

**PAGES
MISSING**



SYNOPSIS OF CANADIAN NORTH-WEST

HOMESTEAD REGULATIONS.

ANY even numbered section of Dominion Lands in Manitoba, Saskatchewan and Alberta, excepting 8 and 36, not reserved, may be homesteaded by any person who is the sole head of a family, or any male over 18 years of age, to the extent of one-quarter section of 160 acres, more or less.

Entry may be made personally at the local land office for the district in which the land is situated.

The homesteader is required to perform the conditions connected therewith under one of the following plans:

(1) At least six months' residence upon and cultivation of the land in each year for three years.

(2) If the father (or mother, if the father is deceased) of the homesteader resides upon a farm in the vicinity of the land entered for the requirements as to residence may be satisfied by such person residing with the father or mother.

(3) If the settler has his permanent residence upon farming land owned by him in the vicinity of his homestead, the requirements as to residence may be satisfied by residence upon the said land.

Six months' notice in writing should be given to the Commissioner of Dominion Lands at Ottawa of intention to apply for patent.

W. W. CORY,

Deputy of the Minister of the Interior.

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

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Manitoba, Alberta & Saskatchewan Points

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ON

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City Passenger and Ticket Agent.

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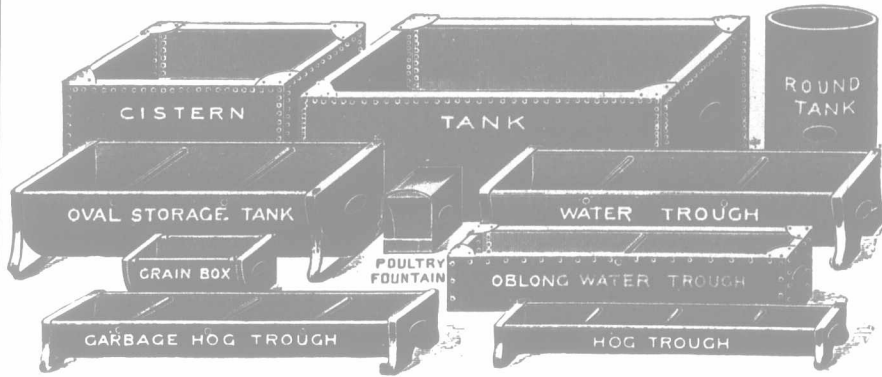
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Secretary.

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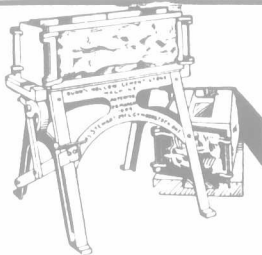
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Write for catalogue to Dept. O.

THE JAS. STEWART MFG. CO., LIMITED, Woodstock, Ont.

Farm Lands

IN

SASKATCHEWAN

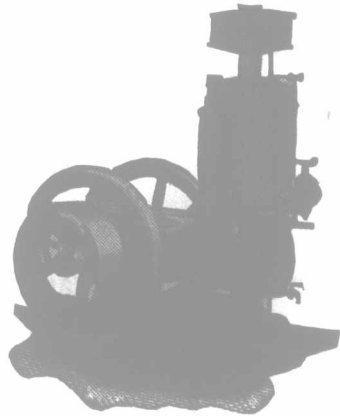
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Favorite in every great potato growing district. Get free catalog. **The Hoover-Prout Co., Lock Box 23, Avery, O.**

20,000 Acres Wheat Land

In the Famous Goose and Eagle Lake Country, with Home-steads AdJoining.

If you have Western Lands and wish to sell, kindly furnish us with description of it, the price per acre and terms of sale, and we will undertake to find you a purchaser.

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Thos. Southworth
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Central Prison Binder Twine will be supplied to farmers as follows:

600 feet per lb.,	11 1-2c. per lb.
550 " " "	10 1-2c. " "
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The twine is put up in 50-pound jute sacks, and is manufactured from **Select Fibre; Quality and Length Guaranteed.**

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the best protection you can give them. Money spent to this end is good investment, for the increased egg production will repay you with interest. If you want best protection with least possible trouble, do as the owners of the Rosetree Poultry Plant did with the building pictured above—cover it with

Rex Flintkote Roofing

It is an absolute protection against snow, rain, wind, sun and danger from flying sparks. No paper or tar about it. Each roll contains full directions and everything necessary to its perfect laying. Any farm-hand can do it.

Send for Free Samples

With them you also get a book, showing all kinds of buildings, from poultry houses to railroad terminals and public buildings, which are to-day proving the superiority of Rex Flintkote over all other roofings under all kinds of climatic conditions. Beware of the "just-as-good" kinds that cost half as much to make, yet sell almost at the Rex Flintkote price. This is your protection.

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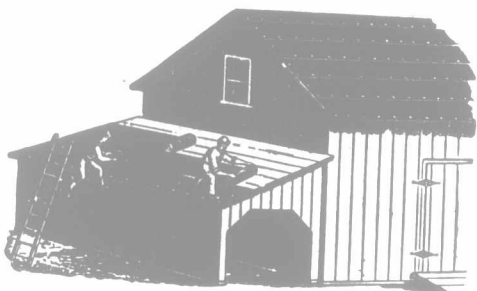
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PRICE: \$7.50 to \$8.00 per acre near railway; \$6.50 to \$7.50 per acre back from railway. In blocks of 5,000 acres and over, a special price of \$5.50 to \$6.50 per acre is given.

TERMS: Retail, \$2.00 per acre cash; wholesale (5,000-acre blocks), \$1.25 per acre cash. Balance in five equal annual installments; interest at 6 per cent.

ATTRACTIONS: Rich soil, mild climate, good markets, good railway facilities, cheap fuel, etc.

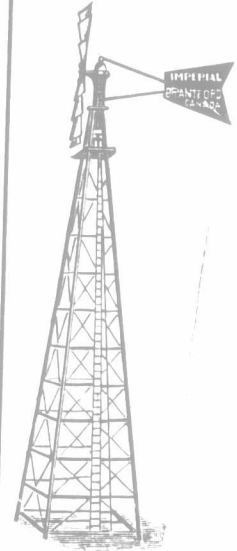
For map, printed matter and other information, address:

C.A. Magrath, Land Commissioner
Lethbridge, Alberta,

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Note—In 1905 the first car of winter wheat was shipped from Lethbridge on August 13th.

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Free on request.
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"Persevere and Succeed."

Established 1866.

Vol. XLI.

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LONDON, ONTARIO, JULY 12, 1906.

No. 720

EDITORIAL.

Lift Your Face Off the Grindstone.

Unremitting toil is no longer necessary to success in agriculture. Farming still requires work, faithful work, and plenty of it. Few farmers but need to be manual laborers themselves. Our business does not lend itself advantageously to an immense scale of operations, high specialization or rapid turnover. It will probably long continue to be carried on chiefly by individual husbandmen, who must themselves perform at least part of the physical exertion.

Our work is changing, nevertheless. Its drudgery is being lessened by machinery. Brains are substituting muscle, or rather substituting horse and mechanical power for human brawn. Effort is being more efficiently applied, energy economized. It must be said, though, that, as a class, we have not begun to realize the possibilities in this direction. Habit holds us to the old routine. And, in the Province of Ontario, for example, conditions have been aggravated through the rural population being far below what it should be to work the farms under cultivation to the best advantage, which has driven some into increasing the area under pasture and others into trying to do an excessive amount of physical work. A conviction persists that farmers must toil early, late, and hard. Here and there a few are breaking away from the self-slavery. Attempt is being made to reduce the hours of labor. Ultimately it works out to be a boon to the employer, who is led to change his own system of work accordingly. He makes more money than when he worked so long that he had no time to think. Surely twentieth-century invention should enable farmers and all other wealth-producers, not merely to exist, but to live, to work moderately, intelligently, and to enjoy the fruits of their labor as they go along. We believe in work. We believe in thrift and industry, but it is possible to have too much, even of good things. We believe in just enough work to sustain the world in a gradually-increasing scale of comfort. Incessant labor is no virtue. The greatest possible results for the least possible labor should be the motto of every farmer. No fear of our not having enough to do for the good of our health. If we haven't, we may help our wives.

Under the lash of necessity and the spur of the demon of toil, the human race has become addicted to the work habit, till severe exertion has come to be regarded as a chronic circumstance. Man has sweat at the plow and the forge till he had not the heart, much less the energy, to study in earnest the question whether less work, better directed, would not achieve better results. To be sure, he has made some effort to improve his condition, and it is encouraging that the more he better it, the more advance he finds possible. Herein lies a grand principle. The more leisure we employ judiciously in thinking and in travel, rest and recreation—which fits us to think the more intelligently—the less we find it necessary to toil. Which farmers in a neighborhood get ahead faster, as a rule, the ones who slave hardest, or those who work moderately with their hands, but plan wisely? The diligent workers, so long as their strength lasts, may accumulate money by sheer penuriousness, but what a life they live! Frugality is a virtue in those who must practice it to live within their means; in others it is a crime. It leads to narrowness and stultification. There are slave-drivers who by stinginess have sent their children from home. They cheese-pare and skimp, and perhaps cheat, all for a little pile of miserable lucre. The broad-gauge, intelligent

men, who adopt improved methods, who make every stroke count, who build up their farms, and perform generously their duty to their families and the communities, getting the good out of life as they go along—they are the really successful men, and they are seldom drudges. Mental energy is rarely compatible with physical exhaustion. The farmer who would work to the best advantage must have some time for reading, conversation and reflection. Step out of the rut now and then to take a look around. How can a man select the best track who is sunk so deep in the slough that he cannot survey the field? Take a day off to travel about and see things. Attend agricultural meetings when you get a chance. Read the agricultural press. No man in this generation can hope to excel his forbears by working longer hours. Shorter hours, better methods, better work, better health, a fuller life—these are the things to seek.

On one of the best-managed farms we ever saw—a dairy farm, at that—the men rose at 5 a. m., and the chores were supposed to be finished by 6 p. m. They accomplished more per man, taking the year through, than any other farm laborers we have ever seen. The men worked with a will while they did work, and the manager economized their labor. Needless to say, the business paid.

On some farms nowadays things are run the wrong way. The hired help works a limited time at the regular farm operations, besides a few chores, while the employer dogs at it early and late. He fancies it is necessary, never dreaming that, while saving at the spigot, he is wasting at the bung. The farmer's hours should be shorter, not longer, than those of his help. The former, who supplies the capital and takes the risks, works with head and hands. That his brain may be bright and clear for managing, his hands should not be too constantly employed, even in the rush of crop-saving, in haying and harvest, when hard-and-fast rules as to hours of labor are not usually observed. At this busy season, let there be breathing spells. On the other hand, the "help" may do much to make things "go," by taking a personal interest in the success of the operations of the farm, whether the farmer is on hand or not. In short, let there be a manifestation of the good old gospel of mutual helpfulness.

Lift your face from the grindstone now and then. Keep posted about your business. Take a broad outlook on life. Study the farm, and you will take a new interest in the work. Life will be better worth living. You will live more years, more days to the year, and more hours to the day. Your wife and children will find something attractive in the farm, and in the long run you will be money ahead of the neighbor who cannot see the economy of brains over muscle.

Sanitary Floors.

The Chicago packing-house revelations fasten attention upon the sanitation of all institutions where human food is prepared. While Governments and boards of health are devising ways and means for inspection and regulation, testing, tagging and branding, we are satisfied, from our own observations, that no other proviso will accomplish so much for the maintenance of cleanliness in slaughter-houses and abattoirs as the cement floor, coupled with efficient drainage. The fibrous nature of wood and the cracks and crevices of wooden floors provide a perpetual harbor for decaying animal or vegetable substances dissolved in steam and water, no matter how often or how thoroughly washed, a fact to which the oppressive effluvia of even our most scrupulously-cared-for abattoirs bear witness. The hard, im-

pervious surface of the cement floor, on the other hand, is proof against this saturation, as wood can never be, and, in the case of "ground floors," being laid on the solid earth, there is no filth-breeding space below to harbor the germs of disease and death. Cement floors and proper drainage are two conditions that municipal Boards of Health should imperatively require in all slaughter-houses. Their introduction in cheese-factory and creamery make-rooms is solving the problem of the sanitation of these institutions, and will no doubt be very generally insisted upon by the new Ontario dairy inspectors. The substitution of cement-concrete for the walls and particularly for the floors of the cattle stables of this country, was the first really efficient step taken for the improvement of their sanitary condition, to say nothing of saving the almost illimitable waste of fertility which the old system involved. When Mr. Isaac Usher started up and down the country as a pioneer missionary, preaching the gospel of cement-concrete in the construction of farm buildings, he rendered agriculture a very substantial service, forestalling, to a great extent, the "man with the muck rake" in our midst. That individual very often will have an important and necessary work to do, but nothing else will do so much to put him out of business as the cement floor.

Ontario Agricultural College Courses.

A subscriber of "The Farmer's Advocate" propounds the following query, which doubtless frames the thought of quite a few intelligent farmers' sons, and is an appropriate topic for discussion at this season:

1. Is the B. S. A. course at the O. A. C. as good as the other professional courses of Toronto University; that is, from a pecuniary standpoint, after graduation?
2. Does the College send a catalogue to enquirers; if not, what are the qualifications, fees, etc., for admission?
3. What course do graduates usually pursue after obtaining their degree? E. F.

Comparing the Agricultural College degree, Bachelor of Scientific Agriculture, with the University degree, Bachelor of Arts, we recognize that the course leading to the former is a special and more or less technical training, whereas the latter is general and in greater or less degree academic. The B. S. A. course turns out men already fitted to engage in some line of life work. The Arts man finds but limited opportunities open to him, unless he takes a further course in medicine, law, or some such branch. This requires several years of expensive preparation in the prime of life before he can enter upon his life-work. Even then he finds the field crowded and the road to success a precarious one. If a doctor, he may buy himself a practice for from one to five thousand dollars, but here is an initial expense which few young Canadians can afford. If he succeeds well, he will, in all probability, make more money per year than if he had taken an Agricultural College course, but money is not everything. A man who thinks so, should choose a business of some kind, not a profession.

We believe the well-trained agricultural scientist is a better all-round practical man than is the average doctor or lawyer, and, if his tastes run at all towards the farm, his occupation will be more interesting. Comparing the intrinsic value of the B. S. A. and the B. A. courses, we should say the former is the better calculated to develop capability, character, and the sum total of the qualities that count for success in life. Its value is not very well known outside the special field of agriculture, but as it becomes better known it will grow in general esteem. It may

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

AGENTS FOR THE FARMER'S ADVOCATE AND HOME JOURNAL,
WINNIPEG, MAN.

LONDON (ENGLAND) OFFICE:

W. W. CHAPMAN, Agent, Mowbray House, Norfolk Street,
London, W. C., England.

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE
is published every Thursday. (52 issues per year.)

It is impartial and independent of all cliques or parties, handsomely
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practical, reliable and profitable information for farmers, dairy-
men, gardeners, stockmen and home-makers, of any publication
in Canada.

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arrears must be made as required by law.

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sible until all arrears are paid and their paper ordered to be
discontinued.

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When made otherwise we will not be responsible.

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subscription is paid.

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attention. In every case the FULL NAME and POST OFFICE
ADDRESS MUST BE GIVEN.

9. WHEN A REPLY BY MAIL IS REQUIRED to Urgent
Veterinary or Legal Enquiries, \$1 must be enclosed.

10. LETTERS intended for publication should be written on one
side of the paper only.

11. CHANGE OF ADDRESS.—Subscribers when ordering a change
of address should give the old as well as the new P. O. address.

12. WE INVITE FARMERS to write us on any agricultural topic.
We are always pleased to receive practical articles. For such as
we consider valuable we will pay ten cents per inch printed
matter. Criticisms of Articles, Suggestions How to Improve the
FARMER'S ADVOCATE AND HOME MAGAZINE, Descriptions of
New Grains, Roots or Vegetables not generally known,
Particulars of Experiments Tried, or Improved Methods of
Cultivation, are each and all welcome. Contributions sent us
must not be furnished other papers until after they have
appeared in our columns. Rejected matter will be returned on
receipt of postage.

13. ALL COMMUNICATIONS in reference to any matter connected
with this paper should be addressed as below, and not to any
individual connected with the paper.

Address—THE FARMER'S ADVOCATE, or
THE WILLIAM WELD COMPANY (LIMITED),
LONDON, CANADA.

not be quite so broad or thorough in such sub-
jects as English, chemistry, mathematics, and
biology, partly because, in the sciences, its
matter is selected and considered with a view to
its bearing on agriculture; but just as farming
is the most practical business of a practical age,
so is the study of agricultural science in a good
agricultural college the most practical kind of
education.

Comparing the O. A. C. course with that of
the School of Applied Science, which is affiliated
with Toronto University on a similar basis, it
may be pointed out that here we have a more
even comparison, seeing that both schools are,
to a large extent, technical; they aim to fit
their graduates for some particular line of work.
Practical mechanical science affords excellent
openings for the bright mind with an aptitude for
such work, and we have to admit that oppor-
tunities in this direction promise more generous
remuneration to graduates than the B. S. A.
course of the Agricultural College. However, as
we have said above, money is not everything.
For our part, we would not hesitate a moment
between the two courses. Agriculture is our
line; we like it, and no pecuniary temptation
would induce us to switch off for any other.

One strong point in favor of the O. A. C.
course is that, failing satisfactory professional
employment, every graduate can fall back upon
the farm. Of the 1906 class of twenty-nine
B. S. A.'s, twenty-two are going to farm—these,
besides the considerable quota who drop out of
their class at the end of the two-year course. It
may be insinuated that more of the graduates
might accept professional positions if good ones
were offered. Without denying some truth in the
presumed assertion, we submit that this indicates
nothing unhealthy. So long as there are such
positions they will be offered to Agricultural Col-
lege men, because, for the most part, they are the
men who are best fitted therefor; consequently,
the salaries and inducements are bound to be

made tempting enough to attract those who have
no land or capital. It is an excellent experience
for a young man to serve for a time in teaching
or investigation. Such work is broadening; it
is an education in itself. In the past the fear
has been, based, we must admit, upon experience,
that once entered in these fields, the young man
seldom returned to practical agriculture. But
this is changing. We find to-day among this
class many of them almost inclined to apologize
for their action in leaving the farm temporarily,
and they frequently hasten to add that they in-
tend to go back to it as soon as they get enough
capital for a little start. At the International
Live-stock Exposition, Chicago, last fall, we were
pleased to note that, among the large number of
young men representing various agricultural jour-
nals, nearly all, in private conversation, voiced a
high appreciation of farm life and work, and many
were seriously debating the point with themselves
whether they would not prefer it to the work
they were at. With most of them, journalism
was a sort of post-graduate course, preparatory
to farming. Possibly it was better for the boys
than for the papers they worked on. This year, at
Guelph, among the twenty-two young men who
chose the farm was the winner of the special
prize, donated by the graduating class of 1905
for the best all-round graduate each year. Only
two weeks ago, in conversation with a leading
professor, he expressed his intention of retiring be-
fore many years, to engage in farming on his own
account. Such facts are significant. They show
that the O. A. C. is accomplishing its chief mis-
sion, of instilling into its students and graduates
a proper appreciation of farming as a means of

livelihood. It also shows that the College
course is proving a practical help to its students,
and enabling them to make out of the farm more
than was formerly supposed to be possible. This
is one of the principal secrets of the fact that
the business is being better appreciated.

What do the B. S. A.'s usually engage in? A
few are employed on the College staff in junior
positions. A few enter the school of agricultural
journalism. A few are employed at some work
for the Provincial or Dominion Departments of
Agriculture. A few go to foreign or other Cana-
dian agricultural colleges or papers, and a good
many farm, either in the East or in the Canadian
West. All told, they are wielding a mighty up-
lifting influence, and no more worthy ambition
can animate a level-headed, practical-minded farm
lad than to enlist in the ranks of O. A. C. ex-
students, and thus become a more successful
farmer himself, or, if his call is towards profes-
sional work, to join the ranks of the investi-
gators or teachers, who discover, reflect, or
spread the light, of which we are still much in
need.

Full particulars regarding courses of study
and conditions of entrance may be obtained by
applying to President G. C. Creelman, O. A. C.,
Guelph, for a copy of the College Calendar. There
is practically no restriction on applicants for the
Two-year or Associate course. If a man wishes
to continue for the B. S. A. degree, which is
identical with the other up to the end of the
second year, he must obtain in the second-year
examinations a 60-per-cent. mark in English, and
50 per cent. on the total.

A Day with the Excursionists at Guelph.

If there is one piece of property of which On-
tario farmers ought to be proud, it is the Agri-
cultural College at Guelph. It belongs to us,
and is a credit to the industry it represents. It
is a revelation of the possibilities of applied agri-
cultural science; it is a fingerboard pointing to-
ward ideals—ideals which we may not all attain,
but which it is well to have before our minds. It
is a source of accurate information, of which
any who walks with his eyes and ears open may
partake. One man said last month that he had
visited the College every summer on the June ex-
cursions for the last thirteen years, and each time
he learned something which paid him for coming.

Does the farm pay? Of course not. Presi-
dent Creelman promises that, so long as he is at
the head of the Institution, it will never be self-
supporting. Its great work is investigation, ex-
perimentation, instruction. Many breeds of stock
are kept; many varieties of crops are grown; acres
of park and many thousand dollars' worth
of buildings have to be kept up. Experts must
be employed—and paid—in every one of a dozen
branches, and no small part of the duty of these
men is to impart information. Then, the College
suffers the handicaps incidental to Government
enterprises. Its laborers work at a "Govern-
ment" pace, and it is hard to get them to do
differently. There are those who think the Col-
lege has an advantage over ordinary farmers in
cheapening cost of production, but closer ac-
quaintance with the inside workings of large
public institutions would quickly convince the
reasonable man that any professor, foreman or
herdsman who obtains profitable results from a
particular method at the College could beat it
several points on a private farm of his own. That
the College farm and stables show such results as
they do, is owing to the excellent principles on
which they are managed, but a capable man who
will apply equally good principles skillfully in his
own practice, combining with them the all-impor-
tant factor of personal attention to details, ought
to secure more profitable returns.

The institution pays indirectly. President
Creelman told the excursionists last month that
the value of the average farm's output had been
doubled within the past ten years by better
methods, many of which had been originated at, or
at least disseminated from the College. Not a
man present, he said, but has benefited many dol-
lars either directly or indirectly from work done
there. One tangible result of College enterprise

has been the introduction by the Experimental
Department of the Mandscheuri variety of barley,
of which half a million acres were grown last
year, the produce of a single handful of seed ob-
tained some years ago. As this is our best-
yielding barley, it is probable that the grain from
the introduction of this cereal amounts to mil-
lions of dollars, and this is only one example of
an immense amount of helpful work in all the
College departments. Besides this is the inspira-
tion and knowledge gained by the annual crowd
of visitors. We believe the College has paid and
will continue to pay a high rate of compound in-
terest so long as it is run. It is a necessity.

FEEDING THE MULTITUDE.

On Thursday, June 28th, a member of "The
Farmer's Advocate" staff visited the College, and
made a tour of the departments with the Perth
County excursionists, among whom, by the way,
was Hon. Nelson Monteith, Minister of Agricul-
ture for the Province, who is never above accept-
ing the same fare as the rank and file of his
constituents.

There may be some among our readers who are
not aware how these excursions are managed.
Each one is undertaken by the Farmers' Institute
organization of the county or riding. The dates
are arranged in advance by the College authori-
ties. Several excursions may be run from differ-
ent points on each day. At Guelph depot, throngs,
totalling sometimes 2,000 or more a
day, are unloaded. The crowds make for the
street cars, which carry them to the College, over
a mile south of the city. About 11:30 a. m.
the doors of the large gymnasium are thrown
open and the first installment of the multitude
is admitted, seated on benches, and regaled with
prime sandwiches, biscuits, cheese, and tea or
coffee—we do not remember which, but it was all
right. Thus reinforced, the people listen to a
spirited twenty-minute talk by President Creel-
man, describing briefly the College, its work, and
the most advantageous tour of the grounds, never
forgetting a word for the Macdonald Institute and
the Macdonald Consolidated School, situated
alongside. A door of egress is then opened, also
the door of ingress, so that the next quota may
be fed.

THE EXPERIMENTAL PLOTS.

Leaving the "gym," the crowd, or such part
of it as is so disposed, is taken in hand by one
of Prof. Zavitz's assistants—the Professor himself
being now away in Europe—and a profitable hour
spent viewing the fifty acres of experimental plots

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and discussing the results of the work in this exceedingly well-conducted department. The rule here is to repeat every experiment for five consecutive years, and then, not infrequently, to repeat the series. In this way a reputation for reliability and practical value has been built up which is the envy of agronomy departments in American colleges. The results of all this work are available in the annual College reports, free for the asking. The practice in this department is to manure once every four years with twenty tons, or about twelve good loads of barnyard manure per acre. Under this system the soil appears to be holding its own in fertility, the average yields of grain seeming slightly on the increase.

In winter wheat, Dawson's Golden Chaff still heads the list in point of yield, having averaged about 57 bushels per acre in plot tests during the past ten years. The best variety of rye is Mammoth Winter. Winter barley is not likely to prove a success, although a Canadian strain which they have been growing shows evidence of becoming hardier. Experiments to test the advantage of early seeding, indicate that spring wheat gives best results when sown as soon as spring opens. Barley gave just as good results sown a week after this date. Oats gave better results a week after seeding opened than when sown at the earliest possible date. Peas and emmer did better sown several weeks after seeding opened. It may be well to remark, however, in this connection, that the first seeding on these experimental plots is generally early in April, so that results may be materially different with such an experiment tried under ordinary farm conditions, where later dates of seeding commonly prevail. An experiment to determine what class of grain will yield the greatest crop in pounds per acre, made a good showing for emmer, which exceeded barley by about 10 pounds per acre, barley beating oats by about 100 pounds.

The differences between emmer and spelt were dwelt upon. Spelt is thick in the chaff, and a poor yielder. Emmer, as shown above, is a good yielder, and has but 21 per cent. of hull, or less than oats. Emmer is good for ordinary to poor soil, but not so good for rich land, nor have they found it satisfactory in mixtures.

The best early oat is the Daubeney. In late oats Siberian has yielded pride of place to the popular American Banner. Siberian is second, and after it come Tartar King and Liberty. A request to know the yield of Banner oats on the experimental plots elicited the information, reluctantly vouchsafed, because of the customary incredulity with which yield figures are received, that last year it was at the rate of over one hundred bushels per acre. Two hundred and seventy-nine varieties of oats have been tested here in the last seventeen years.

About thickness in hulls of oats, tests showed that it has varied all the way from about 22.5 per cent. in Joannette, up to 49 per cent. in the thickest-hulled varieties. Most of the English varieties, such as Sensation, are thick-hulled. Banner and Siberian are about medium (a little over 30 per cent.) in this respect. Plumpness of kernel is a very misleading index of feeding value.

For smut in oats, the best thing they have found is 1 pint of formalin in 42 gallons of water, the oats to be immersed in the solution for 20 minutes. "The Farmer's Advocate" is inclined to caution its readers, however, against immersing so long in so strong a solution, for fear of injuring the vitality of the kernel.

Tests have shown little advantage in drilling grain, only about one bushel per acre over broadcasting.

The best mixture of grains they have found to be 1 bushel of oats and 1 bushel of barley per acre, this giving a greater yield than any mixture in different proportions, and greater than a mixture introducing any third grain, such as emmer, goose wheat, or black hullless barley. Mandscheuri barley and Daubeney oats are their favorite varieties for mixing. For a dry season, they think perhaps the proportion of oats might be advantageously increased. The above mixture has yielded 200 pounds per acre more than oats and barley sown separately. The caution is added that, in sowing mixed grains, it is best to mix together clear oats and clear barley, as in sow-

ing the produce of the mixed crop, the mixture soon tends to run mostly to barley.

Their best six-rowed barley is the Mandscheuri, 69.8 bushels per acre, and the next best is Oderbrucker, 63 bushels. Their earliest barley is the Success, a beardless variety, but a poor yielder. In all crops, the principle holds that length of season is necessary to insure yield.

In a section of the experimental grounds nearest the barn, some cattle were seen grazing in knee-deep vegetation. It was explained that the forage was the mixture which they have found to be the best annual pasture crop, viz., 1 1/2 bushels Siberian oats, 1/2 bushel Early Amber Sugar Cane, and 7 1/2 pounds common red clover.

FARM STOCK.

Returning from the experimental department, the party was taken in hand by Prof. Day, who discussed live-stock matters for a few minutes, and enumerated the breeds of stock kept on the Farm. He then conducted us through the stables and out to the pasture field. An interesting half hour or so was spent looking over the cattle and discussing type and pedigree. We were also shown the splendid Clydesdale brood mare, Her Pretty Sel, then heavy with foal. On the cattle this year they are using for flies a mixture of Zenoleum one part, linseed oil two parts, and water forty parts, sprayed on every day. Fields and stock were looking in their usual, thrifty condition, showing the results of the system of four-year rotation, a system which, by the way, has to be modified, as it provides an excess of hay and pasture, and scarcely enough straw for bedding.

THE HORTICULTURAL DEPARTMENT.

Pausing for a few minutes on the way from the Farm stables to the Dairy Department, the crowd listened to Prof. Hutt while he explained a few points about the Horticultural Department. They are doing some work in cross-breeding of strawberries, as well as in comparative tests of varieties. Their best early berry is Splendid, a good berry, of fair size and beautiful dark color. It is quite as early as Michael's Early, and more productive.

Prof. Hutt emphasized the desirability of setting flowers out in borders, rather than beds, and strongly recommends the planting of our well-known hardy perennials instead of annuals, which have to be sown each year, and do not give as good effects as judicious selection of perennials, interspersed to provide a continuation of bloom throughout the season.

DAIRY DEPARTMENT—THE MILKING MACHINE.

In the Dairy Department, Prof. Dean has been experimenting with sweet-cream butter for the British market, making both with and without cultures, and comparing that with ripened-cream butter. They are also comparing three different kinds of preservatives in addition to common salt. No definite conclusions have been reached. In the cheesemaking department was a graphic exhibit of two cheeses, illustrating the difference in the cheesemaking value of milk of different degrees of richness. Cheese A was very much larger than cheese B. The following table on a card above preached the lesson to all who stopped to read:

	A	B
Pounds milk used to make cheese.....	300	300
Per cent. fat in milk.....	3.5	5.
Weight of green cheese.....	28.8	34.6
Value of cheese, at 10 cents pound.	2.88	3.46
Amount of money that would be paid for each sample, on a basis of same price per cwt. of milk.....	3.17	3.17
Amount of money that would be paid each patron on basis of fat only.....	2.61	3.73
Amount of money that would be paid each patron on basis of per cent. of fat, plus 2.....	2.79	3.55

A comparison of figures shows by far the fairest basis on which to pay for milk for cheesemaking is the per cent. of fat plus two.

A great deal of interest is being taken in the operation of the milking machine, which has been used in the stable for the last six months. It seems, so far, to be giving good satisfaction. The cows milk well, rather better, the attendants say, than in the periodical test periods when they are milked by hand. So far as we could perceive, they rather enjoyed the operation. Prof. Dean

tells us that, while one or two cows do not give quite so much milk as they did last year, he has no reason to think that the machine is responsible for the slight decrease in these cases. Though hesitating to pronounce upon it until he has tried it longer, he thinks it will prove a success. He believes mechanical milk extraction is as good as ordinary hand-milking, and better than poor hand-milking, but does not believe a machine will ever be invented that will draw the milk so well as a skillful human hand. The machine is operated by electricity. Exhaust-air pipes pass overhead through the stable, opening between every pair of cows. The machine is set between two cows, and connection made with the exhaust pipe mentioned. The cups are placed one at a time over the cows' teats, and a pulsating exhaust action is set up. A partial vacuum being intermittently produced, the milk leaves the udder, throbbing through a rubber tube, and then through a short glass tube into the receiving vessel, which holds six gallons. Ordinarily, one man can attend simultaneously to four cows. When the milk ceases to flow through the glass tube the operation is finished, but they say it does not seem to do any harm if the suction continues after all the milk is drawn. Power is supplied by an electric dynamo, which is also used for cutting feed. We await with great interest the report of a more extended trial.

In the dairy stable, both rows of cows are fitted with two different makes of swinging iron stanchions. Mangers have been practically done away with. The front of such manger as there is, is a straight six or seven-inch drop from the cemented feed alley. The back of the manger is, in one row, a four-inch strip, into which the stanchion is fastened. In the other row the stanchion is attached to a gas pipe, about four or five inches from the floor, this being the only back there is to that manger. This latter system has not yet been tried in winter, but the other works satisfactorily. Prof. Dean holds that simplicity is the fundamental scientific principle in stable fittings, as in dairying generally. A litter-carrier has proven a great convenience in cleaning the stable.

THE POULTRY DEPARTMENT.

Lastly, the poultry building. Here was Prof. Graham, sitting in his office, genially greeting all comers, whether their quest were information, bulletins, or settings of eggs. The amount of trouble cleared up in these informal interviews must be enormous. We cannot tell all we learned from him, but he has promised to tell some of it himself in early issues of "The Farmer's Advocate." He has been trying hopper-feeding, with decided success. Likewise, his "cold houses," for winter poultry quarters, are still in favor. He is now building a new poultry-house 110x16 feet, facing south-east. On the other three sides there will be but a single ply of boards, battened. The ceiling will be a straw loft. One-third of the building will have partly glass front, and the other two-thirds partly curtain front. There will be three compartments in all. Last winter he found that, of two houses, one provided with glass and the other with canvas windows, the house with the glass windows would register one degree lower temperature. Hopper-feeding, experiments in incubation, and white diarrhoea of incubator-hatched chicks, are topics on which our readers may expect to hear more at an early date.

To show that the Poultry Department has not to take a back seat in producing growth, we may add that they had goslings of the Toulouse-Emden cross this spring that weighed ten pounds at nine weeks of age.

And, by the way, they have found that chickens will contract blackhead from turkeys. A turkey hen brought on the place, proved to be affected, and chickens roaming over the same range took the disease. Prof. Graham says he would not bring another turkey around the department for a big sum of money. He does not think it will be safe to allow poultry to range over that ground next year.

THE COLLEGE GROUNDS.

After a day that was all too short, the party left with a lingering look at the beautiful college campus, to our mind, one of the prettiest spots in all Canada, a place to which ex-students return with glad hearts, and leave as if leaving home. The grounds

comprise some twenty acres, rather a large area to maintain, but, as President Creelman says, it is a pity if the farmers of the Province cannot have a park of their own, where they can bring their families to spend a holiday. The lay-out of the lawns and shrubs and trees is, too, an object lesson in landscape gardening. The taller trees are at the outside, and from these the trees and shrubs are graded down to the center, which is, for the most part, an open stretch of grass, dotted with a few clumps and individual trees. The grass is kept green by occasional winter top-dressing. The general effect is charming, almost stately, and the whole growth, except one tree, is the result of planting done within the last 25 years.

The value of heredity lies not in what our ancestors did for us, but in what it enables us to do for our descendants.

A short lease is hard on the tenant, owner and farm.

HORSES.

It will do a big, growthy two-year-old no harm to breed her, so long as she gets a chance as a three-year-old.

There is a deal of good done a horse by letting him out a few hours in the evening where he can get some fresh grass. Grass is nature's spring medicine for stock.

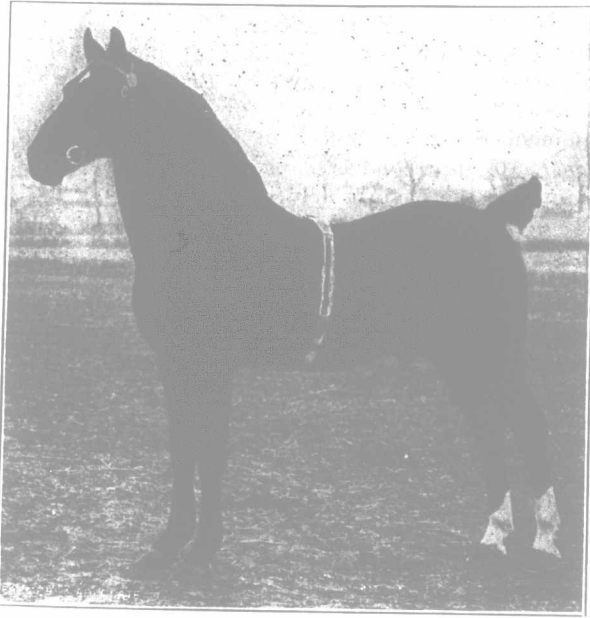
There is no easing off in the horse market, and prices can be depended upon to remain high until the man who begins raising colts now shall have horses to sell.

Muddy fields and dry, hard stable floors are the two extremes that often cause dry, brittle, contracted hoofs.

The Hackney.

The Hackney, the typical carriage horse of the present day, is, like the Thoroughbred, an English production. His origin must, of necessity, to some extent, remain in doubt. Some claim that he originated by crossing the "Royal Mares" with the original "Norfolk Trotter," while others claim that he is the produce of the Thoroughbred, out of mares of this breed or class. The latter is probably nearer the facts. It is not probable that such sires as the Darley Arabian or Godolphin were, in the zenith of their fame, bred only to galloping mares. There is, in fact, abundant proof to the contrary; neither can it be contended or substantiated by evidence that other light mares, besides gallopers, were not highly prized by horse-breeders of the 18th century. Mr. Henry F. Euren, the energetic secretary of the Hackney Horse Society, and an enthusiast upon all questions of pedigree, has satisfied himself by a reference to the files of the Norwich Mercury, of the breeding of the original old Shales, a horse which is regarded by modern Hackney breeders as the foundation-stone of the studbook. Shales, according to an advertisement in the Norwich Mercury, in April, 1772, and March, 1773, was the sire of Scot's Shales, who was at stud at a fee of one guinea and a shilling to the groom, and is stated to be "by a son of Blaze; Blaze by Childers, out of a well-bred hunter mare." Blaze was foaled in 1733, and was by Flying Childers, dam by Gray Grantham, by Brownlow Turk, out of a mare by the Duke of Rutland's Black Barb. Of the many sons of old Shales, two at least, viz., Driver and Scot's Shales, in turn became pillars of the studbook, and to the former of these very many of the best Hackneys of the present day trace. For instance, Mr. Philip Triffitt's great sire, Fireaway, was by Hairsine's Achilles, by Scot's Fireaway, by Ramsdale's Fireaway, by Burgess' Fireaway, by West's Fireaway, by Jenkinson's Fireaway, a son of Driver, out of Mr. T. Jenkinson's mare, by Joseph Andrews, by Roundhead. Other instances might be cited to prove that Hackney breeders of the past, although denied the benefit of a studbook, were not regardless of the value of pedigree. Referring to the antiquity of the Hackney as a recognized breed, it may be stated that sufficient proof exists in the writings of recognized authorities. John Lawrence, who wrote in the 18th century, makes frequent allusions to a breed that was, in its principal characteristics, identical with the modern Hackney. In the "Philosophical and Practical Treatise on Horses," a work published by him, we find that, "in former days," the horses for the saddle were nags, amblers, racers, sturpers, trotting horses, hobbies, great horses, or horses for the buff saddle, hunting horses,

coarsers, race-horses; while for "present use amongst us," are road horses, riding horses, saddle horses, nags, Chapman's horses, hacks, hackneys, ladies' horses, or pads, hunters, running horses, racers, race-horses, chargers, troop horses, post hacks or post horses, trotters, cantering hacks, horses which carry double, cobs, Galloways, ponies and mountain-merlins. The same author, in his "History of the Riding Horse," again refers to the Hackney as a recognized breed over one hundred years ago, and connects him with the roadster. That the Hackney in those days was largely used for saddle purposes, and that he had considerable speed at the trotting gait, is proved by existing records. It is recorded that Driver, a son of old Shales, trotted 17 miles in an hour, and that a son of his, with 15 stone up,



Hackney Stallion.

