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No. 10.

THE EXHIBITION AT BRANTFORD.

The Twelfth Annual Exhibition of the Agricultural Association was held at Brantford on the 29th and 30th of September and 1st and 2nd of October. The weather was wet and cold during the greater part of the week. In several departments the Exhibition was in advance of its predecessors. There was abundant evidence that a steady progressive improvement in the leading branches of our domestic industry is being made from year to year. In agricultural implements and machinery, the exhibition of this year has far surpassed all previous exhibitions, both as to quantity and quality. The same may be said of sheep,—the Leicesters taking the lead of all other breeds. The two classes of thorough-bred cattle, Durhams and Devons, made an excellent show, but exhibited no marked superiority as to quality over former years. The show of stallions was good, and of matched horses the best we have ever seen, taken as a whole. In the department of cereals there was a falling-off, especially in wheat; but the unfavorable season will account for the inferiority in this department. Roots made a good display, but not equal to former shows. In manufactures generally there was little improvement, though in a few branches the display was excellent. Carriages made a poor show, none of the large manufacturers appearing as exhibitors.

The location of the Show at an inland town like Brantford, must necessarily exclude the heavy manufactures of the large cities. A carriage-maker, for instance, will not, for the sake of any advantage the Exhibition may offer, expose a valuable carriage to the risk of injury in being transhipped three or four times by careless railway servants, on its way to and from the fair. Even where, from the nature of the article, liability to damage may not be great, the expense of transporting and transhipping heavy machinery, &c., effectually prevents competition, except from the immediate neighborhood. The Provincial Shows ought not, in our opinion, to be taken off the main lines of communication. Exhibitors should not be required to remove their goods from one steamer or line of railway to another; once shipped, they should go straight to the fair ground. Of course a few who have the

misfortune to live at a distance from the great thoroughfares will be put to some inconvenience, but the many must not be sacrificed to the few.

We proceed briefly to notice the various departments of the Exhibition, only giving the names of those who obtained first prizes. The complete prize list will probably be published as an extra by the Board of Agriculture: we need not therefore occupy our pages with matter which our readers will soon have in another shape.

CATTLE.—As we have said, the Durhams and Devons preponderated. There was, however, a fair show of Ayrshires and Galloways. Some good grade Durhams were exhibited. Messrs. Lawrie and Kirkwood, of Hamilton, exhibited their famous steers, which were the observed of all observers. They took the first prize in the class of fat cattle. J. P. Wheeler, Esq., of Scarboro, took the first prize for aged Durham bull. Mr. Arthur Hogg, of Guelph, obtained the first prize in the class of four years; Hon. Adam Ferguson in that of three years; John Robson, of London, in two years; R. R. Brown, Stratford, one year; and R. Armstrong, of Markham, for best Durham bull calf, under one year. Mr. Stone of Guelph, Mr. Miller of Pickering, and Mr. W. Douglas of Onandaga, also obtained prizes in this class. The young stock in the Durham class was very highly spoken of by breeders generally.

Devons.—The Devons always make a striking feature, when exhibited in sufficient number to attract notice. Their uniformity of color and symmetry of shape render a collection of Devons more attractive to the eye than the same number of any other breed. The present show was much larger than the last. Mr. John Masson, of Nissouri, carried off the first prize in the class of aged bulls; Mr. Richard Coates, of Oakville, in that of four years old; Mr. John Moore, of Etobicoke, in that of three years old; Mr. W. Scott, of Wilmot, in two years; Mr. Daniel Tye, of Wilmot, in one year; and Mr. W. H. Lock, Yarmouth, in class of bull calves under one year. Mr. Lock took the principal prizes for cows and heifers, though he lost the first in two classes—aged cow and two year old heifer—which were won by Mr. C. Courtier, Darlington. Mr. Ferric of Doon, Mr. Tye and others, also contested the field with Mr. Lock, with occasional success.

Herefords.—As usual, this class showed small; in fact there was no competition. Mr. McMicking, of Stamford, was the only exhibitor; and unless a change should take place next year, we would recommend the class to be omitted. It is absurd to waste the funds of the Association year after year upon inferior animals, merely because there is no competition against them.

Ayrshires.—The show of Ayrshires was hardly as good as last year. The first prize for four year old bull went to Lower Canada. The best two year old was exhibited by Dr. Richmond, of Gananoque. Mr. Stanton, of St. George, and Mr. R. J. Denison, carried off most of the prizes.

Galloways.—This comparatively new class of cattle attracted much notice, especially from American visitors. Their black, woolly coats and hornless heads arrested the attention of passers-by, who generally asked, "What do you call these?" The chief exhibitors were W. Roddick of Port Hope, W. B. Graham and John Fleming of Vaughan.

Grade Cattle.—Mr. S. Hodgskin, of Guelph; Joseph Pierson, Whitby; E. Jones, Stamford; and John Snell, Chinguacousy, were the principal exhibitors.

HORSES.—In thorough-breds the show was thin. The first prize was awarded to "Oxonian," an imported horse, owned by James Armstrong of Yarmouth. Francis Major, of Markham, took the second for "Hermit," and Dew & Nightingale the third for "Sir Tatton Sykes." The blood-horse is going out of fashion in this country, as a distinct breed, and we cannot say we regret it. A few first-class stallions should be kept, to give fineness of bone and "mettle" to the duller races; but unless better specimens than those exhibited at Brantford are imported, the Roadster and the Morgan—now making their appearance in Canada—will drive them off the field. The prize thorough-breds were merely good, the others inferior. S. & T. Wilson, Guelph, took the first prize for agricultural horses over sixteen hands. Jos. Black, same place, took the first prize in the same class, but between fifteen and sixteen hands. D. Roundtree, Weston, took the first prize for heavy draught horse. S. Macbeth, Dunwich, took the first prize for roadster. Mr. M. Zimmerman was the winner in the class of carriage horses. The competition was great in this class. George Black, Nissouri, exhibited the best span of heavy draught horses. The best single carriage horse was shown by Patterson & Bros., Richmond Hill.

SHEEP—Leicesters. The Messrs. Miller of Pickering and Markham, and Mr. Snell of Chinguacousy, were the most successful in this class. The competition was close.—*Cotswold.* Mr. Stone of Guelph, J. Petty of Kippen, and Mr. Snell, took most of the prizes.—*Cheviots.* Mr. J. Dickson of Clark, and W. Roddick, were the chief competitors, and divided the honors. In long-woolled sheep, not pure-bred, Mr. Miller of Markham took the first prize for ram two years and upwards.—*South Downs.* Mr. Stone and Mr. Spencer of Whitby divided the prizes in this class. The competition was not so large as on some former occasions. This breed is not so popular as the long-woolled Leicester.—*Merinoes.* The fine-woolled breeds make slow progress also: they seem to remain in first hands. Mr. Choate of Hope, and Mr. Rymal of Barton, are, as usual, the chief exhibitors.

PIGS, POULTRY, &c.—There was nothing remarkable in the show of pigs. C. A. Jordison of Hope, Richard Coate, Oakville, J. Card, Guelph, James Durand, Kingston, and Mr. Jordan of Paris, were the exhibitors in this department. The poultry was good in quality, but not extensive in quantity. Mr. Lamb and Mr. Peters, of London, took the lead in poultry.

GRAIN.—We can say but little of this department, as we barely glanced at it. From the statements of others we conclude that the show was inferior to former years. The Canada Company's prize of \$100 was carried off by Mr. John Brown, of the township of Burford. The Association's prize of \$40 was awarded to Mr. Freeman, of Wyndham. The third best twenty-five bushels of fall wheat also came from Burford; it was grown by Mr. Isaac Merritt. This township has become famous for producing good samples of fall wheat. Last year the Company's prize was awarded to Mr. R. Smith, of the same township. We did not learn whether the prize wheat this year was *Blue-stem* or *Soules*. The first prize for best two bushels

was awarded to J. H. Anderson, of Flamborough West. Mr. C. Anderson, of Haldimand, exhibited the best two bushels of spring wheat. The show of peas, oats and barley was good, but not better than usual.

ROOTS, &c., were large and healthy, notwithstanding the wet season. The show was not so good as we have seen, but was nevertheless very creditable.

HORTICULTURE.—The productions in this department were not so numerous as we have seen them, but the quality was generally excellent. The coldness and lateness of the season rendered it impossible to make much display in those productions of the garden of high tropical origin. We tasted some of the melons, squashes, &c., but found them insipid; they were not ripe. Hon. John Young, Montreal; William Smith, Brantford; John Gray, Toronto; Judge Campbell, Niagara, and a few other local exhibitors, divided the prizes in vegetables. The same gentlemen were also competitors in fruits. The peaches and grapes made a tempting display. Mr. Woodruff of Niagara; Judge Campbell, same place; Charles Arnold, Paris; James Fleming, Toronto; John Freed, Barton; and Mr. C. C. Benedict, Falls; displayed extensively in these fruits. Mr. Arnold's grapes we can commend, for we had practical evidence of their juicy richness and agreeable flavour.

DAIRY.—The best butter was made by Mr. James Wilson, North Dumfries, and the best cheese by Mr. Hiram Ranney of Dereham. One of the cheeses of Mr. Ranney was as large as a cart-wheel, and proportionately thick. He is the prince of cheese-makers in Canada. The exhibition in the products of the dairy was not equal to some former shows.

