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THE
CANADIAN AGRICULTURIST,
 AND
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OF THE
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NO. 10

POINTS OF DIFFERENT BREEDS OF CATTLE.

The New York State Agricultural Society has issued the following system of estimating the relative value of the various points of several distinct kinds of cattle. It is a subject of growing importance in this country, and one that is confessedly surrounded by many difficulties.—We can hardly expect our readers to agree with every thing contained in the subjoined paper; but most of them will look upon the information it contains as highly useful and suggestive to all breeders and judges of cattle; and for the benefit of such we are induced to publish it.—*Editor.*

POINTS OF EXCELLENCE IN CATTLE.

Adopted by the New York State Agricultural Society, for the guidance of the Judges at their Annual Fairs.

The numbers affixed to the points described form the *maximum* that is to be allowed for each; and in proportion as the animal under examination is deficient in any point, so will the Judges decrease the number, even should nothing be allowed for that point.

Points which are characteristic, and therefore common to a *breed*, though very valuable in themselves, are marked comparatively low, because they are easily obtained and demand but little skill or attention on the part of the breeder: nevertheless, an animal not possessing the characteristics of *its own breed*, must of necessity be almost worthless. On the other hand, it will be observed that points of less value, perhaps, in themselves, but which are characteristic *deficiencies* in the breed, or at any rate difficult to sustain at their maximum excellence, are marked numerically high, as they go far to complete or perfect the natural excellence of the animal.

Again, for the above reasons, it will be found that the *same* points, in *different breeds*, have different numerical values attached to them.

POINTS OF A SHORTHORN COW.

PEDIGREE—showing unbroken descent, on both sides, from known animals, derived from Eng-

lish herds, as found in the English or American Herd Books, and without this, an animal can not compete in this class.

- 3 THE HEAD, small, lean and bony, tapering to the muzzle.
- 2 THE FACE somewhat long, the fleshy portion of the NOSE of a light delicate color.
- 2 THE EYE is of great significance and should be prominent, bright and clear—“prominent,” from an accumulation of “adeps” in the back part of its socket, which indicates a tendency to lay on fat—“bright,” as an evidence of a good disposition—“clear,” as a guarantee of the animal’s health; whereas a dull, sluggish eye belongs to a slow feeder; and a wild, restless eye betrays an unquiet, fitful temper.
- 1 THE HORNS—light in substance and waxy in color, and symmetrically set on the head; the EAR large, thin, and with considerable action.
- 2 THE NECK—rather short than long, tapering to the head; clean in the throat, and full at its base, thus covering and filling out the points of the shoulders.
- 14 THE CHEST—broad from point to point of the shoulders; deep from the anterior dorsal vertebra to the floor of the sternum, and both round and full just back of the elbows; sometimes designated by the phrase, “thick through the heart.” These are unquestionably the most important points in every animal, as constitution must depend on their perfect development, and the ample room thus afforded for the free action of the heart and lungs.
- 5 THE BRISKET, however deep or projecting, must not be confounded with *capacity* of chest; for though a very attractive and selling point, it, in reality, adds nothing to the space within, however it may increase the girth without.—It is in fact nothing more nor less than a muscular adipose substance, attached to the anterior portion of the sternum, or breast-bone, and thence extending itself back. This form, however, of the brisket indicates a disposition to lay on fat generally throughout the frame, and in this point of view is valuable.
- 4 THE SHOULDER, where weight, as in the Shorthorn, is the object, should be somewhat upright and of good width at the points, with the blade-bone just sufficiently curved to blend its upper portion smoothly with the crops.
- 8 THE CROPS must be full and level with the

- shoulders and back; and is, perhaps, one of the most difficult points to breed right in the Shorthorn.
- 8 THE BACK, LOIN and HIPS should be broad and wide, forming a straight and even line from the neck to the setting on of the tail, the hips or haeks round and well covered.
 - 5 THE RUMPS laid up high, with plenty of flesh on their extremities.
 - 2 THE ELAIS should be large, indicated by the width of the hips (as already mentioned) and the breadth of the twist.
 - 3 THE TWIST, should be so well filled out in its "seam" as to form nearly an even and wide plain, between the thighs.
 - 5 THE QUARTERS—long, straight, and well developed downwards.
 - 4 THE CARCASS—round; the ribs nearly circular, and extending well back.
 - 3 THE FLANKS—deep, wide, and full in proportion to condition.
 - 2 THE LEG—short, straight, and standing square with the body.
 - 3 THE PLATES of the belly strong, and thus preserving nearly a straight under line.
 - 2 THE TAIL—flat and broad at its root, but fine in its cord, and placed *high up*, and on a level with rumps.
 - 2 THE CARRIAGE of an animal gives style and beauty; the walk should be square and the step quick; the head up.
 - 15 QUALITY—On this the thinness, the feeding properties, and the value of the animal depends; and upon the touch of this quality rests, in a good measure, the grazier's and the butcher's judgment. If the "touch" be good, some deficiency of form may be excused; but if it be hard and stiff, nothing can compensate for so unpromising a feature. In raising the skin from the body, between the thumb and finger, it should have a soft, flexible and substantial feel, and when beneath the out-spread hand, it should move easily with it, and under it, as though resting on a soft, elastic, cellular substance; which, however, becomes firmer as the animal "ripens." A thin papery skin is objectionable, more especially in a cold climate.
 - 2 THE COAT should be thick, short and mossy, with longer hair in winter, fine, soft and glossy in summer.
 - 3 THE UDDER—pliable and thin in its texture, —reaching well forward, roomy behind, and the 100 teats standing wide apart, and of convenient size.

POINTS OF THE SHORTHORN BULL.

As regards the male animal, it is only necessary to remark, that the points desirable in the female are generally so in the male, but must, of course, be attended by that masculine character which is inseparable from a strong, vigorous constitution. Even a certain degree of coarseness is admissible, but then it must be so exclusively of a masculine description as never to be discovered in the females of his get. In contra-distinction to the cow, the head of the bull, may be shorter, the frontal-bone broader, and the occipital flat and stronger, that it may receive and sustain the horn—and this latter

may be excused if a little heavy at the base, so its spiral form, its quality and color be right. Neither is the looseness of the skin, attached to, and depending from the under jaw, to be deemed other than a feature of the sex, *provided* it is not extended beyond the bone, but *leaves the gullet and throat clean and free from dewlap.*

The upper portion of the neck should be full and *muscular*, for it is an indication of strength, power and constitution. The spine should be strong, the bones of the loin long and broad, and the whole muscular system wide and thoroughly developed over the entire frame.

NORTH DEVONS.

PURITY of blood, as traced back satisfactorily to importations of both dam and sire, from known English breeders, or as found in the lately-established Herd Book, for North Devons, and without this, an animal cannot compete in this class.

- 4 THE HEAD should be small, lean and bony; the forehead wide, flat, or, from a fullness of the frontal bone over the eyes, somewhat *disking*; the face straight; the muzzle fine; the nostrils open; the lips thin, and rather flat.
- 4 THE NOSE of a light delicate orange color.
- 4 THE EYE should be bright, prominent, and clear, but mild and gentle in its expression, as indicative of that spirited, but tractable disposition, so necessary to cattle that must bear the yoke; a beautiful orange-colored ring should invariably surround the eye.
- 2 THE EAR—thin; of a rich orange color within, of medium size, with a quick and ready movement, expressive of attention.
- 2 THE HORNS—light, tapering, of a waxy color towards the extremity, and gaily as well as symmetrically placed upon the head; the occipital bone narrow, thus bringing the base of the horns nearer together.
- 2 THE NECK of medium length, somewhat light in substance, very clean, and well set upon the shoulder.
- 14 THE CHEST—deep and round, carrying its fullness well back of the elbows, thus affording, by the aid of a springy rib, abundant internal room for the action of the thoracic viscera, the heart and lungs, and that too without an *extreme* width forward, and between the points of the shoulders, which might interfere with the action of the animal.
- 4 THE BRISKET—It being assumed that it adds nothing to the internal capacity of the chest, must not overload the breast, but be sufficiently developed to guarantee a feeding property, attended with a full proportion of fatty secretion.
- 4 THE SHOULDER is, in this breed, a very beautiful and important point, and should in a *degree* approximate in form to that of the horse. It should take a more sloping position than is found in most other breeds, with its points less projecting, and angular, and the blade bone more curved, thus blending with and forming a fine wither, rising a little above the level line of the back.
- 3 THE CROPS full and even, forming a true line

with the somewhat rising shoulder, and level back, without either drop or hollow.

9 **BACK**, loin and hips, broad and wide, running on a level with the setting on of the tail.

5 **THE RUMPS**—lying broad apart, high, and well covered.

2 **THE PELVIS**—wide.

3 **THE TWIST**—full and broad.

6 **THE QUARTERS** long and thoroughly filled up between the hocks, or hip bones, and the rumps; with a good muscular development down the thigh to the hocks.

3 **THE FLANK**, moderately deep, full and mellow, in proportion to condition.

5 **THE LEGS** not too short, and standing as square, and straight behind, as may be compatible with activity. The bone quite small below the hock and knee; the sinews large and clean, with the fore-arm well developed.

2 **THE CARCASS** round and straight; its posterior ribs almost circular, extending well back, and springing nearly horizontally from the vertebra, giving, in fact, much greater capacity than would at first appear.

1 **THE TAIL**, at its junction, level with the back, long, very slender in its cord, and finishing with a tassel of white hair.

1 **THE COLOR**, in its shades and degrees, is more or less governed by fashion; but in the Devon is always red. Formerly a rich blood-red was the favorite color, and a test of purity; and now a somewhat lighter color is in vogue, approaching rather nearer to that of the *South Devon*, which is a larger, coarser, stronger animal. In all cases, the color grows lighter round the muzzle, while a dark mahogany color, verging almost to a black, and growing yet darker about the head, always was a very questionable color for a *true North Devon*, more especially when accompanied by a dark nose.

1 **THE HAIR** should be short, thick, and fine; and if showing on its surface a fine curl, or ripple, it looks richer in color, and is supposed to indicate a hardier and more thrifty animal.

1 **THE UNDER** should be such as will afford the best promise of capacity and product.

3 **CARRIAGE**—The Devons having, from their excellence in the yoke, another destiny besides that of the butcher's block, it is all-important that the animal's carriage should indicate as much; but, to obtain this, something of the heavy, incut, squarely-moulded frame of the merely beefing animal must be relinquished for a lighter and more active frame.

15 **QUALITY**—On this the thriftiness, the feeding properties, and the value of the animal depend; and upon the touch of this quality rests, in a great measure, the grazier's and the butcher's judgment. If the "touch" be good, some deficiency of form may be excused; but if it be hard and stiff, nothing can compensate for so unpromising a feature. In raising the skin from the body, between the thumb and finger, it should have a soft, flexible and substantial feel; and when beneath the out-spread hand, it should move easily with it, and under it, as though resting on a soft, elastic, cellular substance; which, however, becomes firmer as the

animal "ripens." A thin, papery skin is objectionable, more especially in a cold climate.

POINTS OF THE DEVON BULL,
Same as the Shorthorn Bull;—which see.

HEREFORDS.

PURITY OF BLOOD, as traced back to the satisfaction of committees, to impure blood, on both sides, from some known English breeder, or as found in Eyton's Hereford Herd Book.

3 **THE HEAD**—moderately small, with a good width of forehead, tapering to the muzzle; the cheek-bone rather deep, but clean in the jaw.

2 **THE NOSE**, light in its color, and the whole head free from fleshiness.

2 **THE EYE** full, mild, and cheerful in its expression.

1 **THE EAR** of medium size.

2 **THE HORNS**—light and tapering, long and spreading, with an outward and upward turn, giving a gay and lofty expression to the whole head.

2 **THE NECK**—of a medium length; full in its junction with the shoulders, spreading well over the shoulder points, and tapering finely to the head.

14 **THE CHEST**—broad, round, and deep; its floor running well back of the elbows, which, with a springing fore rib, gives great interior capacity to this all-important portion of the body.

4 **THE BRISKET**—when in flesh, largely developed, descending low between the legs, and deep, by covering the anterior portion of the sternum, or breast-bone, but never interfering with the action of the animal when in working condition.

3 **THE SHOULDER**—lying snugly and closely in towards the top, and spreading towards the points; the blade sloping somewhat back, and running pretty well up into the withers, which, by rising a very trifle above the level line of the back, gives to the ox a very upstanding, and beautiful fore-end. The whole shoulder well clothed with muscle.

3 **THE CROPS**—filling all up evenly behind the shoulders, and blending them smoothly with the muscles of the back.

8 **THE BACK**, loin, and hips, should be broad, wide, and level.

4 **THE RUMPS** should lie nearly, or quite level with the back, and their covering should be abundant, mellow, loose, and freely moving under the hand, thus showing great aptitude to fatten.

3 **THE PELVIS**—roomy, indicated by wide hips, as already mentioned, and the space between the rumps, which should stand well apart, giving a general breadth to the posterior portion of the animal.

5 **THE TWIST**, broad and full, extending well down on each side of the thigh, with corresponding width—a broad twist as a good indication of a butcher's animal.

6 **THE Hind QUARTERS**—large and thoroughly developed in their upper and more valuable portions, as beef. The thigh gradually tapering to the hock, but muscular.

- 8 **THE CARCASS**—round throughout, full and capacious, with the under line of the belly level, or nearly so.
- 3 **THE FLANK** full and wide.
- 3 **THE LEGS**—straight, upright, firmly placed to support the superincumbent weight; a strong back sinew, but by no means a large, coarse cannon bone.
- 3 **THE PLATES** of the belly strong, and thus preserving mainly a straight under line.
- 2 **THE TAIL**—large and full at its point of attachment, but fine in its chord.
- 3 **THE CARRIAGE**—prompt, resolute, and cheerful; and in the ox, gay and lively.
- 3 **THE HAIR**—thick, close and furry, and if accompanied with a long growth, and a disposition to curl moderately, is more in estimation, but that which has a harsh and wiry feel is objectionable.
- 2 **THE UDDER** should be such as will afford the best promise of capacity and product.
- 1 **COLOR**—Reds or rich browns, oftentimes very dark, with a white or “blackled” face, are now the *colours*, and marking of the *Herefords*, though grey *Herefords*, or cream-colored, are not uncommon.
- 15 **QUALITY**—On this the thriftiness, the feeding properties, and the value of the animal depends; and upon the touch of this quality rests, in a great measure, the grazier's and the butcher's judgment. If the “touch” be good, some deficiency of form may be excused; but if it be hard and stiff, nothing can compensate for so unpromising a feature. In raising the skin from the body, between the thumb and finger, it should have a soft, flexible and substantial feel, and when beneath the out-spread hand, it should move easily with it, and under it, as though resting on a soft, elastic, cellular substance; which, however, becomes firmer as the animal “ripens.” A thin, papery skin—is objectionable, more especially in a cold 100 climate.

POINTS OF THE HEREFORD BULL,
Same as the *Shorthorn Bull*;—which see.

AYRSHIRES.

- PURITY OF BLOOD**, as traced back to importations of both dam and sire, under such evidence as will satisfy committees.
- 4 **THE HEAD**, as in other breeds, small; the face long and narrow; the muzzle and nose variable.
- 2 **THE EYE** placid and not strikingly large.
- 4 **THE EAR** of full size, and of an orange color within.
- 2 **THE HORNS** small, tapering, with an outward and upward turn, and set on wide apart; the face somewhat dishing.
- 4 **THE NECK** of medium length, clean in the throat, very light throughout, and tapering to the head.
- 6 **THE SHOULDERS** lying snugly to the body, thin at their top, small at their points, not long in the blade, nor loaded with muscle.
- 12 **THE CHEST** must retain sufficient width and roundness to insure constitution. The lightness of the fore-quarter, and the “wedge-

shape” of the animal, from the hind-quarter forward, arising more from a small, flat and thin shoulder, than from any undue narrowness of the chest.

- 4 **THE CROS** easily blend in with so thin a shoulder and prevent all hollowness behind.
- 4 **THE BRISKET** not over-loading the fore-end, but light.
- 8 **THE BACK** should be straight, and the loin wide, the hips rather high and well spread.
- 4 **THE PELVIS** roomy, causing a good breadth at what is termed the “thurl,” or “round-bone,” and between the points of the rumps.
- 6 **THE QUARTERS** long, tolerably muscular, and full in their upper portion, but moulding into the thighs below, which should have a degree of flatness, affording thus more space for a full udder. The flank well let down, but not heavy.
- 8 **THE RIBS**, behind, springing out very round and full, affording space for a large udder, which by Ayrshire breeders is considered very essential to secure the milking property; the whole carcass thus acquiring increased volume towards its posterior portion.
- 4 **THE RUMPS** nearly level with the back, projecting but little.
- 1 **THE TAIL** thin in its cord, of full length, light in its hair, and set somewhat farther into the back than would be admissible with some other breeds.
- 3 **THE LEGS** delicate and fine in the bone, inclining to be short, and well knit together at the joints.
- 12 **THE UDDER** in this breed is of more especial importance, as the Ayrshires have been bred almost exclusively with reference to their milking properties. The great feature of the udder should be capacity, without being fleshy. It should be carried squarely and broadly forward, and show itself largely behind. As it rises upward it should not mingle too immediately with the muscle of the thighs, but continue to preserve its own *peculiar* texture of skin—thin, delicate and ample in its folds.—The teats should stand wide apart, and be lengthy, but not large and coarse.
- 6 **THE HANDLING** will show the skin to be of medium thickness only, moving freely under the hand and evincing a readiness in the animal to take on flesh, when a drain on the constitution is no longer made by the milkpail.
- 4 **THE HAIR** soft and thick, in the phraseology of the country, woolly.
- 1 **COLOR**, VARIES—a dark red—a rich brown—a liver color, or mahogany, running into almost a black; those very much broken and spotty at the edges on a white ground are the favorite colors at the present time. The light yellow is, however, a color sometimes found on very good cows, but these pale colors are objected to from an impression that such belong to animals of less constitution.
- 1 **CARRIAGE** should be light, active, and even—gay; this latter appearance is much promoted 100 by the inward turn of the horn.

POINTS OF THE AYRSHIRE BULL,
Same as the *Shorthorn Bull*;—which see.

GREAT NATIONAL CATTLE SHOW AT
KILLARNEY.

Abridged from the Irish Farmers' Gazette.

The Royal Agricultural Improvement Society of Ireland held their great annual show of cattle at Killarney, on Wednesday, August 10th, and three following days. The site was judiciously and conveniently chosen, being the rising ground belonging to the Railway Company, lying between the railway and Cork mail coach road, and immediately opposite the station offices. The cattle, pigs, poultry, butter, cheese, and flax, were exhibited in spacious sheds erected for the purpose; the sheep in pens in front, and the implements on the low excavated area, between the slopes and rails, flights of steps being erected to give free and easy access between the cattle and implement yards. A constant and full supply of water was conveyed from the company's works by force pumps and pipes, specially laid down for that purpose, which supplied spacious temporary tanks. On the whole, the arrangements were good, and well carried out in detail.