English Hackney Stallion, His Majesty.

trotted 15 miles in the same time. Pretender, at 5 years old, with 16 stone in the saddle, trotted 16 miles in an hour; whilst Reed's Fireaway won second prize given by the Agricultural Society to the best trotter in 1801, and after winning the prize trotted a mile in 2 minutes 49 seconds. Phenomena, a mare by Othello, out of a Norfolk trotting mare, is credited with 17 miles in an hour. In 1800, when 12 years old, she trotted 17 miles in 56 minutes on the Huntingdon Road, and, the performance being questioned, she repeated the trial, and trotted the distance in a few seconds under 53 minutes. Subsequently she was matched against time, to trot



Hackney Mare.

Hackney mare, Belanie Princess Royal, by Ruffire.

19½ miles within the hour for a stake of 2,000 guineas, but her opponents paid forfeit when they discovered that in a trial she had trotted four miles in less than 11 minutes. It is also recorded that when 23 years old she trotted 9 miles in 28½ minutes. A grandson of Phenomena appears in the Hackney Society's Studbook, under the name of Jacob's Phenomenon 578. The Hackney, by careful breeding, has been improved in size, quality and height of action, though not in speed, and is no longer used as a saddler, but is the heavy-harness horse "par excellence" of the present day.

CHARACTERISTICS.

The typical Hackney is a blocky horse, of good quality, very stylish and attractive, whether

standing or in motion. He should be 15 to 16 hands high, and weigh, say, 1,000 to 1,250 lbs. His head rather small and bony, with fine ears, broad forehead, and prominent but mild eye; lips firm, and mouth rather small; neck of medium length, muscular, not too thick at throat, and well carried; withers rather high, but not so fine and sharp as the Thoroughbred; back rather short and straight, and loins broad and strong; croop long, and slightly drooping; ribs long and well sprung, deep through girth, and breast muscles wide and prominent; shoulder oblique and long; forearm long and strong; knee large and straight; cannon broad, flat and clean; pasterns rather long and oblique; feet rather large, round, and of good quality, and he must stand straight; haunch and gaskin strong and well muscled; hock large, clean, and angular; hind cannon and pastern same as fore; hind feet rather longer and narrower than fore, and he stands with toes turned slightly outwards. In color, he may be bay, brown, chestnut, black, roan, gray, with reasonable modifications, considerable white markings not objectionable, but in all harness horses an off color is undesirable. The action of the Hackney is the chief characteristic, but the present-day high-class Hackney must have quality as well as action. The day has passed when everything else can be sacrificed for action. A Hackney with the desirable action, but lack of quality, is probably more thought of than one with quality and absence of action; and while, to a certain extent, we will sacrifice quality for action, we look for and demand both to a well-marked extent. He must both walk and trot well. His shoulder, elbow, knee and pastern action in the fore limbs, and his hip, stifle, hock and pastern action in the hind limbs, must be free, easy and extensive (we might say intensive), knee and hock action must be high, pasterns must be well flexed, showing the soles of the feet plainly; shoulder thrown well forward, giving considerable extension to the tread, with style, grace and speed, the fore feet brought high up towards the elbow; he must neither paddle nor roll with fore feet, nor allow them to tarry in the air, but fetch them up and forward in a straight line with grace, promptness and style; hind feet must be lifted promptly and high, with good hock flexion, not with a sprawling action, nor yet going close enough with the feet to interfere, but being brought forward in a straight line with a long stride, and planted firmly and lightly. He must show this stylish, high and attractive action (we may say flash action) whether jogging or going fast, and the faster he can go the better, so long as he maintains the quality of action.

"WHIP."

Navel-ill in Foals.

Many foals were lost this spring from a disease known as navel-ill or joint-ill, to which attention has been called in these columns in the last few months, accompanied by warnings which, had they been heeded, and the precautions indicated been observed, might have been the means of saving the lives of many valuable colts. The disease gets its start when the foal is dropped, and it is believed to arise from the entrance of germs into the navel cord, the germs being present in the bedding of the stall, and the simplest and safest preventive is the application, three or four times a day, to the navel cord of a ten-per-cent. solution of formalin, or a solution of 10 grains of corrosive sublimate, or a solution of 10 grains of water, or a five-per-cent. solution of carbolic acid, or a solution of bluestone, three drams to eight ounces of water (the first preferred), dressing the navel string as soon as possible after birth, and, if necessary, continuing it several times daily until the cord is dried up. A local veterinarian says that he finds one application of the formalin solution sufficient to shrivel the cord up and prevent infection. When infection has occurred, however, he injects a teaspoonful of a stronger solution, of about one part formalin in five or six of water into the umbilical cord, and finds this a reliable means of checking the trouble.

An English veterinarian, writing on the treatment of the mare and the new-born foal, says: "In view of the now known entrance of malignant organisms through the cord, there is an increasing disposition to adopt the custom of the midwife, and ligature at a suitable distance from the navel, to permit of its withering away in the usual course. This practice is to be recommended where joint-ill and other troubles are to be feared, but there is no method of disconnecting the young creature so satisfactory as the natural one. The tied cord has a disposition to throb at the distal end, whereas the broken one, under normal conditions, first withers at the extremity, and by thus closing the vessels, reduces the chances of organisms gaining access."

It would appear to be the part of wisdom to be prepared with the necessary disinfectant, to be used as a preventive measure in any and every case, both for foals and calves, whether the severing of the cord occurs by natural or mechanical means.

The Horse and the Wheel.

Ten years ago, when the bicycle was the rage, there was an avalanche of expression from the immature and the impulsive about the doom of the horse. The whirl of wheels propelled by human energy was heard in all sections traversed by good roads, and its echoes filled drawing-rooms. Waves of enthusiasm rose higher and higher, and the pressure was so great that boulevards were built or reconstructed for the use of riders of the wheel. What was the origin of the fever which proved violently contagious? An incident that we recall sheds light on the question. In one of the stately homes of the fashionable Long Island colony, a few charming ladies were gathered for luncheon, when a gentleman of high social position came from a neighboring house on a bicycle. He appeared to excellent advantage in knickerbockers, and when he joined in a waltz, after luncheon, the handsome and graceful figure appealed to the imagination. The tailor-made costume was better adapted to the drawing-room than dusty roads, and therein was the charm. The jaded appetite of fashion saw new possibilities in the wheel, and riding became a fad. People less exclusive than the arbiters of fashion caught the fever, and transmitted it to the ever-expanding circles of humanity, and hundreds of factories had to be equipped to supply the impetuous demand for bicycles. There was a flood of talk about the actual dawn of the horseless age, but cool-headed men were not influenced by it, and horses continued to be bred. It was in this period that the bicycle track, a half-mile oval, with sharp bevels and scientific specifications, was built in Garfield Park. A multitude of riders took advantage of the broad band of cement, and the entire circle was studded with lamps to prolong the amusement after the sun had winked his last wink from a couch in the west. Although the extinction of the horse was declared to be immediate, the city fathers, prompted by foolish sentiment, built a driveway around the bicycle track. It was regarded as a waste of money, but it was like a mile-stone in evolution—a reminder of bright but dead hours of achievement. The passing of years gave velvet-like richness to the lawns of the park, and saw puny saplings develop into sturdy trees, but a spirit of decadence now rules the bicycle oval. On Saturday last, while the horse was showing speed in races on the circular driveway, and boys and young men were keeping the infield alive with baseball—a game that appeals to a phase of human nature that does not change—heavy horses were assisting laborers in dragging great slabs of cement from the places so long filled by them. It was the doom of the bicycle, not of the horse, that was made clear. The hard, beveled track, over which wheels once whirled, will soon be a thing of the past. A wonderful transformation? Yes. And the cause? Well, when everybody took to the bicycle, when mistress and maid servant met on the boulevard; when the laborer went to and from his daily task on the wheel; when even harlequins lent color to the procession, fashion threw away short skirts and knickerbockers, and returned with ardor to horseback riding and driving. Each receding fringe of society flowed suit, and finally the multitude was indifferent or arrayed in opposition. In some things history repeats itself, and the bicycle may return to favor after fashion has discarded the automobile. Through all the stretch of recorded time, through all the steps of mechanical invention and progress, humanity has been faithful to the horse. In the first stages of civilization, when knightly instincts were taking root, when the tide of battle was turned by the spear, the horse contributed to the impressiveness of ceremonial occasion, as he does to-day, and his end is as distant as the stars which gem the sky of night. His form has advanced with the ascending waves of civilization, and love of him has not grown cold in the human heart. He comes to us from the twilight of antiquity, and he is here to stay until thoughts of vanity and rank are obliterated from the mind. Although motor-cars can raise more dust and take more complete possession of the highways than the bicycle once did, horses number higher in the country than ever before, and breeders are unable to meet the demand for individuals of merit.—[The Horseman.]

Now is the time when the town girl likes to visit her country cousin, dazzle the country boys, and smell the new-mown hay—unless she has hay fever.

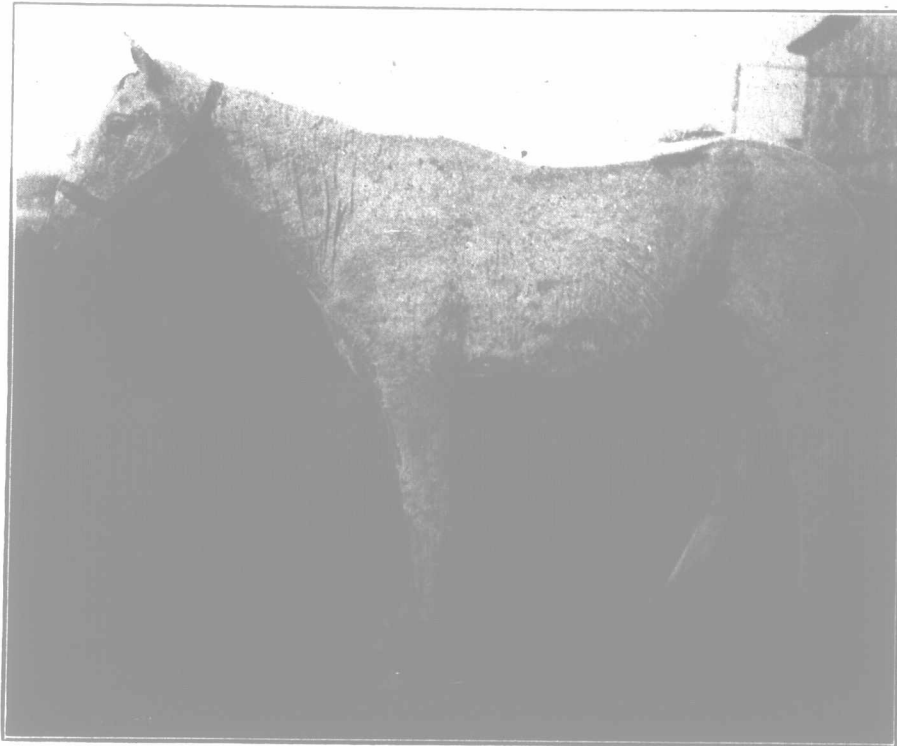
Many an act of boorishness is excused by the perpetrator on the ground of candor. It is not so excused, however, by anyone else.

Mange in Horses.

Unfortunately the various forms of skin diseases show in their inception general symptoms which mislead people or disarm suspicion. In horses two forms of skin disease are often confounded, whereas the relative importance of these diseases makes it imperative that their true nature should be understood at the beginning. It may be taken for granted that mange is due to a parasite, and is extremely contagious. Once that fact is thoroughly appreciated some advance has been made towards its suppression. This disease has, unfortunately, become more or less prevalent in some sections of Canada, due largely to the fact that its contagiousness, and, therefore, serious nature, was not fully appreciated.

THREE FORMS OF MANGE.

1. The most common form of mange insect is psoroptes, which chiefly invades those parts that are covered with "horse-hairs," and, consequently, infest the mane and tail, from which they may spread to the space between the branches of the lower jaw, the breast and thighs. As they live in colonies, their seat of attack may at first be within narrow limits, which gradually extends outwards. In this way the invaded portions of skin become united, until a considerable surface is implicated. Owing to the more settled habits of these parasites, this kind of mange is not so contagious as the second (sarcoptic) form. The punctures made on the skin by these insects give rise to an eruption of small pimples, which at first are the nature of blisters. When these blisters burst or are broken by friction a discharge of serum and pus issues from them and keeps the affected parts in a moist condition, which serves to distinguish this kind of mange from sarcoptic mange. The parasites live on the surface of the skin and under the crusts, which are formed by the drying up of the fluid from the pimples, and by the scaling off of the scarf-skin. Owing to the irritation caused by the



A Bad Case of Mange Brought to Ontario from Northwest.

wounds made by the insects and by the animal rubbing himself, the skin becomes thickened, hardened, wrinkled, devoid of hair, and more or less covered with sores.

2. The insects (sarcoptes, itch parasite of man, belongs to same class) of the second form of mange generally commence their attack on or near the withers, from which they spread over the neck and trunk. Their punctures cause an eruption of small pimples, which become filled with serum that soon dries up and forms crusts over the pimples. On this account, when the affected skin during the first stage of the disease is felt by the fingers, it presents to the touch a number of granular eminences. If one of the crusts is scratched off, it will leave on the skin a raw spot about the eighth of an inch in diameter. As the serum contained in the pimples dries up quickly, the skin in this form of mange will present a dry appearance.

The scarf-skin scales off more or less, and the hair falls out. In the later stage of the complaint the skin becomes thickened, rough and wrinkled. Vertical wrinkling of the skin, neck, shoulders and sides is always present in advanced cases of sarcoptic mange. Each pimple is the result of a pregnant female parasite penetrating the scarf-skin, and irritating the underlying sensitive tissues with her venomous saliva. She then burrows underneath the scarf-skin and away from her point of entrance to a distance of about half an inch, so as to form a tunnel or gallery, in which she lays her eggs as she goes along; consequently, by the time a pimple forms at the inoculated spot, the egg-bearing parasite has left it, and cannot be found if a search be made for her in the pimple, vesicle or scab. In a white-skinned human subject (affected by itch), the position of the characteristic gallery is marked on the skin by a red line, which somewhat resembles the scratch of a pin; but it is not visible in the skin of a horse,

owing to the thickness of the scarf-skin of that animal. If a pin be pushed into the gallery, the parasite can be removed at the point of the pin. The male parasites (which form only about a twentieth of the entire number), the unimpregnated females, and the larvae reside among the crusts on the skin. Although the disease may be fully established on some portions of the skin—which will, consequently, become thickened, thrown into folds, and bald—it may be in its first stages on other parts, upon which the grain-like eminences made by the newly-formed crusts can be felt among the hairs of the coat. The disease takes from one to two months to become fully established. Rubbing the affected surface, and manifestation of pleasure when the mangy spots are scratched with the fingers, are prominent symptoms of the complaint.

3. The insects of the third form of mange are called symbiotes. Their invasions are confined practically to the legs, and extend very slowly from one part to another. They commence their attack at the back of the pastern, and work upwards, but rarely go higher than the knee and hock, and are seldom found except on coarse, hairy-legged animals. They affect the hind limbs oftener than the fore, and those of young horses more frequently than those of old ones. Strange to say, they manifest their presence, as a rule, only during winter; the probable reason of this being, as explained by Neumann, that the excretions from the skin during the summer are sufficient for their nourishment. Possibly for a similar reason, namely, that the skin is more active during work than during repose, the horse suffers more from their attentions at the latter time than at the former. The symptoms are: itching, the formation of crusts, cracks and sores, thickening of the skin, and falling out of the hair. When the pasterns are affected, the symptoms may resemble those of grease or grapes. At the commencement of the attack, the only important symptom which attracts attention is the habit which the mangy horse has when he is at rest, of

abruptly striking the ground with a hind foot for hours at intervals, and especially during the night. Some horses kick. All scratch and bite the fetlock." (Friedberger and Frohner.)

ERUPTION.

The nature of the eruption is due to the venomous bites of the insects and to friction in the efforts made by the suffering animal to relieve itself from the itching by scratching or rubbing itself.

The second form is the most contagious; the parasites of the first form may live under favorable circumstances two months, those of the second form one month. The eggs take from two to ten days to hatch, and remain fertile for a month.

TREATMENT.

Mange, especially of the first two forms, does not run on to spontaneous recovery, hence vigorous measures are necessary for its suppression. The second form has a very bad effect on the health, in some cases resulting fatally, owing to the debility caused by the continual bloodsucking and irritation of the parasites. In order to find the insect it is necessary to scrape the surface of the skin of the affected spots with a knife, and examine with a small magnifying (50 diameters) glass in the warm sun. The second form is apt to be mistaken for skin trouble, due to poultry lice. Clipping of the coat is almost essential. Wash the affected parts thoroughly, using the ordinary carbolic soap and a brush, or use soft soap and warm water, in which is an ounce of soda carbonate to the quart; afterwards apply any of the coal-tar dips, as advertised. Continue the treatment every two or three days for two weeks. Disinfect the stable stalls, etc., with hot lime wash, containing either one ounce of crude carbolic to the gallon, or corrosive sublimate, half an ounce to the gallon of lime wash. Wash all the harness used in warm dip solution. Quarantine affected stock.

More Uniform Type.

How to produce a more uniform type of Standard-bred horses, is a problem that should interest breeders. Great achievements have been accomplished in the line of speed, conformation, beauty, style and action, but in accomplishing the above distinctness in type has not developed rapidly. The reason, no doubt, is due to the fact that breeders have followed the families that produce extreme speed, and have not applied that part of the science of breeding that produces, or rather reproduces, uniform type. Many potent sires that have failed of patronage because perhaps they did not produce great speed, might have done greater service to the breeding industry in fixing the type, if they had been given the

opportunity, than many of the great sires of speed. Of course, speed was necessary development, but in building up a great industry, so that waste may not hinder progress and become a negative factor in its permanent growth and stability, all its avenues leading up to success should be carefully guarded against weak places in the material used to build up the industry. There are plenty of men among the harness-horse breeders who have the means, and should have the patriotism, to make a little sacrifice, in their great desire to produce great speed, to give the question of producing a more uniform type some consideration and aid. The object should be to build up a breed and type of horse that will produce as small per cent. of useless and unsalable horses as possible. In other words, the effort should be more along lines to build up a breed of uniform size, color, action, stamina, weight and conformation, so that there would be no waste in the production of the many that do not prove to be great race-horses and money-winners. It is essential to the success of Standard-horse breeding that it be guided along business lines, as well as along pleasant lines.—(Spirit of the West.)

Steady Growth for Maximum Development.

That a colt to attain its best possible development must be kept going well, but not forced at a rate that cannot be sustained, is the sensible point made by a writer in the English Live-stock Journal, who goes on to say: "It has occurred to me that if all the colts that have come greatly to the front as yearlings had grown along more steadily in their youth they would have made bigger and better stallions than some of them have done. The checking of their growth, it is surmised, is owing to the fact that their owners have become aware that they were being overdone, and were beginning to fail in their joints or other ways, and so feed is reduced, with the result that a dead check to their growth follows, from which they never again recover. This sort of thing occurs very frequently in the ordinary course of farming amongst sheep and cattle. Let a flock of ewes become short of milk through having a bad time for keep, with, perhaps, bad weather at the same time, and note how long it takes those lambs to recover from the stunting that then takes place. Young cattle suffer in the same manner. Several of the best steers at last year's Christmas shows owed their extra weight to their not having been forced on for the yearling competitions the previous year.

"The question as regards young horses is not by any means an easy one to deal with, as there is no denying the fact that if a breeder wishes to take a prominent position with his yearling stallions he must have them practically as big or bigger than the average two-year-old under ordinary conditions. After showing a high-class yearling the remark is commonly heard: He wants to be taken home now and lost for a couple of years. But how many breeders do this? The temptation to go on showing and winning prizes is doubtless too great to be set aside. It was satisfactory to note at last season's shows that a number of breeders' representatives were sent to the showyard in quite the ordinary condition of the farm, and when these colts were brought before judges who appreciated the cardinal points in preference to a superfluous amount of flesh and growth, they received their share of the honors."

The Belgian Horse.

Editor "The Farmer's Advocate":

Your issue of the 21st of June, instant, contained an article on the subject of Belgian draft horses. The article was very unfavorable, and included statements about this breed of horse which are absolutely incorrect. As a Belgian, and a member of an association known as "Le Cheval de Trait Belge," the headquarters of which are at No. 20 rue Royale, Brussels, I ask your courtesy for the publication of this letter in protest. The success obtained by the Belgian horses at the Paris Universal Exposition is a fact known to the whole world, and has most thoroughly established their value as draft horses. The International Jury awarded them the world's championship among all the breeds of horses for heavy and light draft. At page 30 of the Album you will find pictures of the two horses which were victorious over all competitors. The International Jury based its judgment upon the fact that the Belgian horses united in the highest degree all the necessary proportions to furnish the maximum of force for hauling purposes.

In Canada this year, in the Province of Quebec alone, there are 65 Belgian stallions, distributed in the different counties, where they have been introduced since 1902, under the supervision of the Provincial Government, and their progeny, a large number of which are already fully grown, prove that by this crossing the breed has produced the very best results, and they sell for prices hitherto unheard of.

These Belgian stallions weigh from 1,400 to 1,700 pounds; they have generally good action, and a gait of about 9 miles an hour. After the Universal Exposition at St. Louis, a very large number of Belgian stallions were purchased by Americans, and the Steinman Navigation Agency, of Anvers, alone carried 1,040 of these stallions to New York during the past winter. The Americans choose the heaviest class, horses weighing about 2,000 pounds, while those in the Province of Quebec belong to the Ardennais branch, and are lighter.

These few lines will be sufficient to correct an error, published, I have no doubt, in good faith, but which is of a nature to create an unjust prejudice against our national horse-breeding, of which we are proud, and which is the wealth of our agricultural classes.

BARON DE L'EPINE,
Member of the Society "Le Cheval de Trait Belge,"
Quebec.

[Note.—Our correspondent accompanies his note with an illustrated brochure, in which it is stated that as early as the 12th century Belgian horses were exported to Great Britain for breeding purposes, shipments of 100 stallions, young ones, in the 13th century, and the claim is made that some of them became the progenitors of the Clydesdale. (The modern Scottish draft horse is generally regarded as a creation of the 19th century, wherever his blood lines may run in bygone centuries.) Since 1830 the Belgian Government has encouraged private enterprise in horse-breeding, and established regulations for the control of the industry. No stallion is allowed to stand for stock purposes unless approved by Government commission. There are two classes of Belgian horses. The Ardennese, weighing from 1,300 to 1,700 lbs., bred in the mountainous south, and the Brabançons, weighing 2,000 lbs. and upward, bred in the interior and low coast country.—Editor.]

LIVE STOCK.

Parasites that Infest Sheep.

Our domestic sheep may be infested by many kinds of small animals living in or on their bodies as parasites—that is to say, obtaining food from the blood or other juices of the sheep, and thus living at their expense. An animal which harbors parasites is called by naturalists the "host," because it provides them with food and shelter. We cannot believe that such provision is made willingly by the host, which not only receives no benefit in return, but is often seriously injured through the drain on its system, and sometimes killed by the parasites. The multiplication and crowding together of animals that have been domesticated has led to a great increase in the numbers of their parasites. A knowledge of the life-history and form of these parasites is, therefore, of importance to the flockmaster who wishes to protect the beasts under his care from disease.

Many well-known worms, such as the liver-fluke and various thread-worms, are dangerous parasites of sheep. In the present article, however, attention is drawn only to those sheep parasites that belong to the great primary division of the animal kingdom, whose members are distinguished by a firm outer skin and jointed legs. Two classes of these animals are represented on sheep. The "spider-animals" (Arachnida) have eight legs, and their head is not distinct from the trunk; to this class belong mites and ticks. The true insects have a distinct head and only six legs; they include, therefore, keds and lice, as well as the various flies whose maggots live at the sheep's expense.

The common "scab" of sheep is caused by the presence on the diseased animals of multitudes of small mites, each, when fully grown, only one-fortieth or one-fiftieth of an inch in length. These mites have stout, rounded bodies, the male being relatively shorter and broader than the female, and bearing behind a pair of stumpy processes, each with three very long bristles. In both sexes there are four pairs of jointed legs. Of these the hindmost pair in the male are very short, and without the three-segmented sucker-foot found on the other legs; while in the female the legs of the third pair have no foot segments, each leg carrying at its tip two excessively long curving bristles.

Both males and females have their jaws in the form of barbed piercers, which can be worked to and fro by means of these the mites cut into the skin of the sheep on which they live, causing great irritation, bleeding, and the discharge of fluid (serum), which hardens to form the crust or "scab" beneath which the mites shelter. They attack the woolly parts of the sheep, and the wool becomes matted and soiled, finally

falling off. If not checked the mites multiply and spread over the body of the animal, causing the formation of the scabby and cracked skin wherever they go.

The female mite lays about twenty eggs, which are attached to the skin or wool of the sheep. In less than a week the tiny six-legged young are hatched; after casting its skin the young mite gets its hindmost pair of legs, and it becomes fully grown and capable of pairing about ten days after hatching. It can be understood from these facts of their life history how rapidly the mites must increase in numbers. Both the mites and their eggs can live for two weeks or longer when removed from the sheep. In this way fences, posts and other objects against which sheep rub may become infected, and it is likely that mites are carried from diseased to healthy sheep by rooks and other birds.

TICKS.

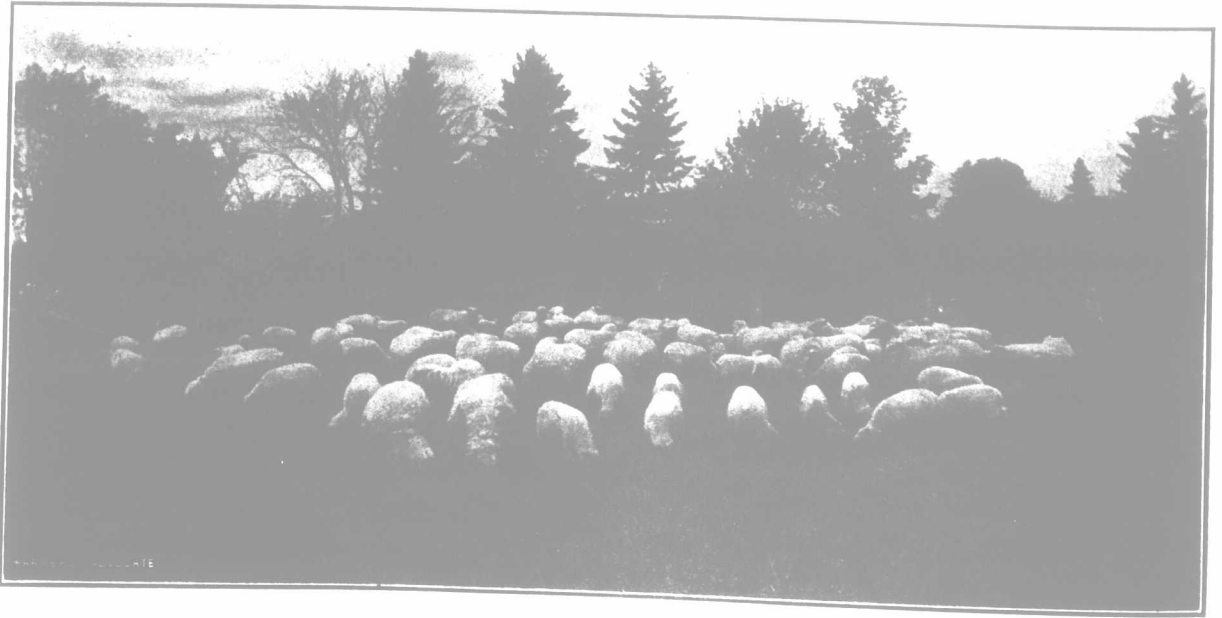
True ticks are the comparatively large, smooth-skinned, eight-legged creatures which may be found sucking blood from sheep, cattle, and other animals, usually attaching themselves at the base of the legs, where the skin is delicate, and where they cannot be reached by the teeth or tongue of the beast on which they are feeding.

Both male and female ticks are to be found on sheep and cattle. The male is smaller than the female; this is especially noticeable after the female has taken a full meal of blood, and has become swollen with numerous eggs, when her body assumes an enormous size, the skin being leathery in texture. The mouth of the tick is provided with two pairs of barbed piercers, which penetrate through the skin of the sheep, and enable the tick to suck blood. If the tick is violently removed the piercers are usually left behind. The male tick also uses this piercing beak in the act of pairing, and female ticks are often found on sheep with males clinging beneath them. The female finally drops to the ground, and there lays over 2,000 eggs among the rough herbage. After about eight weeks the little six-legged young are hatched from the eggs. They wait for the opportunity of attaching themselves to a sheep or other passing animal, and after feeding for two or three days, fall to the ground again. Then they cast their skin and become eight-legged "nymphs." In this stage they again wait for a chance of blood-sucking; then after another few days' residence on a sheep, they drop off, change the skin, and become fully grown. Once more they now wait for a passing animal from which they can suck blood, and in which they live for some time, the female becoming greatly swollen, as explained above. In their various stages the ticks are able to live for a long time (six months to a year) without taking food, and their growth depends upon their finding in each stage a "host" animal from which they can suck blood.

In addition to the irritation and loss of blood caused by ticks, they convey, in many cases, minute parasites from the blood of diseased to the blood of healthy animals, and thus spread most serious illnesses (such as redwater in cattle). It has been shown that in some diseases a female tick may suck blood from an infected beast and her young, in their early stage, convey the infection to a healthy animal; and as the parasites remain in the blood of animals after they have recovered from the disease, the risk of infection is very serious. Louping-ill in sheep is probably spread by ticks from diseased to healthy animals.

Keds, which are the familiar, hairy, wingless, six-legged parasites of sheep, are often called "ticks." No confusion is possible, if it be remembered that the true ticks have smooth, horny or leathery skins, and eight legs.

The keds are in reality degraded flies, their structure and life history showing that they belong to the same family as certain two-winged flies which live as parasites on horses and birds. The keds being quite wingless, spend all their time clinging to the wool of their host—for which their strongly-clawed feet are admirably adapted; they only occasionally migrate from one sheep to another, or, after shearing, from sheep to lambs. The life history of these insects is remarkable. The egg is hatched within the body of the female, and there



They of the Golden Hoof are Having Their Innings Now.

grows into a full-developed maggot, whose skin, immediately after birth, hardens and darkens to form the firm seed-like pupa-case within which the ked comes to maturity. The same female is able to produce five or more young, successively. The pupa-case is often hidden by a whitish, sticky incrustation, which probably serves to attach it to the wool.

Keds possibly suck grease from the wool of the sheep, but they feed principally by piercing the skin and drawing blood, so that when present in numbers they may cause much loss to the animals, and even, in the case of lambs, death. As their whole life history is passed on the sheep's body, keds can be readily exterminated with proper care.

THE NOSTRIL FLY.

It is about one-half inch long, slightly hairy, mottled with black, grey and yellow markings. It belongs to the same family as the ox warble-fly, and, like that insect, has its jaws undeveloped, so that it cannot bite. In July or August the female either lays eggs, or deposits tiny maggots, already hatched within her body, around the sheep's nostrils. The maggots soon make their way into the nasal cavities, travelling by means of mouth hooks, short spines on the body segments, and a prickly process at the tail end, where the conspicuous air holes are situated. They attach themselves by their mouth hooks to the living membrane of the sheep's nasal cavity, and feed on the mucus through the autumn and winter. When fully grown they are 1/2-inch long; then they crawl down into the nostrils, causing great irritation, and the sheep having expelled them by sneezing, they fall to the ground. Under some shelter the maggot skin hardens, to form the smooth, dark pupa-case, within which, through a period of three or four weeks, the fly comes to maturity. It is generally during April or May that the maggots leave the sheep's nasal cavities.

SHEEP MAGGOTS.

The sheep maggots, which are too often found biting the skin and devouring the flesh of living sheep and lambs, are the young of bright metallic green and violet flies, known as "green-bottles" (*Lucilia sericata* and *L. caesar*). It is often stated that the common, dull, steely "blue-bottles" (*Calliphora*) also produce sheep maggots. It may be so, but no proof has yet been furnished, while the attack has been repeatedly traced to the "green-bottles." The female fly lays her eggs in clusters of about fifty on the wool of the sheep, fastening them to the hairs—a single fly may lay as many as 500 eggs. Egg laying usually begins in June, and the mischief is greatest during July and August. The fly seems to prefer sheep whose wool is greasy, or whose hind quarters are soiled. [The good shepherd usually tags the sheep.] Lambs and young sheep are more subject to attack than old ones, and lame or sick sheep than healthy ones. A few years ago the sheep maggot was troublesome only in low-lying, rank, shady pastures; but now sheep on hill grazings are often attacked.

The maggot tapers towards the head end, where there are powerful mouth hooks, which tear the skin and flesh of the sheep; at the broad hinder end are the air holes through which the maggot breathes. It becomes fully grown (about 1/2-inch long) in about a fortnight; then the maggot skin hardens to form the brown barrel-shaped pupa-case, within which the fly develops. If the maggots are allowed to continue their attack on the sheep unchecked the animal will almost certainly be killed, and it has been found that sheep which have been once "struck" are, even if cured, more liable than others to be attacked again. There are repeated broods of flies and maggots through the summer. Every neglected "maggoty" sheep, alive or dead, is a center of infection for the surrounding neighborhood.

The common lice found on sheep are not true blood-sucking lice, but belong to a quite distinct group of insects—the biting-lice, so called because they are furnished with jaws, by means of which they bite the hairs, or the surface and secretions of the skin of their hosts, and thus get food. They may possibly draw blood at times, but they do not possess the powerful piercing and sucking beak of the true lice. The kind which lives on the sheep belongs to a family whose feet, provided with strong claws, are specially adapted for clinging to the hair of their host's body, where they lay their eggs and spend the whole of their lives. They never develop wings, and being, like the keds, always on the sheep, they may be exterminated if sufficient trouble be taken.

A Preventive of Warbles.

For preventing the attack of the warble fly, the dressing recommended by the late Miss E. A. Ormerod is very effective. This consists of 4 ounces of sublimed sulphur, 1 gill of spirits of tar, and 1 quart of train or whale oil. Mix well together, and apply along the spine with a brush. The smell drives off the flies and prevents them from depositing their eggs; the cattle are left to graze in peace, and warbles are prevented.

The cost of production of beef or butter is the criterion by which bovine usefulness must be judged. Production, to be satisfactory, must be profitable.

Our Scottish Letter.

June with us here is pre-eminently the month in which shows most do flourish. We have had them galore during the past fortnight, and could certainly enjoy a rest from them now for a season. But this is not to be. The Royal will be on us a week hence, and before we have rightly recovered from that dissipation the Highland Show at Peebles will summon us to do our best. It is not easy to see what we are to do with ourselves in a place like Peebles. Certainly it has good hotel accommodation for so small a town, but its railway facilities were never planned to cope with such a traffic as enters a town during the week of a Highland Society's show. Meantime we have been surfeited with shows at Edinburgh, Stirling, Glasgow, Paisley, East Kilbride, Castle Douglas, Campbelltown, and an innumerable count of smaller places. What is to be done with them all it would be hard to state. Most of them did not pay, and the splendid exhibitions of stock at Edinburgh and Glasgow were viewed by comparatively few visitors.

The truth is that showing is overdone in this country. Farmers have neither leisure nor money to expend on shows, and the great city crowds care far more about a football match than about an exhibition of stock and agricultural implements.

AYRSHIRE STANDARDS.

Stock with us does not deteriorate. In the case of Ayrshire cattle there is a distinct improvement along sound commercial utilitarian lines. An admirable scheme for testing the quantity and quality of the milk from herds in the dairying south-western counties has had a most educative effect. Silently, and in large measure unknown to those most deeply interested, the dairy farmer is realizing that sound cattle yielding a profitable supply of good milk will pay him better than

several very fine specimens are known of that color. The champion at Castle-Douglas, owned by Mr. Murray, Bo. rowmoss, Wigtown, is one of these. Few owners have a more useful stock than Mr. Murray. If white could be tabooed no harm would be done, but such points as color are best left to be regulated by the public demand. I incline to think that there is not at present such a superfluity of white Ayrshires as there was, say, twelve or fifteen years ago.

CLYDESDALE IMPORTATIONS AND PEDIGREES.

For the past few weeks, and at the present time, we have among us a large percentage of Canadians intent on buying Clydesdales. Every week shipments are leaving the Clyde for St. Lawrence ports. Last Saturday the Donaldson liner, Lakonia, had a shipment of 36 fillies and 1 stallion for Mr. G. A. Brodie, Stouffville, Ont. They were selected by Mr. Brodie, in company with Mr. Wm. Taylor, Park Mains, Renfrew, one of the best judges in Scotland. They should be easily sold on your side, as they are very well bred, and should breed stock of service to your farmers both in Ontario and the Northwest. Mr. J. L. Clark, from Norval, near Brampton, Ont., and Mr. W. J. McCallum, from Brampton, Ont., are also on the Lakonia with horses and mares, mostly young, although not so numerous as Mr. Brodie's big crowd. Messrs. McMillan, Archibald and Cudmore, Seaforth, Ont., will have a shipment of over 20 head on Saturday first, and I expect there will now be shipments right along to the end of the season.

Meantime the Clydesdale Horse Society has been considering its standard of registration. A good deal of nonsense has been written on this subject, and I lately saw a letter, written by Mr. R. B. Ogilvie, of the American Clydesdale Association, in which he said that the home society had been lowering their standard, and that there were a large number of two-cross animals in the most recently published volume of the Clydesdale Studbook. This shows that Mr. Ogilvie does not know what he is talking about. He finds some two-cross mares in the volume, entered not because they are breeding now, but in order that the back crosses in exported animals' pedigrees may have numbers. An analysis of the entries in Vol. 28 has been made. It brings out certain interesting facts. There are 451 entries of stallions in the volume. The minimum qualification is 3 registered crosses for animals foaled after 1890. Only 67 out of the 451 have only three crosses registered; 109 have four crosses; 132 have five crosses; 80 have six crosses; 26 have seven crosses; 12 have eight crosses, and 1 has more than eight. Besides these there are 27 horses entered as special cases, as under rules operative before the rules were consolidated now nearly ten years ago. In the case of mares there are 711 entries in the volume. Of

these 47 are special cases, 2 mares have one-cross each (cases of numbers being given for purely technical purposes), 37 have two crosses (again mainly old mares, numbered for technical purposes), 208 have the standard three crosses—which, of course, means that their produce have four—246 have four crosses, which means that their produce have five; 139 have five crosses, which means that their produce have six; 72 have six crosses, 16 have seven crosses, 3 have eight crosses, and one has more than eight. I think this analysis is a conclusive answer to croakers. It shows that without at all "forcing the pace" the Clydesdale Horse Society is building up a pedigree structure on a sound foundation. It has conserved all that was best in the system of breeding which Mr. Drew favored, and reared upon that a standard pedigree, which must meet with the approval of men who understand their business. It may interest some to know that there still lives a breeding mare, full sister to Mr. Drew's Prince of Avondale. She is named Young June, is about sixteen years of age, and has been a most prolific breeder. She is due to foal either her tenth or twelfth foal (I forget which), and a notable illustration she is of sound constitution and health. Her owner is Mr. James Young, Peatland, Kilmarnock.

"SCOTLAND YET."

The cows in Princeton (Ont.) test are making a steady improvement, the average yield for the month ending June 14th being 10 pounds of butter-fat higher than in April. While many cows test over 4.0 per cent., the average of some herds is very low. Number of cows tested, 85; average yield of milk, 816 pounds; average yield of fat, 28.5 pounds; average test, 3.4.



Countess Farewell 5th and Heifer Calf, Violet Victor.

Sold for \$5,250 at the dispersion sale of the Shorthorn herd of the late Mr. P. L. Mills, Ruddington, England, May 4th, 1906.

a fancy animal having an ideal vessel, but a milk yield below the normal. One of the most significant incidents of this kind was a petition presented to the Board of Directors of the Highland Society a fortnight ago, in which they were asked to take up the question of improving the dairying properties of the Ayrshires. As the names appended to this memorial were one by one read out, the faces of the directors were a study. It was headed by Sir Mark J. McTaggart Stewart, Bart., and Sir Hugh Shaw Stewart, Bart., and following their signatures came those of men like Robert Wallace, of Aucherbrain; Adam W. Montgomerie, Lessnessock; James Howie, Hillhouse; and, in fact, a very large proportion of men who are engaged in the effort to make dairy farming pay. Canadian buyers of Ayrshires know most of the men whose names have been mentioned, and it was significant that not many of those who are identified with the exhibition of what is called "milk stock" had appended their names to this memorial. It is currently reported that the Highland Society Milk Record scheme was rather an eye-opener to owners of cattle of that class. They never imagined their cattle were such indifferent milkers, and several of the keenest opponents of the Milk Record scheme are found in the ranks of exhibitors of this class of stock. The Highland Society directors appointed a committee to confer with the memorialists and the Council of the Herdbook Society, with a view to a possible amendment of present standards of judging, and the bringing of commercial value to the front.

