or \$2 for 40. Hens have large orchard run. Plenty of exercise should guarantee a good hatch. Harvey Oulp, St. Catharines, Ontario.

BUFF ORPINGTONS—Winners at Guelph and Water Fair, 1911, of 1st cockerel, silver hen, special for best shape, best male, best bird, best three cockerels and 2nd utility pen (all classes competing). Over 60% egg yield since December 1st. Eggs from pens headed by above best three cockerels, \$5.00, \$3.00 and \$1.50 per setting of 15. Mrs. E. D. Graham, Queensville, Ontario.

BUFF ORPINGTON EGGS that will hatch: 9 chicks guaranteed with every setting. Three splendid pens, \$1.00 per setting. Special prices on incubator lots and fancy stock. Hugh A. Scott, Caledonia, Ontario.

CLARK'S FAMOUS BUFF ORPINGTONS—Exhibition egg strains. Winners at New York, Chicago and Canadian leading shows. 12 breeding pens; eggs, \$1.00 to \$10.00 per 15. Incubator eggs, \$6.00 per 100. Satisfaction guaranteed. Free illustrated catalogue. J. W. Clark, Gainsville, Ontario.

DUCK EGGS—Good fertile duck eggs, fifty cents per eleven. Vernon I. Miller, Wroxeter, Ontario.

EGGS from S.-C. White Leghorns. Stock from Cyphers, Buffalo. Bred for laying, \$1.00 for 15. C. S. Wilson, Tambling's Corners P.O., London, Ontario.

EGGS—S.-C. White Leghorn, heavy layers and prizewinners, 75c. per 15. A hatch guaranteed; \$2.50 per 100. Geo. D. Fletcher, Binkham, Ontario, Erin Sta.

EGGS FOR SALE—My birds won over four hundred first prizes at nine shows. Barred Rocks, White and Silver-laced Wyandottes, Houdans, Blue Andalusians, Black Javas, Spangled and Black Hamburgs, Silver-gray Dorkings, Black Spanish, Single and Rose-combed R. I. Reds, Brown Leghorns; \$2.00 per 15 eggs. Half price after June 1st. F. W. Krouse, Guelph.

FREE handsome catalogue of fancy poultry. Describes and prices fifty varieties land and water fowls. S. A. Hummel, Box 23, Freeport, Illinois.

HATCHING EGGS—Single-comb White Leghorns. Size, vigor, productiveness; unexcelled eggs, dollar setting; four dollars hundred. E. W. Burt, Paris, Ontario.

PRIZEWINNERS—White-crested Black Polands, \$2.50 a setting, from McNeil strain. Jas. Latimer, Collingwood, Ontario.

BEACHGROVE FARM—Eggs reduced. Single-comb Reds, 75c. per 15; \$1.25 per 30. Indian Runners, \$1.00 per 15. Frank Baird, Glanworth, Ontario.

ROSE-COMB RHODE ISLAND REDS—Eggs for hatching, one dollar per setting. Fred Colwell, Cooksville, Ontario.

SINGLE-COMB ANCONAS, bred to lay, win and pay. Eggs, \$2 per thirty. Guaranteed fertile. James Snyder, Wales, Ontario.

SINGLE-COMB BROWN LEGHORNS—Shoemaker strain. Grand layers. \$1.50 per setting. F. Fotheringham, Oshawa, Ontario.

WHITE WYANDOTTE EGGS—From choice matings. \$1.50 per 30; \$3.50 per 100. W. A. Bryant, Cairngorm.

WHITE WYANDOTTES EXCLUSIVELY—Bred for heavy egg production and standard points. Eggs: \$1.00 per 15. Good hatch guaranteed. Thos. F. Pirie, Banner, Ont.

\$6.41 PER HEN—Write for our beautifully illustrated catalogue. Photos from life. B. P. Rocks, White Wyandottes. E. C. R. I. Reds, S.-C. White Leghorns. Eggs: \$1.50 per 15; \$2.75 per 30; \$7.00 per 100. L. R. Guild, Box 16, Rockwood, Ont.

EGGS EGGS EGGS
PLEASANT VALLEY FARMS

For hatching: White Wyandotte, \$4 per 100; special mating, several prizewinners, \$2 per 15; S.-C. White Leghorns, \$4 per 100; special mating, \$1.75 per 15 eggs. Grand laying strains, both varieties. **GEORGE AMOS & SONS, MOFFAT, ONTARIO** Private phone Milton.

SINGLE COMB BROWN LEGHORNS Eggs for hatching, \$1.00 per 15. Bred from good laying strains.

WM. BARNET & SONS, LIVING SPRINGS Fergus station, Ont., G. T. R. and C. P. R.



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.

DELAWARE FARMS—Money-making farms throughout the entire State, \$15 an acre up; live stock, implements and crops often included. We offer best bargains, and pay buyer's railroad fare. Catalogue free. Ford & Reis, Inc., Dept. 110 Wilmington, Del.

DOBLE AND MILLER, Real Estate Brokers, Uxbridge, Ont., also Room 310 Continental Life Building, Toronto, have a large list of farms for sale in York and Ontario Counties, on very easy terms; also some good business propositions for sale or exchange. Write if interested.

FOR SALE—Two Jersey bulls, twelve and sixteen months; solid color, full black points. Sire "Brampton Ruby Golden Fox"; dams, "Pure St. Lambert" cows. Price, \$45.00 and \$50.00. Apply to Geo. A. Reburn, Massawippi, Que.

IMPORT YOUR BULBS and Perennial Plants direct from Holland at half the regular prices. Get our import bulb list at once. Morgan's Supply House, London, Canada.

VANCOUVER ISLAND, BRITISH COLUMBIA, offers sunny, mild climate; good profits for men with small capital in fruit-growing, poultry, mixed farming, timber, manufacturing, fisheries, new towns. Good chances for the boys. Investments safe at 6 per cent. For reliable information, free booklets, write Vancouver Island Development League, Room A, 23 Broughton Street, Victoria, British Columbia.

WANTED—A good steady man to act as foreman in charge of a large herd of milk cows. Must have experience and be familiar with balanced ration feeding. Address: Elmhurst Dairy, Montreal West, P.Q.

WANTED—Herdsman for Shorthorns. Married man preferred. W. A. Dryden, Brooklin, Ontario.

WANTED—Cash paid for Military Land Grants in Northern Ontario. Please state price and location. Box 88, Brantford.

200 ACRES, Middlesex County. Fine soil for all crops; perfect water supply; grand buildings throughout; good roads; low taxes; schools, churches, stores, mills, factories and station very close. London, ten miles; Ingersoll, nine; Dorchester, one mile. Every convenience there. Milk selling at \$1.30 per cwt. Price right. Early possession. Must be seen to be appreciated. Easy terms. T. N. Way, Dorchester Station, Ontario.

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In best orchard section of State; apples should pay for this farm in two seasons; rich fields cut 50 tons hay; spring pasture for 25 cows; 100,000 ft. timber; good 9-room house; 64 ft. barn, poultry, ice and carriage houses; nice shade; pleasant view; near lake, village and electric; owner called West. \$3,000 takes it; part cash. For travelling instructions to see this and a lake farm of 17 acres for \$600, see page 4 our New Mammoth Farm Catalogue No. 35, just out, copy free; illustrated and filled with a wonderful assortment of money-making farms, stock and machinery included with many to settle affairs quickly. E. A. Strout Farm Agency, Station 2415, 47 West 34th St., and 170 Broadway, New York.

For Sale—A pure St. Lambert Jersey bull. 14 months old, sire St. Lambert of Markham, No. 81910; dam Florence of Glen Rouge, No. 209540. For particulars, address: **H. M. ROLPH**, Glen Rouge Farm, Markham, Ont.

Greenock Shorthorns! For sale: Two registered bulls, 12 and 13 months; red and roan, highly bred; good quality; reasonable. **Nell A. McFarlane, Box 41, Dutton, Ont.** Elgin Co.

BIG SALE COMING.

An exceptional opportunity to secure show herd or foundation stock is announced by the District of Beauharnois Live-stock Breeders' Association in conjunction with spring show, on June 12, 13 and 14, the latter being the sale day, when 100 Ayrshire and 50 Holstein cattle will be offered, and 20 recorded Clydesdale horses, at Ormstown, P. Q. Exhibition winners and Record-of-Performance animals, tuberculin-tested, have been consigned by some of the foremost breeders in Canada. J. G. Bryson, Ormstown, P. Q., the Secretary-Treasurer, will gladly furnish catalogues on application.

POETRY AND FACT.
"In your sermon this morning you spoke of a baby as 'a new wave on the ocean of life.'"
"Quite so; a poetical figure."
"Don't you think 'a fresh squall' would have hit the mark better?"

Another View of George.

A man but lately married went out to post a letter, and as the lamps had not been lit in the suburban road in which he dwelt he could only dimly see his way. A short distance up the road he met, as he thought, his wife, who had been out to tea; and as he went past he just whispered:

"All right, my dear; I shall be with you in a minute."

Immediately after he had said these words he saw the woman turn a horrified look upon him and then hurry away; and the idea occurred to him that it was not his wife at all, and that in the darkness he had made a mistake. He decided to say nothing about the matter and quickly disappeared.

When he returned home he found his wife awaiting him, and she at once greeted him with the words:

"Oh, George, I have had such a frightful experience! I was just coming down the road when a man tried to stop me, and said: 'All right, my dear; I shall be with you in a minute.' I ran home, found you were out, and I've been so much alarmed."

George was just about to explain, when an idea came to him.

"What sort of a man was it?" he asked.

"Oh," replied the young wife, "I saw him quite plainly, and a more villainous face I never beheld in my life. He was a perfect monster, with crime stamped on every feature."

George decided it was best to say nothing after all.—Boston Post.

The Woman Who Pleases.

"She knows just how to talk to all kinds and conditions of men," was the recommendation given for a bright woman who makes her living as much by her ability to please as by her actual labors.

"Seeing that woman afterward and observing her closely, one could not but be impressed with the truth of what had been said. She was gay with the gay, silent when anyone else wanted to talk, talkative with the shy, always good-tempered, never too animated, and never, never visibly in pain nor in tears. She was always charming, bright, sympathetic and sweet. She was witty, too, but not terribly so. She kept her wit to illumine conversation and to lighten dull spirits, not to burn hearts nor scorch sensitive feelings. Everybody went from her presence feeling comfortable in spirit and with reasonably satisfied hearts.

She was a peacemaker and a courage strengthener. There are two or three dozen such women in the world, and when you find one she will tell you that it is almost impossible for her to get an evening to herself because so many dear, kind friends are apt to drop in of an evening. And she will add: "I am glad it is so, for I should not be able to get through the day without the prospect of these pleasant evenings. I wish the day might be all evenings with a time-table that never crept beyond the limits of eight to eleven p.m."—The Ram's Horn.

SHADES OF SCHILLER.

A curious meeting between Goethe and a woman admirer is retold in The Open Court, as reported by Dr. G. Parthey in the woman's own words. The incident is related as follows:

"I had made up my mind to visit the great Goethe just once, and so one day when I rode through Weimar I went to his garden and gave the gardener one dollar, so that he would hide me in an arbor and give me the wink when Goethe came along. Now, when he came down the path and the gardener beckoned to me, I stepped out and said, 'Worshipful sir!' Then he stood still, put his hands behind his back, looked at me, and said, 'Do you know me?' I answered, 'Great man, who is there that does not know you?' and began to recite:

'Firmly bound, the mould of clay
In its dungeon walls doth stand.'

At that he made a bow, turned around, and went on. So I had my way, and had seen the great Goethe."

The great Goethe must have wondered why some of Schiller's lines were quoted to him upon such an occasion, instead of some of his own.

Malted Corn Feed

THE growing demand from wide-awake farmers for concentrated feeds rich in Protein, has led this company to put another Dairy Feed on the market. We have had a careful analysis made of this feed, and had it tested by some of the leading dairies in and around Toronto with splendid results.

The guaranteed analysis is as follows:

Protein... 15 per cent.
Fat..... 3.11 "
Fibre.... 6 "

Compare this with Prof. Day's report on the feed value of coarse grains:

PROTEIN.
Corn... 7.1 per cent.
Oats... 9.1 "
Barley... 9.5 "
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In Malted Corn Feed you get, therefore, 100 per cent. more Protein than in corn; 80 per cent. more than in either oats, barley or wheat. Do you see the point? Several dairymen who have tried this feed report an increase in the flow of milk of from 5 to 8 per cent. Would any one want any better proof of the feeding value of Malted Corn Feed than this? It is better than whole pages of theory.

Ask your dealer for a sample lot of this feed. If he cannot supply you, write:

The Farmer's Feed Co.
TORONTO LIMITED CANADA
108 Don Esplanade
FEED PRO - FAT
(Dried Malt)
AND
"MALTED CORN FEED"
AND WATCH THE MILK FLOW INCREASE

Chicago.
Cattle—Beeves, \$6 to \$9.25; Texas steers, \$5.90 to \$7.75; Western steers, \$6.10 to \$7.85; stockers and feeders, \$4.20 to \$7; cows and heifers, \$3 to \$8; calves, \$5.50 to \$8.75.
Hogs—Light, \$7.10 to \$7.90; mixed, \$7.50 to \$8; heavy, \$7.50 to \$8; rough, \$7.50 to \$7.70; pigs, \$5.10 to \$7.10.
Sheep and Lambs—Native, \$3.75 to \$6.25; Western, \$4 to \$6.30; yearlings, \$5.50 to \$7.75; lambs, native, \$5 to \$8.65; Western, \$5.75 to \$8.90.

Cheese Markets.
Mader, Ont., 13c.; Woodstock, Ont., 13c.; Brockville, Ont., 13c.; 13 9-16c.; 13c.; Kingston, Ont., 13c.; Alexander, Ont., 13 7-16c.; Vanhook Hill, Ont., 13c.; Iroquois, Ont., 15c.; Napanee, Ont., 13c.; Picton, Ont., 13c. to 13c.; Kempsville, Ont., 13c.; Cornwall, Ont., 13c.

British Cattle Market.
John Rogers & Co., Liverpool, cable quotations for States and Canadian steers from 15c. to 16c. per pound.

PARTS WANTED.
"Yes, there are Rogers."
"Allopo... horse, or divi..."

Hello, Mary, Can You Go to Town With Me, Tomorrow?