The entries for short horns were more numerous than they were for last year's show, held at Galway, and were very select—so much so, as to excite the admiration of the judges, who declared that finer or better stock could not be exhibited at any show; in fact, it could not be otherwise, as the best blood in England, Ireland, and Scotland, was well represented. Lord Talbot's splendid bull Phoenix, which was awarded the first prize of 30 sovereigns, and the gold medal, as the best of all the prize bulls; every day he gets older he gets better; in fact, his best points are becoming every day more fully developed. Mr. Douglass of Athelstaneford, took the second prize. In fact, by a careful examination of the prize list it may be perceived that the judges had a most difficult task to perform, several animals being commended, and highly commended—so nearly displacing the perfection of the prize animals; and again, when one exhibitor is successful in one class, he gets beaten in another, as may be observed in Mr. Townley's case, who has again carried off the Purcell challenge cup and all the honours, with his beautiful cow, Butterfly, beating the best blood in the country, in section 4,

and is himself beaten in section 6, by Mr. Douglass, with his splendid heifer, Purity. We observe that Mr. Douglass took two second prizes, in sections 6 and 7, for two heifers out of Rose of Autumn, by two separate bulls, thus proving the superiority of the dam. We suspect Mr. D. has committed a serious mistake in selling the dam, and Mr. Latouche, of Harristown, committed another, by disposing of her in the first instance. We find that the Earl of Charlemont has been successful in Devons, and with his beautiful Kerry bull, Young Rory, has beaten all the Keries in their own Kingdom.

There were some fine agricultural horses and mares exhibited, and amongst the unsuccessful we think Mr. Douglass's mare, 178, deserves much notice.

The sheep numbered less lots than last season, but were, on the whole, if anything, superior.

The entries in pigs were nearly one half more than those of last season, and generally of the most superior description, maintaining their excellence, and, as we before remarked, scarcely leaving a wish for further improvement.

The entries for poultry were rather less this season than last, but the distance must have detained many from exhibiting, as we missed the names of some of the best breeders, though those exhibited were excellent of the sort.

The entries for dairy produce nearly doubled those of last season, and, in most cases, the quality was excellent.

The implements exhibited were very select, and would have been more numerous, but for some disappointment in forwarding some collections entered, particularly those of Richmond and Chandler, which, though forwarded some time since, did not reach the grounds up to Thursday evening.

SHORT-HORNS.

For the best bull, calved on or after the 1st January, 1848, and previous to 1st January, 1851, 30 sovs.; to Lord Talbot de Malahide, for his famous bull Phoenix, No. 8. This fine animal is now in much better condition for service than he was last year, when he was in very high condition; but his muscle was not of that firm yet elastic texture which is now so sensible to the touch on handling. He was crowded about, and much admired during the show. He was also awarded the gold medal, as the best of all the prize bulls. Phoenix was the prize bull at the

Show of the Royal Agricultural Society of England, held at Lewes, of the Royal Highland Society, at Perth, of the Royal Agricultural Improvement Society of Ireland, at Galway, in 1852, and now, in 1853, at Killarney.

For the best heifer in calf or in milk, calved in 1851, 10 sovs.; to James Douglass, Athelstanford, for Purity, No. 59, who also took the second prize, of 5 sovs., for Ladylike, No. 60, thus beating Mr. Towneley's beautiful heifer, Frieda, and others. Ladylike was bred by Mr. Laroche, of Harristown, county Kildare, out of Rose of Autumn, both of which were purchased by Mr. Douglass at the Harristown sale. Mr. Douglass obtained for those beautiful heifers the very handsome sum of one hundred guineas each, from the Hon. B. W. Egan, for the purpose of taking them to America to improve the breed of stock; for which object the Hon. Mr. Egan came to this country.

SHEEP—LICESTERS.

In the short-horned stock, the judges gave universal satisfaction, but the awards in the sheep class were received with much grumbling and dissatisfaction in many cases. There is a circumstance connected with this and former shows of sheep, which really deserves reprehension. Sheep for competition should not be ornamented by trappings of any sort. It is common with some exhibitors to put rings with medals in their ears; others put on new leather head stalls, with brass, and other ornaments, which are easily distinguishable. We do not mean to say that those parties put those on with a view to signal to the judges whose they are; but this we know, that in cases of difficult decision, anything tending to convey a knowledge of the breeding of the animal, will have a correspondent tendency in making the award, as all other things being equal or nearly so, blood will give the preponderance, as that may be depended on in the long run, and, therefore, in case of hesitation, cause immediate decision; we would therefore respectfully put it to the committee of the society, whether they should not decide against those trappings. We know if they do the rule will give general satisfaction; and where there is so very close an affinity between animals of the most noted rival breeders, this is the more necessary. In section I., besides the prize animals, there were numerous prize animals from the flocks of the best breeders in England, Scotland, and Ireland.

SWINE.

On the whole, the show of pigs was, in point of quality, nothing inferior to any of our former shows, and, in numbers, far exceeded the show of last year, so that the honors were most keenly contested by the rival breeders of the Berkshire variety, and the task imposed on the judges in coming to a decision, a very difficult and onerous one.

IMPLEMENTS.

Some of the implements exhibited underwent a preparatory trial at Malahide, which, for the first two days we were able to be present, was not very satisfactory, with the exception of Bennett's broadshare, which, in the three varieties

tried, did its work well. The trial of ploughs was very limited, amongst which Graham, of Smithfield, came off victoriously; and in the trial of drill-grubbers, Hill & Co.'s expanding horse-hoe did its duty admirably, as a hoe and scuttler; but, for deeply pulverising the soil, the work performed by the two belonging to Gray, of Belfast, was unexceptionable; that of Sheridan's, similar to but lighter than Gray's, though badly worked, and, meeting with an accident, was next, as to depth. Law's, of Shettleston, did its work well, but not so deep as Gray's and Sheridan's, the latter being powerful implements, and very steady, particularly Gray's. As to the three and four horse-grubbers, the trial was not of a sort to come to any just decision, though the implements were by the first makers of the day; each choked in a short time, from the extreme foulness of the land, which had been up to a short time previously occupied by small farmers. The trial of two-horse grubbers, on Monday evening, which was simultaneous, in some degree, with that of Samuelson's digging or forking machine, was, to us, equally unsatisfactory, and looked upon it, from the number at work together, and the tortuous track each took, as merely for the purpose of putting them in working trim, but we learned after that the judges had come to a determination as to the merits of each.

A further trial of ploughs was had at Killarney, in a field from which the hay had been taken, amongst which Graham's swing plough again established its very great superiority. Gray, of Belfast, after going to some expense in bringing forward his plough, was refused a trial, on the grounds, we understand, of having been thrown out at Malahide, but, as that was undoubtedly the fault of the horses, and not of the plough, we cannot look upon this decision as particularly just. Two two-wheel ploughs entered in competition; that of Balls, Rothwell, Northamptonshire, was awarded a first-class medal, and Ransom's Y. R. C. two-wheel plough highly commended. The ploughs were tested by Stanley's dynamometer (Mr. S., by the request of the judges, being in attendance,) with the most satisfactory results.

The general show of implements was both select as to general utility, and most creditable, in point of material and workmanship, to the manufacturers.

This great national exhibition was concluded by a splendid dinner, at which his Grace the Duke of Leinster, President of the Society, occupied the chair. The evening was most agreeably spent, the speeches good and to the purpose, and we regret that our space will only admit of a bare allusion to these interesting proceedings. Ireland is evidently improving in her agricultural and other great national interests. May the movement continue uninterrupted!

The love of the beautiful and the true, like the dew drop in the heart of the crystal, remains forever clear and limpid in the inmost shrine of the heart.

MECHI'S LATEST IMPROVEMENTS.

In a report of the Annual Exhibition of *The Royal Northern Agricultural Society*, recently held in Aberdeen, at which Mr. Mechi was an invited guest, appear the following statements made by that gentleman at a public meeting of the members.

We are far from looking upon all that Mr. Mechi says and does as infallible, and much that he recommends is, even in England, impracticable, in the present state of things. We think, however, that his expensive experiments in their practical results must be the production of good, inasmuch as they demonstrate more clearly the truth, or enable people to detect error with greater facility.

After the chairman, Sir James D. Elphinstone, had called upon Mr. Mechi to favor the meeting with a statement of his method of farming:

Mr. Mechi rose amid continued applause and said—I think the best way of elucidating the facts I have to bring forward is to do so in familiar style, as if we were in conversation. I shall tell you what I am doing on my part, and shall be happy to answer any questions put to me on the subject. I need not tell you that my great endeavour has been to make farming more profitable than we now find it. We know that it is naturally a slow business, and rather uncertain; because we are dependent, to a great extent, upon the seasons; and, if we can, by any new mode or invention, remove, to a certain degree, this dependence, we are conferring a great benefit on agriculture. I need not remind you that we had a strong illustration of this this year. In the north country you must have generally felt it. We know that a great part of your fame arises from your having a moist climate, and your care in availing yourselves of it by good culture. Your turnip culture is very perfect. But this season you have an Essex climate, and the result is, an Essex crop of turnips. I am not sorry for it in one respect, because it enables you to see the defects of your system; in other respects, I am very sorry. But when I tell you it is common in Essex, to see a burning sun baking our clays like cast-iron, without a drop of rain for nine or ten weeks, it is impossible, in those strong clays, to grow a large crop of turnips; but now that I have put the new system of irrigation in practice, I take care that the land shall never become baked. That sun, which was before so objectionable, becomes, with moisture, the best friend I have got. There is no doubt that if you had had the power of irrigation this year, you would have been in a much better state than you now are. This would be attended with expense; but everything in agriculture must be so. I do not think it is so much a question of expense we should attend to, as—whether it is remunerative

after it is done; and, I do honestly assure you it is remunerative. Now, supposing I tell you what it costs. I would first ask what is the price per ton of iron piping in this country? I paid £4 5s. per ton at Newcastle, last year, for three-inch iron pipes.

Convener Watson replied that the Commissioners of Police, as a public body, got their piping at £6 15s. per ton. This year it had been £6 10s.

Well, gentlemen, resumed Mr. Mechi, 3 yards of 3-inch piping weigh 118 pounds; and, for round numbers, we will call it a hundred-weight. Now, it requires 15 yards per acre—that is 6 hundred-weight of iron-piping; and 600 yards at 6s. 6d. per hundred-weight would be 39s. That is the extreme quantity required per English acre. Then comes the question of pouring some lead into the joints, which would make a probable addition of 6d. per yard, and then the work is done so far.

The other day, I had a letter from Mr. Myles of Bristol, a good practical farmer and a farmer's friend. He has adopted this principle of irrigation since he saw mine: and he wrote me a letter to say that he had done the whole of his by gravitation at the rate of two pounds per acre, which is very cheap indeed. The first year it doubled his grass crop. He said he never saw such a crop before, and if that is true, as I quite believe it is, it is a striking illustration of the benefits of the system. But, to resume my statements, I will say your piping has cost you about 45s. per acre; the rest you can calculate. At one end you have a hydrant. I have got one of these for every eleven acres; so that all you see on the farm is fifteen little iron posts, on 170 acres; and to these I attach, as you do to the fire-engine in your town, a gutta percha tube of 200 yards in length. At the other end you must have a forcing pump of some kind; it may be gravitation, or it may be steam. That of course is a point very easily ascertained. I have two miles of underground iron piping, and I can put on the liquified manure, and plough it in three feet deep and bring the cart home again, for three farthings a ton, a sum so ridiculously small, compared with the usual expense, that I think I may strongly recommend the plan to your notice. You have heaps to make and turn, you have your carts to drive and bring back, you have roads to mend, and there is much expense in preparing manure for turnip crop: but in my case, supposing my bullocks deposit a hundred loads of pudding upon the boards, I fire at it in the morning with this fire-engine, then it goes in a stream to the great tank, from this it is forced in a fluid form anywhere within two miles, sinks into the ground to the very roots of the crop and is in action twenty-four hours after it is dropped. You lose what you do not see, but feel most seriously. You lose your ammonia, for it is one of the most volatile things in the world, and I wish you to understand what your most eminent men will tell you—that there is nothing will dissolve your soil like ammonia. You use lime, but I assure you that the recent experiments of Professor Wey, and other men of eminence, have shown that lime is secondary in its effects on the soil to ammonia. If you want to improve a bad clay, I assure you that if you take your manure-

as it drops from the animal, with plenty of water, and let it at once into the soil, your subsoil will be fertilized. The worst clay on your farm, which has grown no thing for years, when manured in the ordinary way, after a shower of this liquor, will grow even rye-grass in three months. It is a chemical question—your soil is acted on by the ammonia, and is softened and made ready for ploughing. I have a field of five acres which used to starve a couple of cows. I sowed that field seven years ago with oats, and put in the finest grass seeds from Mr. Gibb's of Piccadilly. They were all choked up by the indigenous weeds, and I no more saw them. Last year in May, I began to work it with the liquid manure and continued through the winter, and now it is covered with the finest grasses—I now keep ten head of cattle and three horses on it, and they never eat it down. In root crops the same result take place; the crop is doubled. My beans are perfectly level by the application of this fluid. In the case of wheat, you must take care not to put it on after turnips, because your wheat would be too strong. When you adopt that principle I think it will not be necessary to have two years' crops; I think you will be able to grow it all clover, instead of mixing with ryegrass. The same result will take place in your fields as in your greenhouses and hothouses. Does the gardener when he has heat give his plants water daily? Otherwise they would be ruined, and, therefore, I am particular in bringing these matters before you. Suppose I wanted to put guano on my field, I would put it into the tank agitated by an air-pump, and in a quarter of an hour you would see it pass out in a stream, going down into the subsoil to the roots of the plants. The great advantage is that you absolutely fertilize the bottom-soil, while with the plough you cannot get down above two feet and a half. I used to lose many crops by wire worm, which is common in Essex, but no insect can stand the ammoniacal shower. The moment you see a fly on your turnips apply your jet, and the insect must escape or die. We put on a hundred gallons a minute all day long, and all night long; we do not stop even at dinner-time. Fortunately for me, I obtained a little bog, and there I got plenty of water that now is a great source of fertility; in fact, I would not give it for £3000, because I can make better use of it than I could of the money. You have a farmer at Mirehill, and another in Ayrshire, in your own country, who have made these experiments in a profitable manner. That they have received censure it is not to be wondered at, because there was never anything new but was censured. It is natural that we should be attached to old customs, and it is proper, because, otherwise, we might follow men who ought not to be followed; but I do not think it is your duty to test it by the common rules of calculation—pounds, shillings, and pence—and to go into the question without prejudice. I have reason to know that every man who has carried out this principle has reason to congratulate himself on his success. If you follow in our steps you will not have the difficulties we had to encounter in a new undertaking, and if any or all of you like to come, or send to me, you

shall have full access to my farm—(loud applause). I believe I was the first who attempted to send out all the manure. Last year I had twenty dead horses and some dead cows, besides the puddings, in my tank; I had thirty feet of solid stuff, and, though I had air pipes at the bottom, I could not lift the mass. Luckily it dropt into my head to apply the air pump,—I pumped down the air, and the solid matter was set in motion till brought within the line of suction, and that took it away. All these dead horses, except the large bones, have gone through a hole the size of my finger; and I could undertake to put you all into the tank, and in four weeks every bit of you would go through the hole—[laughter]. When a mass like that is brought into contact with water you can have no idea of the chemical affinity that takes place. The gas of fermentation is taken care of by the water; it does not go to air, but is laid up in store in the water to go of in the fertilizing stream. Tenants who have large farms and long leases, might make such arrangement with the landlords as would give ample opportunities for putting the system in practice, and preserve unimpaired the interests of both. Water itself is manure for grasses, as is well known by those who have meadows, and if it were mixed with the excrements of your animals the results would astonish you. I shall now be happy to answer any questions before proceeding to my other subject.

Sir J. D. Elphinstone—I should like to know for the intimation of the meeting, what has been the whole cost of the steam-engine and piping on your farm of one hundred and seventy acres.

Mr. Mechi—As near as I can put my expenses down, and I was pretty particular, I would say that the piping, at the former price of iron, cost £4 5s. per acre; the tank cost £80; the engine of six-horse power [four would be sufficient] £150; the piping cost £150 per mile, that is £300 for the whole farm. I would recommend having a hydrant for every six miles, as gutta percha tubing is six times the price of iron; the gutta percha cost £50. Then there is the digging, &c. say £100 for that. That comes to £650 for the whole farm. You, gentlemen, use a good deal of straw for manure, and for littering to your animals. I have all mine on grating, and I find it answers well. Perhaps you would not like that, but I would recommend it, especially for sheep. It does well for pigs in hot weather. Bullocks do very well, and I think they would do better if the fore part where their knees go down were covered with matting. Mr Mechi then detailed his mode of cleaning his cow-houses, and described more minutely the method of distribution of the manure. He then, in answer to Sir J. D. Elphinstone, said they required two little boys and a man, whose wages would come to 26s. a week, to keep the two engines going, and put on eighty gallons a minute. One of the most important things, Mr. Mechi continued, is, that the deposits must be kept in constant agitation by a pressure of air sufficient to force any one of the company through a three inch hole as long as an eel—[loud laughter]. The great secret of profitable farming was this, to be able to grow a very large increase on a small space of ground. The

great friend of the farmer is mauling, and if they double their manure, they will then have some hopes of doubling their crops. He would advise them to collect their straw, and direct a jet upon it, which would extract all the soluble manure, leaving clean straw, which would soon rot by the same operation. In reply to a question from Sir James, as to whether it would be advisable to continue irrigation during frosty weather, he said that, during last winter, they irrigated every day till their pipes were frozen, unless their land was so hard as to allow it to run off, and, in every case, the result had been most satisfactory. In fact, the manure had a tendency to prevent the ground from being frozen.

THE QUACKERY OF AGRICULTURAL SCIENCE.

In offering a few remarks on the subject named above, I beg to disclaim all personal reflection.—I shall aim only to expose things, not persons.—And first, permit me to explain what I mean by the term *science*. The general term means truth, with all its attributes and adjuncts arranged symmetrically. In its restricted or special sense, the term means full knowledge of an art or business in all its parts reduced to rule. For example, the science of agriculture, is a complete theoretical and practical knowledge of all the arts and means, practical and theoretical, required in conducting a farm in the best manner. The science of agriculture or scientific agriculture, does not mean a few skimmings of scum from the well of knowledge, a few imperfect analyses of a few handfuls of soil from a few fields; nor are the requirements of science fulfilled by an occasional dip in the spring of knowledge. The most scientific farmer I ever saw, could not analyze a handful of soil, according to what we call science. He had acquired by long experience and observation a knowledge of soils, their defects, and the remedies, that enabled him to judge with precision the quality of any soil, without the aid of the alembic or crucible. Now, if he had been enabled to resort to the art of Chemistry, it would have saved him much time and labour in acquiring his knowledge; but still he was a man of true science. It does not follow, because the blacksmith cannot explain the *science* of his use of air in his forge, or why he blows air among his coals, or why the doing so increases the heat of his forge, that he is not a scientific blacksmith—he may be and very often is a perfect master of his branch of science, so far as the practice of his own business is concerned. And he can teach others the art and practice, though he cannot teach the more theory. Again, a man may acquire a perfect knowledge of agriculture from other teachers, than professors of Chemistry and Geology. To an observing eye, a soil will itself give indications of its qualities. I knew a man—I know him now, who, if he were about purchasing a piece of land, would look at the growth of the trees, bushes, and even weeds that were on the land, and could by them tell what the land was. I am aware that I shall be considered as an empiric rather than as a scientific teacher, if I go on in this strain; and therefore I shall proceed to my object, after one more remark, which, if

some folks consider it a *parthian* shot, I hope it will hurt nobody. I would give more for one ounce of good sound science, derived from practical experience, than for ten pounds of that derived from ordinary modern “scientific analyses and essays.”

