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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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Vol. XLI.

WINNIPEG, MAN.

JANUARY 10, 1906

LONDON, ONT.

No. 694

A. NAISMITH, President. R. M. MAYHEW, Vice-President. A. F. KEMPTON, Secy. and Mgr.
C. D. KERR, Treasurer. G. R. COLDWELL, K. C., Solicitor, Brandon.

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HEAD OFFICE: WAWANESA, MAN.

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Assets over Liabilities, 126,666 86

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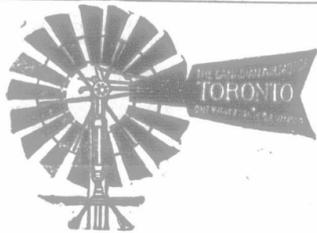
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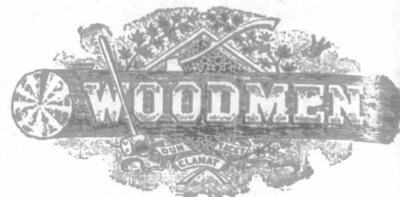
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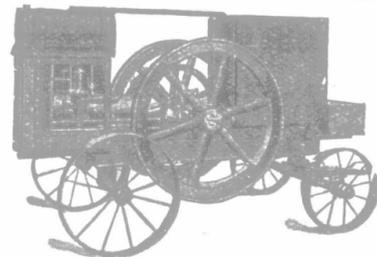
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17	33	60	99	1 30		
18	33	60	99	1 30		
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20	34	62	1 04	1 36	1 84	2 19
21	35	64	1 05	1 38	1 86	2 22
22	35	65	1 07	1 40	1 91	2 28
23	36	66	1 10	1 44	1 94	2 31
24	37	67	1 11	1 46	1 96	2 34
25	37	68	1 13	1 48	2 01	2 40
26	38	70	1 14	1 50	2 04	2 43
27	39	71	1 17	1 54	2 06	2 49
28	39	72	1 19	1 56	2 08	2 52
29	40	73	1 20	1 58	2 11	2 55
30	40	74	1 23	1 62	2 18	2 61
31	41	76	1 25	1 64	2 21	2 64
32	42	77	1 26	1 66	2 26	2 70
33	43	78	1 30	1 70	2 29	2 73
34	43	79	1 31	1 72	2 31	2 76
35	44	81	1 34	1 76	2 39	2 85
36	45	84	1 39	1 82	2 43	2 94
37	47	86	1 43	1 88	2 54	3 03
38	49	89	1 46	1 92	2 59	3 09
39	50	91	1 51	1 98	2 66	3 18
40	52	96	1 53	2 08	2 81	3 36
41	56	1 02	1 64	2 22	2 99	3 57
42	59	1 08	1 78	2 34	3 16	3 78
43	62	1 14	1 89	2 48	3 35	3 99
44	65	1 20	1 98	2 60	3 52	4 20
45	69	1 26	2 09	2 74	3 70	4 41
46	75	1 38	2 29	3 00		
47	83	1 50	2 48	3 26		
48	88	1 62	2 68	3 52		
49	95	1 74	2 88	3 78		
50	1 05	1 92	3 12	4 10		
51	1 15	2 10				
52	1 24	2 28				
53	1 37	2 52				
54	1 51	2 76				
55	1 64	3 00				

\$384,039.18 paid to widows and orphans to June 1, 1904.
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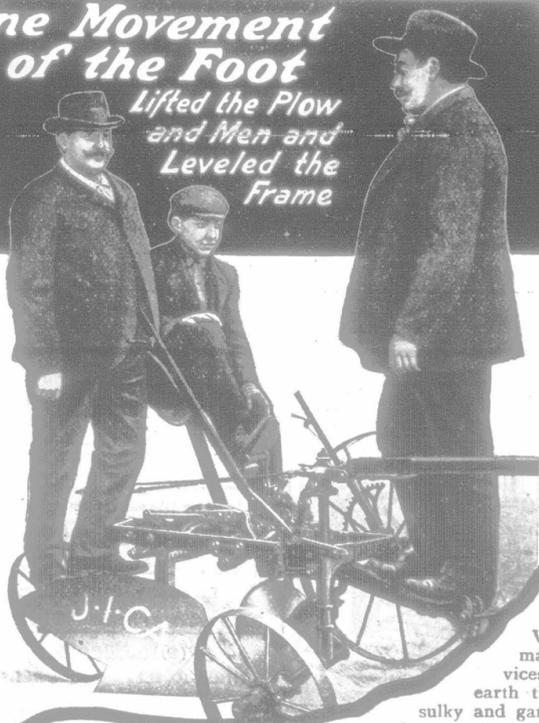
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*One Movement
of the Foot
Lifted the Plow
and Men and
Leveled the
Frame*



**Another Great J.I.C. Step
In Sulky Plows**

This picture shows the latest and greatest plow achievement of the age. And it shows some of the things that can be done with it. It is the J. I. Case new Self-leveling, High Foot-Lift Sulky Plow—a plow that is as far superior to all ordinary foot-lift plows as the walking plow was superior to primitive ground scratching methods. Look at this photograph again. The boy in the seat with his foot alone, not merely lifted this great weight, but he raised the plow bottom from a plowing position, six inches under ground, clear up into the frame, six inches above ground, and he leveled the frame with the same operation. This is a distinct feature of the

J. I. Case Self Leveling, High Foot-Lift Sulky

Other foot-lift plows lift the bottom independently of the frame and then only two or three inches above the ground. In order to raise the bottom as high as six inches above the ground and level the frame in other plows, it is necessary to manipulate one or more hand levers in addition to the foot lever. And this must be done at the end of each furrow. You know what that means—extra work, inconvenience, and time.

All the exclusive features that make J. I. C. Sulky Plows so different from the ordinary kind, are found on the J. I. C. Self-Leveling, High Foot-Lift Sulky. The bottom enters the ground point down, heel up, and starts plowing immediately. It comes out point up, heel down. A simple device by which the heel of the plow is raised or lowered, enables you to level the bottom from point to heel, thus insuring its going into and staying in hard ground and gives the advantage of changing the angle of penetration to suit the condition of the ground.

We want an opportunity to tell you more about this wonderful plow; about the superior materials in it; about the J. I. C. principles of construction and the many labor saving devices that make work lighter for both man and horse. There isn't a line of implements on earth that can claim greater consideration than the J. I. Case line—and that includes walking, sulky and gang plows, harrows, cultivators and planters. Let us tell you why. As a special inducement for you to write for our catalogue, we are making the following special offer:

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I am pleased to say that the Mica Roofing Felt I got from you for enclosing a barn on my farm, 30 x 64 with 16 ft. posts, has given the greatest possible satisfaction. It kept the barn thoroughly warm, and after three years' exposure to the weather, is as good and firmer than when first put on.

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When you see the waist low Tubular you can't be driven into buying a back-breaking, "bucket bowl" separator. Can and crank are just the right height on the Tubular. Here is the largest Dairy Tubular along side four "back breakers." The girl with her hand on the Tubular is 5 feet, 4 inches tall. This is an exact reproduction from a photograph. Which kind for you? Makers of "back breakers" try to get their cans low by setting the cranks low. High cans break your back backward—low cranks break it forward. Unless you are a double jointed giant, you'll find a high can is no joke. To show you how high these "back breaker" cans really are, when the machines are set high enough to turn easily, we raised these "back breakers" 'til their crank axles were level with the Tubular crank axle. "Back breaker" makers don't like this picture—it's too true. They try to squirm out of it. You wouldn't like turning cranks as low as "back breaker" makers put them.

The low can is only one of many advantages Dairy Tubulars have over all others. Dairy Tubular bowls are simple—"back breakers" are complicated. Tubulars are self-oiling—no oil holes to fill up. "Back breakers" are oil drippers and oil wasters. To learn a lot more about Tubulars, write today for catalog N-16.



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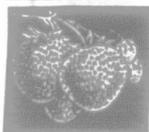
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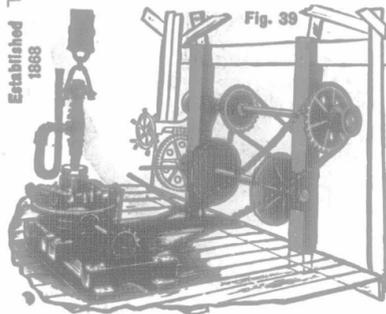
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Your name, address, and date of birth, mailed to Head Office, will bring full particulars.

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LIGHTNING WELL MACHINERY,

Rotary, Coring or Rock Drilling,

Any Diameter, Any Depth, for
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Prospecting,

Descriptive Catalog on request.

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QUININE HAIR TONIC

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FARMER'S ADVOCATE

AND HOME MAGAZINE

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

VOL. XLII.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

NO. 694.

WINNIPEG, MAN. JANUARY 10, 1906. LONDON, ONT.

Editorial.

No occasion for jealousy because Alberta Red makes good biscuit flour.

Behold the era of scientific teaching in dairying starts at the M. A. C. Feb. 6th next.

Canada is all wool and a yard wide, if the International winnings in sheep are any criterion.

The U. S. cattlemen still keep their nerve; they bid the Doddies at Chicago up to averages of \$160 for bulls, and \$138 for females, and that in a country where there is said to be a packer's combine! But then, Doddies are good stuff!

The Ohio Agricultural College brought Yorkshires to the front at the International. The corn-fed Improved Chester White is no longer the society favorite—too many sweets and too little protein puts the best brood sow out of business!

The cry for protection for the few sheepmen would lead people to suppose that sheep were only valuable for wool. For years B. C. has had to purchase mutton on foot in the U. S., and a leg of mutton is almost prohibitive in price in Winnipeg.

Minister of Agriculture Finlay says the protection doctrines enunciated at the Hat before the T. C. did not represent the orthodox doctrines in favor with the farmers and ranchers of that portion of Alberta. We believe the Minister speaks the truth.

Never mind if milk development is the excuse for opening the Shorthorn herdbooks to admit the best British cattle; these cattle are needed, and, if good milkers, all the better. There may be a little less strength placed on family henceforth, and more on performance; at least, it is to be hoped so.

The American Shorthorn Breeders' Association has a surplus of \$115,000, which they are saving—for what? Record associations are not supposed to be in the savings-bank business. Beyond a reasonable reserve, the cost of registration should be reduced, and larger and more prizes be offered at the shows for milk records.

The great American hog is no longer available for Canadian exporting packers. The Government is determined to preserve the good name of Canadian bacon, even at the cost of transferring a part of the packing industry to the United States.—[The Globe.

It (transfer of packing industry) really cannot be avoided if our packers will persist in suicide. The farmers have the right to be considered ahead of the packer, for the simple reason that every chance the latter has to squeeze the farmer he will do it.

The home breeder, after years of careful study in mating his horses, and spending plenty of money for stallion fees, from which he often gets no returns, may register his filly foals if they have four straight crosses of Clydesdale or Shire, and the colt foals if they have five. The foreigner foals, having no more than three crosses, are admitted duty free, and registered in our stubbooks, for which there is not the excuse of either reason or justice!

The Problem of Securing Good Stallions.

The beginning of the year is the time when horsemen begin to feel that the period has arrived for them to look around for stallions for their districts, and devise methods by which first-class horses may be got. There seems to be a growing disinclination to invest in stallions by individuals, and the opposite trend by syndicates. The syndicate is the ideal method, and, if properly conducted, is the best way by which first-class horses may be brought into a district. Unfortunately, the syndicating of stallions is in bad odor at present, owing to the dishonest practices followed by some dealers and farmers, and the ignorance displayed by other farmers. The farmer in a district who will act as stool pigeon to entrap his less wary brother farmers into a horse deal, merits strong condemnation; if he accepts a retaining fee from the stallion dealer of \$100 to \$500, he ought to be honest enough to say so, and stay off the syndicate.

It is to be regretted, also, that some stallion agents have resorted to the dastardly method of the thug, by making some of the men whose signatures were wanted, drunk, so that they knew not what they were doing. Where square methods are followed by both buyer and seller, the syndicate is the modern way of bringing good horses into a neighborhood. Unfortunately, the old truism that "honesty is the best policy," has not yet sunk deep enough into some people's understanding. The palming off of a stallion known to be infertile, or the changing from one syndicate to another of a poor worker, hurts the stallion business, and is an injury to the stallion dealer who wishes and tries to play the game fair, as well as the crook.

Some people would object to the prices of horses, but it must be remembered that the stallion men are at a great expense—the initial cost of the horses, the expense of importing, wages of salesmen, advertising, credit for one, two and three years, and then the cost of guaranteeing the fertility of a horse, which is often placed in the care of an incompetent groom. All these items make the price, in some cases, look big, if not prohibitive, but if value is given in the shape of a sound, healthy, fertile horse, the cost, divided among ten or a dozen, is hardly felt, and the horse will soon pay for himself. The Horse-breeders' Ordinance, in force in Saskatchewan and Alberta, has brought to light many pedigrees for which the only plain term is "bogus," because the birth dates have been altered to misrepresent the age of particular horses.

It has been the custom to abuse the syndicate method, but if properly managed, the organization and purchase of the stallion done "on the square," the syndicate method is far and away the best method, at the present time, of obtaining good stallions, and should not be condemned. The Scotch method of hiring horses has received a great deal of attention and commendation, and rightly so, but it is a question whether such a method is not a little too modern for farmers here as yet. Certain it is that some agricultural societies might do more good for the district by offering district premiums than by holding what are only apologies for shows. The proposition that Provincial Governments should bonus stallions is not worth considering. Spoon-feeding has been carried to the limit already in some lines, and does not conduce to the growth of a self-sustaining industry. Agriculture is only hurt by parasites, whether in the form of insects, shows, organizations, or what not. The field of the Government is education, and by means of reasonable statutes, ensure fair dealing to the

horse-breeder. No special solicitude for the individual stallion owner is needed, beyond that exercised by an up-to-date lien act; he is usually a horseman, knows how to buy, and can take care of himself, and, by his methods, is possessed of considerable public spirit. The syndicate that will form itself and go to the horse dealer, can always do better than the association which is promoted by a dealer who brings a particular horse into the neighborhood to sell. He has to be paid for the time and expense of promoting the scheme, and that means added cost on the horse.

All stallion men are not crooks, neither are all syndicates failures, nor all farmer members of syndicates "easy marks;" but when a neighbor becomes unduly active on behalf of a particular horse and a certain firm, one need not be surprised if suspicion is aroused. Avoid putting on your syndicate the chap who can be made drunk, especially when important business is to be transacted, select your partners in the horse-breeding venture, have everything drawn up in writing, get a lawyer you can rely upon to draw up the terms of and agreement forming the syndicate, and have him inspect agreement of sale before closing the deal for a horse, and if not satisfied, refer to this paper as to the authenticity of the horse's breeding. No honest dealer will mind you taking these precautions, for the simple reason that, knowing things are "straight," he has nothing to fear.

How Should Record Associations be Financed?

The above query is suggested by the report of the American Shorthorn Breeders' Association, referred to in the issue of January 3rd, which has a reserve fund of \$115,000. The Dominion Shorthorn Association has \$14,000 in cash and assets, according to the last auditors' report. What advantage are such large reserves, and who is to benefit thereby? This raises the question at once as to how such reserves are obtained, and whether the cost of registration might not be reduced or more money be distributed for prizes, so that the reserves may be lowered. Record associations are not intended to be savings banks of cash for posterity!

The funds of the breed associations are obtained by taxing breeders, either for memberships, or registration, and, while a reasonable reserve should be kept, one of \$5,000 should be ample to tide over all possible contingencies in the D. S. H. B. Association. The excuse frequently given for electing Ontario men only to the executive of the D. S. H. B. A. on the score of expense, certainly savors strongly of inconsistency when the reserve of \$14,000 is considered. The real truth is, the fellows there do not like to let go their entire control of expenditures—nothing more, nothing less—and it is worth while reminding those gentlemen that a similar way of thinking lost Great Britain the United States in 1775. But aside from that, provided the affairs of record associations are run as economically as possible, no exception can be taken to the giving of large grants to a few of the big shows for advertisement of the particular breed, even if such savors of taxing the whole breeding fraternity for a few showmen to win prizes. Such showmen are forced by competition to fit their stock, to procure the best, and thus to set the standards for the breed, all at considerable cost to themselves, and they deserve reasonable encouragement. The parts the breeders of pure-bred stock play in the public eye are twofold—either they advertise the breed in a helpful manner by producing and placing on the live-stock markets first-class stuff, and thus inci-

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

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competition by other breeds; or they breed poor
trash, which advertises the breed to its hurt,
floods the markets and depresses prices, and de-
ters people from investing money in pure-bred
stock of the breed they own. There is no middle
course.

The breed associations can, therefore, legiti-
mately use their surplus funds to school actors
for the first part, and should do all they possibly
can to raise the average of quality of breed pro-
duction. They could also afford to elect an executive
from more than one Province, pay the expenses of
such men, profit by their counsel, and thus be
brought into touch with conditions in distant parts,
and by so doing tend to rid themselves of narrow-
ness, and be enabled to don a garb characterized by
breadth. Taxes are moneys intended to work,
not to be hoarded up or to be gloated over an-
nually at the reading of an auditor's report.

Wanted: A Minister to Stand for Progress, not Monopoly!

A big Western daily says the Cabinet position
of Minister of Marine and Fisheries, vacant by
the sudden death of the Hon. Raymond Prefon-
taine, ought to be given to a Western man! True,
the whole Canadian West has only one Cabinet
Minister with portfolio, and it deserves more
recognition. That, of course, is a purely Western
view, and somewhat Provincial, too. Have we
the man to fill such an important position? That
is the great question. The position needs to be
filled, not given merely an occupant, because he
may hail from the West. The St. Lawrence
route needs less of handling by politicians and
more by statesmen, from the latter lack of which
it has suffered for the last quarter of a century.
Our national pride cannot let us brag about a
waterway strewn with wreckage. Five wrecks in
1905; marine insurance rates by the Canadian

higher than by the States ports, all because of
the lack of, not necessarily a Western man; but
the Western method of directness, which would
sweep out of the way the 100 French habitant
pilots who are a menace to our commerce and a
drag on our financial progress. Reste!

How Should Breed Associations' Grants be Divided?

There seems to be some misapprehension in the
minds of many as to the principle underlying the
giving of grants by breed associations. That
principle is to advertise each particular breed as
much as possible, and to stimulate emulation
among breeds and breeders. Some breeders, in-
tensely loyal to their Province or locality, would
have the grants divided pro rata, based on their
contribution to the association's funds, which, if
followed out to its logical conclusion, would mean
the dissipation of the grant into a lot of small
prizes at local fairs, with no corresponding bene-
fit to the breed association contributing.

We are entirely in accord with the idea that
the Provinces should each receive a share of the
association's grants for shows, the size of that
grant to be based on the membership and regis-
tration fees paid, and that the members of the
association in each Provincial live-stock associa-
tion should advise the executive of the breed as-
sociation as to how such grants might be dis-
tributed, but believe that the final allotment
should be in the hands of the Dominion execu-
tives, which, of course, should be representative
of the Provinces.

If the methods advocated by some were followed
out, the Provincial associations would have the
handling of the moneys, which would then be
divided among the smaller shows, and might go
into the pockets, via the show-ring, of course,
of the breeders happening to be on the live-stock
associations' executives, and the advertising re-
sults for the breeds would be nil!

At present, the Dominion Shorthorn Breeders'
Association gives annually from five to seven hun-
dred dollars to Manitoba, which has generally
been allotted to Winnipeg and Brandon. The sug-
gestion has been made by some interested people—
men enthusiastic for the success of their local
fairs—that Killarney, Neepawa, Saskatoon, Car-
berry, and shows of that class, should participate
in these grants, a suggestion that is ridiculous
when the basic principle—advertising the breed in
competition with other breeds—underlying such
grants is clearly understood, and also that such
shows are merely county shows, and local in their
patronage, although striving to do good work in
their respective districts.

Time brings a good many changes in its train,
and five years hence opinions may, by the logic of
events, be forced to change, but from an experi-
ence of the various shows in the prairie country,
we consider it would be inadvisable for the breed
associations to make grants, bearing in mind the
interests of each breed, and not of individual
breeders, to shows other than Winnipeg, Brandon,
Regina, Calgary and Edmonton. The breed as-
sociations would do well, however, to stipulate
to the quintette of shows mentioned, that the
size of the grant would depend somewhat on the
amount offered by each fair board from its funds,
so as to ensure a strong prize-list for the breed
and to prevent the recipients from pruning down
their own list and substituting the breed associa-
tion grant therefor. Further, we would suggest
to the Shorthorn, Hereford, Clydesdale, and other
associations, that the major grant be alternated
between shows, so as to get the maximum amount
of advertising, by giving the big end of the grant
allotted to each Province, or all of it to Winni-
peg in 1906, to Brandon in 1907, and similarly
to Calgary and Edmonton. By such a method
the best herds would move around more, and
bring the breeds mentioned to the attention of
people who are not yet interested but have the
money to invest, and only require their attention
to be drawn.

Enclosed find a remittance to cover my arrears.
I like your paper very well, and I would miss it
to be without it. Yours very truly,
Nanton, Alta. AUGUSTUS S. SHAW.

Would Impede the March of Progress.

A report of an interview, in a daily paper,
with a Winnipeg dairyman, has that person ob-
jecting to the dairy department of the college
purchasing necessary supplies for teaching mate-
rial and experimental purposes, and the crocodile
tears shed for the poor consumer are appalling.

It will be a good day for the Manitoba farmer
when the dairy school shall demonstrate to him
how much his cream and milk is really worth on
the open market, and what he should get for that
product. If the Government could only afford it,
we would suggest a mill and a packing-house to
demonstrate returns from other raw materials, so
obligingly furnished by the farmers. At Madison,
Wis., the University dairy of the agricultural col-
lege buys milk from farmers, and peddles milk,
cream, butter and cheese around the town, and
no objection is heard. If the M. A. C. dairy has
the effect of raising the standard of the milk
vended in Winnipeg, the thanks of the people will
be due, and the lives of numbers of infants will
be saved. The fact of the matter is, the average
city milkman is not a cleanly person; he abhors
water, unless (judging by recent prosecutions) he
can get it into the milk. We understand the col-
lege product will, in any event, not come into
competition with that of city dairymen; it will
be superior, sell for more money, be in a class by
itself. The real trouble with a few milkmen—who
have been acting as middlemen—is, that the pro-
ducer (the farmer) is likely to get what is coming
to him, viz., a slightly better figure for milk and
cream and a square deal. After the farmer has
had a taste of the real thing he will, when in-
vited to return to the old order of things, be
like the raven who quoth "Never More!"

Horses

Administering Medicines to Animals.

(Continued.)

Medicines are generally given to ani-
mals in a fluid state as a drench. The
patient's mouth must be elevated, which can be
done by the operator grasping the partition be-
tween the nostrils, by placing the forefinger of
the left hand in one nostril and the thumb in
the other and raising the nose until the mouth is
slightly higher than the throat. It is not wise
to elevate the mouth much higher than the throat,
as this appears to render the muscles of degluti-
tion (swallowing) tense and interferes with their
action. Some cattle are stubborn, and hard to
hold in this position, hence it is well to have an
assistant on the left side of the patient (the oper-
ator stands on the right side) to catch a horn
in each hand, or, in the absence of horns, an ear,
and assist in keeping the head in the proper place.
The drench, having been prepared and put into a
large bottle, is now taken in the right hand of
the operator, and the neck of the bottle introduced
into the mouth through the interdental space
(that space between the incisor and the molar
teeth), a small quantity of the fluid is allowed to
flow into the mouth, when, if the patient works
her jaws and swallows, it can be allowed to run
freely, but if she holds her jaws tight and refuses
to swallow, it must not be allowed to flow, as if
the pharynx be filled some of the fluid will pass
down the windpipe at the first expiration and
cause suffocation or mechanical bronchitis. When
an animal acts this way the roof of the mouth
should be rubbed freely with the mouth of the
bottle until she commences to move her jaws, when
she will, in most cases, swallow, after which the
fluid may be allowed to flow freely. Under ordi-
nary conditions, a quart of fluid can be given to
an ox with less trouble and in less time than half
a pint to a horse. If from any cause an ox
persists in refusing to swallow, or is unable to
swallow on account of a soreness of the throat or
a partial or complete paralysis of the muscles of
deglutition, as in cases of paraplegia, milk fever,
etc., drenches must on no account be given in the
ordinary way, as untoward results are sure to
follow. In such cases a gag made of a piece of
board about three inches wide in the center and
tapered to one inch at the ends, with a one-half-
inch hole through its center, or other means of
keeping the mouth open, should be put into the
mouth and secured there. Then a piece of one-half
inch rubber hose about five feet long should be
passed through the hole into the gullet and on
down to the stomach. The head of the patient
being held in the same position as for drenching,
the small end of a funnel is forced into the cavity
in the exposed end of the tube and the fluid pour-
ed into it. This conveys the fluid directly to the
stomach without danger. Medicines can be given
in this way more easily if the patient be lying
down. Medicines can be given to the ox in the

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solid form or hypodermically, etc., but these methods of administration are not greatly practiced in cattle practice.

SHEEP.—The anatomy of the sheep is very much the same as that of the ox, hence the same dangers exist, and sheep being so much smaller, the danger of suffocation is much greater, and even more care must be observed. The usual manner of drenching a sheep is to have an assistant catch the patient and hold him on his rump with his back and withers up close to the assistant. The operator takes the bottle holding the drench in his right hand (the bottle should be one with a narrow mouth, out of which the fluid can flow only slowly), with the left hand he steadies the head, and then proceeds as with the ox, but he must be very careful to allow the fluid to flow very slowly and allow only a small quantity to enter the mouth between each swallow. He should instruct the assistant to immediately allow the patient to get on his feet if he commences to cough.

SWINE.—The pig is proverbially stubborn, and this characteristic is especially marked when an attempt is made to give him a drench. As it is unsafe to endeavor to hold him by hand and hold his mouth open, unless he is quite small, it is necessary to get a rope in his mouth and around the upper jaw, and then elevate his head, and either tie or get an assistant to hold the rope. He will pull backwards and express his displeasure of the operation by vigorous and usually constant squealing. As the larynx must be open when he squeals, it follows that if fluid be poured into the mouth, even in small quantities, it is more liable to pass down the windpipe to the lungs than down the gullet to the stomach. A large percentage of pigs that are given fluids in this way are either suffocated at once or the bronchial tubes so filled with fluid that death takes place sooner or later as a result. The most successful method we have tried for giving fluids to swine is to force over the neck of the bottle a piece of inch or inch and a half garden hose, the size of the hose depending, of course, upon the size of the bottle's neck. Three or four inches of hose should extend beyond the bottle. The pig is secured as noted, and the hose introduced into the side of the mouth, and the bottle elevated so that the fluid will gravitate towards the hose. The patient commences to chew the hose, and the fluid flows slowly into the mouth and he swallows without danger.

DOGS.—Medicines can usually be given to dogs more readily by their masters than by strangers. They are given either in the form of tablets or fluids. The former are given by holding the mouth open and dropping the tablet well back over the root of the tongue. If the patient's appetite be fairly good, a powder or a tablet can be enclosed in a small piece of well-cooked lean meat, and will be gulped down without taste. Fluids are given in small quantities with a spoon or bottle. The head is elevated and a little fluid poured into the mouth, which is then allowed to close.

“WHIP.”

Key to Chart of Horse.

- | | |
|--|--|
| 1. Poll. Seat of "poll evil." | 21. Seat of splint. |
| 2. Forehead. | 22. Seat of sidebone. Quarter - crack indicated below. |
| 3. Face. | 23. Loins. |
| 4. Muzzle. | 24. Coupling. |
| 5. Throat-latch. | 25. Hip. |
| 6. Windpipe. | 26. Croup. |
| 7. Jugular groove. | 27. Flank. |
| 8. Point of shoulder. | 28. Stifle. |
| 9. Chest. | 29. Hip joint. |
| 10. Arm, from shoulder point to elbow. | 30. Thigh. |
| 11. Forearm. | 31. Quarter. |
| 12. Knee. | 32. Point of hock. |
| 13. Fetlock. | 33. Hock joint. |
| 14. Pastern. | 34. Gaskin or lower thigh. |
| 15. Neck. | 35. Seat of thoroughpin. |
| 16. Crest. | 36. Seat of curb. |
| 17. Withers. | 37. Seat of bog spavin. |
| 18. Back. | 38. Bone spavin. |
| 19. Shoulder. | 39. Seat of ringbone. |
| 20. Elbow. | |

Clean and Fearless!

I appreciate very much your weekly paper. Your editorials commenting on questions affecting the home, farm and public life of the West are clean and fearless, and should be a help to all your readers. Wishing you every success, I remain,
Respectfully yours,
Hartney, Man. JNO. M. FEE.

To the Editor "The Farmer's Advocate":

Congratulations on your Christmas Number. Your paper is, of a truth, "pro bono agricolae" (hope that is correct; though my plowshare is bright, am a bit rusty myself on classics). Your dream and reality, in a way, touches a tender spot, while the "No Complaint" reminds an old Nor'-Wester of many a friend in the good old R. N. W. M. P. Faithfully yours,
"OLD-TIMER."

Stock.

Give a Name to the Farm as Well as Live Stock.

The breeder of pure-bred stock is practically forced to name his animals for registration purposes, and as much care as possible should be exercised in choosing a word label for recorded animals. Occasionally an animal of mediocre standing is labelled by its fond owner with a name belonging to a more famous animal. We believe such is thoughtlessly done, and not with a view to mislead, but, unfortunately, it does have the latter effect in some cases. If a name made famous by another animal is to be used, there should be either a distinctive prefix or affix; the former might be the name of the farm or locality, the latter a number, name or word, so that no possible confusion could arise. It should also be borne in mind that it is not advisable or desirable to use lengthy names for animals, such as are used in royal families; there are limits to which herdbook registrars may go. These remarks are prompted largely by the use of a name, made famous in show circles in Canada for an animal by a firm neither owning that famous animal nor connected with the owners, and while experts may detect the difference readily, the names are exactly similar, and in course of a few years it will be hard for persons reading a show or sale report to distinguish the progeny of one animal from that of the other; consequently, injustice may be done, not only both sires, but their respective owners, when such was not the intention. We believe that where a name is made famous, either in the show-ring or at the

The Royal Encourages Milking Short-horns.

The Royal Agricultural Society of England offers prizes at its annual show, donated by the Shorthorn Society of Great Britain, to stimulate the milk flow in the favorites of the Collings. As the American S. H. B. Association recently decided to open their record to Coates' Shorthorns of Vol. 40 and back, in place of Vol. 20 and back, as heretofore, on the excuse of improving the milking qualities of the breed, we can expect and hope to see similar clauses to the following in some of the prize-lists of our big shows:

"Cows entered in these Shorthorn dairy classes to be clean milked at six o'clock in the evening previous to the opening of the show. That on the first morning of the show all cows shall be milked in the ring in the presence of the judge, who shall see the milk weighed, and any cow that does not yield up to the following standard shall be disqualified:—Cows having calved within three calendar months of the show, 25 pounds of milk. If calved more than three calendar months from the first day of the show, 20 pounds of milk."

The Dominion Shorthorn Breeders' Association could use some of its wealth in no better way, we opine.

Fighting Tuberculosis.

At the recent Health Congress at Buda-Pesth, the consensus of opinion was to the effect that the bacillus causing the disease is identical in man and animals, although it may exhibit variations in virulence and stage of development, and that infection can take place from men to animals, and vice versa.

Dr. Bang, of Copenhagen, summed up the results of his observations as follows:

"It is urgently necessary to take measures to combat tuberculosis, not only in consequence of the agricultural losses caused by it, but also on account of the danger of infection to human beings."

The extirpation of cattle tuberculosis is practicable, and must be aimed at. The early slaughter of diseased animals is indispensable, as well as the careful protection against tuberculosis of calves and other healthy cattle. It is desirable to spread among agriculturists correct information as to the nature of tuberculosis, its manner of infection, and the efficacy of the tuberculin test. The Government should make a grant of money to assist this propaganda. Tuberculin can be recommended as the best means of diagnosing the disease. Tuberculin should be supplied by the Government, but should be given only to veterinary surgeons.

It is strongly recommended that the Government should adopt the necessary steps for combating the disease; only in this way can its spread be hindered, and its gradual extinction brought about.

The following two measures are considered necessary:—

(a) The obligation on the part of veterinary doctors to report any cases of tuberculosis that come to their knowledge.

(b) The destruction of all diseased animals, with compensation, to which Government should assist.

The measures recommended above are scientifically correct, even if, in their entirety, practically impossible to enforce. More ventilation in buildings, resulting in a plentiful supply of pure air, plenty of windows to admit the bactericidal rays of sunlight, and the segregation of tuberculous stuff from that free of disease, are all practical measures in reach of farmers. There is no occasion for panic, but a steady determination to get rid of the white plague should be evinced by the adoption of rational scientific methods.

Canada's Shortage of Pork.

Canadian packers are complaining bitterly because farmers of that country are not furnishing them with a sufficient supply of hogs. Their present predicament is amusing. They are merely suffering the penalty of pursuing the foolish policy of strangling the goose that lays the golden egg. Some years ago a bacon-hog propaganda was started in Canada. Growers waxed enthusiastic, and started in to grow a hog crop large enough to put Denmark out of the bacon business. But when the crop was ready for the shambles the Canadian packer took advantage of the farmer, refusing to pay him the cost of production, and

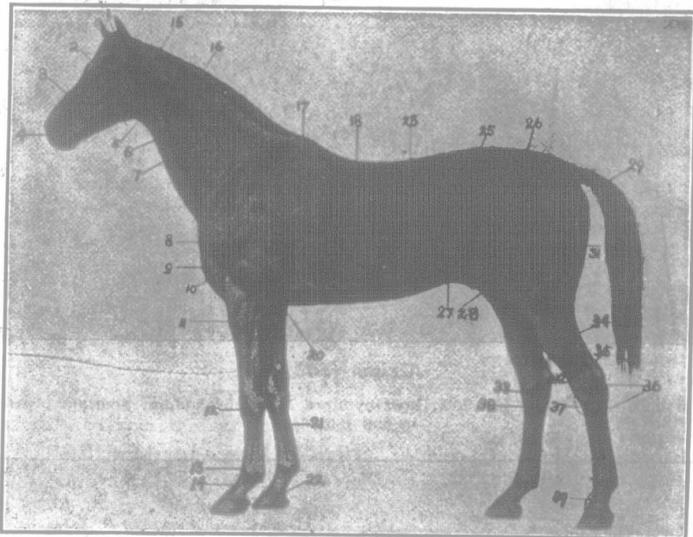


Chart of a Horse.

stud, or both, that the owner's right to the appellation should be respected as much as a copyright of a book, a painting, or piece of music. We believe it would be a good move on the part of record associations to refuse names exactly similar, applied to other animals. Such a procedure is now followed, we believe, by some, but it would be a good idea to apply the rule to all record associations, and thus tend to prevent the possibility of animals masquerading under colors that do not belong to them. It is not a hard thing to avoid if the indexes of the particular herdbook or studbook is studied.

The stock-breeder or farmer who truly loves his home and farm will endeavor to secure a suitable name for that farm. Such a name may indicate a distinctive feature of the farm, such, for example, The Elms, Lakeview, or it may indicate the soil character or other features—Claylands, Sandilands, or some old family name or idea, such as Belvoir, Oak Lodge, Forest Home, Woodmere, etc. The breeder of pure-breds cannot afford to do without such a name, which, applied to his farm and live stock, at once gives its distinction in his advertising, and when seen in print or mentioned, at once brings to the mind of the reader or hearer the particular farm, its owner and its live stock. It is, therefore, good tactics to select a suitable euphonious name for one's farm and use it for the live stock as a prefix. It is doubtful, however, if the farm name will be used for the owner, as is so frequently the case in Scotland, where one hears men spoken of as Kinellar (S. Campbell, Jr.), Auchronie (Alex. Watson), Collynie (Wm. Duthie), Netherhall (Montgomerys), Pitlivie (Baillie Taylor), and others, the names used being those of their respective farms.

in disgust the grower quit making a supply of raw material for the bacon-curer. Hogs are worth \$6.00 per cwt. across the line, simply because the killer refused to pay a reasonable price simply because he "didn't have to."—[Live-stock World.]

The Four Great Beef Breeds.

IV.

SHORTHORNS.

This class of cattle was formerly known as the Durham breed, from the county in England in which it originated. The term Shorthorn was probably adopted to distinguish them from the Longhorn breed which prevailed in the same country early in the eighteenth century, and which is still preserved in its purity in England, although in very limited numbers and confined to few districts, while the Shorthorn has proved its right to the title "Cosmopolitan," having thriven and become popular in many countries and in all quarters of the world, owing largely to its dual-purpose character, the cows in its earlier history being generally good milkers as well as beef producers. The precise origin of the breed, as in the case of nearly all the other British breeds of cattle, is involved in much obscurity. It is but just to say here that for much of the information given in this article we are indebted to Sanders' excellent history of Shorthorn cattle, from which we freely quote.

The Romans, Saxons, Danes and Normans who conquered England, in turn brought cattle with them that were crossed on the native herds, and this, in part, accounts for the variety of these, while the modifying influences of climate, shelter and treatment doubtless had much to do with the origin of breeds. Thus it was that in the rich pastures of Durham and Yorkshire, and especially in the Valley of the River Tees, a comparatively large type of cattle existed several centuries ago—the ancestors of the modern Shorthorn. For a long time there were two independent strains of ancestry, the Teeswater and the Holderness, which were later blended through the indiscriminate crossing of their descendants. It is claimed that a Shorthorn type of cattle existed on the Yorkshire estates of the Earls and Dukes of Northumberland in the sixteenth century. Between the years 1730 and 1780 many eminent breeders gave attention to the improvement of their cattle. Some of the bulls with English Herdbook numbers, appearing in the pedigrees of Shorthorns were born in the eighteenth century, the Studley Bull (620), for instance, one of the first great sires of the breed, having been calved in 1737. At this date it was not customary to preserve the name, or even a description of the cows from which sires in service were descended, the pedigree being traced through the bull line exclusively, and many of the most noted foundation sires were known by the names

of their breeder or owner, and so recorded, as, for instance, James Brown's Red Bull (97), and William Parker's Bull (51).

