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THE

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OF UPPER CANADA.

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## On Permanently Locating Agricultural Exhibitions.

Under the head of "the management of Agricultural Societies," the last number of our talented contemporary, *the Country Gentleman*, has some very useful and practical remarks that deserve the best attention of all who are interested in the prosperity of these institutions. It would appear that farmers the other side of the lines, as well as on this, do not take that deep interest in the business of agricultural societies which they ought, but complain at home that the management is inefficient, whereas if they had done their duty by attending the annual meetings and taking their proper share of the work and responsibility, the defects and shortcomings which they so loudly complain of might have been, in great measure, prevented.

It appears that the question of permanent location has for some time engaged the attention of the friends and directors of Agricultural Societies in several of the States of the American Union, but that no general or very decided conclusion has as yet been reached. The question is evidently a complex one, and requires to be viewed and discussed on both sides; and our cotemporary offers a number of useful and common-sense suggestions that must be acceptable to such as desire to form correct notions on the subject. We are decidedly of opinion that no rule can be arrived at in an extensive Province like Canada, or,

perhaps, in any one of the States, that will admit of general, or, at least, unmodified application, as so much must depend on location, and sectional views and feelings. The union of township and even county societies occasionally for exhibition purposes, as permitted by our statute, when mutually desired, would doubtless prove beneficial. To enlarge the sphere of combination rather than diminish it is, no doubt, the true policy to be pursued. The chief value of Township Societies is the collecting of the best articles furnished by the locality, and creating therein a feeling of emulation, *with reference to the County and Provincial Exhibitions*. Our theory in Canada is that township, county, and Provincial societies, form mutual links of one great chain of agricultural operations; and the success of each, as well as of the whole, materially depends upon the manner in which this spirit of mutual dependence is practically carried out. The good and efficient working of *the whole* is the great object to be sought. Our cotemporary asks,

"Is there not some method by which the advantages of both the permanent and migratory systems can be combined, by a Society occupying a still wider field of labor?"

"The Provincial Agricultural Society of Canada West appear to have successfully accomplished this. Kingston, Hamilton, Toronto and London, the four chief cities of the Province, having publicly appropriated or privately subscribed the amounts requisite for the purchase and laying out of grounds and the erection of substantial buildings, each en-

joys in turn the quadrennial visit of the Society. Its exhibitions do not become "an old story" in any one of them; nor are the grounds and buildings in disuse during the intervals between the Provincial Shows. On the contrary, the former are made to furnish a fine park for constant and general resort, and the main building is of such nature as to be of service for public gatherings of any extraordinary size, while the buildings and grounds are also occupied by the County Society for its usual autumn shows.

\* \* \* \* \*

"We have for many years been convinced—we were so, before the experiment had been thought of by our Canadian brethren—that we shall ultimately be led to the adoption of such a system. We have watched public opinion gradually coming around, unless we much mistake, to a similar position. At least the discussion of the subject can do no harm. If it is objected that these are not "the times" to secure contributions for such a purpose, we reply that *all the outlay need not be made at once*; only let the city which secures the holding of the next Fair, in the assurance that in three, four or five years, it will again be selected, expend what it does expend in a permanent way, and so as to unite the objects of its local Societies, Agricultural and Horticultural, if there are both, with those of the State Society—and we shall have a beginning, to which additions can be annually made, until by the time the turn of the same place next comes, all the demands of the Society and the public would probably be fully met.

"But if our Cities are to take up the question as one of exactions from some greedy corporation, we shall have no hope of early success. So have not done the Canadian towns just mentioned. With them it has been matter of public pride and generous rivalry, to outvie one another in the character of the accommodation furnished,—well knowing that the better the public are suited, the more largely they will be present on such occasions. And when four years shall have run their round, each city expects a golden verdict upon the efforts it has put forth. They have moreover had in view the healthful recreation constantly afforded to their own citizens by the possession of such grounds, the conveniences of the buildings for public uses, and their presence as ornaments and objects of attraction to the city. Whether they have thought once for the farmers and twice for themselves, or twice for the farmers and once for themselves, we do not know: but they have had wisdom and intelligence enough to discern that the interests of both City and County are common, and constantly blending, and that nothing can be done which promotes the prosperity and intelligence of the one, without reacting in a similar way for the benefit of the other."

So far as our *Provincial Exhibitions* are concerned, the providing of permanent accommodation in four or five principal cities, as has been already done, in which they are held *alternately*, public opinion is most decidedly in favor of the new system; the full benefit of which, particularly in a pecuniary point of view, has not yet been attained. The first outlay in the erection of permanent buildings is necessarily heavy, and more or less difficult to meet, but when the next time comes for holding the show in the same place, a comparatively small expense only has to be incurred, and the great convenience and economy of the system will be equally and fully understood.

### Dairy Management.

Last year, that is 1861, a Peebleshire dairymaid published a little valuable tract, founded on her own observation and experience, on the important question of Dairy Management. It is to some of the more prominent points contained in this pamphlet that we invite the reader's attention.

Mrs. Agnes Scott, of Winkston, for that is the writer's name and address, begins at the beginning, when she tells us, "experience soon taught me that most milk and butter were produced when the *feeding* was most carefully attended to. In order to ensure this I superintended this department myself." At six o'clock, her cows are rubbed and littered down, and 4 or 5 lbs of straw per cow was given to them carefully, *quite dry*; at 8 o'clock the cows are milked; at 10 o'clock, they are fed with turnips, (a barrowful, or about 80 or 90 lbs., between three cows); or, failing this, a quart of peas or bean meal, mixed with a pint of water; at 10 o'clock, in *fine weather*, they are let out for an hour or two to water and exercise themselves, and in their absence the byres are thoroughly cleansed and aired; in bad weather they are kept in, and then a handful of oatmeal in three pints of luke-warm water is given to each cow three times a day, and in the first three pints a handful of common salt is dissolved. When the cows return to the byre, each one has 4 or 5 lbs. of straw, and between 4 and 5 o'clock, the same amount of turnips as in the morning; about 8 o'clock, 4 or 5 lbs. of meadow hay are given, and, in addition,

each recently calved cow has half a pailful of boiled turnips, mixed with a quart of peas or bran meal rather more than lukewarm.—For four or five days after calving, Mrs. Scott does not give raw turnips. She says, “It is a great mistake to keep fodder in quantities lying unused; rather let the appetite be tested, and by keeping it always sharp, not only will the meal be eaten up with relish, but a much more healthy state will be maintained. The time of feeding should be regulated according to the season; milking time should also be so fixed that it may be *regularly kept*, and kept so as to be suitable not only for the parties engaged in it, but so as not unduly to disturb either the rest or feeding of the cows.”

It is evident, then, that in Dairy practice, ceaseless attention is the great secret of success, and that there is something more in the business than can be learned from books. Dairy knowledge is generally traditional, and often hereditary. We never saw a slovenly dairymaid whose mother was noted for superior dairy management. Regular and discriminate feeding, warmth and perfect cleanliness, with proper ventilation, are the leading conditions of success; the neglect of any one of them will be sure to produce injury and loss. The proper management of milk in the dairy, and the conversion of it into cream, butter or cheese, are interesting and very delicate processes, equally demanding a system of order and perfect cleanliness, guided by experience and a discriminating judgment.

### Death of the Prince Consort.

It is our most painful duty to record the decease of a no less illustrious personage than the husband of our beloved Queen! This sad news has produced the intensest sorrow throughout the United Kingdom, and those British dependencies which it has already reached; and in a few weeks more the whole British Empire, on which it has been truly said that “the sun never sets,” will grieve as one family for the loss of so great and good a man. Her Majesty in bowing with trustful resignation to the Sovereign will of Heaven, under this most afflictive bereavement, will have the consolation of knowing that she has the deepest sympathies of her subjects, scattered over the greater portion of the earth.

As the late Prince Consort was as distinguished in the pursuits of agriculture as in those of science and art, and indeed in every thing which tends to refine and elevate the character of a people, we think that an agricultural journal, in perhaps, the most important agricultural colony under the crown of England, should not allow this solemn and mysterious dispensation of Divine Providence to pass, unnoticed; and we therefore cordially transfer to our pages the following article from the *Mark Lane Express*, of December 16th:—

“It was only at the General Meeting of the Royal Agricultural Society on Wednesday last, that the members came to hear of the illness which would prevent their august President from being amongst them. It is true that the indisposition of his Royal Highness had already been rumoured, and that he had not occupied his place at the Council Board of the week previous. But who could have ever foreshadowed the fatal result? And indeed the blow has fallen so suddenly, that it is difficult even now to thoroughly realize the calamity. Scarcely a month since it is when, in all the pride of health and mature manhood, in the full exercise of his high abilities and business habits, we had to congratulate the agricultural world on the active interest that the Consort of our Queen was showing in our cause. Under his gracious countenance, as with the many other Arts he had fostered, that of the husbandman promised still further to prosper, as certainly at no era in its history had the National Society given so much promise as when the Prince Consort took its fortunes into his keeping. And then, in a moment, our joy is turned into grief, and our holiday-week closes in mourning and lamentation.

This, however, is perhaps but the echo of a somewhat selfish feeling. For the loss of Prince Albert, as he was more familiarly called to the last, is a common loss to the country. It is not alone Agriculture that will look around agnost for a Patron, a Friend, and an Example. Refined in his tastes, exemplary in his domestic life, and with the highly cultivated manners of a gentleman and a scholar, the Prince proved himself in every way worthy to be the consort of so illustrious a Sovereign. And such, perhaps, will be his great praise; as, in fact, it could scarcely be greater. Debarred from any direct share in the actual business of the State, no man has ever lived a more blameless life as a husband, or maintained his high estate as the father of our future Kings with more dignity and respect. It would but ill become us here to intrude upon the sacred privacy of a bereaved family's sorrow, but we must repeat that it is a feeling which will be shared and sympathized with by the whole country.

In our own repeated visits to the Royal Farms,

in recording his success as an exhibitor, and in noticing the favourable auspices with which he commenced his year of office, we have from time to time testified to all the Prince Consort was doing for agriculture. His was not merely idle, passing patronage or casual aid, but it was rather a pursuit he delighted in, and one that he followed out with equal energy and advantage. The most practical man could not go that pleasant round from the Flemish Farm to the Norfolk, and so back again by the Home and the Dairy, without learning something wherever he went. The very last meeting which we believe the Prince ever presided over was that of the Agricultural Council in November; while the culminating point to such a career should have been but during the next few months.— Regarded either as one of the Arts generally, or more especially as a grand gathering of that Society he had consented to preside over, the Great Exhibition was undoubtedly growing from under the late lamented Prince's design and development. There is a settled gloom now cast over its prospects, from which it can never hope to recover, even if, under the circumstances, the project be proceeded with.— The bustle and crowd of a World's Fair will scarcely harmonize with the heavy heart of the August Lady, in all the fresh, bitter pang of her widowhood."

### The Agricultural Statute—Proposed Public Meeting.

The following circular has been addressed by the Secretary of the Board of Agriculture, to the County Agricultural Societies throughout the country, prior to their Annual General Meeting in third week of January:—

BOARD OF AGRICULTURE OF U.C.,  
TORONTO, January 8, 1862.

SIR,—I beg to call your attention to the provisions of the Agricultural Statute, 20 Victoria, cap. 32, requiring each County Agricultural Society to hold its annual Meeting during the third week of January.

It is a part of the duty of each Society, at such Annual Meeting, under clause 11 of the Act, to nominate four persons as Members of the Board of Agriculture.

I beg to state, for the information of your Society, that the Board of Agriculture, as constituted last year, consists of the following gentlemen:—E. W. Thomson, Toronto; R. L. Denison, Toronto;

Hon. H. Ruttan, Cobourg; Asa A. Burnham, Cobourg; Hon. George Alexander, Woodstock; Hon. Adam Fergusson, Waterdown; Hon. David Christie, Brantford; and Wm. Ferguson, Kingston.

The four members who now retire are Messrs. Thomson, Denison, Ruttan, and Alexander; their retirement, however, does not render them ineligible for re-election.

The Statute requires each County Society to transmit, without delay, a certified list of the names and address of the persons nominated, to the *Secretary of the Bureau of Agriculture and Statistics, Quebec*.

I beg to remind you that a report of the last year's proceedings of each Society is required to be brought up and adopted at the Annual Meeting. It is desirable that these reports should be as full and complete as possible. The Act requires that they should contain a list of the members of the Society and the amount subscribed by each; a statement of the premiums awarded during the year, showing the amount, and for what and to whom awarded; such remarks and suggestions upon the Agriculture and Horticulture of the County, and Arts and Manufactures therein, as the Directors shall be enabled to offer; and a detailed statement of the receipts and disbursements of the Society during the year. The reports of the Township Societies are required to be transmitted to the County Societies in time for the Annual Meeting of the latter, and to be forwarded, along with the reports of the County Societies, to the Board of Agriculture, Toronto, on or before the 1st day of April. An abridgement of the reports will appear in the Transactions at as early a day as possible.

I have to request that you will see that the reports of the Township Societies in your County, when they come into your hands, are complete in the several points mentioned, before forwarding them to this office, along with your own. I will also thank you to be particular to add to the report lists of all the officers elected for the present year, for both County and Township Societies, with the Post Office Address of each.

You will please observe that the names of members of the Board of Agriculture are to be forwarded to the Secretary of the Bureau of Agriculture, QUEBEC; and that the Annual Reports, &c, are to be trans-

ted to the Board of Agriculture, Toronto.

I have to direct your attention to the following copy of a resolution adopted at Annual Meeting of the Agricultural Association at London in September last:—*Resolved*,—That the Board of Agriculture are hereby requested to give notice to the several Electoral Division Agricultural Societies to send up each one delegate to attend a meeting to be held in Toronto one month preceding the meeting of the Legislature, for the purpose of agreeing upon and recommending such alterations as they may deem necessary in the Agricultural Statute, and that the Board of Arts and Manufactures, and delegates from Horticultural Societies, be invited to attend; and in order more fully to carry out the spirit of this resolution, a synopsis of the Bill introduced at the last meeting of the Legislature be published, and a copy of the same sent to each County and Electoral Division Society, in order that the delegates may have a thorough knowledge of the subject under discussion, and that the travelling expenses (i. e. the fare for rail or other mode of conveyance, strictly,) of each delegate be paid out of the general funds of the Association, and that the President of the Board of Agriculture be authorized to name the day and place of meeting by circular."

In accordance with the foregoing resolution I have to request that your Society appoint one delegate to attend a meeting at the Board of Agriculture office, 188 Dundas Street West, Toronto, at noon on Wednesday, 30th January, inst., to take into consideration the above named matter. The chief points in which the Agricultural Bill before Parliament last session differs from the Act at present in force, in so far as it relates to Agriculture, are the following:—

1st. A difference in the mode of electing members of the Board of Agriculture. Under the present Act each County annually votes for four persons as members of the Board, and the four persons who receive the highest number of votes from all the Societies in the Province are thus elected for a term of two years; the number of elective members in the whole Board being eight, four of whom retire in rotation each year.

Under the Bill of last Session, Upper

and Lower Canada would each be divided into twelve agricultural districts; in each District each County and Township Agricultural Society would be entitled to vote for one person to represent the District at the Board of Agriculture, and the person who should get the majority of votes of all the Societies in a District would become the member of the Board of Agriculture for that District for two years. The number of elective members of the whole Board in each Section of the Province would be twelve, six of whom would retire annually in rotation.

2nd. The Agricultural Association as existing under the present Act would be entirely abolished under the bill of last session. There would be no delegates appointed by the Agricultural Societies to represent their views at the Annual Meeting of the Association, to elect officers, and vote for the next place of holding the Exhibition. There would in fact be no Annual Meeting, no Association, and consequently no members of the Association. The appointment of the time and place of holding the Exhibitions, and the management of all the business connected with them, would rest entirely with the Board of Agriculture, under its new organization, as above mentioned, and with the Local Committees which it might appoint.

3rd. The degree of connection which exists under the present Act between the Board of Agriculture, and the Board of Arts and Manufactures, in the business of the Annual Meeting of the Association, and in the general management of the Exhibition, would be abolished under the proposed Act. Each of the Boards would be empowered to hold Exhibitions, and it would be optional with them to hold them jointly or otherwise, as they might deem proper.

4th. The County Societies in Upper Canada heretofore entitled to receive a public grant amounting to \$1000; would under the proposed Act be entitled to receive a sum not exceeding eight hundred dollars.

