

Vol XXI No 402

MONTREAL, CHICAGO and SPRINGFIELD MASS MARCH 1 1900

50 Cents a Year

Dominion and Provincial Affairs.

Gen Hutton Recalled.

Major-General Hutton, the Imperial officer, who was sent out to Canada a couple of years ago to command the Canadian militia, has just received his quietus. Frequent reference has been made in Farm and Home to the gallant major-general, and to the danger of some of his military schemes. His pet idea was to establish an immense standing army in Canada, for which the farmers would have had to pay the heaviest part.

A few days ago it was announced that the major-general had been recalled to England and that he was going out to South Africa. The matter was brought up in parliament and from the explanation made by the premier, Sir Wilfrid Laurier, it transpires that the real reason why Major-General Hutton is leaving the country is that he was guilty of indiscretion and insubordination, two cardinal faults in a military officer. He apparently wished to run things to suit himself, without consulting the government or his responsible head, the minister of militia, and he was forcibly reminded that Canada enjoys responsible government and that its servants must obey orders.

It is rather remarkable that all the Imperial officers who have been sent over to Canada have got into trouble for attempting to run things with a high hand. There is now an agitation on foot to change the law so as to allow of a Canadian being appointed to command the militia. It is, at least, to be hoped that the next commanding officer will be one who understands the temper of the Canadian people better than his predecessors.

The Grim Horror of War

It has been forcibly brought home to the Canadian people by the news that the first Canadian contingent was engaged in a desperate encounter with a force of Boers and that 20 of its members were killed and many seriously wounded. The casualties amount to about 100 or one-tenth of the total strength of the regiment. The intelligence has caused a wave of sorrow from one end of the Dominion to the other, as all portions of the country were represented in the list of the killed. The day, Feb. 21, the news was received was a sad one for Canada and flags were placed at half mast on the parliament buildings and on all the public buildings throughout the Dominion.

The only consolation that mingled with the national sorrow was that the Canadians had fought like men and fallen heroes, fighting the battles of the empire. The second Canadian contingent and Strathcona's horse, the special contingent raised by Lord Strathcona, have sailed for South Africa, and when they arrive the Dominion

will have nearly 3000 men in the field, helping to achieve success for the empire. It will not be surprising if before the war is over Canada will be saddened by the news of further casualties among her brave sons.

The Dominion Parliament,

although in session nearly a month, has as yet done very little actual business. The address was adopted after an exceedingly short debate, a great deal of the speeches being devoted to the part Canada is taking in the South African war. The government has submitted resolutions providing for the payment of \$2,000,000 in connection with the equipment and sending of the troops to South Africa. The event has been an expensive one for Canada, but it has already proved a splendid advertisement for the Dominion, as it has drawn the attention of the whole empire to this country.

The Socialists' Paradise.

The Canadian postoffice, modeled on the European system, goes far ahead of that of Uncle Sam. While 2 lbs is the limit as to weight of mail packages in the states, our 11-lb parcels post keeps down the ravenous appetite of the express company combination on excessive rates. Again, the postal savings bank feature at \$50 postoffices is a great accommodation. Every money order postoffice is obliged to receive deposits in amount up to \$3000, but not to exceed 1000 in any one year, on which 3 per cent interest is paid. Over \$162,000,000 has been received in these popular banks in 30 years, on which nearly \$15,000,000 interest has been paid. At present there is about \$35,000,000 deposited, with an average credit to each depositor of 24¢. The one place in which the Canadian postoffice department is slow is in the establishment of free rural mail delivery. Farmers' clubs and granges should investigate this subject and then demand its gradual introduction.

When Doctors Disagree.

That Prof Robertson should see fit to minimize the splendid work of Dr Saunders at the Ottawa exper farm in the matter of "varieties of seeds" is regrettable. That the federal government should maintain a series of costly experimental farms, employing the best talent obtainable to carry on experimental work in the testing of the best varieties of seed grain suitable to the different parts of the Dominion and at the same time to have another man in the employ, as Prof Robertson, to belittle the work of the farms, and tell the farmers of Canada that all this experimental work of Prof Saunders and his able assistants is of absolutely no value, is to say the least inconsistent. Prof Robertson, on the other hand, advises farmers to go into their grain

fields and pick the "big heads" and save them for seed. The good professor might just as well tell the Canadian farmers to go back to the sickle and grain cradle or to the scythe and sheath and throw aside the binder and mower. This is retrogression with a vengeance.

The Right Kind of Trust.

The raisin growers of California have raised prices from 14¢ to 50¢ per lb within three years, increasing the value of raisin lands by \$50 to \$125 per acre. They did it by pooling issues, stopping out prices, abolishing middlemen and reaching the trade direct. Now the prune growers are trying it. The milk producers of New England and New York are working with considerable success along the same line. The country produce trade generally ought to be reformed in much the same way. This would be a trust that we would all profit by. The loss, expense and shrinkage between producer and consumer of farm products is a disgrace that the twentieth century will reform.

Hen Fever.

About this time of year look out for new cases of hen fever. The January and February poultry shows have a good deal to do with it. Wealthy men in different parts of the country are said to "have it bad" as a result of some good exhibitions, and the breeding of fancy poultry will be a fad with them for a while. This won't hurt the trade in eggs, fowls and incubators. Hen fever is so very catching that a good poultry show is worth while. The great American hen is worthy the attention she is at last receiving.

The Farmers' Association Meetings

in the eastern provinces have had a phenomenal success. All were well attended and the speakers were the best to be had. The stockmen and fruit growers were especially enthusiastic. If any readers of F & H missed taking in some of these meetings, they missed an intellectual treat indeed, and no less can be said as to the social element.

A Million Dollar Apple Crop.

The advantages of the maritime provinces as a fruit growing country are manifold. The soil and climate are eminently suited to the growth of apples. No part of Ontario or the United States can compare with the great Cornwallis valley, or even P. E. I., as an apple growing country. The contiguity of the maritime provinces to the English market is also greatly in their favor, and the fact that the apples can be carried across the ocean in ventilated steamers, rather than by the more expensive system of cold storage, is quite an item. Two counties in Nova Scotia, Kings and Annapolis, sold 500,000 bar-

rels of apples this year, which at two dollars a barrel represents a million dollars.

Improved Transportation Wanted.

At the several farmers' meetings recently held in Prince Edward Island, the Dominion government was sharply brought to book for its neglect to provide improved transportation for the product of the Island farms. Girls and Tories spoke right out in meeting, and with one voice demanded better shipping facilities and a fulfillment of the promise made by the government leaders in this regard. It is a pleasing augury that farmers at last are willing to sink their party feelings and demand from the political powers their just and equal rights. Too long have farmers been politicians rather than farmers, and as clay in the hands of the political potter. This spirit of independence evinced by the farmer is significant of the times and denotes a forward movement of unlimited possibilities.

Flying Chips.

All our readers should have a handy almanac and book of reference. Just such a one can be found in the Canadian Almanac for 1900, which is an acknowledged authority on all matters pertaining to the Dominion. Its 400 pages contain authentic information on many lines of business, educational and general affairs. We mail it postpaid in connection with F & H one year, for 50¢.

Now that by government aid the dairy industry has been put on a strong foundation, would it not be the proper thing to extend similar aid to hog raisers? By the establishment of central co-operative packing establishments much could be done to alleviate the condition of the swine industry. The cow and chicken are being cared for, why not our friend, the hog?

The Sussex (N B) dairy school opens March 1 for a special home dairy course. The factory course opens March 13. The provincial dept of agri has secured able and competent instructors. Dairymen should show their interest by attending, as the home course is but for eight days and the factory a month.

The sentiments of Friend W T Axford of Elgin Co. Ont. touch a tender spot in the Editor's heart. I wonder how many Farm and Home readers feel as does Mr Axford as to our efforts to make this the best farm paper in Canada. After years of reading, Mr Axford says: "Your valuable paper, F & H, has been coming to our home regularly for the past 19 yrs and during that time I think that it has brought more valuable information on almost every branch of agriculture than all the other journals put together that we have taken in that time"

Farm and Home.

Copyrighted for 1900 by The Phelps Publishing Co.

PUBLISHED

SEMI-MONTHLY

(1st and 15th of each month)

BY THE PHELPS PUBLISHING CO.

Entered at postoffice as second-class mail matter. TERMS - 50 cents a year; 25 cents for six months, payable in advance, clubs of two or more, 35c per year. New subscriptions can begin at any time during the year. Sample copies free.

RENEWALS - The date opposite your name on your paper or wrapper shows to what time your subscription is paid. Thus, Jan 10, shows that payment has been received up to January 1, 1900. Failure to February 1, 1900, and so on, some time is required after money is received before the date, which answers for a receipt, can be changed.

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CHANGES - Subscribers wishing a change in address must send the old as well as the new address to which they wish the paper sent.

ADVERTISING RATES - Eastern or Western Edition, 50 cents per square line each insertion. Discounts for contracts made known on application.

FOR THE CONVENIENCE of its patrons Farm and Home has offices at

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SPRINGFIELD, MASS. CHICAGO, ILL.

Orders for subscriptions, advertisements, and editorial letters can be sent to either office.

OUR ADVERTISERS.

It is the intention of the publishers of Farm and Home to admit into their columns none but reliable advertisers, and we believe that all the advertisements in this paper are from such parties. If subscribers find any of them to be otherwise, we will esteem it a favor if they will advise us, and we will at any time give our personal attention to any complaints which we receive. Always mention this paper when answering advertisements, as advertisers often advertise different things in several papers.

The circulation of Farm and Home for this issue is
350,400 Copies.

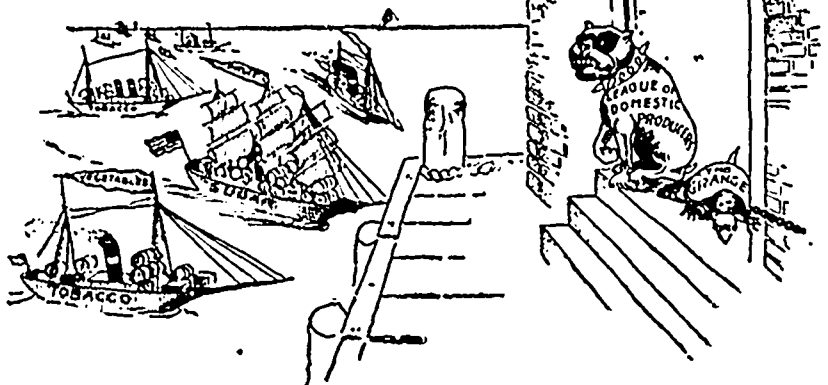
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All Around the Farm.

IMPROVING SEED CORN.

In the animal kingdom the crossing of different strains or breeds is beneficial in that it breaks up the type and causes variation in the individuals. It is then easy by proper selection to establish a strain or possibly a breed that shall be especially adapted to the existing conditions of that part of the country. This is none the less true in the case of plants, especially those of long cultivation, as wheat, corn, oats, etc. The benefits are practically the same as in the case of animals. Variation is set up, the blood is invigorated and the crop resulting from this crossed seed is larger oftentimes by a third than the crop from the uncrossed seed. It is with many no longer an experiment, but a well-established method by which new and better varieties are built up.

Plant two rows with seed different from the rest, but maturing about the same time. When the tassels begin to appear, pull or cut them out before they ripen. Usually three trips through the field will suffice. When the corn is well matured gather separately and select the best ears for next year's planting. Detasselling is necessary in order to prevent the two rows from fertilizing themselves. In other words, it insures that every ear obtained from the said two rows will be a cross between the two kinds of corn. A marked increase in next season's yield will be noticed, but to note the difference carefully a portion of the field next year should be planted to this crossed corn and the rest to the uncrossed corn which was grown alongside the crossed corn. In this way any difference in yield can probably be attributed to the crossing if both have had the same cultivation, etc. It will not do to plant an early maturing variety with a late one un-



The Farmer's Faithful Watch Dogs.

less the early one be planted some days later. The two rows could easily be left until the proper time arrived. The two kinds of corn must tassle about the same time if a good result is to follow. - [Prof J. M. Westgate, Kan Exper Sta.]

TREATMENT OF POTATO SCAB.

The use of corrosive sublimate to kill the germs of potato scab is now conceded to be the most effectual remedy for this increasing menace to the potato industry. The germs live over on the tubers and in the soil. The treatment reaches only those on the tubers and there is no practical remedy for treating those in the soil. It is thought a slightly acid soil is not conducive to their growth, and the use of lime and ashes which sweeten the soil should be avoided for 1 or 2 yrs before planting. The affected tubers should not be fed to stock unless the germs are killed by cooking, as they will be sown in the manure. Treated seed should be placed in clean crates or may become inoculated after soaking.

Two ounces corrosive sublimate to each 15 gals of water is sufficient, and the seed should be soaked for an hour. The solution is good for use until all is taken up by the stock or becomes dirty. One can soak as many bushels as he has gallons of water. We buy a new tight barrel for 10c and burn it when done treating seed. While it will not injure one's hands, it is a rank poison to stock, and none of it should be left around. A post and balance pole to raise the bag out of the barrel or the barrel set in the ground will make the operation much easier. I put a bushel or more into a bran sack and lower it into the barrel, after an hour the bag is raised to the top and allowed to drain. Then the stock is spread out to dry and can be cut for seed while the next batch is soaking. I would not soak much before planting and bury all treated pieces not used. - [C. E. Chapman, Tompkins Co, N Y.]

BEST CORN FOR SILO PURPOSES.

Large, late maturing sorts. Plant 20 in apart and drill 6 to 10 in apart in the row. The same variety is not adapted to all sections. The best should produce the largest growth of glazed ears by early Sept. Evergreen sweet is popular in Wyoming Co, N Y. - [Subscriber.]

Large southern corn in drills 12 to 16 in apart and rows 3 1/2 ft. running east and west, as it shades the ground better when large. - [William Howes, S D.] I plant large and late ordinary field corn and cut at the usual time of shocking. Have used sorghum cane mixed with corn. Shall try red kafir corn this year. - [G. P. Jones, Lyon Co, Kan.]

Pride of the North corn grows large and makes good ensilage in Allegany Co, N Y. Clark's Early Mastodon is a very

large yellow dent and ripens here. - [Norman Hatch, Wis.]

Eight to 10 qts Leaming drilled in rows 3 to 3 1/2 ft apart will produce stalks with 1 or 2 ears each which should be cut as the ear begins to glaze. 2 1/2 tons of such ensilage is worth as much as 2 1/2 tons of timothy hay and some claim to have produced it at \$1 per ton. - [James Miller & Son, Yates Co, N Y.]

White Dent Eureka is the heaviest yielder, but Evergreen sweet corn gives better satisfaction. - [J. E. Peirce, Mass.]

Flint and Evergreen sweet or dent and sweet corn of such varieties as will surely mature ears in this climate are best. - [O. T. Denison, Mason City, Ia.]

Blount's Prolific, cob and butts both small. Best ears kept for seed. Sow sorghum, 1 bu p a, on well prepared soil same as wheat. In case of drouth it is excellent to mix with corn in silage, as more juicy when corn is too dry. - [John Irwin, Culpeper Co, Va.]

For ensilage I prefer Boone County White and Dodson's Prolific White, a stalk every 6 to 18 inches in rows 3 to 3 1/2 ft apart. - [T. Hanning, Ill.]

MANURE FOR GRASS LAND.

I believe in using barnyard manure, if possible, when seeding down. I should harrow the manure in and the young grass will be enabled to get a portion of it the same autumn and will make a vigorous growth and go through the winter in good condition. The first year of growth the grass will need no fertilizer. The second year I would begin to use commercial fertilizers, and would apply 150 lbs nitrate of soda p a. Grass is a crop which is made or unmade between April 15 and June 15. It is a thorough lover of nitrogen. Nitrate of soda furnishes nitrogen in a very available form. Nitrate of soda applied early in spring will give the grass food so that by June 15 we may expect a very much larger growth than if we depended upon stable manure applied the year previous. For the next 2 or 3 yrs. before the land was plowed, I would fertilize as follows: Nitrate of soda 150 to 200 lbs, acid phosphate 200 lbs and muriate of potash 150 lbs. Such a mixture costs about \$7. I am sure the grass crop can be very materially increased and the fertility kept up by the above method. If one has plenty of stable manure it may be well to top-dress the grass each autumn rather than buy the fertilizers. - [Dr J. B. Lindsey.]

SEASONABLE GARDEN WORK.

The farmer who expects to get good work out of his team next spring should take them in from the straw stack and feed on oats. The farmer him if would not be in shape to follow the plow if he was fed on a diet of potato skins all winter. - [Frank Hunt, Ont.]

To use only mineral fertilizers such as acid phosphate or acid phosphate and potash, on very poor land is almost like throwing money away.

Old horseshoes can be used in posts to slide small pole bars in; it's easier

to drive them in than to chop holes. Horseshoes also make good hooks for hitching posts. A wornout ax struck in a block of wood so, or well for an anvil to clinch nails, etc, etc.

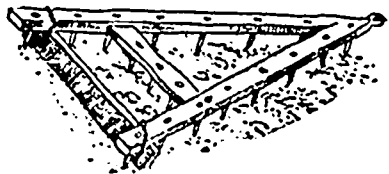
But few have any idea as to the markets opened by the mining operations in the cold northwest, where no crops can be raised. Fifteen carloads canned fruit were sent there by one Ontario firm last fall.

I like F & H the best of any farm paper I ever read; it advocates the farmer's needs. - [J. J. McDermet, Fulton Co, Ill.]

When Logging Down Hill, select a stump 10 inches in diameter, 2 ft high and in line with the road, at top of hill. Hew the bark and make smooth. Take a rope 1 to 1 1/2 inches in diameter and as long as may be required. Fasten one end to the sled, having first taken the precaution to bind the load securely. Have the rope neatly coiled and laid on the upper side of the stump. Let an assistant take the rope in hand and make a couple of turns with it around the stump. When the teamster starts the horses the assistant plays out the rope as may be needed. If the load moves too fast make another turn of rope around the stump. If the team has trouble in drawing, throw off one or more turns. - [C. O. Ormsbee, Washington Co, Vt.]

Handy Clod Crusher and Leveler.

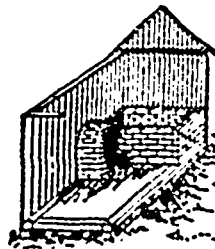
One who has not tried it would be surprised to find how much execution the device shown in the cut will accomplish.



Insert a narrow plank in front of the rear teeth of an A harrow, and the land will be harrowed, the lumps crushed and the surface leveled at one operation. One can also, by stepping on and off the crosspiece, drag earth from knolls and deposit it in depressions, thus grading the land very nicely.

The Irish Cobbler Potato is extra early and brings a high price. Tubers are creamy white, eyes strong and well-developed and but slightly indented. Each tuber is marked with the small white specks peculiar to the very earliest class, Ohio Junior, Early Market and Six Weeks. It is the only variety I know of earlier than the Early Ohio. [A. G. Aldridge, Ontario Co, N Y.]

To Make a Smokehouse fire-proof as far as the stove ashes are concerned is not necessarily an expensive job; all



FIREPROOF SMOKEHOUSE.

that is required is to lay up a row of brick across one end, also 2 or 3 ft back upon each side, connecting the sides with a row across the building, making it at least 2 ft high. As those who have a smokehouse use it nearly every year, that part can also be made safe from fire by the little arch built at the point shown in the illustration. The whole is laid up in mortar, and to add strength to the structure an iron rod or bar may be placed across the center of the bin and firmly imbedded in the mortar, two or three rows of bricks from the top. Of course the rear of the arch is also bricked up. In most cases less than 250 brick will be all that is required.

WANTED, AGENTS.

We want at least one good agent at every postoffice where we are not at present represented, to solicit subscriptions to FARM AND HOME. This is a rare opportunity for men and women out of employment, and even for enterprising boys and girls who wish to engage in profitable work through the fall and winter months. If you can canvass all of the time or part of the time and would make money easily and quickly, send at once for our new terms to agents and complete premium list, which we send free on request.

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SPRING MANAGEMENT.

To get a large force of worker bees in every colony by June 1 is the great desire of most bee-keepers, as it is then that the white clover begins to yield its nectar. The amount of brood that is reared depends considerably on the amount of food the colony has, and nothing is equal to honey given to them in the fall to promote rapid breeding in spring. If last October each colony prepared for outside wintering was supplied with 30 lbs of honey and they have come through the winter quiet and showing little signs of dysentery, they will no doubt have plenty of honey in the spring; if any are short, exchange two or three of their empty combs for full ones kept over in a warm room from last year; if you haven't these, fill some empty combs with warm honey or syrup. To do this, lay the empty combs in a pan or tray, pouring the honey from a dipper through a tin can, the bottom of which has been perforated with small holes.