THINK what it means to be able to take down the receiver and talk to your friends, to get market and weather reports, to rush a repair part for a broken machine from the nearest dealer. You can get your corn to town when the price is right. You can call the doctor instantly in case of sudden illness or accident. You can order supplies that you need in a hurry. You can avoid loss of crops by storm. Makes every day longer with more money earned.

Stromberg-Carlson INDEPENDENT TELEPHONE
Satisfaction Guaranteed or Money Refunded

For years Stromberg-Carlson Telephones have been making farm life safer, more profitable, brighter and pleasanter. Today over a million and a half instruments are giving complete satisfaction with bigger installations going in every day.

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QUESTIONS AND ANSWERS.

1st—Questions asked by those who subscribe to "The Farmer's Advocate" are answered in this department free.

2nd—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd—In Veterinary questions the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Miscellaneous.

GOOSE MEAT.
Is the flesh of geese good to use at all seasons of the year? J. H. G.
Ans.—Yes.

CLAIM AGAINST RAILWAY.
Could I claim damages from a railway for one year, or the number of years that they have had water backed up on about two acres of my land? (Their drain is not the natural course.) If so, how much per acre could I claim?
Ontario. A SUBSCRIBER.

Ans.—It would seem to be a proper case for such a claim. But it would be well for you to leave the matter of amount to the discretion of your solicitor. Have him write the Company first, and endeavor to get a settlement without litigation.

LIGHTNING PROTECTION.
Give me information in your next issue regarding the best lightning protection for farm buildings. G. M.

Ans.—Lightning rods, either homemade or put up by a reliable firm, should be run from permanently moist earth up to and along the ridge of the building and down to permanently moist earth. If a building is over 100 feet long, a third cable should be run down the side of the barn, near the middle. Upright points should be 5 feet high and about 20 feet apart. Cables of well-galvanized wire not less than 3/8-inch in diameter, are recommended for rods. A metallic roof affords reasonably good protection if properly grounded.

KILLING GROUNDHOGS.
Please print the name of substance to kill groundhogs. A. S.

Ans.—Poisoning by placing in the burrows cloths dipped in carbon bisulphide, an inflammable, poisonous liquid, which volatilizes readily, forming a vapor which is heavier than the air, and hence sinks to the bottom of the burrow, killing the groundhogs, is a remedy which has been recommended in these columns, and is effective. This liquid can be purchased at any druggist's at about 5 cents an ounce—cheaper in large quantities—and an ounce is quite sufficient for one hole or nest. Spot out the holes which you know to be habited, and then, about sundown, with bottle and bits of old woolen rags or waste of any kind, go the round and doctor each one. Roll up a little piece of rag about the size of a hen's egg, not too tight, and saturate this from the bottle, pouring on until the rag has all it will hold. Place as far down the hole as possible, after which cover the hole over with sods or loose earth and tramp solid, being careful not to allow the earth to roll down and cover up the rag. The gas will smother everything it reaches.

The young novelist, known to The Cleveland Plaindealer, had had a tough time of it, and so had his dear wife. She held his talents in poor esteem, and often urged him to try something else, for she was sometimes hungry, and all the time ill-paid. But one day his luck changed. He began to make money. And there came a day when he was able to write his check for \$100 and pass it to his wife.

Her eyes filled with tears as she read it.

"Well, brand, darling," she said, as she hastened around the table and put her arms about his neck. "I'll take back all the mean things I ever said about your work. This is the best thing you ever wrote!"

"How did you make your neighbor keep his chickens in his own yard?" "I went out every night and hid a bunch of eggs on my lawn. Then I let him see me gathering them in the morning."

CANADIAN PACIFIC RAILWAY

UPPER LAKES NAVIGATION
Steamers leave Port McNicoll Mondays, Tuesdays, Wednesdays, Thursdays and Saturdays at 4 p.m. for SAULT STE. MARIE, PORT ARTHUR and FORT WILLIAM

The steamer Manitoba, sailing from Port McNicoll Wednesdays, will call at Owen Sound, leaving that point 10.30 p.m.

Steamship Express
Leaves Toronto 12.45 p.m. on sailing days, making direct connection with steamers at Port McNicoll.

VICTORIA DAY SINGLE FARE
Between all stations in Canada, Port Arthur and East. Good going May 23-24. Return limit May 27. (Minimum rate of 25c.)

Homeseekers' Excursions
May 28, June 11, 25, and every Second Tuesday until Sept. 17 inclusive.

WINNIPEG and RETURN \$34.00
EDMONTON and RETURN 42.00

Proportionate rates to other points. Return limit 60 days.

THROUGH TOURIST SLEEPING CARS
Ask nearest C. P. R. Agent for Homeseekers' Pamphlet

Tickets and full information from any C. P. R. Agent. W. FULTON, C. P. & T. A., London

GRAND TRUNK RAILWAY SYSTEM
Canada's Double Track Line

VICTORIA DAY
Single Fare for Round Trip
Between all stations in Canada
Good going May 23rd and 24th
Return limit May 27th
(Minimum charge 25c.)

HOMESEEKERS' EXCURSIONS
MAY 28th, JUNE 11th and 25th
and every second Tuesday thereafter until Sept. 7th, via Chicago and St. Paul.

WINNIPEG and RETURN \$34.00
EDMONTON and RETURN 42.00
Tickets good for 60 days

The Grand Trunk Pacific Railway is the shortest and quickest route between Winnipeg-Saskatoon-Edmonton, with smooth roadbed, electric-lighted sleeping cars and superb dining car service, through the newest, most picturesque and most rapidly-developing section of Western Canada. Through tickets sold and reservations made by all Grand Trunk Agents. Costs no more than by other routes. Trains now in operation Winnipeg to Regina, Yorkton and Canora, Sask., also to Camrose, Mirror and Edson, Alta. Full particulars and tickets from any Grand Trunk Agent, or write A. E. Duff, D. P. A., Toronto, Ont.

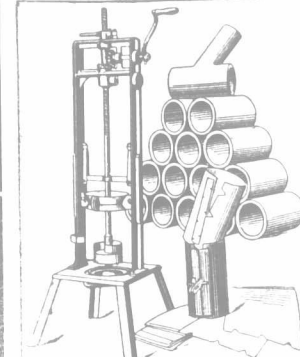
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Cost \$4.00 to \$6.00 per 1,000

Hand or Power

Send for Catalog

Farmers' Cement Tile Machine Co.
WALKERVILLE, ONT.



CREAM WANTED
At the Guelph Creamery. Business run on the co-operative plan. Write for prices and particulars. It will pay you well.
Stratton & Taylor, Guelph.

An Easy-to-lay Roof for Your Barn
—A Tight-locking Shingle that Keeps Out the Rain



SIMPLICITY in itself is no recommendation for a roof. But, all other things being equal, you would select the easy-to-lay roof every time, wouldn't you? This is ONE feature of Galt Steel Shingles that strongly recommends them to the farmer. Another important recommendation is the tight-locking patented "hook" that forms an absolutely weather-proof surface which neither time nor violent storms can undo. The illustration shows two sections of a Galt Steel roof, about to be locked together. It will be noted that, while extremely simple, the shingles are so designed as to "grip" one another tightly at both sides and ends.

A Roof is No Stronger Than its Weakest Point

In a "Galt" roof, all danger of leaks is avoided by our patented "lock"—the most important improvement in metal roofing in 25 years.

The best illustration of "Galt" Shingle superiority you can have, is in the fact that if a number of our shingles are assembled and held to the light, it will be found that light does not penetrate the locks at any point. Do you know any other of which this is true?

It is generally acknowledged that a metal roof (owing to its permanence and fireproof qualities) is superior to any other kind of roof—if "security" can be obtained at the seams. With "Galt" Shingles you can be absolutely sure of such security.

But space does not permit a detailed description or a complete story of Galt Shingles. If you would learn all the facts you ought to have, before you roof your barn, you should get a copy of our splendid free book entitled

"HOW TO BUILD A BARN."

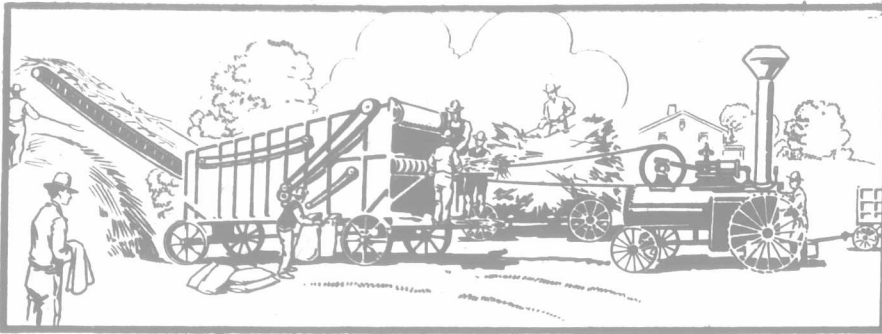
The value of this book to the farmer as a work of present and future reference can scarcely be estimated. But in order that you may appreciate its value and retain it, it should be noted that duplicate copies will cost you 50c. each, unless these are for a friend, also interested in barn construction. Use the coupon and send for this free book to-day.

THE GALT ART METAL CO., Limited
150 STONE ROAD, GALT, ONT.

BRANCHES—General Contractors Supply Co., Halifax, N.S.; Estey & Co., St. John, N.B.; R. Chestnut & Sons, Fredericton, N.B.; J. L. Lachance, Ltd., 253 St. Paul St., Quebec, Que.; Wm. Gray Sons-Campbell, Ltd., 583 St. Paul St., Montreal; Montague Sash & Door Factory, Montague, P.E.I.; Fife Hardware Co., Fort William, Ont.; Galt Art Metal Co., Ltd., 839 Henry Ave., Winnipeg, Man.; Gorman, Clancey & Grindley, Ltd., Calgary, Alta.; Gorman, Clancey & Grindley, Ltd., Edmonton, Alta.; D. R. Morrison, 714 Richard Street, Vancouver, B. C.

Send Me Your Book on Barns

F. A.



Save Friction, Save Wear, Save Fuel Bills

Use

Capitol Cylinder Oil

The very best oil for steam plants on the farm. Lasts longer and gets more power from the engine, with less wear, than any cheap substitutes; costs less in the end.

Atlantic Red Engine Oil

A medium boiled oil, strongly recommended for slow and medium speed engines and machinery. Eases the bearings and lightens the load.

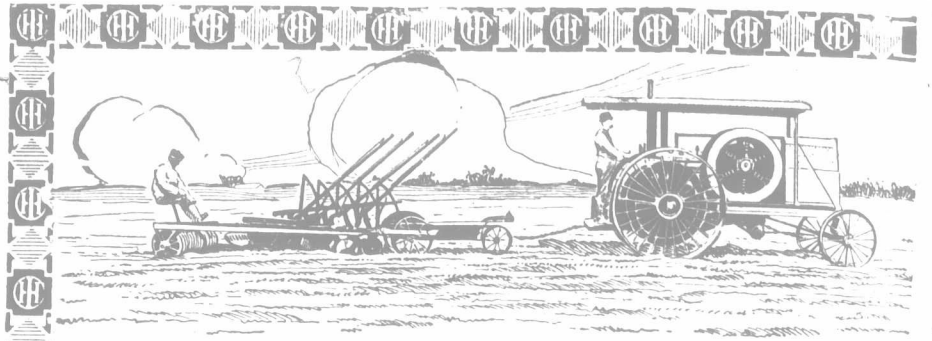
S. Peerless Oil

Has no equal as a lubricant for farm machinery generally. Specially suitable for reapers, mowers and threshers.

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AND
Queen City
Division
TORONTO



Farm For Less Money

CUT down the cost of raising crops. That's the best and easiest way to increase your profits. You can do it by using an IHC tractor. You can plow, harrow, seed, cultivate, harvest and haul at a fraction of what it now costs you with horses. You can run the irrigating pump, silage cutter, saw, feed grinder, and other machines with it. You can make extra profits easily by doing custom work for your neighbors after you are through with your own work.

IHC Kerosene-Gasoline Tractors

quickly pay for themselves. Their strength and durability make them most serviceable for years of hardest work. Their simplicity makes them easy to operate and easy to care for.

Investigate tractor farming. Learn how you can profitably use an IHC tractor. Get all the facts from the IHC local agent. Let him point out the many IHC tractor features and advantages in design, materials, and construction. He will tell you about the complete IHC line, which includes gasoline and kerosene tractors, 12, 15, 20, 25, and 45-H. P. in several styles and horizontal and vertical engines stationary or mounted on skids or trucks, air-cooled or water-cooled 1 to 50-H. P. If you prefer, write the nearest branch house for catalogue.

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At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

IHC Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to IHC Service Bureau, Harvester Building, Chicago, U. S. A.



GOSSIP.

STOCK SALE DATES CLAIMED.

June 10th.—W. A. Tickell, Holbrook, Ont.; Holsteins.
June 12th.—Oxford District Holstein Club, at Woodstock, Ont.; Holsteins.
June 14th.—Beauharnois Live-stock Breeders' Association, at Ormstown, Que.; Holsteins, Ayrshires, and Clydesdales.
June 18th.—A. S. Turner & Son, Ryckman's Corners, Ont.; Ayrshires.

W. B. Annett, the well-known horse-breeder of Alvinston, Ont., in ordering a change of advertisement in this week's issue, writes that he has now on hand an extremely choice lot of imported Clydesdale fillies from two to five years of age. These fillies are recently imported, and of the kind that are hard to procure, having size, substance and quality in plenty. A few choice young Clydesdale stallions are still on hand. All are for sale, at reasonable prices, as they must be sold.

Oswald—Myrtle, I have an important question to ask you.

Myrtle—Oh, Oswald, this is so sudden! Oswald—What I want to know is this: What date have you and your mother decided upon for our wedding?

A ball game between two local pro-teams, one colored, was played on the North Side and attracted a generous following of negroes, who went a long way to root for their team. They occupied a section by themselves, as The Chicago Post.

A foul ball went in among the crowd did not come back, causing a red-hot contender to go to that part of the stand and yell:

"Throw that ball back. What do you think it is—a chicken?"

Standard Wire Fence



In the "Standard" Wire Fence, you get the durability that comes with strength. Made of all No. 9 Hard Steel Wire, well galvanized—which means no rust and long wear.