Meanwhile a new scale of points has been issued by the Ayrshire Herdbook Society. The knotty point of color is dealt with, and, curiously enough, the committee which drew up the scale has tabooed black and white or white and black. This is certainly a mistake. Some of the best cows the breed has ever known have been black and white. At the present moment

THE FARM.

Latitude of Public Opinion on the Road Question.

Editor "The Farmer's Advocate":

The question on which you have invited discussion, viz., the better maintenance of our country roads, is one which calls for much careful consideration, inasmuch as, next to the problem of education, there is none other which comes so near to the whole people, or in which the returns for the expenditure of money are so evenly distributed. When so much of the social and financial well-being of the people depends on convenience and ease of travel on our highways, we do not wonder at the question of placing the responsibility for the bad roads, and how to devise means for their improvement.

Looking at the matter in the light of the experience of our own municipality, I am inclined to place a measure of the responsibility on that part of the people who will oppose any measure of road reform which means the expenditure of any reasonable sum of money, to set on foot this much-needed improvement. Our township council, several years ago, in order to encourage the building of good roads, passed a by-law, the principle of which is a voluntary frontage tax. Whenever the ratepayers interested in any portion of road, desire to improve that road by graveling, they subscribe a sum amounting to or in excess of \$25, either in cash or work. The council supplements this subscription with an equal sum, pays for all gravel used, and appoints a commissioner to let and superintend the work of graveling, the grading and drainage having been previously attended to. After an account is once opened with any piece of road designated in the application, any additional subscription is supplemented, until the road is built. The result is that a large mileage of road has been gravelled by this means. One of the striking features to be seen in connection with this method is the enterprise with which some very inconveniently located pieces of road have been gravelled and made into good roads, while other parts of road near to the gravel pits are left ungravelled, owing to lack of enterprise on the part of those who might have taken advantage of the by-law.

In every municipality there are highways which, because of the amount of travel thereon, are very difficult and costly to maintain, and this same excessive travel demands that the municipality shall deal with them. To reconstruct means a heavy outlay, varying according to the access the municipality has to good metalling material, and yet economy demands that the work be done with a view to permanence.

What can be done (1) by the ratepayers? The attitude of the ratepayers to any question of municipal affairs generally determines its disposition. If they are favorable to a judicious yet necessarily large expenditure for the improvement of our highways, the work of repairing and reconstruction may be done, and it becomes their duty to create a public sentiment which shall demand that municipal councils proceed without delay in the matter of road improvement. This strong sentiment will do away with objections at tax-paying time to the increased taxes made necessary.

(2) Our municipal councillors and officers have the most important duty to perform, and require courage to enable them to take hold of the work, even in the face of an adverse public opinion. They may lead public opinion if they so desire. Where the municipality does not engage a highway commissioner to look after the work of road repair and construction, it becomes necessary for the municipal council to adopt approved and uniform specifications for the work, see that all work is done according thereto, and every dollar judiciously expended, with a view to making the work as permanent as possible, and travelling as convenient and comfortable as possible. No councillor or commissioner can lay too much stress on proper drainage of the roadbed, as upon this depends the whole matter of construction. Side-slopes on grades prepared for metal, easy grades on hills by cutting and filling, proper care and attention in the matter of repairs as soon as necessary—are all points of importance.

(3) The question of the duty of the Provincial Government in the matter, is one that opens up the discussion of the matter of county road systems and their advisability. Those county municipalities that take advantage of the "Act for the Improvement of Public Highways," are receiving assistance along the lines of the Act. The object of the Government, we are told, is to compel those township municipalities in which

public opinion lags in the matter of road improvement to reform, but in road improvement, as in other matters, education and object lessons in adjoining municipalities are better means for advancement than the compulsion a county system entails in some cases. While a county system of roads may be necessary in some counties, yet it does not seem to me that the connected system thus formed is a standing invitation to the automobilists to drive the farmers off these roads. Nor can county municipalities, either in road or bridge construction, spend money so economically as the townships. What is the alternative proposition by which the Provincial Government may assist? From 15 to 20 per cent. of the road mileage of each township is what may be termed "main roads," i.e., roads leading to villages and towns, or connecting these. Let the "Act for the Improvement of Public Highways" be so amended that the townships may deal directly with the Government, who shall agree to assist to the same extent as is offered approved county systems, viz., 33 1-3 per cent. of all road, bridge and culvert improvement on 15 or 20 per cent. of the road mileage of the townships, such roads to be shown on maps to be submitted to the Government. The Townships and Department of Public Works may confer as to the specifications which shall be adopted by and suited to the needs and situation of each township, and all work done according to these specifications shall receive the proportion of assistance paid. In townships in which the Statute Labor Act is still in force, the statute labor from lands bordering on these roads may, in whole or in part, be commuted, and placed to the credit of a fund which shall assist in maintaining these improved roads.

In conclusion, I wish to say that I think the roads of the Province are suffering, not so much because of ignorance of the principles of road-making, as from the neglect of municipal bodies to adopt and apply uniform specifications, and from the absence of a strong public opinion, not excessively strong in the spring, when roads are very bad, and lapsing into listlessness and a feeling that our roads are good enough, as the season advances to fine weather, and waxing at tax time into strong condemnation of the municipal council which will be courageous enough to take hold of the question of road reform.

Middlesex Co., Ont.

C. M. M.

CANADIAN SEED-GROWERS' ASSOCIATION.

The third annual convention of the Canadian Seed-growers' Association was held in the Canadian Building, Ottawa, June 27th and 28th. About fifty delegates were present from various parts of the Dominion. All meetings were well attended, and intensely interesting. Dr. Jas. W. Robertson was re-elected President for the ensuing year, and L. H. Newman, B.S.A., continues as Secretary-Treasurer of the association. A resolution was passed, endorsing the good service rendered by Mr. Newman during the past year. Addresses were delivered by Hon. Sydney Fisher, Dr. Robertson, and Hon. W. R. Motherwell at the opening of the convention. The following is a summary of the papers read at the various meetings, which were presided over by Dr. Robertson. Extracts from a paper prepared by Prof. Harcourt, of Guelph, appeared in "The Farmer's Advocate" of July 5th.

STORAGE OF SEED CORN.

Prof. L. S. Klinck, Macdonald College, Ste. Anne de Bellevue, Que., contributed excellent advice on the methods of storing seed corn. He advised the farmers of this country to insist on buying corn in the ear, and to use only Canadian-grown seed. Seed of No. 1 quality, both dent and flint, could be successfully grown in Canada. He stated that much carefully grown and harvested seed was rendered almost worthless as seed through improper storage. The first essential in storing corn is thorough ventilation immediately after husking, to prevent moulding, as the most critical time in the life of a seed ear is the first ten days after it is harvested. The time of harvesting depended upon variety and seasonal conditions. If possible, it should always be left to mature in the stock. If the variety is so late as to be liable to be injured by freezing, it should be stored in a place where it will not freeze, and at the same time be placed where currents of air can carry off the exuded moisture. The principles in all successful methods of storing corn were the same—a good circulation of air to carry off all moisture before freezing. Storage in cribs was not to be commended, unless corn could be stored early and was unusually well matured. Seed corn should always be stored in the ear, and placed where the rain or direct rays of the sun cannot reach it.

CONDITIONS AFFECTING CEREALS.

Mr. J. Buchanan, of the O. A. C., Guelph, in a paper on "Some effects in varieties of cereal crops arising from different conditions of growth," stated that from general observation it appears that the milling quality of wheat is largely affected by the nature of the season. Harder grain was, as a rule, produced in a dry season.

He stated that there was no clear line of distinction between the cultivated oat and the wild oat, but a

gradual blending of the characters of the wild and cultivated species. Results of an experiment conducted at the O. A. C. with seeds of wild oats, grading from those possessing an exceedingly heavy pappus and strongly developed awn down to very smooth, plump seeds, with scarcely any awn, showed that all the seeds produced from a single plant were much alike, but some plants grown from seeds which were very wild in appearance produced seeds more like those of cultivated varieties, while other plants grown from smooth, plump seeds

various varieties (or grades) of wheat are not known to any one. At the outset, Prof. Saunders defined the term variety to mean race or breed, and the grade to signify degree of plumpness, hardness, etc., of the grain. He outlined the manner in which the milling and baking tests were carried on. The experimental mill for grinding was constructed in somewhat the same manner as the large commercial mills. The bread was baked in small loaves in pans with low sides. Details are recorded in regard to each loaf, such as the amount

of water absorbed when

dough was mixed, the

amount retained in the

bread, shape, texture, etc.

In comparing the relative

merits of Red Fife and

White Fife, Dr. Saunders

stated that after a careful

study of these two varieties

for years, he concluded that

they could only be distinguished

from each other by the color of the bran.

Grown under the same conditions,

they show about the same degree of

hardness, ripen about the same time,

furnish flour which appears identical

in all respects, and produce loaves of bread of the

same size, shape, texture, weight and color.

HARD AND SOFT RED

FIFE COMPARED.

Soft Red Fife is paler

than hard Red Fife, because

of the white, starchy condition

of the interior of the soft kernels,

and White Fife is paler than Red Fife

of the same degree of hardness,

because of the paler color of skin of White Fife.

Prof. Saunders stated that last year at harvest time

in Northern Manitoba a sample of Red Fife grade Extra

No. 1 Hard and a sample of grade No. 3 Northern were

made during the winter. The principal difference noted in

milling was that the Red Fife produced about 5% more

flour than the hard Red Fife. In total flour the hard

Red Fife which included the break flour in both instances

proved superior. The hard Red Fife proved superior in

absorption and retained a little



Photo by

Ruddington Prince Christian.

G. B. Parsons,

Two-year-old Shorthorn bull, sold for \$5,775 at the dispersion, May 4th, 1906.

Ruddington, Nottingham.

produced seeds having characteristics of wild oats in a very marked degree.

QUALITY OF WHEAT.

Prof. C. E. Saunders, Cerealist, Experimental Farm, Ottawa, read a paper on quality of wheat. The installation in the laboratories at the Experimental Farm of suitable apparatus for carrying on milling and baking tests with wheat had made it possible to commence a series of important investigations in a field of research hitherto almost entirely unknown. Up to the present, for the most part, the relative merits of the

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more water, and gave lighter bread of better shape and texture. The hard Red Fife flour earned 101 marks for strength, and the flour from the soft wheat earned 89 marks. In referring to other varieties, he stated that while Club wheat commands a high price on account of the mistaken idea that depth of color indicates strength, it was low in gluten, deficient in strength, and should be condemned. In conclusion, Prof. Saunders stated that results obtained thus far seem to place Red Fife and White Fife at the head of spring wheats for strength, and Turkey Red at the head of winter wheats.

SMUT PREVENTIVES.

Prof. F. T. Shutt, Chemist, Experimental Farm, presented to the association a paper on the action of certain smut preventives on the vitality of seed. The results of experiments outlined are merely a continuation of a series of similar tests conducted during the previous 15 years which were reported at the previous meeting of the C. S.-G. A. The following is a brief summary of the recent tests, results and conclusions, as outlined by Prof. Shutt:—

That wheat with a high percentage of vitality suffers less from treatment, whether treated with bluestone or formalin, than wheat with low germinative power.

That from past work it seems probable that smut wheats are more susceptible to the action of these smut preventives than hard wheats.

That bluestone treatment—solution, 1 lb. in 8 gallons—was the most satisfactory of all fluids under trial, as to the germination of the treated seed.

That when grain is sown on the day following the treatment, the injurious effect on wheat of high germinative quality is scarcely noticeable.

That formalin treatment—solution, 4 1/2 ozs. in 10 gallons water—has practically the same effect on the wheat germ as bluestone, 1 lb. in 8 gallons, though slightly more severe.

That it is undoubtedly safest to use either bluestone, 1 lb. to 8 gallons, or formalin, 4 1/2 ozs. to 10 gallons, than stronger solutions; and especially is this true if the vitality of the wheat is low or has been impaired.

In the discussion, Mr. G. H. Clark, Seed Commissioner, brought out the point that smut spores are sometimes found within the seed, beneath the epidermis, and drew the valuable conclusion that all seeds sown should be taken from an absolutely smut-free crop.

A paper on some results in horticulture from selection of seeds was given by Mr. Geo. Robertson, St. Catharines, Ont.

Mr. Robertson undertook a few years ago to grow early tomatoes, but finding that his knowledge re the best methods of production were not satisfactory to himself, he began experiments with various varieties, with a view to improvement from a commercial viewpoint by seed selection. At the outset he secured a good variety of seed, and placing it under similar conditions to his other varieties, it produced two rows of plants which did not contain a good marketable tomato on any vine. The succeeding year he secured Earliana, and had a good crop of tomatoes, somewhat flat and slightly rough, but good size and color. Next year he again secured some seed of the same variety, but they were deeper fruited, roundish, smooth and early. When picking started he noted there was a decided difference in the vines. A few had numbers of good clusters of smooth, round, medium-sized, well-developed fruits; the vine had a good load, very few ill-shaped fruits, and much further developed than others, the fruit was not flat, but deep through from stem to blossom end; while other vines had a few large tomatoes and many smaller ones, some good and some ill-shaped, and some with scarcely any fruit. All this variation was from one package of seed. Mr. Robertson stated that for the past three seasons he selected from the best vines only, and finds that his tomatoes are more uniform in shape, smoother, are heavier croppers, mature more early, and, as a result of this selection, he believed they were steadily improving. So far the results of seed selection had far surpassed his expectations.

The same principle held good in fruit-growing. A good-bearing fruit tree could only be secured by scions or buds taken from a healthy and vigorous tree, while if taken from a diseased tree low in vitality, or a shy bearer, the variety would likely show a failing in size and quality and shape of fruit.

The improvement of the potato was discussed by Mr. W. T. Macoun, Horticulturist, Central Experimental Farm, Ottawa. According to the census of 1901, the average yield of potatoes for the whole of Canada was only 123.37 bushels, although 400 to 500 bushels are frequently grown by the best farmers. Mr. Macoun believed that a "Potato Contest" in Canada would result in a much greater interest in potatoes than at present. Publicity given to large yields would be obtained, with the method of culture employed, and would be a great stimulus to better methods of culture in Canada.

He advised the members of the Canadian Seed-growers' Association in beginning work of improvement to secure the most productive variety in the district to which each grower belongs. The two best varieties, taking everything into consideration, grown at the Experimental Farm were Carman No. 1 and Moneymaker. Dr. Maerker, which heads the list, and yielded at the rate of 456 bushels per acre, is not of good quality, is of poor shape, and deep in eye.

Mr. Macoun urged spraying with Bordeaux mixture to prevent blight, as good results had been thoroughly demonstrated.

On change of seed, he stated that while he did not believe it was necessary in order to maintain the vigor of a variety, yet an exchange for stock grown under

more suitable climatic conditions and better culture than our own may more than repay the cost of new seed.

At the Experimental Farm in the spring of 1904 they secured seed of Carman No. 1 potato from the firm which originally sent out this variety. Although Carman No. 1 had been giving excellent yields at the Farm, the new seed yielded in 1904 at the rate of 66 bushels per acre more than their own seed, and in 1905 the new stock yielded at the rate of 92 bushels 24 pounds more than their own seed.

In conclusion, Mr. Macoun advised that all work in selection of seed potatoes should be done in the field. They should be planted in the ordinary way, a little further apart in the rows, so that each individual plant may be examined and the variations be quickly detected, whether it be productiveness, resistance to disease, earliness, depth of eye, trueness to type, distance that tubers set from main stem, or for any other purpose.

Hon. W. R. Motherwell, Minister of Agriculture, Regina, Sask., read an interesting paper on wheat-growing in the Canadian West. The three outstanding questions, said Mr. Motherwell, that demand intelligent study and prompt action in order to attain the greatest success in cultivation of wheat on the prairie are soil moisture, good seed, and weeds. Soil moisture was by far the most important, and summer-fallowing every third or fourth year to conserve the soil moisture was the foundation upon which successful wheat culture is based. Good seed was next in importance, and the third most important factor was the absence or presence of noxious weeds.

Broadcast seeding had been abandoned altogether.

Water Impregnated with Iron.

It is generally held that the presence of iron in considerable quantities is objectionable; indeed, without removal of the iron, the water may be unfit for use. This removal, fortunately, is not difficult or costly; aeration is all that is necessary. The soluble iron (ferrous) compounds are readily oxidized into insoluble (ferric) compounds, and precipitated by blowing air through the water, or, more simply still, by exposure of the water in, comparatively speaking, thin layers. This oxidation and precipitation takes place rapidly, and within a short time is practically complete, leaving a colorless, clear water, that may be poured or filtered off, and which contains but traces of iron in solution.

The deposit that forms on the sides of the vessel in which the water is exposed, may be removed by the use of a little strong vinegar.

FRANK T. SHUTT, Chemist Exp. Farm. Ottawa.

THE DAIRY.

The Babcock Test for Butter-fat.

The following instructions on the use of the Babcock milk tester are taken from a bulletin by J. A. Ruddick, Dairy Commissioner, Department of Agriculture, Ottawa:

TESTING THE COMPOSITE SAMPLE.

Up to the present time, no simpler or more accurate method of testing for fat has been devised than the well-known Babcock milk tester. With a little more practice, there is no reason why the careful farmer (or some methodical member of the household) should not do his own milk testing with the Babcock machine satisfactorily.

A two-bottle machine is the smallest made, and costs about \$4.50. Other sizes are for 4, 6, 8, 10, 12 and 24 bottles. Where steam is available, the steam turbine tester will be found the most convenient and satisfactory. About 45 pounds steam pressure is required to operate a turbine tester.

It is advisable to mix any cream that may have arisen on the composite sample, by pouring the milk carefully two or three times from one bottle to another. Do not shake it, or partial churning may result. The test is worse than useless—quite misleading, in fact—unless the cream is thoroughly mixed with the milk, and the sample taken is a fair average of the milk to be tested. Some samples may be required to be warmed in hot water to about 110 degrees F., in order to loosen the cream which has become attached to the sides of the bottle. Should a sample be sour and thick, add a small quantity of powdered lye, mixing it in thoroughly till the curd is dissolved and the milk becomes fluid again.

With a 17.6 c. c. pipette take a small sample of the thoroughly mixed milk, by sucking it up slightly above the mark on the upper part of the stem. Place the forefinger quickly on the top of the pipette to retain the milk, and hold the pipette in an upright position.

Allow the excess of milk to slowly drip out, by allowing a little air to enter under the finger, until the surface of the milk stands exactly at the level of the mark or ring on the neck of the pipette. Place the lower end of the pipette in the neck of the test bottle, not too far in, release the pressure, and allow the milk to flow down the side of the neck. By holding both pipette and bottle slightly inclined, the air will be allowed to escape, without bubbling and causing loss of milk. Blow the remaining drop from the pipette into the bottle. Before adding the acid bring the milk to a temperature of 60 degrees F.

ADDING THE ACID.

Procure good commercial sulphuric acid, having a specific gravity of 1.82 or 1.83. Keep the acid bottle tightly closed with a glass or rubber stopper. If an acid burette or other measuring device is not used, the acid may be poured from a small-mouthed earthen or glass pitcher into the 17.5 c. c. acid measure, which is usually supplied with the machine. Great care should be exercised in handling



Mowing a Good Clover Crop

On account of the strong, drifting winds prevalent in the spring, fairly deep seeding, 2 to 3 inches, gave best results.

The Red Fife variety of wheat continued to stand out head and shoulders above all competitors. The germinating properties of all seed grain should be tested before sowing, says Mr. Motherwell, as experience has taught us that a good, even, robust "catch" of wheat in the West is the battle half won.

Re the amount of seed to sow per acre, the only safe guide to follow was individual experience on individual farms. If in a locality where early autumn frosts are feared, fairly thick seeding, 1 1/2 to 2 bushels per acre, should be practiced to hasten maturity. If drouth is more to be forearmed against, then a half bushel less seed per acre will invariably give better results.

Plowing for Fall Wheat.

There is no better preparation for fall wheat-sowing than a clover or other sod, plowed down in July, and rolled and harrowed immediately after, to hasten the decomposition of the sod. Then the land should be harrowed after each rain to firm it and conserve the moisture in it, so that the wheat will grow vigorously and the plants become strong to stand the stress of winter winds and frosts. Advantage may be taken of a wet spell in haying or harvest, or while waiting for a crop to ripen, keeping the teams at work plowing a piece of clover or barley stubble, or a pasture field that can be spared, for preparation for wheat, and, if possible, the rolling and harrowing should follow the plow promptly, in order to secure the greatest benefit for the purposes above indicated.

There may not be much money in raising wheat to sell, but it is a nice crop to handle. The seeding and harvesting generally comes at a time when other farm work is not pressing. It is a good crop with which to sow timothy and clover seeds for seeding down. The straw comes useful for bedding, and the chaff for feeding stock, so that, on the whole, it is a useful crop to grow, at least to a limited extent. What is needed in order to give the wheat a good stand and a bright prospect is a reasonably rich soil, worked to a tolerably fine tilth, to retain moisture and make the land firm, to hold the roots of the plants from heaving.

sulphuric acid (oil of vitriol), as it is intensely corrosive, and will burn the skin or clothing quickly should it come in contact with either. Any stray drops should be wiped up immediately, using plenty of water. It is a good plan to have a supply of household ammonia handy, which will help to counteract any burning of skin or clothes, if applied immediately.

Holding the test bottle containing the milk at a moderate slant, pour the 17.5 c. c. acid in very carefully, allowing it to flow slowly down the side of the neck, and, on no account, to drop straight onto the surface of the milk. The acid and milk will form two distinct layers, with the acid at the bottom, showing a slight brownish coloration where they touch. Have the acid also at 60 degrees F.

The milk and the acid may be mixed by giving the bottles a careful rotary motion. This must be very cautiously done, to avoid shaking any curd into the neck. Continue shaking until all the clots are completely dissolved. Be careful to have the mixing thoroughly done.

WHIRLING.

When the milk and acid are thoroughly mixed, place the bottles in the machine so arranged as to balance it. If an odd number of samples are to be tested, an extra bottle filled with water may be placed in the machine to make it run smoothly. Precaution must be taken to keep the fat melted, but do not let the temperature run above 130 degrees F. Hot water may be put in the body of the tester to keep the samples warm.

The bottles should be whirled for five minutes at the speed indicated on the machine. This will vary from 700 revolutions per minute for a machine twenty inches in diameter, up to 1,200 for machines of smaller diameter.

Hot water, preferably rain water or condensed steam, at a temperature of 135 degrees F. must now be added to each bottle. Hard water may be used if about 10 c. c. of sulphuric acid is added to each gallon. A convenient method is to use a piece of rubber tubing, provided with a pinch cock and a glass tip like an eye-dropper, leading from the hot-water vessel placed slightly higher than the machine. Add enough water to bring the mixture up to the base of the neck, and whirl for one minute. Then carefully add more water, to about the 8 or 9 per cent. mark on the neck of the test bottle, and whirl for another minute. The fat should be quite clear and golden in color when the test is finished. If the fat is very light-colored, and there are specks of curd, use a trifle more acid, as it is probably weak. If the fat appears burnt or cloudy, use slightly less acid, and see that the temperatures of milk and acid are not too high.

READING THE TEST.

Hold the bottle level with the eye, and perfectly upright. With a pair of dividers measure the extreme limits of the fat column; place one point on the zero mark, when the mark on the scale touched by the other point will indicate the percentage of fat.

Each large space on the graduated neck, numbered 1, 2, etc., up to 10, represents one per cent. of fat. Each small division represents two-tenths of one per cent. Thus, if reading without dividers, and the top of the fat column is at 7.2, with the bottom at 3.3, the sample tested contains 3.9 per cent of fat. If there are many readings to take, keep the fat melted by placing the bottles in water at 130 degrees F., reaching to the top of the fat. The bottles should be emptied before the fat solidifies, and always kept perfectly clean. A suitable brush may be obtained for cleaning the necks. Hot water and some common shot will scour the lower part of the bottle.

GENERAL.

The weight of each cow's milk should be recorded on three days only during every month. We believe that a larger number of farmers will be induced to take up the work on this basis, than if more frequent weighings were proposed. At the same time, we believe most fully that the owner of a herd will be well paid for making daily records. By noting daily fluctuations in the weight of milk, the matter is forced on his attention, and a study of the causes naturally follows. Those who take an intelligent interest in the work on the three-days-a-month basis will soon see the advantage of more frequent weighing. It does not follow that the milk need be sampled for testing every time when it is weighed daily.

It will be of no use to the owner of a herd to simply weigh and test the milk of his cows. Intelligent action must follow in the breeding and selection of animals. The feeding question must also be studied carefully, and it is in this connection that daily weighings will be of great service. Farmers should not invest in pure-breds, unless they are satisfied that there is performance with pedigree, and that behind each animal there is a line of ancestry with good milking records to their credit.

Gravity Cream Not Wanted.

In conversation recently, the manager of a large Western creamery informed us that his creamery, which was a cream-gathering one, would not accept any but separator cream. His reasons for so doing were valid ones, and are as follows: Cream obtained by the gravity process varies in fat percentage, the cream sometimes being very thick, and other times less so. As a result of such variations, and therefore differences in tests, dissatisfaction results, and much damage is done to the business of the creamery in the district, as one dissatisfied patron is a prolific breeder of trouble among the other patrons. Separator cream, being uniform, such trouble, so disturbing to business and wasteful of time and good temper, does not occur. The hand cream-separator has many other qualities to recommend it to the farmers, inasmuch as it saves the cream, and renders the labor incident to dairying less than by the older methods.

The person anxious to develop the dairy side of his farming operations, will therefore find it imperative to purchase a cream separator, if he wishes the largest returns at the least possible expenditure of time, labor and money.—[The Farmer's Advocate, Winnipeg.]

Phases of the Creameryman's Sphere of Influence.

Besides being able to make a good quality of butter, said C. W. Fryhofer, in an address before Massachusetts dairymen, the buttermaker should be qualified to fill other needs, namely: (1) He should be able to secure the respect and confidence of all his patrons; (2) he should be able to instruct his patrons in proper methods of handling milk and cream; (3) to advise with them on all problems of dairy management; (4) tactfully correct wrong methods; (5) he should constantly seek to educate the farmer to secure from his herd by intelligent dairying, a better quality and greater quantity in milk production. Creamerymen should co-operate with the farmer in securing greater milk production, as well as the establishment of improved and sanitary methods in the handling of milk and cream.

Mr. Primrose McConnell puts a poser. If a percentage of butter-fat can be modified by feeding, why not modify it, and save all trouble about a standard.

It is believed in trade circles that the Chicago packing-house exposures are having the effect of diverting a good many Old Country consumers from meat to cheese.

The Trade Bulletin, Montreal, says the United States is shipping considerably more cheese this season than she did a year ago. New York shipments to Liverpool and London being 91,634 boxes, as compared with 17,400 boxes for the same period last year. Almost the entire output from New York this year has gone to Liverpool and London.

GARDEN ORCHARD.

Ottawa Vegetable Crop Prospects in June.

The crop correspondents of the Ontario Vegetable-growers' Association, in their reports covering the month of June, state that the season this year is from one to two weeks behind last year, owing to the frequent rains and lack of warm weather. This condition prevails throughout the Province. Warm weather is badly needed to bring on the crops, and if it prevails, will result in a great improvement. The frequent rains and cloudy weather have resulted in a rank, quick growth of some crops, which has done considerable damage. Several of the correspondents fear that grubs and insects are likely to do great damage this year.

Around Ottawa the total acreage is about the same as usual, but early cabbage, corn and celery will be large crops. At both Ottawa and Napanee the maggot is troubling the onions considerably. At Napanee some patches will have to be replanted. There will be a large crop of tomatoes at Napanee, conditions generally being favorable.

In the vicinity of Burlington the maggot has been destructive, and destroyed quantities of cabbage and early cauliflower. Tomatoes will be a large crop. Early-planted melons have suffered from the cold weather; the later ones are doing well.

Around Humber Bay more potatoes and corn have been planted than usual. Parsnips are a light crop. Maggots are reported as injuring the early cabbage; rhubarb will be a light crop.

Around Bracondale an enormous amount of

transplanted beets are being sold. Early tomatoes look well. The second bloom of tomatoes is a failure.

Large quantities of onions are grown at Scotland. Weeds have got the best of some of the growers in this section, and a number of acres will have to be replanted. The maggot is also doing injury.

The acreage of vegetables around Hamilton has increased during the last year or two by about 16 per cent. The tomato outlook is not as promising as earlier in the season. The plants are small, and the acreage not as large as last year.

Hardy vegetables at Niagara Falls are doing well. On low ground melons and cucumbers are killed and beans injured. The cabbage maggot has been very destructive, and onion maggot is prevalent. The heavy frost early in June has injured the crops around Chatham. In Kent County onions are also injured, but may recover.

At Leamington the tomatoes have set well in most cases, although thinly in others. Small shipments are likely during July, but large ones in August. There is an increase of 25 per cent. in the crops, as compared with last season.

Further north, at Sarnia, all kinds of vegetables are looking well. Early tomatoes are above the average in acreage, but a week later in season.

Liquor for Preserving Show Fruits.

What is the name of the liquid to preserve fruits in for show purposes (not eating). We want to preserve our several varieties of strawberries in liquor, and, if possible, preserve their color. Will the same liquor do for tomatoes? An early reply will oblige. E. H. P.

Ans.—A number of solutions have been tried for preserving the various kinds of fruits in their natural condition, but there are few, if any, of them in which the fruit will retain its natural color for any length of time. One of the best antiseptic preservatives for most of the dark fruits, such as strawberries, red raspberries, cherries, etc., is a two-per-cent. solution of formalin. This solution is best made on the following formula: Formalin (Formaldehyde), one pound (16 ozs.); water, 44 pounds; alcohol, 5 pints. Strawberries, and most fruits of this kind, when placed in the liquid, float to the top, and the best way to keep them down in it is to cut the fruit with long stems and fasten them around a small twig or branch placed in the center of the jar. The ordinary preserving jars will answer the purpose very well. It is best to keep them in a cool, dark place until the time of exhibition, as the color fades more rapidly when exposed to light.

We have never tried tomatoes in any of these antiseptic fluids, but for any of the red varieties the formalin solution would probably be the best that could be used.

Yellow fruits of all kind are preserved in a solution of sulphuric acid—one pint of sulphuric acid, 8 pints of water, one pint of alcohol.

Of course, none of the fruits put up in such a way are fit for table use. H. L. HUTT, Horticulturist, O. A. C., Guelph, Ont.

San Jose Scale Not Going to Devastate the Country.

In the course of an address on the San Jose scale, before the Mississippi Valley Apple-growers' Association, Dr. J. R. Lambert, of Illinois, said that, although the scale was a dangerous enemy, and one which, if allowed to go unchecked, could easily destroy the fruit-bearing trees of the country, still it was not going to devastate the country. In its native home, North China, nothing is done to control it, yet its natural enemies, certain species of ladybug, keep it from doing too much damage. "In this country," he said, "we rely on spraying, and the enemy is easily kept in check by this means. We must not be negligent, however, in our efforts to control this pest, and the only safe proceeding is a thorough winter spraying of every infested orchard."

The Theology of Spraying.

We know, says the Irish Homestead, some farmers did object to spraying because they thought it was going against the will of God. Yet we saw these men sending for the doctor when something went wrong with "little Mary." Why did they not consider that was going against the will of God, or is it only in the case of potatoes that everything is to be left to nature? Our knowledge of theology is not sufficient to enable us to see where the distinction comes in. Perhaps potatoes are good subjects for faith healing. If so, we were surprised at seeing so much blight. We should really like to see spraying, like sheep dipping, made compulsory.

POULTRY.

How to Get More for Our Dressed Poultry.

While in conversation with a high-class Montreal poultry dealer last fall, he made the statement that a farmer came into his shop a few days before and said he had three hundred Barred Rock cockerels to sell, weighing about six pounds each. When the produce dealer learned that they were not fat, but were simply running the farm, he said he would not take them at any price, but if they were fed for several weeks in crates, as the Poultry Division recommended, he would pay at least one dollar each for them.

This is but one case that shows why birds should be fattened before they are marketed. The above produce dealer handled tons of chicks last fall, but they were all fat. He did not want the unfattened chicks because he could not sell them; his customers would rather pay a big price and get a good article than buy an inferior article at a cheap price. There is no trouble to get a good-paying price for fat chicks, and the price would be even better if the poor stuff did not come into the market.

Many farmers are finding out that it pays to feed their cockerels before selling. The above farmer, who wanted to sell his 300 chickens in a thin condition, was selling them just at the worst possible time. They had been reared on free range, and had become large, raw-boned specimens, having very little of anything on their bones but skin and muscle. They were, however, in a good condition to put on flesh rapidly, if properly fed. Supposing he had sold his birds at a good price for such quality, say 8c. a pound, each bird would be worth 48c. We will also suppose that for the three weeks' feed the average gain was 1 pound—which would be below the average with such frames—and that extra pound cost 5c., this additional feed would put the cost of one bird at 53c., but in his case this extra 5c. made the selling price \$1.00, or on 300 birds a total gain of \$141. This is not an extreme case. Let me take two similar cases that can be vouched for, one in Ontario and one in Quebec. In one case a farmer put up 340 chickens, and fed them \$30.10 worth of feed. These chickens would have brought on the market before feeding \$87.85, but when fat they sold for \$223.95, or a gain over the cost of feed of \$105.85. In the other instance, 474 chicks, that at the prevailing market price would sell for \$114.94, were put into crates and fed feed amounting to \$31.60, and when fat they sold for \$247.10, or, in other words, the extra \$31.60 put in feed made a revenue of \$100.56. It might be well to add that these cases were not where scrub or inferior chicks were fed; they were not only pure Rocks and Orpingtons, but they were of a good blocky type, and, above all, they had a splendid constitution. They were from healthy, vigorous parent stock—stock that had plenty of fresh air and exercise, good wholesome feed, but not overfat.

Figures 1 and 2 are very fair representations of the type of breeding stock that should produce good feeders. Note the strong, short legs, the shape of the body, and the erect heads (No. 1 is not quite so good in these respects as he might be), the full eye, and the short, strong back that denotes strength and constitution. If we have not constitution in our breeding stock, we might as

well go out of the business. Great care should be exercised in the selection of the breeding stock. If we want something better, we must breed for it. The man who breeds from inferior stock is not only suffering himself, but he is doing every other person engaged in poultry an injury. The sooner we can have a superior, uniform product, the more there is in it for us.

Figure 3 shows a good type of cockerel, the

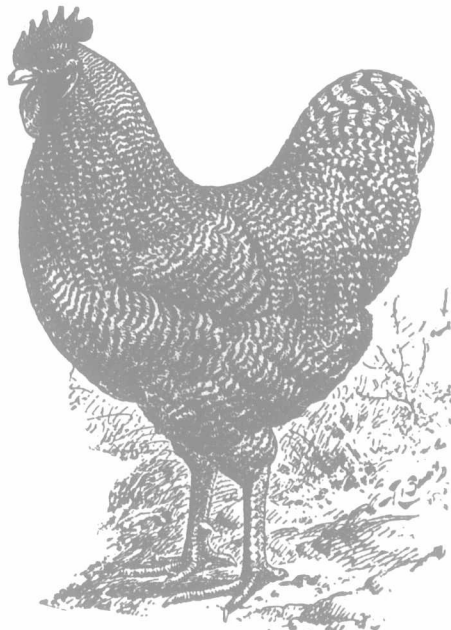


Fig. 1.—Fair type of breeding stock.

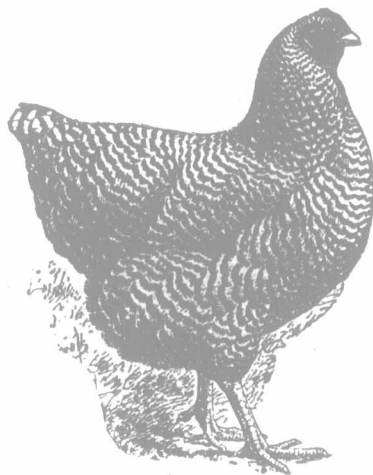


Fig. 2.—A good type of breeding stock to produce market poultry.

kind that will go into the crate and make a profit. Figure 4 is a very good sample of too many birds that are put into the markets. It is just as important that a chicken should have good legs under him as it is that a horse should. The legs should be short, straight, strong, and well set apart. No chicken with bow legs ever amounted to much. Don't buy one, and never raise one. Note the difference in shape, substance and breast development of the two birds. A good feeding bird has a bright eye and a strong beak. A narrow head, a weak eye, and a long, thin beak, invariably denotes a weak constitution. No. 4 will never be a good feeder; he will be the first to take sick, and will never make a salable dressed carcass. Such chicks would be better killed when first detected, or, what is infinitely better, destroyed two or three generations back, by not breeding from the stock that produce them.

Farmers can very well fatten their own chicks; they have the feed at first cost, and a little time will construct a crate or two. Chicks can be fed in crates with less trouble than when running at large. Some farmers can also kill and dress them for the market, but there seems to be many who cannot; they have neither the time nor the inclination, and, owing to lack of practice, they have not the ability to prepare their chicks as they should be for the market. The preparation for market is developing into a business by itself, and farmers are willing to sell alive for a much lower price, so long as they are relieved of the killing and dressing. This would probably be the better way for farmers to do, if the prices paid for the live birds were in keeping with the quality; but when bought alive by shippers, the same price is often paid for anything with feathers on, and that is not any too encouraging for the man that has good stuff; but then, it averages up with the poor culls his neighbor has, and thus

it goes. A much better way would be for farmers in a locality to co-operate, and let one man do the killing and preparing for market. Let each farmer do his own fattening, but they could be probably gathered by one man; at any rate, the killing and the shipping could be done by him. This would mean a higher price directly for the producer, and indirectly a higher price because of the uniformity of the product. All produce would be graded according to size and quality. The two essentials of success in marketing poultry products are quality and uniformity, and such a system would aid materially in the production of a uniform article. No matter how careful a dozen farmers are, their individual products will lack more or less uniformity; but if these twelve men had all their chicks put up by one man it would be uniform. Produce dealers would rather do business with one man for a neighborhood than with ten or twenty individual farmers in that neighborhood. It means less trouble and less expense, and this means more for the producer and no middleman's commission. It brings the producer and the consumer closer together. Such a co-operation would not confine its efforts to dressed poultry; there is a much wider scope, even in fresh eggs in the winter season, and, in fact, it is hard to say just where its benefits would end. The trouble with us, as farmers, is there is too much competition and too little co-operation.

F. C. ELFORD.
Macdonald Agricultural College, St. Anne de Bellevue, Que.

APIARY.

Bees Paid for a House.

Those who are inclined to despise the profits of apiculture may read with surprise the following experience of a Wisconsin beekeeper, A. L. Kleeber, who paid for a house from one year's profit of his apiary. Mr. Kleeber writes:

"The amount of honey sold was fourteen thousand pounds, at fifteen cents per pound, amounting to \$2,100. The expense was \$100, besides our own labor. The increase of the apiary was an extra source of profit, but I kept no account of the bees sold. I had two hundred colonies of bees of the common black and Italian varieties, and think there is but little difference in the amount of honey they gather. Experience has taught me that a cross between the two breeds is preferable to either. My apiary is located about six miles north of a good-sized town. We use the common, eight-frame Langstroth hive, with full super, using a 4 1/2 x 4 1/2 x 2-inch section, with tin separators. Our honey is gathered mostly from white clover and basswood, with some buckwheat. During the year in which the house was paid for we harvested seven tons of comb honey. The quality in this section is superior. We winter our bees in the cellar."