The most famous of these foundation bulls was Hubback (319), a yellow-red, with some white, calved in 1777, and bred by John Hunter, a bricklayer who kept one choice little cow, a good milker, and handsome, which ran in the lanes of the town of Hurworth, and was bred to George Snowdon's Bull, also in Hurworth, the produce

being the bull Hubback, sold to a Mr. Fawcett living not far from Darlington. Charles Colling, one of the principal early improvers of the breed, going into Darlington market weekly, noticed some excellent veal calves, and upon enquiry, learned that they were the progeny of a bull belonging to Mr. Fawcett, of Haughton Hill. This bull, then known as Fawcett's Bull, afterwards called Hubback, was at the time serving cows at a shilling each. Chas. Colling, on seeing the bull, was not particularly impressed with him, but later, his brother, Robert Colling, and his neighbor, Mr. Waistell, thought better of him, and bought him in April, 1873, for ten guineas (about \$50), when he was about seven years old, and used him in their herds one season. In the meantime, Chas. Colling, having changed his opinion of the merits of the bull, offered his owners eight guineas for him, and they sold him. Chas. Colling kept the bull two years, using them freely, and sold him in 1785, at ten years old, to a Mr. Hubback, who used him till he was fourteen years old. The bull had no name when Colling sold him, and he was then called Hubback's Bull. He was a small bull for a Shorthorn of that time, and his dam was small, but of fine symmetry, with a nice touch, and fine, long, mossy hair, all of which choice qualities Hubback took from her. As size was a meritorious point in Shorthorns at that time, it is probable the Collings discarded him for that lack more than any other. Yet, his reputation among the breeders was greater than that of any other bull of his time. It is said that his stock had

of his theory and practice, and in the following year bought in Darlington market a cow which he named Duchess that was the foundation dam of the noted family of that name that in the middle of last century became so popular that, at the dispersion of the Campbell herd, at New York Mills, in 1873, a cow was sold for \$40,600, two others for \$30,060 and \$35,000, respectively, and the whole herd of 109 head for an average of \$3,504. The original Duchess cow was described as a "massive, short-legged animal, of a beautiful yellow-red color, her breast near the ground, her back wide, and her handling quality superior."

In 1786 Chas. Colling purchased from Mr. Maynard, of Eryholme, for 28 guineas, the cow called Favourite, a roan, possessing the long horns of the old Teeswater type, and coming from a well-established tribe. The name of this cow was after changed by Mr. Colling to Lady Maynard, and she became the ancestress of several families and of bulls that practically created the improved Shorthorns. Robert Colling had, in the meantime, laid the foundation of a superior herd of Shorthorns, and is credited with judgment quite equal, if not superior, to that of his brother Charles, as evidenced in the purchase of Hubback, and there is no gainsaying the far-reaching influence of the blood of this bull in the improvement of the breed, some even crediting him with being the real fountain head of the breed. Thos. Bates, one of the most distinguished of those who followed the Collings, went so far as to say: "It was the opinion of good judges in my early days that had it not been for Hubback and his descendants, the old, valuable breed of Shorthorns would have been entirely lost, and that where Hubback's blood was wanting there was no real merit." We have dwelt upon the history and record of this bull, as we shall upon that of other noted sires of later date, because of the great importance which experience and observation has proved should be given to character in a bull, and especially to the handling quality of his skin and hair.

(To be continued.)

A Tribute to the Shorthorn.

A Scotch contemporary, referring editorially to the results gleaned from the Smithfield fat-stock show, says as follows:

"The crosses were easily getting the better of the pure-breeds, and alike in cattle and sheep (the Suffolk) one particular breed was dominant in the cross. The Shorthorn was everywhere in the successful cross cattle. This was as true of the classes judged on hoof as of those judged in carcass. Out of 50 entries in the cross-bred classes, only four were without an avowed Shorthorn cross. The champion carcass was the unique result from an Aberdeen-Angus sire and a Kirklevington Duchess cow. Ever since he purchased some of the few genuine Duchesses (Bates) at the Underley sale, Mr. Fletcher has been demonstrating their value in the production of high-class fat stock. In the other prizewinning carcasses, apart from the two first-prize winners in the steer classes, which were Welsh runts, the Shorthorn influence was felt. Sometimes it was in combination with the A.-A. sire, more frequently with the A.-A. or A.-A. cross dam, or in one or two cases with the Galloway or Kerry and Dexter cow, but, whatever the coupling, the Shorthorn influence in quick ripening and marbling of the flesh was evident. This is a striking testimony to the invaluable breed which has so long held the premier place the world over."

Peculiar transmogrifications must be going on in some of our leading breeds of sheep. An American exchange recently printed a cut purporting to be that of a Shropshire, which, according to the engraving, had a pronounced tendency to white in the legs, and such a light face that you couldn't tell where the wool ended, while the conformation and general appearance would make a Southdown breeder wink. And now we are favored with a picture of a "prize Oxford Down ram," with a head that reminds one of a Lincoln more than anything else except a Leicester. It would seem as though a live-stock Burbank has been getting in some pretty fine work, or else the line fences can't be very good in the States. But anything goes with a lot of so-called farm papers.

Canadian Holstein Secretary's Name Wanted.

A subscriber enquires for the name of the secretary of the Canadian Holstein Association. It is G. W. Clemons, St. George, Ont.

Dominion Shorthorn Breeders' Association.

The annual meeting of the above association will be held at Toronto, February 6th.



Alestair (78217).

Shorthorn bull, calved in 1900; bred by Lord Lovat, Beaufort, Scotland; weight, 2,500 pounds.



Madeline.

Shorthorn heifer; age, 2 years 11 months; weight, 1,840 pounds; bred by and property of His Majesty the King, the Royal Farms, Windsor. Winner of the breed championship and reserve for the grand championship at Smithfield Fat-stock Show, 1905.

capacious chests, thick, mossy coats, mellow skins, with a great deal of fine flesh spread evenly all over the carcass, and his handling was superior to that of any other bull of his day, a quality which counts for very much in a sire to-day, as it evidently did in Hubback's time.

Charles Colling, who had heard of Bakewell and his wonderful success in the improvement of the breeds of Leicester sheep and Longhorn cattle, by in-and-in or close breeding, visited Dishley—the home of Robert Bakewell—made a careful study

Problems of the Feed Bin.

I.

One of the most interesting and profitable lines of study in which a stockman can engage is the economy of feeds. All over the world there is a fearful waste going on for lack of an understanding of the chemistry of feeds and animal nutrition. There is much valuable literature on the subject, but to the ordinary layman, the bulk, detail and sometimes technique of the books are forbidding. The aim of this article and a series to follow is to set forth in popular form some useful facts, and arouse, if possible, a discussion on the subject, which is not only interesting in itself, but vitally important because it touches the pocketbook.

Of all the sciences underlying agricultural practice, chemistry is, we believe, the most important. A knowledge of weeds, insects and bacteria is useful, and is yearly becoming more esteemed; mechanics and soil physics are also valuable to the one practical enough to apply them; but more important that all of these, in our opinion, is a knowledge of agricultural chemistry. It cannot, as yet, be said to be a popular subject, for it is associated in the public mind with complicated formulas, technical language and abstruse symbols. And, indeed, the general chemistry, as studied in our schools and universities, would be but slightly more useful to a farmer than so much astronomy or geology. But eminent specialists have, in modern times, been studying the science in its relation to agriculture and live-stock husbandry. Experiments have been conducted, numerous analyses made, and the results of all this experimentation have been studied and restudied by men combining practical and scientific qualifications, till to-day we have volumes of information upon soil and animal chemistry, and progressive farmers everywhere are reaching out eagerly for the information that has been obtained, that they may bring increased knowledge to bear upon the practical matters of crop raising and milk and meat production.

To the layman who has not studied the composition of feeds and animal increase there is an untouched mine of knowledge that becomes more interesting and more profitable the farther he delves into it. Before going further we may as well answer the question, will it pay to study this thing up, will it enable us to get any better results than the unlettered herdsmen who swear by their "neeps and cake," and oat straw, and clover hay? To which we answer yes and no. It may not enable you to secure bigger returns per animal, for the stuffs these old feeders have found valuable are hard to improve upon. But a knowledge of animal chemistry will enable you, in many cases, to secure cheaper gains and more uniformly profitable results. Conditions vary: feedstuffs are multiplying; every year, almost, some new by-product is heard of; some of these are really economical if one understands how to employ them, though others are sold for more than their worth, and used frequently with home-grown feeds already overly rich in the very same elements contained in the purchased articles. We have seen men buy corn meal when oil cake was less than 50 per cent. higher per ton, and bran about three-quarters the price, to feed to milch cows getting a roughage of cornstalks and timothy hay. The most elementary knowledge of the composition of feeds would have told them that corn meal was excessively rich in carbohydrates and fat, the same kind of elements contained in excessive proportion in the roughage, which, therefore, required a supplement such as bran or oil meal to "balance" it up, by furnishing more of the deficient element, protein. Then, later on, these same men would begin feeding their clover hay—carefully saved till spring—and in the same hit-and-miss fashion would buy bran, and perhaps use up their oats, instead of using some corn meal with the clover and bran, both of which are relatively rich in protein, and more or less deficient in the other elements. A working knowledge of chemistry prevents such mistakes as that, and enables a feeder, no matter how situated as to kinds of stock, feeds available and other conditions, to handle them to somewhere near the best advantage, and know pretty nearly what to buy to complete a ration with such purchased feeds as will supply most cheaply what his roughage lacks. If all feeds preserved a constant ratio in their range of values; if every dairyman, every steer-feeder, every hog-feeder, and every shepherd had always the same feedstuffs at his disposal, the same kinds of animals to handle and dependable markets to prepare for, there would be no great need to study feeds. The best rations could be settled by experiment, and every feeder guide himself accordingly. But seeing that conditions are subject to infinite variations, it is necessary that the feeder shall know the composition and utility of all the staple feeds, know the needs of the stock he is working with, and be in a position to bring mathematics to his aid in compounding his rations. Right here, though, great mistakes have been made by many professors and agricultural-college students. In figuring out

rations according to formulas laid down, they have become so engrossed in their calculations that they lost sight of the many practical points, such as succulence, digestibility, palatability, individuality and breed of the animals, and availability of feedstuffs (in other words, whether or not the feeds were those grown on the farm, for it is always advisable to strain a point and use what you have, rather than to sell it and buy something else). A story is told of one student who, in figuring out a ration, was a little short of the total weight required by the scientific standard, and so to bring up the weight without disturbing his equilibrium of nutrients, he added a couple of ounces of sawdust. Such ludicrous instances and others a little less extreme have done much to make science a laughing-stock to practical men, and have accounted for the failures of more than one enthusiast who wrongly fancied himself "feeding scientifically." Science never makes mistakes; the misapplication of scientific principles may prove disastrous, but that is no reason why level-headed, practical men should not avail themselves of the help of this handmaid of successful practice. W. D. A.

Wants a Canadian Oxford-Down Record.

To the Editor "Farmer's Advocate":

I have had a number of letters from Oxford-Down breeders, principally from those starting pure-bred flocks, asking if we have an Oxford record in Canada; if not, why not? I will repeat the question, if not, why not? Is it because we are not intelligent enough to manage a record, or is it that there are not enough men among Canadian sheep breeders imbued with a patriotic desire to help build up a national spirit of independence, but would rather hang on to the skirts of an American joint-stock company? I know it is held by some that we should have to register in the American record before we would get our sheep across the lines free of duty. I would say to such, do our American cousins when they go to England after sheep tell the English breeder he must record his sheep in the American record, or they won't buy them? Not much; if they did they would be laughed at for their pains, and I might say, Mr. Editor, we have been selling to American customers for years; we have them come here every year for the best of our young sheep—and right good fellows they are—but I never yet discovered one who came for my benefit. They come for our sheep because they want them and must have them, and if their laws are antagonistic to our registry so much as to prevent them from getting our stock, they will, no doubt, very soon modify them. Yes, gentlemen, go ahead with your national record. There are enough men among the breeders of Canada to make it go. R. J. HINE.

Farm.

Soil Moisture and Weeds.

Few people realize the vast amounts of water required for the successful production of a heavy crop of grain. The most careful investigations have shown that from 200 to 500 tons of water is taken from the soil for every ton of dry matter produced in almost any of the cultivated crops. Wheat, the staple crop of the West, requires nearly 460 tons, or about 5 acre-inches for every ton of dry matter produced. According to these figures, a wheat crop of 40 bushels to the acre would require a total annual precipitation of about 12 inches.

When we consider that the annual rainfall of the wheat-growing districts of the West varies from 14 to 20 inches over a period of years, we see the immense importance of the conservation of moisture on the average Western farm. Of the total rainfall, much is lost by evaporation, or by running off the surface of the ground, and of the total amount available for the production of a crop, weeds certainly take far too generous a share. Many fields could be found throughout the West this year that were fully one-half wild oats, and this crop—worse than useless to the farmer—was depleting the soil of moisture that was urgently needed for the growing wheat. The conservation of moisture is important, and every effort should be made to that end; but of what avail is it to conserve the moisture to feed a plant that is crowding your crops out of existence and giving you nothing in return except a dirty farm, with a consequent depreciation of value? Study if you will how, by every possible means, to increase the moisture-holding capacity of the soil; cultivate with the idea of conserving for your crop the total rainfall of the year; shelter from prevailing winds by shelter belts; but all this cannot avail if weeds run riot in every field and free and unchecked rob your crops of the moisture intended for them.

Cause of Rust.

To the Editor "The Farmer's Advocate":

In fulfillment of a promise made some months ago, I give you my opinion as to the cause of wheat rust in 1904. This subject may not be of much public interest at present, but as some of the conditions that make rust possible are live issues, I may be excused for discussing it. In so doing, I purposely omit any discussion on rust spores, which I assume are innumerable present when rust conditions prevail. Rust disease, like epidemics, is not the result of a single cause, but of certain conditions pertaining to the individual (whether plant or animal) and his environs. The causative conditions of rust, so far as I can see them, are five in number, viz.: Degenerate seed grain, soil exhaustion, excessive soil moisture, minimum soil heat, and a certain weather condition.

SEED GRAIN.

Every farmer knows that a weak, sickly animal, with an inherited tendency to disease, will more readily become a prey to disease than the robust, vigorous animal of good constitutional ancestry. The same is true in the plant kingdom, and although some of our farmers have endeavored to keep up the purity and vigor of our wheat by careful seed selection, still the majority of us have allowed it to degenerate and become mixed with inferior varieties to such an extent that the vigor of the plant is impaired, and it thus more readily becomes a prey to rust and other diseases whenever other conditions are favorable.

SOIL EXHAUSTION.

The ill-fed animal of degenerate ancestry more readily contracts disease than the well-fed of the same ancestry. In the same way wheat grown on impoverished land lacks the vigor and robustness of that grown on soil with a uniform and plentiful supply of plant food. Wheat on old land that had never been refertilized was black with rust, while that on adjoining breaking had little or no rust. It is very questionable if we would have had any wheat rust at all in 1904 if all the land under crop had been broken the previous year, and pure seed with no developed or inherited tendency to disease used.

SOIL MOISTURE.

On clay flats that baked and cracked on my summer-fallow there was little or no rust. We have here a condition of a minimum amount of soil moisture. On heavy, loamy soil immediately adjoining, the crop was badly rusted. We have here a condition of a considerable amount of moisture. Around alkali spots the crop was completely ruined. We have here a condition of excessive moisture, as seepage water is added to the usual amount. Evaporation under these conditions would be in like proportion, and, consequently, also the density of the vapor cloud formed on the surface of the ground. It was this cloud that softened the straw and made the lodgment of the rust spores possible.

SOIL HEAT.

During the heat of the day there is a certain amount of heat stored up in the surface of the earth, and in objects on the surface. This heat is gradually given back to the atmosphere during the night. If it were not for this provision for storing heat to equalize day and night temperatures, we would not be able to grow even rusted wheat in Manitoba. Under normal conditions during the night this heat warms the air in contact with the earth's surface. This warmed air rising up carries with it the vaporous exhalation from the soil, and thus prevents condensation taking place at the surface of the ground. The soil heat condition favorable to rust was either a minimum amount of stored heat as the result of cool, cloudy weather, or an unusually heavy atmosphere, or both. However, the rising movement of air ceased, and made the cloud condition on the surface possible. In the clay flats referred to we would have a maximum amount of soil heat under prevailing conditions, together with a minimum evaporation, both factors contributing to lessen rust conditions.

WEATHER.

Popular belief has so long associated a certain weather condition with rust that it has often been regarded as the sole cause. I admit that it is a factor in the cause, but deny that it could of itself produce rust. In my opinion the weather condition was a few cool days that resulted in a minimum amount of heat being stored up. This was followed by a warm, sunny day, which increased evaporation. A very sudden drop in temperature occurring in the evening of this short warm period quickly exhausted soil heat and made the cloud condition on the surface possible. I fail to agree with the generally accepted opinion that a humid atmospheric condition, whether in continued warm or continued cool weather, would be the weather factor. In my opinion the humidity favorable to rust must be the vaporous exhalations from the soil condensed into a cloud on the surface of the ground.

Now rust varies as these causative conditions vary, either singly or in all possible combinations. Let A represent seed grain, B soil exhaustion, C soil moisture, D soil heat, E weather. The following would represent all possible variations: A, B, C, D, E, A B, A C, A D, A E, B C, B D, B E, C D, C E, D E, A B C, A B D, A B E, B C D, B C E, C D E, A B C D, A B C E, B C D E and A B C D E. These twenty-five variations was what made the cause of rust appear so inscrutable, and which gave rise to so many hop, skip and jump opinions as to the cause.

The remedy is now on the surface. I do not know

what conditions prevail on your farm, but I know what they are on my own. I have to consider variation A B C D. I have in the past paid very little attention to seed grain selection; I must improve along this line. I have a field that has been cropped for years without refertilizing; I know what to do. I have low lands where excessive soil water prevails; I must drain these, and in so doing I improve soil heat condition. I am of the opinion if I improve all these conditions to the highest possible degree of perfection that my crop will be rust-proof under the weather conditions that prevailed in 1904. A. M. C.

Wheats at the Brandon Experimental Farm

The growth of vegetation of all kinds at the Brandon Farm was very rank this year, and most of the grain crops were lodged, still the yield and quality was generally above the average.

Preston wheat showed less rust and was stiffer in the straw than usual; no doubt this fact accounts for the unusually large return given by that variety in both the large and small plots. We still think that this is the best wheat for sections liable to suffer from early fall frosts, but along the main line of the C. P. R. and similar districts recommend Red Fife.

Riga wheat is an extremely early kind, but the yield is always less than Preston or Red Fife.

Accompanying this will be found a list showing the twelve most productive varieties in this year's test; also the time taken to mature each kind. Six of these, namely, Red Fife, White Fife, Advance, Laurel, Huron and Wellman's Fife have been among the ten most productive varieties for the past five years.

The size of the plots was one-twentieth acre, and the soil a black loam summer-fallowed. The land was broken in 1882, a crop of peas was plowed in during 1902, but no other fertilizer has been applied for seventeen years.

Variety.	No. days maturing.	Kind of head.	Yield per acre. Bus. Lbs.
Preston	186	Bearded	52 00
Laurel	188	Bald	47 40
White Fife	141	Bald	47 20
Huron	136	Bearded	47 00
Advance	138	Bearded	46 40
Red Fife	141	Bald	45 20
Wellman's Fife	142	Bald	45 00
Hayne's Blue Stem	141	Bald	44 40
Power's Fife	139	Bald	44 00
Minnesota 163	141	Bald	43 40
Percy	137	Bald	43 20
Riga	134	Bald	42 40

OATS.

The yield of oats this year was the largest in the history of the farm, and weight per bushel better than usual, but the color is somewhat dark.

Improved American greatly resembles the Banner, and has good stiff straw and is very free of rust.

Banner, Improved American and American Beauty are among the best oats for this country.

Green Russian oats are highly recommended for their freedom from rust, but they are this year nearly at the bottom of the list for productiveness.

All the seed oats on the farm are sprinkled with formalin liquid every year—one ounce of the drug to a gallon of water—and we have not seen a smutty head of oats on the farm since this plan has been adopted.

All the varieties except Pioneer are white in color. As a rule, we do not find black oats as prolific as the white on this farm, neither are they suitable for milling purposes. The Golden Giant is yellow in color and has a thin hull. Improved American is pure white, with fairly thin hull. Golden Beauty, Goldfinder, Golden Tartarian are yellow in color, and, generally speaking, light in weight. Abundance, Waverley and Bavarian are plump varieties, and have the appearance of being somewhat thick in the hull. Siberian is the most prolific white oat at the O. A. C.; it is long and thin in the hull. Banner and Improved American are among the two best varieties of oats grown here.

The following tables give the yield per acre of the twelve most productive varieties this year. The size of the plots was one-twentieth acre; the soil a black loam, summer-fallowed in 1882. Barnyard manure was applied once since that date, and one green crop plowed under:

Variety.	No. days maturing.	Kind of head.	Yield per acre. Bus. Lbs.
Golden Giant	125	Sided	135 10
Improved American	122	Branching	134 04
Goldfinder	123	½ sided	132 12
Golden Beauty	123	Branching	129 14
Golden Fleece	123	"	125 10
Banner	123	"	122 12
Bavarian	123	"	121 26
Abundance	120	"	121 16
Pioneer	117	"	120 20
Siberian	124	"	118 28
Waverley	124	"	118 08
Golden Tartarian	124	Sided	117 22

BARLEY.

This grain has given good returns, and the weight is above the average, but the color is very dark indeed. Mansfield is a very promising cross-bred variety. It has given the highest average for five years. Mensury and Odessa are also excellent kinds for this country.

The following twelve varieties are at the head of the 1905 list for productiveness. All were grown on one-twentieth acre plots of black loam soil, summer-fallowed:

Variety.	No. days maturing.	Kind of head.	Yield per acre. Bus. Lbs.
Mansfield	94	Six-rowed	77 24
Mensury	92	"	75 20
Odessa	93	"	68 16
Argyle	95	"	67 14
Gordon	97	Two-rowed	67 44
Rennie's Improved	90	Six-rowed	66 32
Albert	92	"	66 12
Oderbruck	91	"	65 40
Summit	95	"	64 28
Stella	96	"	63 36
Yale	93	"	63 36
Jarvis	97	Two-rowed	63 36

PEAS.

As usual this grain has given good returns, but the yield was lessened somewhat by the depredations of the cutworm.

A pea harvester attached to a mower was used on the larger fields for the first time. Where the grain was quite ripe and perfectly dry the machine gave good satisfaction.

The pea weevil has not yet made its appearance here, and the sample is nearly always a first-class one. The following are among the best varieties here: Golden Vine, Mackay and Early Britain. The size of the plots was one-twentieth acre, the soil a clay loam, summer-fallowed.

Variety.	No. days maturing.	Size of pea.	Yield per acre. Bus. Lbs.
Early Britain	144	Large	51 40
Mackay	150	Medium	45 40
Prince	152	Medium	45 00
White Wonder	143	Small	44 20
Gregory	151	Large	44 00
Prussian Blue	139	Medium	42 00
Wisconsin Blue	144	Medium	41 40
Chancellor	144	Medium	41 40
English Grey	132	Small	41 40
Golden Vine	142	Medium	41 20
Arthur	142	Small	40 40
Pearl	145	Small	40 20



The Seed-growers' Medal.

A facsimile of the medal offered for competition at Western Seed Fairs by the Canadian Seed-growers' Association. L. H. Newman, B.S.A., Secretary, Ottawa, Ont.

A Big Percentage Cleaned Out.

Enquiry from Geo. H. Shaw, Traffic Manager of the C. N. R., as to the amount of dockage removed from grain going through the terminal elevators of their system at Port Arthur, elicits the information that the amount is approximately 10 per cent. of the grain cargoes received. The C. N. R. makes no charge for cleaning out this material, which includes wild oats and numberless other weed seeds, as well as short straws, etc., and other offal left in by the threshermen. When the cost of freight on such is figured out, and the shrinkage in each car added, the tremendous loss to farmers of the Canadian wheat belt can be imagined.

Dear Sirs,—I am well satisfied with your paper. WM. HODGSON. Roland, Man.

Barley is an Indispensable Cereal.

In the December 20th issue attention was drawn to the cereal, barley, valuable for feeding purposes, and in the rotation a great aid to weed suppression.

The Seed-grain Fairs, held under the auspices of the Seed Division, Department of Agriculture, are directing more and more attention to grain selection and judging, and with a view to still further help on the good work, we submit portions of the discussion before the Farmers' Club on this cereal. The noted agriculturist, Dr. Somerville, said:

"The time of sowing appears to be a very influential factor, and, as a general rule, you find that the results are precisely opposite to what you obtain with wheat. I think I am right in saying that the experiments to which I have already alluded in the case of wheat shows that a short growing season produces a strong wheat, a highly nitrogenous wheat. On the other hand, in the case of barley, you find that a long growing season produces a starch growth; that is to say, in the case of wheat, a short season of growth will produce a good quality; in the case of barley a long season will produce the same effect. In the year 1900 there was only one autumn-sown barley at the exhibition, and that one autumn-sown barley obtained the champion prize. In the same year there were six samples of barley shown which had been raised from grain sown in February, and half of the total number obtained prizes—three out of six; whereas, when you come to early-sown barley, you find that only six out of twenty-four of the samples shown obtained prizes. Then, we all know what an influence rotation has. We find, for example, in 1900, that thirty-three prizes were gained by crops that had succeeded another wheat crop, and no other rotation has anything like as many prizes. Again, I suppose it is due to the fact that one wheat crop exhausts the ground to a certain extent of the available nitrogen, and the barley crop succeeding that wheat crop finds the condition suitable for the production of grain of very high quality. There is no doubt that the great bulk of the fine barleys come off light land, but we also find that it is quite possible to produce barley of the very highest quality off heavy land; and I think I am right in saying that this year the champion barley of England, and what is probably the champion barley of the world, has been grown upon a strong clay land."

The farmer growing the prize barley said: "I should prefer to sow a six-rowed barley if you go in for a crop. I can grow more value per acre with the six, if I get a low-malting quality, than I can with any two-rowed sort. With reference to the sowing, I prefer to drill. After the experience I have had, I am very particular to get my land to work well. I believe there is a good deal in sowing barley an even depth, and that depth should be as near 1½ in. as possible on my land. If your barley is sown at an even depth it comes away all together, and when it does that it generally goes on and ripens all together, which is a great advantage in malting samples. I have tried Goldthorpe, and my objection to that is that not only is the straw very brittle, but also the ear. If you get it a week or a few weeks overripe through bad weather, you have half the ears breaking off in the center in an awful way."

Professor Lawes, of Rothamsted, speaking on the subject, said: "One thing which does come out very strikingly in the examination of some of the Rothamsted results is the fact that the yield and the quality of the crop are not things which vary in the opposite sense. It is too often supposed that the power of growing good barley depends practically upon starving the land, that you have got to crop out any superfluity of fertility there is in it, and then get a small-yielding plot if you want to have a comparatively high quality. I think our results show that that is not the case; that you cannot get a barley of high quality unless you have a certain amount of food in the land."

"When we are dealing with barley we are dealing with a plant that is subject to much more fluctuation of quality than wheat. When you are dealing with wheat it is very hard to influence the quality by such things as manure, date of sowing, and so forth. You bring about certain small fluctuations, but you do not bring about very large ones. The variety that you sow is dominant over everything else and although, as has been shown, certain soils will always yield stronger wheats than others, the variation you bring about in that way is comparatively small, compared with the variety. But as soon as you come to deal with barley, whether it is because of the shorter growing period, or whatever it may be, you have something which is capable of much greater fluctuation, which you can influence much more by the character of the manure and by the preparation that you give to the soil than you can in the case of wheat."

Threshing Clover Seed.

The difficulty of securing clover seed, without investing in a separate machine for the purpose, has undoubtedly deterred many from attempting a most commendable enterprise. In order to assist our readers, as we believe the sooner home-grown clover seed can be obtained the better for Western agriculture, correspondence was opened up with several authorities, notably Cerealist Chas. E. Saunders, Prof. Zavitz, Prof. Shepperd (Dakota), and the noted English seedsmen, Gartons, in whose catalogue we had noticed a small clover-threshing machine at work in their trial plots. The ordinary Ontario clover huller costs there \$500 to \$600, and unless a thresher in a district could be assured of sufficient patronage, he would not be justified in making such an investment. We have the promise of a contribution on the plan to follow in threshing clover with the common grain separator, which we hope to present to our readers at an early date.

Prof. Shepperd, North Dakota Agricultural College, is probably the best authority on clover-growing under conditions such as obtain in Manitoba, and from inspection of his plots and fields, he is successful. He writes as follows: "Some of the ordinary threshing concerns make special clover attachments for their ordinary grain separators, but a somewhat extended correspondence with one of the firms which has an attachment, discouraged me relative to clover attachments, as they said they could not recommend theirs, although they were satisfied that it was as good as any on the market. We have had reasonably good success threshing clover seed with an ordinary separator, by arranging it so as to give the clover an unusually heavy beating."

Low-grade Formalin.

In various papers there is a great deal of talk about the carelessness of farmers in treating their seed. Some have stated that the loss this year alone will amount in round figures to \$20,000,000, which the farmer might otherwise have had. Now, half of my crop went 2 rej., and I do not propose to let any man say that it was through carelessness on my part that it had to go at that grade. For several years past I have used the formalin method for smut prevention, and with excellent results up to this year. I have followed Prof. Bolley's directions as regards strength of solution, 40 or 45 to 1; that is, gallons of water to 1 pound of formalin. I treated about 25 bushels at one time, using 8 ounces of formalin, sprinkling it, shovelling it over three or four times, piling it in a heap, and covering it with bags or blankets, and let it stand 24 hours. Then bag it up and seed it right away, at the same time treating another 25-bushel lot, if I required it, the next day or so. During seeding time I received a copy of the annual report of the North Dakota Experiment Station; in it there were various lots of formalin, which had been submitted for analysis. Some of the formalin which was bought on a 40 per cent. strength basis, turned out 26 to 27 per cent. strength. I began to have some doubts of the strength of the formalin I was using. It will be readily seen that this strength is of the greatest importance; 40 per cent. strength is the standard, and on this basis it is applied 40 or 45 to 1. If formalin falls much below the standard, it is useless for smut prevention. I then began to increase the quantity of formalin I was using from 8 ozs. to 10 ozs. for 25 bushels, and in wheat threshed from the last treated it was entirely free from smut. I also treated my oat and barley seed, and, during the summer, when the grain had headed out, I noticed more smut in the oats and barley than I ever saw before. Several farmers in the neighborhood noticed the same thing, and in a discussion of the matter, we concluded that the formalin was N. G. as regards strength. In my 2 rej. wheat I did not observe any smut during the growing season. When threshing it, it threshed clear; there was no smut dust from the machine. After it had been in the granary some time it was noticed that a grain here and there showed a trace of smut on the end. The official grading said slightly smutty; earlier in the season it might have passed as straight grade. My experience this year leads me to believe that low-grade formalin is being sold. The retailer may not be to blame; he may have bought it on a 40-per-cent. guarantee, and it may be the manufacturer or jobber who is responsible. The Province and the farmers are losing thousands of dollars by the greed of the maker, wholesaler or retailer who protects the farmer from this fraud.

There is also another matter that I would like to see threshed out. Professor Bolley, who discovered and applied the formalin treatment, says that the formalin method exercises a beneficial influence on the young plants; they come up quicker, grow faster, are better in every way than untreated seed, but an application of stronger solutions than 40 to 1 will injure germination. Supt. MacKay, in the farm report of 1904, in regard to smut in oats, says, if the seed is not smutty use 4½ ozs. of formalin; if smutty, 8 or

9 ozs. I would like to see the conflict of opinion squared before seeding comes around.

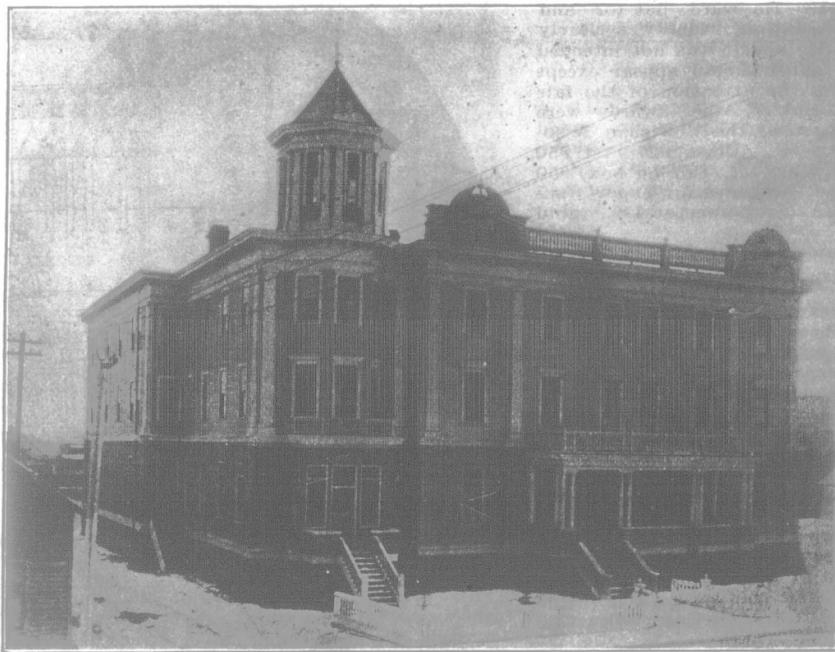
Northern Man. L. BROWN.
[Our correspondent deserves the thanks of farmers for drawing attention to this matter, which is an important one, and one the Dominion Analyst should look after. It would not hurt the Seed Division men to do a little quiet investigation work, either as to the purity of chemicals sold and used in the work. From the description of Mr. Brown's methods we infer he treated his seed in a thorough manner, and should have had better results if the material used had been good. Let us hear from others on this question.—Ed.]

"What the Agricultural College can do for the Farmer's Son."

A brief survey, in retrospect and forecast, of some of the important services which the agricultural college can render the farmer's son would include the following:

I. The agricultural college becomes a means of imparting to students a knowledge of the methods which have been successful in agriculture, and of the principles underlying them—all in a practical manner and in the shortest time. The body of the knowledge which the student is trained to acquire is not something apart or different from the practice of successful farmers. It leads him to gain accurate knowledge from experiments and experience of his own, as well as from those of others.

II. The college is a place where the student acquires a knowledge of the sciences closely connected with his future occupation in a manner which enables him to utilize his knowledge effectively.



A Popular Western Educational Institution—Edmonton College.

Prof. Riddell, Principal.

III. The college trains the farmer's son to observe carefully; to distinguish what for his purposes are the important, and what the insignificant, characteristics of anything under consideration; to identify things on the farm by name, particularly weeds and insects; to understand relationships; to estimate relative values, and to form a mental habit of associating occurrences with an adequate cause.

IV. A course at the college helps him to understand to some extent the laws of nature which govern changes in soils, plants and animals; and to know something of the unfolding of life as disclosed in the growth of plants and animals.

V. It should give him a grip of what is known as the conservation of energy; and some knowledge of the rotation of matter and various forms of energy through natural processes.

VI. It enables the student to understand better the problems of agriculture in relation to public welfare; for instance, in the co-operation between agriculture and other interests for the protection of public health, the improvement of transportation, and the promotion of education.

VII. It trains him into some measure of fitness to act as an intelligent leader of farmers on questions of public policy affecting their interests, and to co-operate with others in that behalf.

VIII. It tends to give attractiveness to farm life, and to implant, or, if already implanted, to develop, a favorable opinion of farming as an occupation.

IX. In furnishing speakers for Farmers' Institutes, in directing reading courses for farmers, and in conducting or supervising co-operative experiments, such as those most valuable ones conducted under the Ex-

perimental Union of the Ontario Agricultural College, other channels of usefulness are filled by the agricultural college.

X. In providing, in its own buildings, or in assisting in providing at convenient centers, short courses for farmers and their wives, and their sons and daughters, the agricultural college does much to educate them to appreciate agricultural education. The practical illustrations and demonstrations at these short courses by experts of ability and reputation have saved them from being superficial.

These are only some of the benefits to be derived by those who are able to attend the agricultural college; they do not profess to be a complete statement of them. Instances might be given in the actual records of those fortunate ones who have been able to attend the Ontario Agricultural College. Those who have taken its courses with earnestness and cheerfulness, testify unanimously to the immense benefit they derived from attending that institution; and maintain that it furnishes opportunities of the best sort for those intending to become farmers or to become instructors in agricultural subjects. Quite as much can be done for the farmer's daughter as for the farmer's son along lines suited to her requirements and abilities. That is illustrated in practice, better than I can put it in words, at the Ontario Agricultural College and the Macdonald Institute.

However, the fact that the attendance in the regular courses at the Ontario Agricultural College has been at the rate of only one student from about every 1,000 farms in the Province makes me alter the topic slightly and offer a few thoughts on "What the agricultural college can do for the farming people."

A system or means of education which aims at helping directly the people who work on farms, must provide suitable, efficient, elementary rural schools.

These are the schools where the vast majority of the future men and women of the farms will receive their formal education. The schools in the rural parts require to be adjusted from time to time to the needs of the rural population. One would like to see them have a direct bearing on the life interests and opportunities of the locality, and not become far separated in course of study, subject matter and outlook, from the home life and from the occupations whereby the parents earn their living.

XI. Agricultural High Schools and Consolidated

Rural Schools of the highest grade will require men and women as teachers who are qualified by thorough training to teach the elements of agriculture and horticulture and the sciences related to them to advanced classes. The agricultural college co-operating with the Normal School appears to be the best means in sight for giving such a training to teachers.

XII. Teachers for elementary rural schools, with some training in nature-study work for children, and in one or more of the various forms of manual training and household subjects, do much to develop in the children a sympathy with rural life, and also ability in and contentment with its occupations. A school garden becomes a basis for much nature study work, and also prepares the pupils for the elements of science, and later on for the elements of agriculture in high schools. All that is here mentioned would not put agriculture into the elementary rural schools, but would give them what one has called "an attractive rural outlook," particularly for boys and girl whose life-work is to be connected with agriculture. The Normal Schools in co-operation with the agricultural college, by means of short courses, might give instruction to teachers of rural schools in seeds and selection of seeds, and regarding insects. Thereby, after a number of years, the children and the women would derive much satisfaction in helping in the selection of seeds, and in the fighting of insects.

XIII. A large number of people leave the country to take their children into town for their education. When the rural schools are improved, and agricultural high schools or consolidated rural schools are accessible, perhaps that migration would cease and many people would remove their families from the cities into the

country for education. Of all the agencies that can quicken the country and advance its prosperity, the school is the chief.

XIV. A travelling instructor for school gardens and illustration plots, associated with the school inspector in rural districts, would advance the cause of rural education greatly and speedily. The agricultural college might furnish men with the special training for that important work.

XV. Probably a time will come when the farmers of every county where agriculture is the material mainstay will maintain an illustration and seed-grain farm, advantageously adjacent to an agricultural high school or a consolidated rural school. That may open another ever-widening field of usefulness for the agricultural college.

JAS. W. ROBERTSON.

The Macdonald College, St. Anne de Bellevue, Que., [Editor's Note.—The foregoing contribution was prepared for our Christmas Number, but, unfortunately, did not reach us till that issue had been mailed. Its value as a contribution and its interest to our readers is none the less, however, and having given thought to the other agricultural college articles, our readers will be all the better prepared for Dr. Robertson's able presentation of the same subject.]

Dairying.

Credit where Credit is Due.

Our attention has been drawn to the fact that in a recent issue of "The Farmer's Advocate" the prizewinners in the Dairy Division at the Dominion Exhibition, held at New Westminster, were given, and in the prize-list the prizes won by us were credited to Mr. W. H. Hayward. We would draw the attention of your readers to this, as such is incorrect, as Mr. Hayward has no connection with the creamery or the management of it. The entries were made by Mr. Hayward, but for and in the name of the Association, which was clearly shown on the entry form, and it was not intended that this gentleman's name should appear except as above. On drawing the attention of the fair management to this matter, the awards were made to the proper parties, the Cowichan Association. The prizes were: Class 927, 1st, 50 pounds, prints; class 926, 1st, tub or box, 50 pounds; class 937, 2nd, packages for export (silver medal); class 936, 1st, sweepstakes (gold medal).