I have long since come to the conclusion, that, as respects the science of medicine, there is more quackery in the profession than out of it, abundant as is the supply of the latter; so also in agricultural science, there is ten times as much quackery in the science as taught, as there is in the ordinary practice of agriculture. Pray, sir, what is a science? I have endeavoured to define the term above; but let me try again. True science is a *knowledge of a man's own business*, is it not? If a man knows how to make the most profit with the least amount of labour and capital, I imagine, whether you call him scientific or not, he possesses the best sort of knowledge of his business; and if this be not at present called science, it ought to. But here, just here, this successful farmer is called from his plow to listen to the harangue of some one who talks to him about the absence of the calcareous, or some other principle in his soil, and the necessity for his applying lime, potash, and ammonia, &c., &c. Well, the farmer will say, this is all very well, but I raise good crops, notwithstanding the absence of lime, &c., and what more will your addition enable me to do!—But says the lecturer, let me analyse your soil, and that will enable you to raise larger crops.—He goes to work, analyses the soil, and furnishes the farmer with a prescription as follows:

- Phosphate of Lime, 100 lbs.
- Sulphate of Ammonia, 10 lbs.
- Carbonate of Lime, 500 lbs. &c., &c.

Mix thoroughly, and spread broadcast over one acre. Now this is all very well, but where is the farmer to get the various ingredients? The result is, the lecturer pockets his fee, and the farmer the loss; for it is impossible, even though the articles were ever so necessary to the soil, that they could be obtained by all, or even by anybody scarcely, considering the number of farmers. A few farmers may, by extra exertions, obtain some of them; some few may obtain one or two of them, but comparatively few persons in the great multitude of farmers, can obtain any of them. I need not enlarge upon this subject.—This quackery is at this day every where prevalent, in forms as various as the physiognomies of the propagators.

Now let all farmers take heed to themselves in this, and learn that the science of agriculture is that true knowledge of one's own farm and its soil, that enables him to make the most of it, without impoverishing, but rather continually improving it, at the least expense, in labour and money. If lime be accessible to you, try a small quantity on a small piece of land of a fair average of your farm; if it improves your crop to the amount of the expense of its application or more, then you have a scientific variant for extending the application; if it does not, then you will have lost but little, either in money or labour. So with all other experiments; try them on a very small scale, and enlarge them upon success. Devoted as I am, and always have been to science, I would

not give one practical experiment for all the "scientific" theories of Liebig and other chemists put together, for practical farmers' use. The true science of agriculture is to be drawn alone from intelligent practical experience; and in the absence of such, the most perfect theories will be of no avail, in agriculture or any other business. I would by no means be understood as opposing the progress of agricultural chemistry—quite the contrary. A knowledge of it is a great and powerful assistant to the farmer. It will enable him very often to hit upon an improvement in his soil, that years of practice might not accomplish. But it is not the main or principal agent that he is to look to. A knowledge of the principles of action of all things in which we are engaged, is essential to a perfect understanding of the means to arrive at an end; and we should therefore study the science of an art, let that art be what it may. But this study of the science is one thing, and submission to the humbuggery of brazen-faced pretension another. Let every farmer study well and thoroughly the theory as he pursues the practice of agriculture, and thus improve and correct the latter by the suggestions of the former, as he progresses, and then he will soon become a scientific farmer.

On the contrary, we must all take care that we do not carry our opposition to *spurious* science into the territory of *true* science. Because practice does not always or often result in the support of theory, we must not therefore take it for granted that all theory, or even the particular theory involved, is unsound. We must continually bear in mind that all the operations of nature, the growth of plants, the formation of nutrition, everything, are governed by fixed laws; and that the theory is the mere arrangement of these laws, into a system of practical purposes. According to these laws, all the operations of the farm must be carried on to obtain the best results, and all our necessary failures will be, and must be, in proportion to our conformity to or deviation from those laws.

If, for example, any practice fails to produce the result indicated by the theory, one or two things will be self-evident; either the theory is predicted upon false principles, or the operator has failed to carry the theory into full effect.—This failure should not be considered as evidence that there is no such thing as sound theory. I believe that nine-tenths of the so-called scientific theories of the day, are the veriest scientific nonsense; and yet who shall say which is the tenth, or truthful one?

And now to the main object of our paper—the remedy for quackery, in all its forms and phases, where is it to be found and how obtained? The answer is plain—in the liberal education of our people. I cannot conclude this paper in a more appropriate way, than by addressing a few words to all our agricultural friends on this subject.—Few men have mixed more in the society of farmers than I have, and I am compelled to say that there is no one expenditure made by them so grudgingly, as that for the schooling of their sons. Among ordinary farmers, they "cannot spare them to go to school, except one quarter in the dead of winter;" and even then the cheapest

school, if there be a choice, is sought for. Now to obviate the evils of false, and to secure the advantages of true science, a liberal education is essential;* the education of all the youth in the State—nothing more, nothing less. Until this is accomplished our agricultural community will continue to be the prey of quackery in all its forms.

—Country Gentleman.

G. B. SMITH.

* NOTE.—Some time in the summer of 1851, (Sept. 15) we (the Associate Editor) had occasion to write a "short essay" on this subject, at the request of a correspondent. We have never lost sight of this great necessity of our race, and when we are more at leisure, and our columns less crowded, will indite a more lengthy discourse, from the text which Dr. SMITH has furnished above, though we are not quite sure that we shall arrive at just the conclusions that our venerable friend himself would, on this subject.—ED.

AGRICULTURAL.

We have been favoured by a gentleman from the County of Norfolk, with a sample of what is rarely seen among the Agricultural products of this country, and of this County in particular, namely, *Millet*. The sample in question, the produce of *one grain* of seed is of luxuriant growth, and measures in height about six feet. It was taken from a field of Millet on the farm of L. H. Hunt, Esq., Warden of the County of Norfolk, and is, we are assured nothing more than a fair specimen of the whole crop. Millet is an excellent article for fodder, both for horses and neat cattle; and the seed, which is very abundant, is the very best winter food for poultry that can be given. In such seasons as this, Millet would be particularly valuable, for while the drought makes a light hay harvest, Millet seems to flourish best under a scorching sun. Those desirous of testing the advantages of Millet will have only to make a personal application to the gentleman above named, and we are authorised in saying, he will be most happy to gratify them. When Millet is sown for fodder it should be done about the 8th of May; and one peck of seed is sufficient for an acre of ground—the crop being taken off like hay, while a little green. When wanted for seed, half a peck is all that is required, and of course it should be allowed to ripen.

We have also received a sample of Wheat from the farm of J. B. Carpenter, Esq., of Townsend, a portion of the same crop which is now the admiration of the Canadian department of the New York Exhibition. By a letter to Mr. C., from the person in charge of the Department, it appears that repeated applications have been made for this wheat by Americans; and that small quantities, of not more even than an ounce, have been eagerly sought, for the purpose of propagating this description of grain. The wheat is a fine specimen of the white flint kind—beautifully bright, plump and even—and does Mr. Carpenter, and the County of Norfolk, much credit.—*British American*.

The best investment for a farmer is live stock and plow-shares.

TOWNSHIP OF HAMILTON FARMERS' CLUB

FALL AND SPRING PLOUGHING.

At the meeting of the Township of Hamilton Farmers' Club, held at Dickson's Inn, Court House, on Saturday, September 17th, 1853. P. R. Wright, Esq., President of the Club, in the Chair.

Present,—Messrs. Forsyth, Masson, Bourn, MacIntosh, Bennett, Ball, Alcorn, A. J. Burnham, Richardson, Wade, Sutherland, Baraet, &c., &c.

The subject for discussion was, whether it is most profitable for general cropping to plough in the fall or the spring. Mr. Sutherland introduced the subject by reading the following:—

ESSAY.

Man in the present race for riches is fast forgetting the old land marks of prosperity, and "speed the plough" is now abandoned for speed the ship, up steam or hoist sail, and away to the gold diggings. Speculate in Railroad stock, shave notes or lecture on Phrenology, anything but drag out existence at the plough tail. How often do we hear the remark—why the majority of farmers know but little more than the horses they drive. It is true the occupation of the farmer requiring in most cases his undivided attention, prevents him from making graceful manners or showing exterior accomplishments his particular study, yet he will be found quite as much imbued with that noble sentiment "do to others as you would be done by" and as much energy in his calling as those embarked in other pursuits.

The discoveries of the present century have perhaps done more for the general prosperity of the world than all that have preceded it, and although the farmer has participated largely in the benefits arising from these discoveries, they have been of still greater advantage to the commercial man.

The steam engine whether used by sea or land, has done so much to "annihilate time and space" and has given such an impetus to business, and created such a demand for manual labour to prepare the way for this mighty auxiliary, that the farmer will have to double his diligence to keep pace with the times. The man whose services you once readily secured for 2s. 6d. per day now doubles the dose, or if you demur tells you he's off to the railroad or the diggings. One of two things is self evident, that if the farmer has to pay 50 per cent. more for the manual labour of his farm, he has got to tax his energy to find appliances to reduce the cost of this item or play a losing game.

These preliminary remarks may no doubt seem irrelevant to the subject to be discussed, but my object for introducing the matter in this way, was for the purpose of advocating the introduction of labour saving machines on a more extensive scale, knowing how tardy we often are in procuring implements we even feel satisfied will be of incalculable benefit to us.

The question under discussion, whether it is most profitable to general cropping to plough in the fall or spring, will I am aware have advocates

for both courses, but although I lately heard an intelligent farmer express his surprise that people ploughed so much of their land in the fall and thereby exposing it to what he considered the injurious effects of the winter's frost. I have no doubt the majority of farmers will advocate its adoption from the impression that the action of the winter's frost has quite a different effect from what the above party supposes. The advocacy of fall ploughing will of course admit of various qualifications as regards its adoption—and in some cases it may not even be advantageous, but I feel convinced, that when done at the proper time—and on this point I hope something will be said—it will not only be found most expedient but most beneficial. One of the objections to sowing on fall ploughing is that the land is frequently baked so that a good seed bed cannot be got, to counteract this I would recommend the free use of the cultivator either before or after sowing, I have tried both ways and found them answer the purpose equally well. The cultivator I have successfully used was manufactured by Bruce of Dumfries and is a credit to Canadian enterprise, it has the advantage of cleansing itself better than any thing of the kind introduced from the States, and is more light and easily handled both by man and horse, one span of horses will thoroughly pulverise twelve acres a day to the depth of three or six inches.

I think by rounding the ridges well up in the fall with one ploughing—and cultivate as stated in the spring it would be better than twice ploughing which is often adopted—and by this means you would have fresh soil to act on your crop, whereas when you plough twice you are exposing the very surface employed the previous season. If by the use of the cultivator one ploughing can be dispensed with another advantage would be that the land could be left undisturbed until a later period in the fall allowing the cattle some advantage in the run of the field. In a section of country where fall wheat is extensively grown these remarks would not be applicable, but in this section of the country where the greater proportion of the cereals are sown in spring the matter is more momentous. There can be no doubt fall will always have a preponderating claim over spring ploughing independent of its merits—because the rapidity necessary to get our crops in in this country in the spring, will always make the farmer desirous to get as much done beforehand as possible.

Confident that I can do little more than introduce the subject, I now leave it in the hands of those more capable to grapple with it.

Mr. MASSON said, he was sorry the Chairman had called on him first, as he would rather have heard some of the others speak before himself. All that he would like to say was about ploughing, had it not been for fall ploughing he could not have got along at all—even if he had had men and horses for nothing, it would not have answered him at all to plough in the spring. He had often thought of sowing green crop on fall ploughing, just cultivating it well in the spring—as it was long before the land was sufficiently dry in the spring that it was difficult to reduce it fine enough. He would even prefer fall ploughing for Barley

but he would cultivate the land in the spring—just sow on the Barley and cultivate it in, the land he found was a dry soil. It was often said that fall ploughing did not do on light land, but he had found as far as his experience went that it answered as well on light as on heavy land. Twelve years ago he lived on a farm in Haldimand, and people told him he was spoiling his land by ploughing in the fall, but when harvest time came he reaped three times as much from his fall ploughed land as his neighbours did from their spring ploughing.

Mr. Bourn said, that in regard to heavy land he would give in his adhesion to what Mr. Masson had said, but with regard to light land he had his doubts of the benefit of fall ploughing, he had tried it on his land and he found it very difficult to get grass seeds to take on land that was ploughed in the fall. For Peas he would not plough in the fall. His spring wheat had done best on his spring ploughed land, and his grass seeds took far better. He had never used a cultivator but he thought to cultivate with one was very similar to spring ploughing, on heavy land he thought fall ploughing best.

Mr. MacIntosh said, he was not aware that he could throw much light on the subject, he was of opinion that what was good for the goose was good for the gander, he therefore thought that fall ploughing was best for both kinds of land, he found that on his light land fall ploughing answered far best, it both enabled him to get in his crops earlier in the spring and he thought that it checked the growth of thistles and other weeds better than spring ploughing. Contrary to Mr. Bourn's experience, he found his grass seeds did best on fall ploughed land. To prevent his high land from running down with the heavy rains he run two or three furrows across the hill.

Mr. BENNETT said, he was not much of a farmer, he used to live by his wits, but getting afraid he should starve for want of stock, he had turned his attention to farming, he had paid some attention to the subject and he thought fall ploughing much the best, he found that when he planted Indian Corn on spring ploughed land, it was mostly cut off with grubs, but when he planted on fall ploughing it escaped, he sowed his spring wheat on fall ploughing, and it was as good as any he saw, fall ploughing enabled the farmer to get in his crop earlier in the spring.

Mr. BALL said, he must say that he had but little experience in farming, and on heavy land no experience at all. With regard to fall and spring ploughing, he was of opinion that if land was perfectly clean it made very little difference when it was ploughed; but if it was dirty, it did best to plough it with a good deep furrow in the fall, and then plough it very light in the spring. When land was very light and ploughed in the fall, it was apt to bake so solid, with the heavy rains, that it was hardly possible to cover the seed without a ploughing in the spring. He had never used a cultivator, as there was too many *wigger heads* in their land on the plains for a cultivator to work.

Mr. A. ALCORN said, he had had a good deal of experience both with fall and spring ploughing. For spring wheat, he preferred ploughing

his land twice in the fall; but for other grains, he ploughed all the land he could in the fall, and as much of it over again in the spring. He was of opinion that (other things being equal) the oftener the land was ploughed it gave the better crops. He found that his crops was best on land that was ploughed in the fall and then over again in the spring. He was of opinion that spring ploughing was far better for keeping down thistles and other weeds than fall ploughing.

Mr. A. J. BURNHAM said, he concurred in what Mr. Alcorn had said. He would prefer to plough his land in the fall and then over again in the spring, except, perhaps, for spring wheat, that, he thought, did fully best on fall ploughing.

Mr. JOHN WADE said, he thought the essay we had just heard was very creditable to Mr. Sutherland, as he thought it very well got up.—He had had a good deal of experience for a number of years with both fall and spring ploughing; but there was so much difference in farms, some wet, some dry, some being high, and some low—so that what would apply to one farm might not apply to another in the immediate neighborhood. For spring wheat, his practice had been to prepare the land in the fall, and if he found it much baked in the spring, he went over it with a cultivator; if not baked he sowed on the fall ploughing. He thought that we were on the eve of an entire revolution in our ploughing, since the attention of mechanics had been turned to the improvement and invention of farm implements; that, he thought, would in many cases supersede our old ones. Last spring he had got what we called a "Michigan Sod and Sub-soil Plough," which beat anything of the plough kind he had ever seen,—this plough had two moulds, the one going before the other, the first mould paring off about two inches, and the second mould turning up the soil seven inches deep completely over the sod, and thoroughly pulverizing the soil, just as if it had been done by a spade. He ploughed down ten acres of land last spring, with this plough, for peas; the plough cut a furrow about twenty inches wide, and nine inches deep, and there was not a weed come up except that pest, the Canada thistle. He had just finished ploughing the land for peas before the severe rain storm that we had in the spring, so that it was nearly a week before he could get the peas sown; he sowed them with the drill, and had a very fair crop; now he was preparing that same piece of land for fall wheat; he tried the Scotch plough on it, and it just turned it up in great lumps; he then tied his new plough on it, and the work it did really surprised himself, it so thoroughly pulverized the soil and made it so fine. He thought that this plough would do better work and more of it than any plough ever made in Scotland; he used three horses on this plough. He thought a good cultivator was of very great importance on a farm; he had got a new cultivator this season that was going to beat anything yet; it runs three, four, or five inches deep, and cuts up everything in the shape of weeds. He thought that with a cultivator, such as he had got, and a Michigan sod and sub-soil plough, we might dispense with summer fallow nearly altogether. Though he considered that land was best prepared in the fall for spring

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PREPARE FOR WINTER.

wheat, yet he must say that for the two last seasons part of his ground was ploughed in the fall and part in the spring, and he could tell no difference in the crop. He thought that since the Weevil came among us that late-sown spring wheat escaped its ravages better than what was sown early; consequently, if late sown, another ploughing would be necessary.

Mr. FORSYTH said, he liked to plough all he could in the fall; when preparing for spring wheat he ploughed as soon as he could after harvest, and ploughed again late in the fall. He had tried barley both on fall and spring ploughing, and he thought that sown on the spring ploughing was rather the best, but not much. For oats and peas, he would plough in the spring.

The PRESIDENT said, he would not detain the meeting by a lengthened summary. Although there was diversity of opinion upon minor points affecting the question, it appeared the principle of fall ploughing was fully upheld, especially on stiff soils. The reasons influencing this opinion appeared to be—the meliorating effect of frost—the necessity of early sowing—the shortness of our seed time—the fitness of the team for fall work, &c., any of which might be a sufficient inducement to keep the plough from rusting in the fall. A necessary adjunct to fall ploughing is the use of the cultivator or "scarifier" in spring, preferable to ploughing, for two very important reasons—it leaves the finely pulverized surface in the best possible state for a seed bed, and is capable of doing five times as much work. The implements described by Mr. Sutherland and Mr. Wade are, no doubt, of the very best construction. He had used the "triangle" steel teeth, and found every purpose answered. One thing is certain, without a cultivator, the benefits of fall ploughing can never be fully realized; and those gentlemen who have not used this indispensable implement must make up their mind to get one. The plough so highly recommended by Mr. Wade, constructed as it appears upon the principle of the "Chinese troins," might be capable of doing its work in a business-like manner, but he must dissent in toto from the principle sought to be established by its use—to bury two inches of the surface, containing probably ten times the quantity of vegetable matter, under seven inches of sub-soil, appears so contrary to common sense, that he could not be induced to give this specimen of Yankee ingenuity even a trial, without a guarantee for deficiency of crop. Mr. Newton might rest satisfied that a good iron Scotch plough would be wanted a few years longer. He must congratulate the meeting upon having this important subject so ably introduced by Mr. Sutherland, and trusted the discussion would produce good results.