AGRICULTURAL IMPLEMENTS.—The implements and machines exhibited at Brantford, show a decided advance. The number of ploughs exceeded that of any former show. The harvest machines were also superior in number and quality to those of any previous year. In pursuance of the recommendations of this and other journals, an attempt was made to submit these important machines to the test of trial. The proper season for such a trial had been allowed to pass, and the only crop available was a field of oats, badly laid, at the farm of Mr. A. Good, about two miles from the fair ground. The labour of testing the reapers and mowers, *ten or twelve* in number, and also about *thirty* ploughs, fell upon the shoulders of five gentlemen, who, in addition, had to examine and make awards upon all the other agricultural machinery! This was expected to be accomplished in two and a half days! Either of these divisions—the reapers and mowers, the ploughs and cultivators, or the threshing machines, straw-cutters and other machines—would have imposed ample labour upon any one committee. The result was, a hasty trial, a hurried examination, and in some cases probably unsatisfactory awards.

The *Ploughs* were ordered to the field on Wednesday morning. Each exhibitor was required to begin and finish a short "land;" but as it was found that too much time would be consumed by this requirement, they were told to complete about a dozen furrows. The ploughs were each placed upon the work they had performed. The judges then examined the work, noting its quality and the number of the plough. The dynamometer was then attached to each plough in succession. They were all

held by one ploughman, selected by consent of the exhibitors, and drawn by the same team. Each plough turned one furrow with the instrument attached. The width and depth of the furrow slice was made the same in each case, as nearly as possible, and the amount of traction was noted at six points. The average result was arrived at by adding the figures together, and dividing by the number of observations. The draught, with two or three exceptions, was remarkably uniform. The medium was 4 cwt., with a furrow seven inches deep by eleven wide. It may be well to observe that the soil was a clay loam, and very favorable for the purpose. Some six or eight of the wooden ploughs were so nearly alike in *draught* and *work*, that the judges were obliged to give more attention to mechanical contrivance than was perhaps desirable, in order to select the three best. The wooden plough to which the first prize was awarded, was made by Mr. P. Logan, of Paris. The mode of attaching the coulter, and the structure of the implement generally, displayed admirable workmanship. Between the ploughs of Mr. Morley and Mr. Modeland, it was very difficult to decide. The former was a little lighter in draught, and a majority gave it the preference. They are both good enough for any farmer who wants such an implement. A new plough, got up by Mr. Jacob Bin^gham, drew lighter in proportion to its furrow slice than any of its competitors. It also did very fair work. It was commended by the judges, and would probably have obtained a prize had there been a fourth to give. Its mechanical structure was not quite so durable as the prize ploughs. The judges also commended a plough exhibited by —————

The iron ploughs were not so numerous as the wooden, but of very superior construction. The judges unanimously disapproved of those which cut the *crested* furrow. Those turning a *square* furrow obtained approval for doing the best work. The first prize was given to Mr. D. Duncan of Ancaster, the second to Wilson & Adams of Paris, and the third to A. McSherry.

Reapers and Mowers.—The unfavorable weather and other difficulties induced the Judges to abandon the attempt to test large reapers. The combined reapers and mowers and the single mowers were, however, taken to the field. The combined machines were tried in a field of oats. The ground was rough, and stones as large as a half-bushel were several times encountered. The oats laid in one direction, and the machines were required to cut *with* the incline as well as against it. The work was well done by all the machines. The gavels were better from some than from others, but this might have been owing to superior skill on the part of the raker. The direct and side draught were not tested, except by the eye, for want of a suitable instrument. The same machines were tried in a field of clover in competition with the single mowers. The latter were chiefly after Ketchum's pattern. The work here was also of nearly uniform excellence. The award, as in the case of ploughs, turned mainly upon the construction and durability of the respective machines. The first prize for Combined Mower and Reaper, was awarded to Darling & Atchison, of Thornhill. This machine is chiefly of iron, and is entirely without side draft, or weight upon the necks of the horses. Its mechanism was also excellent. The second prize was awarded to Messrs. Patterson, of Belleville, and the third to

Mr. Massey, of Newcastle. The two latter are after Manny's patent, with several important improvements.

The Reapers, as we have said, were not tried in the field. The competition was very close, as all, with two exceptions, were unquestionably good machines. A new machine was exhibited by Mr. Lefler, of Streetsville, displaying ingenuity and skill in workmanship, but the Judges objected to the mode in which a third wheel was attached, and considered it doubtful whether the machine would *turn* with facility in the field. Messrs. Patterson took the 1st prize for Reaper. Mr. Watson, of Ayr, the 2nd. Mr. G. W. Goodall, Brantford, the 3rd. The machine exhibited by Messrs. Johnson, of Toronto Township, and also that of Mr. Bell, St. George, were highly spoken of, but as there were only three prizes, they had to be passed over. The third prize machine was what is called Burrell's patent with self-raker. The Judges differed as to this machine; some objecting to it altogether, and others regarding it more favourably, because they had used it. The Seymour and Morgan machine, which has been the model for most of our Canadian manufacturers, is taking the lead of all others, and seems as near perfection, when well made, as such machines can be. The Ayr machine has an ingenious contrivance for elevating the finger-bar from the drivers seat, while the machine is in motion. This may sometimes prove useful. Upon the whole the exhibition of agricultural machinery is most encouraging, and gives promise that *labor* will be *saved* ere long in every operation of the farm.

We must leave other departments of the show for comment in a future number.

MEETING OF THE AGRICULTURAL ASSOCIATION.

A meeting of the several officers and members of the Association and others was held in the Town Hall. On the motion of Col. Thompson, the President took the Chair. He was supported on his right by D. R. Stevenson, Esq., M. P. P., and Col. Thompson; and on his left by Jas. Ferguson, Esq., and by David Christie, M. P. P. Among the gentlemen present were J. B. Marks, Esq., J. McBeth, M. P. P., Mr. Buckland, Ex-Sheriff Jarvis, George Campbell, Messrs Wade, Storm, and other eminent farmers. Mr. Ferguson was appointed Secretary. The President stated they would remember that it had been decided that Wednesday and Thursday evenings should be devoted to discussions among the farmers upon any interesting subject that might be brought before them. For that purpose they had now met together, and it was of great importance that these great social meetings should be well kept up. He did not intend to take any part in the discussion; but there was one point to which he would call their attention, and that was the Educational department in the floral hall. He then went on to speak in high terms of the Educational system of the country, and especially the public Libraries connected with them.—He concluded by stating that the subject chosen for discussion for the evening by the Local Committee was this:—"In what manner this Provincial Show may be carried on in the manner best calculated to advance the Industrial and Agricultural interest of the country." Mr. McDougall had been selected by the Committee to give a paper upon this subject, and he now called upon him to come forward.

Mr. McDougall expressed his opinion that although the Provincial Shows had so far been highly successful, and would compare with any Exhibitions held on this continent, yet there were some points in which he thought they might be made more generally useful. One point in which he thought they were deficient was, that there was no proper provision made to record the results. He thought something might be done with regard to animals, by taking likenesses of the best of the several breeds. In this way they could form better ideas of the improvement that had been effected. No one could obtain the

knowledge of a single fact of importance except by attending these shows, and then only from observation. No one knew how this wheat, or any other production of the earth which obtained a prize, had been cultivated. No one could tell from what he saw how to improve his own culture. This defect he thought might be remedied by requiring every person who sent an article for exhibition, to furnish answers to a list of questions which should be sent to them. By publishing these, every one could know in what manner excellence in any particular branch could be obtained. Another point was that they have hitherto had no practical test of the quality of the Agricultural Implements. It was quite impossible to tell the value of any machine, merely from an inspection of it on the ground. This year they had commenced the system, and the result was that he believed they would give the 1st prize to a reaping machine, to which, had they not seen it working, they would probably have given no prize at all. Another thing was that the decisions of the Judges at a show like this ought to be so reliable that farmers could be guided by them in purchasing machines; and without a practical test they could never arrive at that result. The same remark applied to the ploughs, fanning mills, and other kinds of machinery. Another important point was the places at which these shows should be held, and his opinion was that they should be held more permanently. Giving the people of Brantford every credit for the preparations they had made, still many complaints were made of the want of accommodation, and the high prices charged for what was to be had. Another objection was that the members of the Local Committee, from inexperience, could not be expected to make all the preparations that were required. He thought that the best mode would be to select three permanent places, one central, one in the east, and another in the west. He did not think that it was necessary to confine the shows to one place, as there were many advantages from changing the location.

E. W. Thompson, Esq., spoke of the difficulties which had been experienced in first establishing these exhibitions, and the success that had attended them; this was especially the case in agricultural implements. A few years ago all our implements came from the States, but this year there was not a single foreign implement upon the ground. (Cheers.) It was impossible to test the value of implements at this season of the year, and the only plan would be to appoint a Committee in various parts of the country to report upon the implements used at the time they were employed. It was also necessary to have a better implement to test the draft of the ploughs.

Mr. French observed that he knew of no school in his part of the country which was sufficiently advanced to make use of the splendid instruments displayed in the Exhibition. He thought the establishment of an Agricultural and Veterinary College would be of more benefit to the country. A great many things that were now spoken of as new had really been known of years ago, and the advance that had really been made was very small.

Mr. Jarvis approved of many of the suggestions of Mr. McDougall, with regard to reaping machines. He thought that persons intending to exhibit such machines, should give notice of the time at which it could be tried. With regard to manures, he had recently seen in Europe what care was taken of all kinds of manure; and he was glad to learn that a gentleman in town, too, was preparing to manufacture manure from the numerous kinds of offal to be found about all large towns. The Board of Arts and Manufactures with which he was connected, would work hand in hand with the Agricultural Association, for the benefit of farmers as well as machinics.