Dairy Shorthorns.

At the first council meeting of the English Dairy Shorthorn (Coates' Herdbook) Association, held November 1st, 1905, the rules and by-laws of the association, as drawn up by the committee appointed for that purpose, were approved of, subject to a few alterations; and the following conditions, applying to prizes to be given by the association, were unanimously agreed to, viz.: All cows and heifers competing in any class in which this association offers all or part of the prize money shall be clean milked out to the satisfaction of the stewards at 6 p.m. on the evening previous to the show. On the first morning of the show all cows and heifers are to be milked in the ring, in the presence of the judge, who shall also see each animal's milk weighed; and any animal that does not yield up to the following standard when milked in the ring shall not be awarded a prize:

Standard.	Cows, 4 years and upwards, not less than	20 lbs. of milk.
	Cows, 3 years old and under 4, not less than	15 lbs. of milk.
	Heifers, under 3 years old, not less than	10 lbs. of milk.
	If she has calved more than three calendar months before the first day of the show.	20 lbs. of milk.
	If she has calved within three calendar months of the first day of the show.	25 lbs. of milk.

Judges, in awarding prizes, are also to pay great regard to the size, shape, and general appearance of the udder, both before and after milking, as the prizes are only intended for animals suitable for dairy purposes. The aims and objects of the association are to

promote the breed of the pure-bred dairy Shorthorn, by the giving of prizes, recommending judges, publishing milk records, and other information, and by any other means, from time to time, as may seem desirable to the members of the association. It is not intended to establish any separate herdbook.

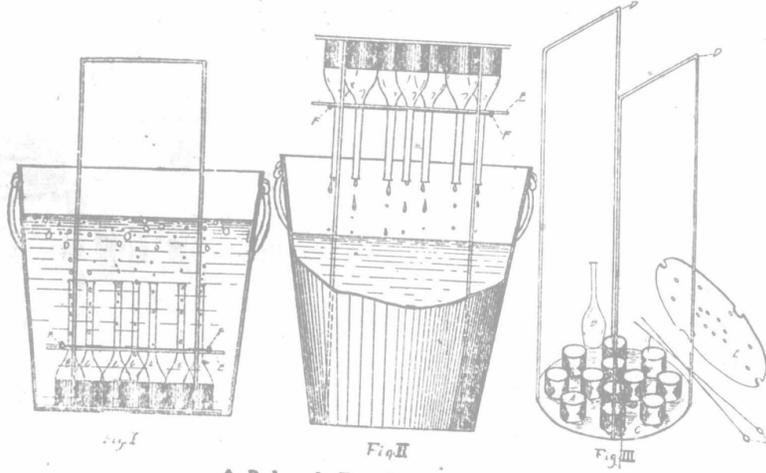
Cleaning Test bottles.

In Bulletin 129 of the Wisconsin Experiment Station, Prof. E. H. Farrington describes a Babcock test-bottle washer. Several such have been in use at the Wisconsin Dairy School creamery, where 140 composite samples of milk and cream are tested each week, and the butter and cheese makers using them find this simple device a great saving of time, and an easy means of keeping the bottles clean:

A clean test bottle is essential for getting accurate results with the Babcock test. The necessity of careful washing is not always thoroughly appreciated, but when the bottles are emptied, it often happens that a thin film of fat is left therein, and unless this film is removed it may appreciably increase the test of the next sample.

A good way to find out whether a test bottle is clean or not is to measure a pinette full of water into it, then add the acid and complete the test in the usual way. In some cases the fat thus obtained in the neck of some bottles is equal to the amount found in some samples of skim milk.

Washing test bottles, at the best, is a tedious operation, and when the possibility of leaving some fat therein is combined with the irksomeness of the usual way of cleaning the bottles, it will be seen that an easy and efficient means of emptying and washing the bottles will be beneficial to all users of the Babcock milk test.



A Babcock Test-bottle Washer.

An arrangement for cleaning a number of test bottles at the same time is shown in the diagrams, Figures I, II, III. Figure III. shows the frame in which the bottles are placed, one in each socket; the metal plate E is then put over the necks of the bottles, which pass through the holes in it up to the shoulders of the bottles. The pins F F are then pushed through the holes in the rods D D, and the plate and bottles are thus firmly held in the crate. When they are secured in this way the frame full of bottles may be placed in a pail or tank of hot water, as in Figure I. They will soon fill with water, and the time of filling the bottles one at a time thus saved. When ready to empty the bottles, the frame is reversed and placed in the position shown in Figure II.

One or two rinsings in boiling hot water is usually sufficient to effectually clean test bottles, but when they have been allowed to get very greasy they can be dipped into a pail of hot dilute lye; this will saponify the grease, and after one or two rinsings in clean hot water the bottles will be bright and clean.

Why a Daily Milk Record Pays.

A Wisconsin creamery patron who was dairying on a small scale, brought out in an address the following excellent points, based on his experience with the milk scales and the Babcock test: "It is not only the milk and butter that determines a cow's value. If a cow is a profitable animal her heifer calves are apt to be good milkers—like produces like—and a dairyman must look into the future, and not live just for to-day. It pays to keep cows that will be matrons of good-milking heifers. The value of a good cow lies not in her own excellence alone, but in that of her progeny as well.

The only sure way of culling out your poor cows is by weighing the milk from each cow and having it tested. Some will say it is too much

work, but I think it is too much work to milk a lot of cows that do not pay for their board; besides, I cannot afford it. I have weighed the milk from each one of my cows for nearly a year, and I do not think I shall ever keep a cow again without knowing just what she brings me. Of course, you would not have to weigh every milking in order to know pretty near what your cows are doing. If you weigh the milk one day each week you can figure their yield very closely. But if you weigh your milk just once in a while you lose half the value of your scale and milk record. I will tell you why: Everything, as far as I can learn, is governed by cause and effect; if your cows are not doing so well as you would like to have them, there is some cause for it, so do not call it poor luck and let it go at that, but try to find out why they are not doing well. When you keep a record of your milk, just as soon as there is an unnatural shrinkage you will notice it at once, and you will ask, why did the amount of milk drop off so badly just now? And you will try to find the cause, and when you have found that it is generally easy to remove it, or to apply a remedy. While you have been studying this matter up you have learned a lesson you are apt to remember."

Effect of Feed on Color of Milk.

The majority of milk consumers, and many dairymen as well, cling to the belief that the color of milk is a dependable index of its richness in butter-fat. The idea is erroneous, for, while an average analysis would probably result in a higher fat percentage from yellow than from blue milk, the relation between color and richness is by no means constant, but varies with breed, individuality and feed. Holstein milk, though usually lower in fat percentage than Jersey milk,

is not so much poorer as the majority of people suppose. Again, individual cows will give very white, yet comparatively rich milk, and vice versa. But the greatest difference is caused by the feed. Experiments by expert authorities go to show that no permanent change of any account can be made in the percentage of butter-fat by the kind of feed used, but a very great difference can be made in color. A few pumpkins fed to the cows will impart a very rich yellow color to the milk and butter,

while at the same time they have a very fair nutritive value, and as a relish are unexcelled. Every dairyman who can do so, particularly the butter dairyman or milk-seller, should plan to have a supply to enable him to feed his cows a few as long as they can be preserved in the fall. A small quantity does relatively more good than a larger ration. Carrots are excellent, and also corn. In general, it may be said that succulent foods, such as roots of all kinds, silage, and even steamed fodder, tend to improve the color of the butter. Cows fed altogether on dry food, especially if the grain ration is limited, yield white, poor-looking milk, and hard, white, tallowy butter. It seems to be necessary that the cow's excretory organs be kept working freely if her milk glands are to yield their finest product.

Butter from a yellow-milking strain of cows, well fed, requires no artificial coloring, even in winter, and there are probably few herds of any size which will not produce at least a deep-straw-colored butter if they are comfortably stabled, well looked after and properly fed, and the milk and cream is handled as it should be. There are exceptional herds, of course, and various factors, such as length of time the cows have been in milk, that influence color, but feed has a great deal to do with it. Almost any cow will give yellow milk on June pasture, and the nearer we come to June conditions the yellower the milk. If all cows were fed and cared for as they should be, there would be little need for butter color, and consumers would soon come to prefer the natural tint to the artificial orange or crimson-red that we frequently see.

As for the milkman's trade, color is not richness, but so long as the two qualities are persistently associated in the consumers' minds, it pays to give them what they think they want, and it is worth considerable to know some of the simple expedients for deepening the natural color of dairy products. Generally, it will be found that the agencies which add color to the milk also improve the flavor.

Horticulture and Forestry.

Minnesota Horticulturists Meet.

The thirty-ninth annual meeting of the State Horticultural Society was held on December 5th, 6th, 7th and 8th, the attendance being large and enthusiastic, and papers read of a high order of merit. Delegates were present at the meeting from all parts of the country, and, as usual, there was a good sprinkling of women.

Other Societies represented were as follows: Iowa, Charles F. Gardner; Manitoba, Wm. C. Scott; South Dakota, N. J. DeWolf; Wisconsin, Professor E. P. Sandsten.

Professor N. E. Hansen, of South Dakota, one of the foremost horticulturists of the continent, was present, and took an active part in the proceedings.

The annual address was read by Professor S. B. Green, of the University of Minnesota, in the absence of Clarence Wedge, President, on account of illness. The address was brimful of important recommendations in reference to seeding, growing and other important matters of interest to the members.

The model secretary of the Society, A. W. Latham, submitted an excellent report, showing the steady progress, not only in membership, but in the scope of the work being done. Over 150 new members were added during the year 1905, bringing the membership up to 1,974. The report of the treasurer showed that the financial condition of the Society was never in better condition.

In every Congressional District of the State there is a vice-president, and each of these was in attendance, and much of interest to horticulturists was brought out.

Superintendents of the Trial Stations throughout the State also presented annual reports for the meeting. One of the most interesting of these was from Mrs. Jennie Stager, of Sauk Rapids, who spoke of the good work being done by the superintendent of the St. Cloud Reformatory in imparting to them a knowledge of horticulture.

The subject that provoked the most discussion was "Blight in the Apple Orchard." The great interest evinced throughout the meetings in this subject shows that it is one of vital importance to the orchardists of Minnesota and elsewhere. The paper on this subject was read by Dewain Cook, who was of the opinion that the progress of blight could be checked by the thinning out of orchards. Blight, he said, bore the same relation to apple trees that yellow fever did to the human family, and the conditions under which the germs of blight thrive are the same that gives existence to yellow fever—food, heat and moisture. Bees and insects are the carriers of these germs, and these will not frequent an orchard that has been opened for free circulation of air.

Another member suggested the opening of the bark in the infested trees, and illustrated his plan of combating the blight with limbs from his own trees.

Professor N. E. Hansen, of South Dakota, and Professor E. P. Sandsten, of Wisconsin, advocated cutting the limbs about six inches below the affected part, using a sharp knife and sterilizing it frequently in a four or five per cent. solution of carbolic acid, all cuttings to be at once burned. They also advocated caution in planting trees subject to blight, especially the Transcendant.

A. D. Leach, of Excelsior, read a paper on "Peach-growing in Minnesota." He advocated planting a few peach trees, believing that the satisfaction of gathering this luscious fruit from one's own trees would be a sufficient reward for the trouble of giving the trees the necessary care and protection.

In the course of the discussion on pruning, Prof. Green made the statement that more trees in the Northwest die from too frequent pruning than from any other cause. We want, he said, to get away from New York and New England plans of apple-raising. The conditions in the Northwest demand that we evolve our own horticulture, and, until we break away from these Eastern traditions and influences, our advancement will be slow. Here we have more sunlight and less shelter, and do not need so much pruning.

An interesting and instructive paper on "Native Ornamental Plants Valuable for Propagation" was read by F. H. Nutter, of Minneapolis.

One of the most interesting papers presented was that by Professor N. E. Hansen, the subject being "Two Hours with Luther Burbank—his work as an originator of new fruits, and its application to Minnesota needs." Professor Hansen related in a most interesting way the account of his recent visit to the "Horticultural Wizard," who has declared that in Minnesota are conditions found nowhere else that will give prestige in the culture of winter apples. In the list of fruits for Minnesota planting only two changes were made. The Okabena was added to the list of

apples of the first degree of hardness. A motion to add the Peerless to the list was voted down, the motion being supported by less than half a dozen members. The Cumberland was dropped from the list of raspberries.

I had the pleasure of being in attendance at the meeting of the Women's Auxiliary. The reports presented and the interesting address delivered indicated a growing interest in horticulture on the part of the fair sex.

Mrs. W. T. McMurray, of St. Paul, spoke of horticulture in the schools, and reported the progress being made by the public school children in planting and growing trees.

Mrs. Milton O. Nelson related how the children of the Linden suburbs had taken up the culture of flowers, with the most gratifying results.

Mrs. Anna B. Underwood presented a paper the subject being "One Season's Work with Children and Flowers." In this most interesting paper Mrs. Underwood told how the Improvement Club of that town had given each child several varieties of flower seeds. These were planted and faithfully cared for, the result being innumerable beds of pretty flowers. A flower carnival was held, and a prize given to the child who was most successful in raising flowers.

The meeting of the State Forestry Association was also held during the week, and many interesting papers were read. President Loring condemned in severe terms the practice which prevails of cutting millions of fine young trees from four to six feet in height, every year, to be used as Christmas trees. We are taking, said Mr. Loring, that which belongs to future generations.



W. G. Scott, Winn'peg, Man.

A leading horticulturist and prominent Mason.

There was a very fine display of fruits below the hall in which the meeting was held, perhaps the largest that has ever been seen at any of the winter meetings of this Society, 1,200, or more, plates of apples being on exhibition.

At a meeting of the executive board, held after the close of the annual meeting, it was decided to offer \$100 a year for a number of years, commencing six years from now, for the best late seedling apples, to be grown from seed yet to be planted. Competition is open to Manitoba.

WM. G. SCOTT.

[Mr. Scott was the delegate to Minnesota State Horticultural Society's convention; and is well known as an enthusiastic horticulturist and Mason. He is at present Grand Master of the Grand Lodge of Manitoba.]

Trees in Southern Alberta.

On the open prairie it is no easy thing to start young trees, but if they once get well rooted, and are watered and cared for, etc., they have every chance of living. In the valleys it is no trouble to transplant young trees, provided that sufficient of the natural soil is brought with the tree. There is no reason why the maple tree should not flourish here, and in time to come we could enjoy the delicious stuff called maple syrup and sugar.

The only drawback to the growing of trees is the dry weather, but if the outside trees shelter the inner ones, the ground should stay fairly damp.

"ONE WHO KNOWS."

The Value of Leaf Mould.

An examination of the fertilizing value of dead leaves, compared with that of ordinary manure, shows the following results: Forty-four pounds of pear leaves, 80 pounds of poplar, 51 pounds of peach, 83 pounds of locust, 82 pounds of elm, and 174 pounds of vine, respectively, are equal in nitrogen to 100 pounds of manure.

Apiary.

No Alchemy in Apiculture.

The prudent apiarist, says Langstroth, in discussing the feeding of honey bees, will regard feeding—the little given by way of encouragement excepted—as an evil to be submitted to only when it cannot be avoided, and will much prefer that they should obtain their supplies in the manner so beautifully described by Shakespeare, whose inimitable writings furnish us, on almost every subject, with the happiest illustrations:

"So work the honeybees,
Creatures that, by a rule in Nature, teach
The art of order to a peopled kingdom.
They have a king and officers of sorts,
Where some, like magistrates, correct at home,
Others, like merchants, venture trade abroad;
Others, like soldiers, armed in their stings,
Make boot upon the Summer's velvet buds;
Which pillage they, with merry march, bring home
To the tent Royal of their emperor,
Who, busied in his majesty, surveys
The singing masons building roofs of gold;
The civil citizens kneading up the honey;
The poor mechanic porters crowding in
Their heavy burdens at his narrow gate;
The sad-eyed justice, with his surly hum,
Delivering o'er, to executors pale,
The lazy, yawning drone."

All attempts to derive profit from selling cheap honey or syrup fed to bees, have invariably proved unsuccessful. The notion that they can change all sweets, however poor their quality, into honey, on the same principle that cows secrete milk from any acceptable food, is a complete delusion.

It is true that they can make white comb from almost every liquid sweet, because wax being a natural secretion of the bee, can be made from all saccharine substances, as fat can be put upon the ribs of an ox by any kind of nourishing food. But the quality of the comb has nothing to do with its contents; and the attempt to sell, as a prime article, inferior sweets, stored in beautiful comb, would be as truly a fraud as to offer for good money, coins which, although pure on the outside, contain a baser metal within.

Different kinds of honey or sugar syrup fed to the bees can be as readily distinguished, after they have sealed them up, as before.

The Golden Age of beekeeping, in which bees are to transmute inferior sweets into such balmy spoils as were gathered on Hybla or Hymettus, is as far from prosaic reality as the visions of the poet, who saw—

"A golden hive, on a golden bank,
Where golden bees, by alchemical prank,
Gather gold instead of honey."

Even if cheap sugar could be "made over" by the bees so as to taste like honey, it would cost the producer, taking into account the amount consumed in elaborating wax, almost if not quite, as much as the market price of white clover honey; and, if he feeds his bees after the natural supplies are over, they will suffer from filling up their brood cells.

Rendering Beeswax.

Considering the high commercial value of beeswax, it is surprising that so much of it should be allowed to go to waste as is permitted by a great many keepers of bees. Even the man with only a few colonies would find it a profitable investment to purchase a good wax press of some description. A Solar wax-extractor, which is simply a box with a false bottom of tin or sheet-iron and a glass cover, and which is operated by being set in the sun, is all right in its place, and will get most of the wax out of cappings, and any scraps of clean white comb which may come to it; but for melting up old comb which has been in the brood-chamber of a hive it is little more than useless, as the cocoons and other foreign matter will soak up at least half the wax as it melts. The only way to get practically all the wax from these old combs is with a press. Some people use a steam press, which sits on the cook stove and takes up a lot of room for a couple of weeks, while the wax slowly drips out of the spout at the bottom into a vessel set beside the stove to receive the wax, which it will do all right until it gets an accidental shove. And once is enough to have to clean wax off a kitchen floor. This process of rendering wax is all right

if you only have a little of it to do or want to kill time in the winter. The writer uses what is known as a "Hatch-Jemmill" press, which will in a couple of hours handle all the broken and discarded comb and other wax-bearing accumulations from an apiary of one hundred colonies in two years' operations. The refuse comb is first melted in an old wash boiler, then dipped with a dipper into the press and subjected to such a pressure, applied by means of a heavy bench-screw, that practically every particle of wax is forced out of it. This press paid for itself several times over the first time it was run, melting up a lot of broken and moth-eaten combs bought from a farmer who had let his bees run themselves for a while. The chief objection to this press is that it makes a lot of "muss" dipping the wax from one vessel to another; but this objection is mostly in theory, as, with a little practice, it can be done very nicely, and a few old newspapers laid on the floor will catch anything that may happen to get away from the dipper. And it is much more satisfactory to go right at a piece of work and get it done and out of the way in a couple of hours than to have it on your mind and in other people's way for days together.

E. G. H.

Poultry.

Ventilation and What it Implies.

By G. W. Scott, Innisfail, Alta.

To replace impure air with pure air without draft has been the aim of a large number of individuals, and especially those engaged in poultry culture. Some have succeeded to their own satisfaction, while others are still endeavoring to solve this difficult problem. There are various systems in use; the principal ones are:

1. The closed house, ventilated by openings near the floor or roof, or by opening both doors and windows for a time each day.

2. The scratching-shed plan, in which part of the house is closed; the balance is an open shed with wire front. The latter portion is closed on stormy days by means of a cloth tacked on a frame which covers the opening.

3. The open-front house, with wire netting only to prevent the fowls from going outside.

These houses all have advocates as to their efficiency.

The first plan, a closed house, which may prevent the water, etc., from freezing, is difficult to ventilate without causing the fowl some discomfort and possibly causing colds in the flock while attempting to secure pure air.

The scratching-shed plan is good, but the fowls still have a poorly-ventilated place in which to remain during the night, and if a window in the closed part is opened during the day there will be a draft through the opening to the shed.

The open-front house will possibly give entire satisfaction in climates less rigorous than ours, but with the temperature reaching 40 below zero, F., good results can scarcely be expected.

In order to secure as nearly ideal ventilation as possible, we should utilize the heat of the sun shining through windows or openings. These openings should be as near the ceiling and floors as possible, so that every portion of the house, including the roosting platform as well as the scratching shed, will have sunshine on it at some time during the day.

The sun shining on any portion of the floor for a short time will warm the air of that por-

tion to such an extent as to cause it to rise, and be replaced by what? In a closed house the warm air will be replaced by some of the cold foal air within the house, but if pure air can be secured from outside without draft, this difficulty will, in a measure, have been overcome. A cloth-covered frame inserted in half or all the window opening will allow the pure, dry, outside air to enter the house to overcome and replace the moist air, and so slowly as to cause no rapid change in temperature. Fowl are not supplied with clothes which will, to any extent, protect them from extremes and rapid changes of temperature, so they are required to meet all weather conditions without change of raiment. Let us, then, endeavor to secure as comfortable a temperature as possible with pure air to breathe, even during extreme temperatures, and provide an extra protection for them while inactive during the night.

Another very important point is a dry floor. If made of earth, it should be well dried out, or, if made of lumber, well seasoned before cold weather. Do not cover any floor with litter until such floor is dry, as litter will take up moisture, which makes it uncomfortable and unhealthy for the fowls to work in. Damp floors will also prevent the dry litter from taking up moisture from inside the house, as it should, in order to reduce atmospheric humidity. Windows should be used, but so arranged that the entire opening can be used with only wire netting during bright, sunny days, or half wire and balance cloth during moderate weather, with all cloth or half cloth and the balance glass during extremely cold, stormy weather.

By the judicious use of the above methods pure warm air will be secured at all times, with no sudden or extreme temperatures to contend with inside the house. The roosting room should be closed in with cloth curtain during the night, and this lowered as soon as the fowl have all gone to roost.

A house built with two ply boards, with tarpaper between on three sides and the front the same as above, with large openings, will give good results so far as housing is concerned. When good healthy fowl (well matured pullets or yearling hens) are well fed and housed, there will be no cause to complain about results. The poultrymen should provide a variety of good sound grain, grit, water, etc., and make the fowl dig for at least 70 per cent. of their food in deep litter. He should use his head and hands with as much energy given to such details as lice, disease, etc., as the average hen exerts in securing her food from a pile of dry, deep litter.

A Cheap but Good Chicken Fence.

What is the good of paying \$3.50 and \$4.00 per roll for chicken wire when a fence equally as good and a lot cheaper can be made in the following manner? :

The fence-posts being all in, four strands of barbed wire are put on very loosely, then, between the posts, with edges on the ground, long boards, a foot wide and an inch thick, should be nailed. Next, a number of sticks, similar to droppers used for fences, but about 7 feet high, should be cut, figuring about 400 to every 75 yards. These should be put down through the wire, two coming at the outside and two at the inside, the sticks being put about three inches apart. When this is done the wires should be tightened up and the gates put in, and you will have a nice neat chicken fence at the cost of little labor and expense.

ONE WHO HAS TRIED IT.

A Mysterious Chicken Disease.

A few days ago I happened at a farm where the chickens were dying from no apparent cause. They looked to me like fowls overrun by lice, but when I suggested this, the owner assured me that they were not lousy. I was not satisfied, for I have frequently seen lousy chickens in coops which the owners were sure were free from lice. I picked up one that was drooping and too listless to get out of the way. Upon examination I found that it was having the vitality sapped out of it by a variety of louse which is much more slender and active than the common gray louse. When the feathers are parted these lively fellows immediately make for cover, and unless one parts the feathers rapidly, moving the hand on a line along the fowl's body, so as to follow them up faster than they can run, they will keep out of sight, and leave the impression that there are none there.

To defend his fowls from the ravages of lice, a poultry-keeper must learn the habits and tricks of these pests. The common gray louse is easy to discover, as it is slow in its movements, and usually is found upon the head or under the wings. It is a common mistake to suppose that when an examination of head and wings reveals no lice that the bird is free from them. But there are several other kinds of lice. One sort is more commonly found under the throat than anywhere else. There are others that do not collect in any one place. Another kind of louse which is almost sure to escape those who do not look closely is the louse which lives upon the feathers, not on the bird's body. It is as hard on the fowls as any other kind, for it kills the feathers, and either consumes them or causes them to fall out. This keeps the fowl constantly producing new feathers as long as it has vitality enough to do so, and when its vitality becomes run down it becomes ragged-looking and partly naked. This keeps a hen in a constant state of moult, which makes her unable to lay and breaks down her constitution.

In warm weather, red mites are usually discovered running about the roosts and nests, but when it is too chilly to be out with comfort they keep under cover in the day time and swarm out to pester the fowls at night. If you ever spent a night in a little town where there was but one poorly-kept hotel, and the bedbugs woke you up just as you got to sleep, and new swarms came out to take the place of those you killed, you know how your chickens spend the night if there are red mites in your henhouse. If you remember how much you felt like work in the morning, you know how much the hen feels like hunting for the necessary articles to put into the eggs you expect her to lay.

A good poultry raiser must be an expert louse-hunter, and he must not blame his hens for not laying, nor get out of sorts because his young chicks die, if he does not learn to spot the wily louse wherever it puts in its appearance.

W. I. T.

Advice to Live Poultry Shippers.

Spring chickens weighing less than 1 pound should not be shipped, as they become a drug on the market. Pound and one-half to 2-pound chickens sell best, and, later in the season, over 2-pound weights are preferred. In the early spring, when chickens first come in, some small chickens will sell, but as soon as chickens begin to be plentiful, then the small ones are not wanted. Later in the summer, when chickens are bought to place in freezer, 1½ pounds to 2 pounds are preferred; so, take it the year round, 2-pound stock, or as near to 2 pounds as possible, sells best.

Attention is also called to the fact that dark-feathered ducks are not as desirable as the white-feathered, chiefly for the reason that they do not dress out as white and clean as the white-feathered stock.

The Cockerels and Old Hens.

Are the old hens, also the cull and unnecessary cockerels, marketed yet? The advice has often been given through your valuable paper to have the latter all disposed of as soon as they could be got sufficiently large. For various reasons there may be large numbers of them on hand yet. What folly to feed a band of roosters, when the feed is needed for the pullets, in order that they shall be pushed to maturity and the production of eggs? No flock of hens can give satisfactory returns if constantly disturbed by these nuisances. When feeding time comes there is such a squabble for first place that the more timid pullets and hens steal away and go without the served rations, and thus can make no headway, and those daring enough to try to secure a share are robbed of it by a band of cockerels. There is no profit on the feed consumed by them either. In many cases the profit they would have made two or three months earlier is consumed ere this, and the loss on the flock to be kept over cannot be fully estimated. But if the weeding out is not done



Poultry House of Geo. W. Scott.

Windows have cloth-covered frame instead in place of lower sash.

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yet delay no longer, and get in shape for a measure of profit before the winter is gone, even though it be too late to experience the full share which earlier planning and attention would have secured.

Then there are a lot of old hens that should never see any more cold weather. After they have been through two winters they should be disposed of, and now is the time if it has not yet been attended to. Of course the price just now is low for such, but there is no money in waiting for better markets. Generally after January 15th any class of fowl becomes scarce, and the market is good. But considering the room they occupy, and the food consumed, the extra price is not sufficient to make keeping them profitable, because the layers are kept back. Where the pen is crowded the chances for disease to get a foothold are increased to a great extent. J. R. H.

An Act to Protect Horse-breeders of the Province of Manitoba.

We print below a copy of the essential clauses of a "Horse-breeders' Act," prepared by the Secretary and Executive of the Horse-breeders' Association of Manitoba, to take the place of the old Horse-breeders' Lien Act. It is proposed to present the revised Act to the Manitoba Legislature this winter for adoption, and it may in all probability be expected to become law in that Province. It embodies quite largely the Territorial Ordinance, which covers the same ground, and which has worked very satisfactorily. The proposed Act will be of interest to horse-breeders generally:

REGISTRATION OF STALLIONS.

3. Every person, firm or company, standing or travelling any stallion for profit or gain in Manitoba shall cause the name, description and pedigree of such stallion to be enrolled in the Department, and shall procure a certificate of such enrollment as hereafter provided.

4. Such owner, when the stallion is pure-bred, shall pay to the said Department for such enrollment and certificate the sum of two dollars; provided, that in the case of a sale or transfer of a stallion once so enrolled, the new owner, upon filing proof of such sale or transfer to him, and, if required, surrendering the original certificate, shall be entitled to a new certificate of enrollment upon payment of the sum of one dollar.

5. In order to obtain the Department's endorsement of soundness of the license certificate herein provided for, the owner of such pure-bred stallion shall make oath before a notary public that such stallion is, to the best of his knowledge, free from hereditary or transmissible unsoundness or disease, or in lieu thereof may file a certificate of freedom from hereditary disease or unsoundness, signed by a duly qualified veterinarian licensed in Manitoba, and shall forward this affidavit, of veterinarian's certificate, together with the other necessary papers relating to his breeding and ownership, to the Department.

6. The following diseases are considered hereditary unsoundness, disqualifying a stallion for breeding purposes: Bone spavin, cataract, contraction of the feet, curb, navicular disease, periodic ophthalmia, sidebones, ringbone, roaring, thick wind or whistling, bony exostoses, splints, etc.

7. In case of a stallion not being able to qualify for the Department's endorsement of stallions thus provided for, such endorsement shall be scored out on each and every certificate; provided always that such endorsement shall apply for one year only from the date of issue.

8. The owner of any stallion shall post up and keep affixed during the whole season, copies of the certificate of such stallion issued under the preceding section, in a conspicuous place, both within and upon the outside of the main door leading into every stable or building where the said stallion stands regularly for public service.

9. The certificate issued for a pure-bred stallion, registered in a studbook approved by the Department, shall be in Form A in the schedule hereto.

10. The certificate issued for a stallion whose sire and dam are pure-bred but not of the same breed, shall be in Form B in the schedule hereto.

11. The certificate issued for a stallion that is not pure-bred shall be in Form C in the schedule hereto.

12. Every bill, poster or advertisement issued by the owner of any stallion enrolled under this Act, or used by him when advertising such stallion, shall contain a copy of its certificate of enrollment.

13. The production of any bill, poster or other printed or written matter advertising any stallion for public service shall be prima facie evidence that such bill, poster or other advertising material was used to advertise the stallion named and described therein by or with the consent of the owner or owners of the said stallion.

LIENS FOR SERVICES.

14. The owner of any stallion holding a certificate of enrollment for such stallion under Section 9 of this Act, or his agent, may file in the office of the clerk of the County Court of the judicial division in which the owner or person in charge of any mare upon which such stallion performs service resides, within 18 months after such service has been performed, a statutory declaration, setting forth:

- (a) The amount of service fee.
- (b) That the same is unpaid.
- (c) The fact of service.
- (d) A reasonable description of the mare.
- (e) The name and residence of the owner of such mare.
- (f) The County Court clerk shall file the said declaration upon the receipt of a fee of ten cents.

15. The owner of such stallion, upon filing such declaration, and complying with the provisions of this Act, shall have a lien to the amount of the said service fee and costs, as hereinafter provided, upon the colt or filly, the offspring of any such stallion from the service in respect of which the said declaration is filed, which lien shall take and have priority over any and all writs of execution, chattel mortgages, bills of sale, liens, claims and incumbrances whatever.

ENFORCEMENT OF LIEN.

16. If payment of the service fee is not made before the first day of January in the year following the year in which the colt or filly is born, the owner of the said

stallion, or his duly appointed agent, may, at any time before the first day of May following, take possession of the colt or filly upon which he has such lien as aforesaid, wherever the same may be found, and may proceed to sell the same by public auction, after giving the person in whose possession the said colt or filly was when taken ten days' notice in writing of such intention to sell, which notice may be effectually given to such person by delivering the same to him personally, or by posting the notice up on the door of such person's last known place of residence in Manitoba.

17. The proceeds of such sale shall be applied, first, in payment of the reasonable expenses of the taking of possession, giving of notice and conduct of sale, not in all in any one case exceeding ten dollars; next, in payment of the said service fee; and the balance shall be paid, on demand by the owner of the stallion, to the person from whose possession such colt or filly was taken.

18. Violation of any of the provisions of this Act shall be an offence for which the offender shall be liable on summary conviction to a penalty not exceeding \$25.

SCHEDULE.

Form A.

Department of Agriculture for Manitoba, Canada.

Certificate of pure-bred stallion No.

The pedigree of the stallion, (Name)

described as follows: (color)

foaled in the year , has been examined in the

Department, and I hereby certify that the stallion is

pure-bred and is registered No. in Vol. of

the Studbook, which is approved by

the Department.

The owner of the above pure-bred stallion having complied with the requirements of Section 5 of this Act, the Department certifies the said horse to be free from hereditary disease, and therefore considers the horse sound at date of issue of this certificate.

Minister of Agriculture.

Form B.

Department of Agriculture for Manitoba, Canada.

Certificate of Cross-bred stallion No.

The breeding of the stallion (Name)

described as follows: (color)

foaled in the year , has been examined in the

Department, and it is found that his sire is registered

in the and his dam is the

Such being the case, the said stallion is not pure-bred,

nor eligible for registration in any studbook approved

by the Department.

Minister of Agriculture.

Form C.

Department of Agriculture for Manitoba, Canada.

Certificate of Grade stallion No.

The breeding of the stallion (Name)

described as follows: (color)

foaled in the year , has been examined in the

Department, and it is found that the said stallion is

not pure-bred nor eligible for registration in any stud-

book approved by the Department.

Minister of Agriculture.

Profit of Farming.

To the Editor "The Farmer's Advocate":

I think Mr. S. Benson's estimate of the profit of farming very moderate; the item of wages is even too low. Pity we have no more Bensons about. Not only farming must be diversified, but a good deal more politics must be cultivated on every farm if farming is to be profitable. After feeding all the nobles from the King up to the local elevator, no wonder that the wheat left in the farmer's granary is not likely to make him too fat. There it is, bringing politics into an agricultural paper! The farmer has no business in politics. The great corporations are interested in clean crops, but the greater interest of the farmer is in a clean vote. The unintelligent vote which is threatening Canada is worse even than the weeds and smut.

Are we not living in progressive Canada, and in the twentieth century? Still some have very primitive ideas about game and game laws. The farmer has no time to hunt—nor does it pay to hunt—and a truly refined person cannot extract pleasure from it. Do not bother about game laws; let the wild animals go with Indians to their natural destination. Confine the hunter with his brother, the soldier, to their proper sphere, the museum. LEWIS GABRIEL.

Dubuc, Sask.

Dear Sirs.—I like your paper best of all the Canadian papers. Yours truly, WILL. M. SIMM, Crystal City.

Events of the World.

Canadian

The assessment of the City of Toronto shows an increase of \$20,000,000 for the year.

According to the report of the Provincial Bureau of Mines, Ontario, in 1904, produced minerals to the value of \$11,572,647.

The net earnings of the Temiscaming Railway for the past eleven months amounted to \$100,000.

One hundred archaeological specimens from the Imperial Museum of Tokio are on their way to the Provincial Museum in Toronto.

Mr. C. M. Hays announces that a section of the Grand Trunk Pacific, between the Touchwood Hills, the western end of Macdonald & McMillan's contract, and Edmonton, will be placed under contract within two months.

British and Foreign.

Charles Yerkes, the famous American capitalist, is dead.

Viscount Aoki has been appointed First Ambassador from Japan to the United States.

The political independence of Finland guaranteed by Alexander I. of Russia has been restored.

Official returns of the recent New York mayoralty contest show McClellan elected by a majority of 3,468 votes.

On December 28th, after riots of almost unparalleled fury, in which the number of casualties amounted to 15,000, the Moscow strikers gave up the struggle. Concessions will, however, be granted as a result of the uprising.

Field Notes.

ON THE FIRST PAGE OF THE HOME MAGAZINE DEPARTMENT OF THIS ISSUE WILL BE FOUND A UNIQUE LITERARY PROPOSAL. READ IT, AND ACT AT ONCE.

Look at the label on this paper. When does your subscription expire? See to it at once.

"The Farmer's Advocate" is a welcome visitor at our home. It is becoming a more up-to-date journal every week. R. AUSTIN, Simcoe Co., Ont.

In the publishers' standing announcement in a leading American exchange appears the phrase: "To all points in the United States, Canada, the British Northwest and Mexico." Query.—Where is that portion of the continent designated "the British Northwest?" The management of our esteemed contemporary should post itself regarding modern geography.

The January 1st issue of the Canadian Epworth Era (Toronto, Ont.) is a beauty, and even better than it looks when the contents are examined. It is a special "Canadian" number, and is packed full of facts, useful and entertaining, about our great country. We do not wonder that the Era is popular in its constituency. It deserves success, and 1906 ought to be its best year.

A Beginner's Experience in Wheat Marketing.

I have learned a few lessons in handling, and one is, if you cannot get a car store the grain on your own farm till you do get one. I put through the elevator, and was rather bothered, but stayed with it. These elevator fellows are too well onto their job; told me my wheat was bleached, and wouldn't grade better than a No. 2 northern. I got very fair weight. It went No. 1 northern at Winnipeg.

SASKATCHEWAN FARMER.

Some Ideals for a Western University.

Dr. Gilbert B. Wilson, Winnipeg.

The true ideal of a University is encyclopaedic. It should have in view the whole circle of the Arts and Sciences. It cannot afford to ignore any segment of useful knowledge, however small. It should be the Alma Mater of all human Truth, the home of Universal Knowledge. To hold such an ideal before its development will deliver it from malformations and monstrosities, from being overloaded on the theoretical or the practical sides from being out of touch with life. The greatest Universities of the world have each five faculties: Theology, Arts (or Philosophy, as it is called by them), Law, Medicine (Human and Comparative or Veterinary), and Agriculture. Not only should each one of these faculties have a place in our future University system, but to them should be added the very comprehensive Faculty of Practical or applied Science. While every branch of the Arts course is necessary and has its full justification, they are not all equally necessary, and they should find their way into the University programme and courses of study just in proportion as they can be most helpful to the common life of the people. In times past some of them have been born out of due time. In Canada the first chair ordinarily endowed has been classics; it should have been English, and the second should have been in this country Agriculture, and the third Pedagogics, both of which, unfortunately, have always appeared by far too late in the evolution.

Again, the whole theory of Politics, in its highest sense, the best methods of governing communities, towns, cities, the Province, the Dominion, the questions of Trade Tariffs, Transportation, Finance, Banking, Taxation, Wages, Public Sanitation, and a host of allied topics, are of more immediate importance, and should find a place on the curriculum of a University earlier than Mental Science and the History of Ancient and Medieval Philosophy. The reverse has generally been the case, with the result that in the earlier life of communities public sympathy has been withheld from institutions of higher learning, because these were impractical, historically unadjusted, too widely divorced from the life and work of the community. On this topic more need not here be said; enough that the order of precedence has been indicated. The subjects of the various older branches of knowledge have been too well classified to require detailed reference or description; they fall into great natural groups of cognate sciences, and any man deemed worthy of a University degree should have fully and accurately mastered the main principles and more essential facts embraced in that particular group of studies which he has elected to pursue. In regard to two of the above faculties, viz., Law and Medicine, they should be an integral part of the University system. To train a lawyer in a Law Office or a Law School rather than in a University, tends to make him a conveyancer, a pettifogger and a privileged character, bent on preserving the privileges of his class; bent also on perpetuating the subtleties and unnecessary intricacies and technicalities of ancient, musty laws and tedious, cumbersome and expensive forms of procedure.