5th. Under the proposed Act, of the amount granted for the encouragement of Agriculture, ten per cent in Upper Canada would be placed at the disposal of the Board of Agriculture and in the hands of the Board of Agriculture for the purpose indicated by law. It is not clear whether this ten per cent is to

be retained from the grants to the County Societies as heretofore, or whether it is to be received directly from Government, out of the amount of the Annual Grant for Agricultural purposes, prior to the apportionment of the grant to the Agricultural Societies.

There are some other minor changes in details, as to days of holding meetings, &c., which it is not important to mention at this time.

The delegate who may be appointed by your Society is requested to consider fully these proposed, alterations in order that he may be prepared to express his opinion upon their desirability or otherwise, or to propose others which he may think preferable, at the meeting here on the 30th inst.

I am, Sir,

Your most obedient servant,

HUGH C. THOMSON,

Secretary.

### Winter Management of Sheep.

[The following article is taken from that excellent monthly, the *American Stock Journal*, and will be found to contain many useful hints to all who keep sheep in these northern regions. While fully endorsing the writer's views of the necessity of affording sheep shelter during cold and stormy weather, we would caution the reader against confining them too closely. None of the domesticated animals, perhaps, suffer so much from a want of ventilation, and from close confinement, as sheep.]

1st. *Sheep should be sheltered.* That sheep require a good, clean, dry place, wherein they can be sheltered from storm, must be apparent to all who will reason a moment upon the subject. Storms, where the wool becomes saturated with water, not only impair their health, but wash out the natural yolk of the wool, necessary for its continued growth. All good wool raisers are agreed in this, and shelter and keep dry their sheep, especially in winter. The farmer will find himself abundantly rewarded by taking a little pains in this particular. And even if he has no sheds for his sheep to continually occupy in case of a storm, it is a good plan to turn the flock in upon the barn floor until the storm is over. It will richly repay him for his trouble.

In fact, I would rather my sheep should be up twenty-four hours, without food, than be exposed to a long, cold storm.

By examining the fibres of wool upon sheep's back, you will find them to be hol like the hair upon our heads. If these fibres are suffered to collapse by means of exposure to the snows and rains of winter, the growth of the wool is retarded, and it will take a time, with the best care and treatment, for nature to re-open the fibres, and produce a that natural health and vigor.

Says a prominent wool-grower, "the advantages of housing sheep are manifold. 1st. Large percentage of deaths are avoided. 2d. Much less food is consumed. 3d. A heavier and better fleece is obtained. 4th. The flock comes through the winter in a much better condition. 5th. The lambs are more vigorous and likely to live. In short, reason, economy and humanity, all conspire to teach the important lesson.—*provide suitable stables for sheep.* And he who can, and will not debar himself to sleep barefooted and alone a couch of straw, with open windows, and under a leaky roof, where the winds go piping and sneering through every crack of his cabin, for months at least, until he shall have learned to sympathize with the dumb beasts God has committed to his care and keeping.

2nd. *Sheep should have water.* Many suppose that sheep can get along very well without water in winter, especially if they can get something to eat. This is another very great mistake. Sheep do not drink large quantities at a time, but require it often; especially if they are fed with roots. Just observe the operation of your sheep during the day, when fed with hay. They will run to the trough and take a few swallows of water, and then back to the hay, a number of times during twenty-four hours; and that too when the ground is covered with snow, showing that they prefer water to snow. Sheep undoubtedly will winter without water, but common sense teaches us that they cannot do as well without as with it, for the fluids of the system must be supplied to keep a healthy organization. In Vermont, water is plenty for all, and within the reach of all, that farmer who neglects this most important suggestion, should be considered an apology for a wool-grower, and should be compelled to go without himself a short season sufficiently long to teach him that water is necessary for health and well-being.

3rd. *Sheep should be fed with roots.* Sheep require some kind of green or succulent food for winter use, I have demonstrated to my satisfaction. For a few years past I have fed my potatoes and turnips to a portion of my sheep, and I know they have done much better than those which have been wintered without.

I raise some three hundred bushels of potatoes and one hundred of turnips, and mix which I cut up together, and mix in a little

il or wheat shorts, and my sheep do remarkably well upon such feed. Especially is such good for sheep about to have lambs, for it makes them have milk, should they lamb any day during the winter.

I think giving green feed to sheep in winter generally overlooked by our farmers. Euro-  
pean wool-growers consider this point of great importance. Morrell, in the *American Shepherd*, says, "The feeding of green food, such as potatoes, apples, hemlock or pine boughs, is strangely disregarded by a large majority of American wool-growers. This is a prominent point of attraction of German management; and, it is thus in every section of the continent, where fine-wooled sheep are cultivated. Sheep, if placed in localities suitable to its general habits, at no period of the year is so perfectly healthy and thrifty as during the season of pasturage; and from this the inference should be deduced, that succulent food is the prominent cause. Confinement to wholly dry food does not comport with that variety of content which has been urged so frequently, and consequently if a provision is not made of something else, it will be followed by disorganization of the digestive functions, producing sickness and constipation. The disease so frequent and fatal in American flocks, called the retches," results from costiveness; but this is scarcely known in England; which arises from a large variety of food the sheep are supplied with during the winter months. In addition to this, further proof may be found in the fact, that we never know to attack the animal during the season. The writer speaks from personal observation, in stating that a supply of green food is indispensably necessary as a preventive of this disease.

In addition to green food operating thus, it has a tendency to increase the wool and yolk of the wool, and thereby those valuable properties of wool, such as elasticity, softness and pliancy, are increased and perfected; and wool, being conducive to health, the condition is improved, and consequently an augmented quantity of wool is a certain result. These hints, though oft repeated, may have a tendency to do good if properly appreciated.

## Agricultural Intelligence.

### The Smithfield Fat Cattle Show.

This world renowned exhibition took place, usually, during the second week in December, for the last time at its old quarters in Baker street. A new Agricultural Hall is in the course of erection at Islington, a populous suburb of London, in which ample space will be found for display of machinery, roots, seeds, &c., as well as enlarged quarters for increasing collection of fat stock. The show having so largely

increased of late years, particularly in the department of implements and machines,—a department not originally contemplated—that the premises in Baker street have been several times enlarged, still they are found altogether inadequate to present wants.

The following statement we have condensed from our excellent contemporary, the *Mark Lane Express*, a paper that stands unrivalled for the copiousness and fidelity which characterizes its agricultural intelligence.

It appears that the society is in a very flourishing condition; and with more extensive accommodation, which it will have hereafter, a more prosperous future is anticipated. The prizes this year amounted to the sum of \$1,343 in money, and £160 in medals. For the future, the society is to receive £1000 a year from the Agricultural Hall Company for the privilege of holding its shows in that Company's new building, a picture quite novel in the management of agricultural exhibitions. The following table presents the number of animals of the different breeds for each year since 1854:

|                          | 1855 | 1856 | 1857 | 1858 | 1859 | 1860 | 1861 |
|--------------------------|------|------|------|------|------|------|------|
| Shorthorns . . . . .     | 40   | 42   | 43   | 4    | 47   | 36   | 50   |
| Devons . . . . .         | 17   | 21   | 32   | 23   | 37   | 33   | 33   |
| Herefords . . . . .      | 20   | 21   | 36   | 26   | 15   | 17   | 15   |
| Sussex . . . . .         | —    | —    | —    | —    | 15   | 15   | 15   |
| Scotch horned . . . . .  | —    | —    | —    | —    | 10   | 11   | 7    |
| Scotch polled . . . . .  | 16   | 13   | —    | —    | 13   | 5    | 7    |
| Welsh . . . . .          | —    | —    | —    | —    | 9    | 3    | 9    |
| Cross breeds . . . . .   | 7    | 12   | 64   | 35   | 17   | 19   | 8    |
| Norfolk . . . . .        | —    | —    | —    | —    | 4    | 4    | 4    |
| Longhorns . . . . .      | —    | —    | —    | —    | 4    | 3    | 4    |
| Irish . . . . .          | —    | —    | —    | —    | 1    | 1    | 1    |
| Extra Stock, &c. . . . . | 12   | 30   | —    | 40   | —    | 16   | 16   |
|                          | 112  | 139  | 176  | 171  | 175  | 163  | 169  |

It will at once be seen that the shorthorns are the only breed that have come up in greater number than was ever known before—making up nearly a third of the entire show. Devons, next in the list, stand at the old figure of last year, yet fewer than the year before that. Herefords have regularly and terribly decreased since 1857, and now are not one half as many as then. Sussex cattle are in equal force with the Herefords, neither more nor fewer for two years past. Scotch cattle are not so numerous as before. Welsh are a little stronger; but Cross-breeds amazingly reduced in number. Norfolks and Longhorns are but few, as usual. Irish put in but a solitary specimen, and extra stock animals maintain their common number of entries.

Of short horns it has been observed:

"We have often made complaints of the un-

finished condition of a considerable proportion of the steers and oxen of this breed: stalls have been taken up by too many plain animals—good butcher's beasts, but little more. Happily, there has been improvement in this respect; and good quality is now pretty well diffused among the numerous competitors for honors in the male shorthorn classes. Of course, we knew where to find the "Gold Medal" placard; for Baker street was not likely to turn out anything more wonderful than Mr. Taylor's Bingley Hall steer. Already has it been written of his touch not being quite so firm as one might desire, about his colour being a very light roan, and his tail being hardly set on square enough; but, in looking him over and over again, especially taking a front view of his magnificent chine, rib, and breast-end; of his broad, level back, without an inequality; of his handsome head, fine muzzle, and kind, dole eye—not forgetting his slender bone, that you may all but span below the knee—we can find very little to disagree with; and when we handle him, and look at him behind, we don't at all feel inclined to pick holes in his merit, or grudge him any bit of praise that he may win. Symmetry had never a fairer exponent than this. In depth of frame, too, he is uncommonly great; but in general grandeur and nobility of appearance, that air and expression marking some specimens of the breed, this steer does not, in our opinion, equal animals that have appeared for the Gold Medal. But let Bates blood have a share of the merit of this year's triumph."

The Devons in many instances combined splendid quality of meat with greater size than is commonly seen; and there were several useful animals of the Sussex breeds, originally derived from the Devon, but larger and coarser. Of Scotch cattle, there were some beautiful specimens, also of Welsh; but from Ireland only a single cow,—a genuine Kerry—wonderfully developed during her sojourn in England.

In SHEEP, three additional breeds have been introduced for the first time; the Romney Marsh (Kentish), Shropshire and the mountain. The Shropshires, which of late have been gaining reputation, were not so well represented as could be wished. Of the Kentish sheep it is remarked:

"The two pens of Romney Marsh wethers excited a good deal of interest, because they exhibited in the most impressive manner what could be effected by judicious selection. The flat-sided, narrow chested, old breed, 32 months old, with loose flesh, barely covering a gaunt frame, gave an additional conspicuousness to Mr. Murton's short, square, stylish sheep, with deep expansive fore quarters, and free curling fleece, there was just one year difference in age between them, Mr. Murton's having arrived at

greater weight of mutton in twenty months than Mr. Newport's in thirty-two. That improvement is a hopeful sign. We hear that French Government has become a customer a considerable extent at Smeeth, having sent several of Mr. Murton's rams to improve the breeds in the South of France. The clip from 8 to 10lbs."

"The mountain sheep were quite the novel of this part of the show. Every one had point to look at the Exmoors, and the breed of the Cheviots, have, we hope, learnt something to their advantage by their visit to Baker street. They cannot avoid the conclusion that a cross with a breed which comes to a great weight, both as respects wool and mutton, is year less time than is usual with the Cheviot is a matter that must be looked to. We shall be glad to hear of some transactions between Mr. Quartly, Mr. Tapp, and Mr. James Ho and the breeders of the North; for surely such an opportunity should not be missed by men enterprise. The tendency of the meeting of the Club to bring men together to increase the produce of the country could not be better illustrated than by the pens under revision. Not only may the breed of mountain sheep be improved but the hill-side pastures will be increased value. The Cheviots were not the only shorn faced mountain sheep from Aberdeen were their side, older in years, and larger in frame but still the contrast was in favour of the little Exmoors, so impudent and amusing, springing on their hind legs like little dogs. It cures need not entertain any fear that they will lose the fine flavour of the mountain mutton there will still be haunches of as undeniable quality as ever encountered the heat of fire criticism, while the hill country shepherd will have a chance of quickening his returns, and mountain pasture will rise in value."

The long-wooled breeds appear to be increasing in reputation daily; they made a splendid show. Mr. Foljambe's pair of three 20 month old wethers, commanded great admiration. In forequarter they were wonderfully developed, two girthing 5 feet 7 inches, and in style and look were all that could be desired and quality their wool was as remarkable as on other points. The following remarks are suggestive:—

"The classes for cross breeds are always interesting, and should ever form an important point in fat stock shows, because of the disposition of such animals to feed quickly. This tendency was specially observable in the classes of last year, and was notable, though so much so, in the show just closed—the contrast between the Shorthorn and Polled Angus, Shorthorn and Aberdeen, and the Hereford



thorn. The cross breeds of sheep were remarkable this year than they have ever been, and we have seldom seen so wonderful a display as that made by Mr. John Overman, in two classes with wethers, that were the result of his favourite cross between the Leicester and Southdown. Mr. Hine, too, made a grand display, and followed Mr. Overman in both classes. In the Extra Stock, the Oxford Down was an original cross between the Hampshire and Cotswold ram, but now considered by virtue of age, an established breed, took the lead with a grand sheep exhibited by the ex-tors of the late Samuel Treadwell. Looking at these Oxford Downs from a consumer's point of view, they certainly seemed to abound in more flesh than their more favored rivals, the Leicesters and Sussex Down cross, which though wonderful for rump, back, and plate, struck us as being the fat too predominant, and too unevenly distributed through the body. Mr. Overman's was a large sheep, with a great display of the Leicester; while the Oxfords, already mentioned, Mr. Druce's, which took a third prize, showed dark faces and wool, a large square frame, and fine quality. We preferred their head to that of the Leicester Down cross, as evincing a more high-toned and vigorous constitution. Mr. Hine's cross between the Hampshire and Gloucester resulted in a most useful class of sheep, the only defect of which was in the thigh. Mr. Druce's small and pretty cross between the Down and Leicester were remarkable for fine bone and good offal; while Lord Berners' Cotswold and Leicester cross showed special merit."

In Pigs the show was, as usual, extensive, comprising animals fattened to the highest degree of the various breeds now cultivated in England. The implement department embraced all kinds of agricultural mechanics in their most improved forms. Next year will afford the new building ample space for progress in increase in every department of this important and well-known institution.

We clip the following extracts from addresses made by members of the club at the annual meeting and dinner, which will be both interesting and suggestive to many of our readers.

"Mr. Barford moved the following resolution: That in future any sheep that may be exhibited for any prize offered by the Club, shall not in any way clipped or trimmed (except on the head and legs,) and any sheep so clipped or trimmed shall be disqualified." He said he considered that the present practice was based on a false principle, and that the exhibitors deceived themselves in resorting to the system of clipping. Six years ago the Prince Consort, during a visit to Birmingham, called attention to a principle which he justly said was forcing its way

into society, namely, the introduction of science in art as the conscious regulator of production. In all their operations, said His Royal Highness, whether agricultural or manufacturing, it was not they who operated, but the laws of Nature which they had put in operation. Now, the clipping of animals into form was a departure from a law of Nature. When he was elected a member of that Club three years ago, he felt that its object was to encourage the breeding of those animals which would pay best, and produce the most nutritious food for man. It might be right and proper that a few animals should be exhibited in that extraordinary way, in order to show what state they might be brought to; but after having paid much attention to the matter, he had arrived at the conclusion that animals used in a lean state would always produce better stock than they would when then they were in a fat condition. A few Exmoor sheep were exhibited in the yard that day. They were a new class in the show; but as regarded quality, he fancied that there was more nutritious matter in one pound of those animals than in the same quantity of any other description of animals in the show. His only motive in moving the resolution was that the matter should be put on a sound footing. He was of opinion that every man who had been in the habit of clipping would do better to study anatomy and the laws of Nature than the art of deceiving."

This motion was lost by a vast majority; Mr. Fisher Hobbs remarked, "that if there was any one point in the animal that ought to be in a perfect state of nature, it was the face and head. In the Royal Agricultural Society such restrictions as that now proposed were abolished twenty years ago."