The thanks of the club were given to Mr. Sutherland for his essay.

The next meeting of the club was appointed to be held at Dickson's Inn, Court House, on the last Saturday in October, at 2 o'clock.

The subject for discussion to be the construction of fences.

Mr. J. Wade to introduce the subject by an essay.

WALTER RIDDELL,

—*Cobourg Star.*

Secretary.

Old winter is again coming, with his piercing frosts and snow storms. If ever there was a year when farmers should look close to the management of all kinds of live stock, that time is most assuredly the present. With high cash prices for every article raised on the farm, and only a very moderate supply of hay, oats and roots, the economical maintenance of domestic animals through the approaching long winter is a matter to the farmer of the utmost importance. Our object is not to write a long, elaborate article, but simply to give timely warning to our Agricultural readers, and throw out one or two practical suggestions.

First,—Pay special attention to the comfortable housing of cattle, by the adoption of such expedients, in the absence of warm, substantial buildings, as will shelter the animals from the inclemency of the weather. This is the surest way of economizing their food and promoting their health and growth. An animal secured against wet and cold, in a clean and well ventilated place, will do better, that is grow faster and lay on more fat and muscle, upon 25 per cent less food, than under the painful circumstances in which too many cattle are placed during the long and severe winters incident to this country.

Second,—Regularity in feeding is a point of more importance than is generally thought. A smaller amount of food punctually supplied at regular intervals, with abundance of water, dry and clean bedding, will better support an animal in a thriving condition than a much larger quantity irregularly given, and under opposite conditions.

Third,—A variety or mixture of food given to stock is both economical and salutary. It is astonishing how a few turnips, mangels, carrots &c., in addition to hay or straw, promotes the healthy action of the system and a vigorous growth. Even the mere brushing of grain, or the cutting of hay or straw before given to stock, is an economical and beneficial practice; and

the cooking of cattle food by boiling or steaming, and mixing, has been found to promote largely the same ends.

The few simple suggestions, if carried into practice, as circumstances may allow, would be found exceeding beneficial to farmers, in enabling them to keep their stock through the winter with economy and success.

THE EXHIBITION OF 1853.

We have delayed this number in order to take some notice of the Provincial Exhibition which was held at Hamilton, on the 4th, 5th, 6th and 7th insts. The weather though threatening during the first day, cleared up on the second, and proved highly favorable. The show was a most successful one in all respects. The official Report, Prize List, and President's Address will appear in the November number. A general description of the more prominent objects is all we can give in this number. The speeches at the evening discussion, and the resolutions at the annual meeting will be found interesting.

The site chosen for the Exhibition was a delightful rolling field about ten minutes walk from the market place and finely elevated. Upwards of 30 acres were enclosed for the occasion. The inclement weather of Tuesday, and the wet and boisterous appearance of Wednesday retarded the progress of affairs a little; but by Thursday morning the ground presented a very fine appearance. Taking it as a whole, the Exhibition was a considerable improvement of that of last year at Toronto, although in some things there was not so much display, and in others no improvement upon those then exhibited. The first thing which attracted the attention on entering the grounds was a handsome first class Carriage for the Great Western Railway to the right of the gate. This was one of six carriages made by Messrs Fisher, Williams & Brainard, for the Great Western Railway Company, and is a magnificent affair of the kind. It is about 43 feet long, by nine feet inside, with fourteen double seats and two single seats on each side. The seats are very finely stuffed and covered with a showy plush. The backs of the seats swing upon strong brass hinges, so as to allow the cars to run either way without turning. The windows, fitted with fine plate glass, are made to slide up, and are protected by a jalouse frame, which also slides up at pleasure. The floor is covered with a pretty oil cloth, which gives a very comfortable appearance. The iron work of this and the other carriages made by this firm, are manufactured by Messrs, McQueston & Co., of Hamilton and is highly creditable to the establishment. The Floral Hall, which is at all times the principal attraction, was situated on the summit of the elevation. It was 120 feet long by 80 feet broad, forming a Centre Hall about 24 feet wide the whole length, and two Side Halls also the whole length of the building. The eastern Side Hall was devoted chiefly to the flowers and vegetables. There was a good display of Annuals and Verbenas. The display of Dahlias was not so great. There were some very tastefully done

up table bouquets. There was a very pretty floral design by Mr. Kerr's gardener, filled up in the different plots with Astors, Margolds, Verb nas, &c. There was a fine box of Annuals from Messrs. Thomson and Murray of the City Gardens, Hamilton.—Judge Campbell, of Niagara, had some beautiful Cork-combs, seemingly the same that figured at the Horticultural Show in Toronto lately, and received so much merited praise. J. F. Moore of Hamilton, had a very fine display of Balsams. Eneas Kennedy had a very good collection of plants from his own private garden. Mr. Fleming of Toronto, had a pretty fair collection of Green-house Plants. Thomas and Murray had a very pretty flowering Jasmine, very useful and suitable for a hall window; it flowers at the early part of the season and gives out a powerful and most delightfully fragrant odour. They had a fine specimen of Veronica, and a very pretty Gesnera Zebrina, a plant of beautiful foliage. The *Veronica Asatica* from the same gardens, was a very fine specimen, with a beautiful soft blue Mulous Flower. It grows easily and flowers freely, but requires a good deal of heat to bring it to perfection. There was a very graceful Japan Pine from the same garden. This plant is well adapted for a conservatory. The *Lantana Ewingi*, a flower something like a Verbena, but more variegated. The flower first becomes orange, it then fades to a fine soft pink, and from that comes nearly to a white, the flowers appearing in all their different stages in one plant at the same time. It flowers from the beginning of June all the way to winter, and is well adapted for bedding out. It has been only recently introduced. There was one plant, a native of California, termed the *Zascaucia Californice*, with a beautiful scarlet flower resembling a fuschia somewhat. This plant is also well adapted for bedding out. J. F. Moore exhibited a very healthy India Rubber plant, and one Orange tree with one specimen of the fruit upon it. There were two fine specimens of Aloe, and a very fine specimen of the *Abutilon Striatum* with a beautiful striped well shaped flower, a considerable variety of *Cacti*, and a rather curious plant—the *Echin Anthony Z. barma*—from the same garden. On the opposite side of this Hall there was a large display of Cabbages chiefly from Toronto gardens. There were also Squashes in great variety, Celery, large Beet, and also some remarkably fine Table Beet. Mr. Leslie showed a good collection of Peas and Quinces of very fine quality. In the Western Hall there was a most magnificent display of white and red Onions, the finest by far that has yet been exhibited at any of our Fairs. There were some Tomatoes of a large size, but not very tempting. There were some very fine small ones. There was a good display of white Table Turnips. The Capsicums were a very excellent. There were some good Cauliflowers, two heads especially very fine. The *Chicory* looked well, it was chiefly from Pear's garden, Yonge Street. The Carrots were also a good display. There were three baskets of varieties of vegetables. The Baron de Longueuil displayed some very fine Egg Plants of a large size. The Water Melons were rather an ordinary display. The Normal School, Toronto, exhibited specimens of the production of the Experimental garden. There were Cabbages, Oats, Barley, Potatoes, Corn, Carrots, Beets, Mangel Wurzel, Turnips, &c. &c., with a full report of the quantity raised, and all the particulars connected with the various specimens. The Peaches were a very good display. There were some excellent hot-house grapes from W. H. Bolton's garden. Enoch Turner, and W. B. Jarvis of Toronto, and W. P. McQueen of Hamilton had also some fine specimens. There was a very prolific specimen of Grape, we think from Mr. Lewis of Saltfleet. There were upwards of forty bunches on each

vine about three feet long. Mr. Humphreys of Toronto, exhibited an excellent basket of sweet-water Grapes. This was decidedly the best specimen of that kind of Grape in the exhibition. There were 56 different entries of "twelve Winter Apples." The winter table Apple, made a good display. The Ribson Pippins were very fine, there were some excellent baking Apples from Leslie's Garden. There were seven entries of 20 varieties of Apples, some of them very fine, from Leslie, Turner, Bruckley of Hamilton, Fuller of Hamilton, and others. Dr. Craig's son displayed some fine specimens of Dried Plants, very well prepared. There were only a few of them displayed, the greater part of them being left in the Portfolio. The centre Hall was more especially devoted to the Fine Arts. At one corner there was a beautiful display of Artificial Flowers. Miss Campbell of Dundas, exhibited two vases of most exquisitely finished Wax Flowers. The leaves of the Flowers were all formed separately by hand, and some of the Flowers were most magnificently formed. Mrs. Beck exhibited a specimen of the New Lily—the *Victoria Regia*. Miss Mutton of Dundas, Mrs. Ruthven, and others, had also specimens of the same kind of work. Mrs. Beck's Wax Fruit was very good. There was a curious specimen of ossification sent in by Captain Nichol of the Grange, Hamilton something of the deer species. Mr. Stenmet, Hamilton, exhibited some Dentistry. Mr. Date of Galt, had a large case of Edge Tools of very fine finish. There were two Electric Magnetic Machines, but we could not learn who showed them. There was an excellent case of American Cutlery. The Pen-knives seemed beautifully finished. John Baine of Hamilton, exhibited two Saws very tastefully ornamented. There was a box of Native Copper. A model of a Steamer by Wm. Brown Ship-carpenter, Chippewa, and a model of a vessel with an improved stern. There was some Powder from the Gore Powder Mills. Mr. Morrison, Jeweller, Toronto, exhibited a case of very pretty Jewellery. Messrs. Ruthven and Watson, James Street, Hamilton, had also a very good display of Jewellery, consisting of Flower Vases, Cruets, Fruit Baskets, Egg-cups, Liquor Stands, Candlesticks, Toast Racks, &c., &c. There was a large case of Stuffed Birds. P. T. Ware, Watchmaker, Hamilton, exhibited a beautiful eight-day Gold Watch, made in their own establishment from the raw material. This watch was sold for \$250. Messrs. Armour and Ramsay had a number of School Books very well got up. Barnes of Hamilton, had some fine specimens of Binding. H. Gibson exhibited two volumes of Fletcher's Bible, most magnificently bound. The edge gilding was done in a superior style. They had also Burns's Works done in an illuminated binding very elaborately finished. W. H. Glasco, exhibited a case of very fine Furs in Caps and Gauntlets, &c., &c. Lawson & Brother had a case of made Clothes. One white embroidered vest looked very pretty. A. M. Titus of Branford had one suit of black, valued at £15, beautifully made up. The sleeves of the coat were lined with a new kind of French serge, of an orange colour, quilted; the inside of the coat was lined with silk and beautifully quilted. The bottom of the pants were done up with hair-cloth. There was a coat and vest of Canadian cloth, very beautifully stitched. We believe these came from Grimsby.—There was carpeting and furs from the same quarters, but no names were attached. Mr. Seord exhibited a case of hats and furs. There were some excellent specimens of blankets and shawls, from Mr. Paterson's factory, at Dundas. Mrs. Beck had a very pretty knitted curtain. There were knitted socks from Mrs. E. D. Moore of Brindale. Mrs. Peter Jones of Brantford, exhibited some silk patch-work quilts.—There was a great variety of crocheted work embroidered table covers, from Miss Springer. Millinery in

great abundance from Lawson & Brother, and from the same house two richly finished ladies' sacks. Raised work from Miss Faulcengh, of Hamilton. Mrs. H. M. Spencer, of Dundas exhibited some beautiful crocheted work in caps and collars, and Mrs. Panton, of Hamilton, had some very pretty braided children's dresses. Mrs. Silverthorn, of Oakville, exhibited two pretty straw bonnets, of domestic manufacture. There was a very beautiful crocheted veil, designed and executed by Miss Margaret Sinclair, of Brockville.—There was a crocheted work design of the fountain and part of the interior of the Crystal Palace, at London, very well executed. Small sofa pillows by the Misses Hills & Carpenter, of Hamilton, raised worsted work, beautifully executed. Some embroidered shirts of a superior quality, were also exhibited. There was a very pretty embroidered vest, exhibited by Mr. Cozen, of Hamilton. Mrs. Scott Burn, and Miss Burn, of Toronto, exhibited some exquisitely embroidered work. Miss G. Ibraith, of Hamilton had some raised worsted work, and patch-work. There was a beautiful down quilt, a very expensive article. Mr. Fleming, of Toronto, exhibited some admirable specimens of Wood Carving—one, a large figure of Time, was well executed,—but one beside it had considerably more attractions for the public—it was a little man in the Tam O' Shanter, or Souther Johnnie style, with a bottle in the one hand, and a glass in the other, in the act of filling up the glass, the liquor being represented as coming out of the bottle; the countenance had rather a misanthropic appearance; he was styled an advocate for the Maine Law. There was a very neat Drawing on Wood, by Lucius O'Brien, of Toronto. The end of the Hall was covered with landscapes, portraits, and drawings of various kinds.—Some paintings of Indians, after Catlin, and several other specimens by Peter Jones, were very attractive. Mr. Reid had several well executed portraits and landscapes. There were some pretty water-colour paintings, by Waudesford, Milne, the Daguerrean, of Hamilton, had a large case of finely executed Daguerreotypes. There was a pretty Monochromatic drawing, by Mrs. J. Wettenhall, of Hamilton, and two frames composed of artificial leaves, by the same lady. Hoppner Meyer, of Toronto, and Mrs. Meyer, exhibited a great variety of Miniature Portraits and Crayons—two of these, a portrait of Mr. S. Richard and a portrait of Mrs. Fitzgibbon, were exceedingly well executed. Amongst Mr. Meyer's collection perhaps Windsor Castle was the happiest. Mr. Pell of Toronto had not much of a display in his line, only some few frames, very well executed however. Before leaving this Hall it may be stated that it was well fitted up, and well arranged, and very tastefully festooned with evergreens. It proved altogether too small however, for the immense crowd that entered the grounds during the day. There would be upwards of 30,000 visitors altogether from the time of opening, and when it is considered that several thousands of these were desirous to see this Hall at one time, it will be apparent that it was much too small. There was also a great fault in its construction in not having more outlets. We imagined that this one would have been a considerable improvement upon last years, but with the exception of a little extra size there was no difference strictly speaking. It is to be hoped when another Floral Hall is to be erected that a Prize of £25 will be offered for the best rough design of a Hall to give size, comfort and easy egress. In the hope that this idea will be taken up we proceed to the

TENTS,

Two of which were devoted to the Mechanical Arts, the other to Agricultural Produce. In the Mechanical tents we found on entering a very fine

display of coopering. Benjamin Fuller, of Waterford, Norfolk County, exhibited a portable boring machine, well adapted for carpenter work. It seemed to bore easily and worked with great rapidity. He had also a patent sliding gate so constructed as to open with the weight of the horses feet and thus prevent the rider from dismounting to perform that operation. It looks very pretty in the model, but it is not likely to get into general repute. There was a fine sample of nails from the Hamilton Spike Works. Lawrence Lemmon of Port Robinson, exhibited a felloe-cutter, to be driven by water power. The principle was simple, and as any kind of circular may be cut by it, it can be easily applied. Its cost is \$40. There were patent scales but no name attached. William Roberts of Port Robinson exhibited a small box containing samples of the various woods grown in Canada, all carefully named in their technical order. There are sixty different pieces. The same person exhibited a saw log measurer made by himself. M. Lossing of Brantford exhibited an economical Churn and Washing Machine combined, valued at \$12. Mr. Vansickle of Oshawa had a patent rotary churn, simple in appearance, and said to be better adapted to the process of churning, as the rotary motion gathers the butter and also breaks up the cream better than the Stationary Churn. He sells them at \$8 a-piece. There were several Straw Cutters in this tent but we saw nothing new in that line on the ground. Brown and Childs exhibited three boxes of Over Shoes, made at their establishment at Montreal. The person in attendance stated that they turn out 1,500 pairs of such shoes daily. John Todd, of Bantord, exhibited a Model for a Vertical Saw Mill for rough timber. One advantage which is claimed for this construction is that it can cut back as well as forward, the saw having teeth on both sides, and also an improvement in the carriage. Mr. Crombie, of Galt, exhibited a very heavy Mule Saw, fitted up on the old principle. There was a good Drilling Machine here, and the Old Flax Machine was displayed. There was a very neat, well-finished Buggy, supposed to be from Galt. There was also a complete Set of large Bellows, capable of blowing for four black-smiths' fire at one time, and worked easily by one man—Cost about £30. J. P. Pronney of Hamilton exhibited a very pretty, well-finished Family Carriage. It was made after the plan of the English private carriage to turn upon its own ground and was prettily stuffed and quilted inside. It was valued at £150. Mr. Gartshore, of Dundas exhibited a Steam Engine, of 15 horse power, manufactured at Dundas and valued at \$1,500. William Gordon, of Hamilton, had a very fine display of Cooper Work in Pails and Buckets, Butter Dishes, and Drinking Cups. His cups were exceedingly well made. In the other tent, Mr. Kirkfield, of Toronto, had an excellent display of Whips in various mountings, some of them valued at \$9 a-piece, and some at \$12. There did not seem to be any other whips on the ground. William Gibson, of East Market Place, Toronto, had a Set of very strong, substantial Harness, worth £20. Jacques & Hay had a French Bristle, very elaborately ornamented with carving in natural flowers. It was ticketed for sale—value, £32 10s. They had also a Sofa, and a most magnificent Sideboard, and a Set of Dining room Chairs in mahogany, of a beautiful pattern. These were said to have been made to order for John Young, Esq., Hamilton. Field & Davidson of James Street, Hamilton, had a very fine supply of Saddle-y of various kinds. There was one beautiful Side-saddle, finely quilted; there was a summerset saddle and several riding saddles of excellent workmanship; horse cloths, team harness

and two sets of single harness. They had also two trunks, one very fantastical y fitted up and bound with silver plaited hoop, valued at \$60, another with brass hoop less fanciful,—cost \$40. The Chipewa Foundry had a large display of very fine stoves. Beside these stood a newly invented tin reflector or baking apparatus, made by John Dean of Vienna. He guarantees that it will bake seven loaves of bread with one small bit of hardwood, and warrants to cook all sorts of meat economically and well,—cost \$12.

CATTLE.

The show of cattle was good, both as regards quantity and quality, each different breed being well represented. Among the Durhams were a number of fine Bulls and we think it would be difficult to give a decided preference to any one animal, at the same time we cannot but mention one shown by Mr. Wad, of Port Hope, and "North Star" belonging to Mr. Jones. There was also a very handsome yearling exhibited by the Hon. Adam Fergusson, which fully sustained his character as a successful breeder. Mr. Parsons, of Guelph, also showed some good Cows and Heifers in this class, and also among the Grade cattle. There was also a large show of Devons, Messrs. Ferrie and Tye, as usual standing well forward. Mr. Locke, of St. Thomas also showed some good animals. Mr. Ferrie had two beautiful two year old Bulls, one of which we believe he has sold for \$75. Mr. Ewart of Dundas, was the largest exhibitor of Ayrshire cattle, having on the ground eleven head, all well worthy of notice. We observed also some very fine ones shown by Mr. Webster, of Fergus. The Foreign Cattle exhibited were not numerous, but of good quality, though they looked jaded by their long journey, especially those which had crossed the Lake during the late squally weather. The best of them belonged to Mr. Hardie, of Munroe County, near Rochester, who had a large Durlam Bull (imported we believe) and a Heifer one year old, which weighed 1200 pounds.