Use petrolatum or vaseline, which are one and the same thing, instead of butter, for anointing the fingers for handling brood-frames, etc. There is no rancidity about petrolatum (petrolatum jelly), and it is much cheaper and nicer than butter. It effectually prevents the hands from being all smeared up with propolis.—[Gleanings.

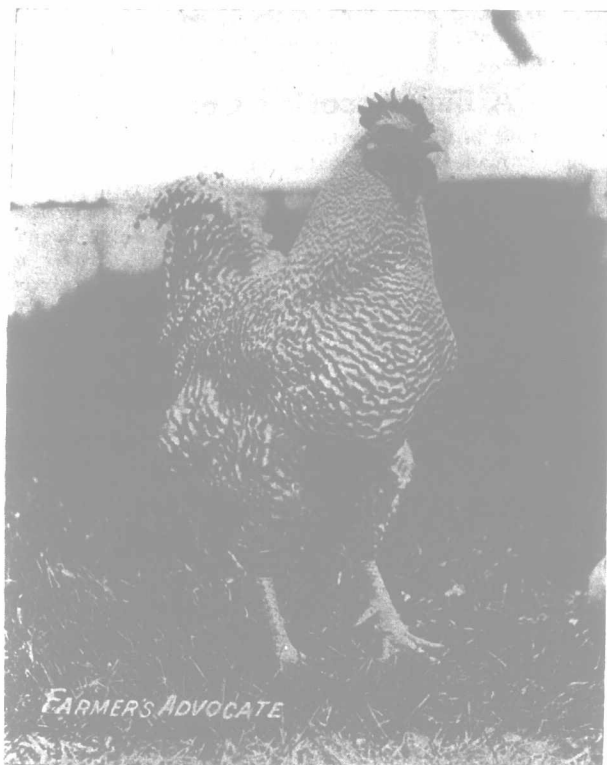


Fig. 3.—A good-feeding type.



Fig. 4.—A poor-feeding type.

Honey as Food.

Honey, which is described as "one of nature's best foods," is the subject of a report by the Ontario Department of Agriculture. In this it is pointed out that it is only within the past few centuries that sugar has become known, and only within the last generation that refined sugars have become so low in price that they may be commonly used in the poorest family. Formerly honey was the principal sweet, and it was highly valued 3,000 years before the first sugar refinery was built. "It would add greatly to the health of the present generation," it is declared, "if honey could be at least partially restored to its former place as a common article of diet.

Excessive use of sugar brings in its train a long list of ills. When sugar is taken into the stomach it cannot be assimilated until first changed by digestion into grape sugar. Only too often the overtaxed stomach fails properly to perform this digestion, and then come sour stomach, and various phases of indigestion and dyspepsia. In the laboratory of the hive the honey has been fully prepared by the bees for prompt assimilation, without taxing either the stomach or kidneys, so that in eating honey the digestive machinery is saved work, and health is maintained.

Moreover, the same report says that, "in many cases it will be a real economy to lessen the butter bill by letting honey in part take its place. One pound of honey will go as far as a pound of butter, and, if both articles be of the same quality, the honey will cost the less. Honey is strongly recommended for children, while for persons of all ages a pleasant and wholesome drink is called 'German honey tea.' This is made by pouring a teaspoonful of hot water on from one to two teaspoonfuls of honey."

THE FARM BULLETIN.

The potato-bug pest is increasing in Manitoba. No district can grow potatoes in any quantity and remain immune from the ravages of this pest. Fortunately, Paris green is an effective antidote.

A press despatch last week stated that a healthy woman in Haldimand County was stung on the cheek, about an inch below the eye, by a common honeybee, and died within fifteen minutes.

The Toronto Horse Show.

The fourth annual open-air horse parade and show, held in the Queen's Park, Toronto, on July 2nd, should serve as a satisfactory answer to farmers and breeders to the question, is the horseless age near at hand, and the automotor likely to supersede the equine. The presence in the parade of over 700 high-class horses and 500 vehicles, and the many thousands of admiring spectators crowding the campus of the Provincial University and the grounds of the Parliament buildings during the judging, and lining the streets forming the course of the parade, goes far towards settling the problem of the preference of the people as between the horse and the motor car for pleasure or for profit, when cost and keeping in repair are compared.

It is a striking tribute to the character of the horse, that so many hundreds of owners and groomers in one city should voluntarily, and for the trifling reward of a medal or a ribbon, take the trouble of preparing for this competition, and that so many prominent citizens should freely subscribe the necessary funds to furnish the prize-list, and manifest so keen an interest in a display lasting less than four hours from start to finish. The classification, comprising 45 sections, included saddlers; carriage horses, single and in pairs, abreast and tandem; high-steppers and speedy roadsters, in many varieties of vehicle; heavy draft teams, double, three abreast; single cart horses; railway lorry and brewers' teams; delivery outfits, single and double, in all lines of business; polo ponies and Shetlands galore.

Two tents were stationed at the Queen's Avenue entrance, and here the officials directed the judges, marshals and attendants. The judges were at their work early, and by eleven o'clock all returns were in, and Mayor Coatsworth was ready to hand the lucky winners their prizes. It was almost noon, however, before the parade returned from its tour of the city, but there were no hitches, and the entire procession had passed the judges' stand and received their awards before one o'clock. The arrangements were very complete, and the satisfactory manner in which everything moved along must be credited to the Secretary and Manager, Mr. H. J. P. Good, who was ably assisted by Mr. H. Gerald Wade, of Ottawa, who was the Secretary for three years. Many comments were made on the great improvement in the appearance of the animals since the horse show was established, and the institution was given credit for greatly raising the standard of horses generally used for delivery purposes in the city.

On returning to the park, the Mayor, assisted by Prof. Goldwin Smith, who has always taken a great interest in the event, presented to the winners fifteen silver cups, thirty gold medals, and forty-five each of silver and bronze medals. Rosettes were also pinned on the successful horses, and each driver in the commercial classes, whether prizewinner or not, was given

an envelope containing a dollar bill, to recoup him for the time spent in turning out.

The wonder is that, with the keen demand for good horses, and the tempting offers being made for high-class animals for the export trade, so many excellent specimens could be brought together in one city, for, with hardly an exception, the horses were all owned in Toronto, though the show was open to all. This event, in all its aspects, but serves to accentuate the certainty that horse-breeding is bound to prove a profitable industry for many years to come, and that for the best specimens in all classes good paying prices may safely be counted on.

A Moral Drawn from the Post-office Surplus.

For the Canadian fiscal year, ending July 31st, the revenue from the sale of postage stamps totalled \$7,068,927, an increase of \$866,095 over last year, and of \$2,828,183 as compared with 1897-8, when the three-cent Canadian letter rate obtained. The striking increase in revenue, following the introduction of Imperial penny postage, and, subsequently, the domestic two-cent letter rate, serves well to illustrate a principle. While much of the increased use of the mails is due to increased population and increased prosperity, there is no doubt whatever that without these contributory factors the cheaper rate would still have induced freer use of the mails that would have almost made up for the reduction of postage toll. The people save a cent on every letter, and are able to afford to use the mails more largely, while business is benefited directly and indirectly. The low rates are thus an immense economic advantage. Any public service which is run with a view to maximum public utility can be operated with far more moderate charges than a service which is exploited for maximum profits to its investors. There is good reason to believe that a reduction of the Canadian railway passenger rates from a three-cent single and five-cent return per mile to a straight two cents each way, would result in enough more travelling to nearly compensate for the reduced rate; while from the freer communication would flow substantial benefits to the country and to the railroads that handle its freight, express and passenger traffic. The trouble is the railways are so greedily viewing the ready dollar, that they will be almost certain to delay the reduction of rates until absolutely compelled to change. Is it not time for public opinion on the matter to assert itself?

The Sooner the Better.

The Canadian Senate has been shocked. One of its members has practically condemned it, by expressing the opinion that second chambers will ultimately be done away with. We agree with him. Simmered down, the main excuse the venerable gentlemen have been advancing for a continuation of the Senate is the Senators themselves. If the chamber was done away with it would throw them out of their jobs. This would be hard lines. The country, having cruelly sat on the ex-ministers-pension scheme of providing for the respectable maintenance of played-out politicians, must surely be constrained to permit yet awhile the substitute for pensioning, known as promotion to the Senate. In the interests of economy, however, we beg to suggest that the Senators be granted their indemnities only on condition that they remain absent from Ottawa while Parliament is in session. We would at least save the incidental expenses of running their show, and the will of the people would be in no danger of being obstructed.

It is clear that our only duty to the Senate is generosity. Our need for it is nil. Would it not be possible to amend the constitution of that body, by providing that when the present incumbents die their places remain unfilled? This would get over the difficulty without doing injustice to any "vested" rights. Some steps should at once be taken looking to the permanent abolition of this travesty on responsible government, and in the words of the business man's motto, let us "do it now." As we pointed out recently in discussing this question, the abolition of the Senate would, by placing the responsibility for legislation where it belongs, raise the standard of the House of Commons, simplify the transaction of public business, and greatly reduce the expenditures.

Temiskaming Railway Branch Lines.

In the course of a recent review of the Temiskaming country, "The Farmer's Advocate" suggested the necessity of early extensions of the Temiskaming and Northern Ontario Railway, as feeders for the main road, and in the interest of the farm settlers in several districts. The Government has given its approval to the proposal of the T. & N. O. R. Commission to build two branch lines. Plans and detailed estimates of the cost have been prepared, tenders for contracts will be invited, and the work will be commenced at the earliest possible moment. One will be through part of the mineralized portion of the Gillies timber limit to the Kerr Lake mining district. The other branch is from Englehart to the foot of Long Lake. This will result in the opening up of a fine farming district, and will give to the people of Charlton and vicinity, now numbering some 200, much-needed connection with the main line. Each branch line will be about six miles in extent. These and a spur line from New Liskeard to Lake Temiskaming are said to be the only projects of this nature which the commission contemplates undertaking this year, but other branches will be necessary as time passes, and settlement in the country tapped by the railway progresses.

The Automobile Question.

Editor "The Farmer's Advocate":

I have read with special interest your editorial of June 28th, re "The Automobile Nuisance," upon which you invite discussion. It is indeed a question of serious import, and one which vitally concerns the farming community.

The recent enactment by the Ontario Legislature is, I think, wise and commendable, and is, perhaps, sufficiently radical for initial legislation; but something more must be done before this question will be finally and satisfactorily settled. Meanwhile, let us note the effect of the present provisions. One thing is certain: The farmers will not long submit to being driven off, or being kept off, the roads which they have built and are maintaining. They will not so cringe before the plutocrats, or whatever the offenders may be designated; they will not so worship the god of wealth as to endure this usurpation, this grave injustice. The horses and vehicles, the limbs and lives of farmers and their families are jeopardized, and much serious damage has already been caused by reckless auto driving. If automobilists have rights on our country roads, those rights ought to be respected, and certain compromises and regulative enforcements may serve to mitigate the evil as to render it endurable. If, on the other hand, they have no rights, then those gentry ought to be debarred. How is the problem to be solved? Perhaps by the building of special roads for the motor car, such as is contemplated in the United States.

Since, under our laws, the voice of the people is the ultimate determining power, I venture to suggest, for the consideration of all interested parties, that the whole question be submitted to the country in some definite form, and that if found expedient or necessary, a general vote be taken thereon. W. J. WAY.
Kent Co., Ont.

The Dog Show at Toronto.

The prize-list for the coming Bench Show, Sept. 3rd to 7th, in connection with the Industrial Exhibition, Toronto, is being mailed. The classes have been increased in various breeds. In Pointers and Setters they have added a junior class for dogs or bitches 18 months or under, as there has always been a feeling on the part of the breeder of this very popular breed that a class of this kind would be interesting to show the development of the breed at the different ages.

Toy dogs have been taken care of and the Pomeranian classes increased, and a class for Pomeranians of 8 pounds and over added. Among other features, the sheep dog trials will be as popular, if not more so, than last year, and, altogether, everything is pointing to an exceptionally good show, and the Exhibition Committee is getting ready for an entry of 1,500 or over. Mr. John G. Kent is Chairman of the Bench Show Committee.

Fair Dates for 1906.

Winnipeg Industrial Exhibition.....	July 23-28
Brandon Exhibition.....	July 31-Aug. 3
Cohourg Horse Show.....	Aug. 14-16
Canadian National, Toronto.....	Aug. 27-Sept. 6
St. John, N. B.....	Sept. 1-7
Canada Central, Ottawa.....	Sept. 7-15
Western Fair, London.....	Sept. 7-15
Michigan West, Grand Rapids.....	Sept. 10-14
Sussex, N. B.....	Sept. 10-14
New York State, Syracuse.....	Sept. 10-15
Chatham, N. B.....	Sept. 10-15
Dominion Exhibition, Halifax, N.S.....	Sept. 20-Oct. 5
Prince Edward Island Agr. and Industrial Exhibition.....	Oct. 8-12
Provincial Exhibition, New Westminster, B.C.....	Oct. 2-6
American Royal, Kansas City, Mo.....	Oct. 6-13
International, Chicago.....	Dec. 1-8
Ontario Winter Fair, Guelph.....	Dec. 10-15

Managers of fairs whose dates do not appear on our list will confer a favor on our readers by sending in their dates.

A Butter-scoring Contest.

Desirous of improving for export purposes the quality of butter made in cream-gathering creameries, the Eastern and Western Ontario Dairymen's Associations have decided to inaugurate butter-scoring contests for cream-gathering creameries during the months of July, August and September. Creameries separating all or part of the milk from which cream is secured will be debarred from the contest. We presume the reason for this is that creameries making butter from factory-separated cream would have an advantage over those manufacturing from gathered cream, the quality of which, as a rule, is not equal to that of cream from gathered milk. Prizes aggregating \$105.00 will be offered, and the only expense the creameryman incurs is the express on the shipment to the point where the butter is stored and scored. The butter will be paid for at market price at date of shipment. The scores will be kept secret, and boxes in which the butter is stored, the scores sent to each maker will not only contain the relative standing and number of points secured, but also information as to defects in the butter, and suggestions how to overcome them. Notification as to the contest will be sent the day before samples are to be sent, and will be regular mail of the day, and the butter to be made the day after the butter is made. It is expected that the uncertainty as to the samples may be called for will keep the makers on their vigilant, and result in a better average of quality for the

season. It is hoped that makers will take up this competition enthusiastically.

Following will be found particulars and instructions regarding the contest:

RULES AND INSTRUCTIONS.

Provincial Department of Agriculture.

Officers of Associations—Thos. Ballantyne, Stratford, President, Western Dairymen's Association; Geo. Barr, London, Sec.-Treas., Western Dairymen's Association; D. Derbyshire, Brockville, President, Eastern Dairymen's Association; R. G. Murphy, Brockville, Sec.-Treas., Eastern Dairymen's Association.

Committee of Management—Prof. H. H. Dean, O. A. C., Guelph, Ont.; G. A. Putnam, Director of Dairy Instruction, Toronto; G. H. Barr, Chief Dairy Instructor, Western Ontario; J. W. Mitchell, Instructor in Creameries for Eastern Ontario.

Prizes—1st, \$30; 2nd, \$25; 3rd, \$20; 4th, \$15; 5th, \$10; 6th, \$5.

Conditions—The competition shall consist of a scoring contest on three packages of butter from each creamery; the butter to be sent by express to Cold Storage, Dairy Department, Agricultural College, Guelph, when called for in July, August and September.

Butter must be shipped not more than two days after the making.

The butter entered for contest must be out of the regular make, and made from "cream-gathered" cream.

Butter will be scored within one week after arrival, then at the end of four weeks, and also at the end of eight weeks.

The prizes will be awarded to the butter scoring the highest number of points on the total score.

Diplomas will be awarded to all prize butter, and to other lots which score well.

Butter will be paid for at the market price at the time of shipment.

Invoice of butter and notice of shipment must be sent to Prof. H. H. Dean, Guelph.

Shippers to prepay express; this being all the expense they will have in connection with the butter.

A copy of each score will be sent to each competitor immediately after judging; also his relative standing among the contestants.

Special boxes will be sent for packing butter; these boxes must be lined with parchment paper for the export trade.

Butter will be judged from an export standpoint.

Special shipping tags and instructions will be sent to each creamery making application for competition.

Applications may be made by the maker, manager or proprietor of the creamery, or the president of a company.

Applications must be in the hands of GEO. A. PUTNAM, Toronto, before July 15th.

The Rose Chafer.

Last week a plague of rose beetles (*Macrodactylus subskinosus*) was reported from the region of Niagara Falls, Ont. Specimens were sent to Dr. Bethune, Entomologist, O. A. C., Guelph, who identified them, with the comment that they occur here and there throughout the western peninsula of Ontario, and no remedy, in the form of poison or spray, has been found entirely effective. The same insect has been proving injurious in Pennsylvania this year. The list of plants on which it feeds includes grape, cherry, rose, peach, plum, pear, blackberry, peony, spiraea, mock orange, and many other plants. The eggs are laid below the surface of the ground, occurring mostly in light sandy soils, and hatch in about two weeks. The larva feeds on the tender roots of grass, etc., and spends its first season in the ground, where it hibernates. The pupa stage is entered in spring. The mature insect appears about the time the grapes are in blossom, and becomes a serious pest. The beetles fly a great distance in search of food, and settle upon a garden, vineyard or orchard where they have been scarcely known before. They prefer to eat the petals, stamens and small fruits in flower, but will also attack foliage. The insect is difficult to combat, because of the continuous appearance of new individuals for a period of several weeks. The arsenical poisons are too slow in their action, and contact poisons must be applied too strong for the plants in order to kill the insects. The only treatment recommended by the Pennsylvania Station, is to cover small plants, like choice rosebushes, with a mosquito bar cloth, leaving no place for the insects to enter. In other cases the beetles should be gathered daily by hand, tossing them into pans or buckets containing a little coal oil. It is said that showering the plants with a mixture of carbolic acid and soap suds has been found a repellent. Destroying the breeding places, by breaking up old sandy pastures, is suggested.

Road Improvements in Middlesex County, Ont.

In 1901 the Legislative Assembly of Ontario passed an act for the improvement of public highways, setting apart \$1,000,000 to aid counties in the building and maintenance of highways constructed according to the recommendations of the Provincial Highway Commissioner. The County Council of Middlesex, desiring to participate in the benefits of this fund, but the local councils being opposed to its again assuming a county road system, passed a by-law, since confirmed by the Provincial Legislature, providing for the expenditure of the money under supervision of the local councils, the money to be divided annually among the various municipalities of the county, according to their equalized assessed value, and paid over to them on completion of

work undertaken. No municipality, however, shall be entitled to receive any portion of the sum set apart until the County Council shall have submitted a plan of the County, designating the roads for improvement, to the Lieutenant-Governor-in-Council, and his approval of the same is obtained.

This plan may appeal to ratepayers in other counties.

The Royal Show.

(From our Scottish correspondent.)

"Our Scottish Letter" this time is written from England, where the Royal Show of 1906 is in progress, June 27 to 30, at the great railway center, Derby. His Majesty the King travelled from London, and spent several hours in the yard during the judging day. Accompanied by the Duke of Devonshire, he made an extended examination of the stock, and had a most cordial reception. In spite of the rain, the show was to-day visited by some 25,000 paying visitors, in addition to members and guests. From these His Majesty received a rousing welcome. Twenty-five thousand paying visitors at 2s. 6d. each represents a revenue of over £3,000, so that there should not be a big loss on this show, even should the weather conditions for the remaining two days of the event be as unfavorable as the first.

The display of stock is one of the best ever seen in a Royal showyard, and this is true beyond cavil regarding the Shorthorn section. No grander display of the red, white and roan has ever been seen on this side of the water. There are close upon 320 representatives of the breed entered, and almost all are forward. Around the ring were fanciers of the breed from many lands, and speaking many languages; among them our good friend, Hon. John Dryden, of Ontario, and several other friends whom the writer met when in Canada a few years ago. The feature of the show was the remarkable success of Mr. J. Deane Willis, Bapton Manor, Codford, St. Mary, Wilts. He bred and owned both the first-prize yearlings, and with them gained both the male and female championships. Both are by one bull, Violet's Fame 78078, a choicely-bred animal, such as Mr. Deane Willis is ever in the way of having at the head of his herd. The male champion is a beautifully level red, exceptionally well furnished at the tail root, and so evenly that you cannot find a flaw in him. He is known as Bapton Viceroy, and is reported to be sold for the extraordinary figure of 2,500 to a South American buyer. Even if the fact be not so, the rumor is sufficient indication of the quality of the animal. His dam is Vanity, by the celebrated Count Lavender 60545. The champion female is Golden Garland, by the same sire, a lovely well-haired roan, out of Golden Geraldine, another daughter of Count Lavender. This is one of the truest and most level heifers seen for many a day. Her maturity of form and fidelity to breed character are rare in an animal so young. It is reported that she also is sold to an Argentine buyer, the price in her case being quoted as 600 gs.

Regarding the other youngsters in the classes led by this pair from Bapton Manor, the bull was pressed very hard by a beautiful roan, named Royal Windsor, bred and owned by His Majesty the King. He was got by Luxury, out of another Count Lavender cow. Many regarded this Windsor yearling as fully a match for Bapton Viceroy. He is certainly a much more stylish youngster, carrying himself with unusual gaiety; but he is not as well finished at the tail and on the plates as the red. More wonderful things have happened than that he will finish the better old bull of the two. Earl Manvers had the third in the class, another red, named Illustrious Count, by Lavender Royal, and thus standing in the same relationship to Count Lavender through the sire as the two in front and the champion female do through their dams. He is not at all unlike the first one, but lacks his finish. Mr. John Handley, Greenhead, Milnthorpe, a Westmorland farmer, and one of the best Shorthorn judges in England, had the fourth, another red, named Frayne Challenger, bred in County Meath, Ireland, with a grand square carcass, but rather a coarse, curly-haired head. In some respects as fine a yearling as any in the class was the fifth, Mr. Herbert S. Leon's light roan, Sir Primrose, bred by Mr. Jolliffe, near Stratford on Avon, and first at the Royal Dublin Show in spring. This is a very level, lengthy bull, but a little lumpy at the tail root. He goes to the Argentine. There were few better bulls in the class than the sixth, Mr. Robert Taylor's Baron Lindisfame, from Pitlivia, Carnoustie.

In a very fine class of two-year-old bulls, Mr. Alex. T. Gordon, of Newton, Combs Causeway, Insh, was first with the gay roan, Fascinator, bred by Mr. James Durno, Jackstown, Rothie-Norman, and got by Lord Lynedoch 74900, out of a Favorite Blossom cow, by the champion Pride of Collynie 75248. The second, third and seventh in the class are in the hands of the noted judge and exhibitor, Mr. George Harrison, Gainford Hall, Darlington. The second and seventh were bred in Cumberland, and the third at Collynie, after Royal Edward. Mr. Henry Dudding had the fourth. In the second there is likely to be a dash of Bates, although his sire is Lord Victor.

The aged and three-year-old class was led by the Dublin champion bull, Mr. F. Miller's Linksfield Champion 86401. He was bred by Colonel Johnston, of Linksfield, Elgin, after Scottish Prince 82270. He is a bull with perfect top line, very deep brisket, and well-sprung ribs, but light in his second thighs. One would also like him better if he had greater gaiety, and did not carry his head so low. He is the property of the great Argentine exporter, whose headquarters in

England are La Belen, Clifton Road, Birkenhead. The bull which followed him in the class, Sir Richard P. Cooper's Meteor 86381, is, unfortunately, white; but for this he would be invincible. With a red or dark-roan hide, it would be impossible to say how high a price might be given for this bull. He shows himself well, and is level both above and below, while his depth and spread of rib show him to be no ordinary specimen. He was first at the Highland last year.

The females, as is often the case, were, perhaps, superior to the males. The first three, in the yearling class were exceptionally fine youngsters. The second, Mr. Basset's Queen of Brilliants 2nd, from Cornwall, was got by Shamrock 84742, out of a cow by Bapton Juan. She shows great gaiety, although lacking the finish and extraordinary maturity of Mr. Deane Willis' champion. Mr. Robert Taylor's third, from Carnoustie, is home bred, and a neat little roan, by Golden Dawn 72609. She deserved all her honors. In a big two-year-old class, the spirited patron of all English stock, Sir Oswald Mosley, Bart., Rolleston, Derby, was first and second with a very promising pair, a red and white, and a roan, respectively. They are home-bred, and few breeders could claim the distinction of putting two such heifers in the ring. One is by Regulator 84488, and the other is by Beauty's Pride 78371. Sir Oswald was also first in the class for three-year-old heifers in milk, with another red and white, named Proud Duchess, got by the sire of the second-prize two-year-old, out of the dam of the first-prize two-year-old. She was an easy winner in her class! It does not fall to the lot of many Shorthorn cows to be dam of two first-prize winners at a show like the Royal in the same season. Sir Oswald is one of the most popular breeders in England. Rolleston Duchess, the dam of these two first-prize winners, was got by Lord Lawrence 72889. Mr. Taylor, Pitlivia, was second in the three-year-old class, with the Cumberland-bred heifer, Silver May, got by the Scots bull, Stonetown Pride 77972. Lord Calthorpe had third, with a big, wealthy heifer, named Ruby 4th, bred by Messrs. Peterkin, Conon Bridge, Ross-shire, and got by the celebrated Collynie Conqueror 78609. There was a very fine class of older cows in milk. His Majesty the King was first, with his big red cow, Sylph, now five years old, and got by the 800-gs. bull, Royal Duke, the champion in his time of England, Scotland and Ireland. Sylph has been a great winner in her time. She was first at the Highland and, I think, also at the Royal when younger. She has become rather rough about the tail root, but her merits otherwise were regarded with such favor that the two judges differed as between her and the yearling heifer, Golden Garland, for the championship. The umpire, who was judging the Lincoln Reds, gave the preference to the younger animal; Sylph then standing reserve. The second-prize cow in milk was Mr. Taylor's Donside Princess, the Edinburgh champion, which, although lacking the wealth and substance of the King's cow, is, perhaps, the truer to breed character and type. She is what one would call a very bonnie little cow, of choice merit and quality. The famous white cow, White Heather, from Bapton Manor, was third. She begins to show signs of wear. Linksfield Champion was the reserve champion bull.

After the Shorthorns, the Jerseys were the strongest cattle section. The Aberdeen-Angus and Galloway breeds were worthily represented; Mr. John Cunningham, Tarbreoch, Dalbeattie, taking both male and female championships for Galloways, with Chancellor of Ballyboley and Doris of Denhamhill, respectively. The A.-A. champion male was Colonel Smith Grant's Prince Forest, bred at Ballindalloch, and the champion female, Mr. Greenfield's cow from Haynes Park, Bedford. Ayrshires were poorly represented for numbers. Mr. Cross, of Knockdon, won for cows, with two good specimens, the winner having been second at Ayr in calf in April. The bull class witnessed a reversal of this season's previous form. First prize was awarded to Mr. Howie's Wynflette, and second to Mr. Barr's Yomosal.

The horse section was well filled, so far as Shires, Hunters and Hackneys were concerned. There was only a fair show of Clydesdales. Mr. James Kilpatrick, Craigie Mains, Kilmarnock, was first in two classes, with Blyth Thomas and Rienzi, respectively, and took the male championship with the former. Mr. Word, Drawdykes, Carlisle, took the female championship with his famous Cedric Princess, the Seaham Harbor Stud (Ltd.) being reserve, with a grand three-year-old, Silver Princess, by Silver Cup. "SCOTLAND YET."

Good Crops East and West.

June rains and summer sunshine all over the grain belt of Western Canada have set the crops growing with such luxuriance that everyone is in an optimistic mood. It would be hard to realize more favorable conditions than have existed the past few weeks. The country is one grand great promise of plenty.

Hardly less roseate is the prospect east of the Great Lakes, if we except certain restricted areas, where winter-killing of meadows, or summer drouth, have scarred the prospect. On the whole, 1906 should be a season of plenty in Canada.

Soot for Turnip Fly.

An Irish writer says he has found soot an effective repellent of the turnip fly. "Get some soot," he says, "as free from mortar or cinders as possible; put in a muslin bag, and immerse in a vessel of water for three hours. The bag acts as a sieve. Saturate the top of the drill by means of a watering pot." He adds that he has no doubt the operation could be done with a spraying machine.

MARKETS.

Toronto.
LIVE STOCK.

Receipts of live stock at the City and Junction markets were not large, but more than the demand called for. Owing to unsatisfactory cables of cattle selling at a loss, trade in shipping cattle was dull, with prices 15c. to 30c. per cwt. lower.

Exporters—Shipping cattle, \$4.70 to \$5.15; bulk, \$4.90 to \$5 per cwt. Export bulls sold from \$3.65 to \$4.25 per cwt.

Butchers—Trade in all classes of butchers' cattle slow, with prices fully 25c. per cwt. lower than last quotations. Prime picked lots of butchers' heifers and steers, \$4.80 to \$5 per cwt.; loads of good, \$4.60 to \$4.75; medium, \$4.30 to \$4.50; common, \$4 to \$4.25; stall-fed cows, \$3.75 to \$4.40; canners and grass cows, \$2.50 to \$3.25 per cwt.

Stockers and Feeders—Receipts have been light, but more than equal to the demand. Prices are reported as being steady at following quotations: Steers of good quality, 900 to 1,050 lbs. each, at \$4 to \$4.25; sters, 800 to 900 lbs., \$3.90 to \$4.10; light stockers, \$3.25 to \$3.60; medium stockers, \$3 to \$3.25.

Milk Cows—Receipts of milk cows and springers have been moderate, and trade dull, only good-quality cows being at all in demand. Prices for best, \$40 to \$50; medium, \$40 to \$45; common, \$30 to \$35; inferior, \$20 to \$28 each.

Veal Calves—Receipts of veal calves have been moderate. The quality of the bulk of the calves being marketed is not good, too few well-finished lots coming forward. Notwithstanding this fact, prices have kept steady to firm for several weeks. The bulk are selling at \$5 to \$5.50 per cwt.; with good to prime new-milk-fed calves at \$6 to \$7 per cwt.

Sheep and Lambs—Receipts last week were the largest of the season thus far. Trade has been active, but prices were easier. Export ewes, \$4 to \$4.25 per cwt.; export bucks, \$3.50 to \$3.75 per cwt.; light handy butchers' sheep of good quality, \$4.50 to \$5 per cwt.; lambs, \$3.50 to \$5 each, or 7c. to 8c. per lb.

Hogs—Receipts were light, and prices 10c. per cwt. higher. Selects quoted at \$7.00 per cwt., fed and watered, or \$7.85 per cwt., off cars. The prospects are for still higher prices, and for an early fulfilment of our predictions that hog prices would go to \$8 per cwt. The farmers who have kept on raising hogs when prices were low, are certainly having their innings now, and have been for some months past.

Horses—There is little that is new to report in regard to the horse market. Monday being Dominion Day, there was no sale at the Canadian Horse Exchange. The main demand on the Toronto horse market is for workers and delivery horses. The feature of the market today is the demand for ponies, and these are selling at high prices. The market is not nearly so good as it has been. Burns & Sheppard, of the Repository, report the following prices: Single roadsters, 15 to 16 hands, \$125 to \$175; single cobs and carriage horses, 15 to 16.1 hands, \$150 to \$200; matched pairs and carriage horses, 15 to 16.1 hands, \$300 to \$500; delivery horses, 1,100 to 1,200 lbs., \$125 to \$160; general-purpose and express horses, 1,200 to 1,350 lbs., \$150 to \$190; draft horses, 1,350 to 1,750 lbs., \$160 to \$220; serviceable second-hand workers, \$50 to \$80; serviceable second-hand drivers, \$50 to \$60.

COUNTRY PRODUCE.

Butter—Receipts liberal with trade good. Prices firm. Creamery prints, 21c. to 22c.; creamery boxes, 20c. to 21c.; dairy pound rolls, 18c. to 19c.; tubs, 17c. to 18c.; bakers' tub, 14c. to 15c.

Eggs—Firm at 18c. to 19c. Cheese—Receipts liberal. Market strong at 12c. to 12½c.

Poultry—Receipts larger. Prices easier. Spring chickens, 15c., live weight; 20c. to 22c., dressed; spring ducks, 20c. to 25c., dressed; turkeys, 12c. to 15c. per lb.

Potatoes—Good demand for choice stock; market firm. Car lots, on track, at Toronto, Eastern Delawares, \$1.05 to

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\$1.15 per bag; Ontario choicest white, \$1 to \$1.05 per bag.

Hay—Baled; market inclined to be easier. No. 1 timothy, \$9.50 to \$10; No. 2, \$7.50 for car lots, on track, at Toronto.

Straw—Baled; steady at \$5.50 to \$6 per ton for car lots, on track, at Toronto.

Beans—Demand light. Prices unchanged. Hand-picked are quoted at \$1.75 to \$1.80; prime, \$1.50 to \$1.60; undergrades, \$1.50 to \$1.00 per bushel.

Honey—Market quiet. Prices steady at 9c. to 10c. per lb. for strained; and \$1.50 to \$2 per doz. for com's.

Onions—Per sack, \$2.50.

Hops—Market dull at 14c. to 17c. per pound.

BREADSTUFFS.

Grain—Wheat—Ontario, market about steady; No. 2, red and white, 81½c. to 82c.; spring, 80c.; goose, 75c. Manitoba, No. 1 northern, 86½c., track, at lake ports; No. 2, 84½c.; No. 3, 81½c.

Oats—Market easier. No. 2 white, 38c. to 38½c., west, and 39c., east of Toronto.

Peas—Prices nominal, at 81c. to 82c.

Corn—No. 2 yellow, 59½c. to 60c.; No. 3 yellow, 59c., on track at Toronto.

Rye—Nominal, at 62c.

Barley—No. 2, nominal, at 52c.

Flour—Market not quite as firm; exporters offering \$3.15 for 90 per cent. patents, buyers' bags. Millers are asking \$3.25. Manitoba—First patents, \$4.40 to \$4.60; second patents, \$4 to \$4.10; bakers', \$3 to \$4.

Millfeed—Market easier for bran; \$15 to \$15.50, in bulk, outside. Shorts are quoted at \$18 to \$18.50, outside.

HIDES AND TALLOW.

Market unchanged.

Cheese Board Prices.

Woodstock, 11½c. Pictou, 11½c. Peterborough, 11 9-16c. to 11½c. Stirling, 11 7-16c. to 11½c. Tweed, 11 11-16c. to 11½c. Kingston, 11 9-16c. Madoc, 11 9-16c. to 11½c. Brantford, 11½c. to 11½c. Ottawa, 11½c. Huntingdon, 10c., white cheese, 11 7-16c.; colored cheese, 11½c.; fresh butter, 21½c. to 21½c. Napanee, 11 11-16c. Inouois, 11½c. to 11 11-16c. South Finch, 11½c.

Chicago.

Cattle—Common to prime steers, \$4 to \$6.10; cows, \$3 to \$4.50; heifers, \$2.75 to \$5.25; bulls, \$2.75 to \$4.25; calves, \$5.50 to \$6.50; stockers and feeders, \$2.75 to \$4.60. Hogs—Choice to prime, heavy, \$6.75 to \$6.90; medium and heavy, \$6.60 to \$6.75; butchers' weights, \$6.85 to \$6.92½; good to choice, heavy, mixed, \$6.60 to \$6.80; packing, \$6 to \$6.75. Sheep and Lambs—Sheep, \$4.25 to \$6.35; yearlings, \$5.40 to \$7.40; shorn lambs, \$5.40 to \$6.

British Cattle Markets.

London—Cattle, 10½c. to 11½c. per lb.; refrigerator beef, 8c. to 8½c. per lb.; sheep, dressed, 13½c. to 16c. per lb.

Montreal.

Live Stock—Export-market situation steady, a recent downward course of Old Country market, however, having the effect of limiting the activity in freights. Shipments from Montreal during June were 19,007 head of cattle, 358 sheep and 24 horses, while those for the season to date were 35,505 cattle, 3,889 sheep and 38 horses. This record is 10,000 more cattle than for any previous corresponding period, save in 1903. Shipments of sheep and horses were rather light, however, having been surpassed frequently. Of the above shipments, 9,040 cattle were American, being shipped through Montreal. Local offerings on the light side now. Demand fair, and prices consequently firm all round. Cattle, 5½c. for choicest; good to fine, 5c. to 5½c.; medium, 4c. to 4½c., and common, 3c. to 3½c. Sheep, 3½c. to 4½c., scarce. Lambs, also very scarce, and firm at \$3 to \$6 each. Calves, \$2.50 to \$8 each, according to quality. Hogs are holding very firm, 7½c. to 8c., freely paid, a few extra choice even bringing more.

Dressed Hogs—On a basis of prices for live. Fresh-killed abattoir stock, 10½c.

Horses—Market firm, with supply very light. Heavy-draft horses, weighing 1,500 to 1,700 lbs. each, \$250 to \$300 each; light-draft or coil-carters, 1,400 to 1,500 lbs., \$200 to \$250 each; express, 1,100 to 1,300 lbs., \$150 to \$225; choice saddle or driving horses, \$350 to \$500 each, and common old stock, \$75 to \$125 each.

Hides and Tallow—Lamb skins quit scarce, still 35c. each. Beef hides, 12½c. per lb. for No. 1, 11½c. for No. 2, and 10½c. for No. 3. Calf skins steady at 13c. per lb. for 2, and 15c. for No. 1. Horse hides unchanged, at \$2 each for No. 1, and \$1.50 for No. 2. Tallow, 5c. for refined, and 4c. to 2c. for rough.

Cheese—The market continues to strengthen, notwithstanding that it is now, and has been for some time, higher than ever before at the same season of the year. Showing the peculiar position occupied by Canadian cheese this year, it may be remarked that it is actually selling, on the English market, at fully a cent a pound more than English Cheshire cheese, probably the first time such a thing ever took place. The first intimation of the most recent advance was the advance on the Peterborough board to 11½c. Local dealers immediately began asking 12c. for finest Ontario cheese, and although this was enough to put a stop to business, they held out strongly for it in many cases, believing that the necessities of those who sold the market short, some time since, might compel the market to go to their price. Quotations are somewhat uncertain, owing to the exceptional conditions in the market, but we quote 11½c. to 11½c. for best East-erns, and 11½c. to 11½c. for best Ontario. Exports from Montreal for the week ending June 30 were 95,000, or 5,000 less than for the same week last year. Total shipments this season were 541,000 boxes, or 50,000 more than a year ago.

Butter—Butter has eased off since last quotations. Finest salted creamery, 21½c. to 21½c. From this figure, prices range downward to 20½c. Very few merchants appear to want butter. (Continued on page 1118.)

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Life, Literature
and Education.

How One Cemetery was Improved.

Having just read the article in the June 28th issue of "The Farmer's Advocate," on "Care of our Country Cemeteries," I wish to state that I quite agree with the sentiment expressed therein, and am going to give you the plan that was taken by our church, for in the country most cemeteries belong to certain churches, and others could be managed in the same way.

I think our cemetery is the nicest that I have seen anywhere in the country, and ahead of union ones, in that it is all kept alike; there are no distinctions made. It is all perfectly level, save for an occasional terrace, and is kept cut with a lawn mower, and clipped around the stones.

Well, how was it done? It was the Ladies' Aid. One woman got up and said that it ought to be done; the others fell in line. A cemetery committee was appointed, and were given a grant of \$15.00 (fifteen dollars). This committee called a meeting of all who had lots in the cemetery, and got their consent to begin work. Three men were then engaged to spade up, level and sow with grass seed a small piece of ground. A lawn mower was bought, and that was kept cut the first year. It looked so well that we had no further trouble. Each year after we called a cemetery bee on the afternoon of May 24th, to which all were invited. We gave the men tea in the church basement, while the ladies sewed for the Indians. We have a general good time, and will complete the whole in a year or two more. We engage a caretaker at \$25 per year. M. R. Simcoe Co., Ont.

Decision re Our "Eastern" Debate.