Mr. Torr, a very extensive Lincolnshire grazier and farmer, in returning thanks for the judges, congratulated the members of the Club upon the successful show in Baker-street during the past week, the merits of which he and his colleagues had a better opportunity of testing than any other parties. Whilst not so good as former ones in some classes, upon the whole it was a successful show. He was bound to say, that the Devons deservedly kept their place, that the Herefords were hardly up to the mark, and that amongst the Shorthorns there were certain shortcomings. Indeed, he thought they were very much indebted to Mr. Taylor, the winner of the Gold Medal, for the best oxen in any of the classes, for saving their credit, as he might also say, on the present occasion; for they might depend upon it that if his ox had been taken out of the show, a large plum would have been abstracted from the pie. With regard to the heifer class of Shorthorns, he would take the liberty of advising his Shorthorn friends to use more exertion, or they stood a chance of losing the Gold Medal which they had so con-

stantly carried away of late years. He supposed however, the real fact to be that this description of stock had become valuable, and was making such fabulous prices as lean stock, that still less would be seen of them here in future. The cross-breeds in the show were the best he had ever seen, and the Scotch cattle were pre-eminently good. Another class in which he himself felt a little interest was the Leicesters; and he thought the Leicesters never cut a better figure, or the long-wools taken altogether. As to the Southdowns, continued Mr. Torr, why they have got so perfect that there is no use to talk about them; while the pigs are, as usual, wonderful! As a judge, he regretted to say, that of late years the practice had grown up of judging animals too much by tape and two-foot rule. Now, for his part he could not see much value in applying any such test. A bullock or sheep was not like a brick or piece of iron, cast in a mould, so many inches long and so many inches wide and deep. There was intuition, an innate taste, in all judging—something in a man's brain who had been nurtured and brought up as it were with stock, a principle within him which, if it were right, would make him a good judge. That man would form his opinion from the character of the animal, and something else perhaps which he might be unable to describe in words; but as to these measurements and computations, he had lived long enough in the world to know that they were of very little worth. He had tried all sorts of measurements in his time, but he would rather take the result of his friend Mr. Giblett's glance than all the measurements in the world as to weight (cheers); and as to character, give him the man who had devoted himself to one particular breed; but do not choose him to be a judge of any other."

Mr. Brandreth Gibbs, the honorary Secretary, to whose long and indefatigable exertions the Club is greatly indebted, in returning thanks observed:—

"He need say but little with regard to the present state of the Club, after what had been said by those who preceded him; but when he told them that they had a balance of more than £3,000 in addition to £1,500 of invested surplus annual income, and £700 more to receive on the following day in Baker-street, and that there was only about £1,500 to be paid out of all this for prizes, they would perceive that the Club was financially in a most satisfactory condition (cheers). It is now twenty years since the Club met in a small livery-stable yard in Smithfield. With its progress since they were all familiar. There had been two great eras in its existence: the first was its formation; the second was its removal to Baker street. From the latter its prosperity might be said to have dated. Its increase had since been progressive, and from having only £300 for a very limited prize list, it was now enabled to offer the

large amount he had mentioned. Although they were going to a magnificent hall, he should look back with feelings of great satisfaction to Baker-street. Baker-street and the Smithfield Club had in his mind long been associated together. During the eighteen years that he had been the honorary Secretary, it was there that he had worked, and he should often have many pleasing recollections of the past. As regards the future, he could only say that he looked forward to a still more brilliant career for the Club and that no exertions should be wanting on its part during the coming year (loud cheers) to render the first meeting worthy of the inaugural show of the Smithfield Club at the Agricultural Hall.

### The Royal Dublin Society,—Winter Show

This important Society, which has been established, we believe, upwards of a century, held its Winter Show on the 18th and 19th of December in the very extensive and convenient Hall, Kildare Street, and every portion was fully occupied by the different departments. The weather was most favorable, and the attendance of visitors very good. We abridge the following statement from our talented cotemporary *The Irish Farmer's Gazette*, a paper which, for the soundness of its practical views, must exercise a very beneficial influence both on the agriculturist and the agriculturist of the lovely Emerald Isle.

It appears that the greatest portion of the now considerable income of this venerable Society is devoted to arts and manufactures, and the *Gazette* loudly, and it would seem justly, complains of the comparatively little encouragement to agriculture, particularly at the Winter Shows, and the agricultural interest seems but feebly represented in the Board of management. This is an unfortunate mistake, as Ireland up to the whole is by far more decidedly agricultural than any other portion of the United Kingdom, and the resources of its soil, particularly in stock raising, are immense. Still the turn of stock is said to have been astonishingly good on this occasion; and the report furnishes a number of animals both of pure and mixed blood that evinced excellent points, and would give beef of the best quality. Sheep were well presented, particularly the long-wooled, and Mr. Allan Pollock seems to have greatly distinguished himself in this department, as he did among cattle.

"Pigs are getting scarce in Ireland—a

which the *Times* considers one of the best evidences of our improved circumstances; and the pigs were not so numerous as they might have been. But there were some choice ones among them, particularly a very nice lot of thick, symmetrical, tempting little pictures of the small Berkshire breed."

There were also some fine specimens of the Great Yorkshire breed, as also Berkshire, Middlesex, &c. In Poultry the show was very good, particularly the Dorkings, Cochin China, and Turkeys and Geese. "The Geese had immense birds to represent the class, among them a pair of *Canada Geese*, which were greatly admired, and no doubt, can be easily domesticated, and, as they weigh as much as twenty pounds, deserve attention."

In vegetables the show appears on the whole very extraordinary. The soil and climate of the island, it is well known, are admirably adapted to the growth of root crops. The following extract contains some matter worthy of more attention on this side the Atlantic:—

"It is conceded that the prize mangels particularly were somewhat coarse, and some would wish that the prizes in roots should have been awarded to some specimens more cleanly grown; the fault of coarseness was more or less apparent in all those exhibited, and it was calculated that if all had been trimmed so as to remove every portion over and above the solid parts, that the largest specimens would still carry the weight. However this may be, it could be a great improvement in the list of prizes for forthcoming shows that a prize would be given to the cleanest grown specimens, irrespective of, but up to or beyond a certain average weight. We must again in this general notice refer to Lord Charlemont's magnificent collection of farm produce, which amounted in the aggregate to several tons weight, and so numerous were the groups as to leave no doubt on the spectator's mind that the general crop could not be much behind the specimens exhibited, and it would be impossible for any single exhibitor in Great Britain or Ireland to exhibit such a collection, or to exhibit by J. J. Radcliffe, LL.D. Both Mr. Radcliff, Lord Claremont's steward, and Mr. Linahan, Mr. Radcliff's steward, acknowledge that the superiority of their crops is owing chiefly to the winter dressings of Phospho-Peruvian Guano they received. The following very concise and graphic description of Mr. Brady's mode of improving the land at Marino and cultivating the crops as appended to Lord Charlemont's collection, which must be of considerable use and interest to some of our amateurs and less practised agriculturists:

"The original depth of *active or surface soil* of the land which produced the greater portion

of the items in this collection was scarcely seven inches; the subsoil a yellow clay, recumbent on a gravelly bottom. The annual produce of it in its reclaimed state, either in grass or in tillage, was scarcely worth £8 per Irish acre.

"It was thorough drained at a cost of £4 10s. per acre, and subsoiled with the spade at £8 per acre.

"In subsoiling it, the *subsoil was not turned up*, and the *active soil all turned down*, but the subsoil was broken and loosened to the full depth of the pick and spade, and left lying on its own bed, and the active soil turned over it, *upside down*.

"The work commenced in December, and was finished by the beginning of February.

"In the last week of April the ground was thoroughly pulverized with Graham's deep grubber, and a portion of the broken subsoil well incorporated with surface soil. It was harrowed and rolled, and the mangel seed all sown by the 1st of May.

"The turnip ground was similarly treated, and the seed sown by the first week in June.

"The manure for the mangels was 35 tons of well-prepared compost and 4 cwt. of phospho-Peruvian guano per acre, and the produce not less than 90 tons per Irish acre.

"For the turnips, 30 tons of compost and 4 cwt. of phospho-Peruvian guano, and the produce 70 tons per acre.

"P. S. — Whoever doubts this statement, I shall be happy to meet him here. He can see the ground and the produce, and judge for himself.

"JAMES BRADY.

"Marino, 13th December, 1861."

The show of agricultural implements and machinery is described as of a superior character, deserving of the highest commendation and support. Many of the principal English makers were well represented, but, from some cause which does not appear, the Irish manufacturers, who now produce some first rate articles with all the appliances suggested by modern mechanical ingenuity, appear to have been but few. The report thus concludes:

"The whole central hall was crowded with the machines and implements exhibited. The frieze was exhibited on the galleries; but we have to remark that though our English friends have come forward as usual, and in great strength and power, at vast expense and loss of time—for which we hope they may be fully remunerated—we regret to find none of our Irish agricultural implement makers have done the show or the *Public* the honor of exhibiting their implements, with the single exception of Ritchie, of Ardec. Polished steel breasts or mould-boards for ploughs are now common in England; they

are much lighter than the cast iron ones, last longer, and are so perfect in form that they run through the land lightly, and with much less draught on the horses. We don't see why the Irish manufacturers should not adopt them; they are cheap, and every way superior to the common metal ones. Verily, the native manufacturers must look to their laurels; they have won them fairly in several well-contested fields, but that is no reason why the Irish farmer must still kill his horses in dragging through the soil a heavy implement, when modern art and science have supplied him with a better and as an enduring an article."

### Profits on a Poorhouse Farm in Ireland.

It would appear that in most parts of Ireland the harvest of 1861 was deficient both as regards quantity and quality, the growing season having been accompanied by incessant rains and a low temperature; conditions unfavorable to root crops, and oft times absolutely destructive to cereals. Hence we hear of a large portion of the potato crop being entirely destroyed by disease, hay spoiled, turf insufficiently dried for the purpose of fuel, and the ordinary produce of grain diminished, and its quality deteriorated. This gloomy future, there is ground for believing, has been somewhat overdrawn by certain individuals for party purposes, but it undoubtedly remains a fact that in this part of the United Kingdom, and also in Scotland, the unfavorable weather during the greater portion of last year, has been attended by very serious consequences to the farming interest.

Notwithstanding the husbandman must always continue in a great degree passive under whatever may, in the order of nature, be the character of the season, it is cheering to know that the tendency of our modern improvements is to provide him with a power, which, within limits not yet ascertained, enables him in some manner to modify the bad effects of unfavorable seasons. Thorough drainage and deep culture, for instance, will now often carry crops well through either a drought or an excess of moisture on soils where, before these ameliorating agents were introduced, they would have inevitably failed. Improved husbandry therefore gives us *improved*, if not equal crops, in bad seasons as well as in good. This great and encouraging truth we should study to keep constantly in mind, as the basis of every advancing

farmer's creed; and which is happily illustrated in the following statement of facts, which I take from the December number of the *Practical Farmer's Chronicle*. The writer in speaking of the good results produced by a suitable education in connection with improved cultivation, remarks:

"In proof of this, one example out of many others we could give, may suffice for the present. That we select is from the Poor-law Union Enniscorthy, in the county of Wexford, Province of Leinster. It is the only union in Ireland, to whose poorhouse is attached even a small quantity of land which the law allows. All, unfortunately, must now admit that the crops of this year are deficient in quantity in England, as well as on the continent; and under circumstances favorable, compared to Ireland, where the chief grain, and even some of the most important green crops, are all but a total failure; yet here, on this poorhouse farm, because of its superior management by the labor of paupers,—boys, the old not over 14 years of age,—the culture of the grain crops, and some of the green crops, have produced the following results:—

|    |    |    | Cr.              | £    | s. |
|----|----|----|------------------|------|----|
| A. | R. | P. |                  |      |    |
| 6  | 0  | 6  | Wheat .....      | 197  | 18 |
| 2  | 1  | 30 | Oats .....       | 49   | 9  |
| 3  | 2  | 10 | Mangel Wurzel .. | 89   | 0  |
| 1  | 2  | 19 | Cabbage .....    | 55   | 13 |
| 0  | 0  | 37 | Carrots .....    | 8    | 0  |
| 0  | 0  | 20 | Parsnips .....   | 4    | 6  |
| 0  | 1  | 0  | Onions .....     | 19   | 17 |
| 6  | 1  | 0  | Meadow .....     | 55   | 3  |
| 20 | 2  | 2  |                  | £473 | 13 |

|                                                                                                                           |  | Dr. | £    | s. |
|---------------------------------------------------------------------------------------------------------------------------|--|-----|------|----|
| Rent .....                                                                                                                |  |     | 90   | 2  |
| Labor; wages of Ploughman ..                                                                                              |  |     | 20   | 16 |
| Taxes, purchase of implements, repairs of same, Machine for threshing corn, artificial manure and other incidentals ..... |  |     | 79   | 11 |
|                                                                                                                           |  |     | 190  | 10 |
| Balance to credit of Farm .....                                                                                           |  |     | 283  | 2  |
|                                                                                                                           |  |     | £473 | 2  |

Comment on the foregoing would now be needless beyond this; that in some wheat lands in Ireland, far superior to the Enniscorthy land, the value of the wheat crops did not amount to *one fourth* of the value as above; on better lands, the proportion is equally low; whilst the mangel wurzel and carrot crops in Ireland are all but a total failure. Even the Swedish turnip crops are exceedingly inferior, on very superior soils; whilst, on some of the best meadows

lands in Europe, the low, rich lands of the midland counties of Ireland, the hay crops have been rendered valueless, except for dung manure. But why these superior results obtained at this poorhouse farm? Because (1) the land is partially—yes, and *but partially*—drained to render it fit for being worked; (2) because it is worked as it ought to be, comparatively speaking; for though *practice* is brought well to bear on it, science has not yet done enough to advance the interests of the farm, or promote the education of the boys.”

The above facts clearly show something of what yet remains to be achieved for the agriculture of the Emerald Isle by the happy union of capital, science and improved practice. And when more of our Canadian forests shall have been brought under the subjection of our rude methods of tillage, who can calculate the millions which our soil will then be capable of supporting, by the use of those necessary means for effecting its full agricultural development?

### The Birmingham Cattle Show.

The eleventh Exhibition of this Society, embracing chiefly the midland counties of England, was held in the spacious Hall of the association on the 2nd 3rd, and 4th of December. Every year this Exhibition has been gaining ground, the total number of entries the first show being 901, while this year it reached the largest aggregate ever attained, 2055. The prize list now amounts to £1,300, not including the value of medals and a large number of special premiums. We take the following facts from the *Birmingham Daily Post*.

The Herefords, which are well known for their fattening propensities, appear to be falling off in numbers at this Exhibition. In 1859 they reached 32; in 1860 they fell to 25; and this year are only 21. They were, however, remarkably good in quality, flesh bearing points being strongly developed. The cows were excellent. His Royal Highness Prince Albert, was a large exhibitor in many sections, and usually more, or less successful with this breed, got only a “commendation” for his steers. Mr. Shirly of Bawcott, Salop, a most distinguished breeder, got the first prize of £10, the Society’s other prize of £20 for the best Hereford in the yard, and the Presidents £25 cup for the best ox or steer of any breed or age, fed and bred by the exhibitor. The Herefords carried away two out of the five grand premiums.

In Shorthorns the competition was much greater than on previous occasions; numbering only 29 in 1859–60, but reaching to 45 in 1861, and their general quality ranged extraordinary high. Earl Spencer was among the most successful, but Mr. G. Taylor of Bridlington, York-

shire, appearing for the first time in Bingley Hall arena, at once reached to its highest point of honor. He obtained the £10 prize of the class; the extra prize of £20, for the best Shorthorn Exhibited, and the Society’s Gold Medal for the best ox or steer in the yard. The class of cows is described as extraordinarily good. The Devons were few, but of high quality, the first prize for cows was taken by Prince Albert. There were only four entries in Longhorns. In all the crosses there was a strong infusion of short-horn blood, the examples of which presented striking points of excellence. Of the Scotch breeds there were only six specimens, the expense of transit so great a distance will likely keep this interesting class small. Mr. W. McCombie, of Tillyfour, Aberdeen, carried off the honors for both oxen and cows, firmly maintaining against all comers the position which he has for some time held of being the most successful breeder in this department. His prize Galloway cow was pronounced the gem of the collection. She obtained the £10 prize of her class, the Society’s Gold Medal for the best cow or heifer, and the Hotel and Inn-keepers’ twenty guineas cup for the best animal of any class in the yard. She measures 8 feet 8 inches round the girth, and her fulness and truth about the hind quarters are the points in which she is supposed to have vanquished Mr. Taylor’s short-horn steer in the contest for general superiority over the whole yard. The show contained several admirably fattened specimens, perfect beauties in fact,—of the Aberdeen and West Highland breeds.