There were eight entries for working Oxen, but only four yoke were on the ground on Thursday. The show of Fat Cattle was small indeed, but some of those on the ground made up in size for want in number. The largest of all was a Durham Ox shown by Mr. Ben. Miracle, near Niagara, and stood above seventeen hands high.

THE ANNUAL MEETING FOR DISCUSSION.

On Thursday evening, the 6th instant, the friends of Agricultural improvement met to interchange their views on such topics of general interest as might be introduced to their notice. Professor Wilson, the English Commissioner to the New York Exhibition, was expected to be present, and it was also stated that Dr. Rolph would take part in the meeting. The honorable gentleman did not make his appearance, having been somewhat fatigued by his recent tour, and the presence of Professor Wilson being likely to make up for all deficiencies. The remarks of the Professor and the gentlemen who followed him were listened to with great attention. We copy from the report of the *Globe*.

Cel. Thomson, President of the Board of Agriculture, said that in the absence of Mr. M. Athie, the President of the Agricultural Association Mr. Sheriff Tracwell, the Senior Vice-President, had consented to assume the duties of Chairman.

Sheriff THADWELL, having taken the chair, and expressed his regret that Mr. Mathie was not able to be present, congratulated the citizens of Hamilton on the position which their city now occupied. He was in the city twenty-five years ago and at that moment he could only recognize in it one building which was then erected. (Cheers.) Now they occupy a high and enviable position, and he believed it was to agriculture they were mainly indebted for it. During the evening he trusted they would have an opportunity of listening to some valuable lectures by gentlemen of eminence present, and he would therefore detain the meeting no longer, but at once introduce to them Professor Wilson, one of Her Majesty's Royal Commissioners to this country.

Professor Wilson, who was warmly received said—I assume you came here this evening more to learn than to tell you anything. Had I known some short time ago that the Agricultural Association of Upper Canada was desirous of hearing me express an opinion on the mode of farming that is carried on in the old country, I would have got together a few ideas to lay before you, but till I arrived here, I have not the slightest notion that anything of the sort would be expected of me, and, therefore, I can only make a few comments on what I have seen to-day. And of all the things exhibited, those that have struck me the most and which will probably admit of the least difference of opinion, are the implements with which the grounds have been very respectably fitted to-day. In regard to the general farming of the country I am not competent to form any opinion. I have seen some what of the farming of the States, but the farming of Canada I have had so little opportunity of observing, that I do not feel prepared to express an opinion on it at all. But as I have seen on the ground to-day many implements which I have also seen in the States and many of which have come from the old country I think I may venture some remarks upon them. In doing so I shall follow the order in which I happened to see them. First of all, at the extreme end of the grounds, I saw a variety of churns, made by a man with a very eastern looking name—Raphael I think. In a pastoral country like Canada, butter-making is an important pursuit, and to make butter well, we ought to understand the principles on which it should be made. And I do not think that these are very correctly understood either by the makers of churns or by the persons who use them, otherwise we should not have so many absurd machines for the purpose brought under our notice. Now, as regards the making of butter, it is in the first place rather an improper term to make use of, because the butter is already made, and all we have to do is to effect the separation of one portion of the milk from the other. The cow makes the butter, and we have to separate it from the butter-milk which the cow gives us also. The particles of butter being much lighter than the fluid in which they are suspended, come to the surface in the shape of cream, which consists of about one half butter and one half of the substance in which it floats. The only way in which we can separate the butter from this substance is by mechanical agitation. We want a machine then which shall mechanically agitate the cream in the best and most economical manner. But there is another thing required to facilitate the separation, viz., a right temperature. Theory teaches us and practice confirms it, that butter comes better at one temperature than at another, a moderate temperature being better than when it is either too hot or too cold. Experience has established that a temperature of about 60° is the best at which butter can be made. In constructing a churn, the error we have two points to attend to. We must have first, a means of regulating the temperature, and secondly a means of mechanical agitation. In the churns exhibited to-day—and I can

say for them that they are very much better than most I have seen—there is a very good means employed for regulating the temperature, the body of the churn being placed in a vessel larger than itself, and the space between them filled with water, either hot or cold, according as it is necessary to raise the temperature of the cream to 60° in winter, or to lower it to that point in summer. The next thing required is mechanical agitation but the mode employed in this churn to effect this is not so good as it might be made. The dasher is of a very imperfect description, and does not give you anything like the power which a slight alteration in its shape would yield, and besides does not avail itself of the mechanical aids afforded in machinery by multiplying wheels. Were these introduced, the dashers would turn six or eight times for each turn of the hand instead of once, and the butter would be made much more quickly, and with a less expenditure of physical power. At the Great Exhibition of 1851 of all the churns brought forward there was only one fully to my mind, as combining the two essentials I have named, and that one came from France. I did all I could to get some of the machine makers to purchase it, but as none of them would do so, I purchased it myself, and as I have used it now for two years in my own dairy, I am quite certain as to the correctness of the principles on which it is constructed. At the Great Exhibition it got the prize both for quality and time. As regards the tum, I consider that butter is always best made, when the churning occupies about twenty minutes. Along side of these churns I saw to-day a very good field-roller. It was an iron roller, but the cylinder, instead of being solid, was divided into six or eight different sections. This, it is obvious, is a great improvement on the solid roller. Just in front of this Rochester stand I was very much pleased to observe a chaff cutter very superior in construction to any I have seen since I have been on this continent. I cannot at all admit the advantage of those chaff-cutters which I saw so generally in use in the States, consisting of a small cylinder armed spirally or horizontally with fixed cutting knives, which cut merely by pressure against a leather roller placed above them. They might do to cut particularly dry straw only one length, but a farmer wants a chaff-cutter for other purposes than that. He wants it to cut hay as well as straw, and damp hay or saw as well as dry. I saw one here made by a firm Kirland & Millington, on the same principle as the chaff-cutters which are so extensively used in the Old Country. The cutting part consists of a large fly-wheel, on the radii of which are fixed cutting knives of a scymmer shape, concave instead of convex as they are sometimes made. The machine has got three knives and when the fly-wheel is turned round, these come successively in contact with the matter exposed to them, and the straw or hay is cut off and falls into the truck prepared for it. One defect in the machine is, that the knives do not give a continuous cut—that is to say, one knife leaves off cutting before another begins, and both the speed and the power of the machine are thus diminished. And the worst tendency of the check is, that it does not act vertically but laterally. The faster you go, the greater lateral action you give to the fly-wheel. If this fault were remedied by the knives being made a little longer, the speed would be more equal, and the strain on the machinery would be less. Alongside of this I saw another machine, brought over to this country some two years ago by a gentleman who deserves all thanks for having introduced this and other machines on the ground—Mr Boulton of Toronto. Although in this machine there are only two knives, the cut is continuous, and by a very simple arrangement in the cogging of the wheels, you can lengthen the cut from a half-inch, suitable to horses—to two inches, suitable for ruminating cattle—or four

inches, the length required for litter. Having mentioned Mr. Boulton's name, I would call your attention also to a horse hoe, which in England we find to be a very essential accompaniment to a drill as it enables you to keep your land clean—one of the essentials of any thing approximating to good farming because no man can thrive who grows two crops, and can only send one of them to market. (Hear, hear.) It is a very simple contrivance, and if you only arrange that the width of the horse hoe between the wheels, shall be the same as that of your drill, wherever it goes however tortuous may be its course, you may thus clean your wheat with great facility. I have been accustomed to hoe out some 400 acres every spring most effectually, at an expense of about 6d an acre, instead of having to pay 3s. or 3s. 6d. or 4s. for hand hoeing. It enables us also to get over the whole ground much more speedily, than we would often be able to do if we had to depend on manual labour. I was very much pleased to see a subsoil plough, an instrument that has achieved a great renown in England. There is now, I think scarcely any difference of opinion as to the great advantages of subsoiling, provided the land is drained. I believe that this which is called Reid's subsoil plough will give the farmer all the advantages he desires. It is very effective in its operation—inexpensive in its cost—not liable to get out of order—and very easily worked. The one I am speaking of is sent, I believe, by Colonel Marks and it can be had for some fifteen or twenty dollars. Adjoining to this is another implement, perhaps less known—the seaifer or broad-share plough, made by a Mr. Bentall. It is somewhat difficult to describe it but it is a very effective instrument, which may be put to various uses. In England it is probably chiefly used in shearing the stubbles, after we have taken our grain crop off the ground. By shearing the stubble an inch deep, you cut up and destroy all the weeds. Seeds which are lying under the soil ready to spring up next year, are brought to the surface, and springing up in the autumn are destroyed by the winter's frost. This broad share plough is also a good thing for paving turf, and by some slight alterations, which it will readily admit of it can be turned into a subsoil plough, or it may be converted into a horse-hoe, that will hoe two or three rows at a time. In short it is a very useful instrument. The sale of it in England is very extensive and there are very few farms of any extent without it. The question of ploughing would give a man enough to talk about for a week, and I will therefore only notice one or two peculiarities which struck me as being improvements, and which I shall be very glad to adopt when I get home. There was a plough, made by Baron of Norwich, with a very good arrangement of what is called in this country the clavis, or what is called in some parts of England the bridle. Instead of any of the complicated arrangements of screws, and nuts, generally employed, the whole arrangements of depression and lateral action are determined by two screws, one vertical and the other horizontal. By means of the vertical screw, you depress the action rod, or elevate it, to suit the depth and style of land you are ploughing; while by means of the horizontal screw you are enabled to set your plough to the land in the way required; I think we shall be glad to call it the Canadian system when we get it introduced into England. I also saw what I believe to be an entirely new machine made by a man by the name of Anderson, for dropping potatoes. It was a very simple mechanical contrivance, and cannot but be useful in a country where labour is of importance.—I was also very much pleased with a very simple form of a hay rake, made by a Mr. Harris. It seemed quite as effective as any of the others,—simple in its construction, and consequently less expensive, and

less likely to get out of order. Implements of that sort we do not use much in England, where we are obliged to throw our grass about considerably after it is cut, and we use a hay making machine which throws the grass all over the field, and then we usually draw it together with one of those toothed machines. But I have seen its use in America, and I think this one exhibited by Mr. Harris, will be an improvement on those generally employed. I was also much struck by the drill made by Messrs. Adkins, Elsworth & Co., of Hamilton. The arrangement seemed very suitable for the purpose for which it was intended and the price at which they are prepared to make it is not at all high. At home we find it most essential to use drills, and even in a young country like this I am sure it would pay a farmer well to drill his crops just for the purpose of keeping them clean. Alongside of this, amongst the other things, I saw a reaping machine made by the same firm. This was similar in its construction to all those very imperfect machines which I have seen before, except that in one part Mr. Adkins attempted to achieve, what Mr. Atkins, of Chicago, has already achieved—in the shape of a self-acting raker. The Chicago maker invented a very ingenious mechanical raker, one of the prettiest things I have seen for a long time, and at the same time, I believe, one of the most useless. In the contrivance of your townsman, I do not think he has got quite the thing he wants, but it only requires one little alteration to make it perfectly effective, as far as a machine of that sort can be. But, although I am pretty well acquainted with reaping machines generally, I am opposed, upon principle, to the whole of them. I am told that a good man with a cradle and scythe, will cut down—I am afraid to tell you how much I have been told he will do in the States—(laughter)—but I believe a good man will cut down from two to three acres a day. Where the crop is light, and the straw much drier than it is in England, I have no doubt a man can cut down three acres. On the other hand we have an expensive machine, requiring two men and four horses to work it, that certainly cannot cut twelve acres, the work of four men with cradle scythes. This surely is no triumph of mechanical skill, and we must have a better article before we can use it to much advantage. I think the whole principle of the machine is defective. In the first place, we have got a lateral traction—the drawing power being applied to one side, instead of the centre of the machine. This surely is an absurdity. No one would handle the rake with the handle stuck in one end of it. Then, when you take it into the field, it cannot work, till a man goes before and cuts away a width equal to that of the machine all round the field. And besides this it can only work in a circle. Still I believe there may be some cases, in which it may be advantageous to use it. In the Western Prairies, and it may possibly be the same in Canada, labour cannot be had at any price, and if you have four horses reduced to the value of two men, it may be of use. I should have mentioned too that I think the principle of the reciprocation cut—the cut backwards and forwards is a false one. In every motion of that sort the mechanic will tell you that there are what he calls the dead points, that is, points in which the knife is in a state of quiescence, and during that time the machine is still being pulled on by the horses. The result is that during that period the straw is not cut, but is either wrenched off or dragged along, and every half hour the machine has to be pulled up, to allow the wheels to be untied from the heads of grain and straw twisted about them. I think we have not been fairly treated

in this matter of reapers. In 1851 two reapers came over from this continent to England, just at the time when the crutches had been taken away from the farmers and we had to stand on our own legs, and began to think that we must do something. It was just at that time that the American machines came to us and being heralded in with that modesty so peculiar to our cousins, we thought it must be something very extraordinary. I never saw the agricultural mouth open so wide, and it swallowed it in at once. (Laughter.) It turned out, however, on enquiry that, instead of reaping machines coming from the continent of America to us, they had actually gone from us to America, that Hussey's machine was merely a bad copy of the reaper invented by the Rev. Mr. Bell of Carmylie, and used on his brother's farm in Forfarshire since 1828—and that of McCormick's machine there was an exact figure and description in the *Mechanics' Journal*, for November 1825, a patent having been taken out for it by a man of the name of Ogle. I give the Americans all credit for drawing attention to those machines. Had they only done that, I would have been satisfied. But to my great annoyance, I have twice heard public men in the States go a great deal further. In one case I heard a gentleman of high standing in science, a man of whom any country might be proud, refer to these machines as a wonderful proof of the ingenuity of his countrymen, and how far they were before us, and how much indebted we ought to feel to them for having introduced our own machines to us. (Laughter.) And at Saratoga, the week before last, I heard a most excellent and admirable address, delivered by a gentleman who is a credit to the United States. It was well conceived, characterized throughout by perfect good faith and good feeling, and most ably delivered; but he could not keep away from these reaping machines, and while referring to them as a triumph of American ingenuity, he turned round and bowed to me, as if I would corroborate him, although I could do nothing else than smile at it. But more than this, he said we had to thank the Americans for having introduced these machines, notwithstanding that for half a century our Parliament had offered a reward for the same thing! (Laughter.) This was purely imaginative, no such reward having ever been offered. The fact is, that in 1835, five of Bell's machines were made at Dundee, and brought over to this country, and sometime afterwards Hussey's machine was brought out, the same as Bell's, with some few alterations that were the opposite of improvements. Instead of putting the draught in the centre of the machine, as Bell does, Mr. Hussey puts it at the side of his; and I leave it to any mechanic to say, which is the most effective plan for pulling anything forward. (Hear, hear.) Again, with Bell's we have only to send in a man to cut sufficient room to admit the machine, which will go in any direction we please. The difference of Hussey's in this respect I have already mentioned. But I have one more fact to tell you, which amply compensates me for all the annoyance and anxiety I have had about these reapers. It is this, that at the great agricultural show in England, this year in Yorkshire, and at the Gloucester meeting of the Agricultural Society, Mr. Bell, the Scotch farmer, brought forward the machine which he has used on his farm for 25 years, and in the open field beat both McCormick's and Hussey's. I have got the papers containing their accounts of this, (*Gardner's Chronicle* and *Agricultural Gazette*, Aug. 13, and Aug. 20, 1853,) and will leave them in the hands of your society. The Jury in both cases were unanimous, and the gold medal and twenty guineas were given

for Mr. Bell's machine, while McCormick's and Hussey's were only "commended." (Cheers.) I am glad of the opportunity of making this statement, and, as I see a Reporter present, I have some hopes of getting it into print. I said the same thing several times in the States, but I never got it put into print there. (Laughter.) The learned Professor then thanked the audience for the attention with which he had been listened to, and resumed his seat amidst hearty applause.

Professor BUCKLAND wished to make a remark in regard to some of the implements to which Professor Wilson had alluded. He begged to state distinctly, as it did not appear on the cards that Bentall's scambler was imported into this country by Mr. John Arnold, of Toronto, and that the small plough next it, for making drills and earthing up potatoes, was also introduced by that gentleman. Mr. Arnold, he was authorized to state, was quite disposed to sell them at the price he gave for them in England, without, he believed, adding anything for freight and incidental expenses. He might likewise state that the subsoil plough to which Mr. Wilson had alluded, and which would be found, with the other two implements, to the west of the Floral Hall, was introduced by the excellent ex-president of the Association, Mr. Marks. When he (Mr. Buckland) left England, it was considered the most efficient subsoil plough then known, and he believed that nothing had since been introduced to displace it. Castings had been made of it in Toronto, and in a very short time they would be able to produce the article at a very cheap rate.

Col. THOMPSON said that his Excellency, Lord Elgin, had placed a prize at the disposal of Mr. Street, to be given in such a way as the Association might consider most beneficial to the country. It was resolved to offer it for a tree-making machine, but none had been produced. A gentleman, however, was now present, who had only arrived that evening, bringing with him a model of a machine of which he was the inventor. The production of the model would not entitle him to the prize, but the meeting would be glad to give him an opportunity of showing by it how the machine itself would work.

The gentleman referred to by Col. Thompson, then took his place on the platform, and by means of this model explained the *modus operandi* of his machine, which, from his explanations, appeared to be sufficiently well adapted for the end intended. He stated also his design to settle in this country, with a view to pushing his invention here.

Professor BUCKLAND having explained the reason of the absence of the Minister of Agriculture, Dr. Rolph, whom they had expected to be here, by stating that it was owing to the fatigue he had experienced after travelling over a rough part of the country during the last two or three weeks.

The CHAIRMAN said he observed in the room a member of the Board of Agriculture—Mr. Christie—and he begged to invite him to the platform.

D. CHRISTIE, Esq., M.P.P., being thus called upon, said they had heard a great deal of interesting matter this evening in reference to Agriculture from the distinguished person who had done them the honor of attending. (Cheers.) He thought, however, that Prof. Wilson had somewhat underrated the power and effectiveness of the reaping machinery, and he considered that the remark made in regard to the Western States applied, and that most decidedly, to the Province of Western Canada. Particularly during the past year, a great deal of difficulty had been experienced in procuring labor; many of them having had to pay at the rate of ten York shillings, and, in some cases, a dollar and a half a day. In these circum-

stances, where the crops had to be taken off the ground in a very short time, and where there was a great scarcity of hands, it was found absolutely necessary to make use of a reaper, and though the machines they had might not be so perfect as they ought to be, still they were a decided gain in the way of harvesting. There was another instrument that he would have liked the Professor to have alluded to at more length—the cultivator or horse-hoe. He was satisfied that they ploughed their land a great deal too much. The delving process was much more natural and effective than the process of ploughing. However, they had not as yet a machine, that would perform that work, but so long as they remained without it, they could do a good deal with the cultivator. By using this implement freely, even very dirty land could be brought into right condition and kept thoroughly clean. The soil, also, by being exposed to the atmosphere, was made much more fit to receive the seed. A great deal might be said as to the other implements exhibited. He believed he never saw so large and so good a collection of ploughs as was exhibited. (Applause.) He thought that the agricultural implements generally reflected great credit on Western Canada. He might say a great deal also with reference to the very fine stock exhibited to-day. The present exhibition, in that respect, was superior to any other they had ever had in Western Canada. Take the Durham cattle for instance, and he did not think they could be beaten even in the State of New York, where they had so large a number of fine animals. Take the Devons again. He had never seen so large a collection of fine thorough-bred cattle as there were among these to-day. The horses also were a splendid collection, and in the department of sheep too, they had a very pleasing evidence of the spirit and enterprise that were now being displayed by the farmers of Western Canada. He saw also a number of very fine pigs. He hoped the farmers of Western Canada would profit by this institution. He was certain that if it kept up its character, agriculture in Western Canada must prosper. Agriculture was the first and most important profession in the country—engaging as it did about eight-tenths of the whole population of Western Canada. If the people were friends to themselves, by promoting these agricultural associations, and encouraging the growth of agricultural science, they would very soon indeed render Upper Canada one of the finest portions, not only of the Western Hemisphere, but of the world. (Applause.)