Mr. Stevenson spoke of the advantages derived from the establishment of the Association, and of the improvements it had effected in the agriculture of the country. Farmers were very much averse to what they called book-farming, and were slow to adopt anything until they knew the practical result of it. The working of the Association had been quiet, but had produced a much greater effect than was generally imagined, in showing farmers, by the example of others, what it was practicable for them to do themselves. In his county, a few years ago, there was scarcely any clover seed to be got; but by the encouragement afforded by the County Society, enough was now grown to be a source of profit. He could remember when there were no implements used but those made in the States, and now all that they required were made in Canada. It showed that they only required to make a market to have the article manufactured.

He spoke of the importance of having a more full record of their proceedings, and also thought that it would be very advantageous to require exhibitors to give a statement of the manner in which they had produced the articles. This was especially the case in re-

gard to roots, the modes of growing and raising of which people were very ignorant.

Mr. Wade said that the question was whether they should have the meetings of the Association fixed in one place, or have them migrating as heretofore. Granting that the money was found by the localities, it was equally lost to the country. He was in favour of having the meetings fixed at five places.

Mr. Good thought it did a great deal of good to have the meetings of the Association held at different places, as many people could see the Shows in that way who otherwise could not. As to the expense the whole of that was borne by the locality in this case, the town paid £1000 and the county £500.

Col. Thompson said that the Association could never have been got up if the people had not become interested in it, by its being held in different parts of the country, and if it was now confined to one or two localities, the general interest would be lost. As to the great bug-bear—the expense—that was all borne by the locality. He contended that the opinion of the meeting should be taken by putting a resolution.

Mr. McDougall said that the circumstances of the country had altered very much since the first establishment of the Society, and the same argument did not prevail. The money that was spent in making preparations by the locality, would confer much greater benefit if spent in giving additional prizes. He thought they ought to study economy, and with that view he would move that in the opinion of the meeting the future meetings of the Association should be held in three of the largest cities most convenient for that purpose.

J. B. Marks, Esq. said this was not the proper place to put such a resolution: it was the duty of the delegates for all parts of the country to decide the question, as they would have an opportunity of doing so on Friday evening. This meeting had nothing to do with the resolution; it could only be a matter of opinion, he thought that perhaps it would be better to let the present system continue two or three years longer.

Dr. Barker said this was not the proper time to put the question, nor was the proper assembly to decide it. It was not intended to take up the question in this way, but merely to discuss it. Several gentlemen decreed the motion withdrawn.

Capt. Beresford protested against any such resolution being put now, as many delegates whose duty it was to decide questions, were not present. The question would come up on Friday, where they would all be present. Some further discussion followed, and Mr. McDougall finally consented to withdraw the resolution.

The President said that it was the opinion of Col. Johnson, that the most satisfactory method of testing the reaping machines would be to appoint a number of Judges to go into the country and see them in operation, and with reference to putting questions to exhibitors as to the mode of producing the articles they exhibited, he was informed that in the State of New York, the answers were so numerous they could not publish them. He had no doubt a similar result would be found in this country. He also begged to call attention to the very small sum the farmers in this country were willing to pay for the agricultural papers. They would not expect to have the best talent in the country employed upon these papers for half-a-dollar a year. He concluded by stating that the Secretary of the Lower Canada Association was present, and would favour them with some remarks.

This gentleman stated that his only knowledge of agriculture was derived from the lessons he had received from Agricultural Schools in Europe and the United States. There, however, the student put in practice in the afternoon what he learned in the forenoon, and performed all the manual operations himself. He thought it of great importance that they should establish similar schools in this country.

Mr. Buckland had been requested to state that a project was being set on foot in Toronto, to collect all organic compositions, with a view to manufacturing from them what were called artificial manures.

Mr. Denison stated that he had been most exorbitantly charged for the carriage of his stock on the Buffalo and Lake Huron Railway. He had paid eight dollars and a half from Toronto to Paris, and he was charged ten dollars from Paris to Brantford. Such conduct as this had materially injured the Exhibition and the Town of Brantford. He therefore moved "That in the opinion of this meeting the conduct of Captain Barlow in exacting exorbitant rates in violation of promises made to the officers of the Society, reflects discredit upon the Company he represents, and has been detrimental to the Exhibition and to the Town of Brantford."

Some further instances of similar charges were mentioned, and the motion was carried by acclamation. The meeting then separated.

MEETING OF DELEGATES.

TORONTO SELECTED FOR HOLDING THE NEXT SHOW.

The meeting of the last day commenced with a meeting of Delegates, for the election of officers for the ensuing year, and the selection of a place for holding the next Annual Show.

The following Delegates answered to their names:—

<i>Essex</i> —John McEwing.	<i>Lincoln</i> —E. C. Campbell.
<i>Kent</i> —D. Wilson, W. Miller.	<i>York</i> —W. McDougall, Geo. Miller.
<i>Middlesex</i> —T. B. Askin, Wm. Bakewell.	<i>Ontario</i> —E. Burrill.
<i>Wellington</i> —Thos. Andrew, F. W. Stone.	<i>Hastings</i> —T. S. Farley.
<i>Perth</i> —W. Smith, W. McCulloch.	<i>Durham</i> —C. H. Jordison, Matt. Jones.
<i>Oxford</i> —John Borwick, Jos. Scarf.	<i>Northumberland</i> —P. R. Wright, A. Allen.
<i>Wentworth</i> —H. Ogilvy, Thos. Stock.	<i>Addington</i> —Samuel Clark.
<i>Brant</i> —Allan Good, John Tennant.	<i>Lenoix</i> —Alexander Campbell.
<i>Welland</i> —John Schofield.	<i>Frontenac</i> —Angus Cameron, E. Jackson.
<i>Norfolk</i> —Oliver Black.	<i>Leeds</i> —Dr. Richmond.

The President congratulated the gentlemen present on the success, in a pecuniary point of view, with which they had met, despite the very unfavourable weather. The proceeds were:—

From sale of badges.....	\$3,177
“ “ “ 15,000 tickets.....	3,750
“ “ “ carriage tickets	51
“ “ “ booth licenses.....	586

\$7,564 or £1,891

That was to 10 a.m.; and had no doubt that \$500 at least would be added to the funds of the Society during the day.

Judge Campbell, of Niagara then said that there was an understanding that the Vice President should, according to rotation, be elected to the Presidency; he would therefore move that Mr Stevenson, Member of Parliament for the county of Prince Edward, should be the President for the ensuing year.

Seconded by Sheriff Ruttan, and carried.

Mr. Stevenson thanked the delegates for the honour they had conferred on him: and pledged himself to do all that the warmest zeal for the interests of the Society could prompt to make its operations successful.

Col. Thomson, seconded by Mr. Marks, moved the appointment of Mr. William Fergusson as 1st Vice President.

This motion was also carried.

Sheriff Ruttan, believing that the officers of the society should be practical men, proposed the name of Mr. John Wade, of Northumberland, as the 2nd Vice President.

Motion seconded by Mr. McDougall, and carried.

Col. Thomson then moved that Mr. Dennison be Treasurer for the ensuing year—which was carried, and,

Mr. Deanison returned thanks for the mark of confidence again reposed in him. There was another, however, to be performed; and, he would therefore, as President of the York Agricultural Society, move that Toronto be the place where the next annual Show is held. He was authorized to state that the city of Toronto had voted £1,250 to the funds of the Society, and the County of York £300, which he was promised should be raised to £1,000. He could at least guarantee that the sum from the city and county would be £2,000.

Mr. McDougall seconded the motion, urging the advantages the society would gain from the excellent accomodation afforded to visitors in Toronto; and the claims it has for consideration, as it was six years since the show had been held there.

Mr. Saunders of Guelph, seconded by the Hon. Adam Fergusson, moved in amendment that Guelph be the place, offering on behalf of the town and county £1,500.

Judge Campbell, of Niagara, in a long speech, moved in amendment to the amendment that the show be held at Niagara. He offered on behalf of the town of Niagara £1,000 that sum to be largely increased by private subscriptions.

Seconded by Mr. Schofield.

Mr. Barwick, of Woodstock, seconded by Mr. Sparks, moved in amendment to the last amendment that three permanent places for holding the shows at be resolved on, namely Toronto, Kingston, and London, and that the next show be held at Toronto.

Ruled out of order, and laid over as a notice of motion at next meeting.

Several other speakers followed, and on the amendment in favor of Niagara being put to the vote, only three hands were held up in favor of it, sixteen for the motion in favour of Guelph. The main motion in favour of Toronto was, therefore, declared to be carried by a large majority.

THE POTATOE ROT—GENERAL PREVALENCE.

The potatoe disease seems to have returned this year with greater virulence than ever, if we except the first season of its general prevalence. The *cause* is still wrapped in obscurity. All the special theories broached from time to time have been proved untrue, or insufficient to account for the disease. The Rev. C. E. Goodrich, of Utica, N.Y., has made the potatoe a special study for years and has produced many new varieties; some of which have proved valuable. We have planted some of these for the last three years, and find them *less* subject to disease than the sorts in common use, but still they all show some signs of disease this year. The Rough Purple Chili resisted the attack for about two weeks after the vines of the Cups, Pink Eyes, and "Farmers" had turned quite brown, and the tubers showed extensive disease. Then they began to exhibit the same signs, but to a much less extent. As the subject is one of general interest, we copy the following remarks of Mr. Goodrich, communicated to the *Country Gentleman* of the 27th August:—

Utica, August 5th, 1857.