The comparative study of Law as a Science tends to simplify law, to modernize it, to bring it into direct and simple relation to daily life, to shorten its forms and make its terms easily intelligible to all. The lawyer ceases to be a leech, and becomes a friend of society; he helps men understand each other, keeps them from costly misunderstandings; helps them to adjust in the simplest, easiest and most direct manner their social, commercial and domestic relations.

Similarly to leave the equally noble science of medicine to a close corporation of practitioners is bad for society, bad for medical men, and not the best thing for medical science. The Medical Science of the future will avoid as much as possible the use of drugs, will be hostile to all intoxicants and most stimulants, will simplify remedies, will seek to make known the laws of health and the symptoms of ill health. It will be largely preventive rather than mostly remedial. It will be interpretative of Nature to men. Pathology and Therapeutics will give place to Sanitation and Hygiene. It is the free, unselfish and enlightened air of the University that can make these splendid Arts and Sciences true friends, disinterested counsellors and valued servants of the common people.

The general public is the most interested party in having these branches of learning taught scientifically rather than professionally. Would it not be well that all pettifoggers, quacks and Christian Scientists should be incarcerated as deceivers of the people, and given the alternative of an assisted course in Law or Medicine, or the learning of some useful trade in the Penitentiary? A NATION IN SEARCH OF LIGHT CANNOT AFFORD TO ENCOURAGE OBSCURANTISM!

There are, however, two great fields of theoretical knowledge and practical effort which an Ideal Western University should seek vigorously to enter and occupy. AGRICULTURE AND APPLIED SCIENCE ARE TWO GREAT PROFESSIONS.

These two departments are Practical Science and Agriculture. Canada is just beginning to take its place in the world's race for commercial equality or supremacy. Rightly guided she should have no difficulty in leading the world in agriculture generally, and especially in Grain and Stock Production. The establishment of an Agricultural College with an Experimental Farm, the attention which the farmers are beginning to give to scientific agriculture, the interest which our Provincial Government manifests, the splendid services rendered by

your own valuable paper—above all, the appointment of a number of well-trained, enthusiastic young Canadian experts on the staff of our Agricultural College—gives hope that at last our paramount agricultural interests are going to receive more careful attention and more adequate assistance. Even at this stage it might not be inopportune that a few suggestions be made:

1st.—Our Western plains demand that in the interest of agriculture attention should at once be paid to the question of extensive afforestation of land areas unsuitable for either grain-raising or stock farming.

2nd.—The Horticultural Society and kindred associations should work in harmony with and might render assistance to the Agricultural Faculty. Their finest triumph should be the condition of the Agricultural College grounds.

3rd.—The same holds true of our Live-stock Associations, which ought to be in the closest touch with the Agricultural Faculty. Mixed farming for the West is a necessity. Stall-feeding, hog-raising and poultry-raising need encouragement and the stimulus of successful examples. Experiments in cross-breeding might also be made at the College stables.

4th.—With these, too, our dairying interests should be combined and instruction given. Union is strength, and too many organizations dissipate vital and quickening forces.

5th.—Finally, the Agricultural College should have two courses. One popular and largely practical, which could be taken full advantage of by any earnest student with only a common school education; the other more extensive, exact and scientific, leading to a diploma accessible only to advanced students, and aiming at graduating a scientist and a practical agriculturist—a workman, needing not to be ashamed. In the near future men with such a training will alone be found competent to manage successfully the mammoth farms of the Northwest. Such, at least, has been the experience of Central and Eastern Europe.

THE NEED FOR TEACHING APPLIED SCIENCE.

The Faculty of Applied Science, as yet to be called into existence in Western Canada will also have abundant scope for invaluable service. It, along with Scientific Agriculture, will help to rid the mind of young Canada of one of its most noxious weeds, viz., the idea that manual labor is undignified. It is only a question of time till the Doukhobor, the Galician, and other proletarian immigration will provide us with plenty of labor as cheap as can be purchased anywhere in Canada. Long before that we shall have plenty of cheap water power transmitted to us, transfused into electrical energy. Already manufactures are beginning in the West, but only feebly. We should mill all our own grain and feed the by-products; we should make all our own starch, tan all our own hides, manufacture all our own binder-twines, agricultural implements, shoes and leather goods, and do hundreds of other like things that we have not yet begun to dream about. In order that we fall not behind in the race, and thus become hewers of wood and drawers of water to our astute American cousins, we must give our boys such a thorough, practical education as shall leave them masters of the situation.

Nor will such practical education be as expensive as might at first be feared. Higher fees could be charged for its courses, and they would be cheerfully paid, as the effect of technical education on the earning power is so obvious and immediate. The young machinists and electrical experts could easily in their college vacations make enough money to pay their way in an expensive course. The product of the University machine shops, designing, drafting, modelling and charting work would be very considerable, and the Faculty of Applied Science might supply the whole group of the University buildings with heating, light and power. The makers of machines are among the emancipators of the human race, and the University of the future will be the home of invention. A National Museum (including many departments, e.g., industrial exhibits, prehistorical relics and historical treasures, geological, zoological and botanical specimens, etc.) and Schools of Music and Art, including architecture, should form a part of a comprehensive scheme of National Education. One of the first cares of any University should be to secure a building however small, and place therein photographs and plaster casts (later copies) of all the great masterpieces in art. An Art Gallery is invaluable, and may be begun very simply and inexpensively. The culture of the imagination and taste has a direct influence upon national development, even upon industrial development. The nation which makes the neatest and most artistic clothes, hats, shoes, house decorations and general products will capture the world's markets, and the nations that lag behind will have to pay the price.

I have room only for a brief word as to the Professors. That is the most important matter of all. One genius, who is at the same time a teacher, is worth three-score mediocrities. Socrates in the chair and Plato at his feet would adorn any University—the rest of the Faculty might take holiday. We have had too much of posing and prosing and stagnation. Professors need to be men of learning, but they need also to be MEN, and learning men. Too many of them are like overfed cattle, who drank in early years from their Alma Mater immense quantities of milk, took first prize as yearlings, and then became, and have remained ever since, wizened, withered and hide-bound. A Professor must needs be a dynamic man, a man of marked personality. His business is not merely to recite facts, but to influence, mould, make—if need be—re-make—men intellectually and in some respects morally. Very few

of our professors are really men of inspiration. Many of them are learned blockheads, out of touch with life, and not even attempting to guide the life currents of the nation. Moreover, not a few of them are too old. They should all be placed on half-pay and half-work at sixty, and permitted to retire at sixty-five or seventy.

LET US HAVE CANADIAN PROFESSORS.

They should all in this country be Canadians. Only such will love this country and its interests supremely above those of all other lands. On equal footing, Canadians more than hold their own in the Universities of the United States, England and Germany. In this climate they have the greatest working force; they exhibit most adaptation; they understand best the genius of the Canadian people, and can be best trusted to guide and teach its youth. We shall not always be content to sail in the back-wash of other nations, and it is not well to have too many foreign steersmen at the wheel.

At the same time our Universities must always be open to new light from every source. If any man, professor or layman has a ray of light let him bring it and cause it to shine.

THE ANCIENTS HAD CANADIAN CLUBS.

The Athenian philosophers were ready to listen to Paul, and the synagogue schools invited the stranger guest if he had any word of exhortation to speak on. To this end the University magazines and the secular press help greatly already, and it will not be long till we see specialists of international repute giving up their chairs and making a grand circuit of all the great Universities, there to deliver brief courses of lectures, which shall be the ripe fruit of their special investigations and discoveries. It should be possible to introduce these travelling lectureships on a small scale almost from the beginning of a University's life. Two very important subjects remain for consideration, namely, Post-graduate Courses and University Extension Lectures, but I fear I have already exceeded the space allotted me, and trespass too far upon the patience of your readers. Perhaps at some future time I may recur to these two topics, and thus close this hasty and fragmentary statement of some of the great principles which should influence our University policy. The greatest mind the German people has produced died with the words "More light" upon his lips. That sentiment should inspire not only our educational but all our national strivings. This young nation, buoyant with physical energy, heir to vast material wealth, taking long strides towards nationhood, but confronted by many and grave problems, feels its intellectual longing best expressed by Tennyson:

"'Tis life of which our nerves are scant,
Oh life, not death, for which we pant,
More life and fuller that we want."

The Uncertainty in Hog Prices.

Duncan Anderson, well known as a lecturer on agricultural topics, has the following to say re the barring of the Canadian market to U. S. hogs:

"I am pleased that Mr. Fisher has withdrawn the bonding privileges. It fixes us down to one brand, clears up and frees the discussion from any outside element, and ties us down close to the perfecting and building up of a trade in Canadian grown and cured bacon. Our aim should be to establish a steady business, by giving packers a regular supply of improved quality. We should never lose sight of the important point that the product is ours until it is consumed. Too many are of the opinion that as soon as they have the money for the live hogs in their pockets they are done with the article handled. But it is Canadian meats made from a Canadian product, and the producer should be intensely interested in it until it passes the final court of appeal—the consumer's taste and palate. This should be made plain to both farmer and packer.

"When the price of live hogs ranges in the twelve months all the way from \$4.60 to \$7.25 it disarranges the whole business; farmers lose confidence, and curtail production. As has been pointed out, Dr. Smale said that the price of bacon was practically stationary to the consumer. I am told that many wholesale meat dealers place the bacon on the retailers' counters, and the retailers sell on a commission. If this is the case, then the fluctuations on our live-hog market must all be caused by our packers at this end, and the wholesalers at the other. In fact, many of the wholesale men own the retail shops, and pay the men behind the counter salaries. When bacon is selling too high they don't raise the price, but press the sale of some other line, such as canned goods or frozen meat from the other side of the world.

"If the packers would agree to have a consulting board to fix prices, composed of a few representative farmers, so as to keep prices more uniform, it would give a healthy stimulus to the Canadian end of the trade. If prices could be fixed so that the year would be divided into three sections, from January to May, say, \$6; from May to October, \$6.50; October to January, \$5.50—a sliding scale of about a dollar in the year—it would be a good thing; but the jumping up and down has been as quick and fickle as the weather in the fall months. We must stay with this business, but we must hammer in:

"Uniformity in prices.

"Evenness of supply.

"And pay according to quality."

The above reasoning can be modified to apply to conditions and prices in Western Canada, with a price

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f. o. b., Winnipeg, some 50 cents lower. Only a short time ago a Western cattle-buyer advised his packing-house patron that it was inadvisable to drop the hog prices below \$5 per cwt. at his point. It is often stated that Western farm hogs cannot be produced profitably for less than 5c. a pound. Does any person really know that to be a fact? What light can the experimental farms throw on this problem from actual tests?

Improvement of Seed.

Samples of seed grains and potatoes secured mainly from the crops grown at the branch Experimental Farms at Indian Head, Sask., and at Brandon, Man., will be distributed this spring from the Central Farm, Ottawa, consisting of oats, spring wheat, barley, Indian corn (for ensilage only) and potatoes. The quantity of oats to be sent this year will be 4 lbs., and of wheat or barley 5 lbs., sufficient in each case to sow one-twentieth of an acre. The samples of Indian corn and potatoes will weigh 3 lbs., as heretofore. The varieties are as follows:

Oats.—Banner, Wide-awake, Abundance, Thousand Dollar, Improved Ligowo, Goldfinder and Waverley.

Wheat.—Preston, Red Fife, Percy, Stanley, Huron, Laurel and White Fife.

Barley.—Six-rowed—Mensury, Odessa, Mansfield, Claude and Royal. Two-rowed—Standwell, Invincible, Canadian Thorpe and Sidney.

Indian Corn (for ensilage).—Early sorts, Angel of Midnight, Compton's Early and Longfellow; later varieties, Selected Learning, Early Mastodon and White Cap Yellow Dent.

Potatoes.—Carman No. 1, Early White Prize, Rochester Rose, Uncle Sam, American Wonder, Bovee, Early Andes and Late Puritan.

Only one sample can be sent to each applicant, hence if an individual receives a sample of oats he cannot also receive one of wheat, barley or potatoes. Lists of names from one individual, or applications for more than one sample for one household cannot be entertained. These samples will be sent free of charge through the mail.

Applications should be addressed to the Director (Dr. Wm. Saunders) of Experimental Farms, Ottawa, and may be sent in any time before the 1st of March, after which the lists will be closed, so that all the samples asked for may be sent out in good time for sowing. Parties writing should mention the sort or variety they would prefer, with a second sort as an alternative, and should the available stock of both these varieties be exhausted, some other good sort will be sent instead. Those applying for Indian corn or potatoes will please bear in mind that the corn is not available for distribution until March or April, and that potatoes cannot be mailed from here until danger from frost in transit is over. No postage is required on mail matter addressed to the Central Experimental Farm, Ottawa.

Graduates Ontario Veterinary College.

The Christmas examinations of the Ontario Veterinary College were held in the College buildings on December 21st. The following gentlemen, after passing a stringent examination by the usual Board of Examiners, were awarded diplomas: Thomas H. Boyd, London; William Brice, Macdonald Hills, Sask.; Carl E. Call, Roachdale, Ind., U. S.; Irvine Christian, Drayton; John A. Cordick, Tara; Samuel E. Cottrill, New London, Wis., U. S.; Peter A. Dewar, Bowood; Ben. T. Gibson, Merritton; William R. Hawke, Medicine Hat, Alta.; William R. Hunter, Warsaw, N. Y., U. S.; William H. James, Leamington; Stephen Knight, Winnipeg, Man.; P. B. Labrosse, St. Eugene; Truman L. McConnell, Warsaw, N. Y., U. S.; William H. Mahon, Pittsfield, Mass., U. S.; Fred Morphy, Rochelle, France; Charles H. Newton, Barrie; Fred C. Pearce, Petrolia; Gerald C. Pinhorn, Oak River, Man.; Wm. A. Shearer, Glasgow, Scotland; W. H. Sweeney, Dubuque, Iowa, U. S.; James Whyte, Eglington.

Primary Examinations.—The following gentlemen passed in anatomy: E. Beverley Cowan, Thomas J. Kain, William G. Moore.

Things to Remember.

SEED FAIRS.

Gilbert Plains	Jan. 23
Swan River	Jan. 25
Dauphin	Jan. 27
Carberry	Feb. 1
Manitoba Poultry Show, Virden	Feb. 5-10
Dairy School (M. A. C.) open at Winnipeg	Feb. 6
Virden	Feb. 7
Morden	Feb. 9
Manitoba Dairy Association, Winnipeg	Feb. 13-14
Manitoba Horticultural Convention, Winnipeg	Feb. 14-15
Portage la Prairie	Feb. 20
Hamiota	Feb. 23
Manitoba Live-stock Conventions, Brandon	Feb. 27-Mar. 1
Manitoba Live-Stock Association's annual at Brandon	Feb. 27-Mar. 1
Manitoba Grain-growers	March 1 and 2
Manitoba Grain-growers' Convention, Brandon	Mar. 1-2
The Agricultural Limited	See Time Card

RENEW YOUR SUBSCRIPTION AT ONCE, AND AVOID MISSING INTERESTING NUMBERS.

Suggestions re Fairs and Noxious Weeds Act.

At the annual meeting of Mountain E. D. Agricultural Society No. 1, held at Crystal City, December 11th, a very lengthy discussion took place on the objectionable sections of the Noxious Weeds Act. At the close the following resolutions were unanimously adopted:

1st.—That the Act be amended so that the Weeds Inspector shall not have power to destroy the growing crop of any farmer, unless positive proof be procured showing that the owner had been habitually negligent and careless in trying to prevent the spread of noxious weeds.

2nd.—That it be made unlawful for any municipal council to appoint any one of its members as Noxious Weeds Inspector.

3rd.—That the Reeve and Councillors of each municipality be compelled to have the weeds cut on all road allowances within their municipality at the proper time.

4th.—That the Reeve and each member of the council in every municipality shall be made personally liable to be prosecuted for non-compliance with this Act.

5th.—That the attention of the Government be called to the particularly vicious properties of the perennial sow-thistle, and that more energetic measures should be adopted to particularize this as a noxious weed.

At the same meeting the following motion was carried:

Moved by David Potter, seconded by J. J. Ring, that it is the opinion of this meeting that our Summer Fair should be purely agricultural, and without attractions of any kind.

W. G. DUFF,
Acting Secretary.

Bars Up Against Hogs and Swine Disease

The Dominion Minister of Agriculture (Hon. Mr. Fisher) is to be commended for the prompt action taken in regard to the importation of American hogs. The unrestrained privilege of slaughtering in bond of hogs drawn from the unlimited corn-fed supplies of the States, would incidentally have left farmers at the mercy of the packers, but probably the real basis of the Government's action is to preserve the hog stock of Canada from disease. For several years our efficient Veterinary Director-General (Dr. Rutherford) and staff have battled with hog cholera, which by herculean efforts and the expenditure of thousands of dollars for compensation, has been got under control. Letting down the bars to the American hog lots, might mean any day the complete undoing of all this valuable work and the ruin of the industry for years to come. Only those thoroughly acquainted with the facts, or have suffered from visitations of swine disease, can realize the gravity of the menace. The new order just issued from Ottawa rescinds sections 45 to 52, inclusive, of the Animal Quarantine Regulations of 1904, and substitutes therefor a provision that all imported swine must be accompanied by a certificate signed by a veterinarian of the U. S. Bureau of Animal Industry, stating that neither swine plague nor hog cholera has existed within a radius of five miles of the premises in which they have been kept for six months preceding the date of shipment, but such swine shall be subjected to a quarantine of 30 days before being allowed to come in contact with Canadian animals. This stops importation for immediate slaughter and doubles the period of quarantine. Swine found to be suffering from contagious disease will be subject to slaughter without compensation.

Outdoor Treatment for Tuberculosis.

As our readers are aware, last summer the herd of cattle at the Experimental Farm, Nappan, N.S., was found to be tuberculous. So as to make perfectly sure of the exact condition of affairs, the animals were held for a second test. It has now been found out that, out of seventy head, about sixty are tuberculous. It has been decided to ascertain whether there is any possibility of cure for animals from this disease, and to have the same system tried as is now thought to be successfully applied to human beings. With this object in view, some forty head are picked out—about ten healthy and thirty diseased—to be kept this winter as much as possible in the open air, with only an open shed for shelter; to be fed reasonably well and to be watched carefully and tested from time to time later on, to see what the results may be. The rest of the animals are being destroyed. It is hoped that this course of treatment will result in the disclosure of information that will be of very great value to stockmen, not only in Canada, but throughout the world.

ON THE FIRST PAGE OF THE HOME MAGAZINE DEPARTMENT OF THIS ISSUE WILL BE FOUND A UNIQUE LITERARY PROPOSAL. READ IT, AND ACT AT ONCE.

Have you sent us your renewal for 1906?

Want an Up-to-date Veterinary College.

The annual meeting of the Ontario Veterinary Medical Association was held in the Veterinary College, Toronto, on Friday, December 22nd, 1905. Five new members were received. Dr. C. H. Elliott, Chairman of the Veterinary Organization Committee, submitted the report of that Committee, in which he outlined their work, also the proposition which they had submitted to the Hon. Nelson Monteith, Minister of Agriculture, as follows:

(1) That this Committee is of opinion that, in view of the large live-stock interests of Ontario, not to speak of the rest of the Dominion, and of the importance to stock owners of the maintenance for the veterinary profession of a standard of education equally high in proportion as that demanded for the other branches of learning in this Province, the time has now arrived for the Provincial Government to take control of veterinary education, and to assume at least part of the expenditure required to put it on a satisfactory basis.

(2) That this Committee would, therefore, respectfully recommend to the Provincial Government the advisability of establishing in connection with the University of Toronto a Faculty of Comparative Medicine, to be endowed from the funds of the Province to such extent as may be necessary, in conjunction with the fees chargeable to students, to carry on the work in a manner creditable to the Province, and on a standard equal to that obtaining elsewhere in British possessions.

(3) That the work of establishing and maintaining the Ontario Veterinary College, an institution which has been of the greatest benefit to the live-stock interests, not only of Ontario, but of the whole North American continent, having been hitherto carried on by the sole efforts and at the expense of one individual, Professor Andrew Smith, this Committee is of opinion that in the making of any new arrangements that gentleman's interests should be carefully conserved, and would suggest that he should be appointed Dean of the above proposed Faculty of Comparative Medicine; and, further, that the premises owned and occupied by him as the Ontario Veterinary College should be utilized by the University in the teaching of Comparative Medicine.

(4) That in the event of the suggestions contained in the foregoing clauses meeting with the approval of the Members of the Provincial Government, this Committee would be willing, as representing the veterinary surgeons of Ontario, to render any required assistance in arranging details, and especially in outlining the work of the proposed new faculty as regards matriculation, curriculum and final examination.

(5) That in order to put the recommendations outlined above into effect, it will be necessary to place the whole matter of veterinary education in Ontario under legislative control, and to that end this Committee would respectfully suggest the introduction by the Government of a measure providing for the maintenance of a standard of veterinary education in accordance therewith. In the preparation of this measure, also, this Committee would be willing to assist.

(Signed)
CHAS. ELLIOTT, Chairman.
C. HEATH SWEETAPPLE, Secretary,
Ontario Organization Committee.
W. LAWSON,
J. F. QUINN,
J. H. TENNENT,
J. G. RUTHERFORD.

Professor A. Smith accompanied the delegation, and spoke strongly in favor of the proposed change. The Minister expressed himself as being in full sympathy with the spirit of the memorandum, especially with the view of the fact. The delegates did not press upon too high a standard of matriculation, it being generally conceded that the examination for high school entrance would be sufficient.

Dr. Elliott's report was received, and hope expressed that the Committee would do all in their power to obtain that which they had asked for.

Valuable papers were read and discussed by Dr. Bowlby, of Tweed, on Phymosis and Paraphymosis; Dr. Short, of Erin, on Epizootic Altitis; Dr. Duncombe, of Waterford, on Torsion of the Womb; Dr. Babe, of Shelburne, on Rupture of Stomach and Diaphragm; Dr. L. A. Wilson, of Aurora, on Lobelia Poisoning.

An interesting discussion took place about holding another summer meeting. It was decided to hold one next summer at Guelph, date and all arrangements being left in hands of executive and Guelph veterinarians. The following practitioners agreed to perform the following operations:

Laryngotomy, by Dr. Mole, of Toronto; Castrating a Cryptorchid, by Dr. Quinn, Brampton, and Dr. Wende, Buffalo; Ovanotomy in Bitch, by Dr. Davidson, Guelph; Castration Standing, by Dr. Duncombe, Waterford.

The secretary was instructed to write and endeavor to have papers by Dr. Rudd, of Woodstock, on Caponizing; Dr. Buchanan, of Florence, on Ovariectomy in the Pig and Heifer; Dr. W. J. R. Fowler, of Toronto, on some operation yet to be decided upon.

The following officers were elected for the ensuing year:

President.—Dr. L. A. Wilson, Aurora.
1st Vice-President.—Dr. J. Orr, Stratford.
2nd Vice-President.—Dr. Duncombe, Waterford.

Sec.-Treas.—Dr. Sweetapple, Toronto.
 Ass't. Sec.—Dr. R. Barnes, London.
 Directors.—Dr. Nichols, Kingston; Dr. McFady-
 jean, Collingwood; Dr. Brind, Woodstock; Dr.
 Hutton, Welland; Dr. Davidson, Guelph; Dr.
 Babe, Shelburne; Dr. Tancock, London.
 Delegates to Industrial Exhibition.—Prof.
 Smith, alternate, Col. Lloyd.
 Delegates to Western Fair.—Drs. O'Neil and W.
 J. Wilson.
 This brought to a close a very successful
 meeting.

Saskatchewan to Have Pure-bred Stock Sale.

A meeting of the Executive of the Saskatchewan Stock-breeders' Association was held on Thursday in the offices of the Provincial Department of Agriculture, Regina, and this meeting was arranged in order to meet Mr. Geo. H. Greig, Assistant Dominion Live-stock Commissioner, of Winnipeg.

The members of the Executive present were: Ald. Robt. Sinton, President of the Association; Alex. Mutch, Lumsden, Vice-President; G. W. Grant Wright, Secretary-Treasurer; Mr. J. C. Pope, a Director, and J. R. C. Honeyman, Deputy-Commissioner of Agriculture, were also present.

Many matters of importance relating to the welfare of the association were discussed at some length, and Mr. Greig was able to give the above-named officers a deal of useful information, and which will be of great benefit to them in conducting the affairs of the association. After considerable discussion, in which all those present took part, it was unanimously decided to hold a sale of pure-bred cattle, open to both males and females, but no definite date was fixed, this being left to the executive to decide later. From the remarks made at the meeting, the executive propose holding the sale at the same time and place as the Fat-stock Show is held, and this we learn will be held in the spring at Regina.

A vote of thanks to Mr. Greig brought a most profitable and instructive meeting to a close.

The Secretary-Treasurer, Mr. G. W. Grant Wright, informs us that the membership is growing apace, and that if the stockmen, farmers, breeders and feeders will help the officers, not only by sending in their membership fee, which is \$1.00 per year, but with their support, the executive will use every effort to make the association a potent factor and a field for good for the benefit and welfare of its members.

Sampling Cream.

When cream stands for any length of time the top layer will be richer than the cream below; this makes it necessary to thoroughly mix each lot of cream by pouring from one can to another just before taking a sample for testing. If the cream is lumpy it should be poured through a fine hair sieve before sampling.

Gathered-cream factories have in some cases adopted the following method of sampling cream: Each driver is provided with a box of numbered bottles, having a capacity of about four ounces each, one bottle being provided for each patron. This box is protected from heat in summer and cold in winter, so that the sample bottles of cream may arrive at the factory in nearly the same condition as when taken from the farms. This gives the buttermaker a chance to inspect each patron's cream and locate the defective lots, if there are any. After inspection at the factory, the samples are poured into composite sample jars which contain a preservative; no preservative is added to the bottles taken to the farms by the man who weighs, samples and gathers the cream, but he must protect these samples from changes caused by heat and cold during the different seasons of the year. In some factories each lot of cream received is tested, as this is considered more accurate and satisfactory than tests of composite samples.

Cream should be sampled with a tube or some arrangement that gives the same aliquot portion of each lot. When the composite samples are tested, the cream should be weighed into the Babcock cream test bottles. Measuring cream with a pipette of any kind or size does not give accurate results in testing with the Babcock test. In Wisconsin the law requires that cream should be tested by weighing into test bottles.

Testing cream accurately requires greater care than testing milk, especially in reading the per cent. of fat. The short-necked cream bottles, graduated from 40 to 50 per cent., do not afford an opportunity for exact readings, because the column of fat is so wide that the meniscus may include nearly one-half of one per cent. fat, and uncertain readings that may be either too high or too low are the result. Cream test bottles should have a narrow neck. This makes it possible to graduate the necks to divisions representing less than one-half of one per cent. each.

Very accurate tests of cream may be obtained by weighing half the usual quantity of cream, or nine grams, into narrow-necked test bottles that are graduated to two-tenths of one per cent., like the whole milk bottles, and multiplying the readings by two. (Prof. E. H. Farrington, Wis. Exp. Sta., in Bulletin 129.

Don't Use Soap in Washing Milk Vessels.

There is a decided objection, says H. E. Van Norman, of Purdue University, in the Country Gentleman, to the use of any common washing or laundry soaps for washing milk vessels. As an illustration, at a recent dairy convention the judge, in criticising a certain lot of butter, noted on the score-card, "Tastes of soap." Inquiry of the exhibitor later brought out that in her anxiety to have everything right, she had given the vessel a thorough washing with soap suds, and had carefully rinsed it afterward; yet there was sufficient soap adhering to the vessel in which the milk had been handled so that the judge could detect it in the butter. While I grant that this was a good judge, with a very sensitive taste, this experience has often been confirmed. I would recommend the use of sal soda, or some other alkaline washing powder, and suggest the following as a desirable method in the absence of steam, or with steam in addition, for that matter:

As soon as the vessels are emptied, rinse them out with lukewarm water, if available; if not, cold water. Wash thoroughly in water as warm as can be comfortably worked in, using sufficient alkaline washing powder to cut the grease. Then rinse in boiling water, or as near it as possible. It would be a little better to use two waters, one to rinse the alkaline water off and the second to simply scald it. In ordinary practical work, this is more trouble than most people will take, so that one rinsing with sufficient water is reasonably satisfactory. This vessel should then be turned up to drain and dry. If left hot, it should dry without rusting.

In dairy practice we recommend the use of a brush while washing, and then not wiping the tinware with a towel. Experiments performed in our laboratory with tinware which was steamed, steamed and wiped with a new towel that had never been used, wiping with a so-called clean used towel and with a soiled towel, showed that after wiping with a new cloth there were three and one-half times as many bacteria left on the surface as in the case where it was steamed only; after wiping with a used towel, one which any housewife or dairy maid would call a "clean towel," there were 300 times as many as when steamed only; and after using a soiled towel, one which was not worse than is commonly used in the kitchen for our dinner plates or our dairy utensils, it showed 4,000 times as many as when steamed only. Tinware scalded with boiling water or live steam, will be bacteriologically cleaner, but not so bright as if polished with a cloth.

Let us never forget that the cultivation of the earth is the most important labor of man. Man may be civilized in some degree without great progress in manufactures and with little commerce with his distant neighbors, but without the cultivation of the earth he is, in all countries, a savage. Until he gives up the chase and fixes himself in some place, and seeks a living from the earth, he is a roaming barbarian. When tillage begins other arts follow. The farmers, therefore, are the founders of civilization.—[Daniel Webster.

Markets.

Winnipeg.

Wheat—Thompson, Sons & Co. say: The bulk of the news and statistics has been of a bearish tendency. First there were much larger world's shipments last week than expected, and then the American visible supply had a larger increase than a year ago, although exports from the Atlantic and Pacific coasts were four times as large as a year ago. Good harvesting weather was reported from the Argentine, and some advices claimed a record crop for that country, and at the same time the weather in the United States has been very favorable to the winter wheat crop. The movement of wheat in America has been large, as is shown by the large exports and increasing visible supply, and the cash demand for wheat and flour has become dull. In face of all these bear influences, the markets have been inactive and dull, and the tendency of prices has been to decline a little, but while the general situation has seemed to favor the bears in a large measure, the markets have a stubborn tone, and sharp reactions have taken place in the American speculative markets every time the bear operators have become aggressive and sold the market down, and, notwithstanding holiday dullness and preponderance of bearish influences, prices show a decline of only ¼c. to 1c. per bushel on the week. In the American markets the Armour house is given credit for supporting the market every time a sharp decline takes place. They are supposed to sell freely whenever a moderate advance occurs, and whenever traders think Armour & Co. are selling the selling side increases, and soon the market sags down again, and then the Armour Co. are found to be replacing their wheat again. It is believed that this house holds a big line of May wheat, and that no matter if the situation in actual wheat should become bearish, Armour & Co. will sooner or later inaugurate a bull movement which will carry prices away up. Should such changes in conditions of supply or growing crops take place

during the season as would naturally tend to higher prices, these would help the Armour plans to success. In the meantime the great demand for wheat and flour for Europe is not filled, although at the moment it is less insistent. European stocks are low. The stock of wheat in the port of London at this date is estimated at only 600,000 bushels, against 1,720,000 bushels same time last year, and, notwithstanding large world's shipments, the quantity on ocean passage has decreased 5,840,000 bushels in the last two weeks. The course of the markets in the next two months will be governed a good deal by the result of the Argentine crop, for it is not certain yet whether this crop is going to be larger or smaller than last year. If it is no larger it need not be considered very bearish, while if it is smaller it will be distinctly bullish, for the immense exports of last year from that country, amounting to about 113,000,000 bushels, have all been absorbed, along with the immense Russian and large Indian and Australian exports. Neither Russia nor India are going to have large supplies to spare for current season, and the European winter wheat crop is only showing moderate condition on a decreased acreage, so that any disappointment in the Argentine crop will readily make itself felt on the markets. The visible supply increased last week 1,632,000 bushels, against an increase of 4,120,000 bushels the previous week, and an increase of 1,133,000 bushels last year. The world's shipments were 11,243,000 bushels, against 9,168,000 bushels the previous week, and 10,432,000 bushels last year. The world's visible supply, according to Bradstreet's, decreased 700,000 bushels, against an increase of 1,466,000 bushels the previous week, and a decrease of 710,000 bushels last year. Manitoba wheat has been very dull during the week, and prices have moved in sympathy with the changes in the American markets, and have lost about ¼c. to ½c. per bushel on the week. Holders are not pressing their stuff on the market, preferring to see the New Year in with what it may bring before they offer to sell freely. The export demand is practically nil this week, and we expect a quiet trade until after the New Year. Prices are as follows: No. 1 northern, 75¼c.; No. 2 northern, 73c.; No. 3 northern, 71c.

COARSE GRAINS AND FEED.

Bran, \$13; shorts, \$15.
 Chopped Feeds—Oats and barley, \$21; barley, \$18; oats, \$25.
 Oats—No. 1 white, 32c.; No. 2 white, 31c.; feed oats, 30c.
 Barley—Malting barley, 38c.; No. 3, 38c.; No. 4, 34c.
 Flax—96¼c.
 Hay—Per ton, cars on track, Winnipeg, \$6 to \$7; loose loads, \$7 to \$8.

PRODUCE.

Prices under this head are wholesale, unless otherwise specially stated. Prices of creamery and dairy butter, cheese, eggs and potatoes are jobbers' prices to retail dealers:

Creamery Butter—Manitoba creamery bricks, Winnipeg, 29c.; creamery, in boxes, 25c. Dairy Butter—Tubs, choicest, 21c. to 22c.; second grade, ground lots, 18c. to 20c.
 Cheese—Manitoba, 13¼c.; Ontario, 14c.
 Eggs—Fresh gathered, Winnipeg, 26c. to 27c.; pickled eggs, 24c.
 Dressed Meats—Beef, per lb., 5¼c.; mutton, per lb., 11c.; lamb, per lb., 12¼c.; dressed hogs, packers pay for 125 to 200 lbs., 7¼c.
 Poultry—Turkeys, per lb., 17¼c.; geese, per lb., 14c.; ducks, per lb., 14c.; chickens (spring), 14c.; fowl (drawn) 12¼c.
 Live Stock—Butchers' cattle, weighed off cars, Winnipeg, 2¼c. to 3¼c.; hogs, weighed off cars, Winnipeg, 150 to 250, 6c.; do, 250 to 300, 5c.; lambs, 5¼c.; sheep, 5¼c.

Toronto.

Cattle—Exporters, \$4 to \$4.80; butchers' best, \$4 to \$4.25; fair to good, \$3.75 to \$4; medium, \$3.50 to \$3.75; feeders, \$3.25 to \$3.80; stockers, \$2.50 to \$3.50.
 Sheep and Lambs—Export ewes, \$4 to \$4.30; lambs, \$5.50 to \$6.10, and choice wethers, \$6.25 cwt.
 Hogs—\$6.10 for selects, and \$5.85 for lights and fats.

Horses—Prices as quoted by the Canadian Horse Exchange and the Repository follow: Roadsters, 15 to 16 hands, \$120 to \$160; cobs and carriage horses, 15 to 16.1 hands, \$125 to \$170; matched pairs and carriage horses, 15 to 16.1 hands, \$300 to \$500; delivery horses, 1,100 to 1,200 lbs., \$130 to \$175; general-purpose and expressers, 1,200 to 1,350 lbs., \$150 to \$185; drafters, 1,350 to 1,750 lbs., \$150 to \$190; serviceable second-hand workers, \$60 to \$90; serviceable second-hand drivers, \$50 to \$90.

Chicago.

Cattle—Common to prime steers, \$3.25 to \$6.25; cows, \$2.85 to \$4.25; heifers, \$2.25 to \$5; bulls, \$2 to \$4; calves, \$2.50 to \$2.70; stockers and feeders, \$2.40 to \$4.25.
 Hogs—Choice to prime, heavy, \$5.25½ to \$5.32½; medium to good, heavy, \$5.20 to \$5.27½; butchers' weight, \$5.20 to \$5.35; good to choice, heavy, mixed, \$5.20 to \$5.27½; packing, \$4.90 to \$5.25.
 Sheep and Lambs—Sheep, \$4 to \$6; yearlings, \$6 to \$6.85; lambs, \$7 to \$7.90.



**Life, Literature
and Education.**

**The Farmer's Advocate and
Home Journal Literary
Society.**

AN ESTEEMED CORRESPONDENT ASKS US, FOR REASONS GIVEN BELOW, TO CONDUCT A LITERARY SOCIETY THROUGH THE COLUMNS OF "THE FARMER'S ADVOCATE AND HOME JOURNAL." WE HAVE DECIDED TO DO SO, AND WE COUNT ON OUR READERS, WHO WILL CONSTITUTE THE MEMBERSHIP, TO MAKE IT A SUCCESS.

The practical value of a Literary Society in a community requires no proof. It may not always be so named, but under any name, the society or club which brings people together for the purpose of cultivating and exercising their mental faculties, is of great benefit—directly to the people who thus meet together, and indirectly through them to the whole country, and this statement is borne out by the experience of those who have formed and carried on successful societies throughout the Dominion.

But in many sections of Canada, outside the towns and cities, a thoroughly progressive and interest-breeding literary society is an impossibility. Distances are great, roads are often poor, time always limited; and yet, scattered over our farming districts are many who would appreciate to the full the opportunity to exchange original ideas or opinions upon the productions of others, with some kindred spirit. The teacher in the country must keep out of the rut into which he or she would surely get if her mental processes were confined entirely to the work of the schoolroom. The younger men and women who have received educational advantages, and have wisely gone back to the farm, need some mental polishing to keep the rust spots from the mind's bright surface. And the men and women who have been compelled by circumstances to stick closely to the work of the home, would find in such a society a well of interesting and helpful information, and a place in which to present the ideas and thoughts that have been forming in their minds, perhaps for years, with no opportunity of giving them out to others. There is nothing more broadening and uplifting for a man or woman than to mentally rub up against someone else; as "iron sharpeneth iron," so does each receive benefit in seeing things through another's eyes and from another's point of view. Yet, too often, for the reasons given at

the beginning of this article, or for other reasons, this gathering together is not possible, and, as a consequence, many bright minds go hungry for a companionship that is necessary to their mental nourishment.

That many readers of this paper are in this position of comparative isolation, and that they feel it keenly, is evidenced by the letters frequently received at this office, in which the writers lament their inability to form and carry on a society for their mutual mental improvement.

To meet this widespread desire, we have, therefore, considered a plan by which the largest, most far-reaching and most interesting literary society in Canada may be made a reality. Why should not the readers of this journal bind themselves into one great society, with the columns of this paper for the meeting-place of ideas? We see no just cause or impediment why such a club should not prove an abounding success with the material which the members are abundantly able to supply. One thought more by way of introduction: Many people suppose that the art of expressing one's self in spoken or written language is the product of natural-born genius. To some extent it is, but it is chiefly a product of downright hard work. We learn to do by doing.

Now, without wasting time on vexatious preliminaries or a complicated constitution, suppose we christen it the "F. A. and H. J. L. S." All agreed?