The sheep mustered in larger numbers (68 Entries) than in former years and the competition was stronger, but the general excellence, perhaps, was scarcely equal to some previous occasions. Mr. Poljambé’s Leicesters were splendid specimens of fat sheep both in point of weight and symmetry; and the Duke of Richmond and Earl of Radnor showed some South-downs which commanded universal admiration. In the number of pigs the show was even less than last year, but what were brought forward were very superior animals both as regards breeding and fattening. His Royal Highness the Prince Consort was a very successful competitor in this department. The display of poultry was very extensive and superior; Mrs. Fergusson Blair, of Scotland, carried off numerous prizes in this department. Her silver gray and colored dorkings, white Cochin China, and B.amah Pootra, are said to have excelled anything ever seen on such occasions. This lady has written a very popular treatise on Poultry, which she treats both philosophically and practically in a most winning and useful manner. In point of numbers, and the proceeds of the gates, the show must be considered a distinguished success.

A new feature accidentally connected with this Exhibition deserves to be mentioned. Two years ago the Birmingham Cattle Show was chosen as affording the fittest opportunity for launching a new project, an Exhibition of *Dogs*.

Some 80 or 90 were entered for competition and a considerable interest was excited; while this year the entries exceeded 500, and the animals exhibited, while embracing the blood of the best kennels in the kingdom, also represented the almost endless varieties of those breeds not devoted to field sports at all. The handsome sum of £450 was given in prizes, besides a considerable amount of extras. A similar exhibition took place at Leeds during the show of the Royal Agricultural Society of England last July, and in London and other places, we believe, Dog Shows have been attended by a success and popularity hitherto unexpected.

### The Potato Disease.

An English writer comes to the following conclusions in regard to the potato disease. We publish them for the consideration of our readers.

1. The desirability of early planting in dry, clean, and well prepared ground.
2. The white potatoes are less liable to disease and are therefore to be preferred to the colored sorts.
3. That the soil in no case produces or influences the disease.
4. That the disease is of a fungoid character, infesting many varieties of plant, and increased in activity by atmospheric causes.
5. That all heterogeneous manures are injurious.
6. That lime and salt, mixed in the proportion of eight tons of lime with three cwt. of common salt is the best manure; and this is the proportion used to the acre.
7. That potatoes that ripen the earliest should be exclusively grown.
8. That, as soon as the disease appears, earthing up the stalks repeatedly with fine earth from the centre of the trench is the only effectual preventive to its ravages. To this operation the author attaches the greatest importance.
9. That when exhumed, sunlight appears to arrest the progress of the murrain, and prevents the further decomposition of the tuber.

### Hoeing Doubly Useful.

Hoeing between crops, in the garden or the field, when properly performed, accomplishes at the same time two of the most important operations in cultivation—namely, the destruction of weeds and the pulverization of the soil. The scratching and scraping with the Dutch and draw hoes, as is usually performed, no doubt cuts the young weeds to the surface, and in this way gets

rid of the annuals, but many biennials and most perennials, instead of being destroyed, are rather strengthened by the operation, while the pulverization of the soil is not effected beyond an inch in depth. If hoeings were commenced when weeds have only made their cotyledon leaves, say from half an inch to an inch in height, and were the Vernon or Spanish substituted for the Dutch and draw hoes, the weeds would not only be completely eradicated, but the soil would be loosened to the depth of six or seven inches. Another advantage the Vernon or Spanish hoes have over those in modern use is, that the operation may be performed between rows of root crops without injury to the tubers or bulbs, which often sustain great injury from being wounded by the others.—*Scottish Farmer.*

**HOME-MADE BONE MANURE.**—A. F. G. of West Gardiner, Me., writes to the American Agriculturist that he makes a good bone manure thus:—A kettle holding a barrel or more, which is kept for boiling roots for stock, is filled with bones, and caustic lye poured in to cover them. A gentle fire is built for two or three successive days, to barely warm the liquor through. In a week the bones become soft and fine. The mass obtained from one barrel of bones is then mixed well with about three loads of muck, the leached ashes from which the lye was obtained, being mixed with the heap. After lying awhile for the muck to partly decompose, the fertilizer is ready for use, and produces good effects.

### The late Lord Berwick's Sale of Herefords.

The great HEREFORD SALE at Cronkhill, as we learn from our English exchanges, resulted as follows:

|                                                   |           |
|---------------------------------------------------|-----------|
| First day, 104 head old and young, sold for . . . | £2959 17s |
| Second day, 42 heifers . . . . .                  | 1,019     |
| 34 bulls . . . . .                                | 1,353     |

Being an aggregate of 180 head, in round numbers, of about \$26,800, and an average of not quite \$150 per head all round—about \$135 per head for females, and about \$195 for males. The highest prices paid were 100 guineas for the bull "Retribution" and 70 guineas for the bull "Canning" both to go to Australia. Several head were purchased for Fred. W. Stone, Esq., of Canada West, who was the only purchaser whose name we find as coming from this side of the Atlantic; his purchases were Jenny, for 26gs.; Agatha 30gs.; Graceful, 23gs.; Wild rose and Sweetheart, heifers, at 40gs. each, and the bull Sailor at 20gs. Among other purchasers, were Col. Hood for the Windsor farms of Prince Albert, and many prominent land owners and occupants of the neighborhood. The prices are probably all that could have been hoped, on so

large a sale, while they are very possibly below the standard of value at which the late Lord Berwick would in many instances have rated the individual members of the herd.

The sale also included a flock of about 600 sheep, chiefly Shropshires—about one-half breeding ewes; “a lot of handsome white Berkshire pigs;” some dairy cows and heifers, and half-a-dozen Bretonne Cattle.

**RECENT ENGLISH RAM LETTINGS.**—The ram lettings in the eastern counties continue to show, as stated recently in the *Times*, a great development of enterprise on the part of sheep-breeders and the agricultural interest generally. At the letting of the Tethwell rams, for instance, the 117 offered made a total of £1200, being an average of £10 7s. each. The highest price for shearlings was £27, and the highest price for two shears and upwards was £55. At the annual Biscathorpe ram-letting, 120 fine animals were offered, and several of the shearlings were let at prices ranging from from £20 to £30 each, one lot realizing £42, another £50, and a third £71. The two and three shears also went off well, three lots making upwards of £30 each, and another lot £52 10s. The shearlings averaged £15 13s. 4d., the two shears £14 1s. 10d., and the three shears £14 14s 7d each. The total sum realized for the 120 lots offered was £1786 10s., and the average was higher than at any previous letting at Biscathorpe, having been £14 17s. 9d., in 1861 £13 12s. 6d. in 1860, £14 14s. in 1859, and £11 9s. 4d. in 1858. Mr. William Torr, another well-known Lincolnshire breeder, has held his letting in the course of the last few days, and offered 40 shearlings, 24 two-shears, and 26 three-shears and upwards. For some reason best known to himself, Mr. Torr,—who is known throughout England as “Torr of Aylesbury”—did not conduct his letting publicly, but put his rams off by private contract. It was stated, however, that the average price obtained was satisfactory. Taking into consideration the increasing prices paid at these lettings, there seems little reason to doubt that the agricultural interest, notwithstanding the unfortunate harvest of last year, is still in a satisfactory and buoyant condition, and has abundant resources at command. The good prices obtained for meat and wool have caused additional attention to be devoted to the production, and hence the high prices willingly paid for first-class rams, from which sheep calculated to yield the utmost possible amount of mutton and the heaviest fleeces are likely to spring.—*The Field*.

### European Shepherds.

In Spain where the celebrated Merino flocks are bred, there are ten millions of sheep to be led, twice in the year to a great distance in search

of pasture, or a warmer climate. Forty or fifty thousand shepherds guide these sheep in their wanderings, and travel with them many miles.—Those shepherds have a very hard life; but they would not leave them, even if they could get better pay and less work elsewhere. As many as thirty thousand dogs accompany the flocks in their wanderings, and put up with hard fare like their masters. The Spanish shepherds live chiefly on bread seasoned with oil or grease; and though they sometimes procure mutton from their old and diseased sheep, it is not their favorite food. Their dress is a jacket and breeches of black sheep-skin, a red silken sash tied round the waist, long leather gaiters, a slouched hat, a staff with an iron point, and a *manta* or brown blanket slung over the left shoulder. When they have reached their journey's end, they build themselves rude huts, living generally in single life. Large flocks are managed by several shepherds, and that everything may be done with regularity, one of the most experienced is set over the rest. The times of their wanderings are in May and September, and the whole journey is that which has been taken for ages. The sheep know the way as well as their masters: and a free passage is granted to them through pastures, villages, etc., where the inhabitants are obliged to leave an opening for them, at least ninety paces wide. The shepherds on their part have to leave them as quickly as possible, that they may reach certain resting-places where they find an open space and good pasture.

In some parts of France the shepherds live a similar life. More than a hundred thousand sheep graze on the plains of Arles in winter; but as the spring approaches they show the greatest eagerness to set off towards the mountains bordering on Italy: and if not watched, they will escape and be lost. The shepherds set out in May for these mountains, driving their sheep in troops of from ten to forty thousand. To every thousand sheep three shepherds are allowed; each of which has his dog, and in the middle of the flock a troop of asses carrying baggage. A chief shepherd is chosen, by the general consent of his companions, to direct the march, to deal out the daily share of provisions, and to listen to the complaint of farmers, when damage is done upon the road. The shepherds' dogs are assisted in a remarkable way in keeping these large flocks in order. The goats are especially trained for the purpose, and have bells around their necks. They are kept in perfect discipline by the shepherds, and show great intelligence in the performance of their task. They halt or proceed at the word of command, and at the close of each day's march, they come to the centre of the flock, and wait there until the morning, when, having received their proper orders, they return to their station at the head of the flock with the greatest regularity. On coming to a stream, they halt until the word of command is given, when they plunge into the water, and are followed by the rest of the flock.

When the flock reaches the mountains, each shepherd has his proper boundary marked out, and the proprietors of the land are paid about twenty pence per sheep for their feed during the Summer. The shepherds sleep with their flocks in the open air, and live almost entirely on bread and goats' milk.

In the south-west of France, on those wild plains called *Les Landes*, the shepherds lead a very singular life. The country consists of large tracts of deep sand, or of marshy ground, with scanty herbage and prickly shrubs. That they may cross these sands without difficulty, the shepherds fasten stilts, or wooden poles five feet long, to their legs, putting them on and off as regularly as any part of their dress. When their flock are grazing, they do not take off these stilts, but remain elevated upon them that they may the better watch their sheep. The top of the long staff which they use in walking is made broad and round, so that they can sit upon it. Thus seated they knit stockings all day, and, clad in her rough sheep-skin coats and caps, they have a most singular appearance, looking like so many little watch-towers scattered over the country. The rate at which they can travel on these tall stilts is said to be equal to that of a trotting-horse.

Some of the sheep-owners in Australia possess fifteen or twenty thousand sheep, and these are led out to graze before sunrise, and folded or brought back to the sheep-yard at night. The wild dogs of that country are great enemies to the sheep, and will sometimes fall upon them in the open day. The shepherd is, therefore, always on the watch; and in setting up his fold, he uses hurdles made of slender rods of iron or oak seven feet long, and so close together that the lambs cannot escape, nor dogs enter. By the side of this fold he places a moveable, weather-tight hut, in which with his dogs he passes the night, keeping a fire burning near the hut to scare away the wild dogs. He has also to watch against a more crafty foe in the escaped convict, whose retreat into the interior of the country is said to be usually well stored with mutton stolen from the different folds.

## horticultural.

### On the obtaining of a New and Superior Parsnip from the Wild Species.

As the origin of some of our common cultivated plants has been considered by some to be a matter of extreme mystery.—a few (a very few) among botanists, holding the notion that such really have descended to us from the Garden of Eden,—we shall here give an account of some successful experiments in the ennobling of the wild parsnip, in order, if possible, to point out the principles connected with the development of these useful roots.

Professor Luckman, of the Royal Agricultural College, Princeton, in the autumn of 1847, gathered some seeds of the *Pastinaca Sativa*, (the wild parsnip) which was sown in the following spring. On coming up, the plants were *thinned*, and when sufficiently advanced it was found that most of the plants had the hairy, dark-coloured leaves, with narrow segments, of the ordinary wild plants. Amongst these, however, were a few plants with the leaflets larger, a brighter colour, and smooth, like those of the cultivated examples. These latter, then, were left for the crop; and in the autumn of the same year the roots were taken up, and the best of them *sto ed in sand*, to be transplanted for the growth of seed.

Many of the second generation from the wild stock showed, on coming to maturity, more or less of improvement, on the small, wiry root of the wild species. Some of them had a generally clear, well-shaped outline, with a few lateral roots, whilst the foliage had assumed the form and colour of the garden parsnip. The objectionable lateral roots were in reality examples of finger and toe, which in a cultivated parsnip is sure to be derived from a degenerate stock; but, just as in the crop parsnip, this tendency may be considered as the sign of degeneracy, so in the present case it was viewed as an evidence of advance to a better form from the *wild state*. The selection of the best of these for seed, and again selecting in like manner from the produce, in ten years resulted in the production of a new variety of parsnips, possessing the following advantages:

1. A more perfect outline, as being free from finger and toe.
2. A better flavour than the ordinary parsnip.
3. As being of a newer sort, and as yet not degenerated in constitution from repeated cultivation in the same soil, it may be expected to be freer from tendencies to malformation or disease.

Professor Luckman found that this parsnip in form was all that could be desired, its root remarkably clear and straight, free from lateral branchlets, and its flavour such as to render it the best of all cultivated varieties. He gave it the name of the "*Student*;" and finding it impossible to continue growing it in the same soil without degeneracy, he assigned the seed to the well-known nurseryman, Messrs. Satter, of Reading, who have grown it with great care, and the following is their report of their crop of 1861: "We are happy to tell you that, in lifting some of each of the varieties of parsnips in our trial ground, your "*Student*" was decidedly the best shape, varying in length, but always clean and straight."

Such testimony then is good evidence of the value of this new form of parsnip, whilst the case, as we have detailed it, cannot fail to be interesting to those who would study the origin of our esculent vegetables. If the points before mentioned, gathering seed and sowing it in pre-



ared soil, selecting and preserving roots for the next generation, and so on, be attended to, most plants will get a new nature therefrom, and such experiments will soon show us that plants as such are the result of such cultivative processes; and when these are not attended to, they either die out altogether, or revert to their original wild condition. We learn that the seed of the Student Parsnip is now in the English market; and the large and beautifully executed wood engravings of the progress of this new variety from the wild state to its perfected form, in the last number of the *Practical Farmer's Chronicle*, both illustrate and verify the preceding remarks.

### Pomological Gossip.

**NEW SEEDLING PEAR.**—We have been presented by Mr. J. R. Richardson, of Dorchester, with specimens of a seedling pear produced by him. In nearly all outward appearances it is a near approach to the Bartlett, being quite as large. But in quality it far surpasses it, being at the same time a month later, a season when we need more large showy pears. When well known it will take its place among our very finest pears.

**CHASSELAS VIBERT GRAPE.**—Mr. Rivers speaks highly of this grape. It obtained the 1st prize at the Crystal Palace show, May 18th, last. The judges did recognize its proper name, but awarded the prize to it as a sweet-water grape. Its berries are very large, and of a pale amber color; flavor excellent. This variety of the sweetwater grape was raised by the late M. Vibert, of Angers, some ten or more years since, and no new variety of this class is of greater excellence. Its foliage is deeply incised, very hairy on its under surface, and thick and substantial, so as to be very striking. Chasselas Duhamal is its twin brother, and was raised from the same batch of seeds. It differs but little from the Chasselas Vibert and is equally good.

**KEENS' SEEDLING STRAWBERRY.**—In our late article on strawberries, we stated that this variety was still one of the most popular sorts in England. In this we are corroborated by an English writer, who, in speaking of the principal varieties of strawberries, says: "Take Keens' Seedling for all points, it will be a long time before it is superseded by any kind at present before the English public. I have had enormous crops of these, and the flavor, though not A 1, is not surpassed by many kinds." He also remarks that he knows "it is the opinion of a good practical man, that, for forcing, no strawberries are equal to Keen's Seedling, Oscar, and Sir Harry, the first being the best."