The vote on the debate, "Resolved that a general system of Macdonald Consolidated Schools, such as those instituted by Dr. Jas. W. Robertson, would be more advisable for rural districts than the present rural-school system," has resulted in a majority of one vote in favor of the negative. The following review of the prize essays has been prepared by a leading educationist:

It will be readily conceded that the above question called forth a very readable and instructive debate, as published in our issue of June 14th. Those who had not thought much of the question, are doubtless surprised that so strong arguments could be advanced for and against a change of the system of organization of rural schools now in vogue throughout Canada.

It will be noticed that the resolution debated is not quite the same as though it had read, "Resolved that the Consolidated School system is preferable to the ungraded rural-school system." The consolidated schools that Canadians can speak of

from personal knowledge are the Macdonald-Robertson ones. What these have done, or are doing, show the possibilities of the system. Whether, if the system were to become general, the standard of efficiency of the Macdonald-Robertson examples would be maintained or exceeded, raises another question, albeit a very practical and important one. The first writer for the affirmative recognizes danger to his side from speculation of this sort, and almost at the beginning of his argument avers that the already-established consolidated schools "should never be taken as criteria of the success or failure of the system in general." It should be explained that he uses the words in connection with the expense of the system. The second writer for the affirmative, in dealing with the objection of increased expense, which, he says, is "the only argument of any weight that can be brought against the system of consolidation," meets it with the theorem that cheap things are usually the most expensive in the end.

Is it true that good schools cannot be had without paying for them? Can the "extravagances"—to use R. J. M.'s word—in the Macdonald schools be cut off without adversely affecting their efficiency? The expenses throughout, he says, have been a maximum instead of a minimum. If, in education, as in so many other things, "money makes the mare go," would consolidated schools, managed on the minimum of expense that taxpayers have shown themselves capable of devising, be more efficient than the present rural schools? So important is this matter of money that it seems to us that a liberally-disposed and unhampered rural school board would probably have a more efficient school than a consolidated school conducted with strict regard to minimizing expenses.

Were we speaking from the judge's bench, we should say that the affirmative has carried the day. This we can do without committing ourselves to the judgment that consolidated schools would be preferable to the present unit system. It is very probable that the former are better suited to some conditions and localities; the latter to others.

In either case, competent trustees, able and willing to incur the necessary expense, can maintain ideally-efficient schools. It is an old saying, and a true one, that as the teacher, so is the school. President Garfield said that he would rather sit on a log with Mark Hopkins to instruct him than attend any mere routine university in the world. In the existing consolidated schools every teacher was carefully selected from among those who had made a reputation for professional aptitude and devotion, and some of them, even after that, were sent abroad, at Sir Wm. Macdonald's expense, for further special training. The cream of the cream! It would call forth a strong effort of the imagination to see and describe the schools of this land if trustees everywhere were to exercise equal care in selecting and liberality in remunerating their teachers.

As the affirmative set forth the merits of the consolidated school,

the reader probably considered how several of these might be introduced, in a greater or less degree, in the existing rural schools. Nature-study, manual training, domestic science, and school gardening, are not dependent on special rooms, special teachers and expensive equipment. The negative made an unnecessary concession in saying that consolidation makes the introduction of these subjects possible. Any teacher who has proven his competence to teach arithmetic well, can train himself or be trained to teach these subjects well. Whatever promotes the spread of the belief that these subjects cannot be taught in the single rural school does great harm to the farmer's child. They can be taught, and they should be taught. They will, too, when trustees advertise for teachers competent to teach them.

The affirmative did not exaggerate the educational value of tasteful and attractive school buildings and surroundings. In every district in the township there might be, there should be, a center of radiance of beauty and taste. This is one particular in which the balance of possibility inclines in favor of the single rural school.

Sir Wm. Macdonald's generosity may prove not less beneficial to the country if it helps us to realize all the possibilities of the present system than if it leads to its entire or partial displacement by the consolidated system.

The Consolidated School from the Standpoint of the Parent and the Pupil.

As the Macdonald Consolidated School at Guelph is nearing the close of its second year, we are acquiring more data on which to base our conclusions as to the feasibility of this experiment in advanced methods of education. This article will, however, present the school from the standpoint of the parent and the pupil, rather than from the side of the educationist.

Ten or fifteen years ago, when visiting a country school in winter time, it was common to see in the back seats three or four young men who were perhaps old enough to be curling their first moustache. These young men were usually the eldest sons of the farmers of the section, who, as soon as they were old enough to drive a team, had been kept at home to help with the spring seeding, and when seeding was over it was scarcely worth while to start for the month before holidays, so they were kept home until fall, and then they were again needed to do the harrowing for the fall seeding. Thus, these boys received but little education until they were young men, and themselves felt the need of at least a knowledge of the three R's. There are still these eldest sons who have been early kept at home and who are feeling the need of more education, but now they seldom go to school in winter, perhaps because more stock is kept on the farm and they are more needed in winter, but also because the school teachers have changed; we now have largely young men and women, or big boys and girls, for school teach-

ers, instead of middle-aged married men. Public-school teaching is now a stepping-stone, not a profession.

During the past winter Principal Hotson opened a class for the young men of the five districts in the consolidated school. His efforts were rewarded by an average attendance of thirteen young men, of whom ten were over twenty years of age. That these young men appreciated the course will be evident from the following account given by one of them: "The summer I was twelve we were building a barn at home, and I stopped school about the first of April, and, as I was very useful, I did not go back again. When I stopped school I was just beginning to read books, but as I was very busy, I did but little reading, and as my father did all the business, I did even less figuring, and in a few years I began to feel that I had forgotten almost all that I had learned. This winter, with two other young men from my section, I started to the consolidated school, mainly, I confess, to get the manual training. However, we found the whole course very practical, for we received regular lessons in farm bookkeeping, arithmetic, spelling, manual training, and stock and grain judging. We each sketched a plan of our home farm, and, from our practical knowledge of farm operations, figured the returns from each field and from the whole farm. We studied methods for keeping an account of the stock on the farm, and for tabulating each animal. We learned to spell all the words in ordinary use on the farm, and to write accounts of farm operations. For our manual training, we were given training in knotting and splicing ropes, repairing farm tools and implements, and a study of the various kinds of woods and their uses. One afternoon a week we went up to the College for training in judging live stock and grain, and in recognizing weeds and weed seeds. The course was to have lasted six weeks, but we were so much interested that we continued until April 1st, or for three months. I had thought my school days were over, but I am very grateful for this course, for both the pleasure and the profit I received."

With regard to this winter course for older students, I may add that, while there were only two or three from each section, not enough to make it worth while to have a special class in a rural school, yet the thirteen from the five sections made a good class in the consolidated school. Further, no rural school could offer the inducements afforded by the course at the consolidated school. It might be suggested that next winter a similar course in English, arithmetic, domestic science, domestic art, and sewing, might be given for the older girls of these sections.

The possibility of making the school so attractive to children that they would really want to go to school used to be a question for discussion at teachers' conventions. The Macdonald Consolidated Schools have effectually solved this problem. I have often seen small children crying because they did not want to go to school, but never until I came to

Guelph have I seen children crying because they wanted to go and could not. Here I have seen a golden-haired little maiden crying when, on account of illness, her mother told her she must remain at home for a few days; and I have heard a father say that he knew of no way in which he could punish his children more than by keeping them home from school. Among nearly 240 children attending the consolidated school, I have only found one boy who did not prefer the consolidated to the separate-section school. This boy came from a home in which the parents objected to the new method, and were unwise enough to allow their objection to spread to their children.

It is not because the course at the school is easier, but because it is more attractive, that the children like it so much. Manual training, domestic science, nature study, and school-garden work, are additions to the subjects of the rural-school course, but are not allowed to interfere with the progress in those subjects which must always be the foundation of a public-school education. The children enjoy making and doing things for themselves. It is a proud moment for the small girls of the school when they can take home some biscuits or some sewing which they have themselves made, and both girls and boys enjoy picking flowers and vegetable in their own small gardens. Many of the children also duplicate at home what they are doing at school, and this spring I watched a small boy of eight and his almost baby brother make up a garden plot, mark it off, and plant it with vegetable and flower seeds.

Though I have talked to many pupils and many parents, I have found but one serious objection to consolidation, the increased cost of maintenance. Let us briefly examine this objection. One farmer said it was now costing him four dollars each to send his children to school, and he would not pay a dollar more. This man lived in No. 4 section, and his school rate was 12-10 mills. Had he lived in the City of Guelph his rate would have been 8 mills, or nearly seven times as much as he pays at present. Another man who sees the bright side of things, said he was paying 90c. a year for the education of his little daughter, and \$1.00 a year for tog tax. At the meeting of the Ontario Educational Society in Toronto, some rural trustees were complaining about the rise in teachers' salaries and the increase in the school rate. Dr. Goggin, a prominent educationist, asked what their whole section paid for school taxes, and was told about \$450. His reply was, "Well, I think you are all better off than I am, and yet I alone pay over \$500 a year for the education of my daughter at college." The increase in cost at the Macdonald School at Guelph is owing to the very large expense for transporting the children. This alone costs \$3,400, and were it not that the consolidated sections lie on both sides of the city limits, the expense would be much less. As it is, six of the eight vans drive more than two miles through the city before reaching the limits of their school sections. Were it not for the city the distance would be much shorter, and also the children of nearly two sections might walk, thus reducing the cost by \$600 or more. The present school rate in the five sections averages 12-10 mills, and when the whole cost of maintenance must be borne, the rate will increase to 34-10 mills. This is still much short of the average city school rate, which is somewhat over 8 mills. Further, it may be expected that, owing to the increase in the county grant, this rate will be decreased. Of the consolidated schools in twenty-two States of the Union, 84 per cent. report a decrease in cost of maintenance, 8 per cent. report the same rate, and only 8 per cent. have an increased rate. An excellent feature of the broader education of the consolidated school is the influence which the children

have on their homes and parents. As the children talk and ask questions about their nature-study, bird, insect and plant life, flowers and vegetables, those at home become interested, and gradually learn to take a greater pleasure in nature. Also, many of the operations in the school garden are good object lessons of the advantages of modern methods of prevention and cure.

After three years' trial, I am convinced that the advantages of consolidation will have been amply proven, even under the unfavorable circumstances at Guelph, and I feel confident that when, according to the present agreement, the assistance from the Macdonald fund will be discontinued on June 30th, 1907, the interested farmers of these five sections will not consent to a return to the old system, but will demand that, in the interests of the growing generation, the objectors, mainly old bachelors, and those whose children are no longer of a school age, bear their share of the expense, and continue the consolidated school.

F. H. R.

Current Comment

Sir Thomas Shaughnessy, President of the Canadian Pacific Railway Co., announces that by the time this year's wheat crop is ready to move, 150 miles of their road between Winnipeg and Fort William will be double-tracked. The C. P. R. now has 900 miles of new roadway under construction.

It has been a matter of disappointment to Canadians that the Argonauts, participating in the Henley regatta, England, failed for the third time to win the Grand Challenge Cup, emblematic of the World's Championship at eight-oared rowing. The first attempt was in 1899, when they won the first heat. In 1902 they tried again, with similar result. This year they won their first heat from First Trinity, in 7.20, and in the second disposed of the Thames R. C. in 7.04, but in the third were beaten in 7.09 by Trinity Hall, losing, however, by only half

but the birth-pains of Russian Liberty, and the fight will not end until an ample measure has been gained. Regret the situation though we may, regret the means, tremble at the ensuing consequences, or pity the dynasty, who of us Canadians would stay the revolution if we could? Russia was slow in arousing herself to the modern ideals of public liberty. She is a long way behind other European nations in the race, but at last she will be free, and those who would oppose the change will be obliged to leave the country or be engulfed in the cataclysm. The price of liberty is high, but who shall say too high? Thus far in the world's history, the fact that revolution follows oppression is as fatalistic as that action and reaction are equal, and as the greater the action the greater the corresponding reaction, so the more high-handed the oppression, the more rapacious the vultures of revolution.

Odds and Ends.

The patent office gives many surprises. Calorit is one of the latest. It is a can of tomato soup, but not by any means an ordinary one. The punching of a few holes in one end causes it to fizz, sputter, and steam precisely as if it were boiling, and it is doing that very thing. After a few moments the can may be opened at the other end, and hot tomato soup immediately served. Had the contents been any other kind of soup, cocoa, or coffee, the results would have been the same. The secret of this fire is that in the bottom of the can is a layer of quicklime, and one of cold water. The punching of the holes in the can allows the water to come in contact with the lime.—Home Magazine, Ind.

The newest thing in building blocks is the use of glass. A bank building and a church are proposed to be erected in Des Moines, Iowa. The walls will be double, with a foot of dead-air space between, of milk-white opalescent glass one-fourth of an inch thick, securely fixed in steel frames, which are laced together. In a building such as this, with mechanical ventilation, no windows are needed, the light passing clear through the walls. In wet weather these walls would be self-cleaning, and in addition there would be no dark corners, since the light could penetrate to every part of the building. The exterior effect will resemble a highly-polished marble wall, with glass ornamentation in imitation of onyx. It will not be long before houses come to be built of the same light, hygienic material.

Luther Burbank is making experiments to produce new potatoes—tubers that may eclipse any other yet given to man. It may seem almost incomprehensible to the average reader should a statement be made that Mr. Burbank has more than 1,000 varieties of potatoes with which he is experimenting, yet such is the fact. And out of these thousands of all sorts and conditions are to come the new and better varieties that may completely revolutionize the potato crops of the world. Another creation and production of Burbank's will come in under the head of the potato experiments, but is even more wonderful. Burbank has produced a "potato fruit." Briefly summarized, the evolution is a matter of planting a tuber and gathering from the potato vine a luscious white-fruit, one that is delightfully palatable and makes an excellent preserve. Mr. Burbank has named the potato fruit "pomato." When compared with tomato, the pomato is smaller in size, and its meat is white instead of red and is higher flavored. In other words, its flavor is that of fruit, rather than of vegetable.

Mozart's Skull.

In the middle of Salzburg stands the small house in which Mozart was born. It contains two old photos and many relics belonging to the composer, whose skull is preserved in a glass case placed in the center of the room in which he first saw the light. The skull is all that remains of Mozart, whose body could not be identified in the mass of remains that filled the common paupers' grave wherein he had been buried at Vienna.



"Now I Know the Cause of All My Indigestion!"

Inoculating Mental Qualities.

Commenting briefly on results accomplished (according to a dairy-paper article) by a Yankee creamery-man, our racy contemporary, the Irish Homestead, indulges in a truly Hibernian speculation on the possibilities that lie ahead of the human race in the line of inoculation. It says:

"We take off our hats to this energetic man. We belong to an effete race which is being swept off the face of the earth, but we have sufficient generosity left to acknowledge that the race which is going to inherit the earth is able to do its business properly. We wish the science of inoculation were more developed, as a pure culture of some electrically-gifted New-World managers could be of the greatest service to us. We have no doubt the youth of the future will be inoculated, not merely for the negative purpose of preventing disease, but for the positive purpose of giving them qualities of energy and mind which they lack at present. We will have a Danish inoculation for thoroughness, a Yankee inoculation for energy, a German inoculation for steadiness, and a French inoculation for gaiety. We will have some powerful fine specimens on show then."

a length. The cup this year, for the first time, was won by an outside team, the Sport Nautique Club, of Ghent, Belgium, winning from Trinity Hall in the finals, in 7 minutes and 9 seconds. While, following the famous victory of William Sherring in the Marathon Road race, it would have been flattering to Canadian pride to capture the rowing championship, we do well to remember that we cannot expect to win in everything, and it is better to lose philosophically than to win exultantly. Anyone can gloat over victory, but it is worth cultivating the fine moral temper which enables individuals and nations to bear themselves bravely in the face of defeat. Occasional losses have a fine chastening effect.

Strife and turmoil continue in Russia. The Czar, infatuated still with the idea of despotic authority, yields only inch by inch to the frenzied forces of economic and political revolution. Snatching each concession of liberty and civil rights, the people cry out threateningly for more. Violence, excess, intemperateness, characterize many of their acts, and confirm the autocratic powers in their second-nature belief that the people are mad. Yet all the terrorism

The Quiet Hour.

Helping to Bear Christ's Burden.

And as they led Him away, they laid hold upon one Simon, a Cyrenian, coming out of the country, and on him they laid the cross, that he might bear it after Jesus.—St. Luke 23: 26.

"O God," I cried, "why may I not forget?
These halt and hurt in life's hard battle
Throng me yet.
Am I their keeper? Only I—to bear
This constant burden of their grief and care?
Why must I suffer for their grief and care?
Why must I suffer for the others' sin?
Would that my eyes had never opened
been!"
And the thorn-crowned and Patient One
Replied, "They thronged Me too; I too
have seen."

"Thy other children go at will," I said,
Protesting still.
"They go, unheeding. But these sick
and sad,
These blind and orphan, yea, and those
that sin
Drag at my heart. For them I serve
and groan.
Why is it? Let me rest, Lord. I have
tried—"
He turned and looked at me; "But I
have died!"

"But, Lord, this ceaseless travail of my
soul!
This stress! This often fruitless toil
These souls to win!
They are not mine."
He looked at them—the look of One
Divine!
He turned and looked at me; "But
they are MINE."

"O God," I said, "I understand at last.
Forgive! and henceforth I will bond-
slave be
To Thy least, weakest, vilest ones,
I would not more be free."
He smiled, and said, "It is to ME."
—Lucy Rider Meyer.

Though Christ's servants are freed-
men, loosed from their chains, yet they
are driven forward at a pace that slaves
know nothing about—constrained by the
compelling force of love. It is impos-
sible, as St. John tells us, to love
God unless we love our brother, and if
we care for him in the least, we cannot
help trying to lift his burdens from him,
or, if that is impossible, at least sharing
his cross to some extent. Those who
set out to follow in the path Christ
trod must be prepared not only to
shoulder their own burdens manly and
cheerily, but also to bear the burdens of
other people. And they are doing it,
too, in your neighborhood and in this,
though sometimes the willingly-accepted
burdens are crushing in their weight.

Yesterday I attended a meeting of
"Rescue Mission workers," and should
like to tell you about it. This conven-
tion was only suggested about ten days
before, and got up in a hurry; yet there
was a large gathering of enthusiastic
men and women who are all actively en-
gaged in God's own work—for the Great
Shepherd says: "I will seek that which
was lost, and bring again that which was
driven away, and will bind up that which
was broken, and will strengthen that
which was sick." Though such work can-
not be energetically carried on without
severe strain on body and soul, on the
part of the worker, yet if one might
judge from the beaming faces around me,
the work must bring wonderful joy as
well. They seemed to believe thorough-
ly in the necessity of loving both the
work itself and the individuals for whom
they worked, and did not forget to em-
phasize the necessity for exercising the
"Divine gift of common sense." They
did not think it wise to approach
strangers in the startling fashion of the
barber who had been converted and was
turning to convert someone else without
delay. He got a customer well-lathered,
sharpened his razor carefully, and then
demanded, sternly: "Are you ready to
die?"
"No! and you are not going to kill
me, either!" exclaimed the man in the

chair, as he hastily fled, having entirely
misunderstood the good barber's inten-
tions.

One told how she had gathered in from
the street many and many a poor girl
who was drifting down the black tide of
hopeless misery, homeless and friendless;
but who dropped her brazen shield of im-
pudence as soon as she found that one
person in all the world really cared for
her. She described how once she per-
suaded a girl of seventeen to turn her

of work done amongst the children and
the Hebrews. One speaker declared that
the foreign children, who are about us in
such numbers, have been repressed, and
learn with marvellous quickness. He
said that a teacher told him once that as
soon as emigrant children learned the
language and could read a little, they
would learn as much in a week as our
own children in a month. He em-
phasized the truth that it is the "per-
sonal element" that counts, that work-

them anything really useful, is by no
means so easy.

Then a Christian Jew made a very
earnest appeal on behalf of his own
people, which was especially interesting
to me, as nearly all the children in our
neighborhood are Jews. He said that
we ought to pay our debts, and that we
had not been paying our debt to the
Jews as we should. "Where did you get
your liberty, your good laws and other
things of which you are proud?" he de-
manded. "Did you get it from Rome,
Persia, Babylon or from Greece? No,
from the Jews!" Then he went on, hold-
ing up a Bible, "We love this Bible, and
where did we get it? Every bit from
the Hebrew race." He said it was not
surprising if the Jew is hard to convert,
after 1900 years of persecution—persecu-
tion by Christians. After seeing what
treatment he has received from Chris-
tians in Russia, it is hard to blame him
for suspecting any show of kindness. He
said that though the Jew is a money-
getter, yet underneath, in soul, the thing
he longs for most is sympathy and kind-
ness. (I can bear witness that any
friendliness is met more than half way,
in visiting amongst them.) This Chris-
tian Jew is preaching every night to
crowds of his countrymen, and has
started a Gospel settlement among the
children. This has only been going on
for three months, and the success of it is
still doubtful. I called there to-day and
had a long talk with two of the workers.
They say that the children love to sing
hymns, but will never say the Name of
Jesus, always leaving it out when they
come to it. Sometimes the parents
stop them from attending the sewing and
other classes, saying that they don't
want them to be taught Christianity. But
it is possible to inspire them with Chris-
tian principles and ideals, even if they
are not yet ready to accept Christ as
God. They nearly always say they think
He was a good and great Teacher.

Another speaker said that if anyone had
a leaning towards infidelity, the best cure
for it would be to engage every night for
a month in rescue work—and I feel sure
he was not far wrong. No one can see
the terrible results of sin without seeing
also the need of a Saviour. In every case
it is the personal touch that heals—the
touch of our Divine Brother. Morality
is powerless to drag people out of their
old selves, but God in Man can still
work miracles, and is doing so every
day, as none know better than rescue
workers. He could not win men with-
out coming to live among men, and
neither can we. Rescue work means
hand-to-hand work; we can't fight with
cannon that shoot ten miles, the weapon
we are commanded to use is the sword
of the Spirit, even the Word of God, and
the use of a sword means close quarters.
We must all give and take from each
other as we move on our way; but let
us see to it that we give something valu-
able to our neighbors and take their
good qualities, not their evil, in return.

"But as we meet and touch each day
The many travellers on our way,
Let every such brief contact be
A glorious, helpful ministry!
The contact of the soil and seed;
Each giving to the other's need—
Each helping on the other's best,
And blessing each as well as blest."
HOPE.

The Meadow Lark

(Sturnella Magna—Blackbird family).
Early in May, when the grass in the
meadows begins to grow rapidly into bil-
lows of rich green, you may hear the
plaintive silvery call of the meadow lark
rising everywhere over the verdant fields.
"Spring-o'-the-y-e-a-r! Spring o' the
year!" an eminent bird-writer asserts
that he says, but you must put your
own interpretation on the tender, half-
mournful little strain. Although the
song carries well, one would imagine that
it must belong to a small bird, but this
is not so. The meadow lark is, in fact,
slightly larger than the robin, and a
very gay fellow he is, when he has donned
his summer dress, not at all the pensive,
half-melancholy poet one would picture
him from his piping. The upper part of
his body is brown, mingled with reddish
brown and black. The top of his head
is streaked with brown and black, with a
cream-colored stripe through the center,
similar to that which one sometimes sees
on the heads of young chickens. Over



Entreaty.

back on the life she was leading, and the
older girls, her companions, said: "Yes,
go with the lady, better get out of this
while you can." She turned to them,
and said: "Won't you come too?" but
they answered: "We can't, we're too far
gone." She declared that terribly sad
answer had haunted her ever since. Then
a sweet-faced woman mounted the plat-
form and told us something of the diffi-
culties which must be mastered in caring
for the "girl of the street," after she
has entered the Home opened so gladly
for her. Who can wonder if girls who
have never been trained or taught, never
known any home but a miserable tenement,
crowded with noisy children and

ers must make friends with the children
if they want to help them. He said that
he would not exchange one volunteer
worker who really loved children for a
hundred paid workers who were only try-
ing to build up some institution—though
paid work has a peculiar value of its
own, being generally more systematic and
reliable. He said he had been teaching a
S. S. class of wild boys—Italians, Jews,
etc.—and thought they never listened at
all to the story of the life of Christ. He
was often inclined to call in a police-
man, they were so unruly. But at the
end of three months, he reviewed the
course and was amazed to find that
hands went up and fingers were snapped



The Meadow Lark.

drunken parents, proves wild and way-
ward. Who can wonder if these girls,
gathered from the lowest surroundings,
sometimes quarrel among themselves or
rebel against the needful discipline of
their new home. Old ways cannot be
altered easily, and it is often a slow and
weary task to build up such souls in the
beauty of holiness.

Other men and women spoke eagerly
about the special rescue mission work in
which they are respectively engaged. I
was especially interested in the account

all over the room, and all the boys
wanted to answer at once. They knew
the whole story, though how they had
learned it was a mystery to the teacher.
He said the children crowded into S. S.,
no matter what the weather was like.
If a room and teachers could be pro-
vided, you only had to walk round the
block and invite the children, and they
would crowd in. I have found out long
ago that if you want children for classes,
all that is necessary is to invite them in
—keeping them, though, and teaching

the eye there is a yellow streak, and across the eye another of rich dark brown. The throat and the under part of the body are yellow, shading into mottled brown below, and on the breast there is a very conspicuous black crescent. The outer tail feathers are white, with a very little brown intermingled.

The coloring of the female is paler than that of the male.

The meadow lark is really not a lark at all. As remarked before, it is a cousin of the blackbirds and orioles, and is often found in the meadows with different species of blackbirds, walking along easily with its strong, stout legs, and keeping a sharp lookout all the while for the worms and larvæ upon which it feeds.

To find a meadow-lark's nest is an event. It is usually built in a tussock of grass or clump of young grain, and as it is constructed of grass, usually with an arch over the top, and occasionally with a covered way leading to the opening in the side, it is very inconspicuous, not enough so, however, to protect it wholly from the depredations of snakes and field mice. The eggs number from 4 to 6, and are white, speckled with brown and light purple. Two or three broods of young birds are reared in a season.

Midsummer Song.

Dawnings of amber and amethyst eves;
Soft in the south wind the laughter of leaves;

Breath of the poppy and death of the rose—
Midsummer comes and midsummer goes!

Dapple on cheek of the apple and plum;
Honey-bees droning a die-away hum;
Swales in a shimmer and dales in a doze—
Midsummer comes and midsummer goes!

Darting of dragon-fly, flutter of moth;
Barley in windrow and wheat in the swath.

Hush-song and thrush-song—the mother-bird knows!—
Midsummer comes and midsummer goes!

Moonlight and moonlight all glamour and gleam;
Hillside and hillside a thrall to the dream;

Capture and rapture before the days close!—
Midsummer comes and midsummer goes!

—Clinton Scollard, in the *Cosmopolitan*.

The Pleasures of Angling.

This is the spot, where the shadows cool
Blacken the depths of the swirling pool,
And the forest resounds with the laughing call
Of the silver tongue of the music fall.

Just where a great big trout would lie,
On with the best-dressed, deadliest fly—
So, so, now for a lucky cast—
Confound that branch, I'm fast!

Ha! saw you not that lightning gleam
Where yon moth but kissed the treacherous stream?
Match me swiftly the fluttering game—
Beware the branch! Ah! try again.

Hum, that's strange. Try further down;
I'll have him this time, I'll lay a crown.
Missed him!—You know there's many a slip—
Great Scott! there goes the tip!

Never mind, there's another inside the butt,
Now, drop lightly the dainty gut
Just where that snowy mass of foam
Swings in behind yon mossy stone.

Hurrah! I have him! Careful, now—
Egad, old chap, you're mine, I vow,
Just as sure as though book of fate
Already held your length and weight.

Avaunt! ye praters of city life,
With your sickening toll and ceaseless strife,
And your doubtful pleasures that never dare

To match this fight in the healthful air,
This grand set-to in the rapid's froth
And the triumph of landing—Oh!—
he's off!

Children's Corner.

Why Cats Wash After Eating.

You may have noticed, little friends,
That cats don't wash their faces
Before they eat, as children do,
In all good Christian places.

Well, years ago, a famous cat,
The pangs of hunger feeling,
Had chanced to catch a fine young mouse,
Who said, as he ceased squealing,

"All genteel folks their faces wash
Before they think of eating!"
And, wishing to be thought well-bred,
Puss heeded his entreating.



But when she raised her paw to wash,
Chance for escape affording,
The sly young mouse said his good-bye,
Without respect to wording.
A feline council met that day,
And passed in solemn meeting,
A law forbidding any cat
To wash till after eating.

A Surly Neighbor.

Said the piggy to his neighbor, as he halted at his door,
"Can you spare a little bedding, sir, to shake upon the floor?"

For the wind is rising high, and the night is freezing cold,
And a plank feels rather hard, when a body's growing old."

"Not a shaving, not a straw, though your bones come through the skin,
So be off about your business!" said his neighbor with a grin.
Then as home that piggy strolled, "Tis remarkable," said he,
"And the wonder of the century, how mean some folk can be."

The Two Sides of It.

There was a girl who always said
Her fate was very hard;
From the one thing she wanted most
She always was debarred.
There always was a cloudy spot
Somewhere within her sky;
Nothing was ever quite just right,
She used to say and sigh.

And yet her sister, strange to say,
Whose lot was quite the same,
Found something pleasant for herself
In every day that came.
Of course, things tangled up sometimes,
For just a little while;
But nothing ever stayed all wrong,
She used to say and smile.

So one girl sighed and one girl smiled,
Through all their lives together;
It didn't come from luck or fate,
From clear or cloudy weather.
The reason lay within their hearts,
And colored all outside;
One chose to hope, and one to mope,
And so they smiled and sighed.

A Young Hero.

This story is not made up, it all really happened in a Buckinghamshire village during a cold spell of winter weather which came on rather suddenly towards the end of December, 1901.

Near the village of B— is a large pond, two hundred feet wide and five feet in depth. When the frost came, all the boys of the village crowded out to enjoy the pleasures of the ice. The frost had not continued long enough for the ice to be really strong. Notice boards were accordingly put up to give warning of the danger, and to prevent accidents. Four boys, however, had spent all their leisure time in making little wooden sledges to run along on the ice; so, as the frost still continued, they set off one Friday morning to see if they could have some fun. The eldest boy was called Daniel; he was thirteen. The second was Alfred, two years younger; his brother, Ernest, who was eight, and a friend, Willie, not quite as old, completed the little party.

The pond seemed in first-rate order, and was apparently quite hard. But when Daniel, the eldest boy, tried it in several places he found that the ice was thin, and he warned the other boys to keep away. Ernest, the younger of the two brothers, obeyed, but Alfred, the elder, pulled his sledge up to a slight hill that overlooked the pond, and then started down at full speed. Away he shot, far faster than he expected, away out into the very middle of the pond. Crack! crack! crack! went the ice. Boy and sledge alike disappeared.

A cry of distress was heard. It came from Ernest, the younger brother, who was running across the pond. Daniel shouted to him to take care; that the ice

was very thin. His answer was, "Help me, help me to get my brother out!" Ernest knelt at the edge of the hole in the ice, reaching towards Alfred, who was struggling in the water. Daniel, who realized the danger both boys were in, ran off and got a long pole; but this took several minutes, and all the time Ernest was kneeling on the ice holding his brother up by both hands. The ice was cracking in several places, a thaw was coming on.

"Run for your life," cried Daniel, hurrying round the pond with his pole. "I can't leave my brother," was the heroic answer, "he'll be drowned if I do."

As he spoke another section of the ice gave away, and both boys disappeared. When Daniel with his pole came near, Ernest was seen on the surface still holding up his brother by the collar of his jacket, though the elder boy was by this time becoming exhausted with cold and terror. The long pole was held out, and the smaller boy, instead of clutching it himself, put one end of it into his brother's hand. He did not try to save himself first, his one thought was for the safety of Alfred.

Daniel now thought of running for an old punt which was tied up at the opposite side of the pond, and giving up the end of the pole to Willie, the smallest of the boys, he flew away. But this was a fatal step, for Willie was too weak to keep up the weight of the two others. Gradually he felt the pole slipping from his numbed fingers. What could he do? Daniel was cutting the ice from under the punt, and was now too far away to lend assistance. "I'm coming, I'm coming," he shouted back; but now a fresh cry of distress was heard, Alfred had just let the pole go out of his hand. He was under the ice, nothing could save him. And Ernest, the brave, the heroic, he also had gone under for the last time. Neither rose to the surface again. A friendly neighbor appeared with a ladder, and after some time both boys were found lying in a bed of mud, Ernest still holding tight to his brother's jacket. Every-

thing was done to try and restore animation, but it was too late, they died as they had lived, together.

The heroism of the younger boy excited the admiration of all who were present when the sad procession moved back to the village. "He was the bravest chap I ever knew," said an old soldier who helped to carry the bodies home. "He could have saved himself, but he only thought of his brother." "Greater love hath no man than this, that a man lay down his life for a friend," says our Lord, and here was a boy of eight years old doing that very thing.

The Boyheart.

The boyheart! The boyheart!

It lies within your breast,
All ready to go leaping when your soul
is as its best—
When on the street there comes to you a
whistle or a call,
Or but the echo of a song whose happy
measures fall
Upon the chords of memory, and rouse
them into life
Until they send a surging thrill as rich
as drum or fire!

The boyheart! The boyheart!

It may be but a rose
That nods in careless glee at one as idly
on he goes;
But instantly he sees a street that wanders
up and down
Between the sleepy fences of the quiet
little town;
Or maybe 'tis a country road where
swaying branches spread
And build an arching canopy of branches
overhead.

The boyheart! The boyheart!

The embers in the grate
May paint for one the picture that will
bring the thoughts elate—
A picture of the meadowlands which
reach beside the brook
And blend into a forest where there's
many a leafy nook,
Where every tree that waves its arms,
and swings and sweeps and sways
is wafting shouts and laughter from the
boytime summer days!

The boyheart! The boyheart!

Pray that you have it yet!
A-many times its tugging thrills will
leave your eyelids wet;
A-many times its sudden beats will set
your blood aflame
When out of all the other years will
come a whispered name:
A-many times you'll walk the ways you
wandered when a lad,
If God has but been good to you and
left the heart you had.

—W. D. Nesbit, in the *Reader*.

How to Use Brains.

A head man in a manufactory was watching a drayman tugging at a heavy case one day. The drayman's face was red, and the muscles of his neck were bulging. The overseer thought it was the right moment to offer practical assistance.

"Wait a minute there," he said, "Let me show you how easy it is when you use a little brains with your muscle." And he grabbed a hook, stuck it into the case, and gave a yank, and went sprawling into the gutter under the dray. He got up, looked at the hook, and said: "Confound it, the handle comes off!"

"Yes, sir," said the drayman, respectfully. "My brain told me that, and I didn't use it."

The wife of a Gordon Highlander received an invitation to visit him at the barracks in Scotland, and took with her their six-year-old daughter. When they arrived the husband was on sentry duty, so could not be approached. The child eyed her daddy with a rather sorrowful but amazed expression as he passed up and down the square shouldering his rifle and wearing a kilt. She had never before seen him thus arrayed. Presently, with a solemn look on her face, the child loudly exclaimed:

"Mammy, when daddy finds the man who stole his breaks will he give me that little frock?"

About the House.

Wanda Stirs Up Another Enthusiastic Correspondent.

If Wanda knows nothing about architecture, she certainly does know how to present very convincingly a plea for more originality and a keener sense of fitness in the building of our country homes. How familiar are the rows of prosperous farms with new brick city houses, set near to and facing the road, each with a large plate-glass window in front (which is frequently made to "stay put," and cannot be opened), a bow-window at one side, and a square porch or short veranda at the other, all looking as if made from one pattern and turned out by machinery; all so much alike as almost to require numbers in order that "John Brown" may know his own house from that of "John Smith."

But may we not go a step further, and venture "in our poor weak way" to enter a further plea for a revised interior as well? All who have read Mary E. Wilkins' stories will remember the invariable "best parlor" in her New England country homes, with its center-table supporting a lamp standing on a wool mat, and flanked on either hand by the family Bible and the family photograph album; chairs ranged stiffly against the walls; mantelpiece adorned with shells, and brilliantly-decorated vases of dried grasses and dyed pampas plumes; the framed wreath of wax or hair-work flowers on the wall, and last, but not least, the gorgeous carpet, the pride of its mistress's heart, on which no ray of sunlight was allowed to fall for fear of dimming its glories. This room was altogether too grand to be used in common, and the door was kept religiously shut, except on various occasions of great importance, such as a wedding or a funeral, or when the minister came to tea, or the daughter of the house received her village swain; and the family lived, dined, and, in fact, did everything but sleep, in the kitchen.

That day, happily, has passed, but the present fashion, while a great improvement, still leaves much to be desired. Even in city homes, the tendency nowadays is towards a more simple and hygienic style of furnishing, and how much more is this needed in the country, where, too often, help is hard to get, and one pair of hands has to perform the multifarious duties of a farm household. When floors (hardwood, if possible) are painted or stained, and the old-time carpet superseded by rugs, which are simply laid down and can be easily taken up and shaken—the semi-annual house-cleaning is shorn of half its terrors. When heavy curtains, plush or chenille portieres and "drapes" and "throws" are relegated to the limbo of things "out-of-date," the time spent in making and caring for them can be spent to better purpose; and when all cheap and unornamental ornaments and gimcracks are banished, how much dusting will be saved! And when we take one step further, and choose rugs, wall-coverings, cushions, etc., with an eye to harmonious combinations or contrasts in color, the result should be "a thing of beauty and a joy forever."

How well I remember a "best parlor" I saw once. The new parlor "set," the crowning glory of the room, consisted of six pieces, upholstered in figured plush (a splendid material for catching dust), no two pieces being of the same color. The sofa was crimson, with arms and trimmings of green, the easy chair peacock blue trimmed with old gold, the rocking chair green and old gold, etc. A rainbow would look faded in such a room. Of another room I was told that "the floor and walls shrieked at each other, and the furniture swore at both."

Of course, there can be no hard-and-fast rule laid down as to colors, for, probably, no two houses would require the same treatment, but a safe general rule is, in rooms with a sunny or southern exposure, use cool colors, such as blue, green, grey, etc., while in rooms with a northern exposure, warmer tints, such as yellow, Pompeian red, etc., should prevail. The coloring for each

room, also, should be chosen with reference to the rooms connecting with it, so as to form a pleasing whole, and not a series of detached bits, like daubs of paint on a painter's palette, and the furnishing of each room should be chosen to carry out the greenish color scheme, and should be suitable for the purpose for which the room is to be used. For instance, the hall might be papered with a two-toned yellow paper, and have a carpet or rug of mixed coloring, with sage-green, yellow and terra-cotta predominating. The fan- and side-lights may be curtained with yellow silk, gathered at the top and bottom, and the furniture should consist of hat rack, umbrella stand, hall table, and one or two plain hall chairs, matching the wood of the hat rack and table. Unless the hall is unusually large, this will be all the furnishing necessary. The living-room (which has taken the place of the old-time "parlor"), opening off the hall, may have soft sage-green for the prevailing color. If this room is to contain many pictures, an ingrain or cartridge paper will be preferable, otherwise the paper may be a patterned one containing principally green and some yellow, which will bring it into harmony with the hall. A large rug, with green as the prevailing tone, may be used for the center of the floor, with smaller rugs where necessary, in mixed colors, and the cushions, table cover, etc., may be of shades of green, yellow and terra-cotta. The curtains may be of soft cream-colored scrim. The dining-room may have Pompeian red, or terra-cotta, as the basis of its color-scheme, with the furniture, if possible, of dark wood, and the chairs leather-covered. I know one dining-room which has been decorated in Crown Derby colors, and the effect is both unique and very handsome. Here, too, the curtains may be soft, cream-colored scrim, with, perhaps, dark crimson or terra-cotta ones of heavier material (NOT plush or chenille) as a winter alternative.