Who may become a member? Well, any reader of "The Farmer's Advocate" not under sixteen years of age, who sends in a request to that effect, with the full name and P. O. address, will be enrolled in a book kept for the purpose. The proceedings will be conducted by correspondence. Prizes in the form of books will be awarded the successful competitors in debates or papers.

A correspondent writing us in favor of such a society, proposed a small membership fee to cover expenses, but for the sake of simplicity, and to save time, we do not consider that necessary. We will cheerfully assume that and do our share of the work if the members will do the rest.

The winter is passing. Let us settle down to business.

Two prizes are offered for the best essays, not exceeding 500 words, on the following seasonable topic:

Which do you consider the most important event in the year 1905, in (a) your Province, (b) in Canada, (c) in Great Britain, (d) in the United States, (e) in the world, with reasons for your answers?

All contributions for this competi-

tion must reach this office not later than Jan. 27th, 1906. The prize-winning essays will be published.

The applications to be enrolled as a member and the contributions may come in the same letter. Contributions to be written on one side of the paper only, with full name and P. O. on back. Literary merit will, in all cases, be considered.

[Editor's Note.—Suggestions for the future conduct of the "F. A. & H. J. L. S., with subjects for papers or debates, will be gladly received.]

Training to Think.

"I may lay too much stress on the importance of a young man's working at some manual or mental money-making pursuit while he is at school, but it does seem rather foolish to graduate Bachelors of Arts into the primary grade of the working world."

There is in our own schools and universities far too much of the very type of "cultured scholar" referred to in the above quotation from a recent magazine article. Men graduate from our schools and universities into the A B C of the workaday world. We claim that credit is due to the man that fights his way through school and earns his bread while attending college, but in the majority of cases success is due to the very fact that in the daily effort to earn his way, he has prepared himself for graduation into the school of success in the business or professional world.

The students who graduate from agricultural colleges are usually successful in after life, even if they do not remain with their chosen profession of agriculture. Why? Because, in their work at college they have been trained to think and work for themselves, and the power of thought, of individual initiative is what lifts the genius above the clods. As a nation, we should guard against reading too much and thinking too little, and our schools with a long line of subjects calculated to place a premium on cramming, tend to accentuate this difficulty.

All hail, then, to the man who thinks! The problems of Canadian national life and the problems of the Canadian farmer will be solved by the thinking men; and thoughtful men will come from the schools and colleges of our land where men are trained to think and work, and not from places where dead languages sing a requiem over bright minds in process of decay.

Hygienic Chats.

The requirements of health can be counted on the fingers of one hand. They are: Good air, good food, suitable clothing, cleanliness, and exercise and rest. The first two requirements affect the blood; and as the blood circulates all over the body, including the brain, every part is affected. Fresh air affects the purity of the blood. The freshest air is out of doors, and it is the duty of every one who wishes to be in good health to spend a certain amount of time in the open air. Good food is not necessarily expensive food. Exercise and rest should alternate and balance each other. It is quite possible to take too much exercise, and this side of the question must be guarded against as carefully as the other.

Women, as a rule, do not rest sufficiently. Every woman should try during the day to get a few minutes' rest, even if it interferes with her regular work. It is impossible for her to attend to the health and welfare of her family if her own health suffers from overwork and lack of rest. The best possible thing to do when you feel tired out, and too weak to carry anything through, is to go to bed, and sleep as long as you can. This is the only recuperation of brain-power, the only actual recuperation of brain-force, because during sleep the brain is in a state of rest, in a condition to receive and appropriate particles of nutriment from the blood, which take the place of those consumed by previous labor, since the act of thinking burns up solid particles, as every turn of the wheel or screw of the steamer is the result of consumption by fire of the fuel in the furnace. To gain flesh it is well to eat fresh bread, potatoes, plenty of fruit and vegetables, rice, cornstarch, puddings, as many sweets as you can digest, pastry, milk, cocoa, and plenty of water, cool, but not iced. The foregoing diet with good exercise and plenty of sleep will add flesh and fat. Don't hurry or don't worry about anything should be added.—
What Women Should Know.

Asthma and its Treatment.

Asthma is characterized by great difficulty in breathing, and accompanied by a distressing cough. It is paroxysmal, coming on suddenly. The first move is to get the patient into a sitting position, or out of bed (if it occurs at night) into a chair, well protected from cold. A person suffering continually from asthma will have to sleep on many pillows, to avoid the recumbent position. Various asthma powders are sold by druggists which, being set fire to, give off a smoke that relieves the spasm when inhaled through mouth and nose. The basis of such powders is saltpetre, and a homemade substitute is prepared by dipping pieces of blotting-paper in a strong solution of saltpetre and allowing them to dry; they are then stored away for future use. When the attack comes on put some on a plate and set fire to them, inhaling the smoke. Stramonium leaves, also obtained at a drug store, are very good, too, and are used in the same way. Other remedies are used, in extreme cases, but by order of a physician who understands the case. Asthma is treated according to the needs of the individual patient, and not always in the same way. The measures above mentioned merely relieve at the time, and are not curative.

Asthmatic people should be careful to select a light, nourishing diet. Avoid everything that is found to cause indigestion, especially at night, for this in itself often causes difficulty in breathing, and always puts a strain upon the rest of the system. Cold drafts should also be religiously avoided, though the asthmatic needs fresh air as much or more than anyone else. When the window is open in winter wrap something about the head, or, if there is a strong wind blowing, air the room by opening a window in an adjoining room. Overfatigue is also to be avoided. Asthma can be cured by appropriate treatment from a physician. A. C. OWEN.

"The Lesson of the Loom."

A midnight reverie, vision, or dream? Which name can one give to the mental pictures which, as a phantasmagoria, come and go before the eyes of those who lie wakeful upon their beds whilst others sleep, and who scarce can tell when they have passed at last from the borderland of dreamy wakefulness into the veritable sleep-land which they have in vain been so eagerly trying to reach?

The year was just dying out, and the sounds of the big church bells, giving their glad welcome to the new year on the big world's threshold, mingled with the wind amongst the trees, and perhaps brought with them those other sounds which so blended with those of my vision that they became as one. Clang! clang! jingle! jingle! ding! dong! What are they saying? Voices like a refrain seemed to sing, "Come all ye faithful, come! Come! watch! work! pray!" and then, in happy chorus, followed:

"Every day is a fresh beginning,

Every morn' is the world made new;

You, who are weary of sorrow and sin-

ning, Here is a beautiful hope for you—

A hope for me, and a hope for you.

All the past things are past and over;

The tasks are done, and tears are

shed; Yesterday's errors, let yesterday cover;

Yesterday's wounds, which smarted

and bled, Are healed with the healing which

last night has shed."

Listen, my soul! to the glad refrain,

Take heart with the day, and begin

again."

Were these comforting words really the message of the joybells to me, or were they but the memory of Susan Coolidge's beautiful little poem, which had helped myself and others so often before?—helped us all to the blessed self-appropriation of those other words, which have always healed so many broken and contrite hearts: "Your sins and iniquities will I remember no more?" Clang! clang! went the bells, and a murmur of voices, and what seemed like a whirring of machinery followed in their wake. My dream-world was peopled for me, and I was amongst a throng of busy workers, all eager to take up their allotted task, and to stand at their post at the bidding of the Master. At least, all looked eager, but it was easy to pick out the loiterers from those others who either went readily to their work or who sought to elude it altogether.

WHAT THE PATTERN WAS LIKE.

"Listen, my people, and while ye look, learn once again the good old 'Lesson of the Loom.'" Thus the Master spoke, as, for a space, upon our own especial section of that mighty Loom before us stood out in bold relief the fabric we last year had wrought. Above, with Heaven's own beautiful light illumined, appeared the pattern of what, alas! it should have been, but was not! but which we were again permitted to gaze upon, that we, "forgetting those things that are behind," might still "reach unto those things which are before, pressing towards the mark for the prize of the high calling of God, in Christ Jesus."

WHAT OUR WORK WAS LIKE.

And what of our work? so botched and tangled, so ill-performed and unsymmetrical, so wholly unlike the Pattern set us when, what seemed so short a while ago, another year of grace had been granted to us? Of the many-colored threads then given to us, each had had its given task to do, no one thread to stand out apart or independent of another, but all to be so interwoven and commingled, so influencing and influenced that the dropping of one thread here and one there, and their consequent careless knotting up together as they fell beneath the loom, would involve

the whole in a confusion so inextricable that no hand but that of the Master Himself could restore its beauty. And what had been the result? As we gazed, eyes were dimmed with tears of bitter remorse or of tender sorrow, of hopeful expectancy or of hopeless despondency, whilst here and there appeared a face testifying to a dogged resistance to all bidding and an obstinate determination to work its own will, regardless of consequences. Here would stand one stricken, as it were, with a wilful blindness—one who would not look up, would not see the Pattern, and recognize how the very thread committed to him had lost its place continuously, and would have been dropped out of the piece altogether but that, by the law of the Master, whilst the shuttle flew, no thread could get beyond its reach, and so, for good or evil, must

in hue and stronger in consistency as the fabric neared its completion, but they had, by their constant looking up, so reflected the Pattern which they had striven to imitate, that such threads which had intermingled with theirs partook of their loveliness, and gained courage and strength from their contact and example; and yet, withal, upon their face shone no self-satisfied look, as of those who "thanked God that they were not as other men are," but only the gladness of those servants who wait for their Lord, and who know that all things, even apparent failures, must "work together for good to those who love Him."

THREADS SEVERED FROM EARTH BUT USED IN HEAVEN.

And what of the tiny threads which here and there appeared among

God?), even though we know it not. But we do know that they have left us by the memory of their beautiful lives, by their undying trust in the efficacy of the "Blood shed for the remission of all sin, and able to save to the uttermost,"—such an example of patient endurance and untiring zeal, that we can, at the beginning of our New Year, take heart of courage to begin our work anew, and drinking from the Fountain at which they drank when weary and athirst, we may, indeed, "forgetting those things which are behind, press forward towards the work of the prize of the high calling of God in Christ Jesus."

Was this a vision, or just an old story retold? Nay, rather, is it not "the story without an end?" Is not the Loom, upon which creation's mighty scheme is growing into its wider and wider proportions, ever at work? Can one single thread snarl or twist or drop out altogether without the knowledge of the Master Weaver Himself? Nay, even if it will keep adrift from the shuttle, and will make choice of its own part of the fabric, may it not be again and again gathered back into its place, and never wholly given up to its own devices? And so, for a while—always hopefully, never despairingly, let us ponder upon the simple but endless "Lesson of the Loom."

H. A. B.

"The Enchanted Forest."

The artist who has given us this expression of a poetic imagination is Sydney Strickland Tully, R. C. A., one of our Canadian artists whose pictures have hung in the Paris Salon and in the London Royal Academy. "The Enchanted Forest" is a purely fanciful subject, showing in clear yet delicate form the artist's delicate mental picture. The original painting is a pastel, the color scheme being iridescent, varying from deep purples to pale yellows and greenish blues. The wings of the beautiful being who dwells in the enchanted forest are of the color of the Luna moth.

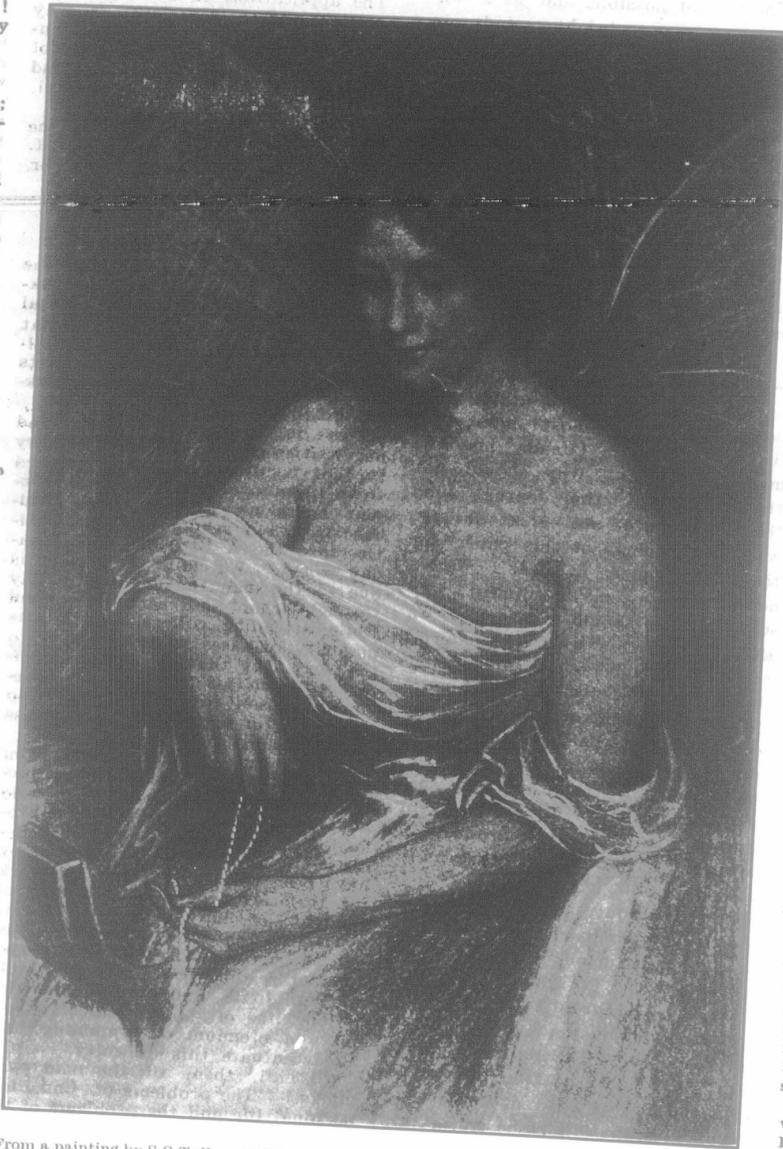
The Food Experiments.

One result of the recent experiments carried on by the Department of Agriculture in order to determine the dietary value of different foods, has been to emphasize the value of fruits and nuts as food materials. The subjects of the experiments were two women, three children, two elderly men, and two students. The only animal food allowed them were cottage cheese and eggs, and these were supplied in limited quantities only. Upon this diet the subjects, although performing hard manual work, retained their full health and strength, some of them even showing a decided improvement.

The peanut and the bean in particular were shown to be great value as foods. Either of them it was proved would supply protein and energy at a lesser cost than either bread or any of the animal foods.—[Youth.

The Charm of the Kitchen.

There is a kind of sentiment about the kitchen in New England—a kind of sentiment not provoked by other rooms. Here the farmer drops in to spend a few minutes when he comes back from the barn or field on an errand. Here, in the great, clean, sweet, comfortable place, the busy housewife lives, sometimes rocking the cradle, sometimes opening and shutting the oven door, sometimes stirring the pot, darning stockings, paring vegetables, or mixing goodies in a yellow bowl. The children sit on the steps, stringing beans, shell-ing peas, or hulling berries; the cat sleeps on the floor near the wood-box, and the visitor feels exiled if he stays in sitting-room or parlor, for here, where the mother is always busy, is the heart of the farmhouse.—[The Century Magazine for May.



From a painting by S.S. Tully. "The Enchanted Forest."

become a part of the whole. Some, as Heaven's own radiance fell upon both the Pattern above and its poor, base imitation below, were shown how their own thread had begun so well, keeping side by side and in sweetest harmony with those lesser ones committed to their guardianship, and then—oh! why had it been so?—allured and tempted, weak and self-indulgent, not only had they let their own promising, bright-hued thread become faded and frayed, but those which should have been sustained and strengthened by it, had fallen with it—a long way from, but, thank God! not wholly out of reach of the Master-Weaver's restoring hand.

OF THOSE WHO HAD DONE WELL

Some seemed to have done the Master's will so promptly, so unremittently and so obediently, that they had not only grown brighter

the fibres of more enduring strength, interwoven for a while, and then snapped in twain by some rougher contact, or by some jarring of the machinery? What, too, of those strong, tested cords, bright as silver and burnished as gold, which had endured to the end, and then, their task done on earth, had, as it were, "fallen on sleep," and their "place knew them no more?" Why, though not with us, they were of us needed for the higher section of the Master's Loom. Those frail and tiny upon earth being tenderly guided upwards to lead with them, hearts linked to theirs by a love which can never die. Those "long-tested" strands of gold and silver—they, too, had only gone upward, still working for the Master whilst waiting for us whose tasks below are still to finish, and who may be watching us, and who may be helping us (for who can limit the tender mercies of our

Answers to Transcontinental Train Conundrum.

In our issue of Dec. 20th, page 1900, we offered prizes for the first two correct answers to the "Transcontinental Train Conundrum," for particulars and conditions of which offer, turn up the above number. During the following fortnight the mails bulked large with answers. One hundred and fifty-three were received the first two days, and by Saturday, January 6th, hundreds of answers were in hand. Of the many received after that date no account has been taken. The interest has greatly exceeded our expectations, all classes of people having sent in replies—from school children to college professors.

Two or three have volunteered other conundrums. One of these, we fear, is too widely-known. The other may be printed later.

There has been some money spent on postage stamps, but this will not be regretted if the increased volume of business results in a lowering of the postal rates or an improved service to country districts.

There are three answers which may be taken as evidence of correct

reasoning—13, 14, and 15. It was stated that there is a daily train service each way, thus implying plainly enough that the service has been going on for some time. Consequently, a man starting out from one end, will meet all the trains that started the week before he did and also all that start during the seven days he is in making the trip. We give below the reason of one who answered 13:

1.	The train that left Vancouver	144	hours	before	he	left	Halifax.
2	"	120	"	"	"	"	"
3	"	96	"	"	"	"	"
4	"	72	"	"	"	"	"
5	"	48	"	"	"	"	"
6	"	24	"	"	"	"	"
7	"	at same time	"	"	"	"	"
8	"	24	hours	after	he	left	Halifax.
9	"	48	"	"	"	"	"
10	"	72	"	"	"	"	"
11	"	96	"	"	"	"	"
12	"	120	"	"	"	"	"
13	"	144	"	"	"	"	"

The train that left Vancouver 168 hours before he left Halifax would be in Halifax at exactly the time he started, and the one to leave 168 hours after he left Halifax would start just as he reached Vancouver, so he could not correctly be said to meet either.

The only exception we take to this answer is that it does not include the train which leaves Vancouver the instant our passenger arrives. The point may be raised whether this train should be counted, since it is not in motion when the Halifax train comes to it, but inasmuch as a meaning of the word "meet" is to come upon by approach from an opposite direction, and seeing that our passenger comes to and passes the head

of his train does not leave till the other stops, and since, by a fair assumption, the two trains will be fully alongside when the Halifax train leaves, he cannot, in our opinion, be said to meet this train. Having regard, therefore, to the precise meaning of the word "meet," we award the prizes to those who said 14.

The first correct answer was received on December 21st, from H. F. Boyce, Qu'Appelle Station, and the second on Dec. 22nd, from Thomas Elliot, Regina. Both will be awarded prizes of equal value.

It is interesting to analyze the returns. Of the 282 persons who sent replies up to December 30th, 3 guessed three as the number of trains, 27 guessed four, 5 guessed five, 34 guessed six, 42 guessed seven, 24 guessed eight, 1 guessed nine, 1 guessed ten, 1 guessed eleven, 5 guessed twelve, 87 gave that unlucky number, thirteen, 29 said fourteen, 22 fifteen, and 1 guessed sixteen.

The things of sense are only dreams—
A world that seems;
Who reaches up to the Ideal
Achieves the Real.

GLENGARRY SCHOOL DAYS.

A STORY OF EARLY DAYS IN GLENGARRY.
By Ralph Connor—Rev. C. W. Gordon.
Chapter V.—Continued.

"Now, James, come here!" said the master, turning to Jimmie. "You see what happens when a boy is insubordinate." Jimmie came trembling. "Hold out your hand!" Out came Jimmie's hand at once. Whack! fell the strap.

"The other!"

"Stop it!" roared Thomas. "I took his thrashing."

"The other!" said the master, ignoring Thomas.

With a curious, savage snarl Thomas sprang at him. The master, however, was on the alert, and swinging round, met him with a straight facer between the eyes, and Thomas went to the floor.

"Aha! my boy! I'll teach you something you have yet to learn."

For answer came another cry, "Come on, boys!" It was Ranald Macdonald, coming over the seats, followed by Don Cameron, Billy Ross and some smaller boys. The master turned to meet them.

"Come along!" he said, backing up to his desk. "But I warn you it's not a strap or a rawhide I shall use."

Ranald paid no attention to his words, but came straight toward him, and when at arm's length, sprang at him with the cry, "Horo, boys!"

But before he could lay hands upon the master, he received a blow straight on the bridge of the nose that staggered him back, stunned and bleeding. By this time Thomas was up again, and rushing in was received in a like manner, and fell back over a bench.

"How do you like it, boys?" smiled the master. "Come right along."

The boys obeyed his invitation, approaching him, but more warily, and awaiting their chance to rush. Suddenly Thomas, with a savage snarl, put his head down and rushed in beneath the master's guard, paid no attention to the heavy blow he received on the head, and locking his arms round the master's middle, buried his head close into his chest.

At once Ranald and Billy Ross threw themselves upon the struggling pair and carried them to the floor, the master underneath. There was a few moments of fierce struggling, and then the master lay still, with the four boys holding him down for dear life.

It was Thomas who assumed command.

"Don't choke him so, Ranald," he said. "And clear out of the way all you girls and little chaps."

"What are you going to do, Thomas?" asked Don, acknowledging Thomas's new-born leadership.

"Tie him up," said Thomas. "Get me a sash."

At once two or three little boys rushed to the hooks and brought one or two of the knitted sashes that hung there, and Thomas proceeded to tie the master's legs.

While he was thus busily engaged a shadow darkened the door, and a voice exclaimed, "What is all this about?" It was the minister, who had been driving past and had come upon the terrified, weeping children rushing home.

"Is that you, Thomas? And you, Don?"

The boys let go their hold and stood up, shamed but defiant.

Immediately the master was on his feet, and with a swift, fierce blow, caught Thomas on the chin. Thomas, taken off his guard, fell with a thud on the floor.

"Stop that, young man!" said the minister, catching his arm. "That's a coward's blow."

"Hands off!" said the master, shaking himself free and squaring up to him.

"Ye would, would ye?" said the minister, gripping him by the neck and shaking him as he might a child.

"Lift ye're hand to me, would ye? I'll break you're back to ye, and that I will. So saying, the minister seized him by the arms and held him absolutely helpless. The master ceased to struggle, and put down his hands.

"Ay, ye'd better, my man," said the minister, giving him a fling backward.

Meantime Don had been holding snow to Thomas's head, and had brought him round.

"Now, then," said the minister to the boys, what does all this mean?"

The boys were all silent, but the master spoke.

"It is a case of rank and impudent insubordination, sir, and I demand the expulsion of those impudent rascals."

"Well, sir," said the minister, "be sure there will be a thorough investigation, and I greatly misjudge the case if there are not faults on both sides. And for one thing, the man who can strike such a cowardly blow as you did a moment ago would not be unlikely to be guilty of injustice and cruelty."

"It is none of your business," said the master, insolently.

"You will find that I shall make it my business," said the minister. "And now, boys, be off to your

homes, and be here Monday morning at nine o'clock, when this matter shall be gone into."

CHAPTER VI.

"One that Ruleth Well His Own House."

The news of the school trouble ran through the section like fire through a brush. The younger generation, when they heard that Thomas Finch had dared the master, raised him at once to the rank of a hero, but the heads of families received the news doubtfully, and wondered what the rising generation was coming to.

The next day Billy Jack heard the story in the Twentieth store, and with some anxiety waited for the news to reach his father's ears, for to tell the truth, Billy Jack's man though he was, held his father in dread.

"How did you come to do it?" he asked Thomas. "Why didn't you let Don begin? It was surely Don's business."

"I don't know. It slipped out," replied Thomas. "I couldn't stand Jimmie's yelling any longer. I didn't know I said anything till I found myself standing up, and after that I didn't seem to care for anything."

"Man! it was fine, though," said Billy Jack. "I didn't think it was in you." And Thomas felt more than repaid for all his cruel beating. It was something to win the approval of Billy Jack in an affair of this kind.

It was at church on the Sabbath day that Donald Finch heard about his son's doings in the school the week before. The minister, in his sermon, thought fit to dwell upon the tendency of the rising generation to revolt against authority in all things, and solemnly laid upon parents the duty and responsibility of seeing to it that they ruled their households well.

It was not just the advice Donald Finch stood specially in need of, but he was highly pleased with the sermon, and was enlarging upon it in the churchyard where the people gathered between the services, when Peter McRae, thinking that old Donald was hardly taking the minister's advice to himself as he ought, and not knowing that the old man was ignorant of all that had happened in the school, answered him somewhat severely.

"It is good to be approving the sermon, but I would rather be seeing you make a practical application of it."

"Indeed, that is true," replied Donald, "and it would not be amiss for more than me to make application of it."

"Indeed, then, if all reports be true," replied Peter, "it would be well for you to begin at home."

"Mr. McRae," said Donald earnestly, "it is myself that knows well enough my shortcomings, but if there is any special reason for your remark, I am not aware of it."

This light treatment of what Peter had seemed a grievous offense against all authority incensed the old dominie beyond all endurance.

"And do you not think that the conduct of your son last week calls for any reproof? And it is you that will stand up and defend it in the face of the minister and his sermon upon it this day?"

Donald gazed at him a few moments as if he had gone mad. At length he replied, slowly, "I do not wish to forget that you are a member of the church, Mr. McRae, and I will not be charging you with telling lies on me and my family."

"Tut, tut, man," broke in Long John Cameron, seeing how the matter stood, "he's just referring to yon little difference Thomas had with the master last week. But it's just nothing. Come away in."

"Thomas?" gasped Donald. "My Thomas?"

"You have not heard, then," said Peter, in surprise, and old Donald only shook his head.

"Then it's time you did," replied Peter, severely, "for such things are a disgrace to the community."

"Nonsense!" said Long John. "Not a bit of it! I think none the less of Thomas for it." But in matters of this kind Long John could hardly be counted an authority, for it was not so very long ago since he had been beguiled into an affair at the Scotch River which while it brought him laurels at the hands of the younger generation, did not add to his reputation with the elders of the church.

It did not help matters much that Murdie Cameron and others of his set proceeded to congratulate old Donald, in their own way, upon his son's achievement, and with all the more fervor that they perceived that it moved the solemn Peter to righteous wrath. From one and another the tale came forth with embellishments, till Donald Finch was reduced to such a state of voiceless rage and humiliation that, when, at the sound of the opening psalm the congregation moved into the church for the Gaelic service, the old man departed for his home, trembling, silent, amazed.

(To be continued.)

One Hundred of the Richest Men on Earth.

Who They Are and How They Got Their Colossal Wealth.

(Chicago American.)

Name.	Country.	How made.	Total fortune.
John D. Rockefeller	U. S.	Oil	\$1,000,000,000
A. Belt	South Africa	Diamonds	500,000,000
J. B. Robinson	South Africa	Gold Mines	400,000,000
Czar	Russia	Inherited	307,000,000
Andrew Carnegie	U. S.	Steel	250,000,000
W. W. Astor	U. S.	Real Estate	200,000,000
Prince Demidoff	Russia	Inherited	200,000,000
Em. Franz Joseph	Austria	Inherited	185,000,000
William K. Vanderbilt	U. S.	Railroads	100,000,000
Wm. Rockefeller	U. S.	Oil	100,000,000
King Leopold	Belgium	Inherited and ac	100,000,000
Shah	Persia	Inherited	100,000,000
Grand Duke Vladimir	Russia	Inherited	100,000,000
Marshall Field	U. S.	Merchant	100,000,000
Russell Sage	U. S.	Finance	80,000,000
John J. Astor	U. S.	Inherited	75,000,000
D. O. Mills	U. S.	Banker	75,000,000
J. Pierpont Morgan	U. S.	Banker	75,000,000
Lord Rothschild	England	Banker	75,000,000
Duke of Westminster	England	Inherited	75,000,000
A. von Roelsch	Germany	Banker	70,000,000
Sultan	Turkey	Inherited	65,000,000
J. J. Hill	U. S.	Railroads	60,000,000
Archduke Frederick	Austria	Inherited	60,000,000
Lord Iveagh	England	Inherited	55,000,000
Senora Isidore Cousinho	Chili	Inherited	55,000,000
M. Heine	France	Banker	55,000,000
George Gould	U. S.	Railroads	55,000,000
H. M. Rogers	U. S.	Oil	50,000,000
Sir Gervin Clark	Australia	Sheep	50,000,000
Prince Lichtenstein	Austria	Inherited	50,000,000
H. L. Flagler	U. S.	Oil	48,000,000
A. Brehl	Austria	Banker	48,000,000
Mrs. Hetty Green	U. S.	Finance	45,000,000
Henry Phipps	U. S.	Steel	45,000,000
Jas. H. Smith	U. S.	Inherited	40,000,000
Duke of Devonshire	England	Inherited	40,000,000
Lord Strathcona	Canada	Finance	40,000,000
H. C. Frick	U. S.	Steel	40,000,000
Mrs. Walker	U. S.	Inherited	40,000,000
Don Luis Wisperrazas	Mexico	Mines	40,000,000
Earl of Grosvenor	England	Inherited	40,000,000
J. D. Archibald	U. S.	Oil	40,000,000
Jas. B. Haggin	U. S.	Gold Mines	40,000,000
Grand Duke Michael	Russia	Inherited	40,000,000
Earl of Derby	England	Inherited	40,000,000
Miss Bertha Krupp	Germany	Inherited	40,000,000
John Smith	Mexico	Mining	40,000,000
Prince Henry of Pless	Germany	Inherited	36,000,000
Count Henckel	Germany	Inherited	36,000,000
A. G. Vanderbilt	U. S.	Inherited	36,000,000
John H. Flagler	U. S.	Finance	36,000,000
Baron E. Rothschild	Paris	Banker	35,000,000
O. Spreckles	U. S.	Sugar	32,000,000
Bishop Kohn	Austria	Inherited	32,000,000
Fritz Swartzenberger	Austria	Inherited	32,000,000
W. A. Clark	U. S.	Mining	32,000,000
W. F. Havemeyer	U. S.	Sugar	32,000,000
Clarence Mackay	U. S.	Inherited	32,000,000
J. Ogden Armour	U. S.	Beef	32,000,000
P. A. B. Widener	U. S.	Finance	32,000,000
Baron A. Rothschild	England	Banker	30,000,000
Duke d'Arenberg	Belgium	Inherited	28,000,000
Angeli Quintier	Italy	Inherited	25,000,000
W. H. Tilford	U. S.	Grocer	25,000,000
M. Nobl	Russia	Oil	25,000,000
Baron Leitenberger	Austria	Inherited	25,000,000
Miss Helen Gould	U. S.	Inherited	25,000,000
Prince Jussopoff	Russia	Inherited	25,000,000
Lord Armstrong	England	Manufacturing	25,000,000
Lord Mountstephen	Canada	Real Estate	25,000,000
Duke of Portland	England	Inherited	25,000,000
Guzman Blanco	France	Finance	25,000,000
Thomas F. Ryan	U. S.	Finance	25,000,000
Lord Brassey	England	Inherited	25,000,000
Charles Yerkes	U. S.	Street Railway	25,000,000
Ogden Mills	U. S.	Banker	25,000,000
Sir Thomas Lipton	England	Tea	25,000,000
Frederick Pabst	U. S.	Brewer	25,000,000
John Wanamaker	U. S.	Merchant	25,000,000
John W. Gates	U. S.	Finance	25,000,000
Sir Francis Cook	England	Inherited	25,000,000
Queen Wilhelmina	Holland	Inherited	25,000,000
Ex-Empress Eugenie	France	Inherited	25,000,000
Langrave of Hesse	Germany	Inherited	25,000,000
Prince Anton Ratzill	Germany	Inherited	25,000,000
Duke of Northumberland	England	Inherited	25,000,000
William Sloane	U. S.	Merchant	24,000,000
James Stillman	U. S.	Banker	20,000,000
J. H. Schiff	U. S.	Banker	20,000,000
E. H. Harriman	U. S.	Railroad	20,000,000
James P. Duke	U. S.	Tobacco	20,000,000
A. N. Brady	U. S.	Finance	20,000,000
John G. Moore	U. S.	Finance	20,000,000
Geo. W. Vanderbilt	U. S.	Inherited	20,000,000
F. W. Vanderbilt	U. S.	Inherited	20,000,000
David H. Moffatt	U. S.	Banker	20,000,000
Jos. E. Brown	U. S.	Finance	15,000,000
Geo. F. Baker	U. S.	Banker	15,000,000
Henry B. Payne	U. S.	Finance	10,000,000
Total wealth of the world's one hundred richest men			\$6,740,000,000



This is rather a large order, Amateur, but I will do my best to help you in your gardening, and hope you may be very successful indeed. In answer to your first question as to flowers for a shady part of your garden, I would suggest ferns for the very shady portions. Many of those you can obtain in the woods will grow quite high and be very ornamental, especially the ostrich-plume fern, which is so common. The anemone is a perennial which grows well in the shade and attains a height usually of twelve to eighteen inches. The old-fashioned hollyhock, the perennial phlox, the garden columbine, the golden glow or double Rudbeckia, the forget-me-not, and lily of the valley are all flowers that you might try, though the last two do not grow very high.

For summer blooming, the hybrid tea roses should prove satisfactory. If young plants are purchased in the spring they may be bedded out at once, though, if sent by mail, it will be better to pot off in three-inch pots and set in a cool, rather shady place for a few days, bringing gradually into the sunshine, until they have become accustomed to it. If the plants are of the usual mail-order size, set them one foot apart each way and make the soil very firm and hard about their roots. Cultivate frequently, or mulch with lawn clippings, working them in as they decay. Do not give liquid manure until the plants are growing vigorously, and then not more than once or twice a week. The tea roses are fairly free from pests, but show a tendency to mildew, which may be avoided by giving them an airy, sunny situation, and by watering early enough that the foliage may dry before the chill of night. If, however, mildew does appear, dust flowers of sulphur over the leaves. Yes, they should receive the same protection in the fall, with, in addition, a foot of mellow earth brought well up around the plants, and rounded so as to shed water, underneath the leaves and branches, and to ensure perfect safety, a canvas or boards over all to shed the rain.

For a rose that will bloom well indoors the following varieties are recommended: Agrippina and Queen's Scarlet, both crimson; Hermosa, bright rose-color; Etoile de Lyon, a beautiful creamy yellow; Clothilde Soupert, a soft pink, very fragrant and a fine bloomer. Get year-old plants in spring; put them in five or six-inch pots. Have a clay-loam soil which will pack well about the roots. Water moderately. As soon as new growth begins cut away most of the top the plant had when received. By and bye cut back this new growth also, and on no account allow the plant to bloom. In the fall you will have a plant with a number of stubs instead of branches, but each stub well supplied with healthy-looking buds. If necessary, re-pot the plant in a seven-inch pot in October. Keep the plant when you bring it into the house in the fall in a moderate temperature not much higher than 65 degrees; let them have all the fresh air and sunshine possible. They should begin to bloom in January. Cut away each flower as it fades, and, when all the flowers on one branch have developed, cut the bud. The red spider and the aphid will be its enemies, the former being got rid of by dipping the plants daily in water for a moment or two, and the latter by dipping year plants in a bath of tobacco-water.

Helpful books for the amateur gardener are, "The Flower Gar-

den," by Ida Bennet (price \$2); and "Flowers," a little book by Eben Rexford (price 50 cents), both of which may be obtained through the "Farmer's Advocate" office.

I do not know why "tea" roses are so called, unless it is on account of their peculiar fragrance. Can some wise one who frequents this corner tell Amateur and me?

FLORA FERNLEAF.

New Definitions.

Appendicitis—A modern pain, costing about \$200 more than the old-fashioned stomach-ache.

Athlete—A dignified bunch of muscles, unable to split the wood or sift the ashes.

Automobile—From English "ought to," and Latin "Movo," to move. A vehicle which ought to move, but frequently can't.

Biliousness—A liver complaint often mistaken for piety.

Caddie—A small boy employed at a liberal stipend to lose balls for others, and find them for himself.

Cauliflower—A cabbage with a college education.

Chauffeur—A man who is smart enough to operate an automobile, but clever enough not to own one.

Cinder—One of the first things to catch your eye when travelling.

Dock—A place for laying-up.

Doctor—One who lays you up.

Earth—A solid substance much desired by the seaisick.

Economy—Denying ourselves a necessity to-day in order to buy a luxury to-morrow.

Explosion—A good chance to commence at the bottom to work up.

Exposition—An overgrown department store, usually opened a year or two behind time.

Fishing—An heroic treatment tried by some laymen to avoid falling asleep in church on Sunday.

Football—A clever subterfuge for carrying on prize fights under the guise of a respectable name.

Hotel—A place where a guest often gives up good dollars for poor quarters.

Hug—A roundabout way of expressing affection.

Counter-irritant—A woman shopping.

Island—A place where the bottom of the sea sticks up through the water.

Jury—Twelve men chosen to decide who has the best lawyer.

Kissing—Nothing divided by two; meaning persecution for the infant, ecstasy for the youth, fidelity for the middle-aged and homage for the old.

Lie—A very poor substitute for the truth, but the only one discovered up to date.

Mine—A hole in the ground owned by a help.

Vulgarity—The conduct of others.—Har.

Philosophy—Something that enables the rich to say there is no disgrace in being poor.

Tips—Wages we pay other people's hired

[Canadian Pharmaceutical Journal.]

GRAPE CATSUP.

To make grape catsup, remove sour grapes from the stems and put them into a kettle with only enough water to keep them from burning. Cook the grapes until they are soft, stirring constantly with a wooden spoon. Then rub them through a sieve. Measure the pulp, and for every three pints of it allow two cupfuls of brown sugar, a cupful of vinegar and a large teaspoonful each of ground allspice, mace, cinnamon, pepper and salt and half a teaspoonful of cloves. Boil steadily until the mixture is half reduced and is thick. As soon as it is cold, bottle, cork and seal it.



Work in a Great City.

And the Lord said unto him, Arise, and go into the city, and it shall be told thee what thou must do.—Acts ix: 6.

"I said, 'Let me walk in the fields.' He said, 'No, walk in the town.' I said, 'There are no flowers there.' He said, 'No flowers, but a crown.' I said, 'But the skies are black; There is nothing but noise and din.' And He wept as He sent me back: 'There is more,' He said, 'There is sin.' I said, 'But the air is thick, And fogs are veiling the sun.' He answered, 'Yet souls are sick, And souls in the dark, undone.' I said, 'I shall miss the light; And friends will miss me, they say.' He answered, 'Choose to-night If I am to miss you, or they.' I pleaded for time to be given. He said, 'Is it hard to decide? It will not be hard in heaven To have followed the steps of your Guide.' Then into His hand went mine; And into my heart came He; And I walk in a light divine The path I had feared to see."