"The Tie That Binds" hooks on the running wire and locks smooth on both sides. Then—there's the Standard Steel Fence Posts that hold the wires without staples—won't rot and are very durable.

We make a specialty of Galvanized Gates, too. Our new books are chock full of fence facts. Write for free copies and sample lock.

The Standard Wire Fence Co. of Woodstock, Limited
Woodstock, Ont. Brandon, Man.



The Right Building Material for Houses, Barns, Implement Sheds

Whether you are building an implement shed, a granary or a house or barn, the most **ECONOMICAL** and **DURABLE** building material is "Metallic."

For Barns: Corrugated Steel Siding and "Eastlake" Metallic Shingles make a barn absolutely fire, lightning and weatherproof.

For Houses: Metallic Rock Paced Stone or Brick Siding will give your house the appearance of a stone or brick dwelling. It is easily and cheaply applied and very durable. "A 25-year actual test" has proven "Eastlake" Shingles the best roofing.

All about the permanent roof you want is told in our artistic free booklet, "Eastlake Metallic Shingles." Write for it now."

The Metallic Roofing Co., Ltd.

MANUFACTURERS

1189 King St., West, Toronto Branch Factory: Winnipeg. Agents in principal cities.

TRADE TOPIC.

INAUGURATION OF PORT McNICOLL SERVICE AND OPENING OF UPPER LAKE NAVIGATION.

The Canadian Pacific is now operating Great Lakes Steamship Express trains between Toronto and Port McNicoll on the following schedule, with first-class coach and parlor car running through without local stops.

Northbound.

Leave Toronto 12.45 p.m., arrive Port McNicoll 4 p.m. Mondays, Tuesdays, Wednesdays, Thursdays and Saturdays, connecting with the palatial C. P. R. Upper Lake Steamers, leaving Port McNicoll 4.00 p.m. on above days for S. Ste. Marie, Port Arthur and Fort William. The Steamer Manitoba sailing from Port McNicoll Wednesdays, will call at Owen Sound, leaving that point 10.30 p.m.

Southbound.

Leave Port McNicoll Sundays and Thursdays at 8.45 a.m., arriving Toronto 12.00 noon, and leaving Port McNicoll on Mondays, Tuesdays and Saturdays at 12.00 noon, arriving Toronto 3.15 p.m.

Full particulars from any C. P. R. Agent, W. Fulton, City Passenger Agent, London.

Senator McCumber, at a dinner in Washington, said that all acts should be judged by the motives that inspired them.

"That is the only way to avoid going wrong." Jim Bludge, of Wahpeton, was a very bad man, but one Easter he turned up at church service. Everybody was delighted. Everybody's heart warmed to Jim. But the deacon, accosting him after the service, said cautiously:

"Well, James, I'm glad to see you at meeting, but how did you happen to come?"

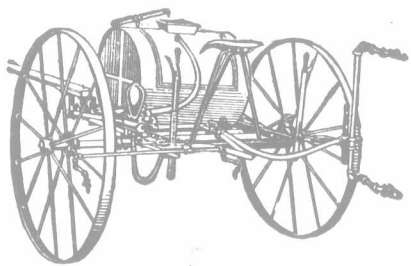
"Ho, ha, ha!" Jim Bludge chuckled. "It's like this, deacon. You see, last Thursday morning I found a counterfeit dime. But don't tell anybody."

GOSSIP.

BRAMPTON JERSEYS.

Canada can now boast of the largest herd of pure-bred Jerseys owned under the British flag, and B. H. Bull & Son, who for many years have had the distinction of owning the largest and best herd in Canada, are the proprietors. This firm have imported 117 head from the Isle of Jersey this spring, 90 of which were in calf, and many of these have calved ere this. Further, there is now a permit issued for the importation of some thirty more. The recent importation is stabled at Toronto fair grounds, where it will be until they can go to the farms at Brampton and be turned to grass. Many have inspected them at the exhibition grounds, where Mr. Bull meets them by appointment. The herd at Hawthorne Lodge, Brampton, has come through the winter in extra good condition, the scarcity and high price of feed having evidently made no difference here. Every one who has visited the home herds says the stock never before looked so thrifty, strong and healthy. Some very good records were made during the winter. Bull & Son have surely proven that their Jerseys, more than any other herd in America, are the kind which can win in the showing and make good yearly records. The sires which have been used on the Brampton herd for many years have proven their ability as producers of butter-test cows. Brampton Jerseys are at the top of the list, and are there to stay, according to present appearances. As a side line, B. H. Bull & Son imported a consignment of Clydesdales last winter, some of which are still on hand. We further understand that the firm has applied for a permit to import some Berkshire swine. Many will take advantage of the cheap rates on all railroads to Toronto during the race meet and at 24th of May to secure a herd bull or a few choice females. Trains met by appointment.

O.K. CANADIAN



Four Row Sprayer

Don't waste your time and risk your crops by using a hand sprayer. An "O.K. Canadian" will spray a Potato Field or Cabbage Patch, while you are getting down a few rows with a hand sprayer. Potato Bugs, Cabbage Worms, Blight, etc., don't

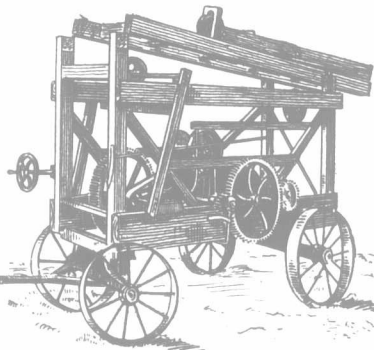
have the ghost of a show of escaping when you drive over the fields spraying Arsenate of Lead or some other bug-killing compound, "O.K. Canadian" sprays evenly because it has the best pump on the market. Linings won't corrode. Relief valve regulates the pressure. Agitator is a positive mixer—and prevents ingredients from settling while the sprayer is in motion. Barrel holds 45 gallons of liquid. Get an "O.K. Canadian" Sprayer and keep your vegetables free of bugs.

"O.K. Canadian Potato Digger has taken the prize wherever exhibited as the champion potato digger of Canada and the United States.

Write For Our Book It tells how to make up your own sprays—and how to use them. Ask for Catalogue L.

CANADIAN POTATO MACHINERY CO., LIMITED, - GALT, Ont. 6

Dick's Standard Well Drilling Machine



THE Noiseless Well Drilling Machine is the term usually applied to THE Standard when compared to other makes, with their incessant rattle and clang. They are compactly constructed and their mechanism is built of iron and steel—not wood.

"Boys"—This is a money maker. Drop a card to-day for full particulars.

The Dick Well Drilling Machine Co. BOLTON, ONT., CANADA Quebec Agents: Bournival & Co., 333 Notre Dame St. East, Montreal

THE SPICE OF LIFE.

AT A FOOTBALL GAME.

Michael—"Come away, wife, or else they will want us afterward as witnesses."

The aviator's wife was taking her first trip with her husband in his airship. "Wait a minute, George," she said. "I'm afraid we will have to go down again."

"What's wrong?" asked the husband. "I believe I have dropped one of the pearl buttons off my jacket. I think I can see it glistening on the ground." "Keep your seat, my dear," said the aviator; "that's Lake Erie."

BREAKING THE I-C-E.

When Alice Jones was eighteen she became Miss E. Alysse Jones. When she went to enter a college she was asked her name by the dean. She replied: "Miss E. Alysse Jones—A-l-y-s-s-e." "Yes," said the dean; "and how are you spelling 'Jones' now?"

AVERTED THE DUCKLINGS

"Why is it," asked Rose Stahl, "that in the spring a young woman's fancy is so apt to turn to clucking hens? Last year one of my best friends abandoned the footlights and sought the actor's oft-dreamed-of paradise, a little home in the country.

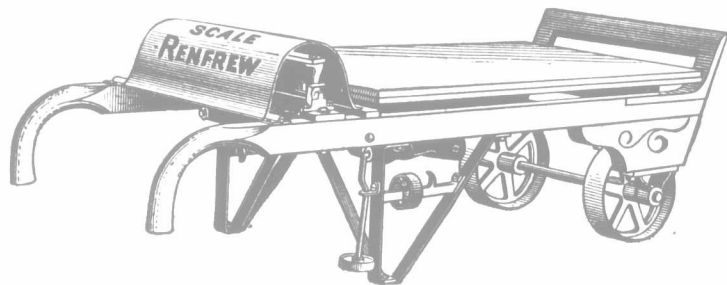
"As a recreation she decided to start a poultry farm, which she did with a barn-yard hen and thirteen eggs from the village store. Not having even the most elementary knowledge of poultry, she inquired of a neighbor how long eggs generally took to hatch. She received the reply:

"Three weeks for chickens and four weeks for ducks."

"The neighbor met her some time afterward, and, on being asked how the poultry farming was going on, she replied, with a lowering countenance:

"Oh, I've finished with it. At the end of three weeks there were no chickens, so I took the hen off, as I didn't want ducks."

"Wheel the Scale to what you want to Weigh"



The RENFREW Handy Two-Wheel Truck Scale

The Scale that is guaranteed by the Canadian Government

The Renfrew insures the farmer his full profit on everything he sells by weight---from one ounce to 2,000 lbs.

The Renfrew comes to you with Government certificate attached---an absolute Guarantee of Accuracy.

Simply wheel the Renfrew to what you want to weigh---it saves time and labor.

The Renfrew outlasts all other Scales---it is built for hard and unremitting service.

Write at once for our booklet, "Profit in the Last Ounce," which shows you how to get every cent of profit on produce you sell by weight using a RENFREW HANDY TWO-WHEEL TRUCK SCALE.

Mail To-day Coupon

Please send me free of charge, booklet: "The Profit in the Last Ounce."

THE RENFREW SCALE CO'Y RENFREW, - ONTARIO

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Address

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EDMONTON—Race, Hunt and Giddy MANITOBA—Clare & Brockest, Winnipeg

THE RENFREW SCALE CO. Renfrew, Ontario

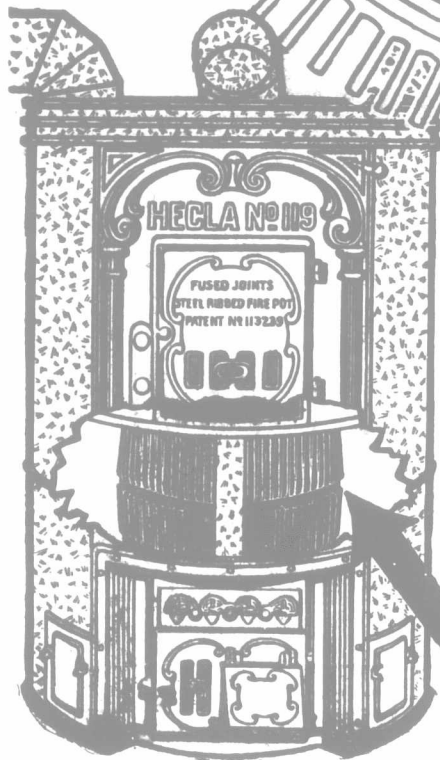
Saves one ton in seven

Figure up your annual coal bill, divide it by seven, and you have the amount the Hecla Furnace will save you every year. ¶ The steel-ribbed fire-pot does it. Adding steel ribs to the fire-pot increases its radiating surface three times more than is possible by any other method. The steel-ribbed fire-pot heats the air quicker. It sends the heat through the registers instead of up the chimney. ¶ Examine the Hecla. Compare it with other Furnaces. ¶ You will find every feature that makes for convenience and ease of operation. But the Hecla is the only one that has the Steel-ribbed Fire-pot—the fire-pot which saves thousands of users one ton of coal in seven.

Section of fire-pot showing ribs of steel plate which save 1 ton in 7.

HECLA FURNACE

No Gas or Dust



Burns wood as well as coal.

And this furnace cannot possibly leak gas or dust. The joints, usually bolted or cemented, are fused in the Hecla in a perfectly tight joint. Time and service cannot loosen the Fused Joint. The fusing welds the Hecla Radiator into one piece.

Our Booklet "Comfort & Health" should be in the hands of everyone who has a heating problem to solve. It will be sent free of charge.



CLARE BROS. & CO., LIMITED,
Dept. L, Preston, Ont.

8" PER RUNNING FOOT Regal Oval Top Ornamental Lawn Fence

SOLD DIRECT TO CONSUMER. FREIGHT PREPAID TO NEAREST STATION. ARTISTIC, DURABLE, INEXPENSIVE. GUARANTEED OR YOUR MONEY BACK.

SEND FOR CATALOG

REGAL FENCE & GATE CO., SARNIA, CANADA.

When writing advertisers please mention The Farmer's Advocate

QUESTIONS AND ANSWERS Miscellaneous.

THOROUGHbred STALLION.

Please inform me with whom I should correspond in order to get in touch with the Thoroughbred stallion owners of this district. I reside about the center of Grey County. H. W. S.

Ans.—Write the Accountant of the National Live-stock Records, Department of Agriculture, Ottawa.

A RIGHT OF WAY.

If a footpath across a field has been travelled a certain length of time, can it be stopped?

Ontario.

Ans.—It depends upon the circumstances. Ordinarily, if such a path has been actually enjoyed, as a way, by a person claiming right thereto, without interruption, for the full period of 20 years, it cannot, legally, be stopped without the consent of such person.

A HILLY ROAD.

I live in a place where I am obliged to drive over a concession. It contains a hill which is so steep that a horse can only draw a light rig up. This concession has been driven over for a number of years, and no complaint has been made about the hill. Could I refuse to drive over it, and compel the Council to give me a road around it?

Ontario.

A SUBSCRIBER.

Ans.—We think not.

WART ON COW'S TEAT.

Have valuable Holstein heifer just freshened; had several warts on body, some very large, and one quite large, smooth one on side of one teat. Removed most body warts with castor oil, but one on teat still grew. Neck of it is large, and wart is hard and rough on end. It is troublesome to milk this teat, and milk comes very slowly. Calf will not suck it. Please prescribe simplest and best way to remove, without injuring teat, and still keep cow milking. A. L.

Ans.—The best time to remove warts on teats is when the cow is dry. As the castor oil failed to remove it, touch it daily with a pencil of silver nitrate, or butter of antimony carefully applied with a feather in small quantity, always being careful not to overdo it, making a troublesome sore. This treatment will make the teat rather sore, and some trouble may be experienced in milking. If at all possible, wait until she is dry to treat.