For the upstairs, I, personally, much prefer the white-painted woodwork, and the different rooms may each be papered with a patterned paper in different colors. One room may be in blue and white, the paper in a delft or conventional design, the rug a blue-and-white Japanese cotton, and the cushions of blue-and-white chintz or cretonne. Another room may be in green and white, the paper a creamy-white satin-stripe, with an all-over vine; the floor covered with good Japanese matting, with small green rugs by bed and dressing-table. One lovely old bedroom I know is in green and yellow. The floor has a painted border in a clear golden yellow, with a large center rug in green and yellow. The walls, from the floor to the picture-moulding (about three feet from the ceiling), are papered with cartridge paper in a soft grey-green, which forms a delightful background for the numerous prints and photos—mementos of foreign travel—with which they are covered, and from the picture-moulding to the ceiling, the paper is one with a large pattern of yellow chrysanthemums and green leaves. The curtains are short white muslin for summer, and figured chintz for winter. Another room may have pink as the leading color, with a paper of wild-rose pattern, and rugs, cushions, etc., to match. Frilled white muslin curtains, coming to the window-sill, or a few inches below, are far the prettiest things for bedrooms. They are easily "done up," and can be kept always looking fresh and dainty with a little trouble, and always harmonize with any color-scheme.

A house tastefully furnished with well-chosen furniture in harmonious coloring, will look infinitely more attractive and more artistic than one on which perhaps twice the amount of money has been spent, but which has been furnished in the usual "hit-or-miss" style, each piece of furniture chosen for itself, with no thought as to how it would suit its surroundings. CULLODEN.

Recipes.

Cup Cake.—Two cups sugar, 1 cup milk, ½ cup butter, 2 teaspoons baking powder, 4 eggs, 2½ cups "Five Roses" flour.

Gold Cake.—Yolks of 5 eggs, 1½ cups butter, ½ cup milk, 1½ cups "Five Roses" flour, 1 cup sugar, 2 spoons baking powder.

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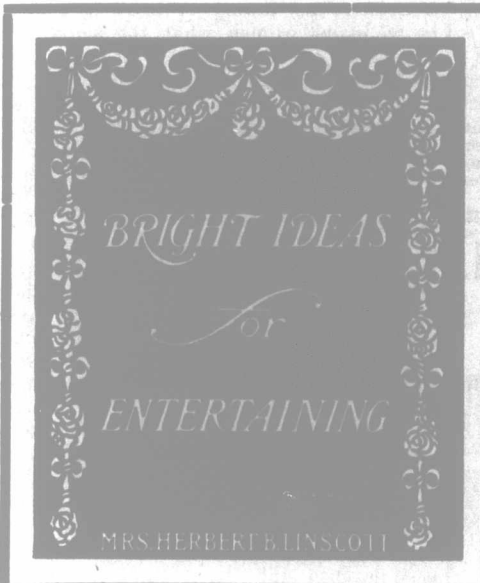
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POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words.

FOR SALE—At the Grey County hatchery, day-old single-comb White and Brown Leghorn chicks at the following prices: 15c. each.

Barred Rocks EGGS for hatching from a pen of E. B. Thompson's strain; headed by a prize-winning cockerel.

ATTENTION! POULTRYMEN.

The choicest prizewinning birds from the best strains of any variety of Wyandottes. Only high-class birds for sale.

An Irish drill sergeant was instructing some recruits in the mysteries of marching movements, and found great difficulty in getting a countryman of his to halt when the command was given.

After explaining and illustrating several times, he approached the recruit, sized him up silently for a couple of minutes, then demanded his name.

A fresh mind keeps the body fresh. Drain the ideas of the day, drain off yesterday.—Bulwer-Lytton.

The Ingle Nook.

While wondering to-day again, about what I should write for my Chatterers, one of "The Farmer's Advocate" readers, an Ingle Nooker too, came strolling into the sanctum sanctorum with the announcement that she was taking lessons in fancywork.

And now I must stop this, or you will think I am trying to encourage laziness. Not so; I am only trying to emphasize the necessity of occasional rest, in order that the work which follows may be better done.

It is as natural for the majority of women to want to make pretty things as it is for a ducking to take to the water. Moreover, the taking of intricate sketches is to many women what the smoking of a pipe is to many men.

Now, just a word as to the fashions in fancywork for 1906, for fashions do change, you know, even in this. Fifteen years ago, you know, we thought nothing could be lovelier to hang on the wall than a red-plush panel with a brass rod on the top of it and three little fluffy balls on the bottom.

make it in white. White things—especially in the different embroideries—are all the fashion. Besides, they can be boiled, and will look well for an indefinite length of time—point lace, Irish crochet, Roman embroidery, Brazilian point, English eyelet embroidery, Mount Mellick work, coronation braid—these are but a few of the dainty kinds of work which are being made nowadays, and whose "construction" will be shown you in almost any good store, provided you buy the materials there.

But now I must stop. You see I had to get my fingers into the fall fairs too, but then you're all interested in them, aren't you? DAME DURDEN.

Another Suggestion for an Evening Party.

A friend of "The Farmer's Advocate" gave us, the other day, the following list for a Flower Party—"a love story in flowers." Slips of paper containing the questions may be given to each guest, pinned up around the wall, or disposed in any way which will suggest itself.

- Name of bride and color of her hair? Marigold
Color of her cheeks? Pink
Color of her eyes? Violet
Shape of her nose? Turnip
What did she wear on her head? Orange flowers
What did she wear on her feet? Lady's slippers
What did she wear on her hands? Foxgloves
With what was her dress embroidered? Golden thread
What plumes did she wear? Prince's feathers
What kind of tresses had she? Maiden's hair
What mirror did she use? Venus' Looking-glass
What kind of soap did she use? Pearls
Name of bridegroom and disposition? Sweet William
Color of his hair? Radish
What did he wear on his coat? Bachelor's buttons
What kind of trousers had he? Dutchman's breeches
How did he stand at the wedding? Plum
What did he smoke? Indian pipe
What charm did he wear on his watch chain? Solomon's Seal
In what did he keep his money? Shepherd's purse
Name his footwear? Moccasin
Why did he limp? A corn
Name his walking stick? Golden-rod
What did he do when he popped the question? Aster (asked her)
To whom did she refer him? To poppy and to-mato
What did they then fix and name? Date
Who married them? Jack in the pulpit
What did he wear on his head? Monk's hood
What office did he hold in the church? Elder
What did he offer his bride? Bleeding heart
What did she give him in return? Heart-case
What did she say to him in the morning? Johnny jump-up
What time did they wake in the morning? Four o'clock
What aroused them? Trumpet

How did their brother wake them with it? Bluet
How did they feel about it? Madder
What will brother do if punished? Balsam (bawl some)
What is brother's sport in winter? Snowball
When did guests go home? Nightshade
What did he call her when she accepted? A daisy
What chimes were rung? Canterbury bells
When he went away from her what was she? Mourning bride
What did she say at parting? Forget-me-not
What state would you say he was in after the wedding? Clover

Graham Bread—Stove Rusting.

Dear Dame,—I would have written to the Ingle Nook long ago, but I thought I couldn't tell the chatters anything new until I saw in the June 7th number M. H.'s recipe for Graham bread, so I thought I would tell you all how we make it. Now, I feel sure this will be new to a good many of you, as I discovered it by experimenting.

At noon I scald two cups white flour, and let stand until lukewarm. To this add one soaked yeast cake, then set in a warm place to rise. At night, put two and a half dippers warm water, one cup sugar, four breadspoonfuls baking syrup, and about one and a half sifters white flour (not Manitoba), finish setting with Graham flour, and to this add the sponge. In the morning, put two hand-fuls salt, stiffen with white flour, and set to rise. One thing to be remembered is it rises much faster than the white bread, and will have to be watched or else it will sour. Then put in pans, and let sit one-half hour; then put in the oven and bake as you would other bread. This will make five loaves.

If your stove rusts in the summer, just clean with James dome lead and turpentine, but be sure the stove is cold before you start. I find this good to keep it from rusting. Hoping these may help someone, YOUR UNHEARD-FROM SIS.

Dufferin Co.

Dear Hame o' My Hert Lang-syne.

Dear hame o' my hert lang syne, Whaur the lums o' the muirland reek, An' the peesweep's cry on the win' gang by, An' the warld is faur to seek; Oh! the years hae been lang, an' lane-some, That sunder'd my fate frae thine, But the 'oor is sweet when in thocht we meet, Dear hame o' my hert lang syne!

Dear hame o' my hert lang syne, Whaur the Clyde rins wimplin' clear, An' the lirtie's sang, the glens amang, In the gloamin' fills the ear; Oh! bright are the dreams that waukin, In mem'ry's beam to shine, Oot owre the sea, frae thy heathery lea, Dear hame o' my hert lang syne.

Dear hame o' my hert lang syne, In the loun whaur the martyrs sleep, An' the healthbell waves aboon their graves, In the howe o' the hills sae steep; Oh! aft in a dwam I hearken, Deid voices I canna tyne— Till time is set, I sail ne'er forget, Dear hame o' my hert lang syne! —John MacFarlane, in Scottish American.

The Old Man by the Brook.

Down to the vale this water steers; How merrily it goes! 'T will murmur on a thousand years, And flow as now it flows. And here on this delightful day, I cannot choose but think How oft, a vigorous man, I lay Beside this fountain's brink. My eyes are filled with childish tears, My heart is idly stirred; For the same sound is in my ears That in those days I heard. —William Wordsworth.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free.
2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.
3rd.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.
4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1 must be enclosed.

Miscellaneous.

IRREGULAR HEAT IN COWS.

Pure-bred bull has served, this spring, about sixty cows. Some came in three weeks; five or six came back in four weeks; others in six weeks, and a number are still coming in seven and eight weeks, after we thought they were safe in calf. What is the cause of this trouble?
H. B.

Ans.—See answer to question by W. J. W., headed "Impotent Bull," in this issue, which is apparently a similar case.

EAR TAG MATERIAL.

What kind of metal is used in making tags for the ears of cattle, and where can it be got? I can get sheet copper, but think it is too soft to stay in the ear very long.
A SUBSCRIBER.

Ans.—Block tin, brass and aluminum strips are all used in making ear tags. The material you can probably obtain from the Rice, Lewis Co., Toronto. In larger quantities, aluminum could be got from the Pittsburg Reduction Co., Pittsburg, Pa. If for your own use, it would probably be cheaper to buy from persons who make tags as a business.

QUESTIONS.

Is Lord McCombie registered in the Canadian Clydesdale Studbook? If so, what is his number? 2. Can a person take any kind of mare and breed her and her progeny to any set breed of registered stallions and register at the fourth cross?
S. S. D.

Ans.—1. We do not find Lord McCombie in the published volumes of the Canadian Clydesdale Studbook, but it is possible he is in the unpublished volume. Would advise writing the Registrar, Mr. F. M. Wade, Department of Agriculture, Ottawa, who can answer definitely.

2. For the Clydesdale and the Shire studbooks, five crosses of registered sires of the same breed entitles a stallion to registry, and four crosses for a mare. This rule does not apply in the case of breeds of light horses.

FLOOR FOR HOGPEN—BLOODY MILK.

1. For a hogpen, would you advise a cement floor, with sleeping place about three feet up off floor? Some say hogs will not fatten, and will not do well on cement floor. I am building a brick block or hollow brick.

2. Also, what causes a cow to give bloody milk at this time of the year?
SUBSCRIBER.

Ans.—1. We commend the cement floor with raised-plank sleeping place, but are not enamored of the brick wall, except for a three-foot foundation wall. Cement, like stone, is inclined to be cold and damp, hence undesirable for a hogpen, which is more inclined in this direction than other stables. The impervious nature of cement, however, gives it a great advantage for floors on the score of sanitation, and with plank to sleep on, the pigs will do pretty well if the pen is kept clean. The principal reason your neighbors find their hogs do not fatten on cement is that the young, growing pigs get stunted, and possibly contract rheumatism, consequently would not fatten well under any conditions. Cement is worse for young pigs than for fattening hogs.

2. Bloody milk is due to the rupture of some of the small blood vessels in the udder, possibly the result of a congenital weakness of the vessels; if so, the recurrence of the trouble cannot be prevented. However, the condition is liable to occur in any cow. Excitement of the animals, particularly chasing by dogs, is liable to produce this condition, and we are inclined to the opinion that the heavy flow of milk of this season imposes an additional strain on the milk vessel and its capillaries. Keep the cow from becoming excited. Bathe the udder well and often with cold water, and give one ounce of tincture of iron in a pint of cold water twice daily, until blood ceases to appear in the milk.

PAYING FOR STALLION SERVICES.

Would I have to pay for two colts? I tried a mare, then the horse was off the road for three weeks. In the meantime, I engaged another horse, thinking that horse would not be on the road again. He had no cards printed until he made a few trips to know where he was going to be billed. After I had engaged another horse, he had bills. The terms were: "Mares tried and not returned will be charged for insurance, whether in foal or not."
Ontario.

Ans.—We think you are liable.

CATTLE BRANDS.

One man is using the same brand on his cattle as mine, and branding in exactly the same place on the ribs. I have no particular name for mine, but he calls it the "— brand." I had it recorded in the year 1895, and no other has been recorded. Will he have to brand over. How shall I go about to stop him from branding the same way? His ranch is 21 miles from here.
A MANY YEARS' SUBSCRIBER.

A MANY YEARS' SUBSCRIBER.

Ans.—You should see a solicitor, and have him write the party. In the event of the letter not having the desired effect, you should instruct the solicitor to take legal steps.

KILLING TWITCH GRASS—MARE WITH TUMOR.

1. Have English twitch grass in a summer-fallow. Have plowed the land once and harrowed it with a spring-tooth harrow, which makes a very good job.

2. Mare, four years old, has growth on the end of her nose about the size of a hen's egg. It is very hard, and is not fast to the bone. It doesn't seem to hurt her any.
W. B. G.

Ans.—1. Keep right on cultivating with the spring tooth—about once a week. Gradually you will exhaust the roots and smother it out. The most effective work will be done in hot, dry weather.

2. This is evidently a fibrous tumor. It should be dissected out, the wound stitched, and then dressed three times daily with an antiseptic, as a five-per-cent. solution of carbolic acid. Unless accustomed to such operations, you had better employ a veterinarian. External applications to such growths usually have little effect.

SEEDING LUCERNE.

I have a piece of land two or three acres in a gore, in a field under corn, I want to put it down in permanent hog pasture with alfalfa or lucerne clover. Which would be better? My field is under corn now. It is clay land, with a creek bank of red clay, a little on the chalky side; the flats of the bank are loamy. As I will be cultivating the corn again, could I sow the alfalfa seed before I cultivate it for the last time and have a chance of getting a stand of seed or clover—it will not be a heavy crop of stalks. Or would it be better to work it up in the spring and sow then? Could I seed any barley or oats with it?
W. D. McN.

Ans.—Alfalfa and lucerne are different names for the same plant. Though a legume, it is not, strictly speaking, a clover. From description given, you have evidently a good place to sow it, although it may not stand the winter well on the flat. We have never tried sowing lucerne in a corn field, nor heard of it, and, therefore, cannot advise it. Would certainly prefer to work the field up well next spring, and sow the lucerne alone, though a bushel of barley might be sown without seriously affecting the lucerne seeding. In any case, do not pasture next year, and, better, not till 1909, but cut for hay.

Veterinary.

BARBED-WIRE WOUNDS

Filly got cut with barbed wire. Two of the wounds are about two inches long. How can I treat them so as to leave no scars? I have been bathing with carbolic water and filling with powdered charcoal.
J. A. M.

Ans.—In most cases it is impossible to prevent scars from wounds, especially from barbed-wire wounds. In order to prevent scars, wounds must heal by what is known as "first intention," that is, without the formation of pus, which is practically impossible, except the wound

THE BIG TRUTH STICK
FACTS COMMON SENSE
SMASHES WORTHLESS SEPARATORS
EASY OR HARD WHICH FOR YOU

Put Facts and Common Sense to work on a Tubular Cream Separator and you know it must be easy to operate. Put Facts and Common Sense up against a back breaking, hard to wash, high can "bucket bowl" machine and you can't make yourself believe it is easy to operate. In the light of truth, the out-of-date, "bucket bowl" separators go to smash.

Which kind for you, the
Tubular or "Bucket Bowl"
Low Can or High Can
Simple Bowl or Bowl Full of Parts
Enclosed Gears or Exposed Gears
Self Oiling or Oil Yourself

Catalog O-193 tells all about Tubulars. Write for it.
The Sharples Separator Co.
Toronto, Can. WEST CHESTER, PA. Chicago.

is clean cut and treated promptly. Keep these wounds clean by bathing as you have been doing, but instead of using charcoal, dress three or four times daily with a five-per-cent. solution of carbolic acid in water. Keep her as quiet as possible in a partially-darkened stall, where the flies will not torment her. V.

IMPOTENT BULL.

Three-year-old bull has been bred to 40 cows, and there are few, if any, of them in calf. Some return in 3, some in 6, some in 9, and some in 12 weeks. He suffered from indigestion last winter. Would that affect his potency? He is in good condition.
W. J. W.

Ans.—Males sometimes become impotent without apparent cause, and in such cases practically nothing can be done more than good care and cessation of breeding for five or six months. In some cases they regain their potency, and in others they do not. Their regular appearance of oestrus indicates that the cows abort, but it is probable if there was infectious abortion in the section, some of the cows would carry their calves so long that the accident would be noticed. It is not possible for me to say whether or not the cows abort. If, by careful observation, you can determine such is the case, no doubt the bull is infected and, in all probability will infect all cows to whom he is bred, and it will be necessary to cease breeding operations with him for five or six months, and in the meantime you will need to inject his sheath about every third day with a solution of corrosive sublimate, 50 grains to a gallon of water, and heated to 100 degrees Fahr., and when he is bred again, his sheath should be flushed out both before and after breeding. As regards the cows, all aborted fetuses and afterbirths should be burned, and the womb of aborted cows flushed out daily with the solution, as long as the nozzle of the injection pump will readily enter the neck of the womb, and afterwards a little injected into the vagina and the tail and hind quarters washed with it daily until all discharge ceases. Both bull and cows should be given 30 drops carbolic acid mixed with a pint of cold water and sprinkled on their food three times daily, and cows should not be bred for at least five or six months after abortion. All affected cattle should be isolated, and, as the disease is due to a germ that is readily carried on clothing, pails, brooms, etc., great care should be taken to avoid infecting healthy cows. The premises in which affected cattle have been kept must be thoroughly disinfected by giving at least two coats of hot lime wash with five-per-cent. carbolic acid in order to destroy the germ and avoid reinfection. V.

Life is a leaf of paper white
Whereon each one of us may write
His word or two, and then comes night.
—James Russell Lowell.

INVESTIGATION

has proven that the reason the

Sherlock-Manning ORGAN

is sold in increasing numbers month by month is because discriminating buyers

Investigate Its Merits.

This is the reason it has been necessary for us to increase our manufacturing facilities and double our output.

Investigate.

The Sherlock-Manning Organ Co.
LONDON, CANADA.

Imported Clydesdales



30 FILLIES and Stallions just landed. Personally selected from leading studs in Scotland, for breeding, size and quality combined. Sired by such noted horses as Baron's Pride, Hiawatha, Pride of Blacon, Marcellus, Baron o' Buchlyvie, etc. Fillies were bred to first-class sires in Scotland. Last importation sold quickly. Present consignment better than ever. Prices reasonable, quality considered. Write or call and see us. Stables one-half mile from G. T. R. and C. P. R. stations. Visitors met if notified.

W. J. McCallum & Bro., Brampton, Ont.

"Whether fair, whether foul,
Be it wet or dry,
Cloudy time or shiny time,
The sun is in the sky.

"Gloomy night, sparkle night,
Be it glad or dread,
Cloudy time or shiny time,
Stars are overhead."

GOSSIP.

Importations of pure-bred sheep for show and breeding purposes will be on a larger scale this year than for many years past. Among Canadian breeders known to be now in Great Britain, or represented, in search of sheep are the following: J. Lloyd-Jones, Burford; J. G. Hamner, Brantford; Hon. John Dryden, Brooklin; Robert Miller, Stouffville; all of whom are importing Shropshires. Telfer Bros., Paris—Southdowns and Hampshires. Henry Arkell, Arkell; J. H. Jull, Mt. Vernon, and J. W. Lee & Sons, Simcoe—Oxfords. J. C. Ross, Jarvis—Cotswolds and Hampshires.

A SUCCESSFUL DODDIE SALE.

A remarkable success was the auction sale, on June 20th, of 35 head of Aberdeen-Angus cattle, from the herd of A. C. Binnie & Son, at Alta, Iowa, the average price realized for the whole offering being \$346. The top price, \$2,425, was paid by Wurzbacher & Merritt for the yearling bull, Lord Ellemere, by Heather Lad of Emerson 2nd. The two-year-old heifer, Eileen Lass, by the same sire, sold for \$1,500, the highest price for a female, to M. H. Holbrook, of Iowa. Four others brought \$400 to \$525 each.

A GREAT SALE OF HOLSTEINS.

The breeders' consignment sale of Holstein cattle, at Syracuse, N. Y., on June 7th and 8th, was a very successful event. Seven breeders contributed cattle from their herds of high-class character. The highest price of the sale, \$2,600, was realized for Mr. H. A. Moyer's six-year-old cow, Aaggie Tebbe De Kol, which had just completed an A. R. O. test of 26.06 lbs. butter in seven days. She was sired by Paul Beets De Kol, and purchased by Woodcrest Farm. \$1,100 was the second highest price, for Tackie 1st (imp.), eight years old. Johanna Vernon De Kol, two years old, sold for \$1,000. One hundred and fifty-nine animals, many of them young calves, were sold to 65 buyers for \$38,895. Six daughters of the bull, Paul Beets De Kol, five to nine years old, sold for an average of \$766.66 each. He is the sire of 59 A. R. O. daughters, 13 of whom have records of over 20 pounds of butter in seven days, and he has the largest number of A. R. O. daughters at this date.

AN EXAMPLE OF BUSINESS GENEROSITY.

The handsome way of treating customers was illustrated this spring by Mr. H. W. Truman, Manager of the London branch of Trumans' Pioneer Stud Farm, of Bushnell, Ill. A year ago last fall he sold to a number of farmers now constituting the St. John's Shire and Hackney Horse Co., of Arva, Ont., two stallions, a Shire and a Hackney. In the face of sharp local competition a fair season was experienced with these horses, but this spring the Shire, Eckretton Dandy, had his jaw broken by a kick, being, as it was then thought, put out of business for the summer. Seeing their predicament, Mr. Truman offered the privilege of going to the Bushnell Farm and picking a horse to use for the summer without any charge, except freight and insurance. The offer was accepted with a unanimous resolution of appreciation, and Mr. H. Farntomb, representing the local company, visited Bushnell and selected from a stud of 57 Shires, 3 Percherons and 20 Hackneys, the splendid Shire stallion, Stuntney Brassey, sired by Juvenal, and bred by the noted breeder, Cole Ambrose, of Stuntney Hall, Ely, Eng. He is a taking horse, a massive dark brown, weighs nearly 200 pounds over the ton, and has captivated everyone in the neighborhood. The company are elated, for they are having even a better season than they would have had with their own horse, although we are told that some patrons prefer to breed to the latter, being so well pleased with the stock of his get that is coming this summer. He is now in service again. It is the intention to exhibit Stuntney Brassey this fall, though he will not be in the bloom that he would have been in had he been kept in his own stable. Mr. Farntomb reports being used white from first to last. Such acts, while they popularize a stallion company, prove a boon to customers who can ill-afford a loss, and the firm which deals in such open-handed fashion deserves the credit it gets.

See the report of the Royal Show, by our Scottish correspondent, on page 1109 in this issue.

A Winnipeg despatch states that Golden Garland, the first-prize yearling Shorthorn heifer and female champion of the breed at the Royal Show, at Derby, has been purchased by Sir Wm. Van Horn, for his farm at Selkirk, Manitoba.

The average price realized at the annual auction sales of imported Jersey cattle, by T. S. Cooper, of Pennsylvania, on May 30th, in the last seven years was \$413, the highest average having been reached in 1905, when the figures were \$621, the bull, Eminent 2nd, selling for \$10,000, and the cow, Reminder's Duchess, for \$2,525. The highest price for a cow in the 1906 sale was \$2,500 for Lady Veronia.

Acting for the Hon. John Dryden, Brooklin, Ont., late Minister of Agriculture for Ontario, Messrs. Alfred Mansell & Co., live-stock exporters, Shrewsbury, have recently despatched from Glasgow, per s. s. Athenia, or the Donaldson Line, 18 high-class Shropshire rams and 26 choice shearing ewes from the noted flocks of Mr. T. A. Buttar, Mr. J. E. Farmer, and Mr. C. Blatherwick, sired by such well-known rams as Head Piece (11461), Corston Standard (11719), Corston Renown (11717), Buttar Jet (10654), Roseford Dreamer (9419), Oxo (11804), Mars (11154), Walnut (11207), Ashby Monarch (11953), Dunsmore Gay Lord (11739), Fiscal Policy (11760), Ream House Star (12168), and Shrawardine Rose (11966).

A Dutchman, addressing his dog, said: "You vos only a dog, but I vish I vos you. Ven you go mit der bed in, you shust duin round drie times and lay down. Ven I go mit der bed in, I haf to lock up de blaice un vind de clock und put de cat oud undress myself und my vife vakes up und scols me, den de baby cries und I hef to valk him up and down, den maybe ven I shust go to sleep, it's time te get up again. Ven you ged up, you shust stretch yourself und scratch a couple of dimes, und you vas up. I haf to light der fire, put on der kettle, scrap mit my vife already, und maybe got some breakfast. You play round all tay und haf plenty of fun. I haf to vork all tay und haf plenty of drouble. Ven you die yor's dead; ven I die I haf to go to ? ? ? ? yet."

TREATMENT FOR TICKS AND FLIES.

The following rather elaborate recipe for ticks, horn flies, stable flies, etc., is recommended by the Tennessee Agricultural Experiment Station: Cut to seed oil (fish oil may be substituted), 1 gallon; sulphur, 1 pound; carbonate of potash, 1 pound; concentrated lye, 3 ounces; beeswax, 1/2 pound; Zanolium, 1 pint; water, 3 gallons. Heat the cottonseed oil, sulphur, potash and beeswax until the beeswax is melted; then add 3 gallons of the cottonseed oil or fish oil. To this add 1 pint of Zanolium or crude carbolic acid. Before applying this wash to the cattle or horses, dilute with equal parts of water, thoroughly mixing it to form a good emulsion. Those of our readers who are disposed to experiment might try this and report results.

TRADE NOTE.

CANADIAN STAR WINDMILL.—The numerous letters recently published in "The Farmer's Advocate" voluntarily testifying to the advantages of windmills should serve as proof, if any were needed, of the economy of this motor for pumping water and other purposes. As everyone wants the best mill, all should be directly interested in windmill literature. In this issue will be found a new advertisement, by Monteith, Nixon, Limited, manufacturers of windmills, pumps, fittings, 256 Macdonell Ave., Toronto, Ont. There are five points in which they claim the Canadian Star windmill excels. These are mentioned in their advertisement, which see, and write for a descriptive catalogue.

Montreal Markets.

(Continued from page 1110.)

too dear for the English market, and the exports, the last week of June, fell off to less than 15,000 packages, against 40,000 for the corresponding week of last year, making the total exports this season about 80,000 packages, or 24,000 less than a year ago. Exporters still talk confidently of lower prices, but as they have been doing this all season, and the market has refused to oblige them, their predictions have lost weight.

Eggs—Dealers claim to be purchasing at 15c. country points, and selling at 16c. to 16 1/2c. Hot weather is having its effect on quality of the stock, and also turning consumers away towards fruit. The cost of candling, however, with lighter supply and demand for storage, keeps prices up. No. 2 eggs not wanted and slow at 13c. Select candled sell readily at 19c.

Potatoes—Market gone all to pieces; 50c. to 55c. per bag, in bulk. Prices, however, might go up suddenly.

Millfeed—Market for bran shows easiness, demand having fallen off to a low ebb; purchases made at \$17 per ton. Shorts in good demand and firm at \$20 to \$21 per ton, bagged.

Grain—Oats about the only grain moving now; 42 1/2c. to 43 1/2c. Wheat nominal at about 89c. for No. 1 northern, Manitoba, and 90c. for No. 2 white, Ontario, store.

Hay—\$9.50 per ton, track, for No. 1 timothy, \$8 to \$8.50 for No. 2, and \$7 to \$7.50 for clover-mixed. Some dealers quoting more.

Buffalo.

Cattle—Prime steers, \$5.50 to \$5.95; shipping, \$4.85 to \$5.10; butchers', \$4.35 to \$5.25. Veals—\$4.50 to \$6.50. Hogs—Heavy, mixed, Yorkers and pigs, \$7.05 to \$7.10; roughs, \$6.10 to \$6.25; stags, \$4.25 to \$4.75; dairies, \$6.90 to \$7. Sheep and Lambs—Lambs, \$6 to \$8.50; yearlings, \$6.50 to \$6.75; wethers, \$5.75 to \$5.90; ewes, \$4.75 to \$5; sheep, mixed, \$3 to \$5.50.

Many friends in Canada will regret to hear that Mr. James Biggar, Dalbeattie, Scotland, the eminent breeder of Galloway cattle, who judged at Chicago in November, 1902, died this afternoon, of acute pneumonia. The news cast a shadow over the Royal show-yard. Mr. Biggar was well known in Canada, where he had very many friends. His death is a great loss to Scottish Agriculture.

"Do you think that the automobile will displace the horse?" asked the conversational young woman. "It will," answered the nervous young man as he gazed down the road, "if it ever hits him."

In an article on the injurious effects of the use of tobacco, the sentence read: "It is a fertile cause of neuralgia, vertigo, and indigestion." But the printer set it up: "It is a fertile cause of neuralgia, vertigo, and indignation." And both were correct.

"Now, boys, the word 'stan' at the end of a word means 'place of.' Thus we have Afghanistan, the place of the Afghans; also Hindustan, the place of the Hindoos. Now, can anyone give me another instance?"

"Yes, sir," said the smallest boy, proudly. "I can. Umbrellastan, the place for umbrellas."

Dwight L. Moody once called on a ministerial brother in an eastern town, desiring to spend the next day, Sunday, with him. The minister was agreeable, but said he was ashamed to ask Moody to preach. "Why?" asked Mr. Moody. "Well," was the reply, "our people have got into such a habit of going out before the close of the meeting that it would be an imposition on a stranger." "I will stop and preach," said Moody. When Sunday arrived, Mr. Moody opened the meeting, and then encouragingly said: "My hearers, I am going to speak to two sorts to-day, the sinners first, then the saints." After earnestly addressing the supposed sinners, he said they could now take their hats and go. But the whole congregation waited and heard him to the end.



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

ALBERTA FARMS—I sell good ones. Write me. A. E. Keast, Innisfail.

FOR SALE—Improved farms in Muskoka. Address: D. T. Hodgson, Bracebridge, Ont.

FARM for Sale—400 acres, Wellington Co., splendid farming district 20 acres clear and in excellent state of cultivation; 200 acres bush, mostly ash, elm and basswood like large bank barn and straw shed, with good stabling underneath, large driving shed brick hoggren and henhouse, fine large brick man and smaller metal-covered house for hired man or foreman. Water in stables, hoggren, and house. New saw and chopping mill being built to replace one recently burned. Large custom trade in sawing and chopping. Field of splendid tested clay for brick or tile, with plenty of fuel. Excellent chance for man with two or three boys to get good grain and stock farm, with steady income on side from mills. Shipping point on new G. & G. Ry. (C. P. R.) within a mile and a half from farm. Terms easy. Immediate possession if desired. Address, Neilson & Turnbull, Newton P.O., Ont.

GOOD experienced farm hand wanted State wages. Apply Mc, Farmer's Advocate, London.

IMPROVED farms for sale in the Edmonton district. Candy & Co., Edmonton, Alta.

SPECIAL SNAPs—Alberta lands. Easy terms and prices. Write: Central Alberta Land Co., Innisfail, Alta.

TRY our King Edward hay and stock rack and cement block machine. John McCormick, Lawrence, Ont.

TO RENT for a term of years, the Ridgewood Park Farm, near Goderich, Ont. About three hundred acres. Good house and barns. Grazing lands well watered. Apply to Edw. C. Aittrill, Goderich, Ont.

THE Perfection Cow Tail Holder (patented) insures comfort and cleanliness while milking. It will please you. Thousands sold. By mail, 15c; two for 25c. Agents wanted. Prices right. Address: Wm. Noxon, Picton, Ont.

WANTED—Thoroughly experienced servant in cooking and housekeeping for a small adult family, to act as a working housekeeper. No washing and every convenience. Apply to Miss Jarvis, Galt, Ont.

WANTED for the Victoria Industrial School—A strong, capable woman as cook; also instructors in farming and printing. If married, must be without family, wife to fill position as matron. References required. Address, C. Ferrier, Mimico.

Why He Hurried.

A certain Irishman was a painter. Usually, being paid by the hour, he worked rather slowly, but a friend, one day, found him painting away like a steam engine. The friend paused to investigate so strange a matter.

"What's come over ye, McGuire?" he said. "It ain't like ye to work that fast."

"Whist," said McGuire, "shland out o' the way, an' don't shtop me. O'im thryin' to get through before me paint gives out."

The Automobile Forever!

The farmers aren't having all the fun out of the automobile. Listen to this from Tit-Bits:

"My brother bought a motor here last week," said an angry man to the salesman who stepped up to greet him, "and he said if anything broke you would supply him with new parts."

"Certainly," said the salesman. "What does he want?"

"He wants two deltoid muscles, a couple of knee-caps, one elbow and about half a yard of cuticle," said the man; "and he wants them at once."

An amusing story told in connection with Mr. Keir Hardie, M. P., may be recalled appropriately just now. Just before the opening day of the session a year or so ago, the anecdote runs, he had occasion to repair to the House of Commons library to consult some books, but found himself intercepted in a friendly fashion by a policeman, when the following colloquy resulted:—"Are you working here, mate?" "Yes." "On the roof?" which was undergoing repairs at the time. "No, on the floor."

Piles Make Life Wretched

BUT THERE IS QUICK RELIEF FROM ITCHING AND THOROUGH CURE IN

Dr. Chase's Ointment

It may be truthfully stated that piles produce more excruciating pain, misery and wretchedness of feeling than any known disease. Life becomes a perfect burden during the attacks of itching, burning, stinging pains.

It is a great mistake to imagine that the effects of piles are local, for, as a matter of fact, they sap the vitality of mind and body, and slowly, but surely, lead to the ruination of the health.

This is true of itching and protruding as well as of bleeding piles, which, because of the loss of blood, are more rapid in their disastrous effects.

Dr. Chase's Ointment brings almost instant relief from the itching, burning, stinging sensations of piles and is a positive and thorough cure for every form of this wretched, torturing and obstinate stubborn disease. This has been proven in so many thousands of cases that there is no longer any room for doubt that Dr. Chase's Ointment is the most satisfactory treatment for piles that was ever discovered.

Frequently when doctors have failed to cure piles, and the surgeon's knife has proven futile, Dr. Chase's Ointment has effected thorough cure; 60c. a box, at all dealers, or Edmanson, Bates & Co., Toronto.



WE WANT TO MEET YOU

Ladies from out of town who anticipate visiting the city during the spring or summer are cordially invited to visit the most up-to-date institute in Canada for the treatment of skin, scalp, hair and complexional troubles. For over 14 years we have been most successfully treating

Superfluous Hair

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Idella and the White Plague.

By Joseph C. Lincoln, in McClure's. "Sakes alive!" exclaimed Mrs. Sparrow, dropping the letter in her lap and holding up both hands. "Well, I never did!"

Mr. Sparrow, reclining in the rocking chair with the burst-cane seat, his stockinged feet resting on the wooden chair without a back, started, opened his eyes, and gazed at his wife. Lycurgus Sparrow and Editha Sparrow and Edwin and Ulysses and Marguerite and Marcellus Sparrow, scattered here and there about the room, on the floor and the broken-down couch, raised their eyes from schoolbooks and rag dolls, and looked at their mother. Even little Shadrach, the smallest Sparrow in the flock, seemed interested.

"I never did in this world!" repeated Mrs. Sparrow, with unctious. "Never did what?" snapped her husband. "Land of Love! Hain't you got any thought for my nerves? Here I be a-settin' and sufferin', tryin' to fergit I've got any stomach or lungs, and you turn loose and holler like a loon. I'm all of a palsy. You never did what?"

"I never heard tell of such a thing in my born days, and you'll say so, too, Washy, when I tell you. What do you s'pose Idella's been and gone and done?"

"Hain't lost her job, has she?" asked Mr. Sparrow, anxiously sitting upright in the rocker, but holding on to the arms in order not to "bear down" to hard on the broken seat.

"No, not exactly lost it. But she's gone and—oh, you'll never guess!"

"Well, I ain't got to guess, have I? 'Tain't a conundrum. I never see such a woman!" Out with it! What's she done?"

"She's gone and—" Mrs. Sparrow paused, to give the announcement due weight; she's gone—and—got—married."

Mr. Sparrow's stockinged feet struck the floor with a slap as their owner sprang up. "Married?" he repeated in a shriek.

His wife shut her lips and nodded solemnly.

"Married!" groaned Mr. Sparrow, and fell heavily back into the rocker. The remnant of cane ripped across and he sank forward, doubled up like a jackknife. Then, apparently unconscious of his uncomfortable position, he stared out between his knees, and again muttered "Married!" in a dismal whisper.

"Yes, sir," said Mrs. Sparrow, "she's married without sayin' a word to us. If that isn't just like Idella—independence all over. Here, Lycurgus! why don't you and Edwin help your father out of that chair? Want him to break his back?"

The two boys sprang to the assistance of their entrapped parent, and each, seizing an arm, pulled and tugged until they separated him from the framework of the rocker. The thanks they received were not effusive.

"Leggo o' me!" shouted Mr. Sparrow, shoving them to one side. "Tryin' to haul me in ha'f, ain't ye? Look here, Betsy! Who'd that girl marry? Has he got any money?"

"She don't say, Washy. She jest writes that she married him, and his name's William Burke, and she met him last winter at a dance of the Carpenter's Union. She—"

"A carpenter! A carpenter! And now she's got him to look after. That's it! Work and slave and worry yourself into the graveyard bringing up children, and soon's they git big enough to earn somethin', off they go and marry another man!"

"But, pa," broke in Editha, aged eight, "Idella couldn't marry you, 'cause you've got marnier."

"Be still, you sassbox you! Makin' fun of your sick father, and your ma upholdin' you in it. What's goin' to become of us without the money that that girl's been sendin'? What's goin' to become of me—me, all but gone with consumption (cough), and most crazy with nervous dyspepsy? Oh—"

Betsy Sparrow hastened to interrupt and ward off the attack of "nerves" that she knew from experience was at hand.

"It's all right, Washy," she cried. "That part's all right; better'n ever, most likely. Seems her husband has got a job buildin' the big hotel at East Wellmouth, and him and her are comin' down here to board with us. Idella says they'll pay good board, and she'll help me with the house and washin' and things. We'll have more money 'stead of less, don't you see?"

"Humph!" grunted her husband, pushing a child or two out of the way and sitting down on the lounge; "that sounds lovely—on paper. Well, go ahead and read us the letter."

Betsy read it. It was a long letter, full of good humor and cheery optimism. But then, Idella had always been hopeful and happy, even when, by virtue of rank as the eldest of Washington and Betsy Sparrow's troupe of children, she had given up school at fourteen to stay at home and mend and cook and sweep and tend baby while her mother went out washing. To be obliged to live in Wellmouthport the year around is, of itself, enough to sour the most saintly disposition; but to live in Washington Sparrow's rattletrap shanty in the woods, with little money and scant food, and with the added discomfort of Mr. Sparrow's society thrown in—that Idella had done this for years, and hadn't lost faith in the world, is the best possible key to her character. To give up these duties and take service as maid-of-all-work with Dr. Saunders and his family, first at their summer home at East Wellmouth, and then at the city mansion in Brookline, was, in comparison, like sitting down to rest.

Idella's disposition and willingness to work were inherited from her mother. Washington Sparrow was an invalid, and knew it. In fact, he knew it better than anyone else. When he and Betsy were first married he went fishing occasionally and did odd jobs around town. Then his wife made the mistake of going out washing to add to the family income, and "Washy" began to develop symptoms. He developed in succession those of rheumatism, pleurisy, phthisis, and lumbago. At last his diseases narrowed down to two—nervous dyspepsia and slow consumption. These were satisfyingly chronic and debilitating. All day long he slept or smoked or sat by the fire, and his only function not impaired was appetite. The town physicians had long given him up. Dr. Bailey scoffingly prescribed a club, and old Dr. Penrose suggested Paris green. The children told their teachers that papa was too sick to work, and Betsy informed her washing clientele that Mr. Sparrow was "dreadful poorly." She believed it, too, poor, self-sacrificing soul, and scrubbed and delved from morning till night to keep things going.