A great change has come into my life. For many years God has plainly told me to stay in the country; but, when my work there was done, the message: "Arise, and go into the city," was spoken as distinctly to me as to Saul of Tarsus. God's calls are as clear to-day as they ever were; though, like Jonah, we may try to escape the responsibility laid upon us, and may rise up to flee from the presence of the LORD, instead of going where He calls. In my case, the call to "go into the city" was plain and unmistakable. I was drawn on by the constraining desire to reach out and touch my fellows where the need was greatest, and I fancied myself free to choose the field of service, but soon found out my mistake. As Saul was directed to the city of Damascus, so I was also guided by a call which could not be disregarded, to the city in which I now find myself. To me also came the message to "go into the city"—this particular city—and it should "be told me" what I must do. And, now, my empty hands are full again, and the days are busy and glad, for they are spent in getting into touch with many who are leading darkened or suffering lives. The church with which I am connected believes in copying the example of the Good Samaritan and helping the neighbors around, whatever their race or creed. Part of the first week was spent in the pleasant duty of inviting the people who live in a back street near the church to a Neighborhood Party in the Parish House. These parties are given every month. One month the people on one or two streets are invited, and the next month the people who live on other streets. It was delightful to carry the printed cards of invitation into the dreary tenement-houses, and to watch the sad faces brighten at the thought of an evening's fun and entertainment. Three or four families—or more—live in each house; and very forlorn and desolate most of these houses are, though occasionally one finds a room that is tidy and clean. The mothers are many of them Russian Jews, who speak very little English, but there is nearly always a bright little Abraham, Isaac, Israel or Rebecca to talk English to the visitor and chatter away in unintelligible "Yiddish" to the mother. In one room a sick mother was in bed with a baby of three months old, another child was also in bed, and the man of the family—who was nurse, cook and everything else—was just able to drag himself about after an attack of pneumonia. More than 200 of our "neighbors" from the tenements turned up at the party, and they seemed to enjoy everything provided for their pleasure. It was delightful to pass round the heaped-up plates of cake and to catch the pleased smiles of recognition from one

and another of my friends from the Rochester St. tenements. And how thoroughly they enjoyed the coffee from the big cans in the corner of the room! It was very good coffee too, and the lump sugar handed round with it was of the very best quality. And you should have seen how the young people enjoyed the jolly dance that followed.

There is no direct Christian teaching attempted with these Jews, as that would only antagonize them; but they are being taught by action that speaks far louder than words, that the keynote of the Christian religion is Love. Their children are gathered into the kindergaten every day, the older ones are taught carpentering, cobbling, sewing, cooking, laundry work, etc., or organized into Clubs for playing games after school hours and in the evenings—and so kept off the street. There is a free dispensary for the sick free legal advice for the poor and friendliness everywhere. Whether these Jews ever accept Christianity or not, at least the work is done in Christ's Name, and He will surely accept the neighborly kindness in the loving spirit in which it is offered.

One of the many houses belonging to this mission is called "Welcome House." The name is a very good one, for its doors are ready to open and welcome any girl who needs a helping hand. The other day a poor girl came, asking for admittance. She had only five cents to stand between her and starvation or crime, and not a friend in this great city. Think of it, you who have sweet young daughters growing up like pure lilies in sheltered homes. Think if they were wandering forlorn, homeless, hungry and terrified along the wintry streets, what a blessed thing it would be to find a house with "Welcome" written on the door and on the kind faces within the bright, homelike rooms. Perhaps this poor wanderer had seen one of the cards which are scattered freely about the city, telling any girl who is in need of a friend to come to "Welcome House."

Another young girl came from Europe several years ago—a mere child of sixteen, entirely ignorant of English. She trusted where no trust was due, and one winter night, forlorn, frightened and ill, she crept about the streets, begging to be taken in somewhere and cared-for. Turned away from house after house, she crawled into one that was empty, and next morning was found so badly frozen that parts of her feet had to be amputated. I wish you could see her happy face now that she has found a home and good friends in "Welcome House."

The other day I called on one of the young women who had given way to drink, had been separated from her husband, got into bad company, and was almost in despair. After some time spent in Welcome House, she went back to her home—and a nice, bright home it is now. When I called, I found the room decorated in honor of her husband's birthday. She said she had done it because he was "so good" to her, and she had no present to give him. A very handsome Bible, given her at Welcome House, occupied the place of honor on the table, and she could not say enough about the kindness she had received there. It is a real pleasure to talk with the girls who are now being trained there. Their faces are so bright, and they respond so readily to any friendliness. I had tea with them last Friday, and ladled out hot "chowder" for a long tableful.

Then there is the "neighborhood work" among the Russian Jews, and other people who live in the tenement-houses around us (for this is a mission-church in a very poor district). One day last week I said to one of the little Jews in my "Good Time" Club, "Of course, you don't keep Christmas, Abraham."

"Why, what do you take us for?" was the indignant reply. "Of course we keep Christmas!"

How strange it is that people who reject Christ should keep His Birthday! When I said, "How do you keep it, if you don't believe in Christ?" there was

Advertisement for Clark's Corned Beef. Features an image of a hand holding a tin of corned beef. Text includes: 'No Bone No Waste', 'CLARK'S Corned Beef', 'Open the tin and serve. No cooking. No bother. Excellent. Yet the cost per pound is but little more than what your butcher charges for uncooked beef with bones and waste. TRY IT.', and 'It is Canadian Beef, packed in Canada.'

Advertisement for the New Scale Williams Piano. Features an illustration of a woman playing a piano. Text includes: 'The Mechanical Perfection of the New Scale Williams Piano', 'Every Williams Piano is mechanically faultless. Every portion of material, every detail of workmanship, is without a flaw.', and 'The Williams Piano Co., Oshawa, Ont.'

Advertisement for The T. Eaton Co. Limited. Features the text: 'OUR JANUARY and FEBRUARY SALE', 'IF YOU have not already received a copy of our January and February Sale Catalogue, write to us at once, and it will be sent you without delay.', and 'THE T. EATON CO. LIMITED WINNIPEG, CANADA.'

EE  EE

Steedman's

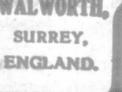
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Prevent FITS, CONVULSIONS, etc.
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TEETHING.

Please observe the EE in STEEDMAN.

WALWORTH, SURREY, ENGLAND.

EE  EE

a chorus of, "We get presents!" from all the boys. I am afraid a good many Christians think of Christmas as only a time to "get presents." The Christmas spirit of goodwill to men is very strong in this parish. Last Tuesday, at the regular meeting of "workers," one talked about "my Christmas-tree on the 26th," another said something about "my Christmas-tree on the 27th," another said, "you are all invited to my Christmas-tree on the 28th," and another echoed this general invitation to all present to "my Christmas-tree on the 29th." I was quite bewildered, and said, "How many trees do you have?" One of the workers answered, with a beaming smile, "Oh, we generally have the same tree, but we trim it up about a dozen times."

Besides the tree for the 400 children of the Sunday-school, there is one for the 175 women who belong to the Mothers' Meeting, one for Welcome House, another for the Girls' Friendly, another for the kindergaten, and I don't know how many more. Then there is to be a Christmas Party for all the children of the Neighborhood who belong to the various Clubs and classes.

I had to stop there and go to an empty building near here in which there are several empty rooms that have been put at the disposal of the church for club meetings. There were a lot of boys collected for basket-ball, and they were making such a noise that one could hardly think. After staying an hour with them, I drifted into the Parish House, where a jolly crowd of children were dancing

round a Christmas-tree, while they waited for the big slabs of ice cream, and the plates of cake which looked very tempting. The clergyman was amusing some of the tiny tots with a Japanese doll, which he said he had got in his Christmas stocking. I did not stay long there, but came back to finish my little chat with you.

However, I must not talk any longer, or you will feel bored. This is not intended for a sermon—aren't you glad? It is only a letter from one who is starting life anew in a crowded city, and who wants all her old friends to know of the new work in which she is deeply interested. New friends cannot make me forget the old, and you, I know, will like to know something of the work that is being done for Christ, where the need is very great.

But, if you are called to live in the country, never think that your life is narrow or uninteresting. Our Master spent nearly all His earthly life in the country, and yet that Life has been a blessing to all the ends of the earth. The greatest lives are:

"Not always, nor alone the lives that search
How they may snatch a glory out of heaven
Or add a height to Babel; oftener they
That in the still fulfillment of each day's
Pacific order hold great deeds in leash.
That in the sober sheath of tranquil
tasks
Hide the attempered blade of high em-
prise."

HOPE.



A Strange Doll.

A STORY FOR CHILDREN.

By Lord Brabourne.

Little Mary Preston was very much delighted when her Aunt Jane presented her with a new doll upon the morning of her eighth birthday. It was a wax doll, with a straight nose, blue eyes, and cheeks beautifully tinged with a delicate red color which looked for all the world as if their owner was blushing. It was not only her face, though, which made the doll so pretty to look at. She wore a white dress with a blue sash, and little blue rosettes to match upon her shoulders, and she had the dearest little shoes of the same color, which really seemed too pretty to walk upon.

It was no wonder, therefore, that Mary was delighted with her present, and after thanking and kissing her kind aunt, told her that it was the most lovely doll she had ever seen in all her life, and at once christened it Alexandra. She undressed her dear doll very carefully, and put her to bed in a spare cot which happened to be in her room and had formerly been occupied by one of her little brothers. This seemed a very proper place for Alexandra, and, therefore, her mistress placed her in it, made everything as comfortable as she possibly could, and then went to her own bed.

She never knew exactly how long she slept, but she was awakened by a queer, little noise, and then saw her new doll sitting upright in her cot, yawning and stretching herself as if she, too, had just awakened from sleep. Mary stared at her in speechless amazement, which was increased when the doll turned round and looked at her, and then in the most barefaced manner actually winked at her, first with one eye and then with the other; and then, after another yawn, proceeded to speak.

"Now, Polly," she said, in a tone and manner abominably flippant, especially when addressed by a doll to its mistress—"Now, Polly, don't be lazy; it's time to get up!"

Now Mary knew perfectly well by the light that it was not time to get up. She was never called until a quarter past seven, and by the dimness of the rays of sunlight which were beginning to creep in through the shutter, she knew that it could not be much past five at the latest. What surprised her most was to be called "Polly," which nobody ever

called her but her brothers, Frank and Ernest, and was a totally unexpected familiarity on the part of a doll.

At all events, instead of refusing to obey the command she had received, she made no reply at all, but, putting first one foot and then the other out of bed, stood upon the floor, and began to get ready to wash and dress herself as usual.

"Give me my bath," said an imperious voice from the cot, and as Mary turned round she saw her doll in the act of following her example, and getting up from bed. After a moment's hesitation, the little girl proceeded to sponge the doll carefully with her own best sponge, and then dried her with a cambric pocket handkerchief.

"Now," said Alexandra, "get me my things and dress me properly."

Mary obeyed without a word, and when she had done all that was required of her, could hardly go on with her own dressing for the interest she took on observing how cleverly her new companion finished her toilette. She was, of course, dressed much the first, and then, bidding Mary take her hand, in a tone which showed that she was used to command, and to be obeyed, next told her to open the door, and proceeded to walk downstairs with the air of a mistress. When they had got down into the little breakfast-room, the doll dropped Mary's hand, and, marching up to the glass doors, told her to open them, and so they both passed out. The doll deliberately turned head-over-heels in the middle of the path.

You may fancy Mary's feelings at this moment! Although accustomed to the society of her brothers, and therefore well acquainted with the habits and games of boys, she had never been able to see them turn head-over-heels without wondering how they could do so, and thinking that it must be a very uncomfutable thing to do. It was at any rate a most unladylike proceeding, and one which no girl with any sense of what was right and proper would ever attempt, and to see a respectable doll betake herself to such a trick, was something too terrible to contemplate. It seemed as if the world must be coming to an end, or else that Alexandra had entirely taken leave of her senses. She, knowing or caring little as to what anybody might think of her, was not content with performing the feat once for all. Twice, thrice, four times, she turned head-over-heels, and stood there before Mary with her dress in a much



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going. Rock and read and wash the clothes. Isn't that a luxury after the hand-chapping, back-breaking rub, rub, rub over the wash board.

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"Mamma, I don't want to wear these red stockings. Nurse said this color won't run and I don't want to walk all ways."

"Oh, nurse didn't say it properly. Let me show you. See, on the toes it says, 'fast colors.'"

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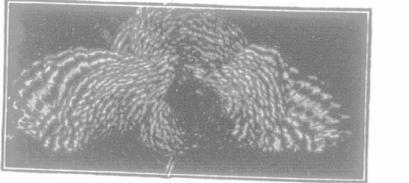
Condensed advertisements will be inserted under this heading at one cent per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns.

FOR SALE—Large variety of canary birds, homer pigeons, pouters, tumblers, Toulouse geese, Bronze turkeys, Buff and Brown Leghorn cockerels. A. Guilbert, Letellier, Man.

I HAVE for sale Barred Rock cockerels and pullets from prizewinning stock—either from pullet or cockerel matings. Geo. Wood, Holland, Man.

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FOR SALE or Exchange for city property or lumber business in Western town: a good farm, three quarter sections, within one mile of market, seven elevators, in the municipality of Indian Head. Price thirteen thousand. Five thousand down. Further particulars on application, M.M.C., Sintaluta P.O., Sask.

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FOR SALE—Good, clean, improved American oats, in car lots or smaller quantities. Write for samples and prices. Harry Stilborn, Pleasant Forks, Sask.

FOR SALE—Five Improved Yorkshire sows—five months of age. These are the long bacon type, and I will clear them out at \$20.00 each. Geo. Hamilton, Neepawa, Man.

HIGH-CLASS Scotch Collies for sale. Choice young puppies and brood bitches; \$15 up. King Edward Collie Kennels, 7 Concord Ave., Toronto, Ont.

IMPROVED FARMS—We have some of the greatest bargains in Northwestern Canada. Write for price list. If you have a farm for sale and want to sell it quick for cash, write us, giving description and price and we will tell you at once what we can do. Address: American Land and Title Co., 505 Manhattan Building, St. Paul, Minn.

LUMBER and dimensions, fence posts and cordwood for sale in carload lots. For particulars, write Thos. Spence, Rainy River, Ont., or J. R. Post, Greenridge, Man.

MILK WANTED—The Dairy Department of the Manitoba Agricultural College is prepared to contract with farmers on liberal terms for the purchase of milk and cream, beginning Feb. 1st, 1906. For particulars address W. J. Carson, Professor of Dairying, Agricultural College, Winnipeg, Man.

POST CARD will bring catalogue of household necessities and novelties. Agents wanted. Box 72, Winnipeg, Man.

SITUATION by expert poultryman, or ranch cook, experienced with incubators, brooders, crate fattening, winner 12 prizes dressed poultry, dairy, Smithfield shows, England. Knight, c/o Farmer's Advocate, Winnipeg.

STRAYED from Indian Head on Nov. 21st, 1905: one sorrel gelding, white stripe on face, white stockings hind legs, about 1150 lbs., branded lazy S over bar on left hip and M in circle on shoulder; one tall brown mare (in foal), right ear slit, about 1200 lbs., branded on left shoulder; one blocky bay colt, 3 or 4 years old, about 1100 lbs., branded on right shoulder and V N on left hip. Last seen going south-west. \$30.00 reward. S. R. Edwards, Indian Head, Sask.

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\$12.80 For 200 Egg INCUBATOR Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day. GEO. H. STAHL, Quincy, Ill.

Portrait of the Late Bishop Baldwin 11x15, on heavy plate paper, suitable for framing, together with memoir, the funeral service and sermon on the occasion; price for the two, \$50.; 5 sets, one address, \$1.00; cash with order.

The London Printing and Lithographing Co. LONDON ONTARIO

TYPEWRITING Book-keeping, Penmanship, Shorthand, Telegraphy, and all business subjects thoroughly taught. Write for particulars. Catalogues free. Address W. I. N. I. PEG BUSINESS COLLEGE, cor. Portage Ave. and Fort St., WINNIPEG.

worse state than before, but looking in her face with defiant eyes, as if perfectly well aware that she was outraging every rule of propriety, and rather gloried in the fact.

"There!" she cried, in an exulting tone. "Do that if you can, Miss Prim: what are you staring at? You are not half up to fun!"

"Fun!" exclaimed Mary, in horrified accents, "do you call that fun? Well—you are the oddest doll that I ever set eyes upon!"

"Of course I call it fun," replied the other (taking no notice of Mary's last remark), "and so would you if you had any sense in your head, which unhappily you have not. It is fun! Roaring, rampageous fun! Why do you stand there staring like an owl? Come and feed the pigs." She spoke, and without more ado brushed past Mary in the path, and ran towards the pigsties.

Then to Mary's horror and disgust, Alexandra, instead of feeding the creatures (which, indeed, she could hardly have done, since she had not gathered anything for them in the garden), began to pelt them with small stones, which she picked up from a heap of gravel which had been shot down in a corner of the yard hard by to be at hand for repairing the garden paths.

"Don't do that!" cried Mary. "You

really must not, and what a shame it is to hurt the poor things!"

"It is not a shame at all," angrily replied Alexandra; "but it is always 'Don't do this,' and 'You mayn't do that' with you. I never saw such a spoil-sport as you in all my life! I've a great mind to put you in the hog-wash tub!"

Mary had no choice now but to engage in a personal combat with her new possession, which would probably determine once for all which of them really belonged to the other. She planted her feet firmly on the ground, and when Alexandra seized her by the waist, she, in her turn, threw her arms round the doll, and firmly resisted all the efforts of the latter to remove her from where she stood. They tugged and strained at each other for full half a minute, and neither of them seemed to have any advantage.

The doll's strength was great, and at last she absolutely felt herself yielding. Yes, she could resist no longer. She was being dragged—inch by inch, it is true, and very slowly, but still she was certainly being dragged towards the hateful corner, and shame, rage and despair were already rising within her breast, when suddenly a strong hand was laid upon her shoulder—the doll's arms were loosed from around her all in a moment, and a loud, cheery voice exclaimed in well-known tones: "It's a quarter past seven, Miss Mary, and time to get up!"

And Mary—awoke!

Never had the summons to rise been so welcome before. Mary sat up in bed in a dazed and confused state.

"Why, what can ail the child?" asked Nurse Saunders, for it was she who had interrupted the doubtful conflict which I have described. "She's all in a fuster, I declare! Wake up, Miss Mary, 'tis a lovely morning, and see, here is your fine new doll all ready to say 'good morning' to you."

And so she was. There, in the little cot, just as she had put her to sleep the night before, lay that hypocrite Alexandra, as meek and quiet as if there was no vice about her, and as if she had never threatened to throw her little mistress into the hog-wash tub. That was what the yardman had threatened Frank, Mary recollected, when he had thrown his ball at the peacock on the courtyard wall the other day, but it was a thing of which a doll could never have thought for a moment, and there were those who always declared that Alexandra never had thought of such a thing, and the matter was only a dream from beginning to end. I cannot settle this matter. Of course it may have been so. It is not a common thing, they tell me, for dolls to set themselves up to be of more account than their mistresses, but the such strange things happen every day now that I do not think that objection counts for much.

INGLE NOOK CHATS

Phœba's Opinion.

Dear Dame Durden.—You so kindly give us a chance to express our opinions that I shall avail myself of the opportunity. First, I should like to say that I derive much pleasure and benefit from the Ingle Nook. In a recent issue you asked: "Should a wife's confidence to her husband include her friends' secrets?" I do not think so. They have as much right to keep secrets as their husbands have; but the question seems to be, "Are they capable of doing it?" Men do not seem to think so. I think I should love Ralph Conner as a writer, if for no other reason than the tender manner with which he writes about women. The idea of women's inferiority seems to be an impression that dies hard amongst men. I think that it remains for our sex to dispel that illusion. I am sending my recipe for headcheese for "Starlight," as it contains no other meat but pig's head.

RECIPE FOR HEADCHEESE.

Remove the cheek or jaw; have the head cut in small pieces for convenience in cleansing. Put on to cook in boiling water, and boil slowly until the meat will come from bones easily. Remove the meat; strain liquid through sieve, and return to kettle to be set aside until cold, and fat removed. Separate bones from meat (I remove the fat meat, it can be fried out for lard); break meat up in small pieces (do not mince). Put meat in liquid, and season to taste with salt, pepper, and summer savory. Let boil, and pour out in suitable dishes, and the result will be a nice, mottled headcheese. Hoping I have made this plain.

PHŒBA.

Glad to have your opinion on that question, though you and I will have to wait for some other chatterer to answer the other query: "Are they capable of doing it?" What do you think of the view of that wit who at a banquet gave this toast: "Woman—once our superior, now our equal!" He seemed to think

that a woman was lowering herself when she claimed equal rights with men. Tennyson, whose reverence and honor for womanhood excels perhaps that of any other of our English writers, expresses his thought of woman's position very beautifully in the "Princess."

"Let her make herself her own To give or keep, to live and learn and be All that not harms distinctive womanhood. For woman is not undeveloped man, But diverse: could we make her as the man Sweet Love were slain: his dearest bond is this— Not like to like, but like in difference. Yet in the long years liker must they grow; The man be more of woman, she of man; He gain in sweetness and in moral height, Nor lose the wretching thews that overthrow the world; She mental breadth, nor fail in childward care, Not lose the child-like in the larger mind. Till at the last she set herself to man Like perfect music unto noble words." D. D.

Recipes.

Nut Fruit Cake.—1 cup butter, creamed with two cups sugar; add 4 eggs, whose whites and yolks have been beaten separately; one grated nutmeg sifted with 1 pound of good flour, stirred in gradually; two heaping teaspoons baking powder; a large cup of stoned and chopped raisins, and the same amount of finely-chopped nuts, dredged with a little of the flour, are stirred in last. Bake in a cool bread oven. Ice, and decorate with burnt almonds.

Jumbles.—1 quart of the best flour; 1 pint granulated sugar; 1 cup butter; 4 eggs; 4 tablespoons of canned berry or cherry juice; 1 teaspoon cinnamon; 2 teaspoons baking powder. Make into a soft dough, roll out thin, cut in small shapes, wet the tops with white of egg, dust with sugar, and bake in a fairly-hot oven. Put away in a tin canister.

To reduce the waist, exercise the waist muscles; place the hands on the hips, keeping the hips and lower limbs perfectly still and firm, twist the trunk vigorously from right to left. This is one of the best of exercises for reducing the waist line.

An Everyday Creed.

I believe in the efficacy of soap. I believe that work is the best panacea for most ills, especially those of the mind, and that fresh air, exercise and sleep are the best medicines for the body. I believe in fun and laughter, both as a tonic for the blues and as an outlet for high spirits. I believe in the beauty of flowers, sunsets and the mountains, in the music of birds and brooks. I believe that there is a bright side to everything, and that we would be more aware of the good about us were our hearts more responsive to its touch. I believe in human kindness. I believe that an ounce of frankness and explanation is worth a pound of repentance and forgiveness, and will often prevent heartache and bitter misunderstanding. I believe in the simple life of the home, free from formality and social conventionalities. I believe in the hearty handshake, in hospitality, comradeship, love.—[Boston Brown Book.

"Sing a Song of Sixpence."

The interpretation of the old nursery song entitled, "Sing a Song of Sixpence" is credited to a clergyman of Liverpool, England, named John Howard, who says: "The four-and-twenty blackbirds represent the four-and-twenty hours. The bottom of the pie is the world, while the top crust is the sky which overreaches it. The opening of the pie is the day dawn, when the birds begin to sing, and surely such a sight is fitting for a king. The king, who is represented as sitting in his parlor counting his money, is the sun, while the gold pieces which slip through his fingers as he counts them are the golden sunshine. The queen is the moon, and the honey with which she regales herself is the moonlight. The industrious maid who is in the garden at work before the sun has arisen is the day dawn, and the clothes she hangs out are the clouds, while the bird who so tragically ends the song by nipping off her nose is the hour of sunset."

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Clydesdale Lore.

At the annual meeting of the Renfrewshire Agricultural Society, recently held, Mr. A. MacNeilage, Secretary of the Clydesdale Society, gave an address which he called a "Clydesdale Crack." In the course of his address, Mr. MacNeilage is reported in the Scottish Farmer as saying of their society: "Up to the 31st October of this year, 580 pedigree Clydesdale horses had been sold for export. Of that 580, 103, or nearly one-fifth, had passed through the County of Renfrew, and of that 103, or thereby, he assumed that fully one-half had been bred in that county. Now, he did not know what price farmers who bred the horses got from those pretty cute gentlemen who went round the country to buy for export. It was not, perhaps, very wide of the mark when he assumed the breeders' share in this hundred-odd horses averaged something like £30 apiece. (Laughter.) That was a very modest assumption, but it was quite good enough for the end he had in view. That meant that something like £1,500 were paid to the breeders of these horses exported during the present year. During the year before that, the number exported from Renfrewshire was 66, and they might conclude that half of these only were bred in the county. Now, look at the tremendous expense that was entailed on those who purchased horses for the foreign market by the neglect of those who breed them failing to register them. Such action came near to causing this country to forfeit the foreign trade. Neither Canada nor the United States would take breeding animals imported from this country unless they were registered, and it was apt to cause a suspicion in the minds of buyers when the owner of a horse had to go hunting all over the country in order to get his pedigree put together. Considering the time registration had been in existence, he thought that if they had expended a few shillings in time, every mare they were breeding from should be registered by this time. He was certain that he was right when he said that there were fewer breeding mares registered in that county than in any other in Scotland in which breeding was carried on to the same extent. It was due to this slackness of registration that the export trade went past that county. Why should only one-fifth of the exported horses pass through Renfrewshire, and only half of those animals appeared to be bred in the county? It was not because there was a want of animals in the county, but to a very large extent it was because of the neglect of registration, and thus failing to satisfy the man who exported that they had got what he wanted. The foreign trade was likely to continue for several years. He had had a letter from British Columbia, which showed that that great Province beyond the Rockies was wakening up to the importance of imported Clydesdales. That Province was only beginning to come under cultivation, and there would, in the course of time, be demands for hundreds of their best horses. Then the Eastern provinces of Canada had, for the first time in their history, made an importation. The Government advanced the money in the hope that they would recover 50 per cent. of the outlay, but so keen was the demand that they had from the local farmers got back 75 per cent. of it. The consequence would be that there would be further efforts to supply the demands. A son of the Rock, who had made his way in Canada, came home this year and exported half a dozen good ones, including a Cawdor Cup winner. If the Northwest Territories could do with such animals, and no doubt the exporter knew they could, they might be sure there would be further exportation. He advised the farmers of Renfrewshire to register every brood mare, so that they might get a larger share in the export trade. (Applause.) With regard to some Clydesdale horses of the past, when he went into the office of the Clydesdale Horse Society in 1878, and for half a dozen years afterwards, it was very interesting to him to get into conversation with some of the men whose recollections extended back a quarter of a century.

(Continued on next page.)

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QUESTIONS AND ANSWERS. Veterinary.

JOINT ILL.

One-week-old calf became stiff in his joints, especially the knees, and he cannot rise without assistance. T. J. M.

Ans.—This is joint ill, and recovery seldom takes place. Bathe the joints frequently with hot water, and after bathing rub well with camphorated liniment. Give, internally, 7 grains iodide of potash night and morning in a little new milk as a drench. V.

WARTS AND CAPPED HOCK

1. Yearling colt has warts on his nose.
2. Heavy mare had a thoroughpin last fall. This is disappearing, but the point of the hock is swelling like capped hock. I may say that this has been on more or less since she was a sucker. J. H. B.

Ans.—1. With a pair of shears, clip off all with constricted necks. Dress the others once daily with equal parts butter of antimony and tincture of myrrh applied with a feather. Some claim that the daily application of castor oil will remove them.

2. If the capped hock is getting more marked, she must bruise it by kicking the stall post, or in some other way. Remove the cause, and blister the parts with two drams each biniodide of mercury and cantharides mixed with two ounces vaseline. Clip the hair off; tie head so that she cannot bite the parts; rub well with the blister once daily for two applications; on the third day wash off and apply sweet oil; let her head down now, and oil every day until the scale comes off. Repeat the blistering once monthly as often as necessary. V.

MISCELLANEOUS AILMENTS.

1. Is a curb on a horse a disease of bone or muscle?
2. Give treatment for curb.
3. Give treatment for spring colt whose stifle bone slips in and out.
4. Give treatment for driver with chronic cough. T. H. S.

Ans.—1. Curb is a disease of a ligament called the calcaneocuboid ligament, extending from the point of the hock to the cuboid bone at the inferior portion of the joint. Neither bone nor muscle is involved.

2. Shoe with high-heeled shoe (about one inch higher than the toe), and blister the curb once every month until it disappears. Give long rest. It is not probable lameness will be long continued; but if you wish to remove the lump you will have to give a long rest and repeated blistering. Details for blistering are frequently given in these columns.

3. Keep the colt as quiet as possible in a box stall, and blister the front and inside of the joint once every four weeks all winter. While the colt will probably make a serviceable animal, he will never be sound.

4. Give every morning a ball composed

of 2 drams each gum opium and solid extract of belladonna, 1 dram camphor and 20 grains digitalis, with sufficient oil of tar to make it plastic. V.

The Family Laramie.

Hssh! look at ba-bee on de leetle blue chair,

W'at you t'ink he's tryin' to do?

Wit' pole on de han' lak de lumberman, A-shovin' along canoe.

Dere's purty strong current behin' de stove,

W'ere it's passin' de chimley-stone,

But he'll come roun' yet, if he don't up-set,

So long he was lef' alone.

Dat's way ev'ry boy on de house begin

No sooner he's twelve mont' ole;

He'll play canoe up an' down de Soo

An' paddle an' push de pole,

Den haul de log all about de place,

Till de're fillin' up mos' de room,

An' say it's all right, for de storm las' night

Was carry away de boom.

Mebbe you see heem, de young loon bird,

Wit' half of de shell hangin' on.

Tak' hees first slide to de water side,

An' off on de lake he's gone.

Out of de cradle dey're goin' sam' way

On reever an' lake an' sea;

For born to de trade, dat's how dey're made,

De familee Laramie.

An' de reever she's lyin' so handy dere

On foot of de hill below,

Dancin' along an' singin' de song

As away to de sea she go,

No wonder I never can lak dat song,

For soon it is comin', w'en

Dey'll lissen de call, leetle Pierre an' Paul,

An' w'ere will de moder be den?

She'll sit by de shore w'en de evenin's come,

An' spik to de reever too;

"O reever, you know how dey love you so,

Since ever dey're seein' you,

For sake of dat love bring de leetle boy home

Once more to de modder's knee."

An' mebbe de prayer I be makin' dere

Will help bring dem back to me.

—Dr. W. H. Drummond's The Voyageur.

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The type of Clydesdale horse had changed greatly during the past quarter of a century. In 1879, at the Stallion Show, the horses which won were Mr. Riddell's Bonny Breast Knot, and Mr. P. Crawford's Strathclyde. Then there were Mr. Johnston's Roderick Dhu, and Mr. Riddell's Rosebery. Roderick Dhu went to Australia. Could they conceive anything approaching a greater contrast in the taste for horses than they found in horses like Strathclyde and the horses that were winning at the present day? The difference between the Campbelltown Lorne and the Sir Everard type, which was the dominating type of the present day, was as interesting as anything possibly could be. (Applause.) There was manifestly a revulsion against the type that secured the ascendancy when horses like Strathclyde and the Druid came into favor. In the previous three years, Darnley and Time o' Day were popular. Yet, in 1878 and 1879, the Darnley and Time o' Day type was cast aside, and a somewhat different type came to the front. The question came to be, How was this type discarded so quickly? His opinion was that it was wholly due to the unquestioned superiority of a group of horses got by Darnley captivating the fancy. The group consisted of Sanguhar, Top Gallant, and Macgregor, all got by Darnley, and with characteristics about the feet and legs which were notoriously wanting in Strathclyde and Druid. These three horses dominated the Clydesdale world for the better part of ten years. The combination between them and Prince of Wales blood produced horses and brood mares that were extremely popular, but at the present time that type had gone out. They were working with a bigger horse than then, and one with broad, flat bones, well-sprung ribs, good back, and altogether more weight than was the case with the Prince of Wales and Darnley combination. The question came to be, Were they breeding better horses this way? The kind of horse that was really a good horse was one that could stand the wear and tear of the street, keep his legs clear of grease, and break into a trot if wanted. The difficulty was that in breeding they got far more blanks than prizes. It was all very well to talk of breeding horses. A Yorkshireman said that what they wanted was a big brown colt, and they got a little chestnut filly. (Laughter.) In nine cases out of ten that was about the size of it. From 1879 to 1884 were the years in which—if he might put it so—the whole question of the future of Clydesdale horse breeding in Scotland hung in the balance. Speaking of Mr. Drew's stock, the lecturer said he thought that probably Prince of Avondale was the finest piece of horse-flesh ever bred on Mr. Drew's lines, and that no horse equal in action to Prince of Avondale had been seen since in our show-yards. In 1884, Mr. Drew died in the spring, the month after he had scored the biggest victory for the type he fancied at the Glasgow Show. In April of that year his great stud was dispersed. In 1886, a horse of his type—Mr. Peter Crawford's Black Prince of Albyn—won the Glasgow premium. That was the last appearance of a really first-class horse, bred on the lines Mr. Drew advocated. He (the lecturer) believed that horse breeders generally would agree that the most useful and the best horse ever bred on these lines in respect to leaving a good influence on the breed was Rosebery. Curious enough, as a three-year-old, Rosebery, when engaged by the Linlithgow people, left almost no foals. He was taken to Kintyre in the following year, 1880, and left a crop of foals there never exceeded in respect of number and quality in the peninsula. The lesson to be learned from this by those who decry a horse as a three-year-old is—give him a fair chance, and put him into a district like Kintyre with good mares, bred on old natural lines, and the lecturer ventured to think that many a horse that received a bad name in that respect would establish a totally different reputation for himself. (Applause.) Rosebery influence had not been lost to the Clydesdale world. The influence was very potent at the present time in Mr. Taylor's horse, Sir Hugo, which is the only noted sire descending direct from Rosebery. For ten years, stretching from about 1888 to 1898, the Prince of Wales—Darnley type dominated the show-yards. Having referred to the grand collection of prize mares owned by the late Mr. Sinclair Scott, the lecturer said he hoped the fu-

ture would belie what he was about to say, namely, that at present he did not see a single breeding horse leaving his influence which is the produce of one or other of these noted prize mares, or, for that matter, the prize mares belonging to anyone. On looking back to the list of impressive sires, and examining their pedigrees, he was bound to arrive at the conclusion that, while prize mares, highly fed for show-yards, rarely left stock that made an impression on after generations, good, well-bred, true Clydesdale mares of the old-fashioned sort, such as take prizes at local shows, almost invariably justify their existence. He knew some of his old friends were about to contradict him. They were going to tell him that Keir Peggy was a champion at the big shows as well as the local exhibitions. But Keir Peggy was only the exception that proved the rule in his argument. She had this advantage, too, that when her show-yard career was over, she was left to winter at large in the good pastures at Keir. The same remark applied to Prince of Wales' dam, which was also a noted prizewinner. Referring to the Prince of Wales type, he thought the typical specimen was St. Lawrence. Looking broadside on St. Lawrence, he challenged anyone to produce a better outline of a Clydesdale horse. St. Lawrence was a right good breeding stallion, but with another good horse, Belted Knight, he unfortunately had to go under to that bad distemper, pinkeye. At the present time, the Prince of Wales type was chiefly seen in our show-yards through Hiawatha and his sons. Hiawatha's type blended with the enlarged Darnley sorts gave them the type that would predominate in the show-yards for the next ten years. He wondered if any of the horse men would contradict him when he said that in the year 1889—the year the big change was made in the management of the Stallion Show—the standard of merit in the open classes at the Stallion Show then had never yet been excelled. The winners in the open class then were: 1, Flashwood; 2, Sir Everard; 3, Grand National; 4, Sir Maurice; 5, Knight Errant; and after him came Mr. Spittal's Rizzio. In the following year, there was a three-year-old class, and the leader was Mr. Johnston's Orlando, which, on the form shown that day he believed had never been surpassed at his age. In discussing the question what breeders should look for in choosing a breeding horse, the lecturer referred to the manner in which the late Mr. Thomas Bates, the founder of the great tribe of Bates Short-horn cattle, selected the sires for his herd. If on nearing the field wherein the intended purchase was, Mr. Bates saw the bull looking at him through the gate, he went on and examined it more thoroughly. His point was that a slug of a male animal—he would not say never, but rarely ever—proved a good breeder. Another kind of animal the judge and buyer should always watch is that which is always being tugged at and hit at with a stick. Such an one either stands easy on his knees, or he has no spirit in him. Another kind of horse of which men should be suspicious is the horse whose leader would not walk him—the horse whose leader, immediately he is told to give him a show, starts him on the run. The chances are that such a horse is a bad walker, and goes wide behind. Judges should insist on cart horses being good walkers. If they possess the ability to walk well, they will also trot well, but the converse is not always true. (Cheers.)

What She Meant—"Is yo' got enny haih fo' sale, boss?"
 "Any what, aunty?"
 "Haih, boss?"
 "Haih?"
 "Yassuh, haih lak' yo got on you' haid."
 "Oh, haih."
 "Yassuh, haih."
 "Why, no, aunty; this is a dry-goods store, not a hair store."
 "Dat's what Ah 'lowed, boss; but missus tole me to cum yeah an' get free yahds mo' hair lak she done got yis-tiddy!"
 "Oh, you mean mohair!"
 "Yas-uh, mo' haih."

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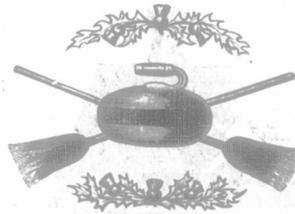
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 3rd.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary.

WARTS—SCRATCHES.

1. Nose and under lip of two-year-old colt is covered with small warts.
 2. He also has scratches. T. D. C.
- Ans.—1. See answer to question 1 of J. H. B.'s.
2. Give a purgative of 6 drams aloes and 2 drams ginger; feed lightly, and keep dry. Dress the heels twice daily with oxide of zinc ointment. V.

ECZEMA.

Two-year-old colt was pastured on after grass of red and alsike clover. After he was brought to the stable, he broke out in itchy pimples on his neck and back.

H. H. D.

Ans.—This is eczema, and may be due to the alsike. Give him a purgative of 6 drams Barbadoes aloes and 2 drams ginger. Feed bran only until purgation commences. After the bowels have regained their normal condition, give 1 ounce Fowler's solution of arsenic night and morning for ten days. Wash the itchy parts well twice daily with a solution of corrosive sublimate, 30 grains to a quart of water. V.

PROBABLY DEAD FŒTUS.

Cow was due to calve and udder was quite full on Nov. 22nd and 25th, and she became restless, and showed symptoms of approaching parturition. She did not calve, and the symptoms of advanced pregnancy have gradually disappeared, and her appetite has been very poor since November.

J. R. S.

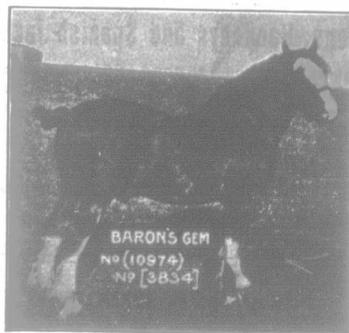
Ans.—I am of the opinion the foetus died in the womb about the time you expected her to calve, and it is quite probable the membranes are ruptured and the fluids escaped, which resulted in reducing the size of the abdomen. If this condition exists, she must have professional attention at once. I would advise you to send for your veterinarian and have him examine her, and if a dead foetus be present, he will remove it. If you think this condition does not exist, give her tonics, as 1 dram each sulphate of iron, gentian, ginger and nux vomica three times daily. V.