To the Editors of the Country Gentleman.—You know very well the interest which I have long taken in vegetable pathology—an interest originally awakened in reference to the potatoe. My views of the diseases of the latter plant are found in the Transactions of the N. Y. State Agricultural Society for 1847, '48, '50, and '51.

1. I have there described two aspects of the disease. The first is, that occasioned by the sudden alteration of cold, wet weather alternating with that which was hot and dry. Such weather seems to chill and starve the plant, and hold its juices in a torpid condition until chemical influences become stronger than the vital energies of the plant. Hence arises a deprivation of its circulation, until, in extreme cases the whole plant is destroyed, both root and branch. The external indications of disease in this case, are a yellowish corrugate look of the leaves, the points of many of them becoming steel blue, and others yellow, while all soon die. The flowers fall without setting balls, and often without opening at all. In mild cases the leading shoots dwarf, and are subsequently replaced by a new leading shoot sent out from the axil of some leaf, near the top of the plant. Mildew is also seen in extreme cases in this connection.

The second aspect of disease is that occasioned by hot, wet weather, continuing usually from two to five or six weeks. This sort of weather seems to impel the crop into a very rapid growth, and wide development of cellular tissue, thus making the plant vascular and sappy. The continued engorgement of the plant with rich and often watery juices, and the absence of dry air and wind to excrete it, and thus aid in its elaborations, seem to bring on a torpor of the plant, much as in the preceding case. The leading mark of disease here is a universal mildew, beginning in small brown points on the leaves, and rapidly spreading until the leaves, and in extreme cases, the stalks and seed-balls are all involved. Unlike the former aspect of disease, the plants continue in this to flower freely and if late enough in the season, to set balls even after disease has advanced to a hopeless state. In both aspects of disease these indications on the foliage are speedily followed by the injury of the tubers. This result follows naturally and necessarily from the deposition of badly elaborated matter upon them.

2. The disease of the potatoe, which is now beginning to manifest itself, is that de-

scribed under the second aspect, and is similar to that seen in 1850, '51, '53, and '55.

In 1850, hot, damp weather began with July 14th, and ended with Aug. 20th—lasting five weeks. In 1851 it began June 14th, and lasted until July 28th, or about six weeks. In 1853 the early and central summer was very hot and dry; the season of wet and only moderately warm weather reached from July 26 to August 7th, that is twelve days. During this period there was an entire revival of the growth of the potatoe crop, and a rapid and large expansion of its foliage. In this State, steady and close hot weather began on the 7th of August, and lasted through the 18th, that is twelve days. The resulting mildew began to be seen on about the 8th, and was at its height on the 14th, constituting the most rapid, and, for the term of its continuance, the most destructive visitation of disease I have ever witnessed. Happily, however, very early crops were too far advanced to be impelled into a second growth by the rains preceding the disease, and so mostly escaped.

In 1855 the season bore a very close resemblance to 1851, that is, the hot wet weather began June 21st, and reached to Aug. 6th, when the weather became cool and dry. In these three principal cases (1850, '51, and '55,) the mildew began to show itself towards the close of each of these periods, and extended its ravages on the foliage into the subsequent good weather, and its effects on the tubers into the following harvest.

The weather of the present year has not been very like that of any of the years just particularly noticed, but most resembles that of 1855. May and June were wet, cold and cloudy beyond all remembered precedent. The growth of the potatoe crop, like that of many others during this period, was slow and dwarfish. With July 4th began a season of hot steady, impulsive weather, such as we rarely see; and notwithstanding the lateness of the spring planting, and the slow progress of the early part of the summer, this weather brought up the potatoe crop nearly to its usual state of forwardness. Since the 19th of July, the weather has been damp as well as hot, rain having fallen in considerable quantities on the 19th, 20th, 21st, 27th, 28th, 30th and 31st, besides many light intervening showers—the whole amounting to 3½ inches of water. Again, yesterday, (Aug. 4th) there fell 2½ inches more.

3. As a consequence of this hot and damp weather, mildew began to manifest on the grapevine, especially where planted in rich and heavy soils, more than a week ago. Even the Isabella and Catawba have not wholly escaped. Mildew was not noticed upon the potato until four days ago, and then on the leaves but not on the vines. Such however is the state of rapid growth in the potato crop, and such the continued hot and damp state of the weather, that a wide pervasion of mildew may be feared, the law of progress in this case being the same as with eruptive diseases, is from merely beginnings to general diffusion. The Early Mountain June, Early Pink Eye, Carter and Kidney, usually show it first, and nearly simultaneously. Then follow the Early Shaw, Flesh Colored, and Western Red. The New Jersey Black or Purple Yam, usually is the last to be struck with disease, and though affected in foliage is rarely injured in tuber.

These remarks on the succession of morbid appearance in the different sorts, are based on the supposition that they are all treated alike in soil, aspect, culture, time of planting, &c. My imported Rough Purple Chili rarely shows any mildew on the leaf, and still more rarely on the tuber. The new seedlings which I am sending out have a similar exception, except in the case of two or three varieties, in which I have acknowledged a slight liability to disease.

4. The cultivators of potatoes will most certainly deceive themselves, if they expect to avoid, or even mitigate this disease, by any other than general means, such as are comprehended in dry, loose soils of moderate fertility, early planting, and the use of the strong varieties.

Under these conditions, the presence of disease, even in such seasons as 1846, '50 '51, and '55, will be comparatively light. To the use of the Yam, and Rough Purple Chili for general crops, there are strong objections—to the first on account of its intensely purple flesh, and to the second on account of its hollowness and irregular shape, when cultivated in rich soils. All these objections, however, are overcome in the character of some of the new seedlings, which have been sent out by different individuals. It must be acknowledged, however, that few of these new and hardy seedlings have obtained that high character for the table that is found in the Meshannock, Carter and Winter Pink Eye. Although the experience of the present generation confirms the sentiment of the past—that new varieties of potatoes, however valuable they may eventually become for the table, are slow in obtaining that character of excellence; yet few cultivators have the

patience to wait, and hence they cling, many of them, to the exclusive use of varieties which, in years of disease, result in the loss of half of the crop.

Among seedling of the same family, those that ripen the earliest in the season soonest acquire fitness for the table. Thus, among those which I have disseminated for the last two years, the Pale Blush Pink Eye, (a seedling of 1850,) which ripens rather early, has already a high character of excellence for the table. So also, among the seedlings of 1852, the Utica Pink Eye and the Oneida Pink Eye, (two varieties looking almost exactly alike,) are both quite early. These two sorts are not only much better for the table than the Black Diamond, which belongs to the same family, but are intrinsically so.

In conclusion, should the present hot weather continue long, nothing can save the old and feeble sorts from extensive injury by disease. Indeed, farther south, where the weather may have been hotter and the rains heavier, such disease may have already been developed.

C. E. GOODRICH.

August 15.—The preceding sheets written on the 5th, were laid aside that I might watch the progress of the disease. In the interval of ten days we have had three heavy rains—on the 10th 1 $\frac{3}{4}$, on the 12th and 13th 2, and on the 14th 1 $\frac{3}{4}$ inches, making, with the previous heavy rain of the 4th, eight inches of water in the first half of the month. The temperature meanwhile has been variable, sometimes sultry, as in similar weather in 1850, '51, and '55; but on the whole much cooler than in those years, and cooler than from the 19th of July to the 5th of August, of this year.

The increase of mildew on the crop has been less rapid than I apprehended at the former date. But it has been steadily increasing, being most apparent on fields closely planted on a rich soil of clay or clay gravel, and where lying flat and not well drained.

There is almost everywhere an unusually large growth of vines, which exhibit a sappy and tender condition, because grown rapidly in hot, and for the most part damp weather.

The community here are pretty generally anticipating extensive disease. Some large fields are entirely defoliated. In others the mildew is exhibited in patches. In others the slightest indications only of it are seen in the shape of small brown spots thinly spread over the inner and lower leaves. Diseased tubers are occasionally seen, but may be expected to increase rapidly.

August 18th.—Yesterday we endured a cold east storm, beginning the preceding night and continuing until 2 o'clock p. m. The result according to different measurements, varies from 2 $\frac{1}{2}$ to 3 $\frac{1}{2}$ inches of water. The late heavy rains, and this last one especially, threatens the potatoe crop with a new and unusual danger; I refer to that arising from the influence of water on the tubers.

It is well known that well ripened potatoes in the wet weather of autumn, will bear immersion in water, while yet not dug, for two or three weeks without danger. The india rubber like closeness of the skin resists the action of cold water a long time. But in the unripe state of the tuber, and amid the warmth of summer, the case is entirely different. The late rains have kept the soil of many fields very wet for the last two weeks. That of yesterday covered many with standing water. Such exposure of potatoes to water results in a soft rot, leaving the flesh usually white. In the present time this cause will interact with disease technically so-called. And even fields wisely planted with reference to time, culture, soil and seed, where no danger of disease need have been apprehended, may yet suffer from this additional cause.

Tropical plants are now, as they always are in such weather, in a very healthy condition. I refer to such varieties as cucumbers, tomatoes, squashes, melons of all sorts, peppers, egg plants, corn, &c. Many of them, however, are a little late in fruiting, although considering the lateness with which they were planted, the fruit is perhaps in an ordinary state of forwardness, the impulsiveness of the central summer having restored the backwardness occasioned by the lateness and coldness of May and June.

But, although tropical plants are generally prosperous under the warm wet weather of the present season, we may expect that many hardy plants will suffer, such as apples, plums, walnuts, cabbage and turnips—the two latter particularly, when such weather extends into the autumn. The fruits and nuts mentioned are rarely as sound and enduring in seasons like the present, as in those which are dry and cooler.

It is with deep regret, Messrs. Editors, that I send you this communication. The extent of ground devoted to potatoes her this year is very large. The prospect of a large and healthful crop was, three weeks ago, very flattering. Should the morbid indications here rapidly developing, extend widely over our country, we may be led to fear a more fatal pervasion of potatoe disease than has ever before afflicted it. While we bow submis-

sively under deserved punishment inflicted by a righteous Providence, we should not be unmindful of the physical causes with which it seems to be connected, nor of the remedy.

C. E. GOODRICH.

CULTIVATION OF PEAR AND OTHER FRUIT TREES.

There is a very general complaint of failure in the cultivation of fruit trees in Canada. The stone fruits especially refuse their accustomed yield. Diseases seem to increase, and the remedies are either not yet found out, or they are not applied. We believe that a great part of the difficulty is owing to careless cultivation. Many people forget that trees require *food*, and will die without it, just as certainly as the living animal. They require food, too, that they can digest, or assimilate, and different species require different kinds of food. A writer in the *Country Gentleman* presents some valuable hints on this subject, which, if attended too, would, no doubt, lessen the complaints now so common about fruit trees dying, and refusing to bear.

"In the manuring of orchards we have learnt much, and solved many problems during the last few years, but we still have a great deal to learn in this respect. For what we do know, we are greatly indebted to chemistry, for expounding, by means of the crucible, the various elements contained in matter. Chemistry is the great telegraph of modern times, now set in operation through that wide and comparatively unexplored territory, scientific cultivation. It has brought and made as clear as noon-day the hidden mysteries of the science of the orchard, and like the philosopher's stone or the magic wand in fairy tale, turned all to gold, and has taught us the lesson that only through the most diligent study can we hope to achieve triumphs in the fruit garden. But our motto must still be *Eccelsior*, until our country "shall blossom as the rose," and appear as Grenada did of old to the army of Ferdinand and Isabella, and orchards and gardens cover all our hill-sides. If we make as rapid strides in progress as we have the last few years past, we, perhaps, in time, may obtain the celebrity the French have attained in the cultivation of their orchards, for they much excel the English in this particular. But I am wandering from my subject, and so must return to it. Elliot, in his 'American Fruit Grower's Guide,' thus writes of soils and manures for the pear tree:—

"The pear roots thrive best in a soil where the subsoil is at once dry and moist; that is, where it is open and porous sufficient to admit of free drainage, and yet where the roots extending deeply and freely in it, reach moisture in seasons of extreme drought. Cold clay is a bad sub-soil, and when it exists in the ground of a prospective orchard, it should be deeply and thoroughly sub-soiled, and well drained. The pear on quince roots succeeds best in rich, deep, moist, loamy ground, even enduring considerable water better than dry sand."

"The following is the analysis of the ash of the pear, as made by Dr. Emmons:—

	Sap Wood.	Bark.
Potash,.....	22.25	6.20
Soda,.....	1.84
Chlorine,.....	0.31	1.70
Sulphuric acid,.....	0.50	1.80
Phosphate of lime,.....	27.22	6.50
Phosphate of peroxide of iron,.....	0.31
Carbonic acid,.....	27.69	37.29
Lime,.....	12.64	30.36
Magnesia,.....	3.00	9.40
Silex,.....	0.30	0.40
Coal,.....	0.17	0.65
Organic matter,.....	4.02	4.20

100.25 98.30

He goes on to say:—"From this it will be seen what is most wanted in the soil to produce healthy foliage and wood in the pear. As a general thing, soils usually are or

become deficient in lime and the phosphates, and the cheapest remedy is liberal dressing of wood ashes and bone dust; or in sections where bone dust is not easily attainable, dig in around the tree whole bones from the daily use of a family, or procured from a slaughter house. Potash, dissolved in water, and applied to vegetable mould from the woods, and this dug in around the tree, is also a cheap and ready way of supplying food requisite. Iron filings, etc., from smith's shops is also good, and hence the impression of some, that through it the blight was cured or prevented, the fact being only that a certain element requisite to health was exhausted in the soil. Oyster shell lime is also an excellent manure. In England all the wood ashes are saved by families, and purchased by farmers at a high price, and have a fixed market value as much as any other market production. Some of the rich farmers give peat to the poorer classes to burn on condition to save the ashes for them, which would be an excellent idea in this country to adopt, particularly in New-Jersey, where it can be found in plenty.'

"Those who wish to read more on the subject of ashes as a manure, are referred to Bridgman's Young Gardener's Assistant, in which will be found an article of some length on this important subject. The above, but particularly bones and oyster shells, are the best manures for the grape vine.

"An article in Tucker's excellent work, the 'Rural Register, for 1855,'—a work which should be in the hands of every cultivator in the country, says: So great is the loss resulting from the stunted and diseased growth occasioned by neglected cultivation, that an intelligent cultivator gave it as his opinion, that 'if nine-tenths of our orchards should be cut down, and the labour and cultivation which they receive be expended on the remaining tenth, more and better fruit would be raised.' It also states as the best manure for fruit trees,

"A mixture of swamp muck, with one half to one quarter of its bulk of stable manure and about one-twentieth of leached ashes. These ingredients should lie in a heap together for a few weeks, and then be worked over. If for peach trees, the soap suds from the laundry, thrown over the heap, will improve it; if for cherry trees, which will not bear high manuring, the proportion of muck should be larger, and with less of yard manure and ashes.

"In speaking of the carelessness of some men in ploughing an orchard, it says:—

"Farmers may be seen driving their teams and plows directly over a young fifty-cent tree, tearing its bark and risking its life in order to avoid running over an adjacent potato-hill, not worth three mills currency. There may be three causes for this strange behavior. One is habit, or doing so because others do. Another is a sort of indefinite notion that trees will take care of themselves. A third is an almost total want of appreciation of the real value of trees.'

"Dr. Kirtland states, 'that orchards on the limestone hills of Ohio invariably afford the best fruit.' The same cultivator tried for his pear trees on worn-out land, specific manures, but his trees only made six inches growth in a season. He then effected a complete renovation by applying a dressing of phosphate of lime, (pulverized bones), ashes and barn-yard manure, with a limited supply of common salt.

"An interesting experiment is stated in the *Horticulturist*, on a large pear tree, bearing cracked, blighted, and worthless fruit, which was restored to health and the production of good fruit. The change was effected by digging three feet distant from the tree a circular trench 4 feet wide and 20 inches deep, and filling this with fresh soil (rich) and turf, and mixing two bushels of scoriae from a blacksmith's forge, two bushels of charcoal, and two pounds of potash. The soil and potash were doubtless the chief cause of success. Other experiments of a similar character have been equally successful. Thomas, in his *American Fruit Culturist*, thus writes of manure for the pear tree:—

"As it contains a large quantity of phosphate of lime, it gives strong promise of being benefited by bone dust. For applying, the bones may be broken and dissolved into a paste, in a large tub, by means of sulphuric acid. The acid should be diluted with two and a half times its bulk of water, and successive portions then added for three or four days, till the bones are dissolved, for which purpose their bulk of the diluted acid will be required. The bone-paste is then mixed with several times as much old manure, peat or compost, and applied so as to give eight or ten pounds of the paste to each large tree, and to smaller ones in proportion. If ground bones only are used, twice that quantity may be applied. As the pear contains also much potash, twice as much ashes as bone may be used in the compost.'

"This, the above, is a valuable receipt, and we feel much indebted to Mr. Thomas, both for this and for many more equally as valuable."

TOPPING AND HARVESTING CORN.

There is much difference of opinion and practice among farmers in the management of their corn crops. Some always practice cutting the stalks soon after the kernels have become glazed or checked, believing that such a course hastens the ripening of the corn; and the removal of the stalks greatly facilitates the process of harvesting, and that green cut, well cured cornstalks are much more valuable as winter forage for cattle, than the same would be if left uncut till the corn was fully ripened, as is the practice of some. We presume this is a correct idea. But experiments made some years since, by the Hon. W. Clark of Massachusetts, seem to prove that the number of bushels of corn per acre was very much lessened where the stalks were cut, compared with portions of the field where the corn was not topped, but all left till the corn was fully ripened. By his experiment, the loss in grain must have been much greater than the increased value of the green cut stalks over the perfectly ripened fodder. But a difference of ten or twelve days time in cutting the stalks might make a material difference in the value of the grain. We think it is the safest way for those farmers that practice "topping" their corn, to cut their stalks quite late, rather than a few days too soon.

Well cured corn fodder is a valuable winter feed for farm stock, and much care should be exercised in saving it in the best possible condition. Many farmers are quite too negligent in this matter. We have seen the stalks cut quite green, and many days too soon, bound in large bundles and put up in large shocks, where it remained during all weathers for weeks, or till the corn was harvested; heavy winds blew over many of the shocks, and drenching rains thoroughly wetted them, thus nearly ruining them as fodder. We have seen others cart them directly from the field as soon as bound in bundles, where from want of room and care a large portion of them became mouldy, and nearly rotten and worthless. We know some careful farmers that pursue quite a different course. They do not top their corn until most of the tops of the spindles are dead, and many of the husks have lost their green color. They cut their stalks in fair weather, bind them in small bundles, cart them to the barns, and place the bundles *astride* of poles extending from beam to beam across the barn floor. Here they dry without heating or growing mouldy. If they have not room enough over the barn floor, they make use of hovels or sheds, in curing them. Those that practice this method think they are fully compensated for all extra labor, in the enhanced value of the fodder.

Many farmers prefer letting the crop stand till the grains are principally glazed, and then cutting all near the surface of the ground, and shocking in the field, letting it remain there till dry enough for husking. Some contend the corn ripens as well as if left upon the separate hills. The fodder, as a whole, is thought to be worth much more cured by this method, than by any other process. The crop, when thus cut up and shocked, is placed beyond injury from frost—a matter of much consequence some years. There is but little if anything gained by cutting and shocking corn after it has been stricken by frost. In cutting up the corn as soon as fairly glazed, the fields can be cleared in season for sowing winter wheat or rye—sometimes a matter of much consequence.

Some contend that the soundest and heaviest corn can only be grown by letting "nature take its course," that is, let the whole plant remain uncut till the corn is "dead ripe." This course, probably, may insure the greatest weight of corn per acre, if the autumn is favourable to its perfect maturing. We have more than once pursued this course, but found the labour of harvesting much greater, and thought the fodder less valuable.

Seasons vary so much, and the circumstances of farmers differ so greatly, (to say nothing of their prejudices,) that it would be idle for any one to attempt to point out the one best way—or rather, to say there was but *one* best way under all circumstances.

From present appearances, and the best information within our reach, we think it may be pretty safely predicted, that over a wide range of our country, this is not destined to be a great corn year. A large part of the growing corn is too late to fully mature, unless we have an unusually warm September and October, a circumstance hardly to be expected. Therefore it will probably be the safer course for most farmers to cut up and shock their corn as soon as it will in any way answer,—that is, if it can be done before receiv-

ing much injury from frost; by so doing they may save much in the value of fodder, and much corn would ripen in the shock that would be nearly ruined by frost. We have several times seen corn cut up, and tied in moderately sized bundles and slung across poles over the barn floor, where it has dried perfectly, and the fodder was much better than it would have been had it been shocked in the field. We have seen various methods of shocking corn in the field. Some put a dozen large bundles into a shock; such large stacks do not dry well. Others cut and stand it round a hill purposely left uncut. We have seen corn very safely stooked by only using five bundles to the stook—one in the centre, and one on each of the four sides; a band of rye straw was tightly tied around the whole some four feet from the ground, and the tops of the stalks bent over and tied down. Such stooks stand better than larger ones, and also dry much better.

Corn, when harvested before it is properly ripened, and dried in the field, as much of it probably will be in the coming harvest, is sometimes injured when stored in large quantities in the crib, or the slatted corn house. If dry, windy weather follows after the corn has been cribbed or housed, it generally dries well, but if long continued damp or rainy weather succeeds, the corn is very liable to heat and mould, &c., injuring its meal qualities. To guard against such a loss, we have known farmers to have a tight box stove in their corn houses, and they kept up a brisk fire a portion of the time during the damp weather, thereby drying their corn very fast, and saving it from injury.

The labor of manuring, ploughing, planting and hoeing an acre of corn, is no trifling job in many situations of the country, and it should be the aim of the farmer to make the most of this labor, and not cheat himself out of a portion of his work by suffering his corn or corn fodder to be injured or wasted through negligence or lack of care on his part.—*Country Gentleman.*

THE NEW KIND OF PAPER.—It appears that the "parchment paper" recently invented by Mr. Gaine, of England, is soon to be manufactured and brought into general use. According to the London Mechanic's Magazine's report on this matter, and which is remarked upon approvingly by the Scientific American, Mr. Gaine instituted a series of experiments to discover the effects of acids of different degrees of strength upon vegetable fibre; and he succeeded in discovering that when paper is exposed to a mixture of two parts concentrated sulphuric acid of the specific gravity of 1.854, with one part of water, for a short time, simply drawing it through the liquid, it is immediately converted into a strong, tough, skin-like material. All traces of the sulphuric acid must be instantly removed by careful washing in water. If the strength of the acid much exceeds or falls short of the above degree, the paper is either charred or converted into dextrine, or if it is allowed to remain for many minutes in the sulphuric acid after the change in its texture has been effected. In a little more than a second of time, a piece of porous, weak and unsized paper is converted into a parchment paper, a substance so strong that a ring of it, seven-eighths of an inch in width, and weighing no more than twenty-three grains sustains a weight of ninety-two pounds; and a strip of parchment of the same dimensions supported fifty-six pounds. Like parchment, it absorbs some water, but it is even indestructible by water. Printed paper is capable, by this process, of being converted into parchment paper without obliterating the printing. If further trials are successful this will prove a most valuable discovery.

LARD AND TALLOW CANDLES.—The following method of making the above named candles is described in the *New England Farmer* by a correspondent:—"I kept both tallow and lard candles through the last summer, the lard candles standing the heat best, and burning quite as well and giving as much light as tallow ones. Directions for making good candles from lard: For 12 lbs. of lard take 1 lb. of saltpetre and 1 lb. of alum; mix and pulverize them; dissolve the saltpetre and alum in a gill of boiling water; pour the compound into the lard before it is all quite melted; stir the whole until it boils, and skim off what rises; let it simmer until the water is all boiled out or till it ceases to throw off steam; pour off the lard as soon as it is done, and clean the boiler while it is hot. If the candles are to be run, you commence immediately; if to be dipped, let the lard first cool to a cake, and then treat it as you would tallow."

SEPARATING BRAN FROM STARCH.—A correspondent states that in the manufacture of starch the finer particles of bran penetrate through the finest sieves, and that an improvement which would remedy this evil would be valuable.

THE RECENT SALES OF SHORT HORNS.

Several important sales of thorough bred cattle have been made the present season. The prices obtained, and the numbers who attended, notwithstanding the tightness of the times, show that the spirit of improvement is abroad, and that thorough bred stock is at last appreciated.

We have no doubt it will be interesting to our readers to know the particulars of these sales, and the names of those into whose hands the stock have gone. The sale of the Messrs. Wade came off on the 26th and 27th of August.

The day of opening was most favourable; but owing to the late season, and the unfinished state of harvest operations was not so large as was expected and consisted chiefly of farmers from the neighboring district, with very few Americans.

We consider the prices realized by no means large, but as far as could be expected in the present state of our monetary affairs. The sellers hardly, we believe, consider the realisation sufficient to indemnify them for the heavy risks and outlay they have incurred for a long series of years. After offering a few ordinary Leicesters, which sold at fair prices, the sale commenced with the perhaps most extensively known short-horns of the late Mr. Ralph Wade, jun., whose unfortunate death at the Desjardin catastrophe we lately had to deplore. We are sorry that the condition of this beautiful lot of cattle showed, in an unmistakable manner, the want of their owner's managing hand; and we have no doubt this improved materially the prices realized.

"Princess Julia," a large, rough-framed cow, the mother of a number of younger cattle, colour dark roan and white, sold, with a calf just dropt, for \$195, to Sidney Smith, Esq., M.P.

"Dairy Maid," a splendid light roan and white cow, which took the first cow prize last year at Kingston, in two high condition, and with some little fear as to breeding, brought only \$200—going to Mr. Sheldon of New York State.

"Lady Lambton," a beautiful dark roan cow, but in low condition, having produced twins since her owner's death, was bought by A. Alcorn, Esq., as Hamilton Township, a most spirited farmer, for \$210

"Bob," the twin bull calf of the above, a beautiful, thick set little fellow, with a close velvety coat of the richest dark roan, just the kind of animal by which his late owner acquired his reputation, went to Mr. Elliott, of Matilda, at \$105.

"Victoria," a large framed, broad, dark, roan cow, rather thin, sold to Matthew Jonas, Esq., of Darlington, for \$190.

"Dahlia," a fine dark red roan and white cow, the flower of the flock, in prime condition, with her heifer calf, was also bought by Mr. Jonas for \$465.

"Water Lily," a white cow, of good shape, but out of condition, hardly showing to be in calf—\$116 to Mr. Sheldon.

"Water Witch," a white two-year-old heifer, went to Mr. G. Elliott, of Port Granby, Clark Township, for \$140.

"Young Clarentine," a beautiful light roan heifer, two years old, was, we understand, retained for the children.

"Clipper," a rich dark roan, one year old, very close, heavy coat, was also, we believe, retained

"Snowberry," a pretty white heifer calf, out of "Clarentine," bought by Mr. Elliot, of Matilda, for \$85.

"Princes Royal," a very pretty roan and white yearling; we did not ascertain her destination.

A few grades of Mr. Ralph Wade's stock were next offered, but, being in low condition, their prices were not worthy of note.

The grades of Mr John Wade were next offered, and a lot of finer animals, or in better order, we have rarely had the pleasure of seeing—not fat, but breeding order.

"Beauty," a fine light roan, sold for \$125, to G. E. Castle, Esq., Hamilton Township.

"Pansy," a rich red and white cow, went to Mr. Sinclair, of Cobourg, for \$100.

"Clara Fisher," a light roan, sold to Mr. Esson, of Keen, Otonabee Township, for \$75,

The thorough-bred bulls were next offered, but few buyers of this stock seemed to be on the ground, and the biddings were lifeless,

"Sir Charles Napier," imported bull, was not bid on.

"Lord Raglan," four-year-old, large, dark and white bull, went to G. E. Castle, Esq., for \$185.

"General Simpson," a fine roan, sold to T. Greenshaw, Hamilton Township.

"Napoleon," sold to M. Jonas, Esq.

"American Belleville," a splendid rich white bull, whose sire was for some years the champion of England, was sold to Timothy Windatt, Esq., an enterprising improver in Clark Township for \$110.

"Washington," a dark roan, sold to John Bellwood, jun., Esq., of Clark, for \$200, &c., &c.

The grades of Mr. Ralph Wade, sen., a very choice lot of animals, which we have not room to particularize, ranged from \$60 to \$80 each.

Next came Mr. Ralph Wade's sen., thorough-breds:—

"Victoria," dark roan, \$115, to C. A. Jordison, Esq., of Hope Township.

"Dehlia," white, to Mr. Francis Fowler, jun., Huron District, for \$250.

"Duchess" and "Newham Lily," two very fine cows, to J. Bellwood, jun., Esq., of Clark, for \$650.

The Crimean heroine, "Miss Nightingale," a pure white, to T. Wyndon, Esq., of Clark, for \$105.

"Lily," white, three years old, to C. A. Jordison, for \$157.

"Lily 2nd," a yearling, to Mr. Sheldon, State of New York, \$80.

During the evening and next day a large number of horses were sold at good prices. The few imported Leicester sheep hung heavily on hand for lack of purchasers in that line. Some time was also occupied in selling grade cows and sheep, the property of neighbouring farmers. A number of the fine thorough-breds of Mr. John Wade were sold by private sale.

Among others, the writer secured two very fine heifers at a fair price.

The next sale in order, took place in Markham. It consisted chiefly of sheep imported by Mr. Simon Beattie. The following prices were realized:—

2 two Shear Leicester Ewes, £32 each; 2 two Shear Leicester Ewes, £20 each; 2 one Shear Leicester Ewes, £11 5s.; 2 two Shear Costwolds Ewes, £20 each; 1 one Shear Leicester Ram, £25; 1 one Shear Leicester Ram, £17 10s.; 1 Leicester Ram Lamb, (Canadian bred,) £11 5s.; 1 Leicester Ram Lam, (Canadian bred,) 37; 1 imported Durham Heifer, two years old, £78; one imported Highland Pony, 2 years old, £33.

The last sale which we shall notice at present, is that of F. W. Stone, Esq., of Guelph. It came off at his farm, near Guelph, on the 16th Sept., was well attended, and the prices paid were liberal, though not in all cases satisfactory to the owner.—Mr. Stone reserved a few animals and exercised the right of bidding once on those which seemed likely to go off at unremunerative figures. The following is a list of the sales, with prices and names of purchasers. The lots omitted were either bid in by Mr. Stone, or passed for want of a bid:—

COWS, HEIFERS, AND CALVES.

Lot.	Price.
1. Henry J. Boulton, Esq., Humberford, County York, C. W.....	\$110
2. Edward Jones, Stamford, C.W.....	180
3. Dr. Twining.....	105
4. Samuel Hodgkins, Guelph.....	180
6. Mr. Buffum, New Hampshire, U. S.....	110
7. Henry J. Boulton, Humberford, C.W.....	160
8. Edward Jones, Stamford, C. W.....	250
9. John Snell, Chinguacousy, C.W.....	650
11. Mr. Buffum, New Hampshire, U.S.....	255
12. Arthur Hogge, Guelph, C.W.....	200
13. Isaac Anderson, West Flamboro', C.W.....	120
14. Henry J. Boulton, Humberford, C.W.....	200
16. Wm. Whitlaw, Guelph, C.W.....	90

17. Henry J. Boulton, Humberford, C.W.....	410
19. Thos. L. Harrison, Morley, St. Lawrence County, N.Y.....	325
20. John Dew, Toronto, C.W.....	120
21. Paoli Lathrop, South Hadley Falls, Massachusetts.....	380
23. Henry J. Boulton, Humberford, C.W.....	205
24. John Snell, Chinguacousy, C.W.....	650
25. John Iles, Puslinch, C.W.....	150
26. John Dew, Toronto, C.W.....	75
27. John Snell, Chinguacousy, C.W.....	140
28. Mr. Emerson, Mountain View, California.....	305
29. Mr. Sheldon, Geneva, N. Y.....	75
30. John Iles, Puslinch, C.W.....	750
36. Paoli Lathrop, South Hadley Falls, Massachusetts.....	509
44. Mr. Emerson, Mountain View, California.....	450
46. Justin Ely, West Springfield, Massachusetts.....	500
47. Mr. Emerson, Mountain View, California.....	200
30 head.....	\$8000

BULLS AND BULL'S CALVES.

1. Arthur Hogge, Guelph, C.W.....	500
3. Thomas Arkill, Puslinch, C. W.....	200
6. Henry J. Boulton, Humberford.....	600
7. Mr. Emerson, Mountain View, California.....	650
9. Mr. Emerson, Mountain View, California.....	800
10. Mr. Emerson, Mountain View, California.....	250
11. Henry J. Boulton, Humberford.....	430
12. Thos. L. Harrison, Morley, St. Lawrence County, N.Y.....	150
13. Justin Ely, West Springfield, Mass.....	160
14. James Phin, Waterloo, C.W.....	100
15. Paoli Lathrop, South Hadley Falls, Mass.....	200
16. Gavin Caldwell, Pilkington, C.W.....	125
18. James Cowan, Waterloo, C.W.....	50
13 head.....	\$4205
Total.....	\$12,205

A number of Cotswold sheep were sold at an average of about \$100 each.

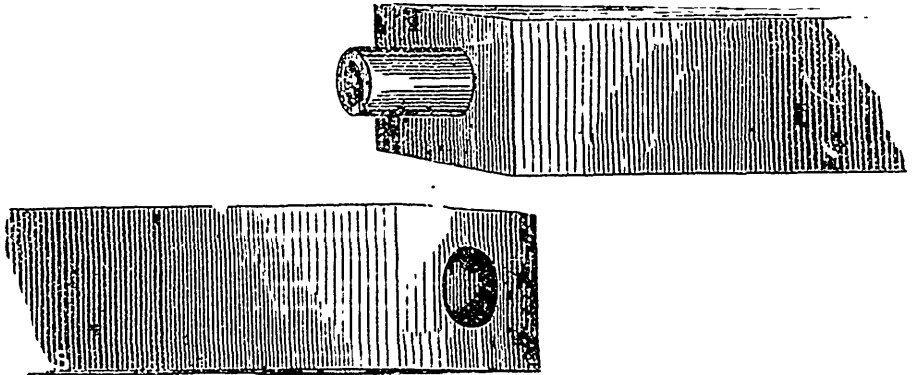
HARVESTING CARROTS.—Grind a hoe sharp, and send a hand along between the rows to cut off the tops, while another hand with a team plows a deep furrow along side of the first row, close to the carrots; the next furrow will turn them out. Two boys with a large basket can follow, dig up the carrots, and put them in the wagon. When your carrots are harvested the ground is fall ploughed. This we believe to be a good mode.

SOAPSUDS.—In days that once were, the soapsuds went to the gutter as regularly as the washing-day way was ended, and there are to many who allow the plan to be followed in the present day. All do not yet seem to have learned that a tubful of strong soapsuds is worth as much as a fertilizer and a wheelbarrow of good manure. Now every bucket of soapsuds will be thrown where it will not be lost. The garden is a good and convenient place to dispose of it, but the roots of grape vines, young trees, or anything of this sort will do as well.

It is estimated that 80,000 persons are employed in the shoe manufactories of Massachusetts. The 218, wholesale and jobbing boot, shoe and leather dealers of Boston, sell yearly \$30,100,000, the 106 hide and leather dealers \$25,650,000, and the retailers \$1,390,000, making an aggregate of \$61,140,000. Four of the shoe-houses do a business of over \$1,000,000, annually; two over \$800,000, nine over \$500,000, and thirty-eight over \$200,000.—Three leather dealers have an annual trade of more than a million, three more than \$800,000, seven more than \$500,000, and thirty-four more than \$200,000.

A NEW INVENTION.

Mr. L. D. Campbell, of this City, has set up a machine for boring tubes for conducting water, and also for Chain Pumps, which performs its work admirably and with astonishing speed. The above cut represents the ends of two pieces of scantling, eight feet long, as prepared to be joined together. Mr. Campbell says,—



“That his tubing is made from solid Pine or any other scantling from 3½ to 6 inches square, with 1½ to 3 inch bore according to the pressure required, in pieces 8 feet long, *accurately filled* with a *socket joint*, both air and water-tight. As this machine bores directly through the centre every time, the timber requires to be only large enough to sustain the pressure wanted, and the smaller the wood the more perfectly it becomes saturated with water, and the longer it will last. At the same time these Pipes never stop up from impurities of the water, nor are they liable to be flattened like lead pipe. They are also free from rust or poisonous oxides, lasting nearly or quite as long as lead or iron pipe at only one-sixth the cost.”

This tubing can be furnished at \$5 per 100 feet, one and a-half inch bore. See his advertisement.

THE TIDE IN THE BAY OF FUNDY.—A summer tourist writes from Windsor, N. S. that the tide in that region is worth a visit to witness. At Windsor it rushes in from the Bay of Fundy, to the height of twenty-five or thirty feet. At the ebb a vast expanse of mud is brought to view, and the beds of deep streams are converted into rivulets. But the tide at this point is not attended by the sublime demonstration witnessed in Chignecto Bay and the Basin of Mines, into which the Bay of Fundy is divided. Setting in obliquely on the coast of North America, the tide “seems to range along that coast in a channel or bed, gradually narrowing till it is stopped in the Bay of Fundy, where the accumulation of water becomes tremendous.” The tide approaches with a prodigious noise in one vast wave, that is seen many miles off, and the waves rise to the height of more than seven feet. Swine exhibit a peculiar penchant for the shell fish uncovered by the receding water, and root vigorously until the distant rumble of the “bore” or approaching wave is heard, which they detect with remarkable readiness, when the whole herd turn tail and make for the nearest land. Speaking on the same subject, a recent writer says:—

“A vast and uninterrupted body of water, impelled by the trade wind from the coast of Africa to the American continent, strikes the Nova Scotia shore between 44 deg. and 45 deg. North latitude, with a force almost adequate to its total annihilation. A barrier of fifteen miles only in width, between the Atlantic Ocean and Gulf of St. Lawrence, seems to have escaped such a catastrophe—while a space 100 miles in length and upwards 40 in breadth, has been swallowed up in the vortex, which, rolling its tremendous tides of sixty and seventy feet in perpendicular height up the beds of the adjoining rivers, has converted them into inland seas.”

THE CHINESE SUGAR CANE.

This new plant—new to this continent—bids fair to prove a valuable addition to the list of cultivated vegetables in the South and West. We hear of some cases in the western part of Canada where it is ripening its seed, but in this neighbourhood, we doubt if any perfect seed will be obtained this year. The season has not been favourable to plants of this family, and it will not be fair to condemn the *Sorghum* for a single failure. We planted a few hills, rather late, which have grown finely, but show no appearance of seed at this date (Sept. 25th). The following is from a Maine newspaper, a part of the Union not so favourable as Western Canada:—

The cultivation of the Chinese sugar cane is yet an experiment, and a most interesting experiment to all classes of the people. If it succeeds, we have a new and inexhaustible source of molasses and sugar, which are now so difficult to be obtained. It has this year—when the season has not been very favourable to it—been cultivated with various success in many parts of the country. Some of our northern farmers have thought that it might be profitable for fodder, but nothing else; others that it would make molasses but not granulate, and therefore be unfit for sugar; while others have been most hopeful that it would answer all the ends promised. Hereabouts it did not grow well in the early part of the season, but has since done better, and we now find it ten and twelve feet high, and standing the cold better than corn.

In other sections of the country it promises better than here. The *Chicago Journal* says:—

“In the Chinese sugar cane we are now confident we have the source of an almost unbounded supply. It will flourish everywhere in the Union, and can be raised at the West as easily and cheaply as corn. Where then, shall we fix the limit of its culture save in the demand for sugar and molasses? The prairies of Illinois, besides growing all the breadstuffs they do now, might almost supply the markets of the world with those articles. We shall be content, however, for the next two or three years, with enough of each to meet the home demand. The business can be indefinitely extended thereafter.

In Michigan and Ohio, experimenters are quite as sanguine as the Chicago men; and at the south all accounts are in its favour. If it proves valuable at all, it no doubt will open the new lands of the southwest, and we see that G. W. Kendall, formerly editor of the *New Orleans Picayune*, who is now farming in Texas, hopes great things from it. He writes:

“I have an immense crop of Chinese sugar cane considering the amount of land planted. I hardly dare say how much seed I think I can raise to the acre, while the amount of fodder is prodigious. As I look at it, and am devising plans to save it, I cannot help thinking of the poor fellow who won the elephant in a raffle—he found he had got too much of a good thing, and did not know what to do with it.

That the *Sorgho Sucre* stands a drought better than any thing else, is past all question, I proved it last year and this year I have double confirmation. Rows of it are standing in my corn field even here, with well matured, ripe heads, where the other grain has come to nothing. All that it wants is moisture enough in the ground to bring it up, and then a single, shower to give it a start, and it will go on and mature when everything else fails.

Many of my friends in this section are sanguine that this new grain or plant will drive all others out of the ground, or that it will at least effect a perfect revolution in the way of farming in Western Texas. They are saving the seed to plant and for bread, they are making syrup and sugar of the juice of the stalk, they are feeding it out as green fodder, and saving it up for dry. No part of it is wasted; cattle, horses, sheep and hogs eat it clean, from the ground upwards, when the stalk is ripe, and gain strength and grow fat upon it. An immense quantity of it will be planted next year.”

BED BUGS.—The weed known as “smart weed,” which may be found in abundance along ditches, roads, lanes or barn yards, is an effectual and certain destroyer of the bed-bug. A strong decoction is made of the herb, and the places infested with the insects well washed with it.

WINTERING VERBENAS, &c., IN PITS.

At this season of the year numbers of our readers we doubt not feel bad to think that in so short a time they must lose their pets—the *flowers*, which have so delighted them during the summer. Perhaps they were the present of some kind friend, and they would like to save them. No green-house have they; what can be done? Quite likely the following simple plan, may set them to work:—

That the thing is feasible and possible with the Verbena, we are quite sure, and it is very likely with any ordinary bedding out plants, if they are kept *dry* while in the dark. Much, very much depends on this one particular point, to secure which the bottom of the pit should be so situated that no water could stand in it at any time. And charcoal or coarse cinders would be better for the bottom than fine saw-dust.

“I succeeded in wintering some three hundred plants in a pit made like a common hot bed, with the exception of strong posts at the corners, and two upon each side at intervals of three or four feet. The frame was about twelve feet long, five wide, five and a half high at the back, and four in front, this gave a pitch to the sufficient to carry off the drip from frost gathered upon the sash; the front edge was nearly level with the surface, leaving just room to slide the sash down a foot, which gave ample room at the top for the admission of fresh air when necessary.

The ground in front of the pit should have sufficient slope to carry off the water. The outside was lined with tan one foot thick and two feet deep in front, and reaching nearly to the top at the back and ends, being well secured with boards nailed to the frame work of the pit and projecting like a roof. In this way the rains and melted snows are conducted off, thus keeping the packing perfectly dry. I presume dry leaves, straw, or saw-dust, would answer equally as well as tan, and to many would be far more economical and convenient.

The bottom of the pit may be covered three inches with dry saw-dust, upon which lay a floor of rough boards. Against the back of the pit I put up temporary shelves, the upper one coming within eighteen inches of the sash; upon this the plants may be kept during the early part of winter, removing them towards the bottom of the pit as the cold weather increases, until they are finally placed upon the floor. The shelves may then be removed in order to let in all the light possible.

The plants will require but very little water, just enough to keep up a moisture about roots; but *especial pains* should be taken to *let in fresh air* upon them every mild sunny day, between the hours of twelve and two.

At night, the sash (which were single) were covered with straw mats, also in severe cold, cloudy days. Entrance to the pit may be had by raising one of the sash in front, and having a temporary step upon the inside.

The snow should be swept from the sash immediately after a storm.”—*Snow's Catalogue for 1857.*

TO PICKLE CUCUMBERS.—Cucumbers for pickling should be carefully cut from the vines raised in cold water, (not washed,) and after draining, place them in a tub or firkin, the bottom of which should be previously sprinkled with pure salt; put a layer of cucumbers, sprinkle white with salt, and thus alternately till your tub is full. Cover them carefully with a cloth, and have a wooden cover or follower to put on after the cloth, on which place a weight sufficient to keep your pickles under the brine, which will accumulate as you fill it up.—Whenever the cloth is removed to add fresh cucumbers, be careful to keep the scum that rises on the top of the cloth, and rinse it off with water, as it will have a tendency to soften the pickles if it should become mixed with the brine. When wanted for use, soak your pickles in a tin or wooden vessel, in warm water till fresh enough, then scald in vinegar, and season with spices as you like.

TOBACCO POISON.—The French poet Santeuill was killed by a little snuff being thrown into his wine-glass at the Prince of Conde's table. Bocarmo, of Belgium, was murdered in two minutes and a half by a little nicotine, or alkali of tobacco. Dr. Twitchell believes that sudden deaths and tobacco are found together, and he sustains this opinion by an array of facts altogether conclusive. I can give the names of scores of men, who were found dead in their beds, or fell dead in the streets or elsewhere who had been the victims of this poison.

RULES FOR HOME EDUCATION.

The following rules we commend to all our patrons and friends, for their excellence, brevity, and practical utility. They are worthy of being printed in letters of gold, and of being placed in a conspicuous place in every household. It is lamentable to contemplate the mischief, misery and ruin which are the legitimate fruit of those deficiencies which are pointed out in the rules to which we have reference. Let every parent and guardian read, ponder and inwardly digest:—

1. From your children's earliest infancy, inculcate the necessity of instant obedience.
2. Unite firmness with gentleness. Let your children always understand that you mean what you say.
3. Never promise them anything unless you are quite sure you can give them what you say.
4. If you tell a child to do something, show him how to do it, and see that it is done.
5. Always punish your children for wilfully disobeying you, but never punish them in anger.
6. Never let them perceive that they vex you or make you lose your self-command.
7. If they give way to petulance or ill-temper, wait till they are calm, and then gently reason with them on the impropriety of their conduct.
8. Remember that a little present punishment, when occasion arises, is much more effectual than the threatening of a greater punishment should the fault be renewed.
9. Never give your children anything because they cry for it.
10. On no account allow them to do at one time what you have forbidden, under the same circumstances, at another.
11. Teach them that the only sure and easy way to appear good is to be good.
12. Accustom them to make their little