A WILL REQUISITE.

Mr. Smith owns a 200-acre farm with stock and implements. The farm has a \$2,000 mortgage against it. Mr. S. has a wife; one son married; a daughter married, who died about a year ago and left one child; two sons at home, 26 and 20 years old; also two girls going to school, 14 and 7 years old.

1. If Mr. Smith died without a will, would the farm, with stock and implements, have to be sold to make a satisfactory division?

2. Would the grandchild share equally with the sons and daughters?

3. Would the Provincial official guardian have charge of the four minor shares?

4. If so, would he demand the cash, or would he leave their shares in the farm until they came of age?

5. Would it be advisable for Mr. S. to will everything to his wife, then, with the \$2,000 life-insurance policy that she holds, she could release the mortgage, rent the farm to one or both of her sons, and with her two little daughters move to a small house on the corner of the farm, where she would have sufficient income to educate them and make a home for them until they were old enough to earn their own living?

Ontario.

READER.

Ans.—1. Yes.

2. Yes.

3. Practically, yes.

4. He would probably require a sale to be held, and that he be consulted regarding the arrangements for it; also that the shares of the infants be paid into Court—the same to be paid out to them, with interest, upon their, respectively, attaining the age of 21 years.

5. He should certainly make a will; but as to the terms and provisions of same we could hardly advise without an intimate knowledge of the family and circumstances generally.

Do you know the "Reasons Why" **McCLARY'S SUNSHINE FURNACE** IS CALLED "The Understudy OF The Sun"

QUEEN'S UNIVERSITY
KINGSTON • • • ONTARIO

ARTS, EDUCATION, THEOLOGY, MEDICINE, SCIENCE, including ENGINEERING Arts Summer Session July 3 to Aug. 17

The Arts course may be taken by correspondence, but students desiring to graduate must attend one session. Short Course for Teachers and general students July 20th to 31st. For calendars write the Registrar G. Y. CHOWN Kingston, Ont.

WANTED-CREAM
Highest Toronto prices paid for cream delivered at any express office. We pay all charges, furnish cans free, pay accounts fortnightly, engage man to collect at some points. Ice not essential. Write for particulars.

THE TORONTO CREAMERY CO'Y, LTD.
Toronto, Ontario

INTERNATIONAL GALL CURE
Cures Horses While They Work or Rest
PRICE 25¢ AT ALL DEALERS

WELL DEFINED.
Tommy—"Pop, what is a monologue?"
Tommy's Pop—"A monologue, my son, is a conversation a woman carries on with her husband."

Have You Made Your Will?

If Not, Your Family Are Unprotected.
NO LAWYER IS NECESSARY.
For thirty-five cents, you can make your will and be absolutely assured that it is perfectly legal in every respect, and that it cannot be broken by anyone, no matter how hard he may try.
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Why not get one to-day? For sale by all druggists, and the Bax Will Form Co., 280F College street, Toronto.

QUESTIONS AND ANSWERS.
Miscellaneous.

SHEEP DIP.

I would like to know, through the columns of your paper, a good wash for sheep. They are sheared, and are very much bothered with ticks. I have only a small flock. J. H. D.

Ans.—We can advise nothing better than the use of one of the proprietary dips advertised in this journal.

AUCTIONEER'S LICENSE.

What rules are there for auctioneering in Ontario? How long does it take to practice? What expense is there to start? Do you think it is a good business for a young man?

Ontario. **SUBSCRIBER.**
Ans.—There is no qualification required by law to become an auctioneer other than payment of the license fee, the amount of which varies in different municipalities, councils of which are empowered by the Consolidated Municipal Act, 1903, Chap. 19, Sec. 583, Sub-sections 2 and 3, to pass by-laws covering, among other points, the license fee, which is usually about \$12. Apply to the County Clerk. As to whether it is a good business or not depends upon the adaptability of the man and the spirit he puts into it. Good live-stock auctioneers are scarce, and make good wages when work is plentiful.

SMALL BARN.

1. I wish to build a small barn to hold two horses and two cows, and sufficient hay and straw for their support, as well as a few bushels of grain. I would want to drive in barn with wagon or carriage, and unhitch under cover. Would a barn 24 x 20 feet, with posts 16 feet high, and flat roof, be sufficiently large? I would like to have a plan of the most economical interior arrangements, also bill of materials, as I imagine something I want would be of general interest to your readers.

2. I would also like some information about water in this barn. I am just building in the country, and my knowledge of country water systems and barns is limited. The well is about 10 feet lower than the bottom of cellar of house. The cellar ceiling is 8 feet high. The kitchen ceiling is 8 feet, with bathroom on floor directly above kitchen. This means that water in well must be raised about 30 feet. Can this be done with a hand pump? Would it be necessary to have a pump in barn also, in order to get water there, and could such a pump be connected with the pipe which supplies the house?

3. I am thinking of putting in cement floor in stalls for horses and cows. I would like your opinion in regard to cement floors for horses to stand on. Do not the horses shoes tend to break up the cement, and would not such a floor be the cause of dulling the calks of the shoes in winter, as some horses are restless in the stall, and are continually pawing and stamping? G. H. B.

Ans.—1. The two horse stalls should each be from 5 1/2 to 6 feet wide, and the cow stalls about 3 1/2 or 4 feet wide. It would be well to have the stable in one end of the barn and the drive-shed in the other, with the grain-bin or box in a granary or feed-room in front of the cattle and horses. A partition should be erected between the stable and the carriage part of the building, and if desired, one could be placed between the portion for the cows and that of the horses. Twenty feet is wide enough for the building, but it is a little short at 24 feet. Thirty feet would be a better length to allow of plenty of space for the drive-shed, and stalls of sufficient width for comfort. It could be squeezed into 24 feet, but it would not be wise to do so. In order to have a place to store hay and straw, an ordinary pitch roof, or a hip roof should be placed on the building to allow a loft over the animals. Your carpenter or contractor could give you the bill of materials.

2. It might be possible to get the water in by an ordinary pump, but it would likely be slow and hard to work. For house and barn both, a windmill at the well and tanks in house and barn, with pipes leading throughout the buildings, would make a good system.

3. Some use cement floors for horse stalls. If using them, would advise covering them with plank.



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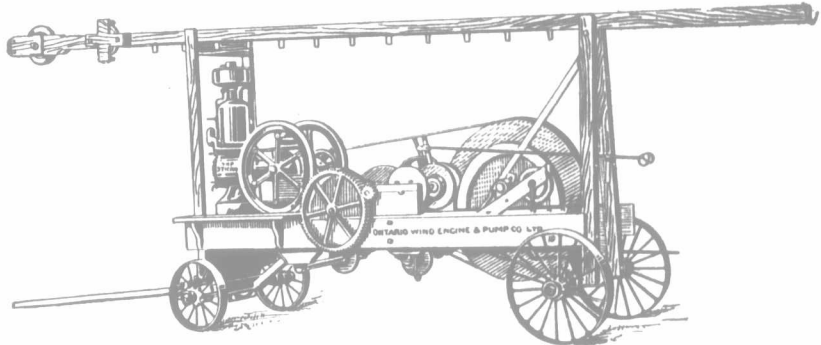
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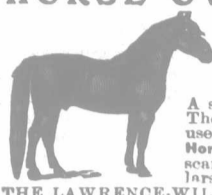
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QUESTIONS AND ANSWERS.
 Miscellaneous.

PILES IN PIGS.

I have a pen of pigs that are troubled with the piles. I am feeding them shorts and whey. They appear to be doing well otherwise. What causes the piles? What is the best remedy, and what do you consider the best feed for little pigs?
 F. S. R.

Ans.—Piles are uncommon in pigs. The trouble may be protrusion of the rectum, due to diarrhea. If so, wash the protrusion with warm water, rub on a little laudanum, and press back into place. Eversion of the rectum is sometimes caused by the pig being constipated, which is often due in young pigs to too high feeding or to lack of exercise. For this, give from one to two ounces of castor oil. Piles are soft tumors which are easily made bleed. They cause the animals great annoyance. Feed on laxative food, purge with castor oil or aloes and calomel, about 10 grains of aloes and 6 or 8 grains of calomel. It is often necessary to open the tumors and squeeze out the blood and apply an astringent, as tannic acid mixed with water and glycerine. Milk is the best feed for little pigs. As they grow older, shorts and chopped grain may be added. Shorts are good.

SHEEP DIPS.

The "Sheep Commissioners" recommended a poisonous dip as the only sure cure for lice on sheep. Give formula for a carbolic or arsenic dip. FARMER.

Ans.—This query was referred to W. T. Ritch, one of the members of the Sheep Commission, who, in replying, advised that one of the reliable dips advertised from time to time in "The Farmer's Advocate" be used. When the directions are carefully followed, there is no risk whatever in using these. We quote from Mr. Ritch's letter:

"My advice regarding 'homemade' formulas for poisonous dips also holds good for the non-poisonous, although they contain different ingredients. It is not only a great mistake, but also false economy, for any farmer with a small flock of sheep to think that he can do better or save money by manufacturing his own sheep dip at the farm. Even large and experienced sheep farmers, who thoroughly understood dipping and formerly made a practice of preparing their own dips, have now come to the conclusion that it was a great mistake. Even Mr. Borland, whose article on 'Cheviot' sheep recently appeared in "The Farmer's Advocate," admitted to me that he had lost several sheep by persisting in manufacturing his own dips in former years.

"There are several harmless, non-poisonous formulas to be had. Some years ago I had a number of these by me, but at the present moment I cannot find them without considerable delay. Several sheep farmers in Scotland make a practice of adding some oily ingredients to the ordinary carbolic sheep dips for the purpose of 'waterproofing' and imparting a bloom to the fleece, and possibly this is what has attracted your correspondent to 'homemade' dips."

Mr. Ritch is willing to look up information on the subject, but advises the selection of some of the most reliable brands of proprietary dips in place of home preparations.

A MODEST NOTE.

Reginald De Koven told at a musicale in Chicago a pretty story in praise of modesty.

"A group of tourists," he said, "visited in Bonn Beethoven's house. One of the tourists, a girl of twenty or so, sat down at Beethoven's piano and played the 'Moonlight Sonata' none too well—Beethoven's own work, in his own room, on his own piano!"

"When the girl had finished she arose and said to the old caretaker: 'I suppose lots of famous musicians have been here and played on this instrument?'"

"Well, miss," the caretaker answered, gravely, "Paderewski was here last year, and his friends urged him to play, but he shook his head and said: 'No, I am not worthy.'"

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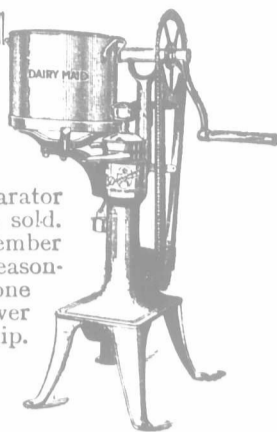
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QUESTIONS AND ANSWERS. Veterinary.

IMPOTENT STALLION.

Stallion will not breed. He does not seem to have any desire. M. F.

Ans.—The administration of medicines in such cases is not advisable. Give him regular exercise or light work, and keep him in only fair flesh and it is probable that nature will assert itself. Some stallions are impotent on account of congenital weakness or imperfect development of the generative organs, in which cases it would be wise to castrate. In others the exciting cause is want of exercise and proper food. V.

OPHTHALMIA.

Mare's eyes are sore. They are inflamed and discharge tears, and she shakes her head. She is in good health, but coughs occasionally. J. B.

Ans.—Keep her in a partially darkened stall and exclude from drafts. If forced to work her, protect the eyes by a piece of white cotton attached to the bridle, and keep from coming in contact with the eyes. This can readily be arranged on a blind bridle. Bathe the eyes well three times daily with hot water, and after bathing put a few drops of the following lotion into each eye with a feather or a dropper, viz.: Sulphate of zinc, 10 grains; fluid extract of belladonna, 20 drops; distilled water, 2 fluid ounces. If the trouble be from an injury or from a cold, it will not be likely to recur, but if it be periodic ophthalmia, which is a constitutional disease, it will recur again and again, and finally cause blindness from cataract. V.

Miscellaneous.

PIGS SCOURING.

I have been having trouble with my young pigs. Since a year ago I have had five that have started with diarrhea, then lose their appetite, and sometimes die, and if they don't die, might better, for they are no good. I have fed them chopped grain, three parts oats and one part corn, and all the milk they could drink. Can you suggest a remedy? F. J. W.

Ans.—Your feed, if fed in moderation, should be all right for pigs. The question does not state whether or not the scouring started while the pigs were on the sow or afterwards. Some sows give such rich milk that the young pigs' tender stomachs cannot digest it. Such sows require very careful feeding, avoiding all strong grains, and giving laxative, coarser feeds, as bran and oats. Three parts oats and one part corn should not be too strong for the pigs after weaning. Give the young pigs a clean, dry, well-ventilated pen, with a run in the open. Damp, cold, unclean quarters, often cause bowel trouble in pigs. Irregular feeding may bring it on. Sudden changes of temperature are conducive to it. For large pigs, feeding dry grain or chop will usually stop it, while a milk diet is good for the younger pigs. Leave the corn and oats out of the ration for a few days until the trouble vanishes, then gradually replace them. As the trouble has been noticed for some time, and in different litters, the pen must be cold or damp, or it must be due to the strong milk of the sow, if it shows when they are still sucking, or to an overfeeding of the grain ration.

Mr. Robert W. Chambers has been telling about the poet who used to compose in bed at night. Nudging his wife, he would say: "Maria, get up. I've thought of a good word." Then the wife would light a candle and write at her husband's dictation for five or ten minutes. Perhaps this performance might be repeated before morning. One night the wife put an end to dictation. Her husband, awaking her with the usual "Get up. I've thought of a good word," was startled to hear her reply: "Oh, get up yourself! I've thought of a bad word."



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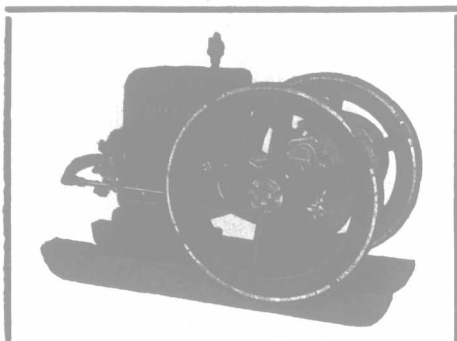
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Nine bulls from 9 to 11 months, cows, heifers and heifer calves; over 50 head on hand. No Berkshires to offer at present. A few shearing ewes for sale.