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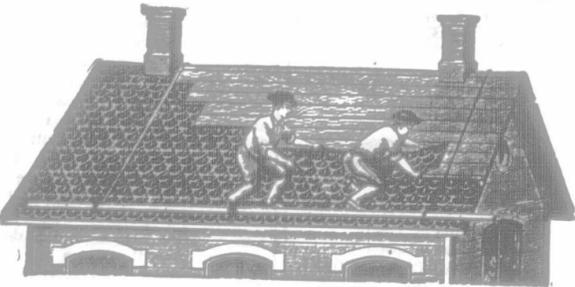
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TRADE NOTES.

THE MARTIN, BOLE & WYNNE CO., Winnipeg, have just issued their North-west Almanac for 1906, and their aim to give something a little different from the ordinary almanac has been entirely successful. This book contains much interesting and valuable information, and may be had for the asking. Write for it at once.

A SCALE ON THE FARM.—Most farmers realize the necessity of owning a good reliable scale. Selling and buying so much by weight, he must realize that a little inaccuracy in his dealer's scales means considerable loss to him. We don't believe that prosperity makes him so reckless of his own interests that he cares not whether the grain buyer cheats him or gives him full value, but the average farmer figures that he cannot afford to buy a farm scale when the crop is light or prices low.

Suppose a certain farmer sells thirty hogs weighing 200 pounds each, receiving for these five cents per pound. If the scales are out of the way 1-20, it will mean a loss to him of \$15.00 on the lot. This same farmer sells 2,000 bushels of wheat at 75c. per bushel. If the scales are out 1-40, it will mean a loss to him of \$97.50. Now, the above examples are by no means gross exaggerations, and it will be seen from the above figures that the total loss incurred would be \$52.50, enough to purchase a good set of scales to guard against all future loss. It is never an equitable proposition to measure farm produce when selling it. Hay measured in the stack is only so much guesswork, although the most infallible rule is used. The same is true of grain. Sometimes oats will overrun one-fourth in weight, and the farmer who sells by measure is simply losing one bushel in every four."

The feeder of stock is also very desirous to know just what progress his animals are making as a result of his efforts. With a set of farm scales they can be weighed regularly, thus accurately determining the gain proportional to the amount of feed.

A firm in Chatham, Ont., is advertising a farm scale, guaranteed by the Canadian Government. It is made in three styles, which are convertible into useful trucks. The firm sell them on very easy terms, in fact, so easy that what the scale will save a farmer should pay for it in the time. We are sure it would pay any farmer to investigate the offer this firm makes. A post card with your name and address on it sent to The Manson Campbell Co., Limited, Chatham, will bring full particulars.

GOSSIP.

AMERICAN COTSWOLD REGISTRY ASSOCIATION.

The annual meeting of the American Cotswold Registry Association was held at the Pedigree Record Building, Chicago, December 19th, at 7 p.m. In the absence of President D. McCrae, Guelph, Ont., Mr. D. B. Watt, Xenia, Ohio, presided. The Secretary and Treasurer's report, as follows, was approved, and in view of the fact that business done represented an increase of 75% over any other year since the organization of the association, general satisfaction was expressed in the good result for the year.

The Treasurer's report for year ending December 5th, 1905, showed: Receipts, \$2,463.70; expenditures, \$1,555.18; balance for year, \$908.52; brought forward from 1904, \$395.18; total cash on hand, December 5th, 1905, \$1,303.70.

Election of officers resulted as follows: President, T. Hardy Shore, Glanworth, Ont.; Vice-President, D. B. Watt, Xenia, Ohio; Secretary-Treasurer, F. W. Harding, Waukesha, Wis. Board of Directors—T. Hardy Shore, Glanworth, Ont.; D. B. Watt, Xenia, Ohio; D. McCrae, Guelph, Ont.; D. C. Lewis, Camp Point, Ill.; F. W. Harding, Waukesha, Wis.

Representatives of the National Record of Canada were heard in the meeting, and their request for affiliation with this Registry Association was discussed freely, and finally referred to Board of Directors, with power to consider details and act.

The resolution was adopted, favoring taking up at the next annual meeting the matter of charging double fees to non-members. Motion that the chair appoint every breeder, now a member, a committee of one, to secure one or more new

members before the next annual meeting was carried. Stock-holders' meeting adjourned.

A meeting of Board of Directors was held following stock-holders' meeting. Four hundred dollars for special cash prizes and special advertising for 1906 was set aside as follows: International Live-stock Exposition, Chicago, \$200; American Royal, \$150, upon condition that this show offer a like amount on Cotswolds, and that, at least, three other breeds participate in the show; \$50 to be used for special advertising; \$150 for State and Provincial Fairs, providing the American Royal Show do not qualify in accordance with terms imposed by the offer made.

In consequence of the lamented decease of the late Mr. Philo L. Mills, his celebrated breeding stock at Ruddington, near Nottingham, England, will be sold during the present year. The extensive herd of Shorthorns will probably be dispersed on Thursday, May 3rd, the flock of Shropshire sheep in September, and the stud of Shire horses in October.

AMERICAN ABERDEEN-ANGUS ASSOCIATION OFFICERS.

At the regular annual meeting of the American Aberdeen-Angus Breeders' Association, and at the meeting of the Board of Directors, held in Chicago, the evening of December 20th, the following named officers were chosen: President, J. S. Goodwin, of Illinois; Vice-President, C. J. Martin, of Iowa; Secretary-Treasurer, Thos. McFarlane, of Illinois. Directors for three years, J. S. Goodwin, of Illinois; C. E. Marvin, of Ky.; Geo. Kitchen, Jr., of Mo.

QUESTIONS AND ANSWERS. Veterinary.

ECZEMA.

Two-year-old colt has lumps all through her skin, and she is dumpish. E. J. H.

Ans.—This is eczema, and is very hard to treat when the coat is long. Give her a purgative of six drams aloes and two drams ginger. Feed bran only for twelve hours before and twenty-four hours after giving purgative. Follow up with one ounce Fowler's solution of arsenic night and morning every alternate week. Make a lotion containing 30 grains of corrosive sublimate to a quart of water, and rub the affected parts well with it once or twice daily. V.

FATALITY IN CALVES.

About the end of August, my calves began to cough; eyes sunk in head, and they would blow and pant like sheep. They ate fairly well, but failed in flesh, and three out of the five died. J. R.

Ans.—The symptoms indicate bronchitis, caused by a parasite. A careful post-mortem would have determined whether or not this was the case. The disease is contagious, and very hard to treat successfully. Inhalation of the fumes of burning sulphur is sometimes successful. This is done by closing the calves in a building where all openings are closed, and then burning sulphur as long as you can stand the fumes; then open doors. Repeat treatment every ten days as long as necessary. Another method is to inject 1 to 2 drams oil of turpentine into the windpipe. This may be repeated in 10 to 12 days, if necessary. V.

OBSTRUCTION IN MILK DUCT.

Cow calved Dec. 4th. One teat has never given milk properly. There appears to be a hard lump, the size of a pea, blocking the passage near the udder. We are able to milk this teat, but it takes about half an hour. F. H. M.

Ans.—This is a little tumor in the milk duct, and the only way to treat is to get a veterinarian to operate with an instrument especially designed for the purpose, and this is often unsuccessful, especially when the obstruction is close to the udder. I would advise you to take very little milk from this quarter at each milking, just enough to prevent inflammation, and allow the quarter to go dry. As the predisposition to these growths is undoubtedly congenital, and there is a danger of another teat being affected at some future date, I would advise you to fit her for the butcher after this period of lactation. V.

QUESTIONS AND ANSWERS.
Legal.

EDUCATION IS COMPULSORY.

1. Is it compulsory in the Territories to send children to school, and what distance?
2. If the distance be too far to make it compulsory, can they legally collect taxes?

Ans.—1. Yes. Children between the ages of seven and twelve must attend school, or be otherwise educated sixteen weeks in each year, eight of which shall be consecutive, unless through sickness, no school open within two and a half miles, or if they have reached a standard of education equal to or greater than can be attained at the school, or the parents are not able to clothe the children, or for bodily or mental infirmity of the children.

2. Taxes may be collected if property is situated in an organized school district.

A DRAINAGE QUESTION.

Two years ago, the Northwest Government ran a large ditch across my farm in order to drain a marsh 12 miles away; some places they kept to the natural creek bed, and other places they did not.

Can I claim damages? If so, how much?
Ans.—The Government has the power to expropriate the land and should keep along the natural water-course, but may make slight deviations which are usually made for the purpose of shortening the distance and doing less damage to the land. You would be entitled to be paid for any damage done to your property, at an amount to be agreed upon or settled by arbitration. Write to the Department of Public Works, Regina, setting forth your claim, if you have received any damage.

Miscellaneous.

WATER NOT GOOD.

Enclosed please find two dollars (\$2) for your valuable paper. I have been a reader of "The Farmer's Advocate" since it first saw daylight, and hope to be a reader of that journal as long as I can see light.

Would like to know what is in the water from a well on my farm? Is it fit to use for stock? What will it cost to have this water analyzed? D. T. C. Sask.

Ans.—Chemist Shutt, C. E. F., Ottawa, will analyze it for you free, if a sample is sent him. Write him for directions.

TRADE NOTE.

POTTER & MacDOUGALL.—The well-known firm of Potter & MacDougall, seedsmen to the people of the Canadian West, have recently opened out in their new premises, corner MacDougall and Jasper Avenue. This is their sixth season in this business, and the enterprise and progress of the firm can be judged by the difference between the new equipment and that with which they started. Today they occupy one of the best business locations in the city, and from a small trade, their business has grown until they now do an enormous trade in all lines of garden and farm seeds.

The importance of seed selection as a factor in crop production is now receiving the careful attention of Western Canada. Seed trains, lecturers and institute workers are constantly calling attention to the importance of: First, selecting the best variety; second, the securing of a good strain of that variety; third, the use of absolutely clean seed. It is by attention to these details that Potter & MacDougall have built up and are building up an excellent business in farm seeds.

In the raising of crops on the farm, the selection of seed is too important a factor to be ignored by the farmer of the West. We would urge upon everyone that great care and attention be given to this work during the coming season. Potter & MacDougall's seeds have been specially selected for the Canadian West. They are varieties all well suited to the climate and agricultural conditions of the country. We would advise our friends in preparing for their spring work to write to this firm for their catalogue, and in the selection of garden seeds remember the name Potter & MacDougall.

Few cattle are being bought for feeders, so the Chicago market papers report. Competition has been keen for sheep to go on feed. Prices for cattle to be marketed next spring may be expected to be more satisfactory than latterly.

WINNIPEG POULTRYMEN MEET.

The local association met recently and elected the following officers: Patron, Lord Strathcona; Hon. Presidents, Sir Daniel H. McMillan, K. C. M. G., D. W. Bole, M. P., Hon. R. P. Roblin, M. P. P.; Hon. Vice-Presidents, J. T. Gordon, M. P. P., T. W. Taylor, M. P. P., E. L. Drewry, Esq., Mayor Sharpe; President, H. A. Chadwick; Vice-President, H. Maw; Treasurer, Capt. Starmer; Secretary, J. E. Costello; Executive, J. H. Mulvey, S. Long, J. M. Alldritt, A. Williams, Geo. Carr, C. C. Stewart; Auditors, J. H. Mulvey, Geo. Carr.

A committee consisting of H. A. Chadwick, Capt. Starmer, Messrs. Ling and Williams, was appointed to wait upon the Provincial Government for the purpose of securing a grant to assist the prize list at the forthcoming exhibition.

Messrs. C. C. Stewart, Costello and Maw were appointed a deputation to wait upon the city council and secure an additional grant for the same purpose. It was generally felt this last committee would have an easy time, in view of the Live-stock Association meeting at Brandon.

THE CHICAGO POULTRY SHOW.

The show will be held January 22-27, inclusive, 1906, in the 7th Regiment Armory, 16th St., instead of the Coliseum, as previously announced. Extensive repairs have made the Armory equally desirable.

O. Prescott Bennett will judge Buff Wyandottes, White Plymouth Rocks, Partridge Plymouth Rocks, Buff Cochins, Bantams, Anaconas, Dominiques, Dorkings; E. J. W. Dietz—Exhibition Games, all Bantams except Buff Cochins, Silkies, Sultans, Sumatras; W. C. Denny—Buff Rocks, White Leghorns, Minorcas, Spanish, Creve Coeurs, Favorelles, Frizzles, Malays; W. R. Graves—White Wyandottes; Daniel J. Lambert—Brahmas, Cochins, Ducks, Geese, Indians, Langshans, Orpingtons, Rhode Island Reds, Turkeys, Buckeyes, LaFlech, Brown Leghorns, Black Leghorns, Red Caps, Rumples, Secilians, Russians; Thos. F. Riggs—Andalusians, Silver Wyandottes, Golden Wyandottes, Black Wyandottes, Partridge Wyandottes, Silver-pencilled Wyandottes, Hamburgs, Houdans, Javas, Polish, Jersey Blues, Buff Leghorns, Black Leghorns; and H. P. Schwab—Barred Plymouth Rocks. The various poultry clubs will meet in the Association's club-room during show week.

The official premium lists and entry blanks can be procured from Secretary Fred L. Kimmey, Room 510, 325 Dearborn St., Chicago, Ill.

A SEED-TRAIN LECTURER.

One of the good moves made by the Dominion Department of Agriculture has been the inauguration of Seed Specials, for which the Department has furnished lecturers and advertising and the lecturer's expenses. The railroads are co-operating in this fine piece of missionary work, which will undoubtedly be returned to them a hundredfold.

Mr. Angus Mackay needs no introduction to residents of Saskatchewan and Alberta, as his work as Superintendent of the Experimental Farm has brought him into close touch with farmers in all parts of the country. He comes from Whitby, Ontario, and was one of the pioneers in the Indian Head district. Here he farmed so successfully that when the Experimental Farm was established in 1887, he was chosen as Superintendent, and has held the position continuously since that date. His work at Indian Head Farm in growing trees has alone been worth more to the Province of Saskatchewan than the entire cost of the farm from its foundation. The beautiful avenues of trees and hedges on the farm are an eloquent testimony of the success of his efforts, and show in marked contrast to the bleak virgin prairie. He has done valuable work in testing varieties of grains, grasses, and clovers; in testing remedies for smut and weeds; and has aided greatly in solving other equally important questions. He will be heard with interest at the various meetings this winter. Watch for the Time Card, and be on time!

De Laval Separators



The DE LAVAL from every standpoint represents the greatest value in Cream Separators. During a history extending over more than a quarter of a century, its prestige has never been questioned—except in the advertisements of "would-be" competitors.

The De Laval Separator Co.
14 & 16 Princess St., WINNIPEG.

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INSIST

ON HAVING

STEVENS' OINTMENT

as used in the Royal Stables, once, and you will always insist on having it. It is a reliable article. Veterinary doctors to the Royal Stables use it. Cures

Splint, Spavin, Curb, Ringbone

and all enlargements in horses and cattle. \$1.00 small, \$2.00 large box, at Chemists, or direct from

MARTIN, BOLE & WYNNE

Western Agents. in Winnipeg, Man.



**NEW IMPORTATION OF
Clydesdale Stallions**

Just arrived from Scotland.
Selected personally.

A grand lot of stallions and mares; combining size with quality, and the best of breeding.

WRITE US FOR PRICES AND PARTICULARS.

SMITH & RICHARDSON, Columbus, Ont.

Hackneys and Clydesdales



From such noted champions as Baron's Pride, Hiawatha, Marcellus, Macgregor, Lord Lothian, etc. Stables at Regina, Sask. Inspection invited. For fuller particulars and prices, write

J. C. FYFE, V. S., Regina, Sask., or T. H. HASSARD, Millbrook

ALEX. GALBRAITH & SON
Brandon, Manitoba.



The oldest and largest importers of British horses on the continent. New importation of prizewinners just received. If your district is in need of a strictly first-class

**CLYDESDALE
SUFFOLK
PERCHON
or HACKNEY
STALLION**

it will pay you to correspond at once with us. Prices reasonable, terms easy, satisfaction guaranteed.

A few choice prizewinning Clydesdale mares for sale.

We can use a few strictly first-class, reliable salesmen to assist in forming syndicates. Apply to

JAMES SMITH, - - Manager.

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



Tuttle's Elixir
Sovereign Horse Remedy.
We offer \$10. for any case of colic, curb, splint or lameness it fails to cure when every cure is possible. Our great book, "Veterinary Experience," free. 100 pages, a perfect guide. Send for copy. Tuttle's Elixir Co., 68 Beverly St., Boston, Mass. Lyman Knott Sons, Montreal and Toronto. Lyman Sons & Co., Montreal.



"Favorite" Churn



In 8 sizes, churning from 1 to 90 gallons.

Improved Steel Frame. Patent Foot and Lever Drive.

Patent Steel Roller Bearings.

Easy to operate. Bolts throughout in place of wood screws. Superior in workmanship and finish. No other just as good. Accept no substitute. If not sold by your dealer, write direct to us.

DAVID MAXWELL & SONS
St. Mary's, Ont.

BREEDERS' DIRECTORY

Breeders' name, post-office address, class of stock kept, will be inserted under this heading at \$3.00 per line per year. No card to be less than two lines or exceed three lines.

A. DAMSON BROS., Gladstone, Man. Young Scotch-topped Shorthorn bull for sale.

A. & J. MORRISON, Glen Ross Farm, Home-wood, Man. Shorthorns and Clydesdales.

B. BOWNE BROS., Ellishboro, Assa., breeders of Polled Angus cattle and Berkshire swine. Stock of both for sale.

C. BALDWIN, Emerson, Man.—Yorkshire swine, both sexes. Herd boar purchased from Canfield, Minn.

C. W. TAYLOR, Dominion City.—Barred Plymouth Rocks, Buff Cochins, Black-headed Red Game, White Cochins.

H. V. CLENDENING, Harding, Man.—Breeder and importer of Red Polled cattle, the dual-purpose breed. H. V. Clendening.

JOHN GARDHOUSE & SONS, Highfield P.O., Ont. Breeders of Scotch and Scotch-topped Shorthorns, Lincoln and Leicester sheep and Shire horses.

J. COFFEY, Dalesboro, Sask. Shorthorns. Yorkshire swine of all ages and both sexes.

JOHN WISHART, Portage la Prairie, Man.—Breeder of Clydesdales and Hackney horses. Young and breeding stock of both sexes for sale.

JAMES DUTHIE, Melgund Stock Farm, Hartney Man.—Shorthorns and Berkshires.

P. F. HUNTLEY, Registered Hereford cattle. Lacombe, Alta.

R. A. & J. A. WATT, Salem P.O., Ont., and telegraph office.—Breeders of Shorthorns and Clydesdales. Imported and Canadian-bred females; also a pair of bull calves.

SHORTHORNS and Clydesdales, Wm. Chalmers, Smithfield Stock Farm, Brandon. Phone at residence.

SHORTHORNS of the fashionable families, John Kennedy, Swan River, Man.—(C.N.R.), 1 1/2 miles from town.

T. W. ROBSON, Manitou, Man. Breeder of pure-bred Shorthorns. Large herd from which to select Young bulls and females of all ages for sale.

W. S. LISTER, Middle Church (Nr. Winnipeg), Marchmont Herd Scotch Shorthorns. Bulls all ages from imported stock. Telephone 1004B.

QUESTIONS AND ANSWERS. Legal.

LIABILITY OF A CASTRATOR.

A castrates B's colt, and charges B \$2 for operation. Colt died.

1. Is A liable for damages under the laws of Alberta, A having no license? If so, to what extent is he liable?

2. If colt had not died, would he be liable to be fined for operating without license? If so, what would fine be?

Alta. W. L. J.

Ans.—Castration and dehorning are exempt from the working of acts, statutes or ordinances regulating veterinary practice, and rightly so, consequently the answer to both questions is no. A similar case was tried recently at Carman, and the farmer suing lost. The Act regulating veterinary medicine and surgery in Manitoba is a better and more up-to-date piece of legislation than in any other province in Canada; yet, the operations referred to above are exempt. If a farmer will take, or is forced to take, the risk of employing a man with a limited knowledge of surgery and surgical practices, he unfortunately is one who must suffer.

Miscellaneous.

WANTS WOVEN-WIRE FENCING.

I have just made entry for quarter-section of Dominion land, east from "Stavely," South Alberta, and am going to move on my homestead out there next spring with some sheep and cattle. I calculate to fence in the whole quarter section with woven-wire fence. I would be very much pleased if you could give me information where I could get such fencing cheapest. Are there any manufacturers of such fencing in Canada, or do you know how much duty there is on it if I should order it from a factory in United States? T. T. B. N. Dakota.

Ans.—See our advertisers of such articles. It is doubtful if it would pay you to bring such material across the line when you consider freight, duty, and the trouble of making entry for same.

Veterinary.

SCRATCHES.

I have a mare that has had the scratches for about a year and a half. She is lame, even when there seems to be no cracks in the skin. She is worse when worked. When she stands for a few minutes, she is very lame when started. When her feet crack, they are raw. They are under the fetlock. I have tried vaseline and carbolic acid, but she seemed to get worse after it was put on. What should I do with her? Sask. J. H.

Ans.—If the mare is not with foal, give her a purge, say a six-dram ball of aloes, with which is incorporated one dram of calomel. Use as a local application oxide of zinc ointment, and after the physic has acted, give two tablespoonfuls of Fowler's solution once daily in drinking water for two weeks.

ABORTION.

Cow aborted in the 5th month of gestation. Will she be liable to abort again? Should the supply of milk increase by reason of the abortion? A. E. G.

Ans.—It is probable abortion was caused by some unknown accident, and while cows easily acquire the habit of aborting, I think I would breed here again, and keep her in the stable, feed lightly, and avoid all excitement during her 5th and 6th months of gestation. This will probably carry her safely through the dangerous period. This precaution may not be necessary, but is wise when there are any grounds to suspect a tendency to abort. It is not probable the supply of milk will be influenced by abortion at such an early period.

LYMPHANGITIS, ETC.

1. Mare has a bad hind leg. It seems sore on the inside, and is swollen up to her thigh.

2. Give a good blood purifier for a horse, and how to give.

3. What is a good remedy for cleaning a horse out? I mean to keep them in good condition. A. M.

Ans.—1. Your mare has lymphangitis. Give a brisk purgative of 8

drams Barbadoes aloes and 2 drams ginger; follow up with 3 drams nitrate of potash twice daily; bathe the leg long and often with hot water, and after bathing, rub well with camphorated liniment; keep comfortable, and exclude from drafts. Do not exercise until the soreness and lameness have disappeared. Cases of this kind require prompt and energetic treatment, else there will be a tendency to a chronically-enlarged leg.

2. Take 3 ozs. sulphate of iron, 3 ozs. nitrate of potash, 2 ozs. gentian, and 1 oz. arsenic; mix, and make into 24 powders, and give one every night in damp food.

3. A purgative, such as is recommended in question 1, is the best for a horse. Medicines are not required to keep a horse in good condition, and should be given only when there is some disease. It is a great mistake to give drugs, condition powders, etc., unless the animal is unhealthy. V.

GOSSIP.

REDUCTION IN PRICE.

We are able, through an arrangement with the publishers, to offer that well-known and appreciated farmers' book, "Veterinary Elements," for \$1.10 post-paid—a reduction of fifty cents a copy.

Volume 14 of the Canadian Ayrshire Herdbook has just been issued by the Registrar, Mr. J. W. Nimmo, of Ottawa, for the Canadian Ayrshire Breeders' Association. This is the first volume of this record issued since organization of the National Record Association, and the transference of the office from Toronto to Ottawa. This volume contains the pedigrees of 1,753 bulls and females, also the minutes of the annual meeting and the scale of points and rules governing Advanced Registry. It is a creditable book, and speaks well for the work of the registrar and the progress of the breed.

Twenty-three distinct breeds of sheep competed for prizes in as many breed classes at English live-stock shows of the present year. The breeds represented were the Cotswold, Leicester, Lincoln, Shropshire, Oxford Down, Southdown, Suffolk, Hampshire, Border Leicester, Dorset, Wensleydale, Romney Marsh, Devon Long-wool, Cheviot, Exmoor, South Devon, Dartmoor, Herdwick, Welsh Mountain, Ryeland, Lonk, Kerry Hill, and Black-faced Mountain. This is a pretty long list, but does not include all the British breeds of sheep.

OPINIONS ON THE EMBARGO ON U. S. HOGS.

C. W. Bowman, manager of the Montreal Packing Company, says the stoppage of importation of hogs into Canada will not seriously affect the industry. He says it may encourage the Canadian farmers to raise more hogs, but it may cause a shortage of supplies for a time, which will force prices for hogs above a paying basis as far as export bacon is concerned. Mr. Bowman says United States bacon is always being sold on the Old Country market as Canadian, and Canadian as Danish, and that these practices will continue in any case.

George McCorry, pork-packer, of Montreal, thinks the regulation will have little effect on the Canadian market, as this, he says, is controlled by conditions in England. He says Canada will soon supply all the hogs required by the packers.

C. C. L. Wilson, manager of the Ingersoll Packing Company, says the order-in-Council will seriously affect the business of his company. In the past they have been unable, he says, to get enough Canadian hogs to keep their factory running to its full capacity, and unless more Canadian hogs can be obtained in future, the factory cannot run to its full capacity.

Out of 58,530 hogs exported from the United States in the ten months ending with October, 47,569, according to the American trade returns, were sent to British North America. These figures doubtless represent the purchases up to that time of American hogs by Canadian bacon factories.

One of the Winnipeg packers said a short time ago, they did not worry over the supply of hogs from Manitoba or Saskatchewan farmers—it will be different now.

DOES YOUR HEAD

Feel As Though It Was Being Hammered?

As Though It Would Crack Open?
As Though a Million Sparks Were Flying Out of Your Eyes?
Horrible Sickness of Your Stomach?
Then You Have Sick Headache!

BURDOCK BLOOD BITTERS

will afford relief from headaches no matter whether sick, nervous, spasmodic, periodical or bilious. It cures by removing the cause.

Mr. Samuel J. Hibbard, Belleville, Ont., writes: "Last spring I was very poorly, my appetite failed me, I felt weak and nervous, had sick headaches, was tired all the time and not able to work. I saw Burdock Blood Bitters recommended for just such a case as mine and I got two bottles of it, and found it to be an excellent blood medicine. You may use my name as I think that others should know of the wonderful merits of Burdock Blood Bitters."

Lump Jaw
Save the animal—save your herd—cure every case of Lump Jaw. The disease is fatal in time, and it spreads. Only one way to cure it—use Fleming's Lump Jaw Cure. No trouble—rub it on. No risk—your money back if it ever fails. Used for seven years by nearly all the big stockmen. Free illustrated book on Lump Jaw and other diseases and blenches of cattle and horses. Write for it today. FLEMING BROS., Chemists, 46 Front Street, West, Toronto, Can.



IMPORTED Clydesdale Stallions and Fillies.

Also Hackney Stallions for sale. At reasonable prices. Come and see them, or write to us.

ADAM DAWSON, Cannington, Ont.
THOROUGHBREDS.

Representatives for sale, carrying best blood in the stud-book.

Studs headed by Kelston, first prize and sweepstake stallion, Winnipeg, 1905. Young stock for sale. Prices reasonable. Correspondence solicited. Visitors met.

R. DALE - - S. Qu'Appelle.

Carlton Herefords.

THE STATE FAIR PRIZEWINNING BULL Gold Prince 88168 at head of herd.

Cows selected from the leading herds in the U.S.A., the Anxiety blood predominating.

BULLS FOR SALE

All ages, all sizes, all prices and all O.K.

FENTON BROS.,

Carlton Hereford Farm.

SOLSGIRTH - - MANITOBA.

POPLAR GROVE HEREFORDS

The Leading Herd of Western Canada

Grand young bulls, cows, heifers, and

PURE-BRED Shetland Ponies

FOR SALE

J. E. MARPLES, Deleau, Man.

HEREFORDS

A score of choice young bulls of AI breeding; also some good breeding females, all ages. Inspection and correspondence invited.

OSWALD PALMER, Lacombe

GLENFERN FARM Jersey Cattle. Herd grandson of Flying Fox, and Dentonia's Merry Babor. Also Brown Lehighorn and White Wyandottes, Toulouse geese and Collie dogs. Correspondence and inspection invited.

W. F. CAMERON, Strathcona, Alta.

Lost, Strayed, Impounded.

Below is to be found a list of impounded, lost and stray stock in Western Canada. In addition to notices otherwise received, it includes the official list of such animals reported to the Manitoba, Saskatchewan and Alberta Governments. This department is for the benefit of paid-up subscribers to the "Farmer's Advocate," each of whom is entitled to one free insertion of a notice not exceeding five lines. Notices exceeding five lines will be charged two cents per word for each additional word, payable in advance.

LOST.

STOCKHOLM, Sask.—Since September 10, 1905, black stallion, two and a half years old, white face, four white feet, branded Q7 on right shoulder, had a leather halter on. Reward will be given for the return of the animal. J. J. Patrick (14-19-3 w 2).

HIGH RIVER, Alta.—Brown, low-set, white-stocking leg mare, white strip on face, weight about 1,200 lbs., branded T D on shoulder. Last seen near mouth of Little Bow. Reward by writing C. O. Fulton.

SPRELING, Man.—Strayed on December 3rd, one bay horse, white face, white hind feet, branded W H on right shoulder, heavy tail. Had halter on when last seen. Is of good sire, and about four years old. Anyone finding and caring for, and notifying the owner, will be suitably rewarded. David McMañon.

IMPOUNDED.

ROSTHERN, Man.—Since November 4, 1905, sorrel horse, with white face. Abram Klippenstein, poundkeeper.

SINTALUTA, Sask.—On December 11, 1905, brown gelding, about 1,350 pounds, about eight years old, rope halter on, white hind feet; on December 11, 1905, brown gelding, about 1,150 pounds, little white on forehead, shoes on front feet. Messrs. Jones & Hannah.

SALTCOATS, Sask.—On December 6th, 1905, red-and-white speckled heifer, two years old, large horns, no brand visible.

ESTRAY ENTIRES.

SPRINGSIDE, Sask.—Red and white spotted bull calf. George Treherne (12-27-6 w 2).

KOLIN, Sask.—Since November 26, last, black bull calf, about seven months old, white spots on hind legs, hornless, no brand. Ladislav Sobotka (30-18-1 w 2).

WAPELLA, Sask.—Dark-red bull, five or six years old, white spot on forehead and left hind leg. William Ireland (N. E. 16-15-32 w 1).

FRANCIS, Sask.—Since last week of November, 1905, large white bull, about three years old. Peter C. Hensen (N. W. 4-13-14 w 2).

ESTRAYS.

SASKATOON, Sask.—Red steer, white under chest, about two years old; red-and-white cow, about three years old. Joseph Poirier.

MOOSE JAW, Sask.—Since about November 20, 1905, pure red steer calf, about ten or twelve months old, no brand visible. Andrew Tveit (N. W. 9-16-26 w 2).

SPRINGSIDE, Sask.—Since about the middle of October, last, red cow, white line along back, white under belly, some white down legs, about seven years old, no brand visible, has a red heifer call at foot. George Treherne (12-27-6 w 2).

HANLEY, Sask.—Since June, 1905, bay gelding, five years old, branded L, reversed L, on right hip, and L on left hip. John Carlson (N. E. 16-29-5 w 2).

MIDALE, Sask.—Since November 2, 1905, bay gelding, branded reversed S on left shoulder, and O or Q, with bar, on right shoulder, hind feet white, white stripe down forehead, three or four years old, about 800 pounds. Charles Brightsman (14-12-4 w 2).

WILLOCKS, Sask.—Since about October 1, 1905, sorrel horse colt, about ten months old; two bay mare colts, about ten months old. Henry Peters (28-5-5 w 2).

FILE HILLS, Sask.—Red-roan cow, also calf. J. M. Collins (N. E. 32-24-12 w 2), Lake View Farm.

WEYBURN, Sask.—Two red-and-white steers, rising three years old, no visible brand. H. G. Tindall (M. W. 12-18-15 w 2).

SALTCOATS, Sask.—Red heifer, two years old, two hind feet white, white under body, small horns, no brand visible, been at my place three weeks. Jos. Cross (26-24-33 w 1).

ESTERHAZY, Sask.—Red cow, about three years old, has brand on left hip re-

sembling circle C; also red heifer calf. Gudleifur Frederickson (22-29-7 w 2).

NUTANA, Sask.—Since a few weeks ago, black steer, two years old, branded AP on right hip. Jas. D. Powe (2-37-5 w 3).

STOCKHOLM, Sask.—Since last December, 1905, two red summer calves, one a steer, and the other a heifer, both in very poor condition. Volmer Th. Moller (2-19-3 w 2).

SALTCOATS, Sask.—Brown mare, white face, hind feet white to hocks, 1,000 pounds, no brand visible. Animal has been in the district for the last two years. W. Moffat.

SHEHO, Sask.—Aged spotted pony mare, with colt at foot; large red cow, with blurred brand on left ribs, right horn disfigured. F. Gilkeson (6-30 w 1).

WAWOTA, Sask.—Small yearling heifer, red, white under body. Wm. Rowbotham (14-11-1 w 2).

HILLESSEN, Sask.—Three calves (been in district since middle of Oct., '05) as follows: One heifer, light roan; one heifer, red; one steer, brindle and red. Wm. J. Ealing (22-13-6 w 2).

BONNE MADONE, Sask.—Red heifer, with white spot on forehead, white stripe down back, all four feet white up to the knees, looks to be about eighteen months old. Jas. Simofot.

LIPTON, Sask.—Red-and-white steer, three years old; tag in right ear, inscribed "F. G. Whittingham." G. Griffiths (18-23-14 w 2).

SALTCOATS, Sask.—Since September 1, 1905, red yearling heifer, no visible brand. Hugh Porter, (2-23-2 w 2).

SALTCOATS, Sask.—September 15, 1905, two small yearling steers, no visible brands. Potter Bros. (4-23-2 w 1).

LEMBERG, Sask.—Black heifer, about six months old; also two red heifers about six months old. Metro Hnylica (22-25-10 w 2).

CRYSTAL SPRINGS, Sask.—Red-and-white spotted cow, with long horns. William Dash (N. W. 24-13-6 w 2).

LIPTON, Sask.—Red heifer calf, little white on belly, no brand. Messrs. Goldsmith & Pringle (16-22-13 w 2).

GOSSIP.

ONE OF ALBERTA'S MOST SUCCESSFUL INSTITUTIONS.

It must always be a matter of great satisfaction to the public generally to see an institution flourish which aims at presenting to young people the possibility of making the best of life. Such an institution is Alberta College, Edmonton. This college is only two years old, yet it has a building and campus worth \$50,000, and has now a registered attendance of about 160 students. Its Principal J. H. Riddell, B. A., B. D., holds a foremost rank among the educationists of the West. Few men have the same power to inspire young people to do and be their best. His constant motto is the best culture possible, but always actuated and impelled by the noblest motives.

The college has several departments of work, and is eminently fitted to meet the needs of the young country. Its course aims at combining the theoretical and practical in education. A young man from the farm can go into the college and take a six months' course in reading, writing, arithmetic, grammar, spelling and bookkeeping. While taking these, he can find a comfortable home in the college at a very moderate expense. The whole atmosphere of the college is designed to call out the best that is in the young person.

A young woman can go there, take up similar studies, with a complete course in music. There are five pianos in the building in constant use. She, also, can find a home in the building, where she is under the supervision of a cultured lady superintendent.

A complete business education for both men and women can be secured in large spacious rooms, designed for the purpose.

All the work is carried on in bright, airy rooms, heated with steam, and lighted with electricity. The business department is one of the best equipped west of Brandon. The people of Alberta should rejoice that these facilities are placed within reach of the young people, and that it is no longer necessary for young men and women to go to Toronto, or some other Eastern city, for an education.



Rough, icy roads, sharp snags, or the hardest wear won't hurt **ARMOUR CLAD** Lumberman's and Boots—they're made to stand rough usage.

Weatherproof, waterproof, snag proof, comfortable. All styles. Get a pair this winter. "The mark of quality" on every pair.



America's Leading Horse Importers



Another sweeping victory at the LEWIS & CLARK EXPOSITION Portland, Oregon.

Our Percheron and French Coach stallions won every First Prize and every Championship.

McLAUGHLIN BROS.,

St. Paul, Minn. Columbus, Ohio. Kansas City, Mo.

HAWTHORN BANK STOCK FARM CLYDESDALES, HACKNEYS & SHORTHORNS

A new importation just arrived. can show you a larger selection of strictly high-class stallions than any importer in the country. Twenty-four stallions and a few mares on hand to select from, sons and daughters of such noted sires as Hiawatha Marcellus, Baronson, Moncrief Marquis, Lord Stewart, Hillhead Chief, etc. I have the pick of the two-year-old colts from the Bridgebank Stud, the late home of Hiawatha, and the present domain of the two champions, Marcellus and Hiawatha Godolphin. In the lot are: Baron Cochrane, brother to Baron Stirling, last year's Chicago champion; Baron Graham, out of the sister of Marcellus; Baron Wales, out of the great Prince o Wales mare, Swallow. In SHORTHORNS, I am offering the best selection I ever had on hand, from calves up to two years, and quite a few of them just newly imported.

If you are in need of a Clydesdale, Hackney or Shorthorn, write, or come and see me. A FEW RELIABLE SALESMEN WANTED. JOHN GRAHAM, Carberry, Man.

AS CATTLE CAN BE BOUGHT RIGHT FROM

Manitoba's Leading Shorthorn Herd

Among those offered being Nonpareil Prince, a straight Nonpareil two-year-old, winner of first at Winnipeg, 1904-5, and Fairview Prince, same age, another winner this year, and younger bulls fit for service. Am crowded for room, hence have heifers and cows for sale at rock-bottom prices.

JOHN G. BARRON, Carberry, C.P.R., Fairview Siding, C.N.R.

ADVERTISE IN THE FARMER'S ADVOCATE.

Boog Spavin

Lameness resembles bone spavin, but the hump is in front of the true hock joint, a little to the inner side, and soft and yielding, hardening sometimes as the case grows old.

Fleming's Spavin Cure (Liquid)

is a special remedy for the soft and semi-solid humps that make horses lame—Boog Spavin, Thoroughpins, Splint, Curb, Capped Hock, etc. It is a liniment to bathe the part, or is a simple blister. It is a remedy unlike any other—doesn't irritate and can't be limited. Easy to use, only a little required, cures the lameness, takes the hump, leaves no scar. Money back if it ever fails, leaves no scar. Money back before ordering. It tells all about this remedy, and tells what to do for blemishes of the hard and bony kind.

FLEMING BROS., Chemists,
48 Front Street, West, Toronto, Can.

DEHORNING STOPS LOSS.

Cattle with horns are dangerous and a constant menace to persons and other cattle. Dehorn them quickly and with slight pain with a **KEYSTONE DEMORNER**. All over in 2 minutes. Not a harsh method. Leaves a clear, clean cut. Cows give more milk; steers make better beef. Send for free booklet. **L. J. McNamee, Victoria, British Columbia.**

TERRA NOVA STOCK FARM HERD OF ABERDEEN-ANGUS CATTLE.