**BRITISH QUEEN PEAR.**—This is the name given to a new seedling pear, raised by Mr. Ingram, of the Royal Gardens, Frogmore. It is supposed to have been obtained from the

Marie Louise. Specimens of the fruit were exhibited before the Royal Horticultural Society, October 8, and were awarded a first-class certificate. The fruit was above the middle size, pear-shaped, of a warm red color next the sun, and possessing a sweet juicy flesh. When better known it is said it cannot fail to be a favorite.

**VESSIER'S PEACH.**—A new French variety, fruited by Mr. Rivers in the orchard house. The specimens, from pot culture, measured 10½ inches in circumference, and were rich and melting beyond any late peach he had ever tasted.

**EARLY VICTORIA PEACH.**—This is the same variety that was recently noticed in our pages as River's Earliest. Mr. Rivers recently exhibited the fruit before the Royal Horticultural Society, with the request that it should be called Early Victoria, which name was adopted. Mr. Rivers' account of it is as follows:—I send you four fruits of a seedling peach which I have this moment gathered from the parent tree, raised from a stone of the early York in 1854. It has hitherto proved the earliest of all, except the Red Nutmeg, which it usually succeeds. This season it commenced to ripen on the 5th September, or a week earlier than its parent, the Early York, and this has for four years, (namely, from 1858, when it first gave fruit, to the present time,) been its tendency, with the exception of 1858, when in common with very young seedling peach trees (as I find from experience) it ripened its fruit very early, and quite ten days before its parent. It has large flowers, serrated leaves, and a habit robust and vigorous in the extreme; being, with the Early York, the only sort that was not killed last winter in the open quarter where the frost was most severe (from 4 deg. to 6 deg. below zero.) If thought worthy of a name, I propose the Early Victoria. The fruit is about medium size, pale yellow on the shaded side, and dark dull maroon on the side next the sun. The flavor was most delicious, and the fruit was highly approved by the committee as a variety for orchard house cultivation, but they suspended judgment on it as an out door variety, until it had been grown against a wall in the open air. It was superior to the Early York or Early Ann, which accompanied it.—[*Magazine of Horticulture*.

### Raising Figs at the North.

A co-respondent of the *Horticulturist*, writing from New Jersey, says:

How few there are in this latitude who have ever eaten figs, ripe and fresh from the tree! Or if, perchance, they have tasted a single specimen raised by dint of great care in a pot or tub, can scarcely credit the fact that figs may be grown, even in this northern latitude, not as

exotics under glass, but as an out-door fruit; and gathered, not as single specimens, but in generous abundance and luscious sweetness.—Yet the fact is nevertheless so, and, under favourable circumstances, two crops may be realized in a single season.

The flavour of this fruit is not generally esteemed by those to whom it is a new sensation. The taste must be cultivated, and then it becomes as fascinating as the tomato or olive.

As to the culture of the fig, there is nothing difficult. The chief requisite is to protect the tree against the severity of winter; and this is done in precisely the same manner as the tender varieties of the raspberry, viz: by covering with earth. We have seen a protection of straw resorted to, but have never known it successful in this latitude. The best method of protection is to dig about the tree in the fall, deferring the act as long as the ground remains unfrozen, and then undermining and throwing the tree, so that all the branches and canes lie upon the ground; and then to shovel upon them soil enough to thoroughly bury them beyond the reach of the frost, taking care to so leave the ground that all excess of water will readily drain off.

There is a decided advantage achieved in this process in the way of root pruning, which prevents the plant developing too much into a tree shape, and thereby rendering it, as years increase, more difficult of being protected. The uncovering should be delayed as long in the spring as possible—at any rate until the long cold storms of early May are passed, say until about the 12th of May. Then, if nothing untoward happens, you may look for a summer and autumn crop.

### Trees for Winter.

No class of plants are more useful and none made worse use of than evergreens. For shelter there is nothing like the Norway Spruce, yet we see many gardens and houses exposed to the northern blasts without an evergreen or tree or shrub to break the force of the fierce winter winds. Other gardens are nearly filled with evergreens, and this gives them a dark and gloomy appearance. For a screen, of course, the trees must be planted close in rows, but on the lawn, for beauty, here and there a fine specimen intermixed with other trees is all that is required. Trees with bright berries, like the Mountain Ash and Euonymus are very desirable, and give to the winter garden a bright and lively look. A correspondent thinks that evergreens, and especially evergreen shrubs, are neglected in this country, and writes us to urge our readers to give more attention to this beautiful class. It is true that there is no country where these evergreens are more needed than our own. Without them, how cheerless and desolate our gardens appear full five months of the year. Our attempts to introduce new evergreens, however, have not always been crowned with success, as

many things of which we had strong hopes have proved too tender for our severe climate. The our most beautiful native evergreen shrubs, such as the Holly, the Rhododendron, and the Kalmia, are difficult to remove, and do not thrive well with common treatment and in an ordinary soil. They are not generally propagated or planted, and deserve far more attention from both nurserymen and amateurs than they have received. We have, however, many beautiful evergreen trees, that will grow as easily as Poplar, and are hardy enough for any climate between this and the Polar Sea.—*Rural New Yorker*.

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TAKING UP FRUIT TREES.—As a rule, a nursery stock should be taken up with a fork in preference to the spade; in fact we would do it if we could to banish the spade from this branch of the nursery business altogether, had we the power; but at any rate, where the preservation of every root is indispensable to success, as in the case with our present subject (fruit trees), nothing but the steel fork should be employed in lifting the trees. When out of the ground, if they have far to travel, wrap the roots in some damp material, or puddle them, to prevent them becoming dry before they are replanted.—*The Florist and Fruitist*.

### Concord vs. Delaware Grapes.

It has been the source of the highest gratification to hear in every quarter the praise of the Concord grape. While at one time, few would allow it any merit, now none would risk their pomological knowledge to deny its excellence. It has indeed proved more than we claimed for it,—the universal grape for the million. It would be idle to attempt to claim for it—which was never done—a superiority in flavour to the Delaware or Diana; but as the Bartlett pear is the pear, while the Belle Lucrative is scarcely recognized, so the Concord, at present is the grape: just as long as the Black Hamburgh will be preferred to the Sweetwater, the Concord will be preferred to the Delaware.

The past year has ripened the Concord in the highest perfection. Its real excellence just begins to be appreciated. The vines have acquired age, their rampant growth has been checked, and now their fruit-bearing qualities appear. It has improved under the same circumstances that have improved others it is so much in its favour. Its hardiness saved it from destruction last winter, when the Diana and Isabella were killed to the ground; its freedom from mildew is one of its great merits, and the certainty of a crop in all seasons must place this first among our hardy grapes.

The Delaware, after fighting its way for nearly ten years, is gaining in the estimation of cultivators. Delicious as the fruit is admitted to be, and hardy as the vines are, the berries lack size

d appearance. It is a little too small, while colour does not make that show that the dark apes do, with their rich bloom. The vines, want vigour and robustness. Young vines do not take hold of the ground readily; the blight mildews slightly, and the tender wood does not cover the trellis quick enough. But to make up for these defects, it is hardy, productive, bears young, and is as early as the Concord. Its culture it needs generous treatment, a good soil, and plenty of manure. This season it has been unusually fine.—*Hovey's Magazine*.

## The Dairy.

### Kindness to Milch Cows.

Attention, dairymen! Read! reflect! and act! We find the following in *Wilkes' spirit of the Times*.

One of the greatest errors in overcoming cows that are unquiet while being milked, is to whip, beat, kick, and bawl at them. This is generally done, and the cow becomes afraid and instead of becoming better grows worse. Milch cows cannot be whipped or terrified into standing quietly, gently, and patiently during milking. They dislike to be milked, for they know that bad words and hard blows always attend the operation. They dread to see the milker as the little archin dreads to see the birchen rod in the hand of an angry pedagogue when he expects to see it applied to his back. A cow, kindly and properly treated, is pleased to see the milker, and gladly awaits his or her approach, and submits with pleasure to the operation of being milked. Every one having experience with cows knows this to be true.

But the cow is opposed to a change of milkers; she soon becomes attached to one person who performs the operation, and does not willingly and freely give down her milk to another person; therefore, have one milker to certain cows, and bear in mind, if you change milkers, it is at the expense of a loss of milk and of injury to the cow. All animals appreciate kind treatment and resent abuse. See that those who milk them can control themselves, govern their passions, speak low and kindly under almost any provocation, and soon the cows will learn that they are not going to be abused, and will submit to the operation. Milking should be performed at regular hours, not varying fifteen minutes one day from the other. No talking or laughing should be permitted."

### Health of Cows.

Good health in domestic animals is always a matter of primary importance. As bad health in parents transmits a tendency to disease in the offspring, it is important that every kind of animal we desire to continue on our farms should be kept vigorous and healthy.

As domestic animals are a source of human food, it is a matter of great importance to preserve them in a healthy condition. Diseased meat carries its qualities into the stomach of the consumers. It is a serious objection which vegetarians urge against the use of animal food, that the bad treatment they receive renders them unhealthy.

As an unhealthy animal cannot consume food to as good advantage as a well one, it is again economical to avoid disease.

Each of these circumstances is sufficient reason for guarding with scrupulous care the health of the animals we feed: but when we derive milk from animals, it is doubly important that they be kept free from every objectionable taint. A sickly cow not only yields a diminished profit, but she yields sickly milk, and sickly in a higher degree than her flesh.

If a cow eats anything that has a strong or disagreeable odor it appears in her milk.

If she eats anything medical, it comes out in her milk.

If she is feverish, her milk shows it.

If she has sores about her, pus may be found in her milk.

If she is fed upon decayed or diseased food, her milk, since it has been derived from her food, will be imperfect. It is as impossible to make good milk from bad food, as to make a good building from rotten timber.

If there is anything wrong about her it will appear in her milk, as that is an effective source of casting filth from her organism.—*Hallowell Gazette*.

### Poor Milkers Dry-Up Cows.

The great importance of having cows properly milked is very forcibly illustrated by the facts stated in the following article, copied from the *Boston Cultivator*:

When I first commenced farming, I milked all my cows with my own hands; and the result was that no one in the town could boast of having made more butter, according to the number of cows than me. I well remember of having a very noble cow for milk, which would fill a twelve quart pail twice a day; and that a friend while visiting us was anxious to milk her. As I was well aware of the bad results of permitting a poor milker to milk cows that are accustomed to be milked by one faithful, regular hand, I *unwillingly consented* that he might milk her. The result was that he obtained about one-quarter less milk, than she was accustomed to give; and although I tried faithfully to draw more milk after he had finished milking, my efforts were in vain; and it was several days before I could obtain from her the amount which she had been accustomed to give.

My manner of milking was to milk as fast as possible, until a cow was milked entirely clean. I was obliged at one time, to stop milking for

only a few minutes, and I found that the cow had drawn up her milk, and I could not get it that evening.

His manner of milking was very slow and easy; and after having been milking her as long as I was accustomed to be in milking her, she withheld the remainder, and nothing that I have ever heard of, could induce her to let it down again. This taught me the importance of employing one steady regular hand at milking.

In the seasons of 1858 and 1859, my wife complained very much, when I did not superintend the milking, that we did not get near as much milk as when I was there to attend to it. Of course I could not be always there, at milking times. Then the milking would devolve on a young man in my employ who *could* milk as well and as quickly as myself, when he had a mind to do it. But as he had inherited almost every characteristic of the human race, but the faculty of *pleasing*, or of trying to please, or of making himself agreeable, even in the society of cows, when I was not there, for the slightest offence he would fall out with the cows, and beat them, and have them all in commotion. Then of course, they would not give down their milk; for a cow has complete control of it, and she will not give it to a being that she hates. All that could be said to him about being gentle with them, and milking fast while he did milk, and keeping his finger nails cut short, &c., had no more good influences than this communication will have on hundreds of other boys in their boyhood, who think that they will make cows and everything else obey their commands.

In the spring of 1859, my wife insisted that I should do the milking. I attended to it as long as was expedient, and then told this young man that he must attend to the milking, and try to do it right and to have no difficulty with the cows. Well, in less than two days, my wife said, "What is the matter with the cows, that we get only about half as much milk as usual?"

The truth on the subject is, cows know much more than some persons think they do; and they will not love a milker who has nothing lovely about him, and who will not treat them kindly; and they will give him as little of their milk as possible.

S. E. Tonn.

## The Poultry Yard.

### Fattening Turkeys.

A writer in the *German town Telegraph* furnishes that journal with the following statement:—Much has been published of late in our agricultural journals in relation to the alimentary properties of charcoal. It has been repeatedly asserted that domestic fowls may be fattened on it without any other food, and this, too, in a shorter time than on most nutritive grains. I made an experiment, and

must say that the result surprised me, as had always been rather skeptical. Four turkeys were confined in a pen, and fed on me boiled potatoes and oats. Four others of the same broods were also at the same time confined in another pen, and fed daily upon the same articles, but with one pint of finely pulverised charcoal mixed with their meal and potatoes. They also had a plentiful supply of broken charcoal in their pen. The eight were killed on the same day, when there was a difference of one and a half pounds each in favor of the fowls which had been supplied with the charcoal, they being much the fattest, and the meat greatly superior in point of tenderness and flavor.

### Cramming Poultry.

The unnatural practice of fattening poultry by cramming is very common in France, and is described as follows: The fowls are closely confined in dark pens, where they cannot move, and get but little air. Aided by the light of a lamp, the poultryman takes three fowls at once, ties them altogether by the feet, and resting them on his knees, forces paste pellets down their throats every twenty-four hours. The finer specimens of poulards [hens] attain a weight of upwards of 8 lbs., the cocks, 13 lbs.; and these weights are sometimes exceeded. Another mode of artificial feeding termed *entonnage*, is by causing the fowls to swallow, by means of a funnel inserted into the mouth, farinaceous substances in a liquid state. In some instances "vermineries" are established in France for the purpose of breeding maggots from putrid flesh to feed poultry on. It might not be wise for epicures to inquire too particularly into the origin of some of their favorite viands.

### Impaction of the Crop in Fowls.

Our domestic fowls are very liable to an enormous distension of the crop by food which, in the absence of secretion, and from the quantity accumulated, becomes hard and incapable of being moved from the distended cavity. The fowl lingers on without appetite, and manifesting great dulness, torpor, and progressive emaciation. Death soon puts an end to the case, and then alone, in the majority of instances, the enormous crop indicates the nature of the fatal malady.

*Treatment*—In mild cases, this consists in pouring tepid water in the gullet, and manipulating the crop so as to soften its contents and press them back through the mouth or onwards into the stomach. In severe cases, no hesitation should be experienced in making a bold incision, evacuating the crop, and

drawing the lips of the wound together by silver wire suture. The fowl must then be fed for a few days on materials which do not lodge in the crop, in order to be prepared for the action of the gizzard, and well broken down meat with sloppy bread and milk, are the best forms of food for it.—*Prof. Gungeer.*

## The Apiary.

### Wintering Bees.

In countries where bees are prevented by the cold of winter from flying out at least for two months, it is best to transfer them to a particular standing-place. In making this change the fly-holes must be stopped, but they must be opened again after the bees are put up in their winter quarters. This removal not only saves food and affords protection from the cold, but the risk of the bees being ruined and the hives stolen is thus also avoided; as in winter they are prevented by torpidity from defending themselves, entire beehives might in this season be destroyed. It is hardly possible to provide bee-houses sufficiently with locks; at all events, it is expensive. In transferring the bees to their winter quarters, the following rules should be observed:—

1. The transfer should not take place until the frost has set in.
2. The winter quarters should be absolutely dark, else the bees will fly from their hive without being able to find their way back.
3. A dry cellar should be chosen, or rooms with covered windows, which allow neither the warmth of a stove, nor evaporation from a stable nor from cattle.

The hives may also be placed in barns among hay or straw. If warm weather sets in after their transfer, the holes of the cellar, &c., may be opened during the following night for the purpose of cooling the stand, for it is always better to keep their standing place a few degrees below than above the freezing point; but no particular ventilation is required. There are many villages in Germany having a common subterranean place into which hives are transferred, watching them and looking after them from time to time. In such cases the fly-holes must be made more narrow, so as to protect the bees from mice. To bury them in the earth, as above described, without admitting air, forms likewise good winter quarters as the bees require still less food. [Wm. Buckisch, Patent-Office Report for 1860.]