Professor WILSON said he quite agreed with what Mr Christie had said in regard to ploughs. He had not seen so good a collection of them on this side of the Atlantic. He agreed with him also that the system of ploughing was bad, but they were beginning now to leave it off as fast as they could, and in the steam digging machine now brought into operation, they imitated as nearly as possible the action that was given to the spade by the muscles of the deliver.

On the motion of Col. THOMPSON, seconded by Mr. CHRISTIE, a vote of thanks was passed to Professor Wilson for his kindness in attending the Show, and for the very valuable hints he had communicated.

A vote of thanks was also passed to Mr. Sheriff Treadwell for his conduct in the chair, and the meeting separated.

The peach originally was a poisonous almond. Its fleshy parts was then used to poison arrows, and it was for this purpose introduced into Persia; the transplanting and cultivation, however not only removed its poisonous qualities, but produced the delicious fruit we now enjoy.

THE ANNUAL MEETING.

The annual meeting of the Directors of the Association was held at Hamilton on Friday forenoon on the grounds—Mr. Sheriff Treadwell, 1st Vice-President, in the chair; George Buckland, Esq., Secretary.

The following is a list of the Delegates present:—Russell, Archibald Petrie; Laurik and Renfrew, Robert Beil, William Wallace; Frontenac, Baron de Longueil; Prince Edward, J. P. Roblin; Ontario, Ebenezer Burrell; York, J. P. Wheeler G. D. Wells, Simcoe, Dr. P. S.; Halton, Thomas Douglas; Wentworth, Thomas Davis, Joseph Webster; Brant, Geo. Stanton, Charles Purdy; Wellington, John McCrea, James Wright; Lincoln, Judge Campbell; Welland, John L. Mott, Sr.; Middlesex, J. B. Askin, T. C. Dixon. Elgin, Isaac Minor, James Armstrong; Oxford, John Barwick.

RESIGNATION OF THE PRESIDENT.

The Hon. ADAM FERGUSON commenced the proceedings by reading a letter which had been received by the Secretary from Mr. Matthee, the President of the Association. Mr. Matthee stated that, in consequence of severe indisposition, he found himself unable to continue to discharge the duties of his office, which he begged therefore to resign. At the same time he continued to feel, and would ever do so, a deep interest in the Association, believing that its success was intimately connected with the growth and prosperity of the Province.

On the motion of Mr. FERGUSON, seconded by Mr. MARKS, a resolution was adopted, expressive of the deep regret felt by the Association, that Mr. Matthee from ill health could not continue to discharge the duties of President, and tendering him their thanks for the zeal, energy, and fidelity which had characterized all his exertions to promote the objects of the Society.

OFFICE BEARERS OF THE ASSOCIATION.

Mr. Sheriff Treadwell, first Vice President, was elected President for the ensuing year; David Christie, Esq., M.P.P., first Vice President, and William Niles, Esq., Warden of the county of Middlesex, second Vice President, R. L. Denison, Esq., was re-appointed Treasurer.

THE SHOW OF 1854.

Sheriff ASKIN, seconded by Colonel Thompson, then moved that the next Provincial Show be held in the town of London.

The SECRETARY stated that last evening he had received a communication from the County of Middlesex informing him that if the Exhibition were held in London, in 1854, the County of Middlesex had resolved to subscribe £500, the town of London £500, and the county of Elgin £200, making a total of £1200; besides this it was expected that £300 would be raised by private subscriptions.

Mr. NILES, one of the Directors of the Great Western, assured the meeting that the railroad would be open by the time of meeting next year, and that no charge would be made by the Railroad for any of the implements carried by them to the Show.

The motion was then carried by acclamation, several of the Directors expressing their high sense of the liberality displayed by the local and railroad authorities.

After some discussion as to the best time for holding the Show, the fourth Tuesday or the 23rd of September was fixed upon for next year.

Resolutions were then passed, giving the thanks of the Association to the Mayor and Corporation of Hamilton—the Hamilton Local Committee—Mr. Commissioner Wid. er and the Canada Company for

their prize of £25 for wheat—the Ladies of Hamilton—the Judges—the proprietors of the grounds—the citizens of Hamilton for the manner in which they had promoted the exhibition and for the liberal hospitality they had extended to visitors—the Press—T. C. Street, Esq., M.P.P., for his prize for the improvement of the breed of horses—and the Countess of Wexworth and Waterloo for the donations they had made to promote the present exhibition.

The Baron de Longueuil announced his intention to give a prize of £10 at the next Exhibition for the best Heifer and Bull, not less than two and not more than four years old.

SALE OF LIQUOR ON THE SHOW GROUNDS.

Mr J. P. Roblin begged leave to throw out a suggestion, that in future no liquor should be allowed to be sold on the grounds. If he did not get a pledge to that effect, he would move a resolution, and get a vote on it. He had seen four people lying on the ground in a state of beastly intoxication—an exhibition that illy harmonized with the occasion.

The Hon. Adam Ferguson said he was glad to hear that among the 20,000 people assembled, Mr. Roblin was only able to discover four persons intoxicated. He was a devoted friend to temperance, but he would not go the length of preventing a thirsty man from getting a glass of grog, if he wanted it.

Mr. Roblin said he had seen more than a hundred people worse of liquor; but when he spoke of the four men, he referred to one particular case. He begged to move a resolution to the effect he had stated.

Mr. Bell seconded the resolution. He believed that on such occasions as this, a great deal of evil was caused by giving facilities for procuring intoxicating liquors. The number of drunken people he had seen during the last day or two, was a disgrace to the neighborhood. He had been present at the Boston Jubilee, where 300,000 persons were assembled, in addition to the ordinary population of the city, and he had not seen there one-tenth of the number of drunken men that he saw yesterday.

The Baron de Longueuil said that the Boston people, if that were true, must have very hard heads, as, for one item alone, he had seen a bill for 6,000 bottles of champagne drunk on the occasion referred to. (Laughter).

Col. Thompson would be sorry that a charge of drunkenness should be allowed to go forth uncontradicted against the yeomanry of that part of the country. It should be remembered that a great many of a class addicted to the use of ardent spirits were employed on the canal, and he was sure that it was among these that the instances of drunkenness referred to had been observed. He thought it was impossible for the Association to exercise a control over this. The matter should be left to Temperance Societies, or if they chose, let the question be determined at the next election. If the country should be in favor of a prohibitory Liquor Law, then let it be enacted. If the majority of the people of Canada were of opinion that not a drop of liquor should be sold in the whole country, let a law be passed to that effect; but it only wasted time, and called forth unpleasant feelings to discuss the matter here.

Mr. Roblin, after what had been said, consented to withdraw his resolution.

Messrs. Thompson, Buckland and Dison, were appointed a committee to revise the by-laws of the Association, and report at next annual meeting.

A vote of thanks was then passed to Mr. Trendwell for his conduct in the chair, and the meeting separated.

PRIZE ESSAYS ON CHEESE AND BUTTER MAKING.

We have much pleasure in giving publicity to the following:—

A. S. Arnott, Esq., P. R. Wright, Esq., President of the Society, and James Sutherland, Esq., offer the following premiums, to be competed for by the Ladies of the Township of Hamilton.

For the best Essay [in detail] on making and curing of Cheese - - - £1 5
 For the best Essay [in detail] on making and preserving Butter - - - 1 5

The Essay to be sent to the Secretary before the first of November, each Manuscript to be accompanied by a letter containing the name of the author, and these letters will not be opened until after the Judges have awarded the Prizes. The successful Essay to be the property of the Farmers' Club. The Judges to be Messrs. Thos. Page, A. S. Arnott, P. R. Wright, and James Sutherland.

WALTER RIDDELL,

Township of Hamilton, Secretary.
 Sept. 20th, 1853.

REPORT OF CROPS, &c.

The following extracts are from a letter we have just received from Mr. Walter Riddell, dated Sept. 27th. They refer to the County of Northumberland, but they have a much wider application, in several a general one, if the information we receive is correct.

I have a little to say with regard to Agricultural matters; our crops have been all secured in excellent condition, our fall wheat was most abundant, our spring wheat was, I think, very near an average crop though not so strong as last year. Oats are generally complained of as light, my own crop was a full average one. Barley I think was a fair crop, and Peas a good one. Potatoes will be light, and I observe some rot amongst mine. Carrots where sown early are good, and even late sown ones have done better than could be expected. Turnips are very unequal, some fields very good others none at all, my own are very poor—the worst crop I have had in ten years. I have some cabbages and they are bad—the dry weather destroyed these. Mangel Wurzel seem to have done the best of any of my root crops this season. We have had some fine rains lately—our pastures

have revived wonderfully since the rain came, which is of great benefit to our stock.

Fall Wheat has got a first rate chance, the rain has brought it away well—where sown early it looks beautifully. On the whole we have abundant reason of thankfulness to the bountiful Giver of all good for sending us an abundance for man and beast.

THE WHEAT FLY.

To the Editor of the *Canadian Agriculturist*.

DEAR SIR,—I enclose in a quill some insects that are making considerable ravages among my Wheat. As editors of Agricultural papers are generally expected to know all things, I apply to you for information on the following points:—What is the real name of the insect—it is called a weevil here. Is the small orange coloured one the same kind as the two caterpillar looking ones enclosed. (I ask this as seven or eight years ago there was quite a number of the large kind among our wheat here; but I did not observe any of the small orange coloured ones. Will it destroy the grain after it is ripe and put in the barn? Is there any known preventative for it? Is it the same wheat fly that made such destruction among the wheat of Lower Canada some years since? Dear Sir, I am sorry thus to trespass on your valuable time which must be fully occupied otherwise, but as the questions must be of vast importance to many of your readers besides myself, if you could answer them in your next number, you will confer a great favor on

Your most obedient servant,

WALTER RIDDELL.

REMARKS.

The proper name of the insect to which our correspondent refers, is the Wheat Fly, or Midge; (*Cecidomyia triticeæ*). It is a parasitic and dipterous insect, and belongs to a genus which composes several distinct varieties of flies that deposit their eggs in the flowers and ears of a number of cereal plants.

Our correspondent has enclosed in a quill several of the maggots or larvæ produced from the eggs of the Wheat Midge: these maggots injure the young ovary of wheat, and consequently prevent the grain from arriving at a healthful maturity. The injury therefore produced by this insect is done previously to harvest—preventing the proper ripening and development of the grain. Whereas the corn weevil, strictly so called, (*Curculio granaria*) is injurious to grain after it is harvested and thrashed; particularly when stowed away in large quantities either in the granery or board of ship.

The wheat midge is sometimes confounded with the Hessian fly (*Cecidomyia destructor*) an insect altogether different in its habits and modes of inflicting injury on grain. The former impairs the vitality and stunts the growth of the grain in the ear; the latter deposits its eggs and produces its larvæ in the sheaths of the Wheat stem in the lower joint, when the young insect is fully matured, preventing the proper growth and ripening of the straw by absorbing the natural juices, necessary to the full maturity of the ear. It was this insect, we understand, that produced such havoc in the wheat crop of Lower Canada and the Eastern States some years ago, when it was deemed expedient to relinquish the culture of that grain for a number of years.

As to preventatives it is exceedingly difficult in practice to apply an effectual remedy. From our imperfect acquaintance with the habits and modus operandi of many insects injurious to the farmer, the question of providing antidotes is yet involved in much obscurity, but the progress of knowledge arising from some minute and accurate observations belonging to the natural history of these depredators will doubtless throw increasing light on this difficult and, at present, obscure and mysterious topic. In the case of the wheat fly, early sowing has been strongly recommended, and exposing the soil in which the pupa are supposed to be embedded, to the action of the frost. Professor Henslow, (if we remember correctly,) recommends the employment of the fine sieve in separating the larvæ of the Midge from the grain and chaff, and then to burn the former. In the case of the Hessian Fly, he suggests the burning of the stubble on the ground; a practice that has been subsequently tested, and strongly recommended.

We hope soon to be in possession of Mr. Curtis's admirable papers on these subjects, which appeared a year or two ago in the Journal of the Royal Agricultural Society of England, when we will give the matter a more extended consideration.

We are glad to find from a subsequent communication received from Mr. Riddell, that the ravages of the Wheat Fly have not proved so disastrous as he seems at one time to have an-

ticipated. Although his last letter was not written for publication, we are tempted (trusting to his forgiveness) to transcribe one or two paragraphs for the information of our readers.

"I do not think the *weevil* has materially injured our wheat in this neighbourhood, it was certainly not worse in Spring wheat than it was last year, and though I think it was worse in the Fall wheat than it was last season, yet the crop being so abundant it will not be much noticed. There was least weevil in the Mediterranean Wheat with me, I thought there had been more in it as I could not find any while wheat was growing, but on thrashing some a few days ago, I found some in running mill after cleaning up.

I do not know whether you have any *museum* for preserving grains or not, but I think it would be very desirable to have samples on the straw of all the different varieties of wheat and other grains grown in the province—and an account of the soils for which each is best suited. I would send you if you should wish it, small samples on the straw of all the different kinds of grain I grow or could procure. A collection of grains from the different parts of the province would help to corrupt the names as I am convinced that the same variety of grain goes by different names in different parts of the country."

REAPING MACHINES.

"As far as my own experience of reaping machines goes I am of opinion that the cutting principle of Hussey's is very good, cutting clean and well. The greatest objection I have to it, is, that it requires to be bound up as fast as cut, as the sheaves lie right in the track. McCormack's reaper lays the sheaves on one side, so that a whole field may be cut without binding; but then I don't think the cutting principle is near so good, and I think the whole machine is more liable to get out of order. I think a machine that would be most useful to the generality of farmers would be one that would allow of cutting and laying the sheaves on one side, as it is not easy to hire hands to keep a machine going, and is often not convenient for neighbours to exchange them, and should anything go wrong with a machine it is a great loss to a farmer to have all hands idle, even for an hour in harvest. I think there has been far too much desire shown for mere speed, both with reapers and thrashing machines, whereas, had there been more desire shown for good compact machines that would do good work with few hands, it would be far better, the mere object of speed being a secondary consideration."

Mr. E. R. Breisach, of Germany, the inventor of wood gas, has arrived in the United States. He claims this to be a great improvement upon the present mode, both in the economy of the process, and in the quality of the gas. The cities of Basle in Switzerland, Heilbrun in Wurtemberg, and Baireuth in Bavaria, are lighted with wood gas.

* We are much obliged to our correspondent for his kind offer and gladly accept it. It is the intention, we understand, of the Board of Agriculture to commence the formation of the Museum forthwith, and every kind of aid will be gratefully received.—[Ed.]

PRODUCTIVE FARMING.

In a treatise on Productive Farming just issued from the press, the following observations occur:

It is in vegetable as in animal life; a mother crams her child exclusively with arow root—it becomes fat, it is true, but, alas! it is rickety, and gets its teeth very slowly, and with difficulty. Mamma is ignorant, or never thinks that her offspring can not make bone—or what is the same thing, phosphate of lime, the principal bulk of bone—out of starch. It does its best; and were it not for a little milk and bread, perhaps now and then a little meat and soup, it would have no bones and teeth at all. Farmers keep poultry; and what is true of fowls is true of a cabbage, a turnip, or an ear of wheat. If we mix with the food of fowls a sufficient quantity of egg-shells or chalk which they eat greedily, they will lay many more eggs than before. A well-fed fowl is disposed to lay a vast number of eggs, but can not do so without the materials for the shells, however nourishing in other respects her food may be. A fowl, with the best will in the world, not finding any lime in the soil, nor mortar from walls, nor calcareous matter in her food, is incapacitated from laying any eggs at all. Let farmers lay such facts as these, which are matters of common observation, to heart, and transfer the analogy, as they justly may do, to the habits of plants, which are as truly alive, and answer as closely to evil or judicious treatment, as their own horses.

THE PLUM.

Good healthy trees must be raised from stones of the common wild plum. Put them in the ground before winter, and cover lightly with earth—the frost will open them. In April, plant them in rows six inches apart, with sufficient space between the rows to introduce the plough. Turn the soil from the trees till they are a foot high; go through them with the cultivator when necessary, and level the ground. It may then be ploughed towards the rows, and hoed freely. The second year they should be budded from the 1st to the 15th of August. The buds should be set very near the ground. In the following April, head them down to the bud, and treat them as recommended for the first year. I have had no knots upon my trees worked upon the wild plum. One grafted with the Washington has been loaded with fruit six years in succession. They make large healthy trees, and will last an age. The worm does not injure the root. When large enough, plant them 12 feet apart in rows. The soil should be rich. Lime or wood ashes is useful, applied near the root. The main roots should be exposed near the trunk when the tree is rooted firmly enough to bear it.

If you want to keep horseradish, grate a quantity while the root is in perfection, put it in bottles, fill the bottles with strong vinegar, and keep it corked tightly. You may thus have a supply all the winter.

Suet and lard keep better in tin than in earthen ware.

THE STEAM CULTIVATOR.

To the Editor of the Canadian Agriculturist:

DEAR SIR,—In that very interesting and unique little book called “Falpa,” or the “Chronicles of a Clay Farm,” a picture is drawn before the reader of an instrument (not rolling on the ground, but) performing independent revolutions behind its locomotive, cutting its way down by surface abrasion into a semicircular trench about a foot and a half wide, throwing back the pulverised soil as it flies from the feet of a dog scratching at a rabbit-hole.

The only approach to this description in a practicable form,—the idea of steam being omitted,—is Samuelson’s digging or forking machine, which is said to bid fair for superseding the plough in many cases.

To persuade the plough is with many considered an impossibility. Though hitherto almost the first object of the farmer’s acquaintance, and the first of his implements of tillage, the numerous attempts made to invent a substitute are plain demonstrations of the inefficient and unsatisfactory working of the instrument.

A machine somewhat similar to that described by the author of “Falpa” is at present being constructed in England. Invented by a Canadian and patronised by the Bureau of Agriculture, it goes before the world with many indications of success. It has already received the approval of Mr. Mechi, on whose farm at Tiptree Hall the first trial is to be witnessed.