All the best families represented. Some fine young bulls for sale from both imported and home-bred cows. Prices reasonable. **M. S. Martin, Houthwaite, Man.**

YORKSHIRES.

Our present offering is:—20 boars and sows, April farrow; 10 boars and sows, May farrow; 16 boars and sows, June farrow; 1 two-year-old boar (imported); 1 yearling boar, sired by imp. Dalmey Turk 2nd; 9 sows, over one year, three of these imported. We are quoting these pigs away down, as we are at present overcrowded. We can ship to any distance in light, strong crates, with self-feeder attachment. **WALTER JAMES & SONS, Rosser, Manitoba.**

Woodmere Stock Farm Neepawa, Man.

Shorthorns

For sale. My herd has always been FIRST on the ring where shown. Have on hand a number of young things of both sexes.

Clydesdales

A few Clydesdale Fillies for sale.

Yorkshire Pigs

Always a good supply of both sexes for sale. Not related.

PLYMOUTH ROCKS A SPECIALTY

STEPHEN BENSON

WILLOW BANK SHORTHORNS

Four bull calves, fit for service in 1906, sired by Alberta Prince—40190—, champion at the Calgary Spring Sale, 1905. Herd now headed by Nonpareil Victor—46240—, sired by Nonpareil Archer (imp.) dam, Primrose, also imported. Address:

D. SINCLAIR, - Innisfail.

SNAPS IN SHORTHORNS.

Bulls from six months to two years. Can supply several Winnipeg prize-winning Tamworth sows and one-year-old boar. Also Pekin ducks and White Brahma cockerels.

A. W. CASWELL, Neepawa, Man.

ONLY AN ACQUAINTANCE

A Scot, who served an Englishman last summer as guide and friend on a fishing trip, had a weakness for claiming relationship with all the influential families in that part of Scotland.

One day the Englishman met him on the road driving a pig, and saw a little fun.

"Well, Donald," said he, "is that one of your grand relations?"

"Oh, no," said Donald, quietly. "This is just an acquaintance—like yerse!"

BLACK LEG VACCINE FREE CUTTER'S BLACK LEG VACCINE "CALIFORNIA STOCKMEN'S FAVORITE"

Powder, String or Pill Form
(Sells for \$1 PER PACKAGE OF TEN DOSES)
To introduce, we will send one package and our booklets on Black Leg and Anthrax Free to each stockman who sends 6 cents postage and the names and addresses of twenty cattlemen state form of vaccine wanted. Address, **THE CUTTER LABORATORY, DEPT. 3, SAN FRANCISCO, CAL.**

QUESTIONS AND ANSWERS.

Veterinary.

ITCHING SKIN

What is the cause of fattening hogs scratching themselves? They are fed on pulped beets and barley and oats chopped. Can see no lice. Fattening cattle same.

G. S.

Ans.—There may be chicken lice or mites working, which are hardly visible, or it may be due to impurity of blood. We would advise giving sulphur in their food (in moderation) for cleansing the blood, but be careful to avoid leaving them out in rain or stormy weather. Would also wash with a solution of Zenoleum or other coal-tar preparation.

TETANUS.

Horse has lost control of his fore limbs. The muscles of neck, breast and shoulders are drawn as hard as a board, and his breast appears to be caved in. His fore feet cross each other when he moves, and he trips and falls. He suffers terrible agony.

T. A., W. B.

Ans.—The symptoms given indicate tetanus, and if this diagnosis be correct, he will be either dead or better before you see this. If he is still alive, give him a purgative ball of 8 drams aloes and two drams ginger, and follow up with 2 drams solid extract of belladonna twice daily, and keep him in a box stall without exercise.

V.

SPEEDY CUT.

Horse's knee and cannon are swollen. They were the same last spring, but the swelling almost disappeared. Would heavy drawing or driving on icy roads cause it?

S. D.

Ans.—The horse has struck his knee with the opposite foot. This is called speedy cut. Driving on icy roads would tend to cause the accident in a horse predisposed. It is probable there is an abscess at the seat of injury, and if so, it must be lanced, and the cavity injected twice daily with a five-per-cent. solution of carbolic acid or other antiseptic until healed. It would be wise to get a veterinarian to operate. If no abscess is present, bathe well with hot water three times daily, and after bathing rub well with camphorated liniment. If a swelling remains after inflammatory action ceases, apply a blister.

V.

LAME COLT.

Yearling colt became suddenly lame two months ago. The leg swelled, and is still swollen, especially the hock; the lymphatics are quite tender. We have purged and fomented, as advised by our veterinarian.

T. J. M.

Ans.—This is a stubborn case of lymphangitis. As you have purged him already it will not be necessary to do so again. Feed lightly on easily-digested food, and give 20 grains iodide of potash in his food night and morning. If he loses appetite reduce the dose to 15 grains. Continue bathing the lymphatics and hock with hot water frequently, and after bathing rub well with camphorated liniment. When the soreness disappears, if the hock remains large, blister it repeatedly in the ordinary manner so often described in these columns. Keep him quiet until soreness disappears.

V.

MARE OUT OF CONDITION.

Pregnant mare was worked all summer. She is three years old. She got thin, but is gaining flesh lately. Her hair is dry, and stands on end, and her legs swell some every night. She gets a little exercise every day. Would either of the following prescriptions be safe and good for her:

1. Equal parts nitrate of soda, nuxvomica, gentian and sulphate of iron. Dose, a teaspoonful night and morning.

2. Five pounds each ground corn, oats and bran, 5 ounces oil meal, dessert-spoonful gentian, teaspoonful sulphate of iron, 4 pound salt. Dose, 1 pound.

N. A. M.

Ans.—The first prescription is a fair tonic. The second has practically no medicinal properties, but, of course, contains nutriment. Take equal parts nitrate of potash, sulphate of iron, gentian, ginger, nuxvomica, and bicarbonate of soda; mix, and give a tablespoonful twice daily. Give regular exercise, and do not be alarmed if the legs continue to swell, as some mares, when pregnant, have this predisposition.

V.

GOSSIP.

GRANARIES.

Sir,—In a recent issue, someone from Vegreville, Alta., asks for a plan for a granary which will hold from five to ten thousand bushels. I think he would do much better if he would build a number of portable granaries. I have a dozen, which I have used for four years, and would not think of using anything else. Some three years ago I wrote a description of them for your paper. Since then, I have had so many enquiries by letter that I have taken the trouble of making careful plans and written a description, which I send to anyone who writes. The only pay asked is that he will return them to me as soon as he is done with them so that other enquirers may have them. **N. WOLVERTON, Brandon.**

THE BEAUTIES OF SOUTHERN ALBERTA.

Southern Alberta is a beautiful country in both scenery and climate. The latter is neither too hot in summer nor too cold in winter. Both seasons have their delights, but, personally, I prefer summer, when nature is clothed in green. To a traveller going south, and to look out of the car window and see here and there fields of waving grain, cattle feeding on the side of some butte or hill, river or creek in which are standing some peaceful horses or cows, and then to look westward and see the Rockies on the horizon, with the golden sun sinking to rest behind them, is a glorious sight never to be forgotten.

AN OBSERVER.

STOCK FOOD RECOMMENDED BY AN EMINENT AUTHORITY.

Professor Thomas Shaw, in a recent article in the Orange Judd Farmer, New England Homestead and American Agriculturist, with reference to Stock Foods, says: "They will always be found useful when properly made. The time will never come when intelligent feeders will cease to use them. The necessity for using them and the advantage therefrom will become greater as foods become increasingly dear. Whether it will be profitable to feed them will depend upon the necessity for using them and on their cost. My special desire, however, is to show that they have a place in the economy of intelligent feeding. The question of price must be fought out between buyer and seller."

With this indorsement from one of the foremost authorities on feeding in the country, it would seem that the value of feeding tonics, etc., is unquestionable; therefore, the only problem is at what price such foods cease to become profitable.

In Bulletin No. 406, issued by the Hatch Experimental Station, they recommend the use of certain medicinal tonics to be given in one-tablespoonful doses once a day for 10 days, then omit for three days, then give 10 days more. They estimate the cost of the tonics they recommend at 20 cents per pound.

Dr. Hess Stock Food, formulated by Dr. Hess, a regular graduate of medicine and also veterinary surgery, contains the best tonics known to science, together with the salts of iron, which are the greatest known blood and tissue builders, the nitrates of sodium and potassium which assist in eliminating the poisonous waste material from the system, and laxatives which regulate the bowels.

This preparation is manufactured by Dr. Hess & Clark, Ashland, Ohio, and is sold on a written guarantee at five cents per pound in 100-lb. sacks, smaller quantities at a slight advance. At this price, can anyone question the economy of feeding such a compound? It costs less than a penny a day to feed this preparation to a horse, cow or steer, and but three cents per month for the average hog. Consider how little additional increase in weight or milk is necessary to cover the cost of this preparation.

Mr. Alfred Mann, dealer in Shorthorns, Rowmanville, Ont., says: "I take great pleasure in making known to you and others the remarkable results I have found from the use of Dr. Hess Stock Food."

"There are so many stock foods that are almost useless that I take pleasure in testifying to the merits of an article which is of such great value as Dr. Hess Stock Food, and it will be a pleasure at any time for me to recommend it to my neighbors."

USED MEN AT THE OFFICE UP WOMEN IN THE HOME AND CHILDREN AT SCHOOL TIED EVERY day in the week and OUT every week in the year men, women and children feel all used up and tired out.

The strain of business, the cares of home and social life and the task of study cause terrible suffering from heart and nerve troubles. The efforts put forth to keep up to the modern "high pressure" mode of life in this age soon wears out the strongest system, shatters the nerves and weakens the heart. Thousands find life a burden and others an early grave. The strain on the system causes nervousness, palpitation of the heart, nervous prostration, sleeplessness, faint and dizzy spells, skip beats, weak and irregular pulse, smothering and sinking spells, etc. The blood becomes weak and watery and eventually causes decline.

Milburn's Heart and Nerve Pills

are indicated for all diseases arising from a weak and debilitated condition of the heart or of the nerve centres. Mrs. Thos. Hall, Keldon, Ont., writes: "For the past two or three years I have been troubled with nervousness and heart failure, and the doctors failed to give me any relief. I decided at last to give Milburn's Heart and Nerve Pills a trial, and I would not now be without them if they cost twice as much. I have recommended them to my neighbors and friends."

Milburn's Heart and Nerve Pills 50 cts. per box or 3 for \$1.25, all dealers, or The T. Milburn Co., Limited, Toronto, Ont.

Shorthorn Bulls, Heifers and Heifer Calves for Sale.

The get of Sir Colin Campbell (imp.)—28878— and General—30399—. Cows all ages, in calf or calf at foot. Seventy head to choose from. Two Clydesdale Stallions two and three years old. Also mares and fillies. Leicester Sheep, both sexes. Stock always on hand. **Geo. Rankin & Sons, Hamiota, Man.**

Grandview Herd.
Scotch Shorthorns
Herd headed by Trout Creek Favorite—53595—.
Stock for sale at all times. Correspondence solicited.
JAS. WILSON, Innisfail, Alberta
Farm 3 miles south of town

SITTITON STOCK FARM

High-class SCOTCH SHORTHORNS FOR SALE

Sittiton Herd 7th, my great show and stock bull, is now for sale. (Three times champion at Winnipeg, Man.; three times champion at Regina's big Fair; SECOND at World's Fair at Buffalo, and other prizes too numerous to mention.)

GEO. KINNON, - Cottonwood, Sask.

BUNNY SLOPE SHORTHORNS

I have now for sale one 2-year-old red bull (imp.) and six extra well-bred yearling bulls and several cows and heifers. Prices reasonable and quality right.

JOHN RAMSAY, Priddis, Alta.

Rushford Ranch

Young Stock for Sale.

Sired by Trout Creek Hero and Loyalty. Also several cows. Write for particulars.

R. K. BENNET, Box 95, Calgary.

SHORTHORNS and TAMWORTHS.

Prizewinners at Winnipeg, Brandon and New Westminster. Select stock always for sale.

T. E. M. BANTING, Banting, Man.

Advertise in the Advocate

THE OFFICE
IN THE HOME
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in the week and
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QUESTIONS AND ANSWERS.
Veterinary.

LUMP JAW.

Steer had a lump on his jaw about two months ago. I had it opened a month ago, but it has grown again to about its former size. J. H. W.

Ans.—This is lump jaw, and is not always curable. The iodide of potassium treatment has given the best results. This consists in giving iodide of potassium three times daily, commencing with dram doses, and daily increasing the dose by say 15 grains, until appetite and desire for water fail, tears run from the eyes, and saliva from the mouth. As soon as any of these symptoms appear, cease giving the drug. Repeat treatment in two months, if necessary. If pus forms, lance, and insert 10 grains corrosive sublimate, rolled in tissue paper, into the opening, and in a few days you will be able to pick out some detached tissue. Then dress daily with a five-per-cent. solution of carbolic acid. V.

THRUSH.

My horse has thrush in fore feet. The frogs are practically rotting away. He stands on board floor, clear of all dirt. Give sause and cure. W. A.

Ans.—The cause of thrush is the more or less continued presence of irritant material in the cleft of the frog. As your horse stands in a stall free from dirt, etc., the irritants must gain entrance when he is out of the stall, and are not removed. Some horses are so predisposed that slight exciting causes produce the disease. Clean the cleft of the frog out thoroughly, and keep it clean; remove all partially-detached horn, and dress with calomel once every second day, until all discharge ceases. Work the calomel well down to the bottom of the cleft. Neglected, or very severe cases, are liable to complications that require the personal attention of a veterinarian. V.

PARTIAL LUXATION OF PATELLA.

Colt, seven months old, got hurt about three months ago. The cap on stifle will not stay in, but comes out when he walks and goes back with a snap. It is different from luxation of the patella. I have blistered and painted with iodine without avail. Would it be well to place him in slings? C. E. H.

Ans.—The patella becomes partially dislocated and slips back with a click. In all probability you will notice a puffy enlargement just below the joint on the front of the leg. It is not probable he will ever be right, but he should make a serviceable horse. It would not be wise to place him in slings. Repeated blistering is the best treatment. Keep him as quiet as possible in a box stall. Do not allow him out of the stall at all. Take 1 1/2 drams each of biniodide of mercury and cantharides, and mix with 2 ounces vaseline. Clip the hair off the part; tie him so that he cannot bite it; rub well with the blister once daily for two applications; on the third day wash off and apply sweet oil; let his head down now, and oil every day. As soon as the scale comes off, blister again, and once monthly after this, until you can turn him out on grass. V.

HORSES COUGHING.

Young horses had distemper last winter, and this winter are coughing again.

1. Should the stable be disinfected, and how?
2. Is there any preventive measures?
3. What is the treatment for the disease? D. McL.

Ans.—It is not probable your horses have a second attack of strangles or distemper.

1. It is good practice to disinfect stables after an outbreak of strangles. Sweep and dust thoroughly, then wash with a hot, five-per-cent. solution of carbolic acid (the crude acid will do). Follow this with a thorough coat of hot lime wash with five-per-cent solution carbolic acid. It is good practice to give a second coat of whitewash.

2. The only preventive measures is prevent exposure of the virus.

3. Isolate; keep comfortable in well-ventilated stables; poultice the throats; open all abscesses as soon as ready; give internally 2 to 6 drams hypsulphite of soda three times daily. If complications arise, such as heavy breathing, failure to eat, etc., send at once for your veterinarian. V.

A WORD TO THE SICK

Who are Tired of Drugs



Free use of my Electrical Invention until you are cured. Not one Penny in advance or on deposit. Gives a current instantly felt, or I forfeit \$5,000.

I think I know and appreciate the value of drugs as thoroughly as any living doctor. They fill a great need, and the world could probably not do without them, but during my forty years' practice I have heard the stories of tens of thousands of people who have used drugs, until many of them were absolute wrecks from the terrible habits contracted, so I also knew their danger. What is to be done for these unfortunates? Surely it cannot be that they are stranded on this earth without help in some direction? If this were so, it would indeed be a cold world. But I dispute any such state of affairs. I believe there is a remedy for every ailment, and the sufferer who finds it finds health. Might not the remedy in your case be ELECTRICITY? We know now to a certainty that electricity is the mainspring of every living thing—it is life itself upon this earth. Can anything more natural be offered as a health and strength giver? And I ask you, have you tried it? If you have not, there is a bright star leading you to a happy future. If health is what you want, let me make you a proposition. I do not recommend my Electrical Invention in fevers, pneumonia and the like, but if you suffer from any of the troubles mentioned below, get my famous Dr. Sanden Electric Herculex (latest patent March 7, 1905) upon

60 DAYS' FREE TRIAL

and if you are well satisfied at the end of that time, pay me for it—in many cases only \$5.00. If not satisfied with the results, return it to me, at no cost to you whatever. If you prefer to buy outright I have not been curing people for 40 years without knowing what I can do, so I run no risk whatever in giving it on trial to responsible persons.

I especially solicit a call or letter from sufferers from Rheumatism, Lumbago, Sciatica, Lame Back, Stomach, Liver and Kidney troubles, Ataxia, Exhaustion from mental or physical excesses, nervousness, atrophy, varicocele and general ill-health. You wear the appliance comfortably during sleep, and it fills you with a soothing, strengthening current, showing a decided benefit from the first night's use, and then a steady building up until well. You may be skeptical about electricity, but if you neglect the opportunity I offer you for a trial of it, you are most likely throwing health and happiness away.

As the originator of the Electric Body-Battery system of treatment, my success is the envy of many, and my appliances are, of course, imitated (what good thing is not?), but my great knowledge to advise and direct my patients is mine alone, and cannot be imitated. I give it freely with my invention to my patients. My Herculex is guaranteed to give a good current for at least a year.

Call or send for my Electric Herculex to-day, or if you want to look into the matter further, I have two of the best little books ever written on electricity and its medical uses I would like to send to you. Sent free, sealed, upon request.

DR. C. F. SANDEN, 140 Yonge Street, TORONTO, ONTARIO.

Also complete establishments, with competent physicians in charge, at

- San Francisco, Cal., 997 Market St.
- New York, 1151 Broadway.
- Montreal, Can., 132 St. James St.
- Paris, France, 14 Rue Taitbout.
- London, Eng., 15 Hanover St.
- Stockholm, Sweden, 36 Malmiskilnads.
- Calcutta, India, 7 Wellsley Place.
- Bombay, India, 75 Hornby Road.
- Madras, India, 162 Mount Road.
- Cape Town, South Africa, 12 Plein St.
- Johannesburg, South Africa, 77 Eloff St.
- Yokohama, Japan, 51 Yamashita St.
- Tokio, Japan, 15 Guiza St.
- Hong Kong, China, 34 Queens Road.
- Canton, China, 73 Maine St.
- Buenos Aires, South America, 15 Artes.
- Rio Janeiro, Brazil, Largo el Carioca No. 20.
- Montevideo, South America, 18 de Julio, 122.
- Sao Paulo, South America, 15 de Nov. No. 62.
- Santiago, Chili, Cassila No. 2.
- Lima, Peru, Quidre No. 17.

SCOTCH SHORTHORNS

- 9 heifers, yearlings.
- 29 heifers, calves.
- 4 bulls, yearlings.
- 26 bulls, calves.

All out of imported sires and dams.

Prices easy. Catalogue.

John Clancy, H. CARGILL & SON, Manager. Cargill, Ont.

T. DOUGLAS & SONS, Strathroy, Ont.

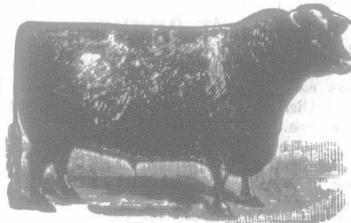
SHORTHORNS and CLYDESDALES

Present offerings: 19 young bulls, of No. 1 quality, ready for immediate service; also cows and heifers of all ages. Also one imp. stallion and two brood mares. Prices reasonable. Visitors welcome. Farm one mile from town.

Pine Grove Stock Farm.

Breeders of High-class Scotch Shorthorns, Choice Shropshire Sheep, Clydesdale and Hackney Horses.

Herd catalogue on application. Address: C. W. WILSON, Supt., Rockland, Ont. W. C. EDWARDS & Co., Limited, Props. om



ARTHUR JOHNSTON, Greenwood, Ont.

- 8 high-class imp. bulls.
- 2 excellent yearling bulls, home-bred.
- 17 first-class bull calves.

Also cows and heifers, imp. and home-bred. Most of the above imp. or sired by imp. bulls and from imp. dams.

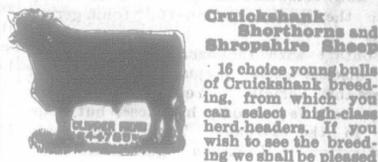
Maple Lodge Stock Farm. 1854.

An excellent lot of Shorthorn bulls and heifers for sale now. Have choice milking strains. Have a few Leicesters left yet. Bargains in ewes.

A. W. SMITH, Maple Lodge, Ont.

Advertise in the Advocate

Maple Shade



Cruickshank Shorthorns and Shropshire Sheep. 16 choice young bulls of Cruickshank breeding, from which you can select high class herd-heads. If you wish to see the breeding we shall be pleased to mail a catalogue.

JOHN DRYDEN & SON, Brooklin, Ont.

Stations { Brooklin, G.T.R. Myrtle, C.P.R. Long-distance telephone.

Spring Grove Stock Farm Shorthorn Cattle and Lincoln Sheep



First herd prize and sweepstake, Toronto Exhibition, 8 years in succession. Herd headed by the imported Duthie-bred bull, Roy Morning, and White Hall Ramdam. Present crop of calves sired by imp. Prince Sunbeam, 1st, Toronto, 1905. High-class Shorthorns of all ages for sale. om Also prizewinning Lincolns. Apply

T. E. ROBSON, Ilderton, Ont.

Brampton Jersey Herd—We have now for immediate sale 10 bulls, from 6 to 18 months old, descended from St. Lambert or imported stock; also females of all ages. In order to reduce our stock, we are making a special offer. For full particulars address B. H. GULL & SON, Phone 68. om Brampton, Ont.



Test of the Scales

There is not a time in the life of a mature beef when Dr. Hess Stock Food cannot be fed with a decided profit, as the test of the scales will prove. Dr. Hess Stock Food causes every organ to perform its proper function, it furnishes the laxatives so liberally supplied in grass, improves digestion and assimilation, regulates the kidneys and liver, and in fact forces growth and development by compelling the system to appropriate to bone and muscle building the nutrition contained in the food eaten. One of the first rules for skillful feeding recognizes the fact that it is not the amount of food consumed, but the amount digested that produces the profit. Modern, scientific feeding, therefore, not only has to do with development of bone, muscle, fat, etc., but is most concerned in digesting it, and at the same time maintaining perfect health and condition.

DR. HESS STOCK FOOD

is the prescription of Dr. Hess (M. D., D. V. S.), containing tonics for the digestion, iron for the blood, nitrates to expel poisonous material from the system, laxatives to regulate the bowels. The ingredients of Dr. Hess Stock Food have the endorsement of the Veterinary Colleges and the Farm Papers. Recognized as a medicinal tonic and laxative by our own government, and sold on a written guarantee at

7¢ per pound in 100 lb. sacks; 25 lb. pail \$2.00.
Smaller quantities at slight advance. Duty paid.

A tablespoonful per day for the average hog. Less than a penny a day for horse, cow or sheep. If your dealer cannot supply you, we will.

Remember, that from the 1st to the 10th of each month, Dr. Hess will furnish veterinary advice and prescriptions free if you will mention this paper, state what stock you have, also what stock food you have fed, and enclose two cents for reply. In every package of Dr. Hess Stock Food there is a little yellow card that entitles you to this free service at any time.

Dr. Hess Stock Book free, if you will mention this paper, state how much stock you have and what kind of stock food you have used.

DR. HESS & CLARK, Ashland, Ohio, U. S. A.
Also manufacturers of Dr. Hess Poultry Pan-a-cc-a and Instant Louse Killer.

Instant Louse Killer Kills Lice.



A Test Will Tell

What Liquozone Can Do for You -- and It Is Free.

You who are waiting—we ask you again to try Liquozone; to try it at our expense. You'll regret this delay when you learn what the product means to you. Do as millions have done—stop doubting; give Liquozone a test. Then judge it by results. Germ diseases—and there are scores of them—call for a germicide. Those are the diseases to which Liquozone best applies. Don't cling blindly to old-time remedies, if you don't find them effective. Let us prove the power of the new.

What Liquozone Is.

The virtues of Liquozone are derived solely from gases. The formula is sent to each user. The process of making requires large apparatus, and from 8 to 14 days' time. It is directed by chemists of the highest class. The object is to so fix and combine the gases as to carry into the system a powerful tonic-germicide.

Contact with Liquozone kills any form of disease germ, because germs are of vegetable origin. Yet to the body Liquozone is not only harmless, but helpful in the extreme. That is its main distinction. Common germicides are poison when taken internally. That is why medicine has been so helpless in a germ disease. Liquozone is exhilarating, vitalizing, purifying; yet no disease germ can exist in it.

We purchased the American rights to Liquozone after thousands of tests had

been made with it. Its power had been proved, again and again, in the most difficult germ diseases. Then we offered to supply the first bottle free in every disease that required it. And over one million dollars have been spent to announce and fulfill this offer.

The result is that 11,000,000 bottles have been used, mostly in the past two years. To-day there are countless cured ones, scattered everywhere, to tell what Liquozone has done.

But so many others need it that this offer is published still. In late years, science has traced scores of diseases to germ attacks. Old remedies do not apply to them. We wish to show those sick ones—at our cost—what Liquozone can do.

Where It Applies.

These are the diseases in which Liquozone has been most employed. In these it has earned its widest reputation. In all of these troubles we supply the first bottle free. And in all—no matter how difficult—we offer each user a two months' further test without the risk of a penny.

- | | |
|---|---|
| Asthma
Abscess Anemia
Bronchitis
Blood Poison
Bowel Troubles
Coughs Colds
Consumption
Contagious Diseases
Cancer Catarrh
Dysentery Diarrhea
Dyspepsia Indigestion
Eczema Erysipelas
Fever Gail Stones | Gout Gonorrhea Gleet
Hay Fever Influenza
La Grippe
Leucorrhoea
Malaria Neuritis
Piles Quinsy
Rheumatism
Scrofula Syphilis
Skin Diseases
Tuberculosis
Tumors Ulcers
Throat Troubles |
|---|---|

Also most forms of the following:
Kidney Troubles Liver Troubles
Stomach Troubles Women's Diseases
Fever, inflammation or catarrh, impure or poisoned blood—usually indicate a germ attack.
In nervous debility Liquozone acts as a vitalizer, accomplishing remarkable results.

50c. Bottle Free.

If you need Liquozone, and have never tried it, please send us this coupon. We will then mail you an order on a local druggist for a full-size bottle, and will pay the druggist ourselves for it. This is our free gift, made to convince you; to let the product itself show you what it can do. In justice to yourself, please accept it to-day, for it places you under no obligations whatever.

Liquozone costs 50c. and \$1.

CUT OUT THIS COUPON.

Fill it out and mail it to The Liquozone Company, 428-464 Wabash Ave., Chicago.

My disease is.....
I have never tried Liquozone, but if you will supply me a 50c. bottle free, I will take it

34
Give full address, write plainly.
Note that this offer applies to new users only. Any physician or hospital not yet using Liquozone will be gladly supplied for a test.

Hides, Furs SHEEPSKINS, etc.

Consignments Solicited. Top prices.
E. T. CARTER & CO., Toronto, Ont.

MOUNT FARM BERKSHIRES

Choice-bred stock now for sale. Pairs supplied not akin. Inspection requested, and correspondence invited and promptly answered.

C. G. BULSTRODE,
Mount Farm. Qu'Appelle, Assa.

SHIP US YOUR Hides, Fur, Tallow, Pelts, Wool, Ginseng and Seneca. Buy Guns, Traps, Decoy, etc. of us. Write for price list catalogue and shipping Tags. Mention this Paper.



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ALL FOR 10 CENTS! We send, postpaid, for Only 10 Cents, 50 Fine Silk and Satin Remnants, beautiful colors, corners and squares, 6 Yards Lace, 6 Yards Embroidery Silk and a handsome Gold Plated Ring. All sent postpaid for ONLY TEN CENTS. Address, **Fancy Silk Co., P.O. Box 1528, New York, N. Y.**

GOSSIP.

Andrew Graham, of the Forest Home Farm, Pomeroy, reports all lines of stock in fine condition. Recent sales are: "To J. B. Hodgson, of Birtle, the yearling Clydesdale stallion, Pride of Derwent, by Pride of Glassnick (imp.) [11135], he by the celebrated Prince Sturdy (10122), and out of Elsbeth Macgregor (7519), by Macgregor, he by Darnley. His dam, Floss (25201), a very choice mare, by Linkwood Lad (imp.) (1818), and out of Rosalie (imp.) (457). This colt has plenty of size, breeding and quality, and should prove a very profitable investment in the hands of his new owner. The two-year-old bull, Autumn Prince, to Mr. Thos. Hurton Carman. The right good yearling bull, Fry Prince, to Jacob Courtt, Spelling; a very fine calf, out of Isabelle the 8th, to David Weintz, Plum Coulee. Sales of Yorkshire boars and sows have been good of late. We have for sale a grand year-old Clydesdale stallion that weighs 1,850 lbs. We can also spare our stock bull, Golden Standard; one bull, two years old, and a couple of yearlings. We have the finest lot of young heifers, bull and heifer calves, that we have ever offered for sale, and we will sell at rock-bottom prices, as we are crowded for room."

A MEMORY OF XMAS.

The schoolhouse at the corner of the Tenth
And of the Second gravel Sideroad,
West,
Is not a mansion, rather like a barn,
—The quaintest of our memories, and the best.

'Tis filled to-night; not little ones alone,
Young men and maidens, matrons fat and fair,
And sturdy greybeards in their Sunday black
Are jammed in gleeful expectation there.

It is the evening of the Christmas-tree.
The pretty teacher, blushing like a rose,
Calls to the Chair a Member of the Board
With tangled hair, bow legs and pigeon toes.

An thus he speaks: "Miss Sutherland an' frien's,
I ain't no public speaker, as ye know,
An' this yere programme is amazin' long,
I'm jist a starter—here to holler "Go."

Now pig-tailed maids declaim about a doll,
And boys in painful boots perspire and fret,
Reciting the Address of Spartacus
Until with nervousness they all—forget.
The programme wears away amid applause,
Until the final number—'tis a song,
"The Maple Leaf," perchance, or "Hold The Fort,"
With Old Boys' bass particularly strong.

And now the Tree, its flashing tapers bright,
Its tinsel ornaments against the green,
Its candy stockings, packages galore,
Celestial vision, lovely fairy-scene.

Fur-coated, and with bells about his waist,
Doth Santa Claus the Mighty now appear.

The greybeards clap, the matrons smile in pride,
And all the juveniles arise and cheer.

The presents—What a wonderful array,
What shouts of laughter fill the tiny hall,
When a young man receives a woolly sheep,
Or some old bachelor secures a doll.

At last the tapers flicker and go out,
Now bare and mournful is the stricken tree;

The sleigh bells jingle faintly on the air—
The night is but a pleasant memory.

Let Colver sing and Ada Roban play,
And the city's four-stricken whirl,
I would prefer the country Christmas 'Tis so.

And the drive homeward with a pretty wif,
Among

News.

QUESTIONS AND ANSWERS.
Veterinary.

BONE SPAVIN.

Horse has a jack spavin coming on. What is the best treatment? He is not much lame yet, only on the start, and only about two steps then. J. D. H.
 Ans.—Before treating it would be just as well to make sure of your diagnosis, by applying the spavin test. Flex the hock lightly by lifting the limb up and holding it close to the body for a few minutes. Then let the foot down and trot the animal off smartly. If the lameness is due to spavin it will be much more pronounced after giving this test. The best treatment for bone or "jack" spavin is to fire and blister. Have it done by a competent veterinarian.

TUBERCULAR FIG.

I killed a pig, and found its liver about twice the normal size, and full of nodules which contained a yellowish fluid. My veterinarian told me it was tuberculous, and the flesh was not fit for use. I burned the carcass.

1. Was my veterinarian correct?
 2. Is it contagious?
 3. Would the other pigs in the same pen be liable to contract the disease?
 4. How can a person tell when a pig is taking it?
 5. Is there any cure? J. V. B.
- Ans.—1. Your veterinarian was correct. There is no doubt the pig was tubercular, and where there is such extensive disease, the flesh should not be eaten.
 2. Yes.
 3. There is a danger, but not nearly so much when the liver is diseased as when the lungs are affected.
 4. No person can tell, as no symptoms are shown until the disease reaches such a stage as to interfere materially with the functions of the organ involved.
 5. No. V.

GOATS LACK GLOSS, ETC.

I have two black and one brown horse, all used and fed alike. They are fed good hay, oats, bran, carrots and potatoes, all in reasonable quantities. They are all well groomed twice daily, and the coats of the black horses are long and dry, and lack the silky appearance desired; while that of the brown horse is sleek and glossy.

2. How should a warm horse be cared for when brought into the stable?
3. State your method of grooming.
4. Should the hoofs be washed out as soon as the horses are brought in?

H. B. T.

Ans.—1. You have done all that you can do to keep the horses' coats fine. The color of the horse has no influence. It is impossible to keep the coats of some horses short and fine in cold weather. Nature demands a growth of hair so soon as the weather gets cold, and while grooming, blanketing, etc., will arrest this growth in some cases, and tends to do so in all, from reasons we cannot well understand, the results are only relative. The administration of drugs with the idea of improving the coat is not wise, as any drug that has such actions tends to cause fatty degeneration, and injures the animal, and, of course, no treatment can shorten the length of the coats. As it would be unwise to clip your horses this late in the season, you must wait until they shed in the spring to get a short, sleek coat.

2. He should be rubbed with cloths or wisps of straw until he cools off; of course, it takes a long time to rub a long-coated horse dry, but if rubbed for a few minutes and then covered with a warm, dry blanket, he will be comfortable.

3. Proper grooming consists in going thoroughly over the body with a currycomb and brush. The hair should be thoroughly disturbed by rubbing in both directions with the currycomb and then smoothing it down with the brush, after which he should be well rubbed with a cloth (called a rubber). The mane and tail should be brushed with a stiff brush, and the feet cleaned out with a hoof-pick, and, if necessary, washed. If any dressing is used on the hoofs, they should be dry when it is applied.

4. There is no objection to washing the hoofs out as soon as the horses are brought in, and in many cases it is advisable, but the washing should not extend above the hoof; that is, the legs should not be washed. V.

THE STRONG MAN WINS



Every day we have evidence that the weakling has no place in the busy humdrum life of to-day. It takes nerve and strength to go up against the obstacles we are now forced to encounter, and this the weakling lacks. Look about you and see the successful man of to-day—it matters not whether he be a merchant, lawyer or laborer—with head erect, eye clear, strength in his every movement. He is ready to tackle any problem with that enthusiasm which insures success.

I can make just such people of weaklings. I care not how long they have been so, nor what has failed to cure them. Let them wear my

Dr. McLaughlin's Electric Belt

every night as I direct, and in place of the weak-nerved, debilitated being I will show you a strong person, full of vigorous life, with nerves like steel and ready to look anyone in the fact and feel that he is the equal of the best of them and can do what they can do.

You will say this is promising—a great deal. I know it, and can show you evidence that I have done it for thousands of weak people, and every one of them has spent from \$50 to \$500 on drugs before they came to me as a last resort. Are you weak or in pain? Are you nervous or sleepless? Have you Rheumatism, Weak Back, Kidney Trouble, Weak Stomach, Indigestion or Constipation? Are you lacking in vitality? I can give you the blessing of health and strength. I can fill your body with vigor and make you feel as you did in your youth. My Electric Belt is worn while you sleep. It gives a soothing, genial warmth into the body. This is life—vigor.

Dr. McLaughlin: Port Arthur, Ont., Oct. 8, 1905.

Dear Sir,—I have received great benefit from your Belt. I understand the directions thoroughly, and my back is all right. I am not wearing it this last couple of weeks. I feel like a NEW MAN. I am satisfied with my investment all right, and would have written sooner but could not. I will advise anyone I see suffering to write to you and will praise your Belt to all I meet.

Yours truly, JAS. LAWLIS, Box No. 77.

My confidence in my method enables me to offer any man or woman, who will offer me reasonable security, the use of my

ELECTRIC BELT FREE UNTIL CURED.

CAUTION.—Don't be misled by imitators. Remember that electricity must be properly applied to cure, and that for your case there is but one way to apply it properly. Without that you might just as well not use it at all.

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FREE { CONSULTATION BOOK TEST.

IF YOU CAN'T CALL SEND COUPON FOR FREE BOOK.

Put your name on this Coupon and send it in.

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Send me your Free Book, closely sealed, and oblige

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THIS BEAUTIFUL STEEL RANGE \$30 — is yours for only — \$30

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To convince you that the WINGOLD STEEL RANGE is just what we claim for it, we will furnish you this handsome range, which is better made, better finished, more lasting than any steel range you can buy elsewhere at any price, we make you this THIRTY DAYS' FREE TRIAL OFFER. Send us our price, and we will send you the range with the understanding and agreement that you can use the range in your own home for THIRTY DAYS, during which time you can put it to every possible test, compare it with other stoves you have used, and with stoves used by your friends and neighbors, and if you do not conclude that, size for size, kind for kind, the range we send you is in every way better than any range you can buy from your dealer at home or elsewhere; if you are not convinced that you have made a BIG SAVING IN COST TO YOU, you can return the range to us at our expense and we will immediately refund your money with freight charges you paid.

THIS WINGOLD STEEL RANGE has six 8-inch lids; 18-inch oven, made of 16-gauge cold rolled steel; 15-gallon reservoir; large warming closet and high shelf; top cooking surface 30 x 34 inches; guaranteed to reach you in perfect order. Shipping weight 400 lbs. Thousands now in use and every one giving satisfaction.

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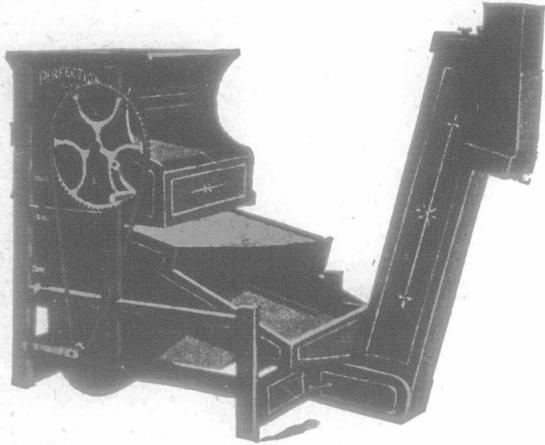
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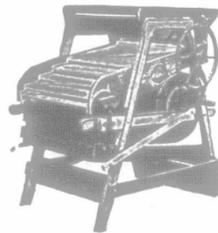
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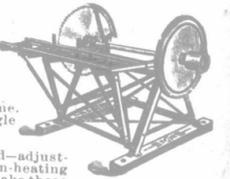
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and last so long a time. Frame of heavy angle steel strongly braced—absolutely no shake. Patented—adjustable, dust-proof, non-heating oil boxes, etc. We make these



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