**PLANTING WHOLE POTATOES.**—A correspondent of the *Mark Lane Express* says he did not see a field of defective potatoes in Germany last season and attributes it to the practice of planting small potatoes whole.

## Miscellaneous.

### Habits of Beavers.

The habits and habitations of beavers furnish many interesting lessons for study to the woodmen and hunters, whether scientific naturalists or not. In our boyhood the principal sources of information respecting them were the old dams and traces of dams that were found on every little brook where we fished or hunted crowslips for greens. These beaver dams consisted of ridges of earth from four to five feet above the common level of the "beaver meadow" flat, running each way from the brook to rising land. We would find great numbers of these dams when it would be hard to understand how they could ever make ponds of sufficient depth for the beavers' use. But the brooks in the primeval forest, before the inroads of civilization, afforded more water than in modern times, and in many instances the marshy pools which the beavers' habits require, by natural process have grown up and filled up to solid land. As in the older part of the country no new works were found, it was generally understood that the beavers left and moved off whenever civilized settlements grew up near them, and we have been surprised to find in this region the evidence of so many working beavers. On the different tributaries of the St. John river, running out of this State, there are some hundreds of them caught every year, and they do not seem to diminish. Hunting parties, whether of white men or Indians, consisting usually of two or three men, get from ten to twenty beavers in a winter's hunt. Lumbering operations have a tendency to drive them to the small brooks and head sources of the rivers, when found on "driving streams" their dams have been torn away; but they do not seem particularly shy of men or settlements unless their dams or houses are destroyed. Four or five years ago, it is said, a company of them built dams and houses in the town of Ashland, only two miles from the village, or corner, as it is called, and staid two years, when a part were caught, and the rest driven away, by the hunters.

There are two kinds of them, differing only in habit. For some reason, now and then one of them usually wanders alone, and has only a hole in the back of the river to live in, while they generally live in pairs or families, building houses and providing stores in companies—hence the terms "family" or "working beavers." The supposition is, that the bank beavers are such as have for some reason come short of a mate, or for idleness have been driven from the ponds and houses. They are the same animals every way, only exiles. The law of industry among the working beavers is well attested by hunters. Their dams or houses are built anew or remodelled every fall, in a way to suit the height

the water during the succeeding winter or spring. The object of the dam seems to be to regulate the height of water at their houses, where they have two or three berths at different heights, where they sleep high and dry, but with their tails in the water, thus being warned of any change in the rise and fall of water. Some houses stand six feet at least above the surface of the meadow, covered with mud, in the form of a round coal pit, but intersected with sticks of wood, so as to be strong, and the weight of three or four men makes no impression upon it.

A "full family," as hunters call them, consists of the parental pair and the males of the next generation, with their mates. When the tribe gets larger than this they colonize. Some time in the fall all single ones of both sexes congregate from considerable distances at the deepest lake in the vicinity, where they choose their mates; how ceremonious the nuptials we cannot say; they all go home, the female following her mate, and all go to work, first putting the house and dam in order for winter, then laying in their stock of wood, the bark of which is their winter food. They go up stream some three miles for their wood, and run it down to their houses, and then in some mysterious way make it lie in a pile at the bottom of the pond, outside of the house, where they may take it in any time in the winter for use. It is said that no human hands can disturb that wood with its rising and remaining afloat till the beaver has the handling of it again. But we do not feel quite sure what is fact and is conjecture respecting the beaver, whose works are so much in the night, and deep under water. The fall of the year is a busy time with them, and it interesting to see the new dams in process of building, as we sometimes find them across large boating streams, and not unfrequently boatmen and river drivers tear away their dams and get a good head of water for their use. They usually build at the outlet of natural ponds, and sometimes they flow large lakes and pieces of dead water, but are always moving and reconstructing. How they keep their teeth in order for so much eating, when the best steel would wear out, is a mystery. They cut logs sometimes a foot through, and every stroke of the tooth tells toward the job, and never does a tooth get dull as we can see. Two winters ago, near Ashland, some lumbermen encamped near one of their ponds. One afternoon they felled a tree across the lumber road, and before morning it was handsomely cut up and piled out of the road. —*Aroostook (Maine) Pioneer.*

**THE LARK AND HER YOUNG ONES.**—A lark, who had a brood of young ones in a field of corn which was almost ripe, was very much concerned lest the reapers should come before the little ones were able to fly. So, whenever she went abroad to seek food, she told the young larks to be sure and listen to all the news. One day, while she was absent, the master of the field, and

his son came to look at the crop. "This corn," said the father, "is quite ready for the sickle; to-morrow go and ask our neighbours and friends to come and help us to reap it." When the old lark came home, the young ones, in a great fright, told her what they had heard, and begged her to remove them at once. The mother said "There is no cause for fear; for if he trust to his neighbours and friends for help, I am certain that the corn will not be reaped to-morrow." The next day the lark went abroad as usual, giving them the same directions as before. The farmer came to the field, and waited hour after hour for the expected help; but, finding the day passing away and the corn getting more ripe, and no one coming to his assistance, he said, "We must not, I find, depend upon our neighbours; so to-morrow go and ask our relations—our cousins and uncles—to come and help us." In still greater fear, the young larks told their mother what they had heard. "There is no occasion to hurry away yet," coolly answered the lark, "for I know that their cousins and uncles have work enough of their own." The lark again went abroad, and the farmer coming to the field, found his corn spoiling through over-ripeness. He waited for some time to see whether his relations appeared to help him; but finding that they did not come any more than his neighbours, he said, "My son, let us lose no more time; to-morrow we will cut down the corn ourselves." When this was reported to the old lark, she said, "Now, my young ones, the sooner we get away the better; for when a man determines to do his own work, you may be sure that he is in earnest." *What the lark said is quite true.*

**PRESERVATION OF STONE.**—At a late meeting of the Institute of British Architects, Sir Henry Rawlinson stated that the old Assyrians were acquainted with modes of preserving stone from decay. In Mesopotamia he had seen a huge rock the whole face of which was covered with inscriptions, coated over with some kind of varnish which he supposed was the silicate of lime. These inscriptions were executed 900 years before Christ were in a perfect state of preservation, and the varnish was harder than the limestone rock beneath it.

**"FLOWING A MAN IN."**—The Herts (England) Advertiser gives the following interesting example of the carrying out of an old English custom—a custom which we had referred to as still not unfrequently acted upon, in Scotland as well as England: The development of one of these good old friendly country customs took place on Wednesday, Nov. 6, in consequence of the recent entry or occupation of Mr. John Ransome, on Webathamsted Bury farm, which extends 450 acres. Although Mr. Ransome only came into this part of this country a few years since, a perfect stranger, he has, by his practical intelligence, perseverance, urbanity, and honorable conduct, gained the esteem and regard of

so many friends, that they were determined to show and testify their sense of the man by sending him their teams, which poured on to the farm from far and near at early dawn on the Wednesday morning in such numbers that it required Mr. Ransome to exercise a great deal of tact and management to place the right plows in the right places. To the uninitiated it may be proper to say it is an old and established custom in this country for the neighbors to send a plow and a team of horses to assist a tenant upon entering upon a new occupation of a farm, and on this occasion the muster was unprecedented; one hundred and forty-three plows, drawn (in round numbers) by 500 excellent horses, whose value might be set down at £15,000 (say \$75,000), averaging each at £30, might be seen turning up mother earth to the extent of upwards of 130 acres, the plowing generally being unusually good. An excellent lurcheon was provided at the farm house, and many gentlemen availed themselves of the offer of Mr. Ransome's kind hospitality, and who did not forget to drink the health and happiness of Mr. Ransome and his amiable lady.

#### HOW SALT AND SALTPETRE ACT ON MEAT—

The properties and action of articles in frequent and common use, should be well understood, especially when those articles are used in the preparation of human food. Hence the following remarks from the *Farmer and Gardener* will be interesting and instructive to many of our readers: "The matter in which salt operates in its preservative functions is obvious. Salt, by its strong affinity, in the first place, extracts the juices from the substance of meat in sufficient quantity to form a saturated solution with the water contained in the juice, and the meat then absorbs the saturated brine in the place of the juice extracted by the salt in the first place. Thus matter incapable of putrefaction takes the place of that portion of the meat which is most perishable. Such, however, is not the only office of salt as a means of preserving the meat; it also acts by its astringency in contracting the fibres of the muscles, and so excludes the action of the air on the interior of the substance of the meat. The last mentioned operation of salt as an antiseptic is evinced by the diminution of the volume of meat to which it is applied.

The astringent action of saltpetre on meat is much greater than that of salt, and thereby renders the meat to which it is applied very hard; but in small quantities it considerably assists the antiseptic action of the salt, and it also prevents the destruction of the florid (or red) color of the meat by the application of salt. From the foregoing statement of the mode of operation of salt and saltpetre on meat, it will be perceived that the application of these matters deteriorates, in a considerable degree, the nutritive, and to some extent, the wholesome qualities of the meat; and therefore in their use, the quantity applied should be as small as possible consistent with the perfect preservation of the meat."

**INFLUENCE OF TREES UPON CLIMATE.**—Jochim Frederic Sahouw, Professor of Botany at Copenhagen, speaks as follows of the influence of forests upon the atmosphere:—"We find the most evident signs of it in the torrid zone. The forests increase the rain and moisture, and produce springs and running streams. Tracts destitute of woods become very strongly heated, the air above them ascends perpendiculary, and thus prevents the clouds from sinking, and the constant winds (trade winds or monsoons), where they can blow uninterruptedly over large surfaces, do not allow the transpiration of vapors into the form of drops. In the forests, on the contrary, the clothed soil does not become so heated, and, besides, the evaporation from the trees favors cooling: therefore, when the currents of air loaded with vapors reach the forests, they meet with that which condenses them and change into rain. Since, moreover, evaporation of the earth goes on more slowly beneath the trees, and since these also evaporate very copiously in a hot climate, the atmosphere in those forests has a high degree of humidity, this great humidity at the same time producing many springs and streams."

**SUDDEN COLD WEATHER.**—A writer in the *North American Review*, in discussing the subject of climatology, refers to the sudden "cold snaps" of our northern winters, and expresses the opinion that they are occasioned by the descent of the cold atmosphere above, or its transference from above. In illustration of this, it is stated that every few years, a storm like the one described below occurs, generally with less severity.—The weather of the last week may afford further illustration of this point and makes this matter of greater interest at the present time. In January, 1810, occurred the *cold Friday*, as it was for years called. The weather had been fair and pleasant, and on Thursday the temperature was uncommonly high, rising even to 60 degs., and the wind from the south. Toward sunset the appearance of a coming storm was obvious. It burst upon the western part of Massachusetts about sunset, or a little later, in a snow-storm from the north of west, of terrific violence, with the power and fury of a tornado. Desolation marked its course. The cold increased with great rapidity; at midnight the thermometer was at zero, and the next morning at 20 deg. below, in some places colder. Friday was insufferably cold; the wind was strong; the thermometer did not rise to zero over much of New England and New York, and in Canada it was still lower. The storm passed over a large portion of our country, and everywhere with a great degree of cold.

**WE SLEEP TOO LITTLE.**—But if night, and not day, is the time to sleep, then it may be said that the general principle prevails that the amount of sleep should be regulated by the dividing line between light and darkness; and that

this view may be accepted as the correct one, is determined from analogy;—it being true that animals accept any act upon it in the temperate latitudes, which are supposed to be the most favorable for the development of the human organism in its highest proportions. Take the year together, day and night are about equal; and were mankind within these latitudes to live according to the laws of life and health in other directions, they would sleep while darkness is on the face of the earth, and be active only during the time in which light was abundant. As a habit and fashion with our people, we sleep too little. It is admitted by all those who are competent to speak on the subject, that the people of the United States, from day to day, not only do not get sufficient sleep, but they do not get sufficient rest. By the preponderance of the nervous over the vital temperament, they need all the recuperating benefits which sleep can offer each night as it passes. A far better rule would be at least to get eight hours' sleep, and including sleep, ten hours of incumbent rest. It is a sad mistake that some make, who suppose themselves qualified to speak on the subject, in affirming that persons of a highly-wrought, nervous temperament, need—as compared with those of a more lymphatic, or stolid organization—less sleep. The truth is, that where power is expended with great rapidity, by a constitutional law, it is regathered slowly;—the reaction after a while demanding much more time for the gathering up of new force, than the direct effort demands in expending that force. Thus a man of the nervous temperament, after he has established a habit of overdoing, recovers from the effect of such overaction more slowly than a man of different temperament would, if the balance between his power to do and his power to rest; is destroyed. As between the nervous and the lymphatic temperaments, therefore, where excess of work is demanded, it will always be seen that at the close of the day's labour, whether it has been of muscle or thought, the man of nervous temperament, who is tired, finds it difficult to fall to sleep, sleeps perturbedly, wakes up excitedly, and is more apt than otherwise to resort to stimulants to place himself in conditions of pleasurable activity. While the man of lymphatic temperament, when tired, falls asleep, sleeps soundly and uninterruptedly, and wakes up in the morning a new man. The facts are against the theory that nervous temperaments recuperate quickly from the fatigues to which their possessors are subjected. Three-fourths of our drunkards are from the ranks of the men of nervous temperament. Almost all opium-eaters in our country—and their name is Legion—are persons of the nervous or nervous-sanguine temperaments. Almost all the men in the country who become the victims of narcotic drug-medication, are of the nervous or nervous-sanguine temperaments. That the very general habit of dependence upon stimulants, or stimulo-narcotics,

is almost entirely confined to persons of the nervous temperaments, shows that the taxations to which they subject themselves, are not readily reacted from; and that under their methods of living, they find it difficult to depend upon the natural force to make good their losses within the time they allot for that purpose. The rule therefore, should be the other way from that which it is supposed to be—namely, that persons of highly wrought nervous organization need but little sleep. It should be the habit of such persons to sleep largely, and to insist upon such freedom from exercise, both of body and mind, and such external conditions of repose, as gradually to bring the brain to acknowledge such relations to the general structure, as will enable its various organs to become so refreshed, that they may, when duty is resumed, perform it with accustomed yet healthy vigor.—*Dr. J. C. Jackson*

**EARLY RISING.**—In New York there has been formed a Young Men's Early Rising Association, all the members of which are obliged to be up at a certain hour. It originated with about half-a-dozen men, who, having kept up this habit for some years, were surprised at its beneficial effects, and at the marked success in life of their associates.

**THE VICTORIA FALLS IN AFRICA.**—Some very interesting news has been received from Dr. Livingstone. His description of the Victoria Falls is worth quoting. He says: "After a second visit, I am inclined to believe that the Victoria Falls are the most wonderful in the world. It is the only grand sight the gentle Africans have to show, I tried to get them taken by an artist, but, to my regret, I failed. The breadth is not one thousand yards, as I conjectured, but between one statute and one geographical mile—we say eighteen hundred and sixty yards, by way of assisting the memory, but it is a little more. Then the river of this breadth leaps down, not one hundred feet, but three hundred and ten feet, *i. e.*, if my memory deceives me not, double the depth of Niagara. It is a few feet more, as the weight attached to our line rested on a slope near the bottom. Then the fissure into which it falls, though, when seen from Garden Island, looks like the letter L, is prolonged in the most remarkable zig-zag manner. The promontory formed by the zig-zag enabled me to see the falls on the east side as well as from the island, and being level, and of the same altitude as the bed of the river above the falls, you can walk along and see the river some three hundred feet before you, and on both sides of you, jammed in a space of twenty or thirty yards. The base of one promontory is only one hundred and thirty paces from a dry fissure, and the base of another is only four hundred paces broad, measuring from the fall fissure to it. Nothing but several oil paintings could give an idea of the wonderful scene; and it was sorely against my will that I had to forego this, which would have



been a feather in the cap of our expedition, and a good thing for our artist as well. The river was now very low—never saw it so dry; indeed, people could wade from the north bank to my Garden island. This enabled me to see the whole thing plainly, but even now there were 800 feet of waterfall. The columns of vapour were fewer—only two good ones, I think. I could not measure their height—probably over 200 feet. The lips of the fissure at Garden Island, when measured by sextants, were eighty feet; but we could not throw a stone across, so it may be more. Come when you may, you will not be disappointed by the falls of Victoria. We bought canoes at Sinamanes, and dropped down the stream to below Chicono. Kersale has no impediment, but a basaltic dyke a little below makes it a dangerous rapid for canoes. There is another dangerous rapid for canoes at Mburuma's, but a boat would go through easily. The canoes were but six inches above the water, and easily filled."

**VENTILATION OF THE APPLE BARREL.**—By this we mean the boring of holes in the head of staves of the barrels that will allow the escape of the moisture that is constantly passing off from the newly gathered fruit. We hazard nothing in the statement that one half the fruit sent to this market this season, so far, has been materially injured from this cause. The effect of confined vapor upon the apple is not at once apparent. The fruit appears uncommonly bright on the first opening—but as the surface dries off the apple begins to grow dull looking, and if a light skinned apple, in day or two will present the appearance of half baked fruit. But this steaming from confinement, not only injures the sale of fruit, but to the great disappointment of the consumer, his fruit does not keep as he supposed it would, and as the variety of apple he purchased led him to suppose it would. Premature decay is soon to follow as a consequence of this want of ventilation.—*Chicago Fruit Dealer.*

**HOW TO HANDLE FIREARMS SAFELY.**—An old sport-man gives the following advice in reference to the safe handling of percussion guns:—When the gun is charged, never allow the lock to be in any other state than at half cock, except at the moment before firing. The reason why this rule should be adopted and religiously observed are briefly these: the lock is so constructed that when at half cock (provided it is good for anything, and no other should ever be used) it cannot be moved from that point toward the cap to explode it in any possible way. You may strike it violently, and it will not yield until the lock itself breaks in pieces. If, by any accident it is moved in the opposite direction, it must go back until it is fully cocked, and must remain there until the trigger is touched. If it does not go back to that point, it cannot possibly, in returning, pass the point of its first position—that of half cock—unless the trigger is touched at the moment, which would seldom if ever happen.

**AN EGG IN A BOTTLE.**—To accomplish this seemingly incredible act requires the following preparation. You must take an egg and soak it in vinegar, and in process of time its shell will become quite soft, so that it may be extended lengthwise without breaking; then insert it into the neck of a small white bottle, and upon pouring cold water upon it, it will assume its former figure and hardness. This is really a curiosity, and baffles those who are not in the secret to find out how it is accomplished.

**WHAT INFLUENCES OUR CLIMATE.**—I cannot omit directing the reader's attention to the influence the far-distant barrier of Central America has upon the climate of great Britain. Supposing you narrow belt of land to be suddenly whelmed by the ocean; then, instead of circuitously winding round the Gulf of Mexico, the heated waters of the equatorial current would naturally flow into the Pacific, and the Gulf stream no longer exist. We should not only lose the benefit of its warm current, but cold polar streams, descending farther to the south, would take its place, and be ultimately driven by the westerly winds against our coasts. Our climate would then resemble that of Newfoundland, and our ports be blocked up during many months by enormous masses of ice. Under these altered circumstances, England would no longer be the grand emporium of trade and industry, and would finally dwindle down from her imperial station to an insignificant dependency of some other country more favored by Nature.—*Hartwig's Sea and its Wonders.*

**TO PREVENT FLIES FROM TEAZING HORSES.**—Take two or three small handfuls of walnut leaves, upon which pour two or three quarts of soft cold water; let it infuse one night, and pour the whole next morning into a kettle, and let it boil for fifteen minutes. When cold, it will be fit for use. No more is required than to wet a sponge, and before the horse goes out of the stable, let those parts which are most irritated be smeared over with the liquor.

**BLISTERED FEET.**—A writer says:—"I had for several years two sons at school at Geneva, Switzerland. In their vacations they, in company with their tutor, made excursions through Switzerland, Italy, Germany, &c, on foot; bearing their knapsacks containing their necessary wants for a month. They were provided with a small bar of common brown soap, and before putting on their stockings turned them inside out, and rubbed the soap well into the threads of them; consequently they never became foot sore, or had blistered feet.

**THE LABOURER ON THE CONTINENT.**—The system of small farms (*la petite culture*) so generally prevalent throughout the Continent, markedly so in France and Belgium, induces a condition of things vastly different from that prevalent in this country; and hence we find that the class of

men who hire themselves out for farm labour is not in any way so important as the class with us. Farm labourers are not numerous, as large farmers requiring their services are anything but numerous themselves. Their place is taken by the body of peasant proprietors, who may be said, in general terms, to represent our agricultural labourer class. I have travelled pretty extensively on the Continent, and I confess to having formed a very favourable opinion as to the condition of the agriculturists of the lower ranks. Time will only permit me however to glance at their condition in Belgium; more especially that part of it—Flanders—where cultivation stands so deservedly high. Wages are not great; a farmer in the neighbourhood of Courtrai, who farmed about 90 acres, told me that he gave his labourers 67 centimes per day, that is about 7d. per day with an ample supply of provision—meat, bread and soup. From a franc to a franc and a quarter may be stated perhaps as the average without provisions. Nearly all the labourers have small plots of ground, which they have time to cultivate, and which they do with the most pains-taking care. That the condition of the labourer is in every way a comfortable one, even a cursory investigation will easily show. The clothing is wonderfully good, far above—specially in the linen department—that of our labourers. In the districts where the small plots of land are cultivated by the peasant proprietors pleasant signs of personal and household comfort abound everywhere. The village streets through which one passes how little of the squalid untidiness which too often greets the eye of the traveller in this country; and seldom is he offended with the sight of children bouncing about in all the Arab freedom of dirt and rags which characterises too many of the rising youths of our own villages. Nor, let me add—which possibly is one grand reason of all this comfort—do you see the drunkard staggering through the streets in the hopelessness of confirmed degradation. The cottages are small, and scantily furnished, according to our ideas of furnishing; but a scrupulous cleanliness atones for this, and adds a charm which abundance of furnished wealth without it would not give. The personal dress of both sexes gives you the idea of great comfort, although in the materials employed you have no evidence of the abundance of money. It simply tells of small funds laid out to highest economical advantage, than which nothing I conceive is more satisfactory in peasant life.—*Mr R. S. Burn before the London Farmer's Club.*

**WHAT THE CHINESE EAT.**—Rice is the staple article of food with all these Chinamen, as with the coolies and farmers, the only difference being that they have their fish and vegetables in quantity enough to be served up on separate dishes, and of much more expensive kinds than those bought by the poorer men. A choice addition consists of thin slices of pork fat, rolled up, cut

into lengths of about an inch, and until most of the grease is drawn out, leaving the rest crisp and brown, and not unpalatable. Bread is never eaten in the provinces south of Shantung, its place being entirely taken by rice; but there is a sort of dumpling made of flour, sometimes plain and sometimes with mincemeat or dried fruit in it. Small cakes are also made from rice and barley flour with seeds like carraways strewed on the top. Heavy sponge cakes made in a mould, and cakes made from bean flour, are also in request. The Chinese aristocrat never feasts (if he can help it) without roast sucking pig for one dish, and of roast pig the part he prefers is the crackling. Every reading child knows about bird's-nest soup and the Indian sea slug biche-de-mer. Eggs are baked in clay until quite hard, and eaten in slices. Deer's sinews and pig's ears are great favourites. They have also excellent soups, thickened with first-rate vermicelli. In Foo-chow-foo bacon and hams are prepared, which many pronounce to be as good as English; at all events, they are famous all over China, and are always a very acceptable present to the residents at the other ports. They have even been exported to America, though, no doubt, only as curiosities. It is said that the art of curing hams was introduced into Foo-chow by a resident English lady some twelve years ago.—*All the Year Round.*

To drive and keep rats from corn-cribs and granaries, place some gas-tar in them, and daub some in their holes, and they will leave the premises at once. The tar can be obtained at any place where gas is manufactured.

**TO REMOVE CHAFF FROM ANIMALS' EYES.**—Mr. C. E. Todd states, in the Ohio Farmer, that he had a valuable cow which became partly blinded with oat chaff, and tried the various remedies commonly prescribed, but to no effect. He then took a silk pocket-handkerchief, drew it tightly over the end of the fore-finger, and after raising the eye-lid as much as practicable, thrust the covered finger carefully into the eye. The chaff adhering to the silk was at once removed.

**NATURAL FOUNTAINS IN ICELAND.**—Two of these fountains, within a yard of each other, erupted alternately—the larger one vomiting a column ten feet high for the space of about four minutes, when it would entirely subside, and then the smaller one took up the running for about three minutes, ejecting a column of about five feet: their regularity in time and force was perfect. What gives rise to this remarkable phenomenon I will not attempt to decide, but there are reliable accounts of their regular habits for the last hundred years.—*Iceland; its Volcanoes, Geysers and Glaciers.*

**THE CONDITIONS OF LIFE.**—It is hard to know whether more to admire the variety of the form under which food is supplied to the animal creation or the simplicity of the fundamental

plan. The nutritious substances baffle calculation, and embrace the utmost diversity of kinds, adapted to every variety of climate, circumstance or habit. While the living organism, on the one hand, can build up a solid frame from liquid materials, on the other, it can pour iron through its veins, and reduce the hardest textures into blood. There is a squirrel in Africa that feeds on elephant's tusks; and the mark of his teeth is a welcome sight to the ivory-collector. The cunning creature selects—for there is scope for epicurism even in this hard fare—the tusks which are richest in animal matter, and which are therefore, the most valuable. But under what diversity of form it may be presented, food is in its essential nature always the same. To give us active bodies, it must be an active substance; that is, it must consist of elements which tend to change through the operation of their chemical affinities. To furnish food for animal life is in one aspect a simple problem, though wrought out in infinite complexity. It is to provide matter in unstable equilibrium, as it is said, or constantly tend to assume new forms, like waves raised in water by the wind. Yet it must not be utterly incapable of retaining its existing form, but should be delicately balanced, as it were, so that it will admit of being transferred and moulded in various way, unaltered, and yet will undergo change immediately when certain conditions are fulfilled. Given a substance thus composed, and there is food. For we must not limit our ideas here to that which happens to be food for us, or for the creatures likeliest to ourselves. Food is found by some creature or other in circumstances the most widely diverse. There is hardly a poison known that does not afford sustenance to some form of life. Corrosive minerals in solution afford nutriment to peculiar kinds of mold or cell plants. Even the gastric juice—the ‘universal solvent’—will sustain, without losing its properties, special fungus. The fable of Mithridates, who accustomed himself to eat all deadly things with impunity, is more than realized in nature. Life in its widest sense almost refuses to recognize a poison. What is death to one organism supports another. Thus many diseases—an ever-increasing number of them indeed—are found to consist in the development of parasites; a new and hostile life invading the old, and flourishing in its destruction. And some of the most virulent vegetable poisons differ but slightly in composition from perfectly wholesome substances.—*Cornhill Magazine*.

**A MICROSCOPIC AGE.**—A correspondent of *St. James' Magazine* says:—“If I were to point out what is the most striking characteristic of the present century, I do not think that I should dwell upon it as a scientific age, or as a literary age, or as a missionary age (by all which epithets it has been described), but as a microscopic age. Nothing appears to be so

wonderful as the changes which has occurred in the common doctrine of magnitudes. Little things have become great and great things have become small. As the modern science of chemistry could not spring into existence until an accurate balance was invented, so the modern science of physiology and the following theory of mortal life, as we now comprehend it, has grown out of the microscope. This is a literal fact, and it is symbolic of a much wider one,—that all modern research has become microscopic. Painting has become microscopic, and gives us details of mosses and lichens, which a half century ago would be laughed at as a useless waste of time. History has become microscopic, and enlivens the descriptions of courts and senates with a minute account of carpet and cakes, dresses, dinners, and other trivialities. Poetry has become microscopic and tells us that the meanest flower that breathes can give to the bard thoughts that do lie too deep for tears.”

**A NEW USE FOR APPLES.**—A country paper says—“We are threatened with a cider famine, not from failure of the apples, although a partial crop, but because they are likely to be applied to a more profitable purpose (so far as the growers are concerned) than in making a household beverage. It seems that the Manchester calico dyers and printers have discovered that apple juices supply a desideratum long wanted in making fast colours for their printed cottons, and numbers of them have been into Devonshire and the lower parts of Somersetshire, buying up all the apples they can get, and giving such a price for them as in the dearest years hitherto known has not been offered. We know of one farmer in Devonshire who has a large orchard, for the produce of which he never before received more than £250, and yet he has sold it this year to a Manchester man for £360. There can be no doubt that the discovery will create quite a revolution in the apple trade.”

**LIGHT IN THE SEA.**—A paper on the nature of the Deep Sea Bed, by Dr. Wallich, was lately read at a meeting of the Royal Institution of Great Britain. The following passage occurred in it:—“Light, or rather the absence of it, can hardly be said to determine, in any important degree, the distribution and limitation of the lower forms of animal life. Light is not essential even in the case of some of the lower orders. A large class of creatures, both terrestrial and marine, possess no true organs of vision, although there is good reason for believing that they do possess some special sensory apparatus susceptible to the influence of light; whilst certain creatures, whose habitation is in subterranean caves or lakes, as in the Magdalena near Adelsburg, and the Great Mammoth caves in Kentucky, either possess them in so rudimentary a state, as to prove clearly that the absence or imperfect development of the sense may be compensated for by the higher development of other

senses. It is impossible at present to say to what depth light penetrates in the sea. The photographic art will, no doubt, one day solve the problem. But it is almost certain that a limit is attained, and that, moreover, long before the deep recesses gaged by the sounding machines are reached, where the light-giving portion of the ray cannot penetrate even in its most attenuated condition; and yet, as shall hereafter be shown, creatures have been found down in those profound and dark abysses whose coloring is as delicate and varied as if they had passed their existence under the bright influence of a summer sun."

**A REMEDY FOR SLEEPLESSNESS**—How to get sleep is to many persons a matter of great importance. Nervous persons, who are troubled with wakefulness and excitability, usually have a tendency of blood on the brain, with cold extremities. The pressure of blood on the brain keeps it in a stimulated or wakeful state, and the pulsations in the head are often painful. Let such rise and chafe the body and extremities with a brush or towel, or rub smartly with the hands, to promote circulation, and withdraw the excessive amount of blood from the brain, and they will fall asleep in a few moments. A cold bath, or a sponge bath and rubbing, or a good run, or a rapid walk in the open air, or going up or down stairs a few times just before retiring, will aid in equalizing circulation and promoting sleep. These rules are simple, and easy of application in castle or cabin, mansion or cottage, and may minister to the comfort of thousands who would freely expend money for an anodyne to promote "Nature's sweet restorer, balmy sleep."

**BATHING IN THE JORDAN**.—The shore was muddy with the feet of the pilgrims, and the river so rapid that I hardly dared to get beyond the mud. I did manage to take a plunge in head-foremost, but I was forced to wade out through the dirt and slush, so that I found it difficult to make my feet and legs clean enough for my shoes and stockings; and then, moreover, the flies plagued me most unmercifully. I found that with them, bathing in Jordan has come to be much the same as baptism with us. It hardly means immersion. No doubt that they do take off their shoes and stockings, but they do not strip and go bodily into the water. —*London Review*.

**STEAM PLOWING**—I cannot conclude this notice of the steam engine without observing the changes it is destined to effect in the cultivation of the soil. It is but a short time since it was thought inapplicable to agricultural purposes from its great weight and expense. But more recent experience has proved this to be a mistake, and ready in most districts we find that it has been pressed into the service of the farm. The small motive, mounted on a frame with four

wheels, travels from village to village with its attendant, the thrashing machine, performing the operations of thrashing, winnowing and cleaning at less than one half the cost by the old and tedious process of hand labor. Its application to plowing and tilling on a large scale is, in my opinion, still in its infancy! and I doubt not that many members of this association will live to see the steam plow in operation over the whole length and breadth of the land. Much has to be done before this important change can be successfully accomplished; but, with the aid of the agriculturist preparing the land so as to meet the requirements of the steam machinery, we may reasonably look forward to a new era in the cultivation of the soil.—*Id.*

**CONSTITUTION OF THE SUN**.—Our knowledge of the physical constitution of the central body of our system seems like'y, at the present time, to be much increased. The spots on the sun's disk when noticed by Galileo and his contemporaries, and enabled them to ascertain the time of its rotation and the inclination of its axis. They also correctly inferred, from their appearance, the existence of a luminous envelope, in which funnel-shaped depressions revealed a solid and dark nucleus. Just a century ago, Alexander Wilson indicated the presence of a second and less luminous envelope beneath the outer stratum, and his discovery was confirmed by Sir William Herschel, who was led to assume the presence of a double stratum of coals, the upper intensely luminous, the lower gray, and forming the penumbra of the spots. Observations during eclipses have rendered probable the supposition that a third and outermost stratum of imperfect transparency encloses concentrically the other envelopes. Still more recently, the remarkable discoveries of Kirchoff and Bunsen require us to believe that a solid or liquid photosphere is seen through an atmosphere containing iron, sodium, lithium, and other metals in a vaporous condition.

We must still wait for the application of more perfect instruments, and especially for the careful registering of the appearances of the sun by the photoheliograph of Sir John Herschel, so ably employed by Mr. Warren de la Rue, Mr. Welsh and others, before we can expect a solution of all the problems thus suggested.—*Id.*

**THE HOUSE SPARROW**.—As Mr. Broderip was passing one day along the footway that borders the National Gallery, he saw a sparrow fly down to the neighbouring hackney carriage stand, and pick up a very long straw, with which it flew, with some labour, towards the building. The long, streaming straw attracted the attention of some of the pedestrians, who stopped and looked at the little loaded bird, who was directing its flight towards the portico of the gallery; but finding its motions watched, it turned short round and pitched with its straw on one of the window-sills, and the people then passed on. Presently it flew again towards the portico; but, the people again stopping and looking—for if one passenger stops and looks up in a great

tion thoroughfare, you have in a very few minutes an increasing crowd—it flew back to her window, and the second lot of gazers followed their way. The little bird then started on with its straw towards one of the same nests, and cutting round it, so as to avoid prying eyes as much as possible, bore it to the mouth of one of the pillars, and disappeared, and all, into a snug nook made by a part of the projecting ornament, which it had chosen as the place for building its nest. “The wary bird adds Mr. Broderip, “was not disposed to allow an inquisitive public know the way to its nest. On many other occasions I have observed these and other birds remain waiting a long time with nest materials and food in their bills, when they have perceived that I was watching them; but the moment I turned my head they were off with their burden to the nest. This would not be worth mentioning, if it were not so difficult to find persons who will turn their eyes to some purpose.”—*Cassell's Popular Natural History*.

**FARMERS' NEWS.**—One plant of the weed black mustard (*Sinapis nigra*) gives 200 flowers: and from each giving six seeds, 1,200 seeds are produced. One plant of the tare (*Ervum tetraspermum*) gives sixty flowers: and each flower giving three seeds, 180 seeds are produced. The seeds of wheat retain their germinating power for three years, rape the same, buckwheat two to three, and cabbage five to six, and beans and peas one to six. Sixty feet superficial should be allowed for each animal in the shed, and 240 feet for a courtyard. A beater thrashing machine will thresh out 7 qrs. 1 bushel 28 lbs. of wheat (after beans) per hour.

**STOP BLEEDING.**—Asa Kemper, Ross County, Ohio, writes to the *American Agriculturist*, that bleeding from wound on man or horse may be stopped by a mixture of wheat and common salt, in equal parts, bound on with a cloth. If the bleeding be profuse, use a large quantity, say from one to three pints. It will stop in a few hours, even days if necessary. In another instance he saved the life of a horse, which was bleeding from a wounded artery; the bleeding stopped in five minutes after this application. The wound was left on three days, when it worked loose, and was easily removed, and the wound soon healed.

**COLONIES OF FISH.**—The fact that fish herd together in great flocks or nations seems now to be well established. All the inhabitants of the deep, from the mighty whale down to the smallest fish, live in what may be termed colonies. We have the term “a school of whales.” We also see the young salmon in shoals—each shoal growing in separate companies, and every fish local in its dwelling-place as men are. Now, too, that the herrings live also in nations, which arrive at maturity in vast groups at

different periods of the season. The same laws govern the crustacea. Persons who deal in shell fish can easily tell the different localities whence they derive their different supplies. A Scotch lobster can be readily distinguished from a Norway one, and “a native” oyster differs considerably from a “scuttle mouth.” These are all points which ought long ago to have led to a better understanding of the natural and economic history of fish. This ignorance has well nigh ruined our most valuable fisheries. We have been trading for years in the belief that the supply was inexhaustible, and are but beginning to find out that it is even possible to exhaust the sea. The German Ocean has been so long the fishing pond of Europe, that we can scarcely wonder, considering the wealth that has been drawn from its depths, that its supplies are beginning to fail us. There can be no doubt, however, that other sources of supply will be discovered; if so, we can only hope that some method will be observed in harrying the nest, in order that the supply may be made to go as far as possible.—*London Review*.

### Tobacco for Sheep Ticks.

**EDITOR OR FARMER.**—I notice in a late number of the *Farmer* an inquiry in regard to the use of tobacco for killing ticks upon lambs, of which the writer Geo. P. Morse, thinks is a sure remedy for killing both the tick and the lambs.

Now, I will give my experience in the use of tobacco on lambs: I have made it a practice for years whenever my sheep were ticky, to dip the lambs in tobacco juice. I take about four pounds of what the merchants term poor tobacco. Place in a caldron kettle; boil until you have the strength, then reduce it nearly one half with water that will be a sufficient quantity for one hundred lambs. This will kill the ticks sure and leave the animal healthy and vigorous; at least such has been the case with my flock. My mode is this: After shearing let all my sheep go in one flock for four or five weeks; the tick will all leave the old sheep and go on the lambs. Then prepare as above and dip your lambs.—By so doing, you will clear your flock of an enemy which has been very destructive in many fine flocks of sheep. Try and See.

M. L. RAY.

Concord, April, 1861.—*Michigan Farmer*.

**THE STUDY OF SCIENCE.**—Science is worthy of study by all men, because it is so intimately associated with all the pursuits of life. The whole animate and inanimate creation is embraced within its folds. It affords ample scope for the exercise of the most comprehensive and refined intellects, as well as those of humble and moderate pretensions. The mechanic and chemist, the poet and scholar, the manufacturer and merchant, can find, in the pursuit of science, a boundless source of pleasure and profit.

**INTERNAL HEAT OF THE EARTH.**—It is well known that the temperature increases, as we descend through the earth's crust, from a certain point near the surface, at which the temperature is constant. In various mines, borings, and Artesian wells, the temperature has been found to increase about  $1^{\circ}$  Fah. for every sixty or sixty-five feet of descent. In some carefully-conducted experiments during the sinking of Dukinfield Deep Mine—one of the deepest pits in this country—it was found that a mean increase of about  $1^{\circ}$  in seventy-one feet occurred. If we take the ratio thus indicated, and assume it to extend to much greater depths, we should reach at two and a half miles from the surface strata at the temperature of boiling water; and at the depths of about fifty or sixty miles the temperature would be sufficient to melt, under the ordinary pressure of the atmosphere, the hardest rocks. Reasoning from these facts, it would appear that the mass of the globe, at no great depth, must be in a fluid state. But this deduction requires to be modified by other considerations, viz., the influence of pressure on the fusing point, and the relative conductivity of the rocks from the earth's crust. To solve these questions a series of important experiments were instituted by Mr. Hopkins, in the prosecution of which Dr. Joule and myself took part; and after a long and laborious investigation, it was found that the temperature of fluidity increased about  $1^{\circ}$  Fah., for every 500 lbs. pressure in the case of spermaceti, beeswax and other similar substances. However, on extending these experiments to less compressible substances, such as tin and barytes, a similar increase was not observed. But this series of experiments has been unavoidably interrupted; nor is the series on the conductivity of rocks entirely finished. Until they have been completed by Mr. Hopkins, we can only make a partial use of them, in forming an opinion of the thickness of the earth's solid crust. Judging, however, alone from the greater conductivity of the igneous rocks, we may calculate that the thickness cannot possibly be less than nearly three times as great as that calculated in the usual suppositions of the conductive power of the terrestrial mass at enormous depths, being no greater than that of the superficial sedimentary beds. Other modes of investigation which Mr. Hopkins has brought to bear on this question appear to lead to the conclusion that the thickness of the earth's crust is much greater than that above stated. This would require us to assume that a part of the heat in the crust is due to superficial and external rather than central causes. This does not bear directly against the doctrine of central heat, but shows that only a part of the increase of temperature observed in mines and deep wells is due to the outward flow of that heat.—*Fairbairn's Address before the British Association.*

## Editorial Notices, &c.

### AGRICULTURAL SEED AND IMPLEMENT STORE

It will be seen from an advertisement in another column, that Mr. James Fleming taken into Partnership Mr. G. W. Buckland the General Seed business, wholesale and retail. Mr. Buckland has had two years experience one of the largest and oldest Seed Establishments in London, England; and Mr. Fleming well known throughout the Province as a Farmer and Horticulturist, and for having successfully carried on the business of a Seedsman in this city, for more than a quarter of a century. The new Firm contemplate extending their business operations, and have accordingly rented a portion of the new Agricultural Hall in the course of erection by the Board of Agriculture on the corner of Yonge and Queen streets, which they hope to commence occupying at midsummer next. In addition to a varied extensive stock of agricultural and horticultural seeds, they purpose keeping on hand a select assortment of the various tools and implements required by the farmer and gardener. Situated in the same building, with the Agricultural Museum, which the Board has resolved on commencing, must prove both interesting and useful to a large portion of our population, especially to all such as are directly engaged in rural pursuits.

### Notice of Co-Partnership.

THE Undersigned have entered into Partnership as Seedsmen and dealers in all kinds of Agricultural and Horticultural Implements under the firm of James Fleming & Co.  
**JAMES FLEMING,**  
**GEORGE W. BUCKLAND**

### NOTICE.

**JAMES FLEMING & CO.,** Seedsmen & Horticultural Association of Upper Canada will carry on the above business, wholesale and Retail, at 126 Yonge-st., 4 doors North of laid-street, until next July, when they will move to the new Agricultural Hall, at the corner of Queen and Yonge-streets.

**JAMES FLEMING** will continue the business of Retail Seedsman and Florist at his old address 350 Yonge-street.

Toronto, January 1st, 1861.

**BOARD OF AGRICULTURE.**

THE Office of the Board of Agriculture has been removed to 188 King Street West, the doors from the late location adjoining Government House. Agriculturists and any persons who may be so disposed are invited to attend and examine the Library, &c., when convenient.

HUGH C. THOMSON,  
Toronto, 1861. Secretary.

**International Exhibition, London, 1862.**

THE Commissioners for Canada at the INTERNATIONAL EXHIBITION of 1862, give notice to all parties desirous of exhibiting Canadian products, whether application has been already made for the exhibition of the same or not, that such articles may be sent in for examination and approval to the following places, at the same time between the TENTH DAY of FEBRUARY next, and the undermentioned dates,

**CANADA WEST.**—London, 18th February; Hamilton, 20th February; Toronto, 23rd February; Kingston, 25th February, and Ottawa, 28th February.

**CANADA EAST.**—Quebec, 14th February; Three Rivers, 18th February; St. Hyacinthe, 22nd February; Sherbrooke, 25th February; and Montreal, 3rd and 4th March next. Articles will be received and stored at the depots of the Grand Trunk Railway Company at London, Toronto, Kingston, Quebec, Point St. Charles, Sherbrooke and St. Hyacinthe.

The Commissioners will begin their examinations at 10 o'clock, A. M., of each day named. Attending exhibitors must deliver the articles for exhibition at the above named places, free of charge. Should they not be approved, the Grand Trunk Railway will return them free of charge, to any depot on their line from which they have been sent.

Parties sending in Grain or Woods are requested to transmit a certificate, stating the varieties and varieties, and where grown. Woods should be sent of the usual dimensions for commerce, and Her Majesty's Commissioners have expressed a desire that they be shown in planks of an inch thick, showing the sap on both sides, or in such scantling, and accompanied, wherever practicable, by twigs with leaves or flowers.

Parties desirous of further information, may apply, concerning Minerals and Specimens of Economic Geology, to Sir W. E. Logan, Montreal; concerning products of the Forests and Minerals, to Dr. Tache, Quebec, or Dr. Hurlburt, Hamilton; concerning Agricultural produce, to Mr. L. V. Sicotte, St. Hyacinthe, and Col. G. A. B. Thomson, Toronto concerning articles of Canadian Manufacture, to Dr. Beatty, Cobourg, or to the Secretary, Montreal, to whom also, communications on all other business of the Commission are to be addressed.

R. CHAMBERLIN, Com'r, Secretary.  
Montreal, December 12, 1861.

**THE INTERNATIONAL EXHIBITION OF 1862.**

THE UNITED AGRICULTURAL SOCIETIES OF WENTWORTH and HAMILTON will hold an Exhibition of Wheat at Cramm's Hotel in the City of Hamilton, on Saturday the 18th day of January, 1862, with a view of obtaining the best samples to forward to the International Exhibition, London,

|                                       |     |
|---------------------------------------|-----|
| Best two bushels Soule's Winter Wheat | \$6 |
| “ “ “ Red Chaff “ “                   | 6   |
| “ “ “ Blue Stem “ “                   | 6   |
| “ “ “ Golden Drop, Spring             | 6   |
| “ “ “ Rife                            | 6   |

The Wheat obtaining the prizes to become the property of the Society. Members of either of the Societies may compete.

The wheat to be the property of the exhibitor, and grown in the County in 1861.

Entries will be received by the Secretary until 10 o'clock, a. m., of the day of Show.

WM. A. COOLEY,  
Sec., U. S. W. & H.

Ancaster, Nov. 25th, 1861.

**FOR SALE.**

AT

**WOODHILL, WATERDOWN P. O.**

MR. FERGUSSON expects to have several pure Durham bull calves to dispose of next Spring, 1862, not intending to raise any this season. These calves will be all of the well known DUCHESS tribe, and will be put on the G. W. R. R. at six weeks old for eighty dollars each.

N. B.—First come, first served.

Waterdown, Nov. 14, 1861. 4-t.

**THOROUGH BRED STOCK FOR SALE.**

THE SUBSCRIBER has for Sale Durham and Galloway Cattle, male and female.

Leicester, Cotswold, and Lincolnshire Sheep, male and female.

January 1, 1862. JOHN SNELL,  
Edmonton, P. O., C. W.

**VETERINARY SURGEON.**

ANDREW SMITH, Licentiate of the Edinburgh Veterinary College, and by appointment, Veterinary Surgeon to the Board of Agriculture of Upper Canada, respectfully announces that he has obtained those stables and part of the premises heretofore occupied by John Worthington, Esq., situated corner of Bay and Temperance streets, and which are being fitted up as a *Veterinary Infirmary*.

Medicines for Horses and Cattle always on hand. Horses examined as to soundness, &c.

Veterinary Establishment, Corner of Bay and Temperance Sts.

Toronto, January 22nd, 1862.

**FOR SALE.**

A FEW PURE-BRED SOUTH-DOWN RAMS  
and Ewe Lambs, from

**IMPORTED STOCK,**

Selected from the Best Flock dealers in Dorset,  
Wilts, and Hants.

The Subscriber will Warrant these Lambs to  
produce as much Wool and Mutton, and of  
equal Quality, as those of Jonas Webb, or any  
other Flock of the same kind and number in  
England.

JOHN SPENCER,  
Brooklin, Post Office,  
Ontario County C. W.

Oct. 12th, 1861.

**AYRSHIRE BULL FOR SALE.**

MR. Denison, of Dover Court, offers for Sale  
a thorough bred Ayrshire Bull, bred by  
the celebrated Ayrshire breeder, John Dodd,  
Esq., of Montreal. The bull is 3 years old, and  
can be delivered at or after the Show at Lon-  
don, in September.

Toronto, Aug., 1861.

**THE****JOURNAL OF THE BOARD OF ARTS  
AND MANUFACTURES,****FOR UPPER CANADA,**

Is Published on the first of every Month,

AT \$1 per annum for single copies, or to clubs  
of ten or more at 75 cents. per copy; to  
members of Mechanics' Institutes, and of Liter-  
ary, Scientific, and Agricultural Societies,  
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per annum per copy.

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Printed for the Board of Arts and Manufactures  
for Upper Canada, by W. C. CHEWETT & Co.,  
King Street East, Toronto.

**FOR SALE.**

A LOT of thorough bred Essex Pigs, -bred  
from recently imported 1st prize animals  
and who have this season taken premiums at  
both Township, County, and Provincial Exhi-  
bition.

JAMES COWAN.

Clochmor, Galt P. O., Oct. 19, 1861.

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**FOR SALE.**

A LOT of thorough bred improved Berkshire  
Pigs of various ages.

R. L. DENISON,  
Dover Court

Toronto, Aug, 1861.

**The Agriculturist,**

OR JOURNAL AND TRANSACTIONS OF THE BOARD  
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