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P. O. AND STA., CAMPBELLFORD, ONT.

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Present offering is five choice young bulls, from 7 to 22 months old, reds and roans, out of good dual-purpose dams, and sired by our champion Scotch Grey bull 72692. Visitors find things as represented. Good cattle and no big prices.

JOHN HILDER & SON, HENSALL, ONTARIO

GEDARDALE SHORTHORNS—Shorthorns of all ages, pure Scotch and Scotch topped, imp. and Canadian-bred, choice heifers, choice young bulls, also the stock bull Lord Fyvie (Imp.); anything for sale.

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Clover Dell Shorthorns

Real bargains in females. Dual-purpose a specialty. L. A. Wakely, Belton, Ont. Bolton Sta., C. P. R.; Caledon East, G. T. R. Phone.

Shorthorns—Nine bulls and a number of heifers for sale at very reasonable prices.

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Spruce Lodge Shorthorns and Leicesters

Will price cheap young bull from 6 to 14 months; also 1 and 2-year-old heifers, some from imp. sires and dams. Leicesters at all times of both sexes for sale. Phone. W. A. Douglas, Tuscarora, Ont.

Jas. W. Glendinning, Veterinary Surgeon, Beaverton, Ont. Office and residence, Main St. Operation on Regional horses a specialty. Insurance arranged for if desired. Bell 'phone 61.

QUESTIONS AND ANSWERS. Miscellaneous.

CLYDESDALE STALLION.

Please give breeding and color of Clydesdale horse, Pearl Oyster.

A SUBSCRIBER.

Ans.—As no number is given with the name in question, we cannot be sure that we have the "Pearl Oyster" referred to. In Vol. XIX., of the Clydesdale Stud-book of Canada, there is recorded Pearl Oyster [10770], a bay, with white hind feet, sired by Royal Duke (imp.) [7023] (13693), and out of Maid of Charlesfield (imp.) [14231], by Prince Balmanna [2877] (9976).

FERTILIZING POTATOES—CANNING PEAS—ALFALFA SEEDING, ETC.

1. I would like to know, through the columns of "The Farmer's Advocate," how many pounds of salt, how many pounds of sulphur, how many pounds of lime, all mixed together, would be enough to sow to an acre of ground for potatoes?

2. Is there any way of treating the seed potatoes by lime, sulphur, or salt, all together, or any one of these separate, before seed is planted, to stop the bugs?

3. Kindly give a recipe for canning green peas.

4. I have some alfalfa to sow. Would like to know how it would do to sow it with spring rye, about one peck of rye to the acre? How would it do to sow it by itself as soon as the land can be made ready? When is the best time to sow alfalfa early in the spring with other grain, or early in the spring alone without any nurse crop, or to summer-fallow along till about July, and then sow? The land is very light and sandy, and dries out quickly after a rain.

5. What would be a good thing to put on a colt's navel as soon as foaled, to prevent joint ill?

6. Is it too late now to plant berry bushes? When is the best time, spring or fall?

SUBSCRIBER.

Ans.—1. We never heard of sowing salt, lime and sulphur on soil for potatoes. Better sow one of the commercial fertilizers, or use a fair amount of barnyard manure.

2. No. There is nothing that can be done to potatoes before planting to prevent bugs. The formalin treatment is used for scab.

3. Fill cans as full as possible. Put on new rubber, and screw rubber on sufficient to hold them, but not tight enough to exclude the air. Place a board in the bottom of the boiler and place the cans on it and fill with cold water up to the neck of the cans. Bring the water to a boil, continuing for six hours. Allow the cans to cool in the water, and as soon as cool enough to handle, screw the tops on tight and remove them from the water and turn them bottom up, as in canning fruit. There is juice enough in the peas if not too old, so that it is not necessary to add water. Cans must be air tight.

4. Alfalfa may be sown with a nurse crop early in the spring, or it may be sown later on alone. The rye seeded at one peck per acre would give a very indifferent stand, and, on the whole, as alfalfa should be sown on clean soil, it might be better to summer-fallow the land until early in July, when it could be sown to alfalfa without a nurse crop. On "The Farmer's Advocate" farm "Weldwood," a portion of a field was sown last spring with barley, and the remainder left to be seeded alone, this latter part being cultivated well until early in July. The alfalfa was sown July 20th, and came on much better than the earlier seeding, and came through the winter in better condition, giving every indication of being a bumper crop. Care must be taken with the summer seeding, however, in northern districts, as it does not do so well in colder climates.

5. Carbolic acid in five-per-cent. solution, or any of the coal-tar products in ten-per-cent. solution.

6. Early spring is the best time to plant berry bushes. It is getting late now.

You are going to buy

a Cream Separator this year. You have your choice of a number of standard makes, including the famous

EMPIRE Cream Separators

which will do some things others won't do—because Empires have some patented features that have never been successfully imitated, although competitors would gladly copy them if it were not for Empire Patents. Just what these features are, is fully explained in the Empire booklet.

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If they interest you deeply, as we believe such facts will, go to our agent in your locality (we will furnish you his name) and tell him to deliver an Empire to you for Free Trial, without obligation on your part to buy, unless it is proven to you that the Empire fulfills our claims. We are willing to let the Empire demonstrate its efficiency to you. It's your ultimate choice—the machine you'll buy sooner or later. Just hasten that day by writing to us by first mail.

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Makers of CONE and DISC Separators 32

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Long-distance Phone L. O. CLIFFORD Oshawa, Ont.

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If you are in the market for a young bull, write us for particulars, or, better still, come and see them. We have 13 young bulls, from 8 to 14 months old, of good breeding and quality. We also have four imported Clydesdale mares, safe in foal.

W. G. PETTIT & SONS, Freeman, Ontario

Bell 'phone. Burlington Jct. Sta., G. T. R., ½ mile from farm

SHORTHORNS

Have now a choice lot of young bulls to offer; also with something nice in heifers. Catalogue of herd and list of young animals on application.

H. CARGILL & SON, Proprietors, Cargill, Ont., Bruce Co.
JOHN CLANCY, Manager



10 SHORTHORN BULLS 10

If you are looking for a young bull to head a purebred herd, or one to cross on grade cows to raise first-class steers, I have them to suit all customers at very reasonable prices. They are reds and roans, and one extra good white show calf; ages from 9 to 14 months, nearly all sired by imported bulls and from the best Scotch families of cows. Will be pleased to furnish breeding and prices.

Claremont Stn., C. P. R., 3 miles. JOHN MILLER, Brougham P. O., Ont.
Pickering Stn., G. T. R., 7 miles.

Scotch Shorthorn Females for Sale I am offering at very reasonable prices, females from one year to five years of age. The youngsters are by my grand old stock bull, Scottish Hero (imp.) = 55042 = (90065), and the older ones have calves at foot by him, or are well gone in calf to him. Their breeding is unexcelled, and there are show animals amongst them. A. EDWARD MEYER, Box 378, GUELPH, ONT.

SHORTHORNS AND CLYDESDALES We have for sale four good bulls which we will sell right, spare a few heifers and cows. Write us, or come and see them. Farm one mile north of town.
A. B. & T. W. DOUGLAS, STRATHROY, ONTARIO

SALEM SHORTHORNS Headed by (Imp.) Gainford Marquis, undefeated in Britain as a calf and yearling, and winner of junior championship honors at Toronto, 1911. Have on hand two yearlings and a number of bulls under a year for sale at reasonable prices.
J. A. WATT, Salem, Ont. Flora Sta, G. T. R. and C. P. R.

Scotch Shorthorns For Sale. Imp. Bandsman, a grand individual and an extra sire; one 10 months' imp. bull; one heavy-boned yearling bull for farmers' trade; 20 choice cows and heifers in calf, at prices most reasonable.
Farm ¼ mile from Burlington Jct. Station. MITCHELL BROS., Burlington, Ont.



Shire Stallions and Mares, Shorthorn Cattle (both sexes); also Hampshire Swine. Prices reasonable.

Porter Bros., Appleby, Ont., Burlington Sta. Phone.

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Have a number of good, thick-fleshed bulls of up-to-date type and breeding, from 8 months to 14 months old, also cows and heifers at reasonable prices. Write to, or call on

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Woodstock, Ontario
Breeder of Shorthorns and Yorkshires.
C. P. R. and G. T. R. Long-distance Bell phone.

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Size	Price doz.	Fifty tags
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No postage or duty to pay. Cattle sizes with name and address, name and numbers; sheep or hog size, name and numbers. Get your neighbors to order with you and get better rate. Circular and sample. Mailed free. **F. G. JAMES, Bowmanville, Ont.**

Shorthorns of Show Calibre

At present one nice red bull 12 months old (of the Bellona family) for sale at low price. Heifers of breeding age all sold.

Geo. Gier & Son, Grand Valley, Ont.

WOODHOLME SHORTHORNS,

I have for sale a number of choicely-bred Scotch Shorthorn heifers and several young bulls, all of high-class quality and sired by Imp. Dorothy's King =55009=, a Lady Dorothy.

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Eric Sta., C. P. R.

PLEASE MENTION THE ADVOCATE.

QUESTIONS AND ANSWERS. Miscellaneous.

BREEDING MARE AND CARE OF COLT.

1. Should a young mare be bred on the ninth day, or three weeks from the ninth day, after foaling? Which is the best for the mare, and surest of getting her in foal the coming season, as I have heard some say a young mare should be bred on the ninth day or else she will only breed every other year. If bred on the ninth day, it would bring my mare in right in seeding, which is a bad time, unless a person has lots of horses. If a mare is not bred at this time, sometimes they will not come in heat while the colt is sucking, can anything be given to make them come around?
2. Is carbolic acid and water good to put on the navel three or four times a day until healed? If so, what parts would you mix, and how would you apply it?
3. Is a pint of wheat a good thing to feed a mare a month and a half before her time is up, if she is working every day? In what way is it good for a mare.
4. How soon should a mare have grass after foaling, if not accustomed to it before, provided the weather is warm?
5. What is good for colt when it gets the scours soon after it is first born, or in a day or two? H. E. G.

Ans.—1. Mares will usually take the horse on the ninth day after foaling. Some horse-breeders claim that they should be bred on this day if good results are to follow. Others get good results from breeding on the thirtieth day after foaling, or three weeks from the ninth day. Some mares will not conceive while suckling a colt, and so breed only every other year. A good deal depends on the treatment of the mare, and the stage of oestrus in which she is taken to the horse. In a normal mare, the oestral period lasts from five to nine days, and appears at 21 days from the beginning of the former period. Mares should be bred when comparatively well advanced in oestrus. All things considered, would advise breeding on the ninth day if the mare is healthy and in good condition. There is generally, however, more trouble experienced in getting mares in foal in cold weather than when it becomes warmer, but there is always a chance that they will not conceive at the first service, and breeding on the ninth day gains time in this respect. Breeding on the ninth day has nothing to do with the mare's periods of oestrus. If she is not bred, and her reproductive organs are normal, she will show oestrus at 30 days after foaling, and every three weeks thereafter throughout the summer. Doping animals to induce oestrus is seldom satisfactory.

2. This has been discussed time and again through these columns. Apply a five-per-cent. solution of carbolic acid to the navel as soon as the foal is dropped, and four or five times daily until the navel dries up.

3. Many believe that wheat has a beneficial effect upon an in-foal mare. If she is used to getting it in her diet no harm is likely, if not, be careful about adding it to the ration. Changes of diet must be made cautiously.

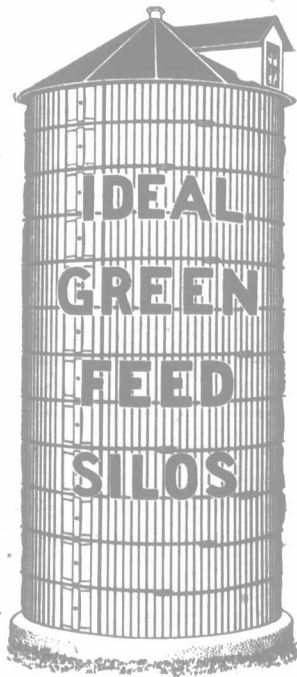
4. Grass is the best feed for the in-foal mare, or the mare with a foal at foot. Get her out as soon as possible on warm days. Commence gradually with the grass, letting her eat for an hour or so at first, and gradually increase the time until the colt has become accustomed to grass milk, when she can remain out continuously if the weather is good.

5. Give 40 to 60 drops of laudanum in the dam's milk every four hours. Colts with scours are hard to treat. Keep warm. Do not allow to lie down on damp, cold ground, and keep in on wet days and cold, damp nights.

"Who was it who was sorely afflicted?" asked the Sunday-school teacher.
"Samson," replied the boy promptly.
"Why, no; it was Job."
"Well, I know Job was, but so was Samson."
"Why, how was Samson afflicted, Tommy?"
"His wife and his hair."

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The materials and construction throughout of the IDEAL GREEN FEED SILOS are of the very best, and everyone contemplating the erection of a silo this year will find it to his advantage to get our specifications and prices before contracting for the erection of a silo.

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No mill feed The only calf meal manufactured in an exclusive Calf Meal Factory.
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At moderate prices, including Marr Missies, Emmas, Cruickshank Nonpareils, Duchess of Glosters, Village Girls, Bridesmaids, Butterflies, Kinellar Claretts, Miss Ramsdens, Crimson Flowers; also a number of the grand old milking tribes, which have been famous in the showing.

ARTHUR J. HOWDEN & CO.
Columbus, Ontario



THIS IS A GOOD TIME, AND I HAVE A GOOD PLACE, TO GET A HIGH-CLASS SCOTCH SHORTHORN BULL CALF by my great Whitehall Sultan sire, or a young cow in calf to him, to start a herd that will be gilt-edged. SHROPSHIRE RAMS AND EWES, too, at low prices. CHILDREN'S PONIES. A CLYDESDALE FILLY, such as I can send you, is one of the best things any man can buy. Just write me and say as nearly as possible what you want, and I will surprise you with prices on goods that are genuine. **ROBERT MILLER, STOUFFVILLE ONTARIO**

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Luan Crossing, G. T. Ry., one mile.

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D. Duncan, Don, Ont., Duncan Stn., C.N.R.
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cows and some calves for sale. Production and quality

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Bulls fit for service are getting scarce. Just a few left. Yearling heifers in calf are in great demand; 6 for sale; 6 now being bred. Brampton Stockwell the sire. A few good

High Grove Stock Farm

No better Jersey blood in Canada. Stock all ages and both sexes for sale.
Arthur H. Tufts, P. O. Box III, Tweed Ont.
When writing, mention "The Advocate."

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Foundation stock, C. C. Combination; stock from a grandson of Bim of Dentonia; also a grandson of the great Blue Blood of Dentonia, for sale. W. Wyandotte eggs, \$1 per 13. **Joseph Seabrook, Havelock, Peterboro Co., Ont.**

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You can't get away from the fact that **directly or indirectly** the DUTY has to be paid by the consumer; therefore, why pay fancy prices for calf meals of foreign manufacture when you can buy CALFINE 15 to 20 dollars a ton cheaper and secure at least equal, and in most cases superior, results.

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is a pure, wholesome, nutritious meal for calves. It is now in use on many of the largest and best equipped dairy farms in the Dominion.

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Express charges paid on all shipments. Every can of cream carefully weighed and tested upon arrival at the creamery.

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Ayrshires of production, type and quality. I can supply Ayrshires that will please the most exacting critic. Young bulls or females of any age, the kind that swell the bank account.

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Choice Ayrshires 10 choice cows and heifers for quick sale. Good teats, heavy producers, high testers. Prices low considering quality. **WILLIAM THORN**, Trout Run Stock Farm, Lynedoch, Ont. Phone in house.

A lady instructed her little boy, invited out to lunch, that when he was asked to have a second helping of cake he should refuse. You must say, "No, I thank you, I've had enough," said she. "And don't you forget it." He didn't. When asked if he'd have some more cake, he said, "No, I thank you, I've had enough, and don't you forget it."

A WEAK ACHING BACK Caused Her Much Misery.

Mrs. W. R. Hodge, Fielding, Sask., writes:—"A few lines highly recommending Doan's Kidney Pills. For this last year I have been troubled very much with nasty sick headaches, and a weak aching back, which caused me much misery, for I could not work, and had no ambition for anything. My kidneys were very badly out of order, and kept me from sleeping at nights. I tried many kinds of pills and medicines, but it seemed almost in vain. I began to give up in despair of ever being well and strong again, when a kind neighbor advised me to try Doan's Kidney Pills, which I did, and am thankful for the relief I obtained from them, for now I am never troubled with a sore back or sick headaches.

"I will always say Doan's Kidney Pills for mine and can highly recommend them to any sufferer."

Price, 50 cents per box, or 3 boxes for \$1.25, at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

When ordering direct specify "Doan's."

Hints 're Keeping Help.

The following orthodox suggestions towards the solution of the help problem are offered by H. A. Macdonell, Director of Colonization, Parliament Buildings, Toronto. While perhaps containing little that is new, they are sound enough, and will bear repetition:

"Realizing that one of the most urgent needs of the farmers of our Province is an adequate supply of farm labor, the Colonization Branch has been endeavoring to meet that demand by bringing men from Great Britain and Ireland and placing them with farmers in this Province. During the past few years several thousand have been brought out and placed in this way. Instead, however, of the demand lessening, it seems to be increasing. Our observation and experience convince us that while there may be many explanations of this regrettable fact, the one outstanding reason is the practice of employing men for six or eight months of the year, and then turning them out to find situations elsewhere for the balance of their time. This works out in such a way that the men who have been employed on the farms now seem to gravitate to towns and cities in the winter months and remain there, with the result that the farmer is compelled to start over again the next spring in his efforts to secure help.

"Having regard to these facts, I beg to make the following suggestions, the adoption of which we are satisfied would go a long way towards relieving the stringency which exists at the present time:

"(1) First and foremost, arrange to employ a man by the year. We have found that the farmer who employs his help by the year, especially if he is able to supply a house and a small piece of land, is the farmer who has the least trouble over the help problem. It is the better way for the man as well as for the farmer. If you feel your work does not warrant the employment of a man the year round, you might be well advised to consider the question of taking up a few more branches of farm work or handling additional live stock, and in this way we feel satisfied you would more than make up the extra cost of the help.

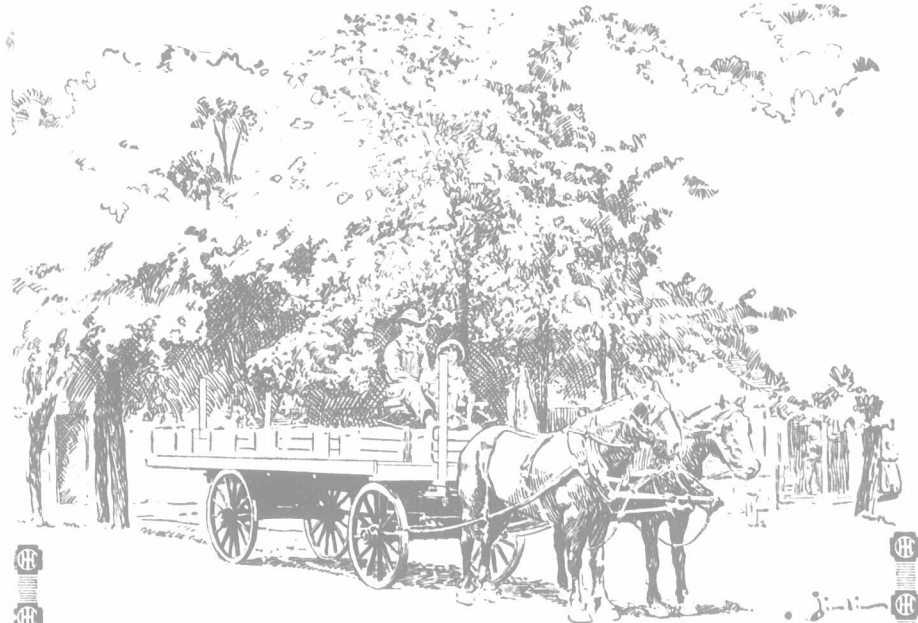
"(2) Do not be too exacting about getting an experienced man. Experienced farm laborers are rare at the present time, as there is a large demand for them in the Old Country as well as on this side. If you take an inexperienced man, recognizing that he is unfamiliar with the conditions and methods in this country, and devote a little attention to training him for a few months, you will find, in nine cases out of ten, that he will prove very useful to you. Being reasonably generous in the matter of treatment and wages is essential if hired help is to be retained."

GOSSIP.

Robert McEwen, Alloway Lodge Farm, Byron, Ont., writes: "The present prices of beef are causing the breeders of all classes of cattle to give more consideration to the sort of bull they should breed from, having in view the production of animals easily fleshed, and that keep ready for the market at all times without too great an outlay for food. Such a condition brings into greater demand Angus bulls. This week, John Lightfoot, from that noted beef-cattle district, Ailsa Craig, visited my herd and selected a right good young bull, in Marboyd, just twelve months old. This youngster has a good, strong, masculine head, short neck, deep ribs, and straight body lines. His sire is one of the famous Blackbird family, and his dam is the Illinois State Fair winner, Marguerite. His merit and breeding will be appreciated where he is going."

TRADE TOPIC.

Anyone desiring to purchase a section of the northern section of Western land within one mile of Winnipeg, all land that can be reached by steam, some sections are improving, others unimproved, should correspond with J. M. Grant, Empire Hotel, Winnipeg, Man.



Every IHC Wagon is Inspected Four Times

HOW do you buy a wagon? Do you wait till you need one and then take the first that's offered you, or do you find out in advance which wagon will give you best service, and buy that one? Why not get as much as you can for your money? Buy the wagon that will stand up for the longest time and be easiest on your horses. That wagon is an IHC wagon. Here is why: Each IHC wagon is thoroughly inspected. IHC wagons—

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have just one standard—the highest. The lumber used is selected from large purchases. Every stick of this lumber is carefully inspected. Another inspection is made when the parts are ready for assembling. This inspection assures perfect shaping and ironing.

The third inspection, when the wagon is ready for the paint shop, covers all the points of superior construction for which IHC wagons are famous. Bearings are tested, every bolt and rivet is gone over, the pitch and gather of the wheels are verified. When this inspection is finished, the wagon is up to standard everywhere, good enough to be stamped with the IHC trademark.

The final inspection is made when the wagon is ready for delivery. Four inspections to make sure that you get everything you pay for. All these inspections are for your benefit, so that any farmer who owns one can say with truth, "My IHC wagon is perfectly satisfactory." The IHC local agent will show you the wagon best suited to your needs. He will supply you with literature, or, we will send it if you write. Address—

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INTERNATIONAL HARVESTER COMPANY OF AMERICA

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IHC Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to IHC Service Bureau, Harvester Building, Chicago, U.S.A.



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There are already consigned: 100 Registered Ayrshires (50% imported), 30 Registered Holsteins, 20 Registered Clydesdales. Watch for future announcements. Catalogues will be ready May 15th, and may be had by applying to the Sec.-Treas.

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NEIL SANGSTER, President

J. G. BRYSON, Secretary-Treasurer, Ormstown, Que.



Burnside Ayrshires

Champions in the show ring and dairy tests. Animals all ages and both sexes for sale.

R. R. NESS, Howick, Quebec

Long-distance phone in house

SPRINGBURN AYRSHIRES

Owing to remodeling our barns, we do not care to carry any bulls over the summer months. Three yearlings and five early spring calves to select from. Prices right for prompt delivery. Always about 30 head of females of all ages to select from. Tuberculin tested. **McWILLAN & LEGGAT**, Trout River, Que. Bell telephone, Huntingdon 81-21. Carr's Crossing, G. E. R., Huntingdon, N. Y., C. R.



Ayrshires and Yorkshires—We have still some good young bulls. Now is the time to buy for the coming season, before the best go. We have females any age, and can fill orders for carlots of Ayrshires. Pigs of either sex on hand.

ALEX. HUME & CO., Menie, Ont.

City View Ayrshires All from R. O. P. ancestors. Young calves of 1912. Right good ones. Males only for sale. Write, phone or call. **JAMES REGAN**, R. R. No. 1, 1/2 mile west of St. Thomas, Ont.

Hillcrest Ayrshires At head of herd is Ivanhoe of Tanglewild, son of the champion Ayrshire cow, Primrose of Tanglewild. R. O. P. test 16.195 lbs. milk and 625.62 lbs. fat per head to select from. Inspection invited. **F. H. HARRIS**, Mt. Elgin, Ont.



STONEHOUSE AYRSHIRES

Are coming to the front wherever shown. Look out for this at the leading exhibitions. Some choice young bulls for sale, as well as cows and heifers.

ROBERT GORDON, Howick, Quebec.

QUESTIONS AND ANSWERS.
Miscellaneous.

PERENNIAL SOW THISTLE.

Can you give me the best plan of killing perennial sow thistle. I have a field that has about a dozen or more small patches of about 25 to 50 square yards each. I have heard shingling with tar paper recommended for killing small patches of bindweed. Would the same kill sow thistle, and if so, how long would it need to be kept on. I would like, too, if you would let me know where I could get a good book dealing with farm weeds. W. J. O.

Ans.—The best plan is persistent, thorough cultivation, either of summer-fallow or hoe crop, preferably summer-fallow, if the field is at all bad, followed the next season if necessary by rape, sown in drills and cultivated. One season of thorough cultivation will finish sow thistle, but it must be very much more thorough than the average man gives, or would suppose necessary. Smothering with tar paper is to be recommended only in the case of a few small patches. The best book on farm weeds is called "Farm Weeds of Canada," and may be purchased for \$1 per copy, from the office of the Superintendent of Stationery, Government Printing Bureau, Ottawa.

DISLOCATION OF PATELLA.

Have a young mare four years old; had a colt three weeks ago all right. Last winter she had her stifle put out, caused from slipping off the plank on the cement floor. I got it put in again, and treated her with liniment that the veterinarian left. Now I have given her a little light work to do seeding, and especially in the mornings she has difficulty in walking on that leg that was stifled. She goes all right for a while, and then she jerks up her leg like a horse that has the springhalt. It looks as though the stifle was partly out and slips in again. She can run all right and kick up her heels, but does not walk right. BOB.

Ans.—Your veterinarian doubtless did all that could be done at the time. You are likely right in assuming that the stifle slips partially out and back again. There is a probability that the animal may never be all right again, but she should make a rather useful animal. Clip the hair off the front and inside of the stifle joint, tie so she cannot bite the parts, and rub thoroughly once daily for two days with a blister composed of 2 drams each of biniodide of mercury and cantharides, mixed with 2 ounces vaseline. On the third day wash off and apply sweet oil. Let loose and oil daily until the scale comes off. Repeat the blister in a month if necessary.

HEAVES.

I must say that I am very much pleased with your farm magazine, which I have received since the first of the year, and think that every farmer should have it in his home. I am going to ask you a few questions, which I trust you will answer through your columns.

Would you advise breeding a mare with the heaves? Would it likely run in her offspring? Are there any cures for heaves? What would you prescribe? What generally brings on heaves, and at what age are horses likely to be disposed to take them? A SUBSCRIBER.

Ans.—Heaves when well established cannot be cured, but the symptoms can be alleviated by feeding small quantities of bulky food (clean wheat straw is often preferred) and grain in proportion to work performed. Dampen all the feed given with a little lime water. Give a half every morning, composed of 1 1/2 drams powdered opium, 2 drams solid extract of belladonna, 1 dram camphor and 20 grains digitalis, with sufficient oil of lard to make plastic, the whole rolled in tissue paper and administered in some-thing recommended. Water the mare before feeding, giving only a small quantity at a time. The progeny of mares having heaves often develop the disease. They are hereditarily predisposed to it. Heaves seldom appears in horses under seven or eight years of age, or until the animals are thoroughly matured. It is somewhat questionable whether it is advisable to breed such mares.

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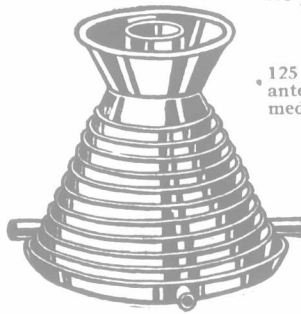
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is made especially for weighing milk in the pail. There is a loose indicator on the dial that can be set back by a thumb-screw when the pail is on the hook. Then when the pail of milk is weighed this indicator gives the exact net weight of the milk.

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LAKEVIEW HOLSTEINS!

Bull calves sired by Dutchland Colantha Sir Mona, and out of heifers sired by Count Hengerveld Fayne De Kol.

Telephone. E. F. OSLER, BRONTE, ONTARIO

Fairview Farms Herd

Is where you can secure a son of Pontiac Korndyke, admitted by all breeders to be the greatest Holstein sire that ever lived. Look what his daughters are doing. Two of them with records over 37 lbs. each. Then look at the work his sons are doing. HE IS THE GREATEST PRODUCING SIRE OF THE BREED, THROUGH HIS SONS. Every son of Pontiac Korndyke that has daughters old enough to milk is a sire of good ones. We can offer you several young ones that will give you great daughters.

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SUMMER HILL HOLSTEIN CATTLE and YORKSHIRE HOGS

Our senior herd bull, Sir Admiral Ormsby, is the sire of the world's record 2-year-old for yearly butter production. Also sire of the three highest record four-year-olds in Canada. The dam of our junior herd bull made 34.60 lbs. butter in 7 days, and gave 111 lbs. milk per day. Come and make your selections from over 70 head.

In Improved English Yorkshires we have won 95 per cent. of all first prizes at Toronto Exhibition for ten years. We are still breeding them bigger and better than ever.

Buy Summer Hill Yorkshires, the big, quick-maturing kind, and double your profits.

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Centre and Hillview Holsteins—We are offering young bulls from Sir Ladie Cornucopia Clothilde, the average of his dam sire dam and grand dams is 662.8 lbs. milk and 30.58 butter, 7 days, and 2,750.80 milk and 114.5 butter in 30 days; also Brookbank Butter Baron, who is a proven sire. He is sire of champion 3-year-old 30-day, 2-year-old 7-day and 2-year-old 30-day. Long-distance phone. P. D. EDE Oxford Centre P.O. Woodstock Stn.

HIGH-CLASS REGISTERED HOLSTEINS. Nothing more for sale until June 12th. On that date the Oxford Holstein Breeders Club will hold a Consignment Sale and we have decided to contribute sixteen head of choice females, all ages, and our splendid stock bull "Prince Abbecker Merceua". Any one wanting choice cattle at his own price should attend this sale as it is sure to be the best of the season. A. E. HULET, Norwich, Ontario

Maple Hill Holstein-Friesians—Special offering: Bulls from one to fifteen months old. The growthy kind that will give good service. One from a son of Evergreen March, and all from Record of Merit dams. Write for particulars. Bell Telephone. G. W. CLEMONS, St. George, Ont.

IMPERIAL HOLSTEINS I can supply bulls ready for service and younger ones, also heifers out of R. O. M. cows, female relatives have records and sired by Tidy Abbecker Merceua, whose seven nearest female relatives have records averaging 27.19 pounds. W. H. SIMMONS, New Durham P.O., Oxford Co.

Woodbine Holsteins—Herd headed by King Segis Pontiac Lad, whose sire's dam is the champion cow of the world. Sire's sire is the only bull that has sired five four-year-olds that average 30 lbs. each. Sire's sire is the bull that has sired two 30-lb. three-year-olds. His two great grand sires are the only bulls in the world that have sired two 37-lb. cows. Bulls and bull calves for sale. A. KENNEDY, Ayr, Ontario.

DISPERSION SALE—Wednesday, June 18th, 1912. We will dispose of our entire herd of 80 Pure-bred Ayrshires. R. O. P. work our speciality. Fuller announcement will be made in later issues. A. S. TURNER & SON, Ryckman's Corners, Ont.

Evergreen Stock Farm offers a choice lot of bulls ready for service, from high-testing, deep-milking Record of Merit ancestors. Also a few females for sale. Herd headed by Franci Sir Admiral; dam's record 26.71, sire Sir Admiral Ormsby. Write for prices. F. E. PETTIT, Burgessville, Ont.

Ridgedale Farm Holsteins—We have four bull calves left for sale, from high-testing dams; sired by Imperial Pauline De Kol, whose 15 nearest dams average 26.20 lbs. butter in 7 days. Shipping stations: Port Perry, G. T. R., and Myrtle, C. P. R., Ontario County. R. W. WALKER Utica, Ont.

Maple Soil Stock Farm

of High-Testing Holsteins—I have at present some bull calves, with dam and sire; dam averaging over 25 lbs. of butter in 7 days, testing better than 4 per cent. Phone connected.

H. C. Holtby, Belmont P. O., Ont. Belmont Stn., C.P.R. or Glanworth Stn., G.T.R.

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The most profitable dairy breed, greatest in size, milk, butter-fat and in vitality. Send for FREE illustrated descriptive booklets. HOLSTEIN-FRIESIAN ASSO. F. L. Houghton, Sec'y, Box 127, Brattleboro, Vt.

Holsteins of Quality

Write us to-day for our proposition, telling you how any good dairyman may own a registered Holstein bull from a Record-of-Performance cow without investing a cent for him. Monro & Lawless, "Eimdale Farm," Thorold, Ont.

The Maples Holstein Herd offers a splendid lot of bull calves, all sired by Prince Aaggie Mechthilde and all from record of merit dams. For pedigrees and prices write

WALBURN RIVERS, Folden, Ontario

Maple Grove Holsteins—Herd headed by Hengerveld, the greatest 30 lbs. back butter bred bull of the breed in this country. For stock of this kind, address: H. BOLLERT, Tavistock, R. R. No. 5, Ont.

Holstein Bulls for sale—Springbank farm is offering two choicely bred Holstein bulls for sale at reasonable prices. For particulars write to: Wm. Barnett & Sons, Living Springs P. O., Ont. Fergus station, C. P. R. and G. T. R.

Glenwood Stock Farm 5 BULL CALVES, fit for service, out of big milking strains, at low figure for quick sale. THOS. B. CARLAW & SON, WARKWORTH, Ont. Ca. on-lakeford Sta.

Maple Line Holsteins and Yorkshires—Herd headed by Homestead Colantha Sir Abbecker 2nd, whose dam sire's dam, g. dam, average 29 61 lbs. butter 7 days. For sale at bargain prices, choice bull calves from R.O.P. cows. W. A. BRYANT Middlesex Co. Caldwell, Ont.

Holstein heifer calves—From heavy milking, high-testing unregistered dams. Sired by Cornelius De Kol, \$12 each. GIENORO STOCK FARM, Rodney, Ont.

Oxford Down Sheep, Shorthorn cattle, Yorkshire Hogs—Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Buena Vista Farm, Harriston, Ont.

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Write for our printed matter. It is mailed free on request.

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WOOL

Let us know how much you will have this season, and the breed, that we may quote you our prices. Don't fail to write us before you sell.

E. T. CARTER & CO.
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Southdown Sheep

Orders taken now for this season's delivery. A few choice lambs and shearings on hand. Every animal shipped is guaranteed.

Angus Cattle

Write, or come and see my young bulls and heifers. They are going at farmers' prices.

ROBT. McEWEN, Byron, Ont.

"Do you speak several languages, father?"

"No, my son," replied Mr. Henpeck, gazing sadly at his wife; "but I do know the mother tongue."—Judge.

THE POOR DYSPEPTIC

Suffers Untold Agony After Every Meal.

Nearly everything that enters a weak, dyspeptic stomach acts as an irritant; hence the difficulty of effecting a cure. Burdock Blood Bitters will relieve all the distressing symptoms of dyspepsia and in a short time effect a cure.

Mrs. F. C. Gross, Berlin, Ont., writes: "I have been troubled with my stomach for the last seven years and tried all kinds of medicine for it, but none of them ever cured me, for as soon as I would quit using any of them, the same old trouble would come back. Last fall I was advised to try Burdock Blood Bitters, which I did, and used four bottles, and now feel so strong I can do all my house work nicely and can eat almost anything without it affecting me in any way."

"Our boy is also using it; he always complained of pain in his stomach and all over, like rheumatism, and at the age of ten had to stay home from school. He hasn't quite used two bottles yet and is feeling good, can attend school regularly and eats heartily."

B.B.B. is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

QUESTIONS AND ANSWERS.

Miscellaneous.

BEES SWARMING.

Is it better to let bees swarm once then cut away queen cells, or would it be as well for bees, and get better returns, to not let them swarm at all, by keeping queen cells cut away? How can bees be wintered in a colony house like hens?

A. H. B.

Ans.—It is better to prevent all swarming by some artificial method, which includes more than simply keeping queen cells cut away.

I have described a good method several times in "The Farmer's Advocate," and we give printed instructions to anyone that writes to me, making application for an experiment in the prevention of natural swarming. MORLEY PETTIT.

BABCOCK VS. OIL TEST.

We have two creameries here that are both anxious to get our cream. One uses the oil test and the other the Babcock, and each man says I'll make more by giving him my cream. The one that got the cream for April sent in the inclosed report. Is it figured out properly, and do you think the Babcock is superior to the oil test?

J. P. B.

Ans.—Your statement is correctly calculated, except that by omitting the fractions your creameryman underestimated the amount of butter-fat by a fifth of a pound, worth about seven cents. Probably he gives you the benefit of the fraction when it exceeds the half pound. We certainly consider the Babcock test decidedly preferable to the oil test. It is more accurate. Nearly all up-to-date creameries have discarded the oil test and substituted the Babcock.

TREE-PLANTING AND HORSE QUERIES.

1. I am going to plant a number of pine balsam, and also a row of maple trees in my yard. When should they be planted, and how treated after planting? What time of year would you advise to transplant an oak about 3 inches in diameter, or can same be done successfully?

2. Yearling colt has a small wart on top of nose. What would remove same?

3. How much wheat would you recommend per day for Clydesdale mares previous to foaling? Would sulphur or salt-petre be injurious to them? If not, what quantity would you advise?

4. Driving mare four years old had distemper last fall; got better, but has kept thin and dry in the hair since. Have been feeding her a cup of wheat in a gallon of oats three times a day all winter, along with hay, but has not cleaned off much yet. What would be the trouble?

5. When is the right time to sow flax, and how much should be sown per acre? Does it require strong land?

Carleton Co. FARMER.

Ans.—1. Plant the trees as early in spring as possible. The oak should be handled like the rest, only be careful in moving to leave as much soil as possible adhering to the roots. There is more danger of loss in transplanting large trees. Mulch the newly-set trees with a little straw manure.

2. If the wart has a constricted neck, it may be removed by clipping off or by tying a thread tightly around it. If flat, apply butter of antimony. Some claim constant application of castor oil to be valuable in removing warts.

3. The less medicine an in-foal mare gets the better. A little wheat in the oats will do no harm. Would not advise more than one-quarter wheat, and unless they are used to getting it, would not advise changing the diet.

4. Turn her on grass. The grass will likely improve her condition. Do not have out in rain. If she does not improve, give her a tablespoonful of the following three times daily, viz: Equal parts of sulphate of iron, gentian, ginger and cayenne. Her teeth may also be troublesome.

5. In the spring, about the same time as the cereals. It is usually sown here immediately following the grain sowing. Sow from 25 lbs. to three pecks per acre. It does well on strong land.

LIVINGSTON'S OIL CAKE MEAL

Is the most wholly nutritious stock food you can buy. Made of the purest Linseed—by the celebrated Old Patent Process (which makes it keep three or four years, if necessary)—proved by feeding tests, both practical and scientific, to be 95% digestible.

Even if LIVINGSTON'S OIL CAKE MEAL costs twice as much as the other foods which do not keep and cannot be half digested, it would pay every farmer and dairyman to get LIVINGSTON'S OIL CAKE MEAL. The cost is only a trifle higher.

LIVINGSTON'S OIL CAKE MEAL is really cheapest in the end—quickly increasing and improving the milk and healthily fattening CATTLE.

As your dealer. If he cannot supply you, write us:

THE DOMINION LINSEED CO., LIMITED
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IMPORTED SHEEP

Those wishing an imported ram, a few choice imported ewes or a few show sheep to make up their show flock, should write me, after this date, to

MOLESCROFT, BEVERLEY, E. YORKS, ENGLAND

C. HODGSON, Brantford, Ontario

WE WILL IMPORT OXFORDS

the coming season, or any other breed. Breeders wishing to get a few head of their favorite breed should write at once to us. One of the firm selects in person, and will select yours if you write us stating just what you want. We are in the market for Oxford rams, and will buy from one up to any number. State price, age and if recorded or eligible.

PETER ARKELL & SONS, TEESWATER, ONT.

FAIRVIEW SHROPSHIRE OFFERING!!!!
We are now ready to receive orders for rams, lambs, shearlings and two-year-olds. Orders can also be booked for ewe lambs, shearings and aged. We can assure prospective buyers that our flock is anything better than ever. Think we have some show-yard material in our offering.

J. & D. J. CAMPBELL, FAIRVIEW FARM, WOODVILLE, ONTARIO

Suffolk Down Sheep—Shearling rams and ewes; also lambs. **James Bowman**

Aberdeen-Angus Cattle—Extra good young bulls, the best in Canada. **Elm Park GUELPH, ONTARIO**

Woodburn Berkshires—We are offering for sale 100 head of young Berkshires of both sexes and any sizes required. We can supply pairs or trios not akin; our Berks are noted for strength of bone, length, depth and quality, conforming to bacon type. Show and breeding stock a specialty.

E. BRIEN & SON, Ridgetown, Ont.

O. I. C.—We offer for sale the **Chester White** boar, Longfellow, register No. 6404; sired by Silver Jack 4341, dam White Beauty 3073. Longfellow weighs between 350 and 400 lbs., was farrowed Oct. 29, 1909; reason for selling is akin to too many of our breeding sows. Price, \$45 for quick sale.

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Hilton Stock Farm Holsteins and Tamworths.
Present offering: 6 yearling heifers and several younger ones. All very choice. Of Tamworths, pigs of all ages and both sexes; pairs not akin.

R. O. MORROW & SON, Hilton, Ont. Brighton Tel. & Stn.
SUNNYSIDE CHESTER WHITE HOGS—I am now offering some very choice young things of both sexes, of breeding age. A few Shropshire sheep of both sexes. Also Mammoth Bronze turkeys. **W. E. WRIGHT, Gleanworth P.O., Ont.**

Pine Grove Yorkshires
both sexes, pairs not akin, toofer at reasonable prices. Guaranteed satisfaction.

Joseph Featherston & Son, Streetsville, Ont.

FAIRVIEW BERKSHIRES
Ontario's banner herd. Prizewinners galore. For sale are: Young sows bred and others ready to breed, and younger ones. A number of young boars coming on. **JOHN S. COWAN, Donegal, Ont.**

SWINE OF ALL BREEDS FOR SALE.
Yorkshires, Tamworths, Berkshires, Hampshires, Chester Whites, Poland-Chinas, and Duroc-Jerseys. I have constantly on hand both sexes of all ages. Show stock a specialty. **John Harvey, Freilighsburg, Que.**

Hampshire Pigs
PRESENT OFFERING—7 Sows in pig Also a number of young pigs 3 months old from imported stock. Write for prices. Long-distance phone.

J. H. RUTHERFORD, Box 62, Caledon East, Ont.

Newcastle Tamworths and Clydesdales
Present offering: 15 boars, from 2 mos. to 1 year. Sows same age, some bred, others ready to breed. Several yearling sows that have raised one litter each. All by imp. boar, dam by Colwill's Choice, Canada's champion boar, 1901, 2, 3 and 5. Also one or two choice Clydesdale fillies for sale. L.-D. Phone.

A. A. COLWILL, NEWCASTLE, ONTARIO

Duroc Jersey Swine
A choice lot of boars fit for service. WANTED—Twenty dairy calves, seven to twenty days old, grades or pure bred; state price F.O.B.

Mac Campbell & Sons, Northwood, Ont.

ELMHURST LARGE ENGLISH BERKSHIRES
Present offering: Select sows bred for spring farrow. Choice boars ready for service also younger stock, the get of Duke of Somerset imp., and out of imported dams. Satisfaction and safe delivery guaranteed. **H. M. VANDERLIP, Breeder and Importer CAINSVILLE P.O. Langford station, Brantford and Hamilton Radial.**

Ohio Improved Chester White Pigs—Largest strain, oldest registered herd in Canada. Choice lot of spring pigs; pairs and trios not akin; register; express paid; safe delivery guaranteed. **E. D. GEORGE & SONS, Putnam, Ont.**

For Sale—Ohio Improved Chester Hogs. Sired by first-prize hog at Toronto and London. Also reg'd Jersey Bulls, from 8 to 10 months, from high-testing stock. Write: **CHAS. E. ROGERS, Ingersoll Ont.**

Maple Villa Yorkshires and Oxford Downs. We offer 30 splendid service boars; 50 strictly choice sows, bred and ready to breed; also ewes of quality bred to imp. rams. **J. A. CERSWELL, Bond Head, Ont.**

Hampshire Hogs—We have the greatest prize-winning herd of Hampshire Swine in Canada, bred from the best strains of the breed; stock of both sexes not related. **Hastings Bros., Crosshill P.O., Ont., Langford station, C.P.R., Newton Sta., C.P.R., Langford, Ont.**

Morrison Tamworths
Bred from the prize winning herds of England; choice stock for sale; also Shorthorns of the deep milking strain. **CHAS. CURRIE, Morrison, Ontario**

"It Took Me Fifty Years to Know How to Give You Better Roofs than any other Man"

"I tell you, every farmer in Canada should realize the big share a good roof has in making a good barn. That is my life-work—making roofs. I have been making my roof better and better for more than fifty years. What I have done for farm roofs is one of the biggest things ever done for people who farm."



"You ask me why a barn roof is so important. I will tell you. You build a barn and expect the roof to protect it many years. You put thousands of dollars' worth of produce under that roof while it lasts. Every pound of this produce costs you hard work. If a poor roof lets it get spoiled by wet, you lose money year after year. This lost money is many times the roof cost. Some roofs will last for several years. Some roofs will last if they are kept painted. But a roof is mighty hard to get at. It is not too safe to work on anyhow. Once a roof starts to leak, it is often left as it is. The result is the things you have in your barn spoil. This is lost money, and soon amounts to more than the cost of a good roof."

This Took 50 Years

"You are beginning to see something of the big work I have done. I have made a low-cost roof that stands terrific cold and heat, that stands tremendous rains, that stands ice, that stands earthquakes. In fifty years, I have made Pedlar roof better and better by little points added every year. It has world sales to-day, just because it is the best roof in the world at its very moderate price."

chemists worked with me to get it. I stuck to it just as carefully as I had stuck to bettering my roof. And I got it at last. That's the metal I use to-day."

years. A roof that will do that is worth going after a good long ways."

Stands the Arctics

"This roof is so good that the Canadian Government Bernier Arctic Expedition used it for the Arctic regions. Here is immense cold and sweeping winds and ice and poor foundations to stand up under. The North-West Mounted Police use it. The Canadian Government has found no better roof for them. My roof is a good roof for the Arctic Circle. It is a still better roof in the milder climate of the rest of Canada."

MY LATEST TRIUMPH

"Then, a few years ago, I put my finishing touch that made my roof wonderful. I had been troubled, not by my roof design, but by the metal in it. It seemed impossible to get a metal which would not rust. I had to take the best metal I could get. The design was all right. I had been making that design better for fifty years. At last I struck a clew in Europe."

You Get the Benefit
"My roof is the only roof in the world with this kind of non-rusting iron in it. I am the only man a farmer can come to and say, 'I want a hundred-year roof at about the price I would pay for cedar shingle.' I am the only man that can deliver that kind of goods."

"My roof will not rust to the leaking point within 100 years. It saves the barn and its products from the weather. It saves the barn from thaw-water and lodged ice, because the seams cannot be gouged apart. It saves the barn from fire, because sparks cannot burn it. A burning stick on the roof will not harm it, or harm the barn under it. Lightning cannot burn a barn with my roof on it. My roof is a perfect conductor of electricity. My roof has 'give' in it to defy heat and frost, and protects in winter and summer. It protects even though the rafters sag. Wind cannot blow my roof off a barn. This is because it is a ventilated roof. It keeps your barn ventilated and stands the heaviest winds safely."

"You know they have cathedrals there that are hundreds of years old. Yet the iron hinges on the doors are as good as ever to-day, though they were hammered out hundreds of years ago. I said to myself, 'Why not make up my roof in this peculiar kind of iron, so my roof will last like these door hinges?' Well, sir, that was a hard job. It was hard to get that iron duplicated. I worked for a long time and my

Get My Barn Book
"I want to send you my book, 'ROOFING RIGHT.' This lets you dig into more facts about the Pedlar roof. You will see how clean it is. It gives the best clean water you can gather, as it is self-cleaning. This book shows scores of good barn designs—the best barns in Canada. Every one has my roof on it. You will get big help from my book, and I will send it free for a post-card, because you can plan your barn from it, whether you use my 100-year roof or not." Write to-day

A Roof for any Man See What a Good Roof Can Do!

"I have spent my life making a low-cost roof that any man or his tinsmith could lay right. This roof of mine saves the stuff stored under it. It saves the barn framing and beams. It saves the foundation. This roof of mine doesn't need special roof timbering at all."

Good for 100 Years

"The big point about my roof is that it cannot develop leaks after you have had it up a year or two. It is a real roof from the first year it is on your barn to the last year. And do you know when that 'last year' will be? You will use that barn, and your son will use that barn, and your grandson will use that barn before that 'last year' comes. I want to pound the fact home to you that when you get a roof from me, you get a roof that is good for one hundred years. Think of getting a roof that makes your barn good for a hundred years. And that at about the price of an ordinary roof."

"That is why I say, 'I have helped the farmer more than any man ever did.' My roof will protect a good \$100,000 of produce in your barn in 100 years."

Stands the Tropics

"But that is not all. My roof is used in the West Indies. Here is a temperature of 135 degrees at Portus, Jamaica. My roof stands it. In Jamaica during rainy season at Montego Bay, rain falls 10 inches in a single day. My roof stands it. In Ontario rain falls 30 inches in a whole year. My roof in Jamaica stands in 24 hours the rainfall it has easily 4 months for in Ontario. Is that a good roof? Is a roof that stands the severe conditions in both Arctics and Tropics good enough for you? You get exactly the same article, made on the same machines."

Used All Over the World

"Not only that, go down to South Africa. Go to the farms there. Go around Port Elizabeth, or Durban, or up in the Transvaal. You'll see my roof there. People will go around the world for my roof, because it is the best roof in the world. It will last 100 years. People use my roof in Japan—an earthquake country. They get it from me. They have searched the world for a roof that would stand earthquake straining. My roof will."

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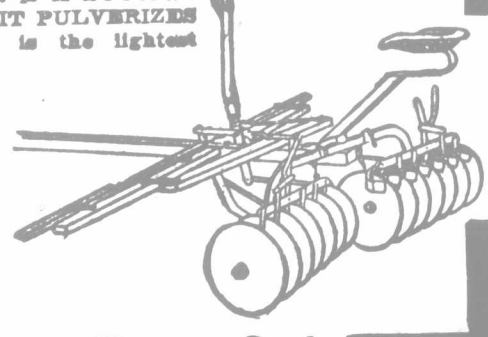
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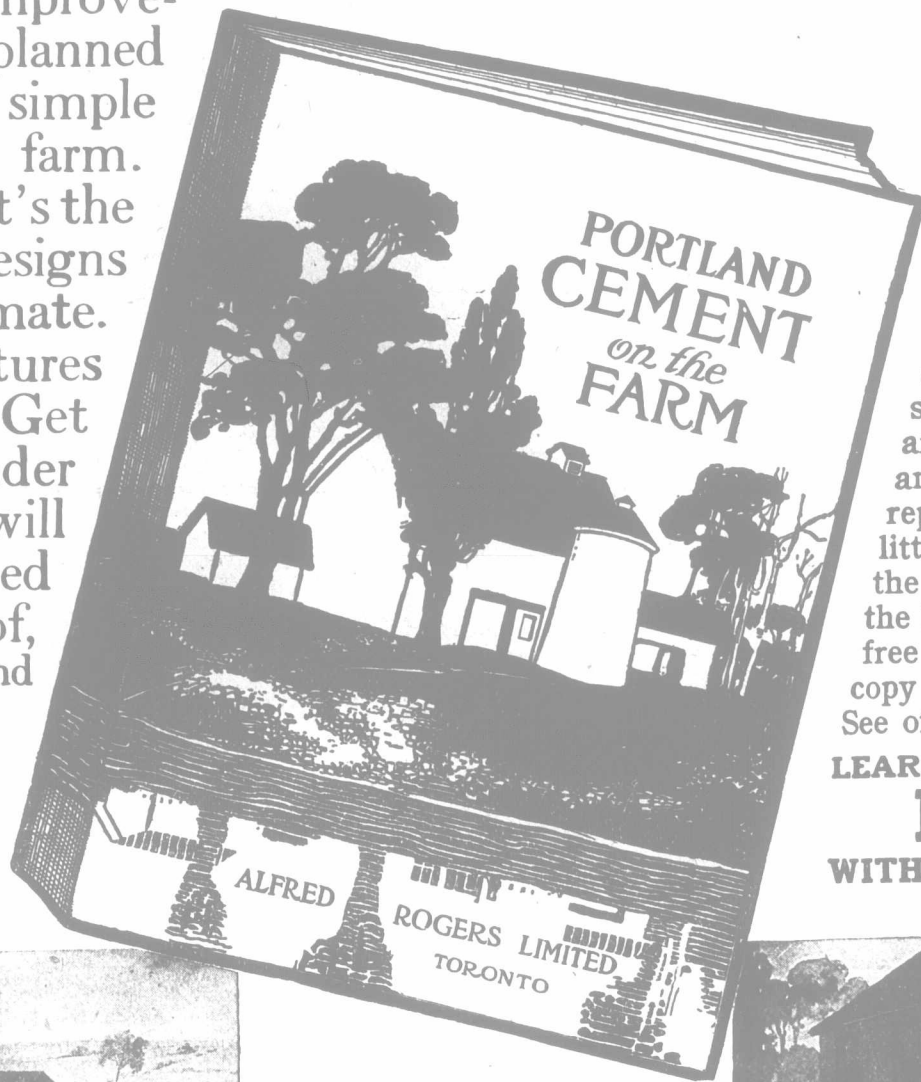
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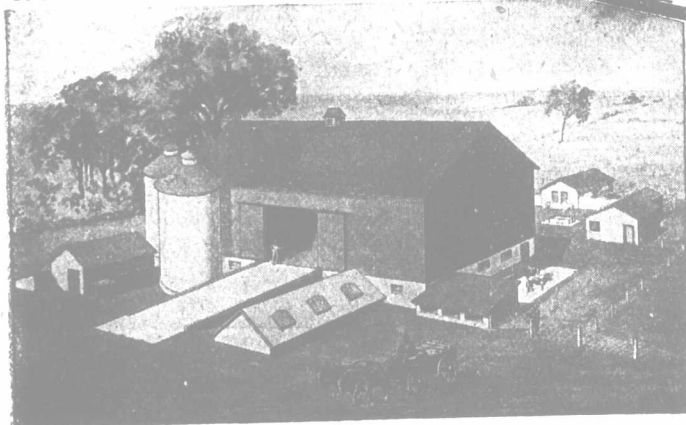
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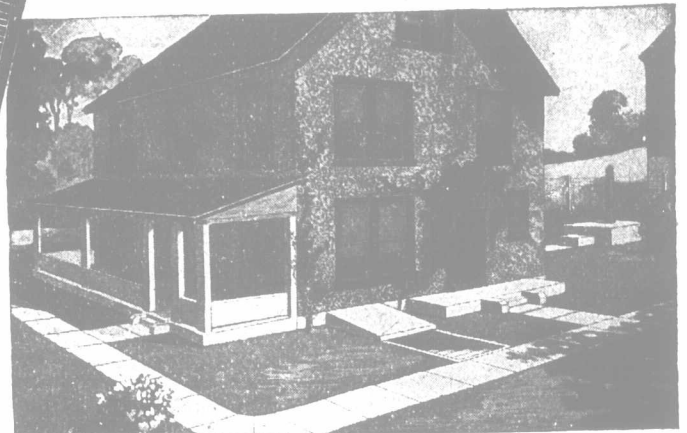
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