Mrs. Sparrow read the long letter through, stopping occasionally to comment.

"Jest listen to this," she cried, exultingly. "I guess my comin' home will make things easier for you, ma. We'll have you playin' lady in the rockin' chair yit. Ain't that jest like Idella? She allers used to say that. She don't fergit her poor old mother."

"Huh!" grunted Mr. Sparrow, with sarcasm; "how 'bout her poor old father? Ain't no bouquets for him, is there? No, I'll bet there hain't."

"Oh, she ain't forgot you, nuther, Washy. Here's what she says: 'Tell pa that my livin' in a doctor's family has learned me a lot about diseases. I b'lieve I can cure him.'"

"Yes, she'll cure me a whole lot. No, sir! I've got my nivergit-over, and I know it (cough). Well, the sooner the quicker, I'll be at rest pretty soon, and everybody'll be glad. Don't rag out in no mournin' for me. Don't put no hot-house wreaths on my grave. I know how you all feel, and all I ask

is to git through. I'm resigned. Git off my feet, you everlastin' young ones! Think I'm a sofy?"

The attack of nerves developed. Mr. Sparrow felt that he and his troubles were in danger of being overshadowed by the news of his daughter's marriage, and that it was time to come to the front. He stormed and stamped and coughed and groaned and whimpered. The children fled, the younger ones to bed, and the others to prepare them for it. After a while the invalid fell asleep on the lounge. Mrs. Sparrow sat by the table mending and darning. She took up the letter and read it through again. Idella was coming back. Perhaps there was balm in Gilead after all.

And two days later Idella came. The depot wagon reeled and bumped through the sandy ruts and up to the little one-hinged front gate. It was a Saturday, and the children were all at home. The allowance of washing for that day being "taken in," Mrs. Sparrow was at home also. They were all at the door to welcome the arrival, all but the afflicted Washington. He stayed by the cook-stove in solitary dignity.

Idella jumped from the wheel and ran in at the gate. "My sakes, ma," she cried, grabbing Mrs. Sparrow about the neck and kissing her; "if it don't seem good to see you. And Lycurgus (smack), and Editha (smack), and Ed, and 'Lys and Nap and Margie (a smack for each), and there's the baby! My! how you have grown!"

The children blushed and grinned and stared admiringly at Idella's jacket. A real store-coat, and new, not cut down and turned and made over half a dozen times. And the gay hat with the red ribbons was new likewise.

"If it ain't fine to see you all again," cried Idella. "Seems if the cars never would get here. Oh, and Bill must see you, too! Bill, come here, will you?"

Mr. Burke was big and square-shouldered and sturdy. He came obediently at his wife's first call. It was easy to see who was "boss" in that family. Mrs. Sparrow wondered and envied.

They went into the house, Bill bearing the trunk, as if it was no heavier than a carpet-bag. Mr. Sparrow, by the stove, did not deign to turn.

"And there's pa!" exclaimed Idella, running over and embracing him. "Why, pa! how well you look!"

"Well!" repeated the invalid indignantly, "maybe I look well, but I tell you—"

"This is my husband," interrupted Idella, briskly. "Bill, shake hands with pa."

Mr. Burke extended a hand of proportionate size to the rest of him, and mashed his father-in-law's flabby fingers within it. He growled that he was pleased to be "acquainted" to Mr. Sparrow.

"How's the cough, pa?" asked Idella.

Her father gave a tombstone sample of the cough before replying. Then he observed, resignedly, that it wasn't no better, and he cal'lated it never would be.

"Oh, yes it will," affirmed his daughter. "Dr. Saunders has learned me a whole lot of things. You'll see. Bill, open that trunk, will you, please; I want the folks to have the presents we brought 'em."

The word "presents" caused even the invalid to brace up and take an interest in life. There was something for every one; nothing expensive, of course, but all wonderful in that family.

"And now, ma," said Idella, "jest let me change my duds, and I'll pitch in and help git the dinner. I hope we're goin' to have herrin's. I ain't had a herrin' sense I left Wellmouth."

That was the beginning. Before the next week had passed, it was evident that there was a new manager in the Sparrow household, and the name of that manager was Idella. She took charge of affairs at once,

Dairy Talks by the EMPIRE Dairy Maid—No. 5.



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That may be a little "slangy," but you know what I mean—you want the separator that will do what its manufacturers promise it will do, and what you expect it to do.

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and began to make improvements. The children all went to school regularly, the eldest included. On Tuesday Mr. Burke began his labors at the new hotel, leaving early in the morning, and returning at six o'clock. In a fortnight Idella announced that her mother was to go out washing no more. She might "take in" the laundry work if she wished, but then it would be done at home, and she, herself, could help. Mrs. Sparrow protested, but Idella calmly went ahead, saw all the regular customers and arranged with them. In a month Betsy actually realized that she had time, daylight time, to "set in the rockin'-chair" and do the mending. Idella cooked, and scrubbed, and dressed the children. She and her husband paid board, so there was more money on hand than ever before. It was wonderful, but it was true.

At first the invalid viewed all these changes with suspicion, but when he found that the food was better, that he wasn't asked to do anything, and that, more important than all, his ailments were appreciated and understood, he became reconciled, and told his wife that he could pass off in peace now, because he knew that she and the children would be provided for.

But one evening, early in November, his dreams were shattered. They were seated in the kitchen, Mr. and Mrs. Sparrow, Bill and Idella, Lycurgus and Editha were doing sums in the front room. The rest of the children were in bed.

"Pa," said Idella, suddenly, "I don't suppose you feel well enough to go to work?"

Her father, seated with his feet on the hearth of the cook stove, took his pipe from his mouth, and turned an agitated face towards his daughter. He started to speak, and then, recollecting, coughed long, and with dreadful hollowness.

"I asked," continued Idella, "'cause Bill says they need more hands to cut down trees and lug lumber over to the hotel, and he could git a job for you any time you wanted it."

"Cut down trees!" shouted the sufferer. "And lug lumber! What you talkin' 'bout? How long do you cal'late I'd last down' that? I'm slippin' into the grave fast enough as 'tis, jest sittin' here hackin' and all tore to pieces with dyspepsy. Do you want to kill me all at once?"

His spasm of coughing this time was heartrending to witness.

"No," said Idella, "I told Bill you wa'n't fit to work. But pa, I think somethin' ought to be done to cure you, and so I'm goin' to try."

"Cure? Humph! I'm past curin', darter. Don't you worry 'bout me. Doctors give me up long spell ago. No, all's left for me is to linger around and die slow. I'll be glad when it's over, and so'll everybody else."

"Doctors gave you up? What doctors? These one-hoss ones down here? I've been livin' for a year with a real doctor, and he didn't give folks up jest 'cause they have consumption. No sir! he cured 'em, and I've got his receipt."

"It ain't no use," began Washy, but Idella went calmly on.

"Your case is kind of mixed up, pa, I'm free to say," she continued, "'count of your consumption bein' complicated with nervous dyspepsy. The cures for the two is so different. But I've made up my mind to start in on your lungs, and kind of work 'round to your stomach, as you might say. Bill, where's the receipt for consumption?"

Mr. Burke, a grim smile hovering about his lips, took a folded paper from his pocket and handed it to his wife.

"Consumption," said Idella, looking at the paper, "ain't cured by medicine no more. Not by the real doctors it ain't. Fresh air, night and day is what's needed, and you don't git it here by the stove. You ought to live outdoors. Yes, and sleep there, too."

"Sleep outdoors? What kind of talk is that? Be you crazy or—"

Idella held up a hand. "Don't screech so, pa," she said. "You'll wake the children. Bill, where's that magazine?"

Her husband produced a dog's-eared copy of a periodical, and Idella turned its pages. "Here," she said, "Here's a piece about curin' the White Plague; that means consumption. Led me read you a little of it."

Mr. Sparrow declared that he did not want to hear no such foolishness, but his daughter laboriously spelt out extracts from the article, which specified the dangers of dark rooms and confined atmospheres, and described Adirondack sanatoriums and open-air sleeping-rooms.

(To be continued.)

GOSSIP.

BIG CLYDESDALE SHIPMENT.

The Donaldson Liner, Lakonia, which sailed a week ago, had on board a big lot of Clydesdale horses and fillies for the Canadian market. Mr. W. J. McCallum, Brampton, Ont., had several horses purchased from Mr. James Picken; Messrs. A. & W. Montgomery, Netherhall and Banks; W. S. Park, Hatton, and others.

Mr. J. L. Clark, Norval, Ont., in the region, had also two or three horses, with the sale of which Mr. Picken, Torrs, had something to do. These horses are pretty sure to be popular in Canada, being useful, well-bred, sound animals.

The largest shipment was made by Mr. G. A. Brodie, Stouffville, Ont., who had 37 head, purchased from Mr. William Taylor, Park Mains, Renfrew, and purchased by him in Kintyre, Renfrewshire, Dumbartonshire, and Lanarkshire. Of the 37, one was a choicely-bred two-year-old colt, got by the noted premium horse, Royal Blend, and, like him, pretty sure to make a good breeding horse. Of the three dozen fillies, five were got by the Glasgow premium horse, Clan Chattan (10527), the sire of the H. and A. S. champion horse of last year, Royal Chattan (11489), one of them being by that celebrated horse himself. Three were got by the West Lothian premium horse, Linesman (11397), and an equal number by that well-bred sire Royal Everard (11165), a successful local breeding horse, closely related to Baron's Pride and the other leading sires. Three are also got by Sir Hugo (10924), one of the best breeding horses of the present day, and got by the great Sir Everard, sire of Baron's Pride, and all the best horses of our time. Two are by the well-known Kintyre sire, Sir Ronald (10464), and an equal number by Gay Everard (10758), which bred excellent selling stock in the Kintyre district.

Besides these there were fillies by Baden Powell (10963), sire of Memento, the Glasgow premium horse of this present season, and first last week at the Glasgow show; The Summit (9442), also, like the last named sire, a son of Sir Everard, and a Glasgow premium horse in his time; the H. and A. S. big champion horse, Prince Thomas (10262), sold by public auction for £900; Mr. Park's famous breeding horse, Marnion (11429), sire of the champion mare of 1905, now in Canada; the first Cawdor Cup winner, Prince Alexander (8899), which was sold for £1,200 when a yearling, and was champion of the H. and A. S. Show the same year, 1890; the H. and A. S. first-prize horse, Royal Carrick (10270) and Drumflower (10537); Mr. Taylor's noted premium horse, Sir Edward (11193) and Sir Randolph (12372), both excellent horses, and breeding useful stock; as well as other sires of established reputation. This is Mr. Brodie's first shipment from this country, but he has been so well suited with fillies and in res for the Canadian market that there can be no doubt that it will not be his last.—(Scottish Farmer.)

Mrs. Crossly—John, that gentleman with the long hair and big black tie is going to write a series of stories on "Wild Animals I Have Met."

Mr. Crossly—Well, what do you mean by inviting him to call at this house so early in the morning?

Mrs. Crossly (sweetly)—Why, I thought he would like to see you when breakfast is a few minutes late.

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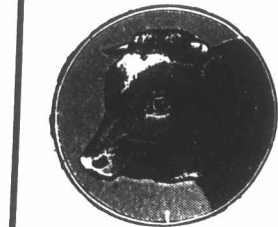
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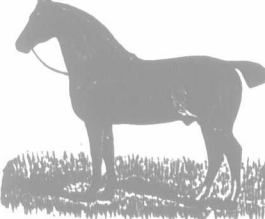


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When Writing Mention this Paper.

QUESTIONS AND ANSWERS.
 Miscellaneous.

MEADOW BUTTERCUP-YARROW.
 Please name the two enclosed weeds. Is the yellow-flowered one as bad as the ox-eye daisy? It is hard to pull by hand. How best can one destroy them?
D. McL.

Ans.—The yellow-flowered plant, with fleshy-fibrous roots and divided leaves, is the meadow buttercup, Ranunculus acris. The name acris means acrid or bitter. In neglected pasture fields it becomes a very bad weed. Thorough cultivation is the remedy for it.

The white-flowered weed, Achillea millefolium, is another perennial, with bitter juice. It is easily recognized by its finely dissected leaves, and is pretty generally known under the name of yarrow. Other common names for it are milfoil, meaning thousand leaf; nosebleed plant, because its astringent sap had a reputation as a styptic or arrester of blood-flow. It disappears before good cultivation.
J. D.

BOX STALL FOR BULL-OIL CAKE FOR HORSES.

1. In building a box stall for a bull in the corner of a cow stable, would it be wise to have the partitions of the stall high enough that the bull could not see the other cattle over them?

2. Is oil-cake meal a satisfactory food for horses, or should they be given pure linseed meal, or else the raw linseed oil? Which of the two latter is the more economical? Should like to hear the opinions of experienced readers on either of these subjects.
P. E. R.

Ans.—1. Many herdsmen think a bull is more likely to be contented and even-tempered if kept where he can see and hear the cows, and if arranging a bull-box we would be inclined to construct it so the bull could see the cows.

2. We should prefer oil-cake meal as being the safest feed, and we would not use very much of it. Raw oil is used as a laxative or purgative, not as a feed.

SUN SPURGE.

I am sending enclosed a weed for identification. Is it a bad weed?
W. J. S.

Ans.—This plant, Euphorbia helioscopia, belongs to a genus with poisonous milky juice. It is in the same order with the castor-oil plant and croton plant, and may be known by its sessile green, obovate leaves in a whorl at the base of its umbellate branches. The plant is an annual, naturalized from Europe. Occasionally, if neglected, it becomes troublesome in gardens, just as lamb's-quarter or pigweed does. It bears several common names, including sun spurge, cat's milk, churnstaf and wart weed, the last because its juice is supposed to cure warts.
J. D.

Veterinary.

GREASE.

Is there such a thing as a cure for what we call a greased leg in a heavy horse?
F. W. B.

Ans.—Heavy feeding is liable to produce grease. Prevention consists in feeding moderately to lightly of grain, allowing a proportion of succulent feed, such as grass, and exercising regularly when not working. Curative treatment consists in purging with six to ten drams aloes, according to size and weight, and two drams ginger, following up with one and a half ounces Fowler's solution of arsenic twice daily for a week. Local treatment consists in applying warm poultices of linseed meal with a little powdered charcoal every six or seven hours for a couple of days and nights, and then applying three times daily a lotion of one ounce each of sulphate of zinc and acetate of lead, two drams carbolic acid to a pint of water. Do not wash. In bad cases of grease heel, the attendant fungoid growths are quite pronounced, and are called "grapes." When they abound, it is necessary to use the knife or actual cautery followed by caustics.

LUMP JAW.

Bull, 18 months old, has a lump under its jaw, near the throat, about the size of an egg. He is very slow eating, and one would think that he wasn't hungry. The lump was noticed about 25th April. He has not done well since.
A. G.

Ans.—This is probably lump jaw, for which iodide of potassium is the best specific. Give as a drench in water 1 dram, three times daily, and increase the doses by 10 grains daily, until a condition called iodism is produced. Symptoms of iodism are failure of appetite, refusal of water, slaving, and tears running from the eyes. When any of these symptoms appear, discontinue the use of the drug for three weeks, then repeat treatment if necessary. Iodine ointment applied repeatedly and well rubbed in may reduce this enlargement. If the bone is affected the lump will not be entirely removed, and may not be permanently checked.

PROBABLY THOROUGHPIN.

Colt, three years old, had puffy joints. Went away on one joint, but the other joint still has a soft puff on each side of his hock joint. Would you advise blistering or using spavin cure? Has never been lame.
M. E.

Ans.—This is a bursal enlargement of some kind, probably thoroughpin. Avoid severe labor for a time, and apply once daily the following mixture: 3 drams each, biniodide of mercury and potassium iodide, and 6 ounces water. Clip off the hair before applying. After four or five applications cease for a week or ten days till the soreness passes away, and repeat. This is an absorbent blister, and will not make the part very sore. If necessary, repeat the treatment several times.

ITCHY-LEG TREATMENT OF IN-FOAL MARE.

1. Will a mare get in foal while being treated for itchy legs by the recipe in "The Farmer's Advocate"?

2. Will the treatment hurt a mare that is carrying a foal, or the foal?
OLD SUBSCRIBER.

Ans.—1 and 2. Correspondents would do well to state the issue in which any article or item appeared about which they may wish to enquire. We are at a loss to know what recipe our friend refers to, but may simply state that a mare in foal is not injured by ordinary treatment, except excessive purging. Avoid aloes particularly. We do not think any treatment that has been given in this paper for itchy legs would have any effect in preventing a mare from conceiving.

GOSSIP.

Mr. G. A. Brodie, Bethesda, Ont., reports the landing, on June 29th, of an important importation of about 50 Clydesdale fillies, particulars of which may be looked for in an advertisement in these columns in the near future.

The new Government quarantine stables at St. John, N. B., are to be fitted with the Bailey-Underwood "Maritime" Cattle Stanchions, the same as are advertised in "The Farmer's Advocate." An order has been placed with this company to equip the new stables with forty-four stanchions. To receive such an order is a high tribute to the merit of the "Maritime."


W. J. McCallum, Brampton, Ont., 20 miles west of Toronto, in a new advertisement in this issue announces the arrival last week of his new importation of 30 imported Clydesdale fillies and stallions, personally selected during his recent visit to Scotland. These are the get of some of the most noted Scotch sires. The fillies were mostly bred to first-class horses before leaving the Old Country, and are described as a first-class lot, combining size with quality in a high degree, and all are for sale at living prices. Our readers will do well to look up the advertisement, and if in want of something good in this line, to write or call and see the importation at the farm, within the corporation of the town of Brampton, half a mile from G. T. R. and C. P. R. stations—a convenient point to reach and to ship from. "Small profits and quick returns" is the motto of this firm. Their former importations have met with a quick and ready sale, and it is expected these will do the same, as they are the best lot yet brought out by this firm.

SCOTCH Shorthorns
 A fine lot of imported cows with calves at foot, from first-class imp. sires. Also a fine lot of one and two year old heifers. Three high-class young bulls of the best quality and breeding at easy prices. Am taking orders for any breed of cattle, sheep or swine to be imported in time for the exhibitions the coming season.
H. J. DAVIS,
 Importer and breeder of Shorthorns and Yorkshires.
WOODSTOCK, ONT.
 C. P. R. and G. T. R. Main Lines.

DURHAM CATTLE FOR SALE
 have for sale two young bulls, 8 months old, sired by Imp. Rustic Chief—40419—(79877); also a few females, among them a young cow fit for any show-ring.
HUGH THOMSON,
 Box 556
 St. Mary's, Ont.

MAPLE HILL STOCK FARM.—Scotch Shorthorns of the best families. Young stock for sale of either sex, sired by the grandly-bred bull, Wanderer's Star—58585—
Wm. R. Elliott & Sons, Guelph, Ont.

SHORTHORNS.
 We have for sale several young heifers and cows, which we are offering at a bargain; also two young bulls, one by Derby Imp., our noted bull, Young Derby is in good trim for fall shows. **W. J. Shean & Co., Box 856, Owen Sound, Ontario.**



PROSPECT STOCK FARM. For sale: 4 Shorthorn Bulls, including Gold Mine (imp. in dam), also some choice young females. Stations: Cooksville and Streetsville, O.P.R.; Brampton, G.T.R. **Peel Co. F. A. Gardner, Britannia, Ont.**

High-class Shorthorns—We are now offering 5 young bulls and 3 heifers, two, three and four years of age. Marigolds, the eldest, a daughter of Imp. Royal Member, has a calf at foot by Sailor Champion. This is an extra good lot.
THOS. REDMOND, Millbrook P.O. and Stn.

FOR SALE—A few young bulls from a few days to six months old; cows and heifers all ages; one bull (calved in May) with imp. British Statesman and imp. Diamond Jubilee on top of pedigree; also Loyal Duke—55096—(imp.)
FITZGERALD BROS., Mount St. Louis.
 ELMVALE STATION, G. T. R.


BROXWOOD HEREFORDS.
 A few choice bull calves from my imported stock.
R. J. PENHALL, NOBER P. O., ONT.

FIVE NICE, SMOOTH HEREFORD BULLS FOR SALE.
 Two about 16 months and three from 8 to 10 months old. Priced right to do business.
W. BENNETT,
 Box 428,
 Chatham, Ont.

THE SUNNYSIDE HEREFORDS
 Twelve high-class bull calves and 4 yearling and 5-year-old bull, we will place at a price that will move them quick. Some choice cows and heifers are yet left for sale.
 Address:
A. F. O'NEIL, Maple Grove P.O. or M. H. O'NEIL, Southgate P.O.
 Ilderton Stn., L. H. & B.; Luanan Stn., G. T.



ONTARIO'S LARGEST AND FINEST HERD OF HEREFORDS.—We sell our beauties to breeders all over Canada, because we sell our stock at much below their value. Come with the rest and get some of the bargains in 25 bulls a year old and over, 25 heifers and 30 cows, or write to have us save you some. (Farm inside the corporation of the town.) **A. S. HUNTER, Durham, Ont.**



FOREST VIEW FARM HEREFORDS
 Four bulls from 8 to 12 months old; prize-winners and from prize-winning stock. Several heifers bred on the same lines; choice individuals, for sale.
JOHN A. GOVENLOCK,
 Forest Sta. and P.O.

HEREFORDS—We are now offering a few thick, smooth young bulls and a number of females—a low-down, even, beefy lot. If in want of something extra good, correspond with us. We can please you.
J. A. LOYERING, Coldwater P.O. and Stn.

ADVERTISEMENT IN THE ADVOCATE.

PURE SCOTCH SHORTHORNS

Herd bulls: Imp. Prime Favorite =45214=, a Marr Princess Royal.
Imp. Scottish Pride =36106=, a Marr Roan Lad.
Present offering
2 imported bulls.
15 young bulls.
10 imported cows with heifer calves at foot and bred again.
20 one- and two-year-old heifers.
Visitors welcome. New catalogue just issued.

W. G. PETTIT & SONS, Freeman, Ont.
Burlington Jct. Sta. Long-distance telephone in residence.

JOHN GARDHOUSE & SONS, Highfield P.O., Ont.

Breeders of
Scotch and Scotch-topped Shorthorns, Lincoln and Leicester Sheep and Shire Horses.
A good selection of young stock of both sexes always on hand for sale. Scottish Prince (imp.) Vol. 49, at head of herd. Royal Albert (imp.) 80267, at head of stud. Farms 3 1/2 miles from Weston, G. T. R. and C. P. R., and electric cars from Toronto.

BELMAR PARK SHORTHORNS

40 bull calves.
16 heifers under two years.
All of the choicest breeding and practically all of show-yard quality. You can buy anything in the herd at a reasonable figure.
JOHN DOUGLAS, PETER WHITE, JR., Manager, Pembroke, Ont.

SHORTHORN BULLS and HEIFERS

Sired by the Scotch bull, Scottish Lad 45061 FOR SALE.

S. DYMENT, Barrie, Ontario.

Clover Lea Stock Farm SHORTHORNS

FOR SALE: Choice bull calves by Golden Cross (imp.). All dark roans. Some from imported sire and dam. Visitors met at Ripley station.

R. H. REID, PINE RIVER, ONT.
Ripley Station. G. T. R.

GEO. D. FLETCHER,

Breeder of Scotch Shorthorn Cattle, Yorkshire Pigs, and S.-C. White Leghorn fowl. Herd headed by the Duthie-bred bull (imp.) Joy of Morning =39070=, winner of first prize at Dominion Exhibition, Toronto, 1903. Young stock for sale. Eggs for hatching 75c. per setting.
Binkham P. O., Ont. Erin Station and Telegraph

PLEASANT VALLEY SHORTHORNS

Herd headed by imp. Old Lancaster =50068=, Grand champion, Toronto, 1906, and consisting of females of the leading Scotch families; can spare a few young cows bred to imp. Old Lancaster.

GEO. AMOS & SON, Moffat Stn. and P.O., C.P.R.

Pine Grove Stock Farm.

Breeders of
High-class Scotch Shorthorns,
Choice Shropshire Sheep, Clydesdale and Hackney Horses.

Herd catalogue on application. Address:
JAMES SMITH, Supt., Rockland, Ont.
W. C. EDWARDS & Co., Limited Props. ont

SHORTHORNS AND BERKSHIRES.

For sale: 2 very fine pure Scotch bulls fit for service; also 2 boars of bacon type fit for service, and grand young sows bred to imp. boar. 25 males and females (Berks.) 2 and 3 months old.
S. J. PEARSON, SON & CO., MEADOWVALE, ONT.

Stations: Streetsville and Meadowvale, C. P. R.

Glen Gow Shorthorns—Our present offering is 9 bulls, from 6 to 14 months of age, sired by imp. Ben Loman and imp. Joy of Morning, and out of imp. and Canadian-bred cows. Also a number of very choice heifers. No fancy prices asked. Long-distance telephone.
WM. SMITH, Columbus, P.O. Brooklin and Myrtle Stns.

SPRING VALLEY SHORTHORNS.
Herd headed by imp. Bapton Chancellor =40269= (78286). A choice lot of females, mostly with calves at foot or safe in calf. Also a good six-month-old bull calf. Inspection and correspondence invited.

KYLE BROS., Ayr P.O.
Ayr, C.P.R.; Paris, G.T.R.

For Sale: 1 Choice young bull seven months old. Dark roan, by Queenston Archer =48838=.
BELL BROS., The "Cedars" Stock Farm, Bradford, Ont.

SUNNYSIDE STOCK FARM.

For sale: The two-year-old show bull, Blyth-some Ruler =52236=. Also cows and heifers in calf.
James Gibb, Brooksdale, Ont.

Forest Reserves as Outing Places and Sanatoria.

We quote the following excerpts from an article, by J. T. Rothrock, appealing to the Pennsylvania Forestry Association: Vigor, of body and mind, is the one important element which assures us everything else that is desirable or lasting. Without it a race degenerates into weaklings and imbeciles, and then it succumbs before those of greater strength. This is natural, necessary and just. The human race is here for progress, and whatever fails to measure up to the aggressive standard of a forward movement becomes an impediment.

During twenty years this organization has stood for protection to and restoration of our forests. It has done so mainly upon the ground that forests were necessary to the wood-consuming interests, that they equalized and continued the flow of water in our streams and tended to purify the air. It was thus upon a single-sided, material basis, that we made our wonderfully successful plea to the public, the Legislature, and to our five consecutive Governors. Man himself, as a factor of the problem, was not considered, except in, I may say, a commercial way.

I now ask you to take one step in advance, and I hope that Pennsylvania may again surpass herself by promulgating and defending the thesis that after all the highest purpose which these State forest reservations can serve is to recreate, make over, elevate and strengthen man himself, and thus to fit him better for his work, while at the same time he is enabled to rise to a higher enjoyment of a nobler life.

A distinguished German has said that when a nation loses its fondness for the woods, it loses its virility. His own nation is a most conspicuous illustration of the truth of this statement. All that is great in civilization is exemplified in the German character. Strong men physically, forceful thinkers, these Teutons still retain their love of the woods just as they did in the times of Caesar. The German student, after wearing himself in the laboratory, seeks and finds his recreation in the woods, where, for the time, "wanderlust" takes possession of his soul. He then returns to civilization to work out more effectively his duties there. The example should not be lost upon us.

Where shall our masses turn for that rest and recreation which is their heaven-born right, and which is being more desired every day?

Nearly half a century ago the entire country was convulsed in the extermination of the black plague of slavery. Today it is struggling with the white plague of tuberculosis, the extermination of which the safety of our nation demands. For centuries it has scourged humanity, and carried into premature graves untold millions of men and women. Drugs have utterly failed to arrest the advance. Mankind during all this time has lived in the only known remedy, which is as free as the fresh air and as cheering as the sunshine, and yet failed to recognize the fact until within the most recent years.

Of the thousands of citizens of this State who are afflicted with the disease, probably not one in a hundred could find means to go to distant health resorts. Probably but few of them would actually be any better off if they could go. Some States are already endeavoring to enact laws which prohibit railroads from carrying consumptives into them. In our own State, I am ashamed to say, capital is seeking to shut out the consumptive from the most salubrious portions of the Commonwealth. What is to be done? Are we to turn our ailing people out to die like brutes? Are we to ostracise and banish them on the one hand, and on the other hand deny them a place where they may have a chance for life? Do you realize that in many of these cases the disease was contracted by the forgetfulness of self which made the victims, in the exhibition of a Christ-like character, risk life to care for some other sufferer? Surely we must halt long enough to solve this problem. If we fail to do so our neglect of duty will bring its own curse upon us in a lengthened list of victims to the disease we are endeavoring to avoid? By failing to provide for

others we may be inviting tuberculosis into our own homes, for unguarded germs fly on the wings of the wind!

I now ask the Pennsylvania Forestry Association, while celebrating its birthday and rejoicing over the great work it has done, leave the past to itself, and advance a step further, again lead the movement into a new field which has been occupied by no Forestry Association, and ask that these State lands be, under proper restrictions, made the healing grounds of our people. Nothing that I know of would be so directly beneficial in its results, because there is no known method by which so many people can be so placed in the only condition where the disease most destructive to mankind can be so certainly arrested. It is a safe prediction that this will be done in the future, for public thought is tending in that direction. We can neither halt the movement nor change the course of the current, though we may hasten and help it by asking our Legislature to promptly grant to our people what is theirs by divine right—pure air, sunshine, health and happiness.

It will, no doubt, be urged that the people cannot be trusted to roam the woods, and it may be predicted that they would injure or destroy the timber. It is not proposed to grant them unrestricted liberty, but simply to make it possible for them to receive such advantages of the outdoor life as can be had without injury to the forestry work. That this can be done is proven by the splendid results already gained in our little camp at Mont Alto. Not a single case of violation of forest law by our campers has ever been observed during the four years since the camp was opened.

The history of mankind has always been one of education, and there is no better way of educating men into respect for the forests than by familiarizing them with the blessings which the forests confer upon us.

The money expended upon the charities of the State approximates the sum devoted to our public schools, and still probably half of those who, under existing regulations should be cared for, are receiving no help from the State. If caring for our insane, or our consumptives, is a State duty, as it appears to be, then it would seem necessary to devise means by which the other half should be provided for.

To increase the State appropriations for charities enough to provide for those lacking care, upon the scale now existing, is out of the question. It simply cannot be done.

The experience gained during the past four years at Mont Alto has been invaluable. We have now treated 138 consumptives. In 67 per cent. the disease has been arrested or cured. Yet until ten months ago the State provided for the camp inmates only shelter, fuel and medical attendance. Provisions, bedding and light were furnished by the campers. Yet the results were surprisingly good.

I write now with knowledge gained by actual trial of several years and assert:

1st. That it is possible to provide suitable camping grounds and cabins on the State Forest Reservations for consumptives.

2nd. That by employing, for each camping ground, a competent physician and a superintendent a great relief could be brought to numbers of our consumptives at a minimum of cost and without danger to the community or to the forestry interests.

It was a true saying of a living author,—"Every man is a man after God's own heart if he acts out in faith the special function for which he is fitted." To be a man after God's own heart, as the beloved Son was, is His call to each of us.—W. H. Channing.

An extremely interesting booklet, entitled "The Last West," has been prepared and issued under the charge of the Edmonton Board of Trade. It tells all about the conditions and opportunities of the great Edmonton district. Our readers, upon writing the Secretary of the Board, will receive one of these booklets free of charge.

Messrs. W. R. Elliott & Sons, Guelph, Ont., are advertising Shorthorns for sale—young bulls, cows and heifers from their richly-bred herd of Scotch-bred cattle. See the advertisement, and write them for particulars.

Ring-Bone

There is no case so old or bad that we will not guarantee
Fleming's Spavin and Ringbone Paste
to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on Siblebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of
Fleming's Vest-Pocket Veterinary Adviser
Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durable bound, indexed and illustrated. Make a right beginning by sending for this book.
FLEMING BROS., Chemists, 45 Church Street, Toronto, Ontario

Spring Grove Stock Farm

Shorthorn Cattle and Lincoln Sheep

First herd prize and sweepstakes, Toronto Exhibition, 5 years in succession. Herd headed by the imported Duthie-bred bull, Roy Morning, and White Hall Ramsden. Present crop of calves sired by imp. Prince Sunbeam, 1st, Toronto, 1908.

High-class Shorthorns of all ages for sale. Apply
Also prize-winning Lincolns. om

T. E. ROBSON, Iderton, Ont.

KENWOOD STOCK FARM.

SHORTHORNS.

Headed by (imp.) Jilt Victor =45187=. 10 grand young bulls; also heifers; from imp. and home-bred cows, for sale. Choice Lincoln sheep; Berkshire and Tamworth hogs offered.

HAINING BROS., Highgate, Ont. Kent Co.

SHORTHORN BULLS

FOR SALE
1 roan calf, 15 months old, of the Duchess of Gloster family.

1 roan, two years old, from imp. sire and dam. Also a number of good registered Clyde mares.

JOHN MILLER, Brougham, Ont.

Glenoro Stock Farm

SHORTHORNS AND LINCOLNS.

Imp. Marr Roan Ladys, Missies, Broadhooks and Miss Ramsdens. Three choice young bulls for sale. **100 Head of Dudding-bred Lincolns.** Grand crop of ram and ewe lambs. Twelve choice yearling rams for sale.

A. D. McGugan, Rodney, Ont.

For Sale: Two Young Shorthorn Bulls

Also Cows and Heifers, and one good Imp. York. Sow, also a good Yorkshire Boar one year old. Good breeding and good animals

DAVID MILNE, ETHEL, ONT.

SHORTHORNS & CLYDESDALES FOR SALE

Bull in service: Scotland's Fame =47897=, by Nonpareil Archer (imp.) (81778) =45202=, dam Flora 51st (imp.) (Vol. 19). Present offerings: Two heifers rising 1 year old, two bulls rising 1 year old; also young cows and heifers of good quality and breeding, mostly well gone with calf. Also stallion rising 1 year old, sired by the well-dam, and one filly rising one year, sired by King's Crest (imp.). Will sell at a bargain if taken soon.

JOHN FORGIE, Claremont P.O. & Sta.

Wm. Grainger & Son

Hawthorn herd of deep-milking Shorthorns. Aberdeen Hero (imp.) at head of herd. Three grand young bulls, also females, all ages. Prices reasonable.

Londesboro Station and P. O.

ELM GROVE SHORTHORNS

We have for sale some good young cows and heifers, of the Fashion and Belle Forest families, in calf to Scottish Rex (imp.) or Village Earl (imp.), our present herd bull. For prices and particulars address

W. G. SANDERS & SON, Box 1133, St. Thomas, Ont.

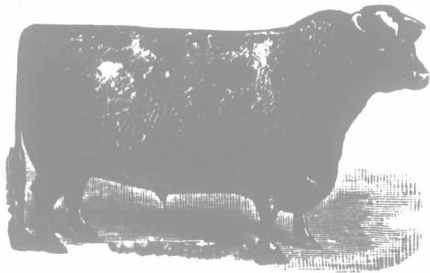
LAKEVIEW SHORTHORNS.

Spley King (imp.) at head of herd. Young bulls for sale reasonably. For prices, etc., apply to

THOS. ALLIN & BROS., Oshawa, Ont.

ROSEDALE SHORTHORNS

Do you want a profitable cow with calf at foot, and bred again; also heifers bred and heifer calves from imported stock. Choice milk strains. Write
A. M. SHAVER, Ancaster, Ont.
Hamilton station.



ARTHUR JOHNSTON Greenwood, Ont.

Offers for sale, at moderate prices, 12 high-class yearling BULLS

All sired by imported bulls, and most of them from imported dams. Also imported and home-bred cows and heifers of all ages.

CEDARDALE SHORTHORNS

For immediate sale: Four young bulls and a few heifers, a nice thick, well-put-up lot, and bred on heavy-milking lines. Will be sold cheap. DR. T. S. SPOULE, M.P. Markdale, Ont.

Shorthorn Cattle and Lincoln Sheep

Shorthorn bulls, cows and heifers for sale at greatly reduced prices for the next 60 days.

J. T. GIBSON, Denfield, Ont

Hillhurst Shorthorns

Registered bull calves for sale, by Broad Scotch #46315, from imported English and home-bred dams of good milking strains.

JAS. A. COCHRANE, Compton, P. Q.

SHORTHORNS AND LINCOLNS.

Present offerings: 4 choice young bulls 9 to 14 months; also a few good heifers, Lincolns, descended from the best English flocks. JOHN LEE & SONS, Highgate, Ont. 40 miles west St. Thomas, on M.C.R.R. & P.M. Ry.

SHORTHORNS

Imp. Keith Baron 36050. Six young bulls from 10 to 18 months old. A lot of 2-year-old heifers in calf and a few young cows. A bunch of heifer calves, cheap.

CLYDESDALES

Just now: One pair of matched geldings 5 and 6 years old; show team.

JAS. McARTHUR, Goble's, Ont.

Riverview Shorthorns and Oxfords

Shorthorns represent Crimson Flowers, Athelstanes, Lady Janes and Roses.

We have for sale three yearling bulls and some spring calves, also a few females. A thick, straight, mossy lot. Also some Oxford Down ram lambs.

Peter Cochran, Almonte P. O. and Station.

Queenston Heights SHORTHORNS

I am offering extra value in yearling and two-year-old heifers. Bull calves that will make high-class sires. Straight Scotch.

HUDSON USHER, Queenston, Ont.

High-class Shorthorns

The well-known Duthie-bred bull, Scottish Beau (imp.) (36099), by the great Silver Plate, formerly at head of R. A. & J. A. Watt's herd, now heads my herd. Young stock usually on hand for sale.

N. S. ROBERTSON, ARNPRIOR, ONT.

SCOTCH-TOPPED SHORTHORNS

Three young bulls, from nine to thirteen months old; also several young heifers by Scottish Baron (imp.) for sale. Prices reasonable.

H. GOLDING & SONS, Thamesford, Ont Stations, Thamesford, C.P.R.: Ingersoll, G.T.R.

Brown Lee Shorthorns

Present offering is 3 young bulls from 9 to 15 months old, a nice straight, good-doing lot, sired by Blenheim Stamp; also females of all ages, daughters of Imp. Sir Christopher and Imp. Beaucamp. Prices very reasonable.

DOUGLAS BROWN, Ayr P.O. and Station.

GOSSIP.

Wm. Agnew, Langton, Ont., advertises in this issue of "The Farmer's Advocate" his imported Clydesdale stallions, including one three-year-old, by the famous Pride of Blacon, Bute premium horse, and first at Highland and Agricultural Society Show. This is a horse of extra quality, form and action. One by Sir Simon, one of the best breeding sires in Scotland, a colt of extra growth and quality, will make a ton weight; one by Sir David, a famous sire. This colt is of extra quality and first-class formation.

WRANG IN HIS HEID.

Charged with having set fire to a hayrick, a Scotsman was defended on the ground that he was not altogether responsible for his actions. One of the witnesses, a typical Scot, testified that the prisoner was "wrang in the heid." "Can you mention any occasion on which the prisoner behaved in a manner to warrant your statement?" he was asked by the prosecuting counsel. "Yes," answered the witness. "I mind since he got half-a-crown over much for his wages, an—" "Well?" said counsel, as witness hesitated. "He took it back to the manager," concluded the witness, dramatically.

Messrs. W. J. Shean & Co., props. Rosevale Stock Farm, Owen Sound, Ont., ordering a change of advertisement, report sales of Shorthorn brisk as usual. The calls for bulls, especially, have been very good, while heifers and cows have also been selling very well. Among other recent sales are: To Wm. McNabb, Bognor, the yearling bull, Derby II, got by the famous Imp. Derby, and a good representative of his father. To Archie McTae, Flesherton, one of our show herd, Telluria 23rd, a good breeding cow. To T. S. Ostrander, Reddickville, the beautiful pair of heifers, Marengo's Last, by Marengo's Heydon Duke (imp.), and out of the Marr Flora cow, Mayflower of Holland, also the beautiful heifer calf, Jessamine 8th, by Famous Pride (imp.), and out of Imp. Buchan Lass. To Joseph McKibbon the young bull, Village Lavender, by Imp. Langford Eclipse, and out of the grand old Village cow, Village Fairy 2nd, by Vanguard. To Jas. Cochran, Drew, Ont., the young bull, Missie Marquis, by Imp. Marquis of Zenda, and out of the Missie cow, Melrose Queen, by Grand Sweep (imp.). To Donald McGregor, Kemble, the young breeding cow, Mayflower of Holland, a Marr Flora, and a good one. To Watson Scarrow, Keachy, the Marr Flora heifer, Flora, a beautiful dark roan that, no doubt, will develop into a fine cow.