The inspection of a model is necessary to a correct idea of the machine. Differing from that portrayed by Mr. Hoskins, its steam power is stationary, or more properly speaking not locomotive, but placed in a cart drawn by horses, and giving motion to a cylinder behind, armed with teeth; or to quote “Falpa,” reminding one at a distant view, of a half-bred between a hay-tedding machine and a Crosskill’s clod-crusher—but unlike them, fundamentally distinct from any and every instrument that was ever seen in a field, as doing its work not by traction, not by its rolling weight, but driven by its axis, as the steam-paddle, the circular saw, the driving wheel of the locomotive, are driven; supported by its own apparatus, and abrading the soil with its armed teeth, first cutting its own trench, burying itself to the required depth, and then commencing its onward task, *tearing down the bank* (so to speak) on the advancing side, casting back the abraded soil, *earth’s saw dust*, “commuted, wreted, inverted” into the trench it leaves behind.

This much for Romaine’s Steam Cultivator armed with the Falpian claw, that “works up the earth so fast.”

I am, dear Sir,
Your obed’t servant,
A. KIRKWOOD.

Quebec, Sept. 5th, 1853.

Abundant crops cannot be grown for a succession of years, unless care be taken to provide an equivalent for the substances carried off the land in the products grown thereon.

THE PLOUGH SUPERSEDED.

The machine described in the following letter, which recently appeared in the London Times, is, we are informed, an invention of Mr. Romaine, formerly foreman in the Queen’s Printer’s Office, Quebec. Mr. Romaine, it appears, is now in England, for the purpose of completing and introducing his machine in the British Islands. We heartily wish him every success:—[Ed. Ag.]

To the Editor of the Times.

SIR,—A calm and rigid investigation and computation have convinced me that the doom of the plough, as an instrument of culture, is sealed, and that the rotatory forking, or, as it is wrongly called, digging machine, is the only profitable cultivator. Even with six or eight horses, it is cheaper and infinitely more effective than the plough.

Since the trial of implements at my “gathering,” I have received from one of our North American colonies the model of a newly-invented machine, which, by a happy and most simple combination of horse and steam power, will—and I pledge my agricultural reputation for it—not only deeply, cheaply, and efficiently cultivate and pulverise the soil, but at the same time sow the seed and leave all in a finished condition. It will also, by a simple inversion, cut and gather the corn without any rake or other complication; while, both in cultivation and harvesting, its operation will be continuous and without stoppage.

The inventor and his machine have, by the government of the district (!) been placed under my charge and guidance. I have, therefore, on public grounds, and considering the vast importance of the invention in a national point of view, advised the inventor to grant licenses for its manufacture, at a very moderate royalty to the most eminent agricultural implement-makers in various parts of the Kingdom, so that our agriculturists may be secured by competition against monopoly or inferiority, while the inventor will benefit in proportion to the appreciation of his merits. I shall call together a meeting of the various implement-makers, and in due time my practical friends of the old school (who must now consider me quite insane) will have an opportunity on my farm of forming their own conclusions.

I may venture to state generally that the implement when complete will weigh about 20 to 25 cwt., will require a pair of horses, and will represent the power of about 8 to 12, or more, real horses.

I trust I need hardly say that I shall have no pecuniary interest in this matter. The invention has been duly secured. I am, Sir,

Your obedient servant, J. J. MECHE.

Tiptree-hall, Kelvedon, Essex.

The implement for digging will require one man and one boy only, including the management of the steam-engine; in reaping, the same, with the addition of three men to bind as the corn falls into their arms. The men will be carried on the machine.

ICE HOUSE.

Among the useful and convenient appendages to the farm and country family establishment is the ice-house. Different from the general opinion which prevailed before ice became so important an article of commerce, and of home consumption, the building which contains it should stand above-ground, instead of below it. And the plainer and more simple it can be constructed, the better.

The position of the ice-house may be that which is most convenient to the dwelling, or to the wants of those who use it. If it can be placed beneath the shade of trees, it will so far be relieved from the influence of the sun; but it should be so constructed that sunshine will not affect the ice within it, even if it stand unsheltered; and as it has, by the ice-merchants of our eastern cities, who put up large quantities for exportation abroad and others in the interior, who furnish ice in quantity for home consumption, been proved to be altogether the better plan to build the ice-house entirely above ground, we shall present no other mode of construction than this. Mr. Allen in his recent work on Rural Architecture states that five years' experience with one of our own buildings, has confirmed his opinion of the superiority of this over any other plan which may be adopted.

The design here presented is of the most economical kind, yet sufficiently ornamental to make it an agreeable appendage to any family establishment. The size may be 12 feet square—less than that would be too small for keeping ice well—and from that up to any required extent. The idea here given is simply the principle of construction. The posts should be full eight feet high above the ground, to where the plate of the roof is attached, and built thus:

Mark out your ground the size you require for the house; then, commencing at one corner, dig opposite each other, a double set of holes, one foot deep, and two-and-a-half feet apart, on each side of the intended building, say three feet equidistant, so that when the posts stand up they will present a double set, one and a half feet apart. Then set in your posts, which should be of oak, chestnut, or some lasting wood, and pack the earth firmly around them. If the posts are sawed, they may be 4—6 inches in size, set edgewise towards each other. If not sawed, they may be round sticks cut from the woods, or split from the body of a tree, quartered—but sizable, so as to appear decent—and the insides facing each other as they stand up, lined to a surface to receive the planking. Of course, when the posts are set in the ground, they are to show a square form, or skeleton of what the building is to be when completed. When this is done, square off the top of each post to a level, all round; then frame, or spike on to each line of posts a plate, say six inches wide, and four to six inches deep, and stay the two plates together strongly, so as to form a double frame. Now, plank, or board up closely the inside of each line of posts, that the space between them shall be a fair surface. Cut out, or leave out a space for a door in the centre of the side where you want it, two and a half or three

feet wide, and six and a half feet high, and board up the inner partition sides of this opening, so as to form a door-casing on each side, that the space between the two lines of posts may be a continuous box all round. Then fill up this space between the posts with moist tan-bark, or saw-dust, well packed from the ground up to the plates; and the body of the house is inclosed, sun-proof, and air-proof, to guard the ice.

Now lay down inside the building, some sticks—not much matter what, so that they be level—and on them lay loose planks or boards, for a floor. Cover this floor with a coating of straw, a foot thick, and it is ready to receive the ice.

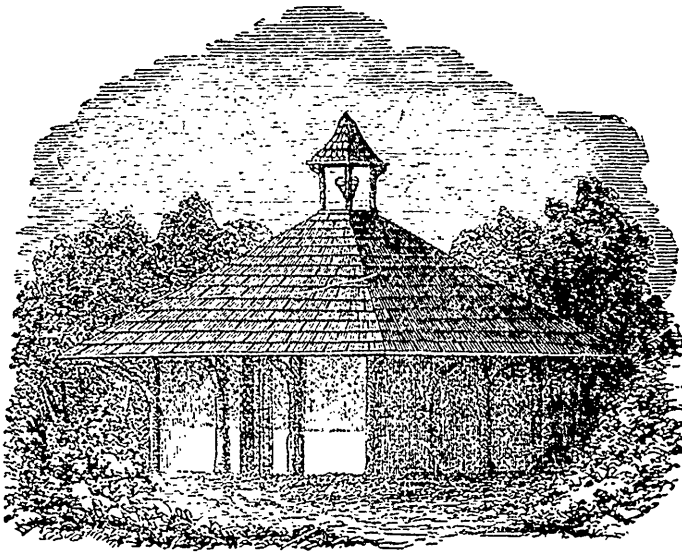
For the roof, take common 3—4 joists, as rafters; or, in place of them, poles from the woods, long enough, in a pitch of full 35° from a horizontal line, to carry the roof at least four feet over the outside of the plates, and secure the rafters well, by pins or spikes, to them. Then board over and shingle it, leaving a small aperture at the top, through which run a small pipe, say eight inches in diameter—a stove-crock will do—for a ventilator. Then set in, 4 little posts, say two feet high—as in the design—throw a little four-sided, pointed cap on the top of these posts, and the roof is done. If you want to ornament the under side of the roof, in a rude way—and we would advise it—take some pieces of 3—4 scantling, such as were used for the roof, if the posts are of sawed stuff—if not, rough limbs of trees from the woods, to match the rough posts of the same kind, and fasten them to the posts and the under side of the roof, by way of brackets as shown in the design.

When the ice is put into the house, a close floor of boards should be laid on joists, which rest on the plates, loosely, so that this floor can be removed when putting in ice, and that covered five or six inches deep with tan, or saw dust—straw will do, if the other cannot be had—and the inside arrangement is complete. Two doors should be attached to the opening, where the ice is put in and taken out; one on the inner side of the lining, and the other on the outer side, both opening out. Tan, saw-dust, or straw should also be placed at the top of the ice, when put in, so as to keep the air from it as much as possible; and as the ice is removed, it will settle down upon it, and still preserve it. Care must be taken to have a drain under the floor of the house, to pass off the water which melts from the ice, as it would, if standing there, injure its keeping.

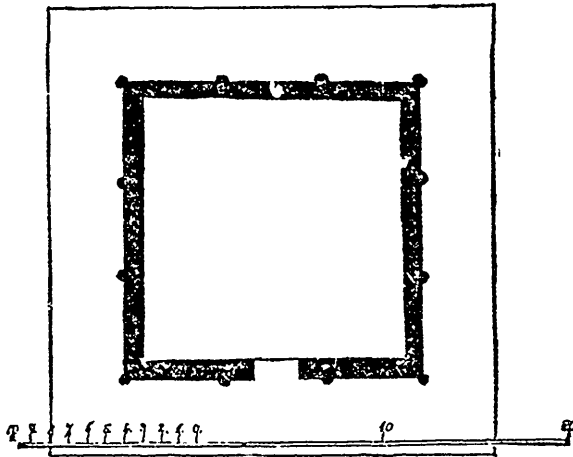
It will be seen, that, by an error in the cut of the ground plan, the inside line of posts does not show, as in the outer line, when they should do; nor is the outside door inserted, as is shown in the elevation. These defects, however, will be rectified by the builder.

We have given considerable thought to this subject, and can devise no shape to the building more appropriate than this, nor one cheaper in construction. It may be built for fifty to a hundred dollars, according to the cost of material and labor, and the degree of finish given to it.

It is hardly worth while to expatiate upon the convenience and economy of an ice-house, to an American. Those who love well-kept meats, fruits, butter, milk, and various etceteras for the



ICE-HOUSE.



GROUND PLAN.

table, understand its utility well; to say nothing of the cooling draughts, in the way of drinks, in hot weather, to which it adds—when not taken extremes—such positive luxury. We commend the ice-house, *well-filled*, most heartily, to every good country housekeeper, as a matter of convenience, economy, and luxury, adding next to nothing to the living expenses, and, as an appendage to the main buildings, an item of little cost, and a considerable degree of ornament.

If an under-ground ice-house be preferred to the plan here shown, a side hill, or bank, with a northerly exposure, is the best location for it; and the manner of building should be mainly like

this, for the body of the house. The roof, however, should be only two-sided, and the door for putting in and taking out the ice may be in the gable, on the ground level. The drainage under the floor, and precautions for keeping the ice should be quite as thorough as we have described, as, otherwise, the earth surrounding it on three sides, at least, of the house, will be a ready conductor of warmth, and melt the ice with great rapidity. If the under-ground plan is adopted, but little more than the roof will show, and of course, be of little ornament in the way of appearance.

TRUTHFULNESS is a corner stone in character, and if it is not firmly laid in youth, there will ever be a weak spot in the foundation.

CHARCOAL, it is said, placed around rose bushes and other flowering plants, has the effect to add greatly to the riches of the flowers.

RURAL ECONOMY—THORN HEDGES.

To the Editor of the Canadian Agriculturist :

SIR,—Last month I sent a few random thoughts on the "Farmers' Prospects," which I see you have been kind enough to publish, and at the same time I intimated my intention to address you, on some future occasion, on the subject of "Live Fences."

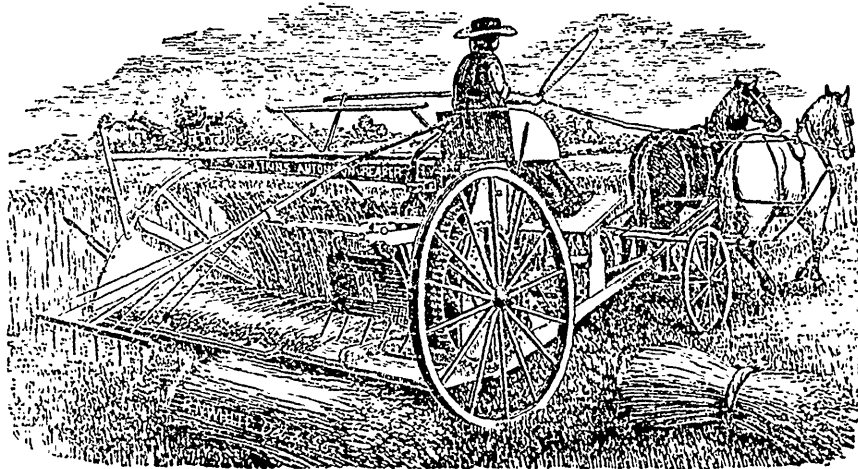
Now, sir, it is evident to every thinking mind that this subject must soon force itself upon the mind of the practical farmer—must soon become one of vital importance—and whether he receive it or no, the stubborn fact stares him in the face, and he cannot get over it. I have often wondered, when looking over the various addresses, discussions, reports, &c., which appear from time to time in the *Agriculturist*, that this question should have been overlooked. The all-absorbing topic of conversation in a new settlement is, "Well, neighbor, how many acres do you intend to clear next season?" "Well, I don't know," replies the other, "I'll underbrush five or six acres this fall, anyhow,—and if the snow doesn't fall too deep, I think, by changing work with some of my neighbors, I will be able to manage it, and if I get a good burn I will have ground enough for all the wheat I want to sow, besides reserving a good potatoe patch; and if I can only get rails enough split to build a good fence to keep out the neighbors' cattle, I will have a fine lot of wheat to sell next winter." Just so, sir, at a first rate, your plans are well arranged, couldn't be beat, what care you for thorn hedges, or anything else of the kind, so long as you have more rail timber than you can destroy; but hold on, the time is coming when the old woods which have so suitably retired before the sturdy strokes of your axe must be either replaced by new ones which is not likely, or you must find a substitute for rail timber, which may be rather difficult. And then, again, in old settled townships, where you will not see a stump, perhaps, on a farm, let a few farmers get together, and what are they talking about? About the price of wheat, and whether it is likely to rise or fall. About the number of acres each of them has summer fallowed. About the pedigree and raising of horses. About the superiority of Short-horns, or Herefords, or Ayrshires, over all the other breeds of cattle. About the different breeds of sheep. About the breed of hogs that is easiest to fatten. About the different kinds of manure and its application to different soils. About the kind of ploughs they use, and which does the best work. About making roads, building bridges, draining swamps, &c., and it might be they would even extend their discussion to telegraph lines and railroads, as to whether the former was a paying concern or not, and whether the profits, as well as the advantages and conveniences, of the latter were not more than counterbalanced by the awful sacrifice of human life which we hear of almost every day in this continent.—Thus it is, sir, that farmers generally, in discussing these questions, though valuable, instructive, and each of them highly important in its own place, sometimes overlook those of minor importance, but which, nevertheless, are entitled to their serious consideration.

Now the question arises, What will make the best, the prettiest, the most formidable live-fence? I answer, English Hawthorn, the *Crataegus Oxyacantha* of the naturalist, the baws of which, gathered in October or November, and mixed with sand or dry earth, and frequently tanned to separate the seeds from the pulp, are sown in beds in the spring of second year after gathering,—and covered with fine soil about an inch in depth, when strong enough the seedlings are planted into nursery rows—and then about three after they will be ready to be transplanted into the hedgerows. In the part of Britain where I came from, such plants could be bought at the nurseries for 10s. or 15s. per thousand; in this country, I presume they would cost more than double that amount. The young quicks should be transplanted in the fall, not later than October.

Hedges are generally planted on banks having a ditch on one side, and sometimes on both, but (except in the case of forming a fence against a road, or on flat wet land, where ditches are required as drains) it is a great waste of ground to have a ditch at all; and, therefore, it is preferable that the hedge should be planted on the plain surface of the earth. The ground, however, should undergo a thorough preparation by being trenched with the spade, or deeply ploughed, and if a small quantity of barn-yard manure be applied, so much the better. The planting is performed by first trimming the young plants, then by stretching a line along the middle of the prepared ground, and a man with a common garden dibble precedes, making the necessary holes in the soil 5 inches apart, alternately 2 inches on either side of the line, another follows putting the plants into the dibbled and carefully and lightly treading them on every side with the foot, leaving a slight hollow around the plant, to catch the rain, and retain the moisture about the roots. The single ditch may be used when fencing against a road or a distinct property, the ditch should be made on the same side as the road, and the soil having been thrown up from the ditch to form a mound upon which the plants are laid, (following the same rule as in dibbling, of having two lines of plants) about six and ten inches from the side of the bank, the roots being towards the field side, and from where the good soil is thrown upon the roots. But it has been objected, and perhaps justly too, that the young plants are frequently destroyed by mice in winter, this may be partially true, but the chances are in favour of planting—it is indeed a disastrous battle in which all are killed, when not a man is left to tell the melancholy tale. The few plants thus destroyed by vermin can be easily replaced, and in eight or ten years the persevering farmer will have the pleasure of seeing a beautiful hedge row, affording both shade and shelter to his cattle, instead of the unsightly zig-zag rail fence, the very sight of which was enough to entice a marauding ox to make an inroad on his neighbour's grain.

Let this question be thoroughly agitated and acted on, and a few years will show the happy results. In the meantime some of your intelligent readers, may favour you with their experience, on this important subject.

HIBERNICUS.



ATKINS' AUTOMATON REAPER.

The proprietor of this journal, while on a recent visit to New York, devoted some time to a careful examination of newly invented Agricultural implements, especially those on exhibition at the Crystal Palace. Among several recent inventions that may be mentioned with approbation, is the self-raking Reaper, invented by a Mr. Atkins, of Chicago, Illinois. We believe some of these machines have been introduced into the western part of the Province already, but we have not yet heard of their performance in the Canadian harvest field. Perhaps some of our western readers will be able to enlighten us on the subject?

The above is a cut of the Reaper which in its general appearance resembles McCormick's but differs from it in several important particulars; the chief of which, is an ingenious contrivance for gathering the grain on the platform into bundles, or gavels, and depositing them at the side of the machine. The objection to this machinery is, of course, its liability to get out of repair. Several wheels and springs are required to produce the peculiar action of the rake, which moves as if in obedience to an *intelligent* motive power, but with even more regularity and steadiness. The additional weight of iron must increase somewhat the draft, but not to any serious amount. The weight, as well as the expense of a *human* raker is dispensed with. The manufacturer, Mr. Wright, of Chicago, told us that he would like to exhibit one at our Provincial Fair, which we urged him to do, and hope our farmers will examine it carefully, should it reach Hamilton in time.

From a large number of certificates, &c., we select the following. We may observe that this Reaper has only been in operation during two harvests. The price is \$160 at Chicago.