Aside from food in abundance, warmth is one great thing needed to promote safe, early breeding, with the covers sealed, the winter packing surrounding the hive and the entrance contracted to 1/2 in at one side, they are in good condition to withstand the changeable weather of spring. Leave the winter packing on till June, and last but not least keep them quiet, don't feed outside or anywhere if possible; it excites them, causing unnecessary loss of vitality, for they can gather nectar and pollen from skunk cabbage, pussy willow, maples and many other trees and shrubs early enough for their own good.—[T. E. Brainard, Elgin Co, Ont.

GIVE THE BEES WATER.

Watering bees is of considerable benefit, and I would as soon think of allowing other stock to roam the country in quest of water as the bees. During winter, the moisture that condenses in the hive furnishes the colony water, but during the early spring these condensations cease. They begin brood rearing early, and in order to prepare food for the young larvae, must have water. The most vigorous bees go forth in quest of water, and it at some brook or tank where it is ice cold, fill themselves and are chilled, and do not get back to the hive.

Every careful bee-keeper well knows that one bee in early spring is of more value than half a hundred later on. In order to prevent spring dwindling, we take one of the Mason half-gallon fruit jars, remove the screw top, take a 3/8-in board 4 in square and with a small gouge or knife cut a groove nearly from one extreme corner to the other, taking care not to cut quite to the corner. We fill the jar with water, place the board over the mouth, invert all quickly and place in convenient places in the apiary. When the sun shines sufficiently so that bees can fly it will also warm the water through the glass, and we are always able to give them what they most desire, pure, warm water, and no one until they have given this a trial will fully realize how much water a single colony will use during the height of brood-rearing. In order to draw them from the old watering place it may be necessary to slightly sweeten the water for a day or two.—[E. Whitcomb, Saline Co, Neb.

American Fruits at Paris—Much good should result from the exhibit to be made at the exposition of 1900 under the care of the dept of agri. A thorough system is to be employed in making known American fruits to visitors, particularly such varieties as are suitable for the export trade. Cold storage facilities will be afforded for apples, oranges, peaches, grapes, plums, etc.

Russia Buys Harvesters—Exports of these machines are reported very heavy, destined for Russian ports, to take care of next year's crops.

For Potato Planting, the more uniform the cutting of the seed the more perfect the action of the potato planter, the easier the work of the feeder, the better and more uniform the stand and future growth of the plants and the result a better crop.

THE AMERICAN AND FOREIGN PRODUCE MARKETS AT A GLANCE

The highest quotations of wholesale prices for standard grades of farm produce in the leading markets of the world on the dates named; poorer stuff lower.

Table with columns for various commodities (Wheat, Corn, Oats, etc.) and prices in different markets (Boston, New York, Chicago, etc.) for the month of February.

* P box. † P oz. ‡ P cental. § Estimated dressed weight.

Business Side of Farming.

LIVE STOCK TRAFFIC GOOD.

No branch of the live stock markets has been more active and strong than sheep, the month of Feb proving highly satisfactory to farmers having butchers' stuff to sell. Extra good lambs have touched \$7 25 p 100 lbs at Chicago and \$6 at Buffalo, with best wethers and yearlings quotable around 5 7/8 @ 6 50. The trade wants strictly choice mutton and seems willing to pay good prices for same, although in some directions it is believed the recent level will not be passed. Farmers are buying stock sheep with considerable freedom.

At most of the northern markets hogs have sold at 5c to a shade better, although packers object to paying the price named. The situation, as a whole, has not changed and the undertone of the market one of confidence in continued fairly good prices, as there is a liberal home and foreign demand for pork product. Fat cattle are selling much as a year ago, but 50@75c higher than two years ago. A moderate demand exists for feeders, yet farmers naturally consider prices asked relatively high compared with what they may reasonably expect to secure for good heaves when returned to the markets later in the season.

FULL GRAIN ACREAGE.

In the grain growing sections of the country, and this includes pretty nearly every state from Wash to Va, farmers are rapidly completing their plans for the coming campaign. While prices in some instances have not been wholly satisfactory, there is no doubt but the acreage of all staples will be a full one. The wheat market has ruled dull, but values substantially steady and the situation not considered bearish. Should the winter wheat now in the ground show frost damage, spring wheat area will, no doubt, be a liberal one. The latter, however, will be cut into somewhat by flax, farmers in the northwest having secured the best prices in years for the biggest crop of flax ever raised. The export trade in wheat and flour is liberal, but not especially significant. The corn crop of '99 is passing out of sight at a rapid rate. Our exports are liberal and gratifying. The government will make special effort this sum-

mer at Paris to further exploit the merits of this great staple crop, co-operating in this with the American Maize Propaganda. Farmers are feeding corn freely, as present prices for live stock offer encouragement to make cattle, hogs and sheep fat and prime. The oats market has continued dull and steady, rye, barley quiet but strong.

Binding Twine Next Summer may be higher, providing there is a corner in manilla hemp, as now seems possible. The supply of this raw material in the U S is almost exhausted, but other fibers may be employed to largely take the place of this. Furthermore, accumulations at Philippine ports may be released and shipped before spring, this relieving the situation.

Broom Corn is attracting much attention even in sections where it is not commonly grown. This points to an almost certain overproduction, followed by ruinously low prices. The demand at best is limited and an increased acreage is to be discouraged. A nice self-working now sells around \$15 p ton, with few dwarf 200 down to 190.

Fair Apple Exports—Foreign shipments of apples from U S and Canadian ports are slightly above those of the same period last year, amounting to about 1 1/4 millions bbls this year to date sent to Liverpool, London, Glasgow.

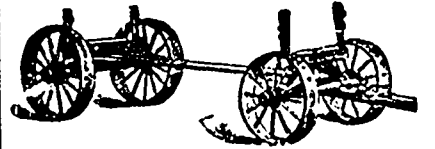
Packing Dressed Poultry during late winter months requires skill. The animal heat must all be out, but freezing is not allowable. With comparatively warm days and sharp nights packers are apt to be caught.

The Federal Census of 1900 is already under way in a preliminary manner. The bureau is sending out special advance inquiries to cranberry growers and persons engaged in floriculture, asking for certain information which should be cheerfully granted in order to make the census the best one ever undertaken.

For Dairy Supplies no house is more courteous and reliable for our readers to do business with than the De Laval Separator Co of 74 Cortlandt St, New York. Their new dairy supply catalog for 1900 has just been issued and will be cheerfully sent any of our readers who write for it and mention this paper.

Farm Wagon only \$21.95.

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon that is only 23 inches high, fitted with 24 and 30 inch wheels with 4 inch tire, and sold for only \$21.95.



This wagon is made of the best material throughout, and really costs but a trifle more than a set of new wheels, and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices, made any size and width of tire to fit any axle.

STEEL WHEELS and HANDY WAGONS

of every style and price are made in our mammoth factory and sold direct to farmers. We supply all trucks used by U. S. Govt. Farmer's Handy Wagon Co., Saginaw, Mich.

Do You Want a Buggy?

If you have any use for a fine open or top buggy, surrey, phaeton or spring wagon at the lowest price ever heard of, a price that will surprise you, privilege of free trial and payable later received, cut this notice out and mail to SEANIS, ROEBUCK & Co., Chicago, Ill., and they will mail you their very latest and extremely interesting vehicle offer and special catalogue.



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SMALL DOSES. LARGE RESULTS

The Poultry Yard.

A PRACTICAL BROODER.

An excellent homemade brooder is shown in Figs 1 and 2. It works very well indeed, costs but little and is more easily made than the incubator described in F & H Feb 15. The heater is

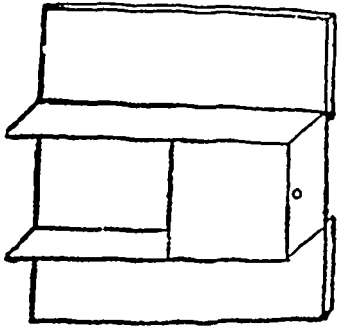


FIG 1.

like that of the incubator, 4 ft long, 1 ft wide and 6 in high. The top is covered with zinc nailed on tightly. The sides are lined on the inside with tin. The front has a sliding door with a little window. The hole for the chimney is 1 in from the bottom in the middle of the back. It is for a tin pipe 1 1/2 inches in diameter. Boards 1 ft wide are nailed onto the top through the zinc. The sliding door is not shown in Fig 1.

Fig 2 shows the top, after strips 2 in wide have been fitted onto each end of the zinc. Strips also 2 in wide extend all around the edge, excepting the small opening at the lower left-hand corner, 1 1/2 in wide, to admit air. b is a strip 8 in long nailed on to admit air to the zinc.

Nail on a covering of matched boards over the entire top, thus leaving a space which will be 2 in deep over the zinc and 1 in over the boards nailed on the sides of the zinc. A pipe 3 in long, 1 1/2 in diameter, extends through the center. Next make a cover to place over the floor. Make it of matched boards 2 in smaller every way than the floor. The cover is supported and adjusted to the size of the chickens by means of four legs which extend through holes and raise or lower by means of nails used as pegs. Tack strips of carpet, slitted every 4 in, around the edge of the cover. The cover should be 2 1/2 in above the floor for young chicks. The heat from the zinc will reach through

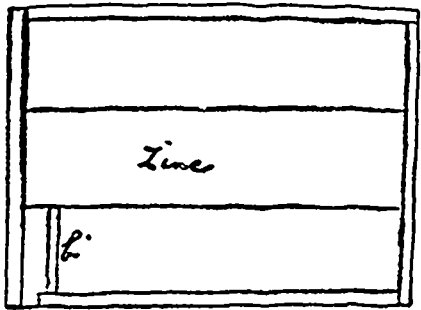


FIG 2.

the floor and radiate from the pipe in sufficient quantities to keep them warm. Use a long chimney of tin to carry away the fumes of the lamp.

A convenient way to locate the brooder is to set it in a small warm chicken house and bank up around it nearly level with the floor in which the chickens stay, taking care not to cover up the air-hole, and not to interfere with moving the lamp. Use the same kind of lames as for the incubator. So degrees is about the right temperature. It should never be much warmer than that. Sprinkle the floor with sand and clean it every day.

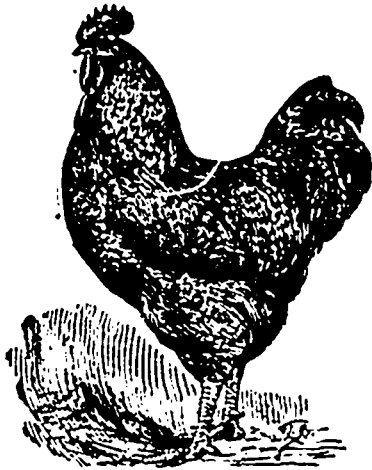
Vigorous Turkeys Fowls are able to have crooked breasts from improper breeding. I have found that turkeys raised from the same cock and hens will, after a few years, be liable to such deformities. Also, if there is the least trace of relationship between the cock turkey and the hens, the same trouble is almost sure to occur to a greater or less extent. This matter of changing the cocks cannot be urged too much if strong, healthy young turkeys are ex-

pected. Obtain a cock from a distance, if possible. I find that if he has considerable wild blood in him, his offspring are stronger for it. I know of nothing to relieve the afflicted ones, but care in breeding will entirely prevent such troubles.—[George M. Tucker.

The Early Sitter—Some hens will soon be set. If this is done now, care must be taken to prevent the hatch being spoiled if a cold spell of weather should appear, which is not at all unlikely. A thorough cleaning of the chicken house and nests is advisable. Then put the sitting hen where she can be kept comfortable, give food, water and exercise regularly, prevent the other fowls from disturbing her, and there is no reason why a good hatch cannot be secured from the early set hen.

An Egg Ration—Give the hens a warm mash in the morning composed of bran, corn meal and oats with a pinch of salt. Cover the house floor about 6 in deep with chaff, straw or leaves. Scatter the whole grain in this litter, making them scratch for all they get. Feed more oats and wheat, keep them scratching and you will get eggs if you have the right kind of fowls to start with.—[Edgar H. Merrill, Me.

The Buff Rocks owe their beautiful color to an infusion of blood from the R I Reds. In general qualities they do not differ from the Barred Rocks. Al-



BUFF PLYMOUTH ROCK.

though one of the new breeds, they already run remarkably true and uniform and give a large per cent of standard birds. Some growers consider them better layers than the barred variety. They have well developed bodies, yellow skin and legs, are good layers of brown eggs and are good sitters and mothers. No breed of practical general purpose fowls is more of an ornament to the farm.

Spring Rations—Charcoal, table scraps, milk, buttermilk, apples, potatoes, turnip tops, cabbage heads, onions, peppers, chopped lime, are all important at this time of year. Often there are damage fruits and vegetables in the cellar which ought to be removed anyway and will be appreciated by the occupants of the poultry yard.

To Stop Egg Eating give them china eggs to hammer at to their heart's content. At the same time keep before them all the crushed eggshells they can eat for several days. Keep ground oyster shells before them to harden their shells.—[A A Burr.

Crested Fowls are justly objected to because they are not able to see quickly and are therefore easily caught by vermin being an especially easy prey to hawks, and if out in cold rains they are almost sure to be troubled with colds and are very liable to have roup. They are undoubtedly pretty, but not very practicable.—[Emma Clearwaters II.

Eggs Well Kept—I am sending a recipe to keep eggs for nine months. I have done so, and the eggs were just like fresh-laid ones. I kept no brooder and gathered the eggs as they were laid. I got the grocer to give me a blister tin. I put in a layer of waste salt thick enough to keep the eggs from touching the bottom of the can. I greased them all over with fresh butter, of which I had plenty. Then I put

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In another layer of salt. On no account must the eggs touch. I put them in every day and when the can was full I closed it and kept it in the cool basement.—[J. H. L., Vancouver, Wash.

Handy Egg Carrier—A regular egg case is doubtless best for carrying eggs to market, but better than carrying them piled up one upon another in a basket is the plan shown in the cut. Get a candy pail at the grocery store and cut from old paste-board a lot of circles, each one a trifle smaller than the one to go next above it in the pail. Put in the bottom of the pail, lay the eggs thickly over it and fill in between and over them with bran. Lay on a paste-board circle and proceed as before. The storekeeper will take out each layer of eggs, lift out the circle with the bran on it, empty the bran into a box or pail. Then when the eggs are all out he will pour the bran all back into your pail, putting the circles on top to be used again and again. Packed in this way the eggs will not break, though the horse trots and the roads be rough.

HANDY EGG CARRIER. a layer of bran in the bottom of the pail, lay the eggs thickly over it and fill in between and over them with bran. Lay on a paste-board circle and proceed as before. The storekeeper will take out each layer of eggs, lift out the circle with the bran on it, empty the bran into a box or pail. Then when the eggs are all out he will pour the bran all back into your pail, putting the circles on top to be used again and again. Packed in this way the eggs will not break, though the horse trots and the roads be rough.

THE BUSINESS' HEN.

Let people talk of Bantams, Of Polands, Hamburgs (big), Minorcas and Black Spanish, And Brahmas, Langshirs big; Let them talk.

But far the finest poultry, That e'er are hatched from eggs Are those that best develop; The strongest scratching legs; Let them talk.

M. G. Kains.

Under the Roosts—If absorbents are used, the labor will be lessened. A good way is to sweep with a splint broom, then, if the rubbish is not all removed, use a hoe and then the broom again. Sprinkle road dust after sweeping, or fine coal ashes. Sawdust can also be used, if dry. The roosts should be examined often, and if nutes are found upon them, saturate with kerosene. If the roosts are movable, as they should be, take them out of the house and pass them through a sieve slowly. Some farmers object to kerosene, thinking it makes the feet tender. Do not perform the work of cleaning and renovating spasmodically, but regularly, at least once a week, if the quarters are at all foul. Fumigation should be used once in a while, taking a damp day.—[Mrs. A. C. M., Athens Co., O.]

Chicken and Rabbit Queries—M. O.'s cockerel has lost use of his legs. We have been very successful in such cases with camphorated oil, bathing the limbs with it twice a day.—U. R. M. complains that hens eat well, but are dying off and livers are found enlarged. These hens were overfed. Make them scratch a little for their grain.—M. G. C.'s fowls have swollen eyes and offensive breath. This is roup. It would be well to place the sick birds in a separate coop. Bathe the head with Arabian balsam and give two quinine pills daily.—Mrs. C. S. C.: Feeding sulphur will rid the hens of lice. Dust each hen with insect powder. Lambert's Death to Lice is good.—A. C. B.: For eggs of Golden Hamburgs write to any of our large poultry advertisers. Only reliable firms are admitted.—W. H. R.: For W. P. Rocks, write to the nearest poultry fancier, as advertised in F & H.—L. L. W. H. and others wish to buy Belgian hares. They are kept by Bauvehe, Miller, Greider and other of our poultry advertisers.

A live hens are the best layers. Clean houses and runs are the best medicine. A nest egg will usually stop hens scratching the nest; if not, use shavings. If fowls leave part of their breakfast in the dish, remove it. If their appetites fall, a change of food is needed.

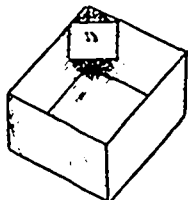
The Horse.

The Faithful Horse should not be worked hard at first if closely confined all winter and fed mostly on rough feed. He will be stiff when first brought out, so give him his own time. In fact, it will pay to give him the run of the barnyard during any spare time this month to get limbered up. Groom him well, don't hurry and be kind and he will soon be doing his usual good work.

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To Remove a Wart, scrape the surface crust and after bleeding stops, rub on a little bichloride of mercury with a piece of smooth wood. Repeat once every third day, use no more at a time than would lie on a dime.

A Corner for Salt in the grain feed trough is shown by the cut. By nailing a board across a corner so it will be 1/2 in from bottom of manger, animals will soon learn to lick out the salt from underneath. It is well to put a cover on top. Don't allow water to get in contact with the salt.—[S. Dole.]

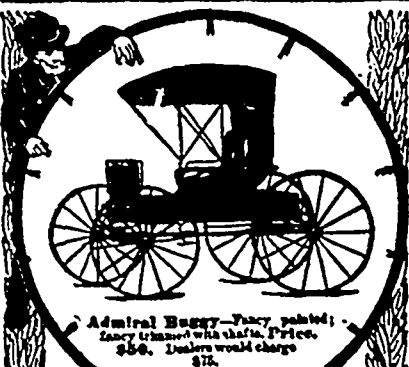


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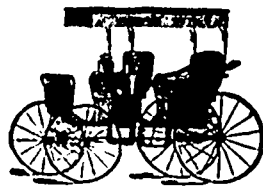
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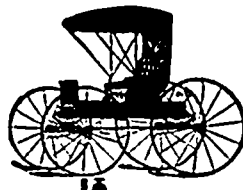
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Dairy and Creamery.

WHY A SEPARATOR PAYS.

I have used a hand separator on my farm 5 yrs and find by experience many advantages as compared with crocks or pans. There is a financial saving in the having of warm, sweet skim milk for calves and pigs. We have sold Jersey calves for veal at six weeks old weighing from 140 to 160 lbs, fed entirely on separator milk. It has been demonstrated by experiment stations that one cent's worth of oilmeal will do calves and pigs as much good as a pound of butter. Besides this, the skim milk from the separator, when it is run through and fed to them immediately after milking, while it is warm, fresh and sweet, is better feed for calves and pigs than skim milk that is old and sour, even though it does contain one-fourth of the butter fat originally in it. This can be attested by hundreds who are to-day using farm separators.

From my experience in testing crock skim milk for myself and many neighbors, I find that the loss varied from 4 to 1.8 per cent of the total butter fat by the Babcock test. And from the result of these tests I am convinced that the loss where the milk is set in pans is 2% to 1 lb to each 100 lbs of milk more than where the separator is used. This shows, with milk of the average richness, a loss of from 20 to 25 per cent of the total product. A herd of cows ought to average from 175 to 225 lbs butter per cow per year by the gravity system. But if the average be only 200 lbs, the yearly loss on one cow would be about 50 lbs of butter, and this at 20c per lb would amount to \$10, and anyone having more than one cow can easily estimate their loss, not taking into consideration the advantages stated above. We sometimes hear men say that the one-fifth (20 per cent) is not lost, as the cows and pigs get it. I think I have plainly shown the ill gain in feeding butter fat to either calves or swine. Others say the machines are too high in price, and that they will wait until they become cheaper, but if dairymen would reason a little with themselves, they could not be convinced otherwise than that the farm separator is the best paying machine on the farm; and while they are waiting for the machines to get cheaper, the separator would have saved its cost many times over.—[G. F. Griffls.]

FOOD FOR CREAMERYMEN.

The fierce competition in dairy products in the east, caused by markets being flooded with western butter, ought to admonish creameries to educate their patrons in better and more economical methods of feeding, show how to improve and build up the dairy herd and increase the butter capacity of cows, induce the keeping of records and the weeding out of poor cows, advise patrons of the best crops to grow and best and most economical feedstuffs to buy in order to reduce the cost of producing milk to its lowest possible limit, how to produce milk and deliver it to the creamery in the best possible manner. Creameries may also act as purchasing agents for patrons in foodstuffs, fertilizers, farming tools, etc.

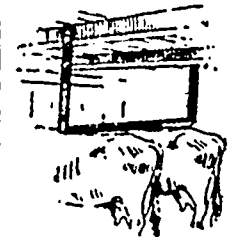
The patron on his part should be loyal to the creamery, be a stockholder if possible, should see to it that the best possible cream is made and that every care should be bestowed in delivering it free from taint and in good condition. He should endeavor to create a sentiment among fellow patrons of interest in the quality of the cream and the business of the creamery.

Experiment stations should devote time to the solution of practical problems of importance to both creamery and patron, should publish concise instructions for their guidance in feeding, butter making, fertilizing and other lines of work. There should also be held dairy meetings at which men who have mastered the various interesting problems shall speak.—[Dr J. B. Lindsey, Hampshire Co, Mass.]

Selling a Cow by the amount and quality of milk she gives is a proposition from the N C exper sta. To sell or buy cows by the milk test seems like good sense. The plan is based on the yield of milk together with its quality as determined by tests of the milk. The

rule is to pay for the cow at the rate of \$12 per gal of milk given a day that is rich enough to show 3 1/2 per cent of fat. To this price add or subtract \$1 for every 1/2 of 1 per cent of fat which is above or below the 3 1/2 per cent. By this rule a cow is bought entirely on her merits. It is thought to be a conservative plan and one which, if adopted, will certainly raise the standard of cows and increase their milk and butter production. The result of such a rule certainly would be beneficial to all. [G. H. Bloodgood, Schoharie Co, N Y.]

Keeping Cows Clean—The illustration shows a device that has been tried



successfully for keeping cows clean in the stable. The frame stands 1 ft above the cow's backs, just forward of the rump. When dropping manure, the cow must step back into the gutter, as she cannot round up her back when the frame is in place. Have the side pieces screwed so tightly to the beams overhead that the frame will stay at any angle it is put. It can thus be swung up out of the way when the cows are out of the stable.

Kansas The Meriden Creamery Co find their patrons who know how to feed get from \$40 to \$55 income per year from each cow, while patrons who do not know how to feed get from 18 to 25 per cow per year, the net profits received from each cow by the best patrons are 11 times those received per cow by the poorest. They also find that some patrons get no profit whatever from skim milk, while others who know how to feed it get from 25 to 50c from each 100 lbs of skim milk fed. As there are 5000 lbs of skim milk from each good cow yearly, the way it is handled makes a great difference in the profits from dairying.

One third of all the cows in Ohio are not paying their board, and nearly one-half of the other two-thirds do not more than pay for their keeping and make good the loss of the first third. Two-thirds of all our cows return no profit whatever, and only one-third can be classed as genuine profit makers.—[President J. F. Hickman, Ohio Dairymen's Ass'n.]

Use none but the best of salt for dairy purposes. Salt should be as carefully kept as flour—in a dry, sweet and clean place, away from kerosene, fish and other rank-smelling articles.

One cow per acre can be easily kept where silos are used. The cow can have her food green from the field, or green from the silo, every day in the year. The dairyman has the entire advantage of his work.—[A. Jeffers, Norfolk Co, Va.]

The cow showing the best record last year in the home tests of the American Guernsey cattle club made 12,283 lbs milk, containing an average of 6 1/2 per cent butter fat, which would make 912 1/2 lbs butter. Her name is Lily Ella No 7249 and is owned by J. H. Belrne of Wis.

AT THE BOSTON POULTRY SHOW, an interesting feature was the exhibit by the Des Moines Incubator Co, Des Moines, Ia, of 120 eggs in process of hatching, these having been shipped from that city to Boston, a distance of over 1400 miles. Over 1000 chickens were hatched.

More Money per Pound.



The advantages of a farm separator are not alone in the increased amount of butter produced from the same milk, but also in its improved quality, which brings the extra few cents per pound. The Little Giant Separator produces these results surely, every time, everywhere. It makes the dairy business pay. Isn't that what you want? Send for Catalogue No. 58.

The Sharples Co., Canal & Washington Sts., CHICAGO. P. M. SHARPLES, West Chester, Pa. U. S. A.

20TH CENTURY CREAM SEPARATORS

EVERYONE who knows anything at all about cream separators knows that the "Alpha" disc system—patent protected and hence restricted in use to the De Laval machines—has revolutionized centrifugal cream separation just as centrifugal separation originally revolutionized previous gravity methods. They further know that for five years every imitator and would-be competitor of the De Laval machines has been veritably "tip-toed" in the effort to keep alive in the separator trade—that many have dropped out and that others are on the verge of doing so; that none have made a pretence of keeping in the race except through exaggeration and misrepresentation, cheap construction, so-called "cheap" prices, and still cheaper values to deluded purchasers. The latest development of the "Alpha" disc system, embodied in the 20TH CENTURY De Laval machines, still further increases their superiority—rendering them simply unapproachable in efficiency and practicability by anything else in the shape of a cream separator.

Send for new "20th Century" catalogue. THE DE LAVAL SEPARATOR CO. RANDOLPH & CANAL STS., CHICAGO. 103 & 105 MISSION ST., SAN FRANCISCO. General Offices: 74 CORTLANDT STREET, NEW YORK. 1102 ARCH STREET, PHILADELPHIA. 327 COMMISSIONERS ST., MONTREAL.

IF YOU COMPARE THE PRICES AND CAPACITIES OF THE IMPROVED UNITED STATES SEPARATORS



with those of other makes and bear in mind that the U. S. is addition to GIVING MORE FOR THE MONEY, SKIM CLEANER, RUN EASIER, LAST LONGER, you must acknowledge that the U. S. are the BEST and MOST PROFITABLE SEPARATORS TO BUY.

1900 or "New Century" Prices and Capacities.

No. 9. Low Frame.	Capacity 150 to 175 lbs.	\$50.00
No. 8. " "	" 225 to 250 "	\$45.00
No. 7. High " "	" 375 to 400 "	\$85.00
No. 6. " "	" 450 to 500 "	\$100.00
No. 5. " "	" 450 to 500 "	\$125.00
No. 3 1/2. " "	" 450 to 700 "	\$165.00

We furnish a complete line of Dairy and Creamery Apparatus. Catalogues free for the asking. VERMONT FARM MACHINE CO., Bellows Falls, Vt.

THE LOSS OF AN EYE—terrible calamity. The tip of a horn often does it in tying up cattle. Cut off the horns quickly and humanely with the Keystone Dehorning Knife. Best for cutting and tearing. Highest Award World's Fair. FULLY GUARANTEED. Write A. C. BROSIUS, COCHRANVILLE, PENN.

THE BEST BUTTER and the most of it is made by using our improved patent AQUATIC CREAM SEPARATOR. It takes all the cream out of milk, expels all foul odors and impurities in two hours' time. Better than any creamery made and costs less than half as much. For 1 cow up to 40. Can't get out of order. No experience necessary. Price, \$1.50. Free catalogue and testimonials. Reliable Agents Wanted! Aquatic Cream Separator Co. 117 Factory Sq. West, Iowa, N.Y.

LABEL Dana's White Metallic EAR LABELS stamped with any name or address with consecutively numbers. I supply forty recording associations and thousands of practical farmers, breeders and veterinarians. Samples free. Agents Wanted. G. M. DANA, 27 Main St., West Lebanon, N. H.

GOOD FLAVOR makes good butter. It's the flavor that sells better. The flavor of butter depends upon the treatment of the milk. It must be relieved of all odors of Animal, Stable and Food. PERFECTION Milk Cooler and Aerator. Takes out all the animal heat and all bad odors with it; takes out all odors due to feeding ensilage, cabbage, turnips, etc., or any odors arising from the stable. Makes sweet milk, rich cream and fine flavored butter. Sizes from 1 to 200 cows. Send for prices and free catalogue of Farm and Dairy supplies. L. R. LEWIS, Manfr., Box 20, Cortland, N. Y.

Profitable Cows will quickly be found by using our ADJUSTABLE DIAL HAND SCALE. Weighs quickly and accurately in pounds and tenths. Write for new catalogue. Everything for the Dairy. THE PARTNER'S SUPPLY CO., 1907 Market St., Philadelphia.

Most smoked in a few hours with KRAUSERS' LIQUID EXTRACT OF SMOKE. Made from hickory wood. Cheaper, cleaner, sweeter, and surer than the old way. Send for catalogue. K. KRAUSER & SONS, Milton, Pa.

Makes Your Pump WORK EASY. Yankee Pump Governors make the hardest pump work easy as the easiest. Windmills turn in the lightest breeze. Managing agent wanted for each county. Money in this for you. Write to-day. BANE MANUFACTURING CO. (Dept. 2) 25 W. Washington St., CHICAGO. FARM FENCE, 18 to 24 cents per rod. Box 17, Buchanan James Co., Smithville, Ohio.

The Sugar Bush.

MAKING A CHOICE PRODUCT.

Color and flavor are imparted by the nature of the soil. In these varying colors and flavors, each is but the natural pure product of the maple. To test your maples, know of no better way than take sap freshly dropped to the house and upon dining-room stove, in tin pans, boil it to syrup and sugar. The product will be a good sample of what your maples are capable of producing. Then endeavor to bring your entire outfit up to the perfection that you can make a similar article.

To produce the best of which your maples are capable, careful, rapid movement, the soonest that it is practicable to gather the sap and reduce it to syrup and sugar with cleanliness in every detail, is essential. If you are to build new, locate the sugar house where you can have the sap and empty into the tank with the least spouting and handling possible, for sap is quick to receive color and flavor. Whatever kind of system of boiling you have, let it be continuous until the sap is reduced to syrup. There is a sediment in sap, although not perceptible until reduced to about 9 lbs to a gallon. By using proper strainers it can be taken out; it will generally settle to the bottom. Whatever boiling apparatus you have, arrange so you can continuously reduce your sap to syrup in small quantities, say from 1 to 3 gals at a time. If troubled with sediment, the safest way is, after straining, let it settle and then draw off from the surface. Do not overheat as the syrup is approaching to sugar.

I have used tapping bits from $\frac{1}{4}$ to 1 in, but prefer a 5-16 in bit with an oiled hard wood spout to fit the bit. The small bit cuts just as many grains of wood, therefore just as much sap and better, for there is not so large a space to receive air to dry and corrode and is less injurious to the tree. A well laid brick arch is most enduring and does equally as good work. Place a 35-flue heater or boiler at the rear of the arch to utilize waste heat. The sap is heated and boiled all at no expense, with a tin evaporator 42 in by 12 ft, divided into departments of 15 in connected by metallic stoppered tubes and each department with an outside tube, then every department could be at pleasure made independent to be emptied at any time if so desired. With the evaporator set on an inclined plane, there is an adjustable movement from receiving the heated sap from boiler until it is passed into syrup to be drawn off. With such an inexpensive apparatus, a fast evaporating is fully realized. A well located sugar bush should produce from 3 to 5 lbs of sugar per tree, varying as to seasons.—[C. P. Stickney, Windham Co, Vt.

THE VALUE OF BUCKET COVERS.

Bucket covers will save their cost in one or two seasons. They save time in stormy weather, as it takes considerable time to go around to several hundred trees and scoop snow off the



SAP PAIL COVER AND FASTENER.

ice in the buckets, and very often sap is running more or less during a storm and the sap must be thrown away with the water, or wood wasted in boiling water with the sap. After buckets are emptied, colored water will often drip from the overhanging limbs into the buckets. In windy weather, leaves and dirt will blow into the sap and mice, squirrels and insects meet death by drowning. Properly covered sap is always clean and pure. Covers may be made of $\frac{3}{4}$ in pine or spruce boards 5 or 6 in wide, matched or half lapped together, or plain edges with narrow batten strips, square shape, 2 in wider and longer than the diameter of the top of the bucket, with cleats at each end put on flush with the ends of the boards and on the under side of the cover. Cut a hole in the rim of the bucket large enough to admit a metal spout easily. If a wood spout is used, cut a notch in the top of the

spout to hold the bucket. Take two pieces of wire 2 or 3 in long, according to the kind of spout used, drive them into the center of the end of the cover $\frac{1}{2}$ to $\frac{3}{4}$ in apart and bend them down, place the cover on the bucket with the wires between the bucket and the tree, slide them down one on each side of the spout; they should be bent to bulge where the spout comes and be $\frac{1}{4}$ to $\frac{1}{2}$ in apart underneath, the lower points turned out so as to slip on easy. The covers should be painted with white lead and oil, or oiled with hot oil. I am using bass-wood covers, but pine or spruce would be better.—[Fred J. Johnson, Windham Co, Vt.

WELL BOILED DOWN.

For tapping, use a $\frac{1}{4}$ in bit; you will get as much sap as by a $\frac{1}{2}$ or 1 in bore. Tap old trees 3 in; smaller and secondary growth not over $1\frac{1}{2}$ in. The deeper the hole the greater the injury to the tree, as it never fills with new wood. Do not bore directly above or below a former boring, except at quite a distance, no matter how old the scar may be.

After boring the hole, draw the bit forcibly out to clear the hole of any shavings and prevent their souring. The best quality of sugar is made from trees which have more or less elevation and are away from large bodies of water.—[Timothy Wheeler.

Cleanliness and Dispatch are essentials in making prime sugar or syrup. Boiling sap or syrup over any considerable deposit of niter is done at the expense of both color and flavor of syrup. Boil to a density of 219 or 220 degrees to get a good precipitate of the carbonate of lime with malic acid in the sap. Use a felt strainer. Do nothing by guess; use thermometer and scales to determine the right density.—[Alpha Messer, Vt.

The Poorer the Quality of maple products the greater their value for adulteration. Producers do not realize half as much for inferior maple products as for a choice article. Ninety per cent of the adulterated syrup is glucose. The demands for pure maple syrup are unlimited.—[Ex-Gov Josiah Groat, Vt.

In Caking maple sugar for market, cook sugar to 238 degrees, later to 242 or 243, because of more foreign substance and less sugar crystals in the sap. Don't ship small cakes in large packages.—[C. D. Whitman.

There Is a Great Difference in the sugar production of maple trees. A maple at Duxbury, Vt. produced 32 lbs sugar in 1 yr; 5 qts sap from a tree at Corinth made 1 lb sugar; another tree ran 1 bbl sap in 24 hours, said Timothy Wheeler. To the sugar makers' assist'n.

Every Cattleman Needs One—One of the most important of the many "silent revolutions" which have taken place in farm methods in the past decade, has been the change in public sentiment in regard to dehorning cattle. When first practiced it was thought by many to be both cruel and unnecessary. Time and experience have demonstrated beyond question that it is not only a most humane practice, but is also highly profitable to the owner of the stock. The best authorities now endorse dehorning and it is practiced to-day in all the experimental stations and prize dairy herds of the country. Probably no one had more to do with bringing this about than A. C. Brosius of Cochranville, Pa. Early methods of dehorning were both crude and painful. Mr Brosius invented a dehorner in 1892, which has a quick, powerful action and makes a clean, smooth cut. The cutting edges of the blade are applied to four sides of the horn simultaneously, obviating entirely the cruel and painful operation of the straight, rotary or shear principle knives, which always result in more or less crushing or bruising. This dehorner was awarded first prize at the World's fair and has increased in popularity ever since. A beautifully illustrated catalog will be sent readers of F & H who write to the manufacturer for it.

Jumping at Chances—I wanted an early garden, but not having fall plowed and garden being wet threw

Cured By Swamp-Root.

To Prove What This Great Kidney Remedy Will Do For YOU, Every Reader of "Farm and Home" May Have a Sample Bottle Sent Absolutely Free by Mail.

Among the many famous cures of Swamp-Root investigated by Farm & Home, the one which we publish this week for the benefit of our readers, speaks in the highest terms of the wonderful curative properties of this great kidney remedy.

Kansas City, Mo., Nov. 30, '99.
Dr. Kilmer & Co., Binghamton, N. Y.

Dear Sirs:—"During three years I was frequently attacked with severe spells of sickness, many of these sick spells kept me in bed, dangerously ill, from three weeks to three months, under the constant care of the best physicians in Kansas City. The doctors said my kidneys were not affected, but I felt sure they were the cause of my trouble.

"Some doctors pronounced my case gall stones and said I could not live without a surgical operation, to which I would never consent. In May, 1898, I had the most severe attack, then the doctors said I could not live. It was during this illness that a friend suggested I try Dr. Kilmer's Swamp-Root. I began to take Swamp-Root regularly, and when I had used only three fifty-cent bottles I felt fine and was able to do more work than I had done in four years. It has made a new woman of me. I have only had one slight attack since I began to take Swamp-Root, and that was caused by being drenched with rain and catching cold. This stomach trouble had bothered me for about twenty years and had become chronic. I am now 44 years of age and feel much younger than I did ten years ago. My friends say I am looking

It used to be considered that only urinary and bladder troubles were to be traced to the kidneys, but modern science proves that nearly all diseases have their beginning in the disorders of these most important organs. The kidneys filter and purify the blood—that is their work. So when your kidneys are weak or out of order, you can understand how quickly your entire body is affected and how every organ seems to

How to Find Out If You Need Swamp-Root.

fall to do its duty.

If you are sick or "feel badly" begin taking the famous new discovery, Dr. Kilmer's Swamp-Root, because as soon as your kidneys are well they will help all the other organs to health. A trial will convince you and you may have a sample bottle free for the asking.

Many women suffer untold misery because the nature of their disease is not correctly understood. They are led to believe that womb trouble or female weakness of some sort is responsible for the many ills that beset woman-kind.

Neuralgia, nervousness, headache, puffy or dark circles under the eyes, rheumatism, a dragging pain or dull ache in the back, weakness or bearing down sensation, profuse or scanty supply of urine, with strong odor, frequent desire to pass it night or day, with scalding or burning sensation, sediment in it after standing in bottle or glass for twenty-four hours—these are all unmistakable signs of kidney and bladder trouble.

Other symptoms showing that you need Swamp-Root are sleeplessness, dizziness, irregular heart, breathlessness, sallow, unhealthy complexion, plenty of ambition but no strength.

Swamp-Root is pleasant to take and is used in the leading hospitals, recommended by skillful physicians in their private practice; and is taken by doctors themselves, because they recognize in it the greatest and most successful remedy that science has ever been able to compound.

To prove its wonderful curative properties, send your name and address to Dr. Kilmer & Co., Binghamton, N. Y., when you will receive, free of all charge a sample bottle of Swamp-Root, also a pamphlet of valuable information pertaining to kidney and bladder troubles, by mail, prepaid. This book contains many of the thousands upon thousands of testimonial letters received from men and women who owe their good health, in fact their very lives, to the wonderful curative properties of this great kidney remedy. Swamp-Root is so remarkably successful that our readers are advised to write for a free sample bottle and to be sure and mention reading this generous offer in Farm and Home.

If you are already convinced that Swamp-Root is what you need you can purchase the regular fifty-cent and one-dollar size bottles at the drug stores everywhere.

soil from a large hotbed at one side of this garden over the nearby surface uniformly 3 in deep. The hotbed soil was naturally rich and as underneath the soil was about 1 ft of well-rotted manure, when all was out and fired we had a garden bed that would produce anything and it was dry, so that we could go at once to work. We planted early peas, radishes, lettuce, onion seed and sets, early tomatoes, spinach and early cabbage. All grew and did wonderfully well and we had an abundance of fresh vegetables for the table long before our more phlegmatic neighbors. Not only did we have all we wanted

younger every day. Five years ago I only weighed 104 pounds; I now weigh 135 pounds. I freely give this testimonial for the benefit of those who have suffered as I have."

MRS. M. E. DALLAM,
Proprietress of Criswell House,
211 W. 5th St., Kansas City, Mo.



Swamp-Root will do just as much for any newwife whose back is too weak to perform her necessary work, who is always tired and overwrought, who feels that the cares of life are more than she can stand. It is a boon to the weak and ailing.

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for home use, but sold quite an amount. The early vegetables were followed by later ones, and all the preparation was to plow the ground with the hand-plow or hoe up the top with the hand-hoe. This plot of ground produced bountifully the entire season without any additional manure, only frequent cultivations with wheel and hand hoe.—[A. N. Springer, Tipton Co, Ind.

Beware of process or renovated butter. It is made from spoiled, rancid, poorly made and unsalable butter, made when milk is plentiful and butter cheap.

Large and Small Fruits.

TEST YOUR PARIS GREEN.

There are three simple tests for purity, two of which may be tried by anyone. Pure paris green dissolves freely and wholly in ammonia, forming a beautiful blue liquid. Any material which fails to dissolve is an adulterant. This test will not show the presence of free arsenic, however. Take a little paris green upon the point of a penknife and place it on a piece of glass, holding the glass at an angle. During the lower edge will cause the green to move down the inclined surface, leaving a bright green track if the sample is pure. In the case of many adulterated or impure samples the path would be white or light green.

The most satisfactory of the easy methods of testing is the use of the compound microscope. Place the sample on a piece of glass and treat as above. Then place the glass under the microscope, using a quarter-inch objective. The paris green will be seen in the form of clear, round balls. In impure samples there will be seen in addition, more or less material of irregular shape, usually white. If the sample contains an excess of free arsenic, which has been added in the form of a powder, it may be recognized as any other adulterant but when added during the process of manufacture it sticks to the particles of paris green and only produces the effect of making them more irregular in form and causing a tendency toward sticking together.

For Plum Curculio, either in plum or apple orchard, spray thoroughly just before blossom buds open, as soon as the petals fall and again in about a week with Bordeaux and paris green - [Prof S. T. Maynard, Mass.

For Currant Worms, spray when the first young worms are noticed. If the worms come on before the currants are out of blossom, spray before they bloom. Use paris green or white hellebore if you can get it fresh.

The Kerosene and Soap Emulsion, the vilest of concoctions, is doomed. The kerosene and water emulsion is to take its place. The two great difficulties, mechanically, the mixing of water and oil and the securing of power enough to mix the liquids and throw the spray, will be overcome. Automatic pumps for this purpose are not yet perfect, but some of them are perfect enough to be useful and reliable and they indicate that we may expect better things. - [Prof L. H. Bailey, N. Y.

The Apple Tree Anthracnose is a new disease affecting the apple orchards of the Pacific northwest. It attacks chiefly the branches under 2 or 3 inches in diameter, appearing with the autumn rains as depressed, brown areas of bark.

Look Out for the Poisons-It is a dangerous thing to have the general run of farmers buying white arsenic for spraying and mixing and boiling, it themselves. One has only to inspect the ordinary farmstead to see how careless the owner is about things which require careful handling and weighing. The refuse is thrown in the yard or into a stream. Utensils are left where they were used. There are farmers who are otherwise, and if they have much spraying to do, the white arsenic can be recommended confidently; but I believe that most people should buy their poisons ready prepared, even if the cost is somewhat greater. - [Prof L. H. Bailey, Cornell Exper Sta, N. Y.

Fully three-fifths of the varieties of pears are wholly self-sterile or are greatly improved when cross-pollinated. Some of the more common self-sterile sorts are Bartlett, Anjou, Boussock, Clairgeau, Clapp's Favorite, Sheldon, Louisa Jersey and other varieties.

F & H is more interesting and full of up-to-date talk in every way than ever and the best agricultural paper that is taken here, where all kinds of farming papers are subscribed for. [Mrs Maude S. Jacobs, Tompkins Co, N. Y.

Market Gardeners

make money by getting their produce into market early. This is best accomplished by taking advantage of the stimulating effect of

Nitrate of Soda.

It forces the most rapid growth and imparts quality, crispness, tenderness, etc. All about it in our free book, "Food for Plants." Ask for a copy. Address, John A. Myers, 12-B John St., New York. Nitrate for sale by fertilizer dealers everywhere.

Write at once for List of Dealers.

MONEY IN MELONS BUCKBEE'S NEW STRAWBERRY MELON which created such favorable comment last season was hybridized with the strawberry, the result being the most delicious strawberry flavor. Hardy, good market size, excellent shipper. It will please everybody that grows it and all who eat it. WRITE TO-DAY FREE PAPER. H.W. BUCKBEE ROCKFORD SEED FARM, ROCKFORD, ILL. BOX 681.

43 FLOWERS, 30¢ 20 Pkts. Seeds, 23 Bulbs Most popular varieties, postpaid. 1 pkt. Mary Sempie Asters, colors. 1 Alyssum, Little Gem (mixed). 1 Beautiful Hybrid Argemone. 1 Bouquet Chrysanthemum. 1 Umbrella Plant. 1 Carnation Marguerite. 1 Double Chinese Link. 1 Heliotrope mixed. 1 Forget-me-not Victoria. 1 California Garden Heist. 1 Petunia Hybrid Mixed. 1 Phlox Drummondii. 1 Poppy, New Shirley. 1 Sunshrine Pansy. 1 California Sweet Peas. 1 Lovely Butterfly Flower. 1 Giant Veronica, mixed. 1 Diamond Flower. 1 Washington Weeping Palm. 1 Japan Morning Glory. 23 BULBS - Two grand new "Scarlet King" Cannas Lilies. 1 Double Tuberosa "Hybrid" color 2 Butterfly du 45 Spanish Iris. 1 Tuberosa climb'g Wistaria. 1 lovely in 2' x 2' Ozalis. NEW FLORAL GUIDE - 124 pages. FREE with every order. The Conard & Jones Co. Box N, West Grove, Pa.

A valuable book for practical flower and vegetable growers. Free for the asking. Address J. S. H. CRUICKSHANK & SON, HARTFORD, CONN.

IRON AGE EASE The test of a tool is the ease with which it does its work. Good tools make good work easy, rapid and economical. The No. 4 IRON AGE Combined Seed Drill and Wheel Hoe for 1900 does nine different things and does them all better than any other six tools you could buy. It takes care of everything from first to last. It plows, levels, furrows, sows, covers, rakes, cultivates, hoes and hills. Send for a free copy of the famous Iron Age Book for 1900. It's a money-making guide. BATEMAN MFG. CO. Box 114, Crenlooh, N. J.

WE SAVE YOU MONEY ON FERTILIZERS. Buy your fertilizers Direct at Wholesale Prices, and get your money's worth. SPECIAL OFFER TO CLUB PROMOTERS. WRITE FOR PRICES, SAMPLES AND PAMPHLET. WALKER, STRATMAN & COMPANY, Pittsburgh, Pa.

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AN AUTOMATIC STRAWBERRY A time, labor and money saver. Killall weeds and fly all of crop-any kind of insect. Invaluable to the strawberry man. Splendid for use in spring. Makes it look perfectly increasing yield. Best best sugar and candy, cuts 7 ft. wide. Works 2 acres per hour. All with best oil tempered steel. Cash price \$7.50. Freight out of Mo. River and north of Ohio River only 25c to 75c. Write for big catalogue.

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PROTECT Your Fruit Trees from roaches, thrips and all pests by painting the tree's trunk with LEE'S LICE KILLER. Hang saturated cloths the limbs, rotate occasionally as shown in cut, and a big crop of fine fruit is secured. Don't fail to send for the circular. GEO. M. LEE CO., Omaha, Neb., or 80 Murray St., N. Y.

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TREES, Plants and Vines, Fruit and Ornamental. Low prices. Send for Catalogue. Satisfaction guaranteed. Alliance Nurseries, Rochester, N.Y. EVERGREENS Best Quality, \$1.00 to \$10.00 per 100. Also Full Nursery Stock. Write Big Spring Ferguson. Agents Wanted. Catalogue FREE. O. WILLS, Box 100, Dundee, Illa. FREE ILLUSTRATED CATALOGUE Choice Evergreens, Shrubs, Fruit and other plants. Catalogue, Water Lilies, etc. Free. Write for it or send when desired. N. S. PETERSON & SON, Box 1, Montrose, N. Y.

SEED POTATOES. Best pure stock, leading early and late varieties, cheap. Illustrated catalogue free. A. G. ALDRIDGE, Fishers, N. Y.

The Mapes Manures. FARMS GROWING RICHER EACH YEAR.

Send postal for latest pamphlet, "Twenty Years After," experience on a poor, almost worthless field (seven acres,) since 1879, up to date, that had been brought up into good condition with profitable crops, potatoes, oats, corn and hay, from the start only the Mapes manures used. The New England Farmer said of this field. "Now that seven acres is easily worth as a property, paying dividends at five per cent. on \$4,000."

I have used the Mapes manures over twenty-five years almost exclusively. When I started to use the Mapes manures I had one of the poorest farms in the county, and at present time I have one of the best in the county. It you don't believe it, come and judge for yourselves. I wish you could have seen my hay crops for the last ten years, no better in the county, and I owe it all to the Mapes manures, as far as fertility is concerned. - [Lewis Bettz, North Penn, Pa.

Before using Mapes manures we thought it a big thing to grow 20 bushels of wheat to the acre, but can grow now on the average of from 27 to 47 bushels, and get far better grass. We cut in the year of 1898 about 5 tons of hay on 25 acres, and I think that speaks very well for your goods for one who does not buy any manure. We keep four horses on farm and four cows, so you may know about what manure the land gets. - [R. M. Everett, Lawrence Station, Mercer County, N. S. June 10, 1899.

Our section is overrun with agents offering fertilizers at very low prices; and with many of our farmers the very low price backed by the assertion of the agent that, "it is just as good or better than the so-called high grade," will win every time with the man that knows nothing about fertilizers. My land is a standing practical advertisement of the merits of the Mapes manures. I have used them almost exclusively for the past sixteen years, with results that should be convincing to anyone seeing the permanent improvement in the productiveness of my farms. My crops are wheat, corn, oats, potatoes, clover and grass. - [D. R. Merkel, Shiremanstown, Pa, June 9, 1899.

THE MAPES FORMULA AND PERUVIAN GUANO CO., Send postal for pamphlets. 143 Liberty Street, New York.

Gardening Under Glass.

FRUIT GROWING UNDER GLASS.

The subject of growing fruit under glass has not received the attention that it deserves in America. In England it is a great industry and large establishments are devoted to growing fruit. There is one near London of 40 acres covered with glass, which gives employment to 500 men. Fruits grown under glass attain a higher degree of perfection in size, color and flavor than the same varieties grown out of doors, but the great advantage is in ripening them earlier and in growing certain very choice varieties which could not otherwise be perfected. For instance, the vinefera, or hard-meated, grapes like Black Hamburg cannot be grown in this country except under glass.

The fruits that are commonly forced are grapes, peaches, nectarines, plums and apples. Grapes are grown more largely than anything else and are raised in a commercial way in America. The earliest houses are started up in January and the grapes mature in June. But many grapes are grown in what are known as cold graperies. These have little or no heat at all and the vines are not forced so early in the season. The grapes begin to ripen in August and continue until the holidays. The vines are always planted in beds or borders either inside or outside the house, the latter giving the best results, but requiring more care.

Tree fruits are commonly planted out in the greenhouse, and like grapes, require expert knowledge to handle them. The watering, pruning, thinning and disbudding are all operations that require great care. But the fruits are not hard to grow after one understands their needs. The houses are generally started up in Jan or Feb and the fruit brought to maturity in May, June and July before outdoor varieties are ripe. Nectarines and peaches often bring as high as \$4 per doz, and some trees will ripen as many as 12 doz. The trees may also be grown in pots and not forced with artificial heat. They are stored away in winter and brought out in the late spring.

PLANT CLOTH VS GLASS.

Plant cloth is much cheaper than glass to cover hotbed frames and superior for many purposes. The beds do not dry out so quickly under it, the plants never burn, they get more ventilation and grow harder and stronger. In the very early spring or late winter a covering of plant cloth is not as warm as glass, but during cold spells an extra cloth-covered frame may be put on. If a layer of thick paper is placed between the two frames it will keep out cold better than glass. The frames may be cheaply made of boards, 1x2 in in size, halved at the ends and nailed with clinch nails. The handiest size is 6 ft square with a center piece. The cloth should be stretched slightly and nailed with big headed tacks. For hardening off plants that have been started in hotbeds or greenhouses there is nothing equal to a cold frame covered with plant cloth.

It is a Mistake to try to grow several varieties of vegetables in the same house unless they are carefully chosen. Cucumbers, tomatoes, melons and beans want a high temperature, while lettuce, radishes, beets and cauliflower need from 10 to 20 degrees cooler. A little care in selecting kinds as near alike as possible will prevent disappointment to the amateur.

To Make Waterproof Muslin, close all seams on common cotton and tack to the frame. Heat over a slow fire until well mixed and apply while hot the following: Old, pale, linseed oil 3 pts, sugar of lead 1 oz, white resin 4 oz. Sugar of lead should first be ground with a little linseed oil, then the rest of the oil and finally the powdered resin added.

Tomatoes of the smaller varieties bring a good price in the old country and can be sent safely in cold storage.

The earliest kinds of potatoes and of dwarf habit are the best for forcing as an early crop. Early Rose is an old favorite.

Care should be taken to air tomato plants so as not to chill them and at

the same time to air them sufficiently to prevent them from being drawn up and becoming long and spindling. As soon as the heat ceases in the seedling hotbed, they should be transplanted into another hotbed with good bottom heat, setting them 6 or 8 in apart each way, according to the size of the plants.

SPRAYING FRUIT TREES.

The question of spraying fruit trees to prevent the depredations of insect pests and fungous diseases is no longer an experiment but a necessity.



Our readers will do well to write Wm. Stahl, Quincy, Ill., and get his catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had for the asking.

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Fruit, Plants, Trees, Potatoes & Strips. Quality, first consideration. Satisfaction guaranteed. CATALOGUE FREE—You need it, no matter how many others you already have. It's brim full of good things at lowest prices. For 10c seeds, etc., we will send 1 pkt. each—Advance Tomato, Princes of the North, Black Diamond, Waine Wagon, Jap. Imp. Mar. the Glory, High Leg, Italy, etc. and choice Broad Fern. This collection without names 25 ct. 1/2 doz. \$1.00. For 50c we will send by mail any one of the U.S. 1 also this season 10 choice varieties of Cereals covering season from early to late in time of ripening. For 7 names as above we will add to this set, 2 Miller Red Raspberry plants. Mention this paper. FORD SEED CO., Dept. C, Havana, C.



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Seeds Free! We want the names of live, active market gardeners. Send us two names and we will mail FREE one pkt. of Globe Radish and one of Iceberg Lettuce, together with our Annual for 1900, a mirror of American Horticulture. It tells the whole story of garden, lawn and farm. It's free.

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Perhaps you know seeds, perhaps you do not

In either case you can be absolutely sure of getting only the best seeds that grow by buying direct from W. ATLEE BURPEE & Co., Seed Growers, Philadelphia, Pa. BURPEE'S FARM ANNUAL FOR 1900 is mailed free to all who take pleasure in gardening. It is a handsome book of 160 pages, and tells the plain truth. Every word is carefully weighed, and every picture true to nature. Send your address on a postal card to-day. W. ATLEE BURPEE & CO., Philadelphia.

HAMMOND'S Michigan Northern-Green Onion Seed. I sold 54,000 lbs. of this seed in 1899. My customers report yields of 450 to 1,200 bushels of onions per acre from this seed. Some of them intimate that this seed is worth 60 to 80 per lb. more than the California grown seed sold by anybody. I guarantee this seed to be new and freshly grown. We have seed of all the leading and standard varieties. We make special prices on large lots. Onion sets of all varieties. Buy direct from the grower. Catalogue—entire and illustrated—free. Harry H. Hammond, Seedman, Box 12, YIPPIE, MICH.

FOR 14 CENTS We wish to gain this year 200,000 new customers, and hence offer 1 Pkg. City Garden Best, 10c 1 Pkg. Best of Emerald Cucumber, 10c 1 Pkg. La Crosse Market Lettuce, 15c 1 Pkg. Blueberry Kale, 10c 1 Pkg. 15 Day Radish, 10c 1 Pkg. Early Ripe Cabbage, 10c 1 Pkg. Early Disease Onion, 10c 1 Pkg. Brilliant Flower Seeds, 10c Worth \$1.00, for 14 cents. \$1.00 Above 16 Pkgs. worth \$1.00, we will mail you free, together with our great Catalogue, telling all about SALTER'S MILLION BOLLER PEATY upon receipt of this notice & 14c stamp. We invite you to trade, and know that you can't try our seeds for 14c. 1900 Prizes on Salter's 1900—largest earliest Tomato Giant on earth. F. J. JOHN A. SALTER SEED CO., 24 CROSS ST., WIS.

SPRAY PUMPS ALL BRANDS. \$17 outfit for \$8.50, express paid. Will spray a 10 acre orchard per day. 100,000 in use. Satisfaction guaranteed or money refunded. 1900 catalogue free. Agts. make from \$5 to \$15 per day. New Improvements. Free Trial. Mention this paper. P. C. LEWIS MFG. CO., Catskill, N. Y.

POTASH gives color, flavor and firmness to all fruits. No good fruit can be raised without Potash.

Fertilizers containing at least 8 to 10% of Potash will give best results on all fruits. Write for our pamphlets, which ought to be in every farmer's library. They are sent free. GERMAN KALI WORKS, 93 Nassau St., New York.

375000 TREES

150 Varieties. Also all kinds vines and small fruit plants. Everything for parks, gardens, orchards. 2 New Red Cross Currant mailed for 10c. Large cat. free. Green's Nursery Co., Rochester, N.Y.

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10 VEGETABLE NOVELTIES, 25 Cents. For 25 cents we will send 10 full size packets of the following new and sterling varieties of Vegetable Seeds. Paul Rose Muskmelon, Wonderful Sugar Watermelon, All Seasons Lettuce, Grand Pea, Scarlet Globe Radish, Mammoth White Hubbard Squash, Prize-taking Onion, Earliest Sheffield Corn, Arlington Cucumber, Detroit Beet. Catalogue of Vegetable and Flower Seeds, free. THE PAUL COMPANY, Red Bank, N. J.

Soon Saves Its Cost. A 12-Year Old Boy can do more and better work, either in the field or garden, with the HAND CULTIVATOR than three men can do with common tools. Plows, hoes, cultivated outside or between rows. Has agent in your town and \$1.35 for sample delivered and terms to agents. Ulrich Mfg. Co., 42 River St., Rock Falls, Ill.

"Planet Jr." Two-Horse Implements embrace among others this Two-Row Pivot-Wheel Cultivator, which, with the attachments, easily and quickly converts it also into a Plow, Furrower, and Ridger. It is mounted on pivot wheels which makes it easy to steer—holds the shovels close up to the row on a hillside. They are adjustable on the axle to fit wide or narrow rows—28 to 48 inches. With furrower it marks out two rows for planting 28 to 42 inches apart. After planting, these same two rows may be covered satisfactorily at the same time. Everything of the best material throughout and all fully up to the high "PLANET JR." standard. Our full line embraces Seed Drills, Wheel Hoes, Horse Hoes, Cultivators, Harrows, Two-Horse Cultivators, Sugar Beet Seeders and Cultivators. We have published for distribution in 1900, an edition of 300,000 catalogues of our "PLANET JR." goods. This catalogue is profusely illustrated with all our tools, many of them as in actual operation, at all kinds of work in all countries, at home and in many foreign lands. It is openly acknowledged to be the most comprehensive and valuable work of its kind ever published. We mail a free copy to every address. S. L. ALLEN & CO., Box 1107-K, Philadelphia, Pa.

Table of agricultural implements and prices: \$18.50, \$10, \$11.00, \$24.75 to \$25.50, \$2.50, \$1.00, \$3.20. Includes descriptions of various tools like cultivators, plows, and seeders.

Organize and Educate.

FARMIN' DON'T PAY.

Oh, I know it for a fact, sir,
Farmin' don't pay.
In my barn this line I've tacked, sir:
"Farmin' don't pay."
I have had the best of training.
On the farm my bread I'm gaining,
But my faith in farms is waning;
Farmin' don't pay.

Yes, I guess you're right about that;
Farmin' don't pay.
Seen your farm, I don't doubt that
Farmin' don't pay.
Drainage, culture you don't practice,
Every tool you've shown me cracked
is.
I'll agree the honest fact is
Farmin' don't pay.

Had you tried fertilization,
Farmin' would pay.
Drainage, moisture-conservation,
Farmin' would pay;
Practiced food elaboration,
Tillage, weed-eradication;
You'd declare to all the nation:
"Farmin' does pay."
M. G. KAINS.

ECONOMY OF TIME IN FARMING.

Written on the face of my father's old clock were these words, "Time is money." These words faced me for 20 yrs. I first wondered what they meant, afterward wondered why others didn't know. When I left the quiet, easy-going country and saw the bustle and stir of city life I thought others did know.

Save every minute you can and you will save money. A farmer who paid one hand one-third more than he did his other hand said one worked as hard as the other, but did a third less. I asked him why. "Because he puts on too many extras," he replied. These "extras" are where the loss of time comes in. I know a man who has his corn bin in the left of the barn when he could have had it on the feed floor. He climbs up and down that ladder two or three times every day to feed his horses. The unnecessary labor caused by this ill-arranged crib costs him not less than \$25 every 10 yrs. If time is money. One of my neighbors has a crib 100 ft away from his feed room. For 40 yrs he has been carrying a few ears two or three times a day from the crib to the feed room. What has that crib cost him?

I knew a farmer who each year had his hands cutting down corn stalks with hoes in May. It would have been cheaper to have knocked them some cold morning with a team and pole at \$10 a day. I went into a barn the other day where there were 12 horses and 2 cows. A man was carrying water to them from a pump 300 ft away. He said it took him 1/2 hour each day to carry the water. That would amount to over 15 days in a year, or since time is money, \$15 a year. For half that sum a pipe could have been run from the well to the barn and a 50c bbl would have made two tubs that would have placed the water in reach of all his stock without going out of the barn. He was throwing away \$180 dollars every 10 yrs.

I stopped with a farmer in Pa who had a spring about 100 ft from the house, but in a hill on a level with the comb of the house. A deep path was worn in the hillside where he had been carrying down water in buckets for 30 yrs. What a vast amount of labor and money and comfort had been wasted for the want of a little sense and a few pipes! Almost every farm has some of these "extras" that could be removed were it not for stupidity.—[W. L. Anderson.

The **Element of Character** which many boys lack due in no small part to their home surroundings or bringing up, is self control. In a fit of passion, the young boy strikes another or destroys some article or attempts to run away or do some other foolish act. This same lad, as soon as his frenzy is over, is penitent, humble and full of promises to do better. Anything that will cultivate self-control and true self-respect is of inestimable value to boys of this very sort of disposition. And nothing is more encouraging and inspiring than to see a boy gradually but surely acquiring that power with-

out which his life can be nothing but a failure, and with which he will be "greater than he that taketh a city."

Making Captains of Industry—It is the duty of the university to train men to manage corporations. To manage a great corporation so as to subserve the best interests of all concerned is a task that demands an honest, able, far sighted and great hearted man, a king-like man in the best sense of the word. With such men as railroad kings, coal barons, captains of industry and merchant princes, consecrating their genius to the best service of stockholders, laboring men, consumers, community, the state, the glory of the 20th century must surpass that of all the past, and industrial freedom and prosperity of the people, by the people and for the people become an assured fact.—[Dr C. S. Walker to Miss W'd of Agri.

A Subscriber's Experiments—Last year I tested foreign seeds for the U S dept of agri. I found one cucumber, a Russian sort, that matured fruit in four weeks in the open ground. Another Russian sort produced cucumbers as long as a man's arm. One kind of field corn matured in 60 days; the ear was small. Three varieties had extra large kernels, some measuring an inch in length, and the stalk of each was immense. They came from the South Sea Islands.—[J. H. Gray.

Some Good Ministerial Advice—The spring will soon be here and the wise farmer will be laying plans for his kitchen garden. The farmer who does not have a good garden, well stocked with fruit and vegetables of all kinds, won't be able to enjoy heaven if he ever gets there. He will have so much dyspepsia and melancholy in the world that eternity won't be long enough to get his system in shape to enjoy the next. The farmer who does not have a good garden, so that his family can have fresh vegetables and fresh fruit in season, is an enemy to mankind, for the reason that he sends out into the world his progeny with sour stomachs and sour dispositions, to have about the same effect on society as a carbuncle has on a man's nose.—[Frank Hunt, Ont.

Farming, like any other business, should be ruled by ideals. The experiences of a single season do not prove or disprove things which are true.

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YOU can build up a regular trade in a short time; permanent customers who will buy every week. You can thus make money a "part" of your school duties, and be in "spendthrift" with your school mates.

Send for Fall Particulars

REMEMBER that THE SATURDAY EVENING POST is 171 years old; the oldest paper in the United States, established in 1728 by Benjamin Franklin, and has the best writers of the world contributing to its columns. So popular that a hundred thousand new subscribers were added to its list the past year.

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there is nothing that will so completely relieve the farmer or gardener from the heavy lifting and positive drudgery as this

ELECTRIC LOW DOWN HANDY WAGON.

Among the advantages are—that it is low and easy to load; that large loads may be easily placed upon it; that the broad-tired Electric Steel Wheels will not cut in and "rut" on meadow or pasture land; that for the same reason much larger loads may be drawn on stubble or plowed land and that the draft is much lighter. It is specially strong, being guaranteed to carry 400 lbs. The front and rear hounds are made of specially formed angle steel. Wheels are the famous Electric Steel with either direct or staggered oval steel spokes. Axles of best seasoned swamp white oak.

This wagon is equally desirable in hauling ensilage, corn, corn fodder, hay and grain in the straw; for clearing up land and hauling logs, wood, stumps, stones, loads, etc. Saves more hard labor for man and beast than any implement on the farm. Send for free catalog.

Electric Wheel Co.,
Box 56, QUINCY, ILL.



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- Model 1894. 30 W. C. F. caliber, "Take Down," weight 7 3/4 pounds.
- Model 1892. 44 and 35 caliber, "Take Down," weight 7 pounds.
- Model 1856. 45-70 caliber, "Extra Light," weight 7 pounds.

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It's the **CHANDLER LOCK** and it makes the stay stay where you put it, on any kind of wire—hard steel or soft, large or small. That's why **CHANDLER FENCE** is superior to others. Anyone can tell it, and it's right, strong, safe and handsome. Agents make money selling and holding it. **WE WANT AGENTS** everywhere and will grant exclusive territory on long terms. **CHANDLER FENCE CO., 12 S. Howard St., Baltimore, Md.**



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P. S. EUSTIS, Gen'l Pass'y & Agt., C. B. & Q. R. R., CHICAGO, ILL.

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"WATCHING THE GAP," is a treat. Page Gates did it. Send for description. **PAGE WOVEN WIRE FENCE CO., ARLING, ILL.**



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Field and Hog Fence with or without bottom cable barbed. H. K. S. Poultry Fencing. Lawn and Farm Steel Gates and Posts.

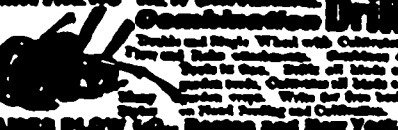
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ANTHONY'S NEW UNIVERSAL DRAIN

Combination Drain
Sinks and traps. Works with Cellar, Paved and Side streets. Suction & Push in Use. Sifts all kinds of garden trash. Cleans all kinds of gutters. Works on all kinds of roofs. Works on Wood Paving and Cellar. Works on all kinds of drains.

ANTHONY FLOW CO., Boston and New York.



The Dominion Over.

ONTARIO'S CROPS LAST YEAR.

The returns to the Ont. dept of agri for 1899 have been sent in by about 2000 correspondents. Secretary James makes the following official estimates therefrom:

Table with 3 columns: Crop, Acres, Yield per a, Total bushels. Rows include Fall wheat, Spring wheat, Barley, Oats, Rye, Peas, Buckwheat, Beans, Potatoes, Mangels, Carrots, Turnips, Corn.

There was also raised 151,375 a corn for fodder and silage, yielding 287 tons p a, or a total of 1,687,750. The 2,563,422 a hay and clover yielded 1,49 tons p a, or a total of 3,498,705. The total average under crops was 8,775,920 in 1899, there were 8,852,212 a. Apples yielded 18,126,439 bu., or an average of 3.2 bu p tree of bearing age. Of live stock, there were horses 615,574 head, cattle 2,318,555, of which 955,000 were milch cows, sheep 1,772,600, hogs 1,571,000, poultry 9,344,000. During the year there were sold or slaughtered horses 15,500, cattle 555,683, sheep 662,238, hogs 1,876,466, poultry 3,102,614. The wool clip was 3,525,122 lbs.

The Horse Market is in a peculiar condition. The home government has placed an order for 1000 head for use in Africa, but before this order was placed, had bought heavily all through Ontario. With the cream of export horses bought up, the statistics recently given out from the office of the minister of agriculture for 1899 are of interest. In 1899 there were a total of nearly 650,000 horses in the province, in '93, 655,000, '94, 677,000, '95, 648,000, '96, 624,000, '97, 612,000, '98, 611,000. The stock of horses on hand last year included 420,500 working horses, 77,500 breeding mares and 102,000 of all others.

Ontario-Butter sold at 25 to 28c on Feb 1 at Hamilton, eggs 30c, wheat 66c, oats 30c, potatoes 28c, hay \$10 to 12, oat straw started at \$7. The winter has been against wheat. About one-half the peach trees of Kent Co were killed one year ago. There has been no course uniformly followed with regard to replanting, a few replanted some have planted plums, and one field planted with melons gave an enormous yield. No other kind of fruit will quite supply the place of the peach.

Quebec-Last year was an average prosperous one with farmers throughout Huntingdon Co. Crops were very good and butter and cheese sold for higher prices than for several years. Butter was sold at 21 to 24c per lb, and cheese 11 to 15c. Butter and cheese will probably have a ready market at good prices this year, as the demand is brisk. The outlook is also favorable for other farm products. Very little snow and much changeable weather, rather incli. to be mild.

Nova Scotia Farmers of Kings county are fairly well satisfied with the sale of crops for 1899, and seem hopeful for 1900. Apples a fair crop and mostly sold, less if any, were borne by speculation. Any seed sown on the trees, so much for the orchard in a lump sum, and in this way realized more than they otherwise would. Apples in the warehouses and shippers' hands have in many cases turned out badly, partly on account of not keeping, and in some few cases, loss has come to shippers by parties putting up poor fruit. The high winds of last fall made a good many drops and we fear some ardent persons have put some of them up and sold for picked fruit. This short-sighted policy sooner or later comes back on the seller's head. Potatoes have been

VEGETABLE PEACHES The marvel of the century: grows from the seed in 30 days, perfectly delicious. Large Packet, Catalogue of vegetables and a 15c. Present all for 1 Gene A. T. COOK (Seedman), Rock City, N.Y.

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low, although a brisk demand; 40c has been the highest price paid. Shippers are trying to buy at 20c, but stocks are not abundant and farmers not inclined to sell at those figures. A very mild winter and very little snow.

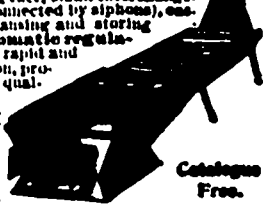
A Big Lumber Cut was made during 1899, estimated at 300,000,000 sq ft. The cut in 1898 was 250,000,000 ft. The record year was in '95, when 340 million feet were cut.

No better investment can be made each year than the spending of a few dollars for some first-class, up-to-date books treating on the various lines of agriculture. If only a half dozen books are bought a year, a good-sized library will be got together in a comparatively short time.

A good topic to discuss in the grange or farmers' club: Wherein is a small hand milk separator worth more than a good sewing machine with attachments? Farmers know how to farm but they

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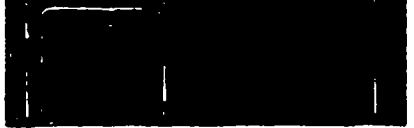
do not know how to vote. The consequence is they are robbed by law, or perhaps better said, by lawyers.—[T. H. Laws, Watford, Ont. England has bought 12,000 tons Canadian hay at \$2 p ton for use in Africa. The wise farmer takes precautions.

The Permanent Effect as well as immediate profit from the proper use of fertilizers is strikingly proven by the many years' experience of practical farmers given in the new Mapes pamphlets. The Mapes manures are justly popular with growers of special crops, truckers, fruit growers and other farmers who realize large profits. All such, as well as farmers who would be equally successful will do well to send a postal to the Mapes Formula and Peruvian Guano Co., 112 Liberty Street, N. Y., asking for a free copy of Twenty Years After, to which you are entitled as a reader of Farm and Home; to others the price is 25c.

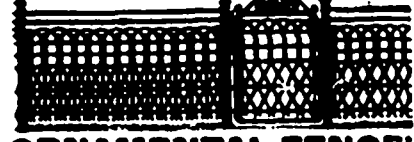
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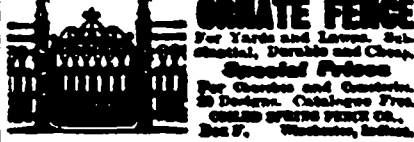


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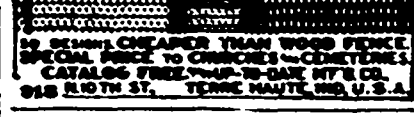


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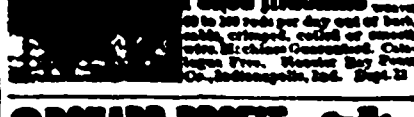
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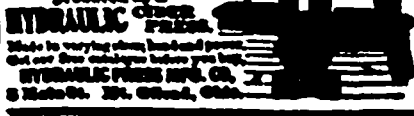
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Canadian Farm Affairs.

PROFITABLE WAYS OF FEEDING

High class stock keeping is as necessary to high-class farming as the latter is to the former, and either is as dependent upon the other as two distinct branches of one business can possibly be.

No line of stock can be economically fed under perfect conditions except through the products of the farm upon which they are kept, while stock must be the medium through which the crops grown on the farm find the most satisfactory market.

What is considered stock keeping in the truest sense of the word is where the stock on the farm is bred on the farm and finished there or sold to be finished elsewhere, according to the surroundings or the capacity of the farm.

Finishing a bunch of steers for the block is usually the work of a few months, depending upon their condition during the time kept at high pressure or on full feed, hence they can stand more highly concentrated food and food that will heat the blood will not necessarily injure them to any extent.

French-Canadian Cattle have been described and illustrated interestingly by Dr J. A. Couture of Quebec. These are a very popular breed of cattle and are generally kept on the farms of the Province of Quebec.

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follow the feeding of other foods, such as grain, etc.—[Frank R. Shore, Middlesex Co, Ont.

ONTARIO DAIRY PRODUCTS.

The recent marvelous growth of the dairy industry in Ontario is apparent from a glance at the statistics compiled by the provincial bureau of industries. The value of the cheese product has increased steadily each year from \$7,700,000 in '91 to 9,500,000 in '94, 11,700,000 in '97 and 10,300,000 in '98.

Equally as surprising is the growth of the creamery or butter industry. The value of creamery made butter in '93 was \$574,000, '95 863,000, '96 1,101,000, '97 1,404,000, '98 1,632,000.

Table with 6 columns: Year, Milk cows, Factories, Cheese used (Millions pounds), Butter made (Millions pounds), Creameries. Rows for years 1898-1891.

Growing Extra Large Tomatoes—If plants are wanted larger and more forward than ordinary boxed plants, order from a potter pans 4 in deep and 3 in wide at the top and 6 in wide at the bottom, inside measurement.

Figs with Rheumatism should be purged with 2 to 3 oz epsom salts, according to size of the animal. Give also 10 to 20 grs nux vomica three times daily to overcome paralysis of the muscular coats of the stomach and intestines.

must be some organization in which the farmers could take united action to protect their interests. The farmers had deserted the grange at the instigation of men who boomed other orders to boost themselves into position and power.

The Wolf River Apple resembles the Emperor Alexander somewhat and is said to be a seedling of that variety. The fruit is hardly as large as the Alexander, but is of little better quality.

Fertilizing Mangels—The past 3 yrs 27 tests have been made of fertilizers for mangels, at the Ont agricultural college, Guelph. Unfertilized land averaged 19 1/2 tons p a and that treated with nitrate of soda 24 1/2 tons.

Hardy Apples Along the S Lawrence—For summer, Yellow Transparent, Duchess, Red Astrachan; early winter, Fameuse, Scarlet Pippin, McIntosh and Wealthy; late winter Scott's Winter, Salome, Seek, Golden Russet, Yellow Belleville, Ontario, Talman Sweet and Canada Red.—[W. A. Whitney, Ont.

The San Jose Scale is with us to stay. The kerosene-water emulsion, one part oil to five of water in summer and 1 to 4 in winter, is a specific for its destruction, says Prof Bailey.

The Cow's Tail doesn't bother a certain Holstein dairyman, while milking, that I recently visited. Stepping in his stables I noticed that just out of reach of my hat, about 7 ft from the floor, above the cow's hips, a No 9 wire, drawn tight, ran the whole length of the stable.

The first thing in the way of attention a young lamb wants is to see that the ewe's teats are free from all obstruction. Clip the wool from the udder and start the milk flow with the fingers. If a young ewe refuses the lamb to suck, put her in a narrow lath stanchion and hold the lamb; a few trials will be enough and the ewe will take her lamb.

A large majority of feeders make a mistake in holding fat cattle that are ready for market. A man is feeding 100 to 150 head of steers and there are

3/4 or 2-3 of them fat that could be shipped at any time. Very few will ship them out as they are not all ready, and they hold on to the good ones until the entire bunch is ready. Fat cattle should be shipped as fast as ready.

The south-central part of Manitoba, including 12 counties, had 3148 a in potatoes last year and produced an average yield of 194 bu p a, or 610,700 bu. We doubt if any other section, except around Greeley, Col, can show such a record.

While the increase in the number of hogs more than 1 yr old kept in Ontario the past 6 yrs is only about 34,000, statistics as to the number under one year show an enormous increase, from 765,659 in 1892 to 1,376,000 in '99, or almost twice as many. Somebody must be eating pig!

Remember We P-y agents for Farm and Home a liberal cash commission instead of a premium if preferred. If you have a little spare time and would employ it profitably, write us to-day for our special cash terms.

A WONDERFUL INCUBATOR business has been done by the Petaluma Incubator Co of Petaluma, Cal, in their export as well as domestic trade. One Australian firm has bought 700 incubators. While this company has made the largest foreign shipment of any company in the U S, its home trade continues to increase rapidly.

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Success Without a Mortgage.

FIRST PRIZE ESSAY—125.

NOT BALDHEADED HUSTLING ON THE PRAIRIE To be successful in any occupation in this wide world you must take a pleasure in it, have energy and courage and a determined mind.



W. J. CASSON.

certain price we will receive for it, after we do raise it, do not always give it a rosy hue, but I am well satisfied with what I have accomplished. I have often been asked how I got through the hard times so well when so many others failed.

It is easy to say, keep out of debt, but whoever knew of a man who began on nothing, as most farmers do, and ever became worth much without going into debt? It is not going into debt for things needed that busts a man, it is for the things not needed. I have found out that a wagon paid for rides easier than a mortgage carriage, and a yoke of oxen paid for was safer to drive than a high-priced mortgaged team of horses.

I took Horace Greeley's advice and left my home, Rochester, N. Y., in May, 1882, and came west. Was then 21 years old. Settled on government land in Dak. This part of the country was just beginning to settle, and it did not take long, for by the spring of 1883 vacant land was quite scarce.

When I began turning the virgin sod, I was obliged the first year to double up teams with one of my neighbors. I broke 25 a of sod that year. The second year I bought another yoke of oxen and broke 90 a. Raised 480 bu wheat on the first year's breaking; the third year raised 1490 bu wheat and 600 bu oats; fourth year 2700 bu wheat and 700 bu oats. After 7 yrs had 300 a broken and into crops. Rented some land, to relieve me of so much work, and farmed about 160 a myself with varying success, according to the seasons.

I managed to pay cash for everything I have bought the past 7 yrs, so there is quite an item saved. Six years ago I bought 180 a joining my land for \$1000 cash. Four years ago I bought my brother's 160 a and stock for \$1250 cash. That gave me 650 a all clear. I was single, so was obliged to do all the work myself, unless I hired it done—and hired help is poor property in this country.

Four years ago I married and have succeeded admirably well ever since, and now we have two bright boys to make home happy. I always take quite an interest in and have a good garden.

We keep 100 Plymouth Rock and White Leghorn fowls, and find them profitable, for we manage to keep the house expenses from the sale of poultry, eggs, meat and garden. Cans pay well, and in '98 we sold what we raised at \$1 p bu in trade, and last fall received 75c. In '99 we kept the garden and poultry accounts separate, and they amounted to \$127. If I was obliged to pay even that small amount out of my wheat crop it would take over 250 bu.

It is far more profitable to have a diversity of crops, so if one falls you can fall back on another. We see many who call themselves farmers, going to town buying meat, butter and even eggs, and then wondering why they are not better off. It is obvious every farmer ought to raise what he consumes; then he would raise less mortgages.

I have kept a diary for 17 years, so I know just what I make and pay out and every bu of grain I raised. The last 11 yrs I raised 23,712 bu wheat and 2520 bu flax. I had one good man on my farm all those years, who has watched everything closely and made his time count. I just made him get right out and hustle at times early and late. I have tried and succeeded fairly well in posting him on farming; made him read agricultural papers instead of novels, attend state fairs, also the Chicago world's fair. He can now retire and take it easy after 18 yrs of hard work and experience, while by economy, perseverance and care I accumulated about \$10,000. I also carry \$7000 life insurance. What success I have attained I attribute to keeping out of debt and by putting business methods into my work, for successful farming requires brains as well as muscle.

A Mortgage Lifter's Advice—Do not buy a farm unless you like farming. For to be successful you must have a fondness for it. Do not buy unless you like the location, for if you are dissatisfied and wishing to move to parts where you think you will be more contented, you will find yourself handicapped. But if when buying a piece of property it is necessary to give a mortgage you should regard it as your worst enemy, and one that will vanquish you if you do not use every means in your power to annihilate it. To pay the mortgage, choose some special branch, let your situation and inclinations decide what it shall be. If it is cattle, resolve firmly that the whole proceeds from this branch shall go to the mortgage; regard it as money set aside for a distinct purpose, and money you should not touch unless in a case of dire necessity. If you choose cattle, you will find it both economical and convenient to keep a few hogs and some poultry. These with other means to add a few dollars should buy groceries, clothing, etc. If you choose hogs as a specialty, keep a few cattle and some poultry—the cattle to eat fodder and rough feed that would otherwise be wasted, the poultry to eat grain that that will be scattered more or less about every farm where grain and stock are kept. These, with other means, should keep up expenses. I always plant a small piece to melons, and realize enough from it to nearly supply a family of four with sugar and flour the year round. Every farmer should have a good garden, so the family can have plenty of vegetables and some to spare. A farmer should never buy anything he does not need, because it is cheap, he should not incur a store bill to be paid some time in the future; he should not spend his time foolishly, but should do something each day to more than pay expenses, not forgetting to take some recreation for himself and family.—[R. E. Thorp, Fayette Co. Ia.

Let There Be Light—The average farmer in this country does not yet squarely believe in that principle as an aid to himself and his farm. He has too little sympathy for agricultural schools or for organized methods for a better agricultural education. This is seen in the fact that, as a class, he spends thousands of dollars to educate his children to be lawyers or doctors, where he spends one dollar to especially fit them to be intelligent farmers. This strange indifference to the advantages which a trained use of knowledge imparts, is difficult of explanation. But few farmers believe that there is such a thing as a science of agriculture. The great mass do not believe that the

thing we call farming can be taught to their children from books or schools. The American farmer will admit the necessity of a special intellectual training to be a lawyer, doctor, preacher, editor, merchant, or mechanic, and his sacrifice for the education of his children in everything but farming is without parallel in the history of any other nation. He sees clearly that if his boy

is to understand the principles of law, of medicine, of mechanics or of banking, he must look into books and read there the record of the experience and judgment that have gone before him. That boy's intellect must be trained to discern a principle on the printed page and then, by practice, learn how to apply that principle to produce material results.—[Ex-Gov W. D. Hoard,

AN OHIOAN'S REMARKABLE ACHIEVEMENT.

Our Recent Investigation of this Article was so very satisfactory, We Have no Hesitancy in Endorsing the Same as

"JUST WHAT ALL OUR READERS NEED."

A genius of Cincinnati has placed on the market a new bath cabinet, whereby anyone resting on a chair within, enjoys the famous Turkish, hot vapor or medicated baths at home for 2 cents each, heretofore enjoyed only by the rich at public bath rooms, health resorts, hot springs and sanitariums. These baths are celebrated for their marvelous cleansing, curative, purifying and invigorating effects upon the human system, and this invention brings them within the reach of the poorest person in the country. Clouds of hot vapor or medicated vapor surround the entire body, opening the millions of sweat pores, causing profuse



perspiration, drawing out of the system all impure salts, acids and poisonous matter, which, if retained, overwork the heart, kidneys, lungs and skin causing disease, fevers, debility and sluggishness.

Astonishing is the improvement in health, feelings and complexion by the use of this cabinet, and it seems to us that the long-sought-for natural method of curing and preventing disease without medicine has certainly been found.

The makers inform the writer that more than 107,457 of these cabinets have been sold since August, and showed letters from thousands of users, who speak of this cabinet as giving entire satisfaction.

Since this invention bathtubs have been discarded, for it gives a better bath for all cleansing purposes than soap and water, and as there are millions of homes without bathing facilities, it seems this would be a good article for our readers to take the agency for.

Thousands of remarkable letters have been written the inventors, and to our knowledge persons who were full of drugs and nostrums, and have been given up to die, have been restored to perfect, robust health, to the astonishment of their friends and physicians.

Dr Franklin Moore of New York, Dr E. L. Eaton of Kansas and hundreds of our best doctors have given up their practice to sell these cabinets, because they say they benefit humanity more than drugs, and are all that is necessary to get well and keep well.

Congressman John J. Lentz, Mrs Senator Douglas, Rt Rev Bishop J. L. Spalding, Peoria, Ill, Rev John A. Ferry, Brooklyn, N Y, Rev C. M. Keith, D D,

editor Holliness Advocate, and a host of our most eminent people recommend it.

J. A. Hagan, Richfield, Mo, afflicted 15 years with rheumatism in its worst form, was cured in six days. L. B. Westbrook, Newton, Ia, afflicted 45 years, was cured in three weeks of catarrh, asthma, heart and kidney trouble. An old railroad man, O. P. Freeman, Sparta, O, afflicted 17 years, unable to walk, was cured of urinary and kidney troubles, piles and rheumatism. A lady in Maysville, Mo, Mrs I. Coen, was cured of woman's troubles and recommends it to all suffering ladies.

After examination, we can say this is a genuine cabinet, with a door, hand-somely and durably made of best materials, rubber lined, has a steel frame, and should certainly last a lifetime. It folds flat in one inch space when not in use, can be easily carried, weighs but 10 lbs.

IT IS IMPORTANT

to know that the makers guarantee results, and assert positively, as do thousands of users, that this cabinet will clear the skin, purify and enrich the blood, cure nervousness, weakness, that tired feeling and the worst forms of rheumatism. (They offer \$50 reward for a case not relieved.) Cures sleeplessness, neuralgia, headache, piles, dropsy, eczema, macularia, all blood and skin diseases, stomach, liver, kidney, bladder, nervous troubles, and all ailments peculiar to women. It cures the worst cold in one night and breaks up all symptoms of la grippe, pneumonia, fevers, bronchitis, and is really a household necessity—a god-send to every family.

To please the ladies, a face and head steaming attachment is furnished if desired which clears the skin, beautifies the complexion, removes pimples, black-heads eruptions, and is a sure cure for skin diseases, catarrh and asthma.

ALL OUR READERS

should have one of these remarkable cabinets. The price is wonderfully low. Cabinet complete, with heater, formulas and directions only \$5. Head steamer, \$1 extra, and it is indeed difficult to imagine where one could invest that amount of money in anything else that guarantees so much genuine health, strength and vigor.

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Don't fail to send for booklet anyway. This cabinet

IS A WONDERFUL SELLER

for agents, and the firm offers special inducements to both men and women upon request, and to our knowledge many are making from \$100 to \$150 per month and expenses. It is certainly an opportunity, not to be neglected.

Advertisement for Sheffield Razors. Includes text: '10,000 RAZORS GIVEN AWAY!', 'FREE', 'CONDITION—With your application you must pin this numbered coupon to your name & address, & send with it 10c in silver or stamps, to help pay postage, mailing, packing, etc., & you will receive free a package of Electric Palm Shaving Soap & Completion Soap which beautifies the skin, prevents pimples, blotches & all facial eruptions. Includes a coupon with number 2022.

Advertisement for Mead Cycle Co. Includes text: '500 BICYCLES \$3.10', 'NEW 1900 Models, \$11 to \$20', 'Great factory-direct prices', 'KARY A BICYCLE distributor', 'WRITE AT ONCE for Bargain List and our Special Offer. Address Dept. 46 F. MEAD CYCLE CO, Chicago'

Advertisement for The Gem. Includes text: 'NOW EARNING BIG MONEY selling the GEM ALUMINUM', 'Federal Patent Pending and protecting RIGHTS', 'The Gem is the best by far', 'The Gem is the best by far', 'The Gem is the best by far'

THE HOME CIRCLE

THE POINT OF THE HOOK.

At a bend in the stream where the willows grew tall. And the waters ran slow and were deep. Where there came to our ears the low sound of a fall. And we heard through the pines the soft sweep of the sweet summer wind, there we fished for the trout. My young nephew, Jack Sully, and I did not catch a fish, but the lad pulled them out. 'Till I, envied, sat with a sigh 'I am tired, Jack, dear, the monotonous great Here I sit without ever a bite. I have not caught a fish, while you have six or eight. Now please cast on this subject a light. From the bed of the stream Nephew Jack drew his bait. Just a glance and 'twas back in the brook. 'My dear uncle,' he said, 'you'd e'er sit here and wait If you don't hide the point of your hook.' Then I fell in a muse and neglected to fish. As an angler I failed of success. But to be angling for I was all one could wish. And to having been caught I confess Quite a number of times, there was once, young and green. I contracted a ten-dollar book, For the agent who caught me did up his work clean. He had hidden the point of his hook. On another occasion the most charming girl I had, up to that period, known, Set my pulses a-flutter, my brain in a whirl. And my heart bowing down at her throne. She accepted my homage and helped spend my cash. She repaid with a smile or a look, Then she married another—my heart went to smash— She had well hid the point of her hook. There's been a real estate, each with promise of wealth, Patchettes having each a sure thing. Who have angled for me with precision and stealth. And who, at the right moment, would fling Their bait to this gudgeon, seemed they knew I would bite. So their bait cast they down in my nook. And they caught me, and so did some brokers, all right, For each man hid the point of his hook. There's for me consolation. I'm not all alone— Than the fishers, the fished-for are more. It's a fact—when before them a fine cut is thrown There are always keen biters, galore Among men and women, and the reason they do. Like the foolish young trout in the brook Is the fact at they cannot, from their point of view. 'Nearth the salt see the point of the hook.

W. T. B.

Old Coins—The coin described by J. F. C. Ontario, is an English half-penny, worth only a few cents. Copper cents of 1788, 1829 and 1829 are worth five to ten cents each, according to their state of preservation. The cent of 1853 is common, with little or no premium. The English penny of 1797 is very common, so are the cents of 1800 and 1833, the three-cent piece of 1865 and the large cent of 1854.

THIS WILL INTEREST MANY.

F. W. Parkhurst, the Boston publisher, says that if any one afflicted with rheumatism in any form, or neuralgia, will send their address to him at Box 1561, Boston, Mass. he will direct them to a perfect cure. He has nothing to sell or give, only tells you how he was cured. Hundreds have tested it with success.—[Adv.]

"FURTHER ON."

The last train on Saturday night had disappeared in the distance, when a middle-aged woman who had alighted therefrom turned to the station agent, and with a look of perplexity on her face asked, "Is this Berkley Station?" "It is, madam." "Are there two Berkleys?" "Not that I know of." "But this does not look natural." "Can't help it, ma'am, this is Berkley, R I, fast enough." "Oh!" The woman's eyes were black as midnight, and they wore a wild, excited expression as she exclaimed, "I thought I was going to Berkley, Mass. I read the name at the station where I bought my ticket. I had friends in Berkley, Mass." This information elicited no response from the ticket agent. "Can you tell me where to find a hotel?" "Can't, none in these parts." "Any one who would take a lodger?" "Can't tell; I don't know." The man leisurely lit a cigar. "Where is your home?" inquired the traveler desperately. "Four miles away." The woman turned away and proceeded up the street, meeting a man of whom she asked the question which was becoming of vital importance to her. "Can you tell me where to find a boarding house?" The answer was in Portuguese and unintelligible. After further travel two more men were met; these proved to be French and did not understand English. At last a nice-looking house with green blinds appeared in sight, and hope revived in the heart of the homeless traveler. Reaching the door she knocked, and told her story, asking for shelter at any price, only to meet the response, "I never did such a thing as to take in a stranger in my life." "I have kept a great many at my home, and it seems to me strange that anyone can turn a person from their door at this hour." The hands of a clock visible from the open door pointed to a quarter to nine. "About two miles farther on you will find the Episcopal minister's, maybe he will take you in." "My good woman, when you reach heaven, may you not be asked to go further on?" These words seemed forced from the traveler's lips without any volition of her own, but the two women watched her go forth into the night without relenting. She reached the road, singing, "I must walk to keep warm, but whither shall I go?" The time of the year was January, the night moonless, the roads slippery with ice. Suddenly a guideboard caught her eye, the black lettering made visible by the glistering ice. The inscription read, "7 miles to Woonsocket." There was cause for hope. At Woonsocket it would be possible to find shelter, and a seven-mile walk was better than no prospect of a bed that night. She had a feeling that the road was one on which she was not likely to miss her way, and with a brave heart she went forward at a brisk walk. All sense of fear left her. She was a firm believer in the protecting power of our Heavenly Father, and her ability to endure a long walk was above the average. After three miles were passed she heard a hail in the darkness; a team stopped. "Where are you going, my good woman?" "Woonsocket." "Woonsocket, the devil!" "No, Woonsocket," in a calm voice. "But, my good woman, it is four good miles." "I can't help that, I must go there." "Have a ride?" The woman accepted the invitation without hesitation and was helped up onto what seemed to be some kind of a peddler's wagon. Her new friend tucked the buffalo robe around her and drove on in silence. At last he said, "What are you doing on the road at this time of night?" "Looking for Christians." Again she had seemed to be impelled by some spirit not her own. "By gum! I want to know what all of this means." The woman told her story soberly. The man listened, and asked, "Are you not afraid?" She replied, "I am well protected." She thought of the Higher Power. Her hostener said "I-m-m" with emphasis. "What are you, anyway?" "A temperance lecturer." Just then a rough place in the road set the lager beer bottles with which the team was loaded to jingling and both the driver and his companion were silent. She was thinking of the strange fact that she, a temperance lecturer, should be dependent upon a vender of

beer for the only Christian help which she had received. Her companion broke in upon her reverber with, "By gum, mum; it's too bad, but I'll tell ye what I'll do. I'll tack ye in sight of the Woonsocket hotel; ye'll get in there one time o' night. The board's three dollars the day, but on Monday I yer pocketbook's small ye can go to the Globe. It's a factory corporation. They keeps travelers for three dollars the week with planny, carpets and all that." In due time Mike Bryne lifted his companion down from her high seat, pointed out the hotel in question, bade her "Good-night and God bless you, mum," and at 1 o'clock on Sunday morning she knelt beside her comfortable bed and prayed for the "brother" who had proved her good Samaritan in her hour of need. She did not need to test the hospitality of the Globe corporation, and has never met Mike Bryne since. In her home beside the sea she still gives shelter to those who ask. She has often been told by charitable workers that she does wrong to entertain tramps, but she has never been injured by so doing.—[Mrs Caroline Oakley.]

THE SPIDER AND THE FLY.

Oftentimes an objection is raised because the usual amusement introduced in "socials" arranges so that two people are placed for a share of the evening in each other's company, although they may not be at all congenial and perhaps entire strangers, occasionally not even having been introduced. This may be remedied by the formation of groups instead of couples, as is the usual rule, before serving refreshments. There should be one card for distribution marked "Spider" to five of the "Flies," which are numbered respectively from one to five. The Spiders should be chosen wisely, and it is well to have them appointed before distributing the cards. Then the Spider cards need not be distributed until the numbered or Fly cards are all out. The Spiders are expected to "catch" five Flies with numbers from one to five. And the success of the entertainment depends largely upon the Spiders, who should be both socially inclined and well acquainted with the participants. Prizes may be offered to the most and least successful Spider who catches first and last his group of Flies.—[Lillian Searle.]

Why are horses in cold weather like meddling gossip? They bear idle tails (tales).

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Young America.



"NO SOOTHING SYRUP, THANK YOU."

THE TRUANT.

Fred Johnson is a truant; He ran away from school To spend the day in skating Upon the factory pool.



He met us going homeward And bragged about his fun, But when the teacher neared us I noticed that Fred run.



Next morn into the school room Fred entered looking blue. He knew he would be punished— That no excuse would do.

Our master is a kind one, And loved by all the school, But when a boy plays truant A whipping is the rule.

MARGARET LEE.

Coward—If a girl doesn't like to be kissed and tells you so in plain English, respect her wishes and she will respect you the more for it. If you want to have a big time, get one of Water Lily's... One reason I never got slapped for kissing a girl is because I was too big a coward to try it. All I can say is, boys, respect a lady and keep your place.—[Mud Socks.

TO CURE A COLD IN ONE DAY Take Laxative Bromo Quinine Tablets... E. W. Grove's signature is on each box, 25c. Adv.

The Struggle.

A WOMAN'S DAILY BREAD.

Please answer this inquiry in your next paper: I cannot go from home to work. Can you or any of the readers of F & H suggest any way a woman can earn money to support her family and be at home with them?—[Mrs P. J. T.

This whole question depends on what you are fitted by nature or experience to do, and your ability to successfully supply the demands of others in your particular line. Some of the cases that have been directly brought to our attention in which women have actually earned a living at home are the following, and while you individually may or may not be able to follow any one of them, they must be suggestive to a thoughtful woman. One of our readers raises sheep and sells mutton and wool. Quite a number earn a modest living from poultry. Others combine poultry, garden stuff and sewing for neighbors. One woman, a particularly neat sewer, gradually worked up a little kindergarten sewing school where a certain time every day the neighbors' children meet to learn. Some of these women have started in other things and made failures until they hit upon the thing they became successful in. Many women have established quite a market for some special line of cooking in which they excel, and combine this work with chicken raising or sewing. One woman left with two or three children and no assets hired a small rent and two garden spots. She sold quite a lot of garden stuff and sewed carpet rags and did mending and plain sewing, and got a little besides for taking care of a little church near her and ringing the bell. Thus she brought up her children and lived at home. Perhaps some of our readers will have other suggestions to offer.

THE PURSE COMMON PROPERTY.

Were it not for its serious features, the letter of Veni Vidi Vici would be amusing indeed, so odd and anomalous does it seem that there ever should be any wrangling over the family purse between husband and wife. Wife begging husband for needed money, husband refusing her the same! Preposterous! My wife and I lived together 20 odd years and in that time the pocket-book was but common property—a mutual fund from which both drew without stint when occasion required. When either went to town he or she drew from the family bank as demands dictated; nor was either cross-questioned when home as to the amount or nature of expenditures. In all that time my wife never asked for money but she got it if I had it, and now that she is gone, how glad I am that such is the case, for were it otherwise, then would guilt be "my midnight chamberlain with fingers bloody red." I do not say this by way of self praise, that we were better than other people; but simply that we regarded such action as but a common bounden duty to each other. Thus we lived and thus we struggled together, teaching in the winter and farming in the summer, for when we were married we both were in the very depths of poverty's vale, so much so that I was forced to buy her winter shoes on credit. When she went away—I can't say died—we owned a good farm, well stocked, with a \$2500 residence. I don't say this boastfully—far be such a thought from me—but simply to show that our common fund family financial system was not a ruinous, disastrous one.

If there be one among the husbands I now address brute enough to deny his wife necessary money from the family fund for her personal comfort or pleasure, then let him put on sackcloth and go hide away in the dog kennel—he is not a man. Let him write in his hat as a motto one sentence from Veni's letter, namely: "No wife can love a husband if he be mean and stingy," words as true as holy writ. O wives that are too delicate to ask your lords for needed money, ye are but wingless angels, strayed from paradisaical realms, too tender for the stern realities of this world. O husbands that deny your patient wives the needed money that justly belongs to them, ye are but bete noirs—black angels from Satan's plutonian shores. You are not man and wife in the true sense of the term. You are but merely suspicious, distrustful

members of a loveless, soulless corporation whose stock in a true matrimonial market would not bring one cent on the dollar, even in Confederate scrip. Reform or disband and go home to your respective parents, asking for forgiveness for your unholy travesty on the sacred institution of marriage.—[Matt Van.

Homely Economies—Our woven wire cot had given way at each end, so that the loose ends of the wire tore the bedding and we successfully "patched" it as follows. A piece of strong burlap (in this case it was part of a gunny sack) as long as the cot was wide was closely tacked to the wooden frame with carpet tacks, the burlap was stretched snugly down over the loose wire and fastened, where the wire was sound, with strong wrapping cord, a large needle being used to go down and up through the wire and burlap. Before this there were thick pieces of carpeting laid on the torn wires, else the burlap would have benefited little. Each end was fixed in the same way. The cane back of a small rocker gave out at one side and was mended with a darning needle and carpet chain in the darn stitch, going entirely across the chair, in and out through the open work of the cane and around the wood at each side and at the top and bottom. Always have the thread doubled. With a full length crochet tidi on the chair one hardly sees the mending.—[Emma Clearwaters.

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A great, fat volume, and as interesting and valuable as it is big, is the American Newspaper Annual for 1900, just issued by N. W. Ayer & Son of Philadelphia. It contains 46 colored railroad maps.

Why is a blacksmith the most dissatisfied of all mechanics? He is continually on the strike for wages.

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SEWING LESSON-IV.

Some time you may wish to sew the edges of a narrow piece of cloth together to make a fold or necktie. If you should make a seam and then attempt to turn it right side out you would have trouble, but the stitch in

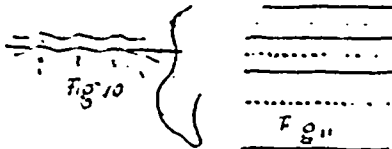
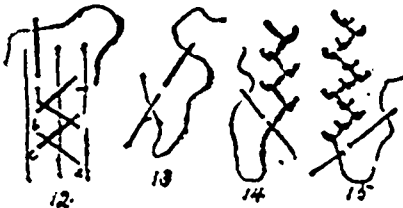


Fig 10 will help you out, because the work can be done on the right side and the stitches will not show, for they are the kind called blind. Turn down the edges of the cloth on the wrong side, then when you baste the two sides together the turned-down parts will be out of sight. Put the needle in near the edge of the piece nearest you, then in the other and weave the needle back and forth for two or three (four if you can) stitches, draw the thread through and repeat. The cloth looks puckery in the picture, but it will straighten right out when the needle is drawn through. The edges must be even, but in blind stitching a lining to an outside part, the lining may be turned in a little more as in the cut. When the lower edge of a petticoat becomes worn, it may be fixed by cutting off the frayed part and turning in the edges and blind stitching.

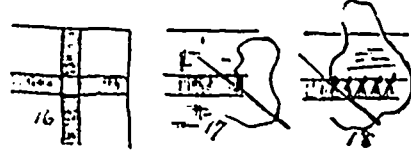
Don't you think a few tucks look pretty above a hem on drawers and other garments? The only hard thing about making them is to keep them even. Now you will need to use that little measure very carefully. If you will the tucks an eighth of an inch wide, measure for the first one half an inch from the top of the hem. Fold the cloth for the edge of the tuck and crease it, then baste for the sewing line. The width between the tucks



should be the same as the tucks, so the distance from the basting of one tuck to the edge of the next should be 3/4 in. If the cloth is thin and fine, run the tucks or backstitch if you would like it firmer.

Now we will learn to make some fancy stitches and you will find them a relief from some of those hard ones. The first one, Fig 12, is nice to use on the wrong side of a flannel skirt to

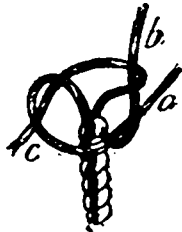
spread open a seam and keep it flat. The stitches must be only just caught into the outside cloth or they will show too much on the right side. The center vertical line in the cut shows the seam and the others the edges of the cloth. Bring the needle through the cloth at a, cross slanting and put the needle in at b and out at c. The upper part will show you how. Work up or away from you and use thread or silk. Some work from left to right. The name of this stitch is herringbone and the one in Fig 14 is cat, bird or feather stitch. The last two are good names for it, don't you think so? Fig 15 is called the double brier. These stitches are used



on the outside of seams of flannel petticoats and for the line of the hem, too, which makes it look very pretty. Embroidery silk should be used. Fig 13 shows just how to begin. You see the needle is put in slanting instead of straight as in Fig 12 and you work from the point farthest away from you or at the top toward you or down. In the double brier take two slanting stitches before crossing over for the next.

Haven't you wished many times that you knew how to hemstitch so you could make dainty little handkerchiefs all by yourself? If you are willing to be very patient and careful you can learn now surely, for the stitch we will try is the easiest of three ways to hemstitch that I know. A piece of linen 12 in square will be large enough, because you may want to put a narrow lace edge around it. Draw out four or five threads 1/2 or 3/4 in from the edge each way on all sides, then it will look like Fig 16. Turn the edge down twice for the hem and baste close to the upper edge of the drawn part, put the needle in the edge of the fold, then under three or four threads, as in Fig 17, but be sure to put the needle under the same threads again to hold them firmly at the top, pull them together, then into the lower edge of the fold. Fig 18 shows this, also some finished stitches. Some use linen thread, I think cotton is the best, but it should be finer than you would use in making a common hem.—[B. A. W.]

An Easy Knot—This very pretty knot is tied as follows. First ravel the rope down about five inches, then take one strand, a, and bend it around and press it against the rope, making a loop as shown in cut. Then take strand b and bring it around under a, and then take c and bring around under b and put it through the loop made by a. Then take c and follow a up through the loop made by b. Then take a and follow b up through the loop made by c; then take b and follow c up through the loop made by a, and then draw all gradually until tight, and you will be surprised at the result.—[W. J. Evans.]



To Lighten Washing—I read an article in Jan 15 F & H on how "to lighten washing," and I will tell my way. First I put the water over early and let it get boiling hot, then I have in my tub some soap powder and soap (hard) shaved up fine; on this I pour the boiling water, so as to have a good suds. In this I put my white clothes, no matter how dirty they are. Get your clothes in the tub as soon as you can after putting in the water (of course do not put anything in boiling water that has blood stains on). You will be surprised to see how dirty the water is before you get all your white clothes in the suds. I have a stick and keep stirring them down in the water. I let them remain in the suds about 15 minutes, then I put in enough cold water so I can rub them out. You will be surprised to see how easily the dirt comes out of the clothes. I know by experience that boiling water does not set the dirt in clothes, but rather it loosens the dirt. After I rub out my white clothes I put them in a tub of

rinsing water. If my dark clothes are very dirty I heat over some of the suds from my first tub and put them in the hot suds the same as I did my white clothes. Be sure and rinse your clothes well. I think half the secret in washing is in having plenty of good rinsing water. From the rinsing water put them in water slightly blue. But let me tell you if you have sheets and pillow cases of unbleached muslin, do not blue them at all and you will see how

much quicker they bleach out.—[Reader.]

Coloring Hats—To color a white straw hat black, as requested in a recent issue, brush thoroughly, then rub with a damp, not wet, cloth. Now with good liquid shoe polish go over every particle of the hat with a brush. This will prove satisfactory.—[Emma Clearwaters.]

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Unexpected Trouble , an exact reproduction in color of a wonderful \$2,000 oil painting. With Farm and Home, one year. \$0.40	Wood's Natural History , contains 600 pages on over 1,200 topics, and 600 illustrations, 120 in color. With Farm and Home, one year. \$0.50
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WHITE HOUSE COOKERY.

Chocolo Dishes Contributed by Hug. Zie mann, Steward of the Executive Mansion at Washington.

Winter Vegetable Soup: Scrape and slice 3 turnips and 3 carrots and peel 3 onions; fry all with a little butter until a light yellow and add a bunch of celery and 3 or 4 leeks, cut in pieces. Stir and fry all the ingredients for 6 minutes, and when fried add 1 clove of garlic, 2 stalks of parsley, 2 cloves, a little grated nutmeg, salt and pepper. Cover with 3 qts water and simmer for 3 hours, taking off the scum carefully. Strain and serve with crotons and rice or vermicelli may be added.

Potato Fillets: Pare and slice the potatoes thin; cut them in small fillets about 1/4 in square and as long as the potato will admit. Keep them in cold water until wanted, then drop them into boiling lard, and when nearly done take them out with a skimmer and drain. Boil up the lard again, drop the potatoes back and fry until done; this will cause the fillets to swell up and puff.

Chicken Dressed as Terrapin: Select young chickens, clean and cut them into pieces and put into a stewpan with just enough water to cook them. When tender stir into the chicken 1/2 cup butter and 1 beaten egg. Season it with salt and pepper and 1 teaspoon powdered thyme. Add 2 hard-boiled eggs coarsely minced and a small glass of wine. Boil up once and serve with jelly.

Oyster Salad: Drain the liquor from 1 qt of oysters and put them in hot vinegar enough to cover them placed over the fire, let them remain until plump but not cooked and then drop them immediately into cold water. Drain off and mix them with 2 pickled cucumbers cut fine and 1 qt celery cut in dice pieces. Add salt and pepper for seasoning and mix all well together, tossing up with a silver fork. Put a mayonnaise dressing over the whole and garnish with celery tips and slices of hard-boiled eggs arranged tastefully.

Washington Leaf Cake: Three cups sugar, 2 scant cups butter, 1 cup sour milk, 5 eggs, 1 teaspoon soda, 3 table-spoons cinnamon, 1/2 nutmeg grated, 2 cups raisins, 1 cup currants and 4 cups sifted flour. Mix in the usual order and stir the fruit in at the last, dredged in flour. Line the cake pans with paper well buttered. This cake will take longer to bake than plain cake and the heat of the oven must be kept at an even temperature.

Orange Roly-Poly: Make a light dough the same as for apple dumplings, roll it out into a long narrow sheet about 1/4 inch thick. Spread thickly over this peeled and sliced oranges, sprinkle plentifully with white sugar, scatter over all 2 teaspoons grated orange peel and then roll it up. Fold the edges well together to keep the juice from running out. Boil in a floured cloth for 1 1/2 hours and serve with a lemon sauce.

Dominoes: Have a plain cake baked in rather thin sheets and cut into small oblong pieces the size and shape of a domino, only a trifle larger. Frost the top and sides. When the frosting is hard, draw the black lines and make the dots with a small brush dipped in melted chocolate. These are especially nice for children's parties.

Apple-Puff Pudding: Put 1/2 lb of flour into a basin, sprinkle in a little salt and stir in gradually 1 pt milk. When quite smooth add 3 eggs; butter a pie dish and pour in the batter. Take 1/2 lb of apples, seed and cut in slices and put in the batter. Then place bits of butter over the top and bake three-quarters of an hour. When done, sprinkle sugar over the top and serve hot.

Trifles: Work 1 egg and 1 tablespoon sugar to as much flour as will make a stiff paste. Roll it as thin as a dollar and cut it into small, round or square cakes. Drop into boiling lard and when they rise to the surface and turn over they are done. Take them out with a skimmer and place on an inverted sieve to drain. When served for dessert or supper, put a spoonful of jelly on each.

Orange Tartlets: Take the juice of 2 large oranges and the grated peel of 1 orange, 1/2 cup sugar and 1 tablespoon butter. Stir 1 large teaspoon corn-starch into the juice of 1/2 lemon and

add to the mixture. Beat all well together and bake in tart shells without covers.

REQUESTED RECIPES.

Raised Brown Bread: One pint yellow corn meal, 1/2 cup yeast, 1/2 cup molasses, 1/2 teaspoon salt, 1 salt spoon soda, 1 pt rye meal. Put the corn meal in the mixing bowl and scald it with boiling water, just enough to wet it; let it stand 10 minutes, then add cold water enough to make a soft batter. When lukewarm, add the yeast, molasses, soda, salt and rye meal. Beat it well and let it rise over night, or until it cracks open. Stir it down; put it in a buttered and floured tin to rise again; sprinkle flour over the top. Bake in a moderate oven two hours.—[Mrs Lincoln.]

Hop Beer or Home Brew: Put 3 gals water into a porcelain-lined or granite vessel, add 2 big handfuls of hops. Boil for half an hour and add 1 pint wheat bran and 1 qt molasses. Boil 15 minutes longer. When it is milk-warm, add 1 teaspoon light yeast. Set the mixture in a warm place to ferment for a day and night, after which it may be bottled. Secure the corks with wire or string and lay the bottles on their side in a cool place.

Ginger Punch: One quart cold water, 1 cup sugar, 1/2 lb Car. on ginger, 1/2 cup orange juice, 1/2 cur lemon juice. Chop ginger, add to water and sugar, boil 15 minutes, add fruit juice, cool, strain and dilute with crushed ice.

LEMON PIES.

Lemon Pie with Upper Crust: Stir 1 heaping tablespoon flour in a little water until it becomes a smooth paste, add 1 cup cold water, the grated peel and juice of 1 lemon, a scant cup of granulated sugar and a little salt. Stir this mixture over the fire in a double boiler or a small dish set in a larger dish of boiling water. Cook three or four minutes, let cool and add a well-beaten egg. Pour this filling into a pie plate lined with crust, cover with this crust, dampening edges with milk and pressing well together. Cut an opening in center of top crust for escape of steam; bake a nice brown in a brisk oven.

Custard Lemon Pie Mix together 1/2 cup sugar, 2 heaping tablespoons flour or 1 of corn starch, the juice and grated peel of 1/2 lemon and 2 well-beaten eggs. Pour a pint of boiling water over the whole, stirring well. Set this mixture over the fire and stir until it boils and thickens. Turn into a pie plate lined with paste and bake as a custard pie. Set away until quite cold. Beat the whites of 2 eggs to a stiff froth, add 3 tablespoons powdered sugar, spread over the pie and set in a moderate oven until a light brown. Serve when cool.—[A. R. Amable.]

Raised Graham Bread: Four cups graham flour, 1/2 yeast cake, 1 teaspoon salt, 1 qt warm water. Mix together in a sponge and raise. When raised (in three or four hours) add 2 qts wheat flour, rub into it lard or butter, size of an egg. Add 1/2 cup molasses, 2-3 cup sugar, 1/2 teaspoon soda. Mix with the sponge and knead as for white bread. When raised mold in loaves and bake. This quantity makes two loaves.—[Ma.]

Dark Sour Milk Cake: One cup sour milk, 1/2 cup butter, 1 egg, 1 teaspoon soda dissolved in sour milk, 1 cup sugar, not quite 2 cups flour, spices and fruit to suit the taste. Some use 1 teaspoon cinnamon, cloves and all-spice.—[Ma.]

Baked Eggs: Break 8 eggs into a well-buttered dish, put in pepper and salt to season, and between each egg a bit of butter and 1 teaspoon of cream. Set in oven and bake about 20 minutes. [A. R. A.]

Pork and Rice: Cut fresh lean pork into small pieces and place in a deep kettle, season with salt and pepper, cover with water and stew two hours. At the end of that time add 2 cups rice, and as it swells add water if necessary. Serve hot.—[L. M.]

Eggs with Tomatoes: Season with salt a pint of canned or freshly cooked tomatoes, break 6 eggs carefully into a dish and slide them gently over the top

of the boiling tomatoes. As the whites stiffen, prick the yolks; cook a few minutes and pour over slices of buttered toast.—[S. B. W.]

OUR PUZZLE CONTEST.

We shall give you the usual number of puzzles for March and 15 prizes will be awarded, the first of which will be a watch. The contest will be governed by the following

RULES.

No two answers will be allowed to any question that is, you must not say the answer is this or that. Answers must be mailed within 10 days of the receipt of the issue of the 15th. The contest is open to every subscriber or one member of the family. Write your answers plainly, and be sure and spell your words right, as a misspelled word will throw out the answer. Always write your name on every set of answers, as any set without name or address will be thrown out. Answers may be sent by letter or on postal, as the writer chooses. Address all answers to the Puzzle Editor of Farm and Home, Springfield, Mass.

FIRST INSTALLMENT FOR MARCH.

1. A Geographical Story—Make sense by putting in words to correspond with the name of the town mentioned.

John Jones was a (town in Va) with a (town in Ky) reputation. He was at work on a (town in Mich), when he had a (town in N J) from one of the (town in Ill). The (town in S C) was immediately sent for, who at once summoned help from the (town in Kan). When the man came he gave him a dose of (town in N C), and proceeded to examine him to see if he had broken his (town in Ga), on which he (town in Wash). After careful examination it was found that he had sustained no injury to his (town in S D), and the doctor consented to his (town in W Va). He was carried to his (town in Col), where his young (town in Tenn) was waiting to receive him, having heard of the (town in Md).

ANSWERS TO THE JANUARY CONTEST.

- 1—Peerless.
- 2—50,000.
- 3—Perpendicular.
- 4—All is fair in love and war.
- 5—Quebec Shanghai Damascus Pesth.
- 6—He who by the plow would thrive, Must either hold himself or drive.

PRIZE WINNERS FOR JANUARY.

Rosa Hyde, Md; A. I. C. Black, Minn; William A. Clark, Mass.; Olin Olsen, West Salem, Wis; Charles Day, Mo; C. Everett, Kan.; Cyrene Griffin, Pa; Amy T. Cloud, Wash; George A. Clough, N J; Mrs Mary E. Howe, Neb; L. T. Partridge, N Y; Edwin E. Blake, Me; W. E. Wyatt, Va; C. Dixie, N Y; William M. Learned, Mass.

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NO MORE LETTER CIRCLES.

Our readers are hereby notified that the letter circle department has stopped. The circles already formed are to continue, and if there is any unnecessary delay or stoppage of letters, the members should notify us so that we may investigate.

COUNSEL.

Letter Circle Business—Letter Circle No 61 is in the line of march which leads to the city of Success. How many of the other circles are also marching in this line? The letters are now on their fourth round.

WHEN?

When will cold winds cease to blow? When will summer come again? When the lovely violets grow Down along the pasture lane?

POETIC BELL.

Own Making—I am a stepmother of four grown-up young men, the oldest 29, youngest 21, and I only 34, and I love those boys as though they were my own.

Take Your Wife—Now, Bachelor, if you will look around a little I don't believe you will find half the deceitfulness you imagine there is in the fair sex.

Good Treatment—Two Stepdaughters, treat your stepmother better than anybody in the world, for if anybody seeks good treatment it is she.

body that will marry your father and help raise his children should have his and your best thoughts. My two are boys. I would not have much trouble if it were not for their relatives.—[Mrs V. C.]

Greatness—Some men do great things in our world, and they are great men; the world looks on them as heroes. But in all probability if we could look down into their inmost heart we would see there what we would not call greatness.

Discussion—M. R. Rouse suggests as a subject for discussion, the various ways in which a person may be divinely great. Dwight L. Moody, the great evangelist, is dead. Because he lived for one purpose, that purpose believed in himself, made it the gist of his conversation and study all day long and the object of his untiring efforts, his work was crowned with success, for truly "perseverance wins."—[Sankanae.]

I live in Radcliffe, Ia. the best town in the best county of the best state of the best United States on earth. Don't you think I have a good reason to boast? Who can say as much?—[Vernon Mangum.]

Noah—I have seen all of the last century but 15 years, my wife has seen all but 19 years. We were married 57 years ago and both are hale and hearty, and expect to take the F & H while we live.

Col North Again—Being a constant reader of F & H, I was much interested in looking over the Council items for Dec 1, to see an account of Col North and his home in the lovely Kentish village of Eltham.

Saved!—Magdalene, I'm sorry your brothers aren't more thoughtful of you. Are you quite sure it isn't your fault? X Y Z, I wish I could thank you personally for your letter in reply to mine about intemperance.

it may afford you some pleasure to know that his wife is a far happier woman because of your words. He yielded in a fit of great trouble, but he has been brought to his senses before it became a clinging habit. Arkansas Traveler, this is the way I forgive.—[Coddle's Sister.]

Happy Pair—I am married to a man that nothing but death can separate me from. Dear sisters, let me advise you a little.



Stepchildren—I noticed some advice given to stepmothers. Now I am a stepmother, and can write from experience. My stepchildren are all boys and all except the youngest began to work for themselves when their father broke up housekeeping.

Fried Onions. Indirectly Caused the Death of the World's Greatest General. It is a matter of history that Napoleon was gourmand, an inordinate lover of the good things of the table, and history further records that his favorite dish was fried onions.

Fried Onions.

Indirectly Caused the Death of the World's Greatest General.

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THE HOUSEKEEPER is a thirty-six page monthly, beautifully illustrated with half-toned plates, and full of good things from cover to cover. The departments of Fashion, Fancy Work, Home Talks, Music and Art, Mothers' Council, Etiquette and Toilet, Entertainments, etc. Floriculture, News and Comment, Our Young Folks, Queries and Replies, etc., each presents unrivalled features. It is certainly wonderful fifty cents' worth. Its popularity is attested by the fact that 140,000 women take it.

SPECIAL CLUBBING OFFER.

Believing that many of our readers would be glad to subscribe to this valuable journal, we have arranged the following special clubbing offer:

- The Housekeeper, Price \$5.00
Farm and Home, " \$5.00
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Do not delay or fail to take advantage of this remarkable offer, for never before was so much offered for so small a sum. Remember we send both papers a full year and the two books, at the very low price above named. Address all orders to FARM AND HOME, Springfield, Mass., or Chicago, Ill.

Talks with Our Lawyer.

FENCE—Shakespeare, NY: Your agreement that A should repair half the division fence and B his half is a good agreement, and both are liable to the other. Independently of the agreement, neither of the two owners of the adjoining land is compelled to erect or contribute to a partition fence if he doesn't wish his land inclosed and doesn't occupy or use it otherwise than in common. If a neighbor's cattle wander over such unfenced land to other land and there damage crops or injure themselves, it is the loss of the owner of the cattle. To avoid this liability the owner must fence his cattle in.

CONVEYANCE—Pa Reader: An owner of real estate died, leaving a widow and children, all of age. The widow wished the heirs to convey their shares to her and all but one did so. The one who refused to sign still retains his interest and in case the mother dies, he as her heir inherits part of the portion that now belongs to her. The widow and the child who didn't sign are owners in common of the land—not joint owners. Either may have the land partitioned by division or sale upon proper legal proceedings. The other heirs had a perfect right to convey their shares if they so chose.

RENT—J., Pa: X rents his farm to Y for a year by verbal agreement. At the end of 6 mos Y purchases the farm of X and receives a deed of it. Will Y be obliged to pay X for the remaining 6 mos of the term? No. The delivery of the land put an end to the tenancy and Y ceased to be tenant of X.

DESCENT—A. H., N H. X, a widow, owned a farm. She had one son. She then married Y, a widower who had three children. If X should die, to whom would the property go? The surviving husband would have the use of the farm for his life. Then the son of X would take the property. The children of Y would have no interest in the property. If Y pays off a mortgage on the farm and he dies before X, his children take no interest in the property by reason of the fact that Y paid off the mortgage. The wife can, by will, devise the farm to her child if Y will in writing assent to the will. If he will not, she cannot thus deprive him of his life estate in the property.

DAM—Ct Subscriber: A has for several years owned a fish pond formed by damming up a stream. The water sets back on B's land. C now intends to buy B's land and threatens to make trouble for A. Can C compel A to draw off the water? No. C can sue and recover damages, but can't make A take down his dam after so many years.

INHERITANCE—H. E. N., Mass: If a wife has real estate fall to her from her father or mother, can her husband take any of it at her death, they having had children, and can she during her life sell such property without the husband's consent? In Mass, on the death of a wife, the husband has a life estate, free from all her debts. In any land of which she was seized of an estate of inheritance at any time during coverture, if they had lawful issue born alive and capable of inheriting. Therefore in this case the husband has such an interest in his wife's land, and to make it impossible for a wife to strip her husband of these rights without his consent, it is by law made necessary that he give his written consent to any conveyance which will destroy or impair such interest.

LAND REGISTRATION—M. L. W., N Y. The Torrens system of registration and transfer of real property is a name given to a system built upon the principles of examination of a title by a public examiner, the registration of a title, the issuance of a certificate of title, and an indemnity by the state against loss by reason of any flaw in the title. See "The Land Registration Act of Massachusetts." Little, Brown & Co, Boston, 1898.

BURIAL LOTS—Mass Reader: Rights in burial lots are governed by the terms of the deed and the act of incorporation of the cemetery. The secretary or clerk of your association will give you the information you desire.

FENCE—Del Reader. No person not wishing his land inclosed, and not occupying or using it otherwise than in common, is compelled to erect or contribute to any partition fence. But when any fence is erected by a person on the boundary line of his land and the person owning the land adjoining thereto afterward incloses his land so that such fence is used by him, he shall pay to the person owning it half the value of so much of it as serves for a partition fence between them.

DEED—W., Fla: A deed of property by X to Y before the land is deeded to X is a good deed and conveys the land to Y as soon as X acquires title. Y should of course record his deed at once, but it is a good deed even though not recorded. If

a husband dies in Fla leaving a widow and one child, the offspring of a previous marriage, he cannot by will leave all his property to the child and cut off the widow against her will. She may take one-half the property in spite of the will. The husband and wife must join in the sale, transfer and conveyance of the property of the wife. The real estate of a woman, upon her marriage, remains her separate property free from the interference or control of her husband, in N H, N Y, N J, Pa, O, Ind, Wis, Minn, Kan, Neb, Md, Del, W Va, Ky, Ark, Col, Wyo and Miss.

The question of R. P. of Ga is not a question of law but of the weight of your evidence. All depends on whether or not the jury will be persuaded by your evidence.

Our Veterinary Adviser.

CHRONIC DERANGEMENT OF THE THROAT AND BASE OF TONGUE—J. T. D. has a steer which has eaten very little for several months, when he chews his food it seems to stick in the back part of his mouth and at times has to be removed, when he chews a great deal of saliva runs out of his mouth. There is a disease which sometimes affects the base of the tongue and extends to the throat and the above symptoms would indicate that the disease was there. The animal should be examined carefully by a qualified veterinarian. If one cannot be had, gargle the throat three times a day with the following: Potassium chloride 2 dr, fluid extract of belladonna 1 dr, and water 1 pt. Feed on ground oats and bran.

DIARRHEA—E. E. H. has lost some young calves with diarrhea. The calves seem all right and strong, but from 12 hours to 3 days after birth they begin to scour and soon die. One of the most common causes of this trouble is the first milk of the mother containing too much of the purgative properties which nature provides to move the bowels of the young animal. This trouble can be usually prevented by milking the cow a few days before she comes in, thus removing the greater part of the milk which contains the purgative principle. Also give the calf when it is born 2 oz castor oil. After the calf is sick, medicine seems to be of no use.

INDIGESTION—G. W. B. has a horse which eats well but keeps very thin in flesh. Feed on good hay and oats. Boil a teacupful of flaxseed into a pulp and while hot pour it on 1/2 a pint of bran and make a mash of it. Give him a mash of this kind once a day and put one of the following powders in it. Mix 4 oz nitrate of potassium, 4 oz sulphate of iron and 2 oz nux vomica, divide in 24 doses. Repeat this quantity if needed.

BLACK LEG—L. K. has lost yearlings; the leg swells and they die within 24 hours. This disease is one of the forms of anthrax, which affects young cattle, and is the result of the animal being in a plethoric state. When it takes place there is no cure but it can usually be prevented by keeping young stock in a good, healthy, hard condition. Change the food to ground oats and bran with abundance of good fresh water. The disease is not contagious, but the same cause may produce it in several animals in the same herd.

ECZEMA—J. H. has a horse which has an itchy skin, at times small pimples will appear these dry and the hair falls out. Also a horse which has a sweeten. Mix 1 oz carbonate of potassium with 1 qt water; wash the horse all over with this, then wash off with clean water and dry well. Mix 2 oz oxide of zinc with 4 oz vasoline and rub a little on the affected parts once every third day. Also mix 4 oz sulphate of iron and 4 oz nitrate of potassium, divide into 24 doses, give one once a day in bran mash. In the case of sweeten, on account of its being of one year's standing, little can be done. Try rubbing it well once a day with a little soap liniment.

LAME HORSE—T Y has a horse which has been lame for 3 yrs and is getting worse. It is not likely that anything can be done for such a chronic case, but as we do not know the location of the lameness, we cannot prescribe. If possible, find the nature and cause of the lameness, then let us know and we will advise.

THE ILLINOIS INCUBATOR is sold on the guarantee that it is a perfect hatcher. Have you written for a catalog? If not, do so to-day. It is made by J. H. Jones of Streator, Ill. The Illinois incubators and brooders are among the most substantial and satisfactory machines used.

ORDERING BY MAIL is now a safe and reasonably sure method of getting pure and fresh seed. Reliable seedsmen have a reputation at stake and cannot afford to palm off old and worthless seed. Before buying of local storekeepers or elsewhere, send to the Ford Seed Co of Ravenna, O, for their catalog, which is free. Their seeds are of a No 1 quality.

Helps for Farm and Home.

CHAT WITH THE EDITOR

J. L. K.: There are three reliable booklets on onion culture: 'The New Onion Culture', by Greiner, price 50c. 'Onions, How to Raise Them', price 20c. 'Gregory on Raising Onions', price 30c. These booklets are all sold by the Orange Judd company of 52 Lafayette place, New York.—F. E. S.: The Champion hand seed sower, made at Urbana, Ind, is sold by the Whitman & Barnes Mfg Co of St Catharines, Ont. The import duty from the states to the Dominion of seed sowers is 20 per cent. The Iron Age seed sowers are sold by J. A. Simmers, 147 King street east, Toronto.—S. J. S.: For information about the soil, climate, etc. of Cal, write to S. J. E. F. Smith, Cal b'd of agri, Sacramento, Cal.—A. L. D.: For information as to the best fruit lands of Fla, write to M. V. Richards, Washington, D C.

HORTICULTURAL MATTERS—Mrs I. J. P.: For catalog of the best dahlias, write to the florists and seedsmen that advertise in F & H.—H. W. H.: Field Notes on Apple Culture, by Prof Bailey, price 75c, sold by the Orange Judd company of 52 Lafayette place, New York. We answer your many inquiries on apple production.—Mrs M. H.: Poplar cuttings are sold by nearly all nurserymen who advertise in F & H.—C. F. R.: Henderson's Handbook of Plants is a reliable dictionary of plants, trees, shrubs, vines, etc. It is sold by the Orange Judd company of 52 Lafayette place, New York, at \$1, postpaid.

VALUE OF OLD CEMENT—W. L. C. has three tons Akron cement, old and hard, in paper sacks. It is useless as cement. Would it pay to run through a mill to pulverize and then spread as a fertilizer? Fresh Akron cement undoubtedly contains a good deal of lime that would materially aid in bringing plant food to an available condition in certain soils. Soils that are greatly benefited by an application of stone lime would undoubtedly be benefited by an application of fresh Akron cement. Old Akron cement that has become hard has undoubtedly lost its power of bringing inert plant food to an available condition. The value of this old cement for agricultural purposes will undoubtedly depend quite largely on its present condition. It may be almost entirely worthless. If the cement has become hard and set, the lime is undoubtedly present largely in the form of silicate, hydrate, carbonate, or all of these, and the value of this cement, therefore, cannot be but slight. If, on the other hand, a considerable portion of the lime has not changed materially since its manufacture, it undoubtedly would have considerable agricultural value. The chances are, however, that it will not pay to go to any considerable trouble or expense in preparing the mechanical condition of this cement for agricultural uses.

ICE POND—Ct Subscriber: A and B have an ice pond. The dam is on A's land. B agreed to do half of the work on the dam and pay half of the expense. This B has not done. How can A compel him? By suit attaching B's land.

WALL PAPER advertisement with image of a hand holding a roll of paper. Text: 'WALL PAPER can be effective without being high-priced. A good design, well colored, costs no more to make than a poor attempt. Our 25 years' experience and improved machinery enable us to make the best effects for lowest cost. See our samples before placing your order. Agents wanted everywhere. KAYSER & ALLMAN, 1214-16 Market St., Philadelphia.'

BROWN'S BRONCHIAL TROCHES advertisement with image of a box. Text: 'Neglect of a Cough or Sore Throat often results in an Incurable Lung Disease or Consumption. For relief in Throat troubles use BROWN'S BRONCHIAL TROCHES, a simple effective remedy. Sold only in boxes.'

KENDALL'S SPAVIN OURE



The old reliable remedy for spavins, Kingbones, Splints, Curbs and all forms of Lameness. It cures without a blister because it does not blister. Price \$1, Six for \$5. As a liniment for family use it has no equal. Ask your druggist for Kendall's Spavin Oure, also "A Treatise on the Horse," the book free, or address DR. B. J. KENDALL CO., Essexburg Falls, Va.

Horse's Tail advertisement with image of a tail. Text: 'The Horse's Tail with TITZ PERFECTION hold fast. Made of polished metal. Can't wear out. Stood the test of 8 years. 500,000 sold. Nothing else as good. Agents wanted. Sample 20 cents. See Helms Novelty Co., 112 4th St., Des Moines, Ia.'

SEIZE AND HOLD FAST advertisement with image of a man holding a horse. Text: 'Put your confidence in our unqualified and absolute guarantee that Veterinary Pixine will cure any gall sore or scratch on horse, or any sore or skin disease on horse, cow, sheep or dog. Money refunded if it fails. The more chronic the sore or disease the more anxious we are for you to test it—for you to proclaim its marvelous effectiveness. It makes a quick, clean, healthy cure without scab. It is an antiseptic, neutralizing, soothing ointment of unfailing properties. One trial box convinces.'

PRICE {2 oz box 25c} At Druggists' and Deal {1/2 lb " 50c} ers' or mailed postpaid.

TROY CHEMICAL CO., Troy, N. Y.

Personally Conducted California Excursions

Via the Santa Fe Route. Three times a week from Chicago and Kansas City. Connecting cars Boston to Chicago by all lines. In improved wide-vestibuled Pullman tourist sleeping cars. Better than ever before, at lowest possible rates. Experienced excursion conductors. Also daily service between Chicago and California. Correspondence solicited. S. W. MANNING, N. E. Agent, The Atchison, Topeka & Santa Fe Railway, 332 Washington St., Boston, Mass.

MAGNETIC HEALING advertisement with image of a man. Text: 'MAGNETIC HEALING cures when all else fails. Prof. Jones cures all diseases at his Infirmary, or by his Absent Treatment. Distance makes no difference. This Method is taught to others at his School or by mail. Many of his students are making \$25 per day. His Journal of 32 pages free. Address W. D. JONES & SON, Bloomington, Ill.'

PHOTO-ENGRAVING and ELECTROTYPING advertisement. Text: 'We have unrivalled facilities by reason of skilled workmen, first-class materials and newest machinery for producing excellent work in both these departments at very low prices. Special attention given to making pictures, either half-tones or line drawings, of live stock, poultry, farm buildings, implements, etc., from photographs or drawings, for our subscribers and advertisers. Also half-tones with extra coarse screen for use on fast presses of daily newspapers. Artistic designs and illustrations for catalogues, circulars, etc. Our electrotyping department is specially equipped for a sick work, and can furnish electric in a few hours, when necessary. Add. to Photo-Engraving or Electrotyping Dept., Kansas Pub. Co., Springfield, Mo.'

HALLOCK'S Success Anti-Clog WEEDER and CULTIVATOR

No use for the old style Cultivator.
Would not take \$100 for it.
This is what farmers say about it.

We do not claim to give away the first one in a place, but do sell at a very low price.

B. Y. HALLOCK & SONS, Box 811, York, Pa.

Can you afford to farm without one?
CAN YOU?

YOUNGSTOWN, OHIO, May 24, 1909.
Please accept thanks for your kindness. You appear to be the most liberal manufacturers we have ever dealt with. We wish to say that this is the third year we have ever used your weeder, and we are very much pleased with it. We used it for corn, potatoes, cabbage, tomatoes, etc., with wonderful results. We had a good two-horse cultivator at the time we bought your "Success" weeder, and we state truthfully that we have not used the cultivator since, as one small horse and your weeder will do more and better work than two teams and cultivators. The teams, of course, can be used for other work, which means a big saving.
Yours truly, J. E. GRAY & SON.

LAFAYETTE, IND., July 24, 1909
I simply wish to say that I am more than satisfied with the 12-foot mounted weeder I purchased of you last spring. My corn is cleaner and the ground worked better than it ever was before. I would not think of parting with it for \$100 if I could not secure another like it. I expect to send you some orders next spring as my neighbors like it also.
Yours truly, D. D. COAN.

Around the Globe.

To Kitchener, the conqueror of the Soudan, is generally attributed the turn in the tide in South Africa in favor of Great Britain, whereby Gen. French made his brilliant dash northward to Kimberly. The incidental capture of thousands of cattle and sheep from the Boers helped the English troops and correspondingly weakened the Boers. The venerable and competent Gen. Roberts, at the head of England's South African army, will have to share liberally with his brilliant chief of staff, Kitchener, whatever success is achieved. This latter general is 45 years old, a bachelor, and is a perfect type of what is known as the scientific soldier, taking plenty of time to mature his plans and relying upon thorough and accurate methods rather than headlong dashes at the enemy.

Forests and Rainfall, their relation, are to be studied by the forestry division of the department of agriculture by investigations in southern California, along the sources of the Mohave river in the San Bernardino mountains. The flood capacity of the streams will be made the basis of investigation.

The Methodist Church east and west was startled to learn that students of the Boston university school of theology had accused three of their professors of heresy and had appealed to the bishops and the Methodist church in general. These students attack Prof. Mitchell, Brown and Sheldon, and even President Warren, accusing them of departing from the teachings of John Wesley toward the "higher criticism." They even think they detect a drift toward Unitarianism.

Personal—The new president of the national American woman suffrage association, succeeding Miss Susan B. Anthony (retired), is Mrs. Carrie Chapman Catt of New York. She is a native of Wisconsin, was a school teacher and editor, and as national organizer of the woman suffrage association developed remarkable abilities.

The Canteen is destined to remain in the United States army, according to the interpretation of the new federal statute by Secretary Root, who agrees with Attorney-General Clegg on this point. The national W. C. T. U. appeared in vain to President McKinley for a reconsideration of the legal aspects of the question, but in vain.

A New Cloud appeared in Great Britain's horizon in the shape of Russian aggression in central Asia. A comparatively small loan to Persia is believed to be but a symptom of new relations between the two nations whereby Persia becomes a vassal of the great northern power. The control of Persia will give Russia a much desired foothold on the Indian ocean and bring her face to face with Great Britain on the borders of Herat and Afghanistan, one of the great dangers incurred by the British government in

sending a large army to South Africa is the exposure of India to its enemies.

The Total Loss of the British in South Africa up to a recent date is put down at 10,515, including 1629 killed and 5430 wounded. Our losses in the Philippines since Aug. 6, 1898, have been killed in action, 404; died of wounds and accidents, 234; died of disease, 391; total, 1029; wounded, 1952.

Free Instruction at the Harvard university summer school is offered by President Elliot for 1000 Cuban teachers this year. This plan is full of promise for the educational advancement of the island. Not the least advantage of the plan is the fact that the Cubans will come in contact with American teachers.

Famine Stricken India is still in a deplorable condition. Throughout Oudh and Punjab provinces rains have fallen and some seeding started, which points toward relief. In general the outlook is bad.

Free Transportation for live stock as required in certain instances of the railroads in Kan by legislative enactment has been declared unconstitutional by the state supreme court.

Oppose Bucket Shops—Representatives of the commercial exchanges at their Chicago meeting decided to adopt and enforce rules which will kill bucket shops.

Fresh Milk Daily for Paris Exposition—Maj. H. E. Alvord, who is to be in charge of the American dairy products at the Paris exposition, is to have fresh milk shipped to Paris every week. It is expected to be kept sweet 2 or 3 days after arriving. No preservative will be used and it will not be pasteurized.

What the Railroads Are Doing—It is a matter of common knowledge that vast schemes of railway control are now in process of consummation and that the competition of rival lines is to be restrained by these combinations. While this movement has not yet found full expression in the actual consolidation of railroad corporations, enough has transpired to disclose a unification of financial interests which will dominate the management and harmonize the operations of lines heretofore independent and competitive. This is to-day the most noticeable and important feature of the railway situation. If the plans already projected are brought to effective results, an others of similar scope are carried to execution, there will be a vast centralization of railroad properties, with all the power involved in such far-reaching combinations, yet uncontrolled by any public authority which can be efficiently exerted. The restraints of competition upon excessive and unjust rates will in this way be avoided, and whatever evils may result will be remedied under existing laws, says the Interstate Commerce commission in its recently issued annual report.

The wise farmer sets a mark and tries to attain it.

Is the Best Too Good For You?

If It Costs No More than What is Not the Best?

There is but one answer possible, and if you will take the trouble to look it up you will find that

The Elwood Woven Wire Fences

made of highest quality Bessemer spring steel wires, heavily galvanized, well woven, are the most durable, efficient, economical Fences, will last a lifetime and save you money. Get facts from our agent in your town, or failing to find our agent write to the manufacturers.

American Steel and Wire Co.,
CHICAGO. NEW YORK. SAN FRANCISCO.

THE EDGAR FANNING WEEDER

as the cut shows, is a weeder attachment for all walking or riding two-horse cultivators. It possesses all the virtues of the regular weeder at a mere fraction of the cost. It stirs and breaks up the crust, killing all the weeds between the plants, while the cultivator works between the rows. "Once Over and Done"—and completely done. No extra labor, no extra time and SURE DEATH TO WEEDS. Write for prices, testimonials, etc.

Edgar Fanning Weeder Co.,
Box 104, CALVERTON, NEW YORK.

Make an Early Season Start—The only way to get a good crop of corn is to get a good start. Buy your corn seed early. Buy your corn seed from the best source. Buy your corn seed from the best source. Buy your corn seed from the best source.

THE ELECTRICITY—The only way to get a good crop of corn is to get a good start. Buy your corn seed early. Buy your corn seed from the best source. Buy your corn seed from the best source. Buy your corn seed from the best source.

Universal Supply Machine—The only way to get a good crop of corn is to get a good start. Buy your corn seed early. Buy your corn seed from the best source. Buy your corn seed from the best source. Buy your corn seed from the best source.

\$50 a Month Easy!

We can give you something to do that will make you \$50 a month without any money. Buy your corn seed early. Buy your corn seed from the best source. Buy your corn seed from the best source. Buy your corn seed from the best source.