HOW THINGS GET CHANGED SOMETIMES.

When Ambrose Bierce, the author, was editor of the San Francisco Argonaut, a local poet submitted a poem for publication. The poem was a pretty good one and Bierce printed it.

"The souls as yet ungarmented Press 'round me without noise or tread."

A few hours after the issue of the magazine, in which the poem was printed, was on the newsstands, the very angry author of the poem rushed into Bierce's room and shouted: "What do you mean by making sport of me in this way?" "In what way?" asked Bierce, mildly. "Look!" screamed the poet. "Look at this!"—and he pointed to the two lines quoted. Bierce read:

"The souls as yet ungarmented Press 'round me without noise or tread."

Bierce explained it was a terrible typographical error and promised to make amends. A few weeks later he reprinted the poem in full, with the explanation that, in its first printing, it had been marred by an unfortunate error.

Next day Bierce left town for a week, for in the reprint the two lines appeared:

"The souls as yet ungarmented Press 'round me without nose or head."

—Saturday Evening Post.

Your friends often know things about you that you yourself never suspected.

Mrs. Talkmuch (at Niagara Falls)—Isn't it grand? I love to hear its roar. Mr. Talkmuch—So do I. Just keep quiet for a while and we'll both hear it.

The dialects of England are so various that grammatical eccentricities are commoner even than among the mixed peoples of the United States. An English paper has been printing some choice examples. In Somersetshire a party of masons are at work. One of their number is idling. The foreman appears.

Joe (warningly)—Hi, Ben, there be gaffer eyein' ee!

Ben—Aye, I eyed ee eye I.

An example from Punch, but true as to dialectic peculiarities, is recalled. It is the reply of a farmer to a former vicar of his parish, who sympathized with him on the fact that his three elderly daughters were not married: "You see, zur," he said, "when they would ha' they they wouldn't—ha' they, now they would ha' they they won't ha' they."

RAW SKIM MILK AS FERTILIZER.

Several weeks ago, a creamery of Holsey, N. Y., had a lot of skim milk that could not be used. W. Clark Mains and John A. Segler, farmers, took the milk and poured it on their lands as an experiment. Mains emptied 75 cans on a timothy-sod lot. Segler emptied 150 cans on a piece of meadow land. Remarkable results have been obtained. Their grass, it is said, grew seven times as vigorous as on adjoining fields where the milk was not used, but which were covered with commercial fertilizers. It is safe to add that throwing skim milk on meadows will never become general. Experiments have demonstrated that it is worth fully 20 cents per cwt. for feeding young pigs when they sell at \$4 per cwt. This makes the milk worth \$4 per ton. Reckoning the total albuminous constituents of the skim milk at five cents, and the content of nitrogen as 16 per cent., we cannot count the value of the skim milk, including also the ash constituents, as over \$2 per ton. It is not known that the skim milk has a greater value than is indicated by its content of nitrogen and ash. It does seem that the material is too valuable as a feed to be used on the meadows as a fertilizer when it can be fed to pigs or calves to such advantage and a considerable portion of the fertilizing value recovered and applied to the land in the form of barnyard manure.

A HERO HORSE.

John Devinney, an old farmer of Butternilk Hollow, near Duquesne, Pa., sank all his money in drilling a dry hole which was to have been an oil well, and then, thoroughly disgusted with life, decided to end it all. He secured a piece of stout clothesline and an old soap box and started to the stable with the intention to make a good and quick job of it. He couldn't pass Old Bill, the horse he raised from a colt, which had been in the family all of sixteen years, without a word of parting.

When this was said, Devinney went back to the stall, knotted one end of the rope around his neck, and mournfully crawled up on to the soap box. Then he threw the other end of the rope around the rafter.

All this time Old Bill had been looking at him askance. Suddenly the truth of the situation flashed across the horse's mind. There wasn't any time for explanations, and quick action was necessary. Devinney was in reach, and suddenly Bill's right hind hoof shot out and struck the farmer squarely on the seat of his trousers. The force of the blow was so great that Devinney was knocked clear through the weather boarding of the stable and landed him in the lane outside.

The screams of the injured old man were heard by his family, he was carried into the house, and a doctor was summoned. To-night he is doing as well as could be expected, and will recover.

He is delighted at the thought of getting well, says that he does not want to die now, and declares that Old Bill saved his life.—[Horse World.]



These pills cure all diseases and disorders arising from weak heart, worn out nerves or watery blood, such as Palpitation, Skip Beats, Throbbing, Smothering, Dizziness, Weak or Faint Spells, Anaemia, Nervousness, Sleeplessness, Brain Fog, General Debility and Lack of Vitality. They are a true heart tonic, nerve food and blood enricher, building up and renewing all the worn out and wasted tissues of the body and restoring perfect health. Price 50c. a box, or 3 for \$1.25, at all druggists.

GREENGILL HERD

SHORTHORNS

We offer ten young bulls ready for service, a number of them from imported sire and dam; also high-class females, all ages, either imported or Canadian-bred. The herd is headed by (Imp.) Lord Kesberry.

R. MITCHELL & SONS, Nelson P.O., Ont.; Burlington Junc. Sta.

MAPLE GROVE SHORTHORNS

Imp. and Canadian-bred. Males and females, as good types as the breed produces. With breeding unsurpassed.

C. D. Wager, Enterprise Stn. & P.O., Addington Co.

R. A. & J. A. Watt, Salem, Ont.

Elera Station on the G. T. and C. P. Ry. Home of the first and third prize aged herds, Canadian National, Toronto, 1905. Mayflower grand champion Toronto and Winnipeg, 1904-05; Olga Stamford, grand champion New York State Fair, 1905; Gem of Bellechere, grand champion Toronto, 1903; Tiny Maude, reserve senior champion Toronto and Winnipeg, 1905; Mildred's Royal and other leading winners. A choice number on hand to make your selection from at all times.

GLENAVOH STOCK FARM

Shorthorns and Lincoln Sheep

I have one Shorthorn bull calf, with imported cross near the top, and a registered Lincoln ram, which I will sell cheap, or will change rams.

W. B. ROBERTS, Sparta P.O. Station: St. Thomas, C.P.R., M.C.R., G.T.R.

Maple Lodge Stock Farm

Established 1854. CHOICE SHORTHORNS, LEICESTERS. THE BEST. FOR SALE.

A. W. Smith, Maple Lodge P.O., Ont.

A. EDWARD MEYER, Scotch Shorthorns.

The Sunny Slope herd comprises Cruickshank Bellona, Mysias, Villages, Brawith Buds, Broadhooks, Bruce Augustas, Mayflowers, Campbell Bessies, Urys, Minas, Clarets, Kibblean Beautys. Herd bulls: Scottish Hero (imp.) (90066), a Shethin Rosemary, and Chief Ramsden #62548, a Miss Ramsden. Correspondence solicited. Visitors welcome. Long-distance phone in house.

WILLOW BANK STOCK FARM

Established 1855. Will offer imported Rosicrucian of Dalmeny #45220. Recorded in both Dominion and American herdbooks. Also young stock of either sex. "Shorthorns." James Douglas, Caledonia, Ontario.

Oak Grove Shorthorns—Present offering: Several imp. cows, heifers and young bulls, all sired by Imp. Nonpareil Duke and out of imp. dams; also the stock bull, Imp. Nonpareil Duke, a choice offering. Prices right. W. J. ISAAC, Cobourg Station, Harwood P. O.

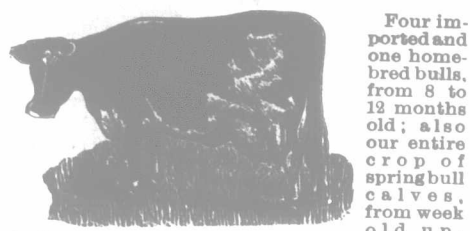
Cows from the ANNANDALE HOLSTEIN HERD

Have won during the past show season at Ottawa first and sweepstakes on cow, first on 3-year-old, first on 2-year-old class. At Guelph (dairy test) first and sweepstakes on cow, first and second in heifers. At Chicago (National) first and sweepstakes on cow, also second-prize cow, second and third on 2-year-olds, second on 1-year-old heifers, and a host of other prizes (different cows at different shows).

Bull calves, 4 months and under only, for sale from great dams and greatest of sires. Buy young if you want them from Annandale Stock Farm.

GEO. RICE, Tillsonburg, Ont.

HOLSTEINS FOR SALE



Four imported and one home-bred bulls, from 8 to 12 months old; also our entire crop of spring bull calves, from week old up.

Sired by the grandly-bred imp. bull, Sir Howitje B. Pieterse, whose dam record is over 82 lbs. milk in one day, and from great-producing cows of the most fashionable strains. Can spare a few cows and heifers, from one year up; 75 head to select from. Cheese 13c. Don't delay if you want one from this herd.

H. E. GEORGE, Crampton, Ont.

WOODBINE HOLSTEINS

Hard headed by Sir Mechthilde Posch, absolutely the best official-backed sire in Canada. Dam Ianthe Jewel Mechthilde, 85.8 pounds butter in seven days. Champion cow of Canada ever all breeds. Sire's dam, Aaltje Posch 4th, holds the world's largest two-day public test record—8.6 pounds butter. Young bulls of the choicest quality for sale.

A. KENNEDY, Ayr, Ont. Ayr, C.P.R.; Paris, G.T.R.

A FEW HOLSTEIN BULLS

fit for service, for sale at reasonable prices. Choice females, all ages. If you are willing to pay good prices for good stuff, write me.

G. W. CLEMENS, St. George, Ont.

Lyndale Holsteins.

For Sale A number of bull calves from one to four months old, out of Record of Merit cows, and sired by Beryl Wayne Paul O'Connell, whose four nearest dams have official butter records averaging 22 lbs. 11 oss. each. BROWN BROS., LYN, ONT.

Centre and Hill View Holsteins

We have four yearling bulls left which we will sell at reduced price to quick buyers; from good producing strains; our own raising. Sold out of females at present. F. D. EDB, Oxford Centre P. O., Woodstock Station, C. P. R. and G. T. R.

MAPLE-GROVE HOLSTEIN-FRIESIANS

For Sale: Three bull calves, sired by Lord Wayne Mechthilde Calamity, and all out of Advanced Registry cows. Apply WALBURN RIVERS, Folden's Corners.

Maple Glen Holsteins

Three sons of Sir Altra Posch Beets, whose granddam holds world's largest official record for her age, and grandsire has over 60 tested A. R. O. daughters—the most by any bull on record. Brother of Aaggie Cornucopia. Secure the best. C. J. GILROY & SON, Glen Buell, Ont.

Grove Hill Holsteins

Herd contains 55 head, a number of which are in the advanced registry. Our stock bulls have all been backed up by high records. Present offering: Several young bulls and a few females. F. R. MALLORY, Frankford P. O. and Stn., C. O. R.

IMPERIAL STOCK FARM HOLSTEINS

A prizewinning herd of imported, officially tested stock. Bulls of all ages for sale, also a few cows. W. H. SIMMONS, New Durham, Ontario.

"GLENARCHY" HOLSTEINS

We have for immediate sale several young bulls and a number of young females, that for ideal type and superior quality, backed up by gilt-edged breeding, are unsurpassed. G. MACINTYRE, Renfrew P. O. and Stn.

Glenwood Stock Farm—Holsteins and Yorkshires.

Holsteins all sold out. Have a few young Yorkshire sows, about 2 months old, for sale cheap. True to type and first-class. Bred from imported stock. THOS. B. CARLAW & SON, Warkworth P. O. Campbellford Stn.

Holsteins, Tamworths, Oxford & Dorset SHEEP FOR SALE.

At present we have 1 young bull, 8 Oxford ram lambs, Dorsets, 1 yearling and 1 aged ram, Tamworths, both sexes. J. A. Richardson, South March P. O. and Stn.

HOLSTEINS AND YORKSHIRES

R. HONEY, Brickley, offers for sale a choice lot of young boars fit for service; also sows ready to mate.

HILTON STOCK FARM—Holsteins, Cotswolds and Tamworths—Present offering:

Some young cows; a nice lot of young pigs; few boars six months old, and sows in pig. R. O. MORROW & SON, Hilton P. O., Brighton Tel. and Stn.

QUESTIONS AND ANSWERS. Miscellaneous.

RELATIONSHIP OF HALF-BROTHERS.

Are two colts sired by the same horse, but out of different dams, any relation? If any, what relation are they?

SUBSCRIBER.

Ans.—What relation would a man be to his half-brother?

MUSHROOMS.

Kindly send anything you have about mushrooms. Have you grown them with slight, say, single-board partition? Does success depend on expensive plant?

G. F. B. P.

Ans.—The best information you can get regarding the growing of mushrooms may be found in a work on "Mushroom Culture," by Wm. Falconer; price, about \$1 [order through this office]. In this connection, however, I may say that mushrooms are one of the most uncertain crops we ever tried to grow. Some years we had an excellent crop, and at other times failed entirely. In most cases, however, we thought the failures were due to poor spawn. It is often very difficult to get good live spawn. When one succeeds in getting a good crop, he should, if possible, save over the spawn of his own growing for successive crops. H. L. HUTT, Horticulturist. O. A. C., Guelph.

ROPY MILK.

My customers have been complaining about my milk. They say if they set it away for twelve hours or fifteen hours that the cream is stringy and chunky, and that they cannot get it to mix with the milk or dissolve in their tea, although the milk is perfectly sweet. I find upon setting up samples, say a quart or two, that what they say is true. My cattle are in good order, apparently in good health, on good pasture, supplied with good water, with salt at their disposal nearly every day.

Ans.—The complaint which customers make regarding the milk supplied by subscriber, is evidently due to what is called "ropy" milk. This is generally caused by some form of bacteria, and the remedy is to thoroughly scald and clean every pail, can, dish, etc., which comes in contact with the milk. This is the only way to get rid of this trouble. It may be coming from some one particular cow, and I would advise setting the milk from each cow separately until all the herd has been gone over, and thus see if it can be located with any one cow, but it is altogether likely that the trouble is to be found in the pails, cans, etc. H. H. DEAN.

FILTER FOR HOUSE WATER SUPPLY.

Some four or five years ago I had a well drilled about 116 feet, have a plentiful supply of water, but the water is never perfectly clear. I had a sample analyzed by my physician, who said it contained nothing but a little fine quicksand. We are using water for the house, and would like to know if we could arrange a convenient and inexpensive way of filtering a sufficient quantity for use in the house. We have room for tank in cellar, if that would be suitable, or could be placed underground.

A READER.

Ans.—The water in this instance may contain very fine particles of clay. It would be very difficult to clear this by filtering. If it is quicksand, then filtering will likely clear it. If a drop of the water were examined under a small microscope, the nature of the substance in suspension could easily be determined. I cannot estimate exactly what quantity of water would be required per day for the house, but I shall assume 100 gallons. For this amount, the filter basin would require to have a surface of one and a half square feet, and should be seven feet deep. The amount of water that will pass through the filter per day will depend upon, first, character of the filter; second, the surface area of the filter, and, third, the depth of the water over the filter. A depth of three feet of water over the filter should furnish sufficient head to force the water through the filter. As to the filter itself, on the bottom should be laid a line of two-inch tile connecting with the iron pipe that leads to the clear water basin; over the tile one foot in depth of broken stone should be laid; over that, one foot of coarse gravel, then one foot of fine gravel, then

from one foot to two feet of medium sand. Care should be taken to have the material of these distinct layers all of uniform grade. Each grade should be sifted, and the finer as well as the coarser grades removed. Any lack of uniformity in the size of the particles composing each layer will interfere seriously with the permeability. The total depth of filter should be from four to five feet, making seven or eight feet in depth over the whole basin. The top layer of sand will likely catch most, if not all, of the quicksand, which is removed from the water. Thus this quicksand will gradually accumulate in the top layer, and in time lesson its permeability, so that the filter will draw more and more slowly. It will, therefore, be necessary occasionally to renew a part or all of the top layer of sand. The old layer should be scraped off and fresh sand put in its place. It is advisable to have a separate basin for the clear water, even if it is only a small one, for in event of an unusually large demand, the filter may not be able to supply water fast enough, and in any event the filter does better work when allowed to work slowly and uniformly. The clear-water basin may stand with its bottom at the same level as that of the filter, and, of course, it should be as high as the filter. J. B. REYNOLDS, Ontario Agricultural College.

WATER PIPE NOT WORKING.

I use a windmill for pumping water into a tank in the barn to supply the stables and house with water. I have always used a wooden tank until about three weeks ago. If the tank got empty and we started the mill to pump, we could get water at any place we wanted it right away. About three weeks ago, I put in a new steel tank, right in the same place where the wooden tank was. We cannot get water until the tank is one-third full. I feel satisfied that it is air in the pipes. Why should air stop the water since I put the steel tank in, when it did not with the wooden one, and how will I remedy it?

A SUBSCRIBER.

Ans.—It is evident that the air which was allowed to fill the pipe while the tank was being changed has not yet all been removed; or, which is more likely, that some obstruction has got into the pipe, partially blocking it. The latter would account for checking the rate of flow from the tank, and would allow air to remain in the pipe, and thus would lessen the pressure, which would account for the failure to flow until the tank is partially filled. Certainly, if the pipe were in the same condition as before, it would act the same under the same head. It would be well to examine the pipe and remove the obstruction which is very likely there. J. B. REYNOLDS, Ontario Agricultural College.

MENTAL GEOGRAPHY.

The largest river is Time. The deepest ocean is Death. The region where no living thing hath habitation is called Yesterday. The most highly civilized country is To-day. The highest mountain is called Success. Few reach the top save those who watch sharply for the passing of the spirit of the mountain Opportunity who carries upward all those that seize hold upon him. The region where no man hath ever set foot is called To-morrow. The greatest desert is called Life, and it hath many oases. These are called Hope, and Ambition, and Love, and Charity, and Home. And of them all the last is the most beautiful. Besides these are many others smaller in extent, whence the traveller obtaineth refreshment during the weary journey through Life.—Exchange.

The gift of Jesus to mankind has been His faith in the never-failing presence of an infinite love. He, first of all human beings, rose to the perfect and un-failing confidence.—James Freeman Clarke

Lump Jaw



The first remedy to cure Lump Jaw was Fleming's Lump Jaw Cure and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in Fleming's Vest-Pocket Veterinary Adviser. Most complete veterinary book ever printed to be given away. Durable bound, indexed and illustrated. Write us for a free copy. FLEMING BROS., Chemists, 45 Church Street, Toronto, Ontario

HIGHGROVE JERSEY HERD.

Our present offering is a few choice heifer calves from 2 to 8 months old, which, considering quality, will be sold reasonable. ROBT. TUFTS & SON, Tweed P.O. & Sta.

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. BULL & SON, Phone 68, Brampton, Ont.

Pine Ridge Jerseys—Present offering: Some good young cows and a choice lot of heifers, all ages, from 4 months up; also some good Cotswold sheep (registered). WILLIAM WILLIS, Newmarket, Ont.

AYRSHIRES

The famous Reford Herd at St. Anne de Bellevue, Que., now owned by Sir William C. Macdonald.

Several yearling bulls for sale; also a number of bull calves, quality and appearance extra good, bred from the best milking strains, noted for robust constitution and large teats. For particulars apply to MACDONALD COLLEGE, St. Anne de Bellevue, Quebec.

BARREN COW CURE

makes animals breed. Abortive Cow Cure prevents animals aborting. Cures guaranteed or money refunded. L. F. BELLECK, Morrisburg, Ont.

AYRSHIRES—Choice stock of either sex, different ages, for sale. Prices reasonable. For particulars apply to N. DYMENT, Hickory Hill Stock Farm, Dundas Stn. & Tel. Gt. Mississauga, Ont.

Maple Cliff Dairy and Stock Farm—Breeder of Clydesdale Horses, Ayrshire Cattle, Berkshire and Tamworth Pigs. Young stock for sale at all times. R. REID & CO., Hintonburg, Ont. Farm adjoins Central Experimental Farm.

Ayrshires and Yorkshires

We always have on hand choice animals of above breeds, of any desired age. Prices reasonable. Write us before buying. Intending purchasers met at Hoard's. Alex. Hume & Co., Menie P. O. SPRING BURN STOCK FARM, North Williamsburg, Ont. H. J. WHITTEKER & SONS, Prop. Breeders of Pure-bred Ayrshire Cattle, Oxford Down Sheep, Berkshire Pigs and Buff Orpington Fowls. Young stock for sale. Eggs for hatching, \$1 for 13, and \$4 per 100.

HIGH-CLASS AYRSHIRE CATTLE

Bulls and heifer calves, two to nine months old, cows and heifers all ages. Prizewinners from this herd include Tom Brown and White Floss, sweepstakes at Chicago. DAVID BENNING & SON, Glenhurst, Williamstown, Ont.

Select Ayrshire Bulls—A right good one, 18 months old. Four choice last Aug. and Sept. calves. Special low price on five March and one May calves. W. W. BALLANTYNE, Neidpath Farm, Stratford Ont.

Wardens Ayrshires—We are offering young bulls from 1 to 2 years old; also a choice lot of spring calves from deep milking dams. Sired by White Prince of Menie No 1825; bred by A. Hume, Menie. F. W. TAYLOR, Wellman's Corners, Hoard's Stn., G. T. R.

STOCKWOOD AYRSHIRES FOR SALE

Have some nice February calves for \$30 each, out of heavy milking dams. Sire Pearl Stone of Glenora; also some nice young cows and heifers. D. M. WATT, Allan's Corners, Que.



Burnside Ayrshires

Imported and Canadian-bred. Prizewinners at all the leading shows. I hold the award of merit given by the Bd. of Dir. of World's Fair, St. Louis, to the breeder of largest number of prizewinning Ayrshires at said Exposition. Females of all ages for sale, imported and Canadian-bred. R. R. NESS, JR., HOWICK, QUE., P.O. AND STATION.

DORSET HORN SHEEP and SCOTCH SHORTHORNS

The latter representing the Nonpareil, Miss Ramsden, Missie and Gloster families exclusively...

JOHN A. MCGILLIVRAY, North Toronto, Ontario

Farnham Farm Oxfords.

We have some extra good yearling rams for flock headers, all sired by imported ram.

HENRY ARKELL & SON, ARKELL, ONT. Guelph, G. T. R.

FAIRVIEW SHROPSHIRE

Have the world's record for the largest per head winnings at the greatest of world's fairs—St. Louis.

Also have the record for their 23 years in the leading show rings, including three world's fairs...

JOHN CAMPBELL, Fairview Farm, Woodville, Ont.

BROAD LEA OXFORDS.

Present offerings are 28 ranch shearing rams, seven shearing ewes, one show ewe four years old.

Correspondence promptly answered. Visitors always welcome.

E. B. Stations: Mildmay, G. T. R., Teeswater, C. P. R. W. H. ARKELL, Teeswater, Ont.

WOOL

Consignments solicited. Write and get our prices.

E. T. CARTER & CO., TORONTO.

COTSWOLD SHEEP

From one of the largest breeders in the home of the breed. We have bred the prizewinners at the leading English shows.

W. HOULTON, Broadfield Farm, Northleach, Glos. ENGLAND; or S. HOULTON, Calgary, ALBERTA, Canadian representative.

SOUTH DOWNS

Having sold short, I am now booking orders for future delivery of show and breeding flocks.

COLLIES

At Stud, Holyrood Clinker, Just imported. Fee \$10.00.

Robt. McEwen, Byron, Ont.

Dorsets. Can supply Dorset sheep of the various ages, of either sex, in pairs not akin, at very reasonable prices...

E. DYMENT, Copetown P. O. Wentworth Co.

Some men are so lazy even a vacation tires them.

Action may not always be happiness, but there is no happiness without action.

An aged Scotch minister, about to marry for the fourth time, was explaining his reason to an elder. "You see, I am an old man now, and I cannot expect to be here verra lang."

DODD'S KIDNEY PILLS. CURES RHEUMATISM, BRIGHT'S DISEASE, DIABETES, BACKACHE. TORONTO, CANADA.

GOSSIP.

AYRSHIRE HERDBOOK.

From Mr. J. W. Nimmo, Registrar of the Canadian Ayrshire Breeders' Association, National Records, Ottawa, we have received a copy of volume 15.

While I was a student in the medical college I had a patient, an Irishman, with a broken leg. When the plaster bandage was removed and a lighter one put on in the place, I noticed that one of the pins went in with great difficulty...

"Why, Pat," said I, "didn't you know the pin was sticking in you?" "To be sure I did," replied Pat. "But I thought you knew your business, so I hit me tongue."

The Belgian "Revue de Cavalerie" estimates the horse population of the world at 80,000,000, of which 41,000,000 are in Europe, 19,000,000 in North America, 11,000,000 in Asia, 6,000,000 in South and Central America, 2,000,000 in Australia, and 1,250,000 in Africa.

USES FOR COAL ASHES ON THE FARM.

William B. Cary, of Connecticut, contributes to the Tribune Farmer his experience with coal ashes. He has found a marked effect in applying sifted coal ashes to the surface of a clay hillside...

They are better for foundations than gravel, because they pack together and form a surface which is not favorable to the growth of grass or weeds, and a layer of gravel on top works down among them and compacts itself finely.

Of course, there was opposition. There always will be opposition to doing anything new or different from the existing order of things in old settled communities. There was laughter and plenty of prophecy that the rains would wash out the bank and the frosts would heave it so that the work expended would be worse than useless.

QUESTIONS AND ANSWERS. Miscellaneous.

SILVER AND SILVER-LACED WYANDOTTES - MINORCA COCK WITH DROOPING COMB.

1. Is there any difference between Silver and Silver-laced Wyandottes? 2. Is a Black Minorca with his comb lying down a little any good for showing purposes?

Ans.—1. The American Standard of Perfection describes Silver and Silver-pencilled but not Silver-laced Wyandottes. The colors of the two breeds, though corresponding in general pattern, differ noticeably in the details of feather markings.

SALT FOR BINDWEED.

I have about 15 patches of bindweed in about 4 acres of land. These patches vary from 20 to 60 feet in diameter. The ground has been in sod for 10 years. Plowed it this spring, and am running over it every few days with a disk harrow...

Ans.—Summer-fallowing, if persisted in, will certainly kill bindweed, though for a time it may seem to flourish as a result of the cultivation. We would suggest the use of a broad-share cultivator instead of a disk harrow.

Veterinary.

DISTEMPER - IRREGULAR SUPPLY OF MILK.

1. Dog, three months old, has lost the use of his limbs. His neck is stiff, and his body seems sore. He takes convulsions and coughs. 2. Cow gives a large flow of milk for a few days, and then gives very little for a few milkings, etc., etc.

Ans.—1. The dog has distemper, which requires prompt treatment. It is doubtful whether treatment will be of any use now. Keep him comfortable. Give him an emetic of 5 grains each sulphate of zinc, calomel and tartar emetic in 2 ounces warm water.

MEN CURED

HEALTH AND MANLY VIGOR RESTORED YOU PAY WHEN CURED



No matter how serious your case or how many times you have been treated without success, consult Dr. Goldberg, who will treat men by mail and cure them at their own homes before they have to pay him a cent.

Remember, when dealing with Dr. Goldberg you take no risk as you do not have to pay him a cent until you are cured. This liberal offer should convince you of the Doctor's confidence in his ability to cure you.

Address, DR. S. GOLDBERG, Suite 634, 208 Woodward Avenue, Detroit, Mich., U. S. A.

Shropshire & Gotswold Sheep

SCOTCH SHORTHORNS and CLYDESDALES



Choice ram and ewe lambs. Also 50 shearing ewes for sale. Apply to

JOHN BRIGHT, Myrtle Station, Ontario.

I Have Imported

more prizewinning and high-class breeding sheep in the past twenty years than all other importers combined.

I WILL IMPORT anything you may need this year in cattle or sheep. Will leave for England on the 18th May. My address there will be: Care of Alfred Mansell & Co., Shrewsbury, Eng.

Robt. Miller, Stouffville, Ont.

Canadian Agents for the Original McDougall's Sheep Dip & Cattle Dressing Imported direct. Price: Imperial pints, 35c; imperial half gallon, \$1.25; imperial gallon, \$3.25.

NEWCASTLE HERD OF TAMWORTHS and Shorthorns.

We have for immediate sale several choice boars ready for service, and sows bred and ready to breed, together with a lot of beautiful pigs from two to four months old.

Mount Pleasant Herd of Tamworths and Holsteins.

A large herd of choice pigs of all ages on hand. Mount Pleasant type of hogs are profitable breeders and ideal bacon hogs.

Bertram Hoskin, The Gully

Ohio Improved Chester Whites

100 Pigs to Offer of the long, deep, heavy sort. Breeding stock selected from the most noted families, with a view to size and quality.

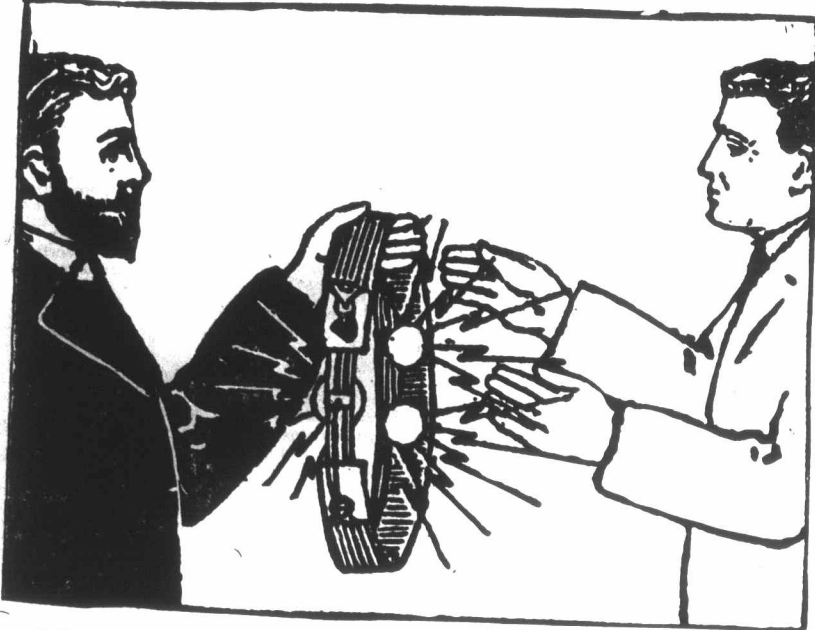
H. E. GEORGE, Grafton, Ont.

Yorkshires!

Have some grand spring litters farrowed in Feb., Mar., April, May from A1 stock. Will sell at living prices. L. HOOEY, Powie's Corners P. O., Fenelon Falls Station.

WEAK MEN, LOOK!

Tako This Belt for What it is Worth. Wear it Until You are Cured—Then Pay Me My Price.



I have learned to put a lot of confidence in men, especially men who are weak, sickly and delicate, who have tried everything to restore their vitality and failed, who have lost faith in themselves and humanity in general, because they have been led to try so many remedies which were no more use than as much water. These are the men I want to wear my Belt, and I will wait for my pay until they are cured. All I ask is that they give me reasonable security while the Belt is in their possession and use. If it don't cure you it costs you nothing. Is there anything more fair?

Where there is any physical constitution to work on, my treatment will develop perfect manhood. It will take the slightest spark of manly vigor and fan it into a flame which will encompass the whole structure and charge every nerve and muscle in the body with the vigor of youth.

Every man should understand that physical power, large muscles, strength and endurance come from animal electricity. My treatment will pump every part of the body full of that, and perfection will result. It not only restores vigor and increases nerve power, but it cures Rheumatism, Pains in the Back and Kidneys, Indigestion and Constipation, and all troubles which result from weakness of any vital organ.

Dr. McLaughlin: Dear Sir,—The trouble for which I purchased your Belt has entirely disappeared. It was only after a great deal of hesitancy and enquiry from your patients that I bought one of your Belts, but I am now glad that I did. My back is perfectly well, and I never was so strong or felt so well as I do now. Yours very truly,
GEORGE A. STARK,
Joggins Mines, N.S.

Dr. McLaughlin: Dear Sir,—I have worn your Belt for 4 weeks, and am well pleased with it. It has done me a great deal of good. My back don't bother me so much, and I have had no losses this last fortnight. Wishing you success with your Belt, I remain, yours truly,
JAMES FOWLER.

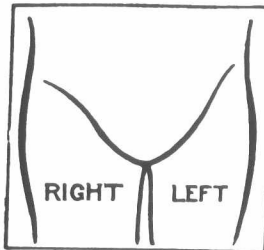
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Is Without Operation, No Pain, No Danger, No Loss of time From Daily Work.



This Remarkable Simple NEW WAY TO CURE RUPTURE has opened up a new era in the treating of this terrible dangerous, dreaded, hitherto considered incurable malady, Rupture. You ruptured people who have borne the painful agonies of Rupture surely will be glad to see this notice, for it means a NEW lease of life for you—free from pain and suffering. Won't it be grand to be cured? You can be sure—hundreds of Canadians have been. Cut out this notice. Mark on the diagram position of Rupture. Answer questions and send all to me at once. I will send you Free A FREE TEST to show you how quickly you can be cured right in your own home. I'll also send you a valuable Book of Information for the Ruptured. You must write for these at once. Remember they are FREE. No ruptured person who has had these would part with them for money. You wouldn't either. Write at once.

DR. W. S. RICE, 2 1/2 East Queen St., Block 279 Toronto, Ont.

Do you wear a truss? Does rupture pain?
On which side ruptured? Ever operated on for rupture?
Age Time ruptured
Name Address

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Imported and Canadian-bred
H. M. VANDERLIP, Gainsville,
on T. H. & B. and B. & G. division of Grand Trunk. Telephone and telegraph, Gainsville Ont.

HILLCREST HERD OF ENGLISH BERKSHIRES

Sires in use: Concord Triumph 1333, got by Perfection (imp.) 9901, possibly the best sire in Canada to-day. Stoll Pitts' Winner (imp.) 12135, first at Le Royal. On hand, young sows, sired by Concord T., bred to Stoll Pitts' W. These are choice and lengthy.
JOHN LAHMER, Vine P.O., Ont.

QUESTIONS AND ANSWERS. Veterinary.

PERVIOUS URACHUS.

1. What is the cause of a foal leaving from the navel?
2. Give treatment. T. W. Y.
Ans.—1. This is called pervious urachus, and is due to a nonclosure of a tube called the urachus, which is a fetal organ, and should close or become obliterated at birth.
2. The best treatment is to get a veterinarian to sear with a red-hot iron. Another method is to apply a caustic, as butter of antimony, applied with a feather twice daily as long as necessary.

FIBROUS TUMOR.

Mare has hard lump on point of shoulder. I got a liniment from my veterinarian, but it did no good. J. F. S.
Ans.—This is a fibrous tumor, and external applications will do no good. It can be removed in time by introducing setons, or by injecting sloughing agents, but the better way is to have it carefully dissected out by a veterinarian, who will then stitch the wound with the exception of an opening for the escape of puss, and supply you with an antiseptic dressing, as a five-per-cent. solution of Zepholum, creolin or carbolic acid to use until healed.

RINGBONES.

A year ago my twelve-year-old mare got lumps like ringbone on one fore pastern. She went very lame, but seems to be a little better now. The other pastern now shows similar lumps, and she can hardly walk. H. A.
Ans.—These are ringbones and are very hard to treat in an aged mare. Get your veterinarian to fire and blister them, and, if necessary, repeat the operation in a year. If this fails to cure the lameness, the only thing to be done is an operation called neurotomy, which consists in a removal of a part of the nerves that supply the foot. This operation cures the lameness by removing sensation, but it does not cure the disease, hence should be performed only in cases where other measures have failed.

GOITRE.

Several of our calves when born have goitre, and in some cases the lumps are not disappearing. Has this any connection with contagious abortion? Lumps of lime have been kept in the drinking water to make up for an absence of lime in the land. Would this cause it? Is the trouble hereditary? T. B. M.
Ans.—Too much lime in drinking water is supposed to cause this condition; hence the lime placed in the water would predispose to its appearance. It has no connection with infectious or contagious abortion. The predisposition to it is, to some extent, hereditary. A change of food and water for pregnant cows will, in most cases, be followed by the nonappearance of the trouble. The daily application, with smart friction, of a little compound iodine ointment will generally reduce the lumps. In extreme cases, the tumors should be lanced. They will bleed considerably. After bleeding ceases, inject tincture of iodine into them and apply the ointment as above.

MISCELLANEOUS

1. Mare raising foal has broken out in little lumps on neck and fore quarters.
2. How soon after foaling should a mare be bred?
3. How soon after farrowing should a sow be bred? R. N.
Ans.—1. This is due either to high feeding or to heat. In either case it is not serious and will probably disappear now that she is on grass. It would be unwise to treat her while she is raising the foal. If not better when foal is weaned, give her a purgative of 8 drams aloes and 2 drams ginger, and follow up with 1 ounce Fowler's solution of arsenic twice daily every alternate week as long as necessary.
2. The usual practice is to breed on the 9th or 10th day after parturition, and while this has proved successful, I think it better to wait three weeks longer.
3. Sows can usually be bred in three to six days after the process of weaning commences, or, in other words, after the pigs are taken from her.



CURES

Dysentery, Diarrhoea, Cramps, Colic, Pains in the Stomach, Cholera, Cholera Morbus, Cholera Infantum, Sea Sickness, Summer Complaint, and all Fluxes of the Bowels.

Has been in use for nearly 60 years and has never failed to give relief.

MONKLAND YORKSHIRES

Imported and Canadian-bred.

We keep 35 brood sows, and have constantly on hand between 100 and 200 to choose from. Can supply pairs and trios not akin. Quality and type unsurpassed. Prices right.

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IMPROVED YORKSHIRE WHITE BOARS

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Of the largest strains. Imported fresh from England. The produce of these and other noted winners for sale reasonable. Let me book your order for a pair or trio not akin.
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Glenburn Herd of

YORKSHIRES

Now on hand, a number of sows, 5 and 8 months old, for spring farrow; also a large number of September sows and boars. Booking orders for spring pigs.
DAVID BARR, JR., Box 3, Renfrew, Ont.

Glenhodson Yorkshires.

Sows bred to farrow in July, August and September. Young pigs from three to six months old. Pairs not akin. Satisfaction guaranteed.

GLENHODSON COMPANY, Myrtle Station, Ont.
Long-distance phone at farm. Lorne Foster, Mgr.

For Sale—Ohio Improved Chester Whites, the largest strain, oldest established registered herd in Canada; young sows in farrow; choice young pigs, six weeks to six months old; pairs not akin; express charges prepaid; pedigrees and safe delivery guaranteed. Address:
E. D. GEORGE, Putnam, Ont.

Blmfield Yorkshires

Have still a few choice young boars from Summer Hill Chester, some young sows from imp. sire and dam; also a fine lot of suckers coming on. A few sows 7 months old, bred again.
G. B. MUMA, Ayr P.O.
Ayr and Paris stations.

Rosebank Berkshires

FOR SALE: Young stock from six to eight weeks old; sired by Maple Lodge Doctor and Concord Professor. Some choice sows bred and ready to breed. Express prepaid.
JOHN BOYES, JR., CHURCHILL P. O.
Lefroy Station, G. T. R.

IMPROVED YORKSHIRES.

Choice young stock from imported prize-winning stock for sale.
GEO. M. SMITH, HAYVILLE, ONT.

Berkshires and Shorthorns

Choice young pigs of both sexes, sired by Pelgati, Doctor (imp.) and from Industrial prize-winning stock; also a few excellent Shorthorn cattle. We invite your inspection.
MCDONALD BROS., Woodstock, Ont.