"The undersigned having witnessed the working of Atkins' Self-Raking Reaper, manufactured by John S. Wright, of the "Prairie Farmer" Warehouse, Chicago, cheerfully give this testimonial to its entire success. It cut two or three acres of wheat on very rough ground, having a thick under-growth of grass, and delivered it at the side (out of the way of the team as it came round again) regularly in good order for binding. Notwithstanding the grain and under-growth were quite moist from a rain a few hours previous, there was no tendency to clog the knife as in some other machines, and the stubble was left short and even. The raking was better done than it is practicable to do after a cradle, or in raking off other reapers by hand. The machine is strong; not liable to derangement; easily altered to cut high or low; not difficult to manage; thoroughly built; and draft easy for one pair of horses, requiring only one man (the driver) to attend to it. It not only saves the hard labor of raking off by hand as compared with other reapers, but handles the grain so carefully, that a considerable percentage is saved. The movement of the Raking is very curious and novel, and very simple to produce so complicated a movement. We cordially recommend this Reaper to the farmers in this vicinity.

"James S. Negley, Thomas Simpson, J. W. Biddle, William Dilworth, A. Bradley, James Wardrop, Henry Graff, Henry H. Collins, L. R. Livingston, W. P. Baum, H. S. Fleming, D. N. White, L. Wilmarth."

The above is signed by upwards of a dozen respectable farmers, (as we are told,) who witnessed a public trial of the Reaper last season in Pennsylvania. It has taken the 1st prize at the following Fairs:—

"Committee of the Ohio State Agricultural Society, Michigan State Agricultural Society, Kenosha County (Wis.) Agricultural Society, Racine County (Wis.) Agricultural Society, Wisconsin State Agricultural Society, Buel Institute (Agricultural,) Illinois, Mechanics' Institute Chicago, Illinois, American Institute, New York City."

The Inventor describes its peculiarities as follows:—

"It saves the labor of one hand, (the raker,) which is the hardest work of the harvest-field.

"The grain is laid so even, that the binding is greatly facilitated, some farmers say that one hand in five, or four, and some even one in three, can be dispensed with as compared with other reapers.

"The careful handling of the grain by the raker, saves a small per cent. over taking by hand.

"The main driving wheel is large, being four feet in diameter, with a four-men telfoe, giving steadiness of movement in passing over rough ground, and good support in soft. The grain wheel, too, is two feet in diameter.

"The frame work is well braced and still, supported and strengthened with iron wherever necessary.

"The gearing is compact and symmetrical, well boxed in and protected from dirt.

"The team is relieved of weight and of the side draft by resting the hounds upon a pair of front wheels, making it also very convenient to turn a square corner, as will be learned by a little practice.

"The driver's seat is elevated and easy, giving him good command of his team, while at the same time he can watch the operation of the knife, reel and raker, and if necessary instantly throw the machine out of gear by the lever at his right side.

"The height of cutting is regulated by a very simple arrangement, and the knife may be set close to the ground.

"The draft is comparatively easy for a pair of horses, and is not perceptibly increased by the raker."

MISCELLANEOUS.

MISREPRESENTATION OF THE IRISH CHARACTER.

The London *Artisan* has commenced its "Notes on Irish Industry and the Dublin Exhibition," which, from such practical hands, ought to prove highly interesting. In a kindly spirit the writer in his opening chapter desires to disabuse his English readers of the many false and prejudicial notions held as regards Ireland, and urges Irishmen to pursue the path of industry and progress in which they have entered with so much *eclat*. A favorable change of circumstances affords individuals an opportunity of bettering their condition, and raising their character and attainments; as we daily see illustrated on this side the Atlantic. Thousands and tens of thousands of Irishmen are to be found in Canada and the States, who were poor and miserable in their own country, but who are now in a state of comfort, respectability, and not unfre-

quently of positive affluence. We know that numbers of our best and most successful Canadian farmers are natives of the Emerald Isle, who commenced life afresh in this country without a penny, and made their way sheerly from persevering industry and exemplary moral conduct. The *Artisan* says:—

Having some claim to an acquaintance with the people—we mean those classes which will ultimately take that place in Ireland which the middle and operative classes occupy in this country—a knowledge of their habits and tendencies, we have high hopes of the future of Ireland; we look upon the objection which has been seriously urged by many as to the people having "peculiarities incompatible with social and national prosperity," as almost too absurd to be worth the trouble of even an emphatic denial. It is a mistaken notion altogether; engendered through ignorance, and upheld by illiterate prejudice. The very contrary is the fact. On this point it is, perhaps, worth while to quote the words of one whose opinion is of high value, Dr. John Forbes, F.R.S., who has recently made a tour through Ireland:—"I think, I may venture boldly to affirm, that there never was a more injurious opinion entertained respecting a people, than that just stated in relation to the people of Ireland. It is so monstrously absurd—so directly in contradiction, not merely to facts and to experience respecting those very people, but to all that we know of the constitution of man regarded as an animal—that it seems not merely unnecessary, but humiliating, to give it a serious consideration. It is not to be denied that race goes for much in our estimation of social and national progress, any more than that the constitution or temperament of individual men goes for much in modifying their particular career, and determining their *status*. But this is a very different thing from affirming of a whole people, that they are incapable of reaching a given point of elevation in the social scale, which has been attained, not merely by all their neighbors, but even by various branches of their own race within the same quarter of the earth." In reviewing Dr. Forbes' work, the writer in the *Literary Gazette* says:—"The vague assertion of superficial observers, as to a supposed inferiority of race, have been productive of infinite injury to the Irish, particularly in England; and it is only by the resolute expression of opinion among those who occupy a position such as Dr. Forbes holds, that they can be effectively met." Generosity, no less than justice, demands "this resolute opinion" from those who know that the calumny is unfounded—it is the result of a prejudice, which a well constituted mind is too dignified to retain; it is a wrong to be redressed, an injustice to be atoned for. Of the "peculiarities incompatible with social and national prosperity," which are thus so untruly said to distinguish the Irish as a people, the one fact which is most perseveringly dwelt upon in this country is that of "idleness." This, like the other sweeping charge, from which it is inevitably deducible, is the result of gross ignorance of facts, or, what is

worse, of cherished prejudice. When we hear high talk of the "incorrigible idleness," as the cant phrase goes, of the Irish, we are ashamed of the ignorance or illiberality which dictates the charge. Those who know the people, their habits and impulses—and it is they alone who have the to judge—know well their great capability of endurance, even in the midst of the most disheartening influences, and their spirit of patient unflagging industry, which only requires proper channels for its display, proper motives for its exertions. And on this the question of Irish industry hinges. Without the motive, which every man in this highly favored country has before him, to urge him to exertion, where, we ask, would be the evidences of an industry? It is all very well to point complacently to what we do and what we can do: but let us conceive ourselves as placed under the same depressing influences which have so long acted on the working population of Ireland; let us be made each day, as it drags its weary length along, to feel, in the intensity of its bitterness, that we are slaves in fact, if not in truth; and let the enslaving influence of such a system bear heavily its iron hand on all our social and moral capabilities, not for a year, but for a lifetime—not for a lifetime, but for generations—and what think you would be the condition of our population generations hence? We know of no surer method of dispelling the day dreams of our self-sufficiency, than by trying to impress ourselves with the stern supposition as to what we would have been, had years of temptation and suffering been our lot. It has been truly said, that a one hour's walk amid the busy haunts of men will suffice to dispel the book notions of the study, regarding men and manners; so in like manner, we think, that a day's experience of the work—a day-life of Irishmen placed amidst favorable circumstances, and having a motive for working—would dispel at once the falsehood of the charge so unthinkingly and unfeelingly made against them.

HENWIFERY.

The flesh of fowls is a delicacy of the most substantial kind; and that it is within the reach of the middle classes, and occasionally even of the poor, is a matter that we may congratulate ourselves upon; for, from the turkey "brazed" and roast goose down to the smaller fry of ducks and chickens, the whole race seem warmly and richly associated with holiday keeping, and with "mirth and jollity," ably supporting the roast beef of Old England, and paving the way for the plum pudding—those pillars of our national hospitality of which we are justly jealous. Notwithstanding our love of beef, it is a notorious fact that few at a dinner party are found to partake of the large joint of beef, the *piece de resistance*, whilst they can get fowl; and, in an economical point of view, fowl is decidedly preferable to beef, for the weight of bone in the bird, in

proportion to its weight of flesh, is very small indeed, whereas the weight of bone in the beast is a large per-centage upon the weight of its flesh, for nature having adapted the fowl to rapid transit, built its bones very thin, and, instead of filling them with marrow, as in the beast, filled them with air; whilst a beast of burden, like the ox, had to be heavily boned and gristled to resist the strain upon his system; and it must be borne in mind that "he who buys beef buys bones;" it is, therefore, evident that, in the country at least, and in most country towns, fowl is cheaper than flesh, in as far as really digestible food is concerned, there being so much waste with the inferior joints of meat, and few can afford to have the *prime of ox beef*. Animals are all more or less affected in their general health and character by the food they subsist upon, although we cannot always trace from cause to effect, so clearly as we can in butter tasting, of the turnips that the cow had eaten. Dairy-fed pork is the opposite to porker's flesh that had been fed on butcher's offal. Sheep fed on certain pastures are noted for the superiority of the mutton. The flesh of many sea birds tastes so fishy as to be scarcely eatable. Carnivorous animals and birds of prey are not eaten at all; and, unless the editors of public journals, and such like influential parties, cry down the practice of feeding chickens upon flesh meat, we shall very soon find the farm-fed fowl a rare bird, for the transition from fresh roast beef, as recommended by the highest authorities now, to raw carrion is so very easy, and so much more economical, that we need not wonder at the improvement being very soon tried and in active work. I should just as soon think of making my dinner off the carcass of a carrion crow as that of a chicken fed on flesh of any kind. It is a common practice with beginners to give parrots a bone to pick, and they seem very handy at it.—Parrots thus fed peck their own feathers at moulting time, and get quite disgraceful in plumage; and precisely the same complaint is now raised against domestic poultry when fed with flesh; they quarrel and peck each other at moulting, and it is only at such a critical period as moulting time that we find the want of proper food.—China fowls always moult badly, so much so that when they have changed their coat once or twice they become *turncoats* indeed, and bear no resemblance to the majestic, happy bird with maiden plumage. Had finely-powdered bone been given to birds instead of flesh, the case would have been very different, for chemical analysis sheweth its fitness, where lime and gelatine are so much needed; but a very little research into the admirable arrangements that Nature has made to reap that which she hath scattered (or as the Bible has it "strawed") will show that these domestic birds are the gleaners after the reapers, and the chances are that that which hath been cast upon the earth will be earthy; so that we see earths, and even stone, not only admissable into the stomach of the fowl, but actually necessary to be there for its health and well-being. Food containing the same proportion of earth or sand, taken into the stomach of a horse produces frightful agony and death. When fowls assume any other character than gleaners and pickers up of

* "Turkey boiled
Is turkey spoiled,
And turkey roast
Is turkey lost;
But for turkey brazed
The Lord be praised."—*Old Cookery Book.*

crumbs, it must be either at the expense of their own health, or of their owner's profits; for, leaving out the "crack feeds" of bread soaked in old ale, fresh roast beef, hempseed, candle-maker's greaves, &c., and taking only the cheapest grain—barley, for example—at present prices, we have one-third of a peck a week for each hen, or four bushels a-year, say 18s., or if wheat, 27s.; and six dozen of eggs a-year, even at a 1s. a dozen, is but a poor set-off against such a sum, and this does not include the cost of keeping the cock bird; and if chickens reared are to be taken into account, so must the food they eat be accounted for also.—*David Sangster.*

Poetry.

The following lines, written on occasion of the recent death of a young lady, only 15 years of age, (a niece of the Editor of this Journal) have been sent us by a friend residing in the south of England, who is a constant reader of our paper. The spirit which they breathe will commend itself to many a bereaved and sympathising heart:—

'Tis past! thy pains are ended,
All suffering now is o'er;
Thy spirit freed has landed,
On a far happier shore.

Long did the Angel tarry
Before he struck the blow,
And sent disease to carry
The summons hence to go.

For weary hours you waited,
And calmly bore the pain;
By Hope—kind Hope—supported,
No murm'ring accents came.

I watched thee when thy sister
Would try to ease thy pain:
When not thy faintest whisper
Was ever breathed in vain.

Her kindness thou wilt treasure
In that sunless home of thine,
And feel an Angel's pleasure,
To tell to ear's divine.

How bitter is the sorrow
Thy parents too will feel,
As each returning morrow
They miss thee at their meal!

When, with agonising sadness,
The memory of the Past,
Sweeps o'er them in its madness
Like a bitter winter's blast.

Oh! if thy spirit wander
Back to this earth again,
Thou'lt know the broken slumber—
The silent heart-felt pain.

The tears that flow unnoticed,
(The holiest that fall)
The prayers that are presented
Unto the Father of us all;

The thoughts thy image wakens,
Of the vacancy and gloom,—
The spirit-speaking tokens
Of Love beyond the tomb;

The still pent-up emotion
Relieved not by a tear;
The earnest calm devotion,
Too pure for mortal ear;

Thou'lt—hid from finite vision—
Thy heaven-taught soul may know,
And breathe in soft compassion
O'er those you lov'd below!

Then bend still o'er them hourly,
While here on earth they stay;
And guide them all securely
In the true and living way.

GARDEN VISITORS.

It was only last summer that a friend from the city, affecting for the moment a taste for horticulture sought admission to our little garden. We took him thither, and he rushed through as if a railway whistle had pierced the tympanum of his ear, or if he had been bent on "proving by his heels the prowess of his head." We waited at the door until his return, and had not long to wait, when taking the adjoining border as our text, we proceeded to descant upon its inhabitants. The first was a Peruvian novelty, which had never flowered beneath the Tay, and for whose inflorescence we were waiting in high expectancy.—The second was a hybrid Veronica, the gift of an early cherished friend, and most accomplished floriculturist—a child from a marriage of his own making; for our friend's is highly potential in commanding parties to join hands—in manipulating those quaint clandestine marriages, for which nature does not provide—in tying those mystic hymenial knots among Flora's children, the progeny whereof does oftentimes give a pleasant surprise at once to the parent and priest.—The third was a rose—the *Geant de Battailles*—a gift from another friend, who varies his exertion in the gloomy province of criminal law by frequent recreations among the innocent and lovely denizens of his exquisite Rosarium. We were making slow progress in our descriptive narrative—for, indeed to us a flower border is not a mere border of flowers, but an unrolled volume of many-colored history. Each plant has its pedigree and its parentage—its peculiarities of habit and education, and its biography. One brings to our recollection dear friends in a distant land; another transports us to its native home among the snowy Himalayas. Every plant forms a nucleus of kindly associations, and "on every bough we have learned to hang gentle thoughts and pleasant memories." To number three in the border we had only reached, when, accidentally looking into the face of our friend from the city, we saw depicted there blank ignorance, and a cold negation of all sympathy with our floricultural enthusiasm. It was enough; we were throwing words away. We conducted Mr. Urban out of the garden; but not before he had cropped, with most rash and profane fingers, the flowers of an *antirrhinum* of such clean and brilliant stripes, that we had severed it from its compeers for the purpose of seeding! Smothering our indignation we led the gentleman back to our parlor, and put into his hands an Edinburgh newspaper! We have made up our mind on the subject. A man that can walk rapidly through a garden is an undoubted barbarian. He ought to keep to the highway—or the boards of the Parliament House; or if he must enter a garden, let it be a large one, where he may take an airing, and pedestrianize at his pleasure.—*Blackwood's Magazine.*

AN APPLE PUDDING DUMPLING.—Put into a nice paste, quartered apples, tie up in a floured cloth, and boil two hours; serve with sweet sauce. Pears, plums, peaches, &c., are fine done this way.

EDITOR'S NOTICES.

THE AGRICULTURAL SOCIETY OF DERRY.

Will hold its first Exhibition, on the 21st of October next.

THOMAS GORDON, Secretary.

"THE OLD COUNTRYMAN."

The first number of a new weekly Journal, under the above title, is announced to be published at the beginning of the present month. The prominent characteristic of this paper, is to consist in the giving of copious details of the news of the United Kingdom and its freedom from party politics. Several interesting sheets have been published, containing letters on the present condition and capabilities of Canada, exceedingly well written, and calculated to make a favourable impression in the Mother Country, as regards this Colony. The paper will be published in Toronto, corner of Church and Front Streets, at fifteen shillings per annum.

ADVERTISEMENTS.

ANDRE LEROY,
NURSERYMAN, ANGIERS,
FRANCE,

HONORARY AND CORRESPONDING MEMBER, &c., of all the principal Agricultural Societies of Europe and America, begs to inform his friends and the Public in general that he has just published his catalogue for 1853, which is the most complete one ever made. All the prices and required information for the importation of all kinds of Trees, Shrubs, Evergreens, Stocks, Roses, &c., &c., will be found in said Catalogue, which can be had free of charge on application to the undersigned, who will receive and forward all orders and attend to receiving and forwarding of the trees ordered, on arrival here. It is useless to add that Mr. LEROY possesses the largest NURSERY on the Continent. His experience in putting up orders for America, and the superior and reliable quality of all his trees, &c., is too well established, to require any further notice. Orders should in all cases be sent to the undersigned in the fall with information when the trees are to be forwarded.

E. BOSSANGE,

138 Pearl-st., New York.

September, 1853.

3m.

BUREAU OF AGRICULTURE,

QUEBEC, 30th September, 1853.

HIS EXCELLENCY THE ADMINISTRATOR OF THE GOVERNMENT has been pleased to revoke the appointment, notified in the *Official Gazette* of the 28th of May, last, of

Messrs. Whitman & Wheelock;

OF No. 103 FRONT STREET, NEW YORK,

As Agents for the receipt and bonding of Goods, or for the Payment of Duties on all such Goods as may be sent from Canada for the INDUSTRIAL EXHIBITION AT NEW YORK, their services not being required.

Mr. ANTHONY HOLWELL, Esq., Commissioner for Canada at the INDUSTRIAL EXHIBITION at New York, will take charge of all articles sent to the Exhibition from Canada.

WANTED,

A FEW DECEMBER Nos. of the "AGRICULTURIST" for 1852. Subscribers who can spare any of the above Nos. will be paid by sending them to this Office.

IMPORTANT TO
BREEDERS OF STOCK.

THE Subscriber offers for sale Two Thorough Bred Short Horn DURHAM BULL CALVES, one 20 months old, a beautiful Roan Colour, splendid proportions, a descendant of the much celebrated "Belled Will" of England - the other about two months old, white, of unequalled Symmetry and beauty and is a descendant of "Belled Will," his Dam was got by "Bellville," the Champion of England, Scotland and Ireland, and was imported to this Province in 1851, and the first of Mr. Hopper's, celebrated herd, ever brought into Canada.

ALSO:

Two other Calves of the same unequalled breeding 3 weeks old.

Satisfactory certificates of pedigree will be furnished. For further particulars application may be made to

RALPH WADE, SEN.

Spring Cottage, near Port Hope, Canada West.

June, 22nd 1853.

3-m.

Paige's Thrashing Machines.

WHERS who desire to obtain a first rate Machine, which, with less than half the number of horses, and half the number of hands will thrash as much grain in a week, as one of the cumbersome eight horse-powers, should supply themselves with Paige's celebrated machine. Terms easy. For sale at the Office of the *Agriculturist*, Toronto.

August 3, 1853.

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TERMS.

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N. B.—No advertisements inserted except those having an especial reference to agriculture. Matters, however, that possess a general interest to agriculturists, will receive an Editorial Notice upon a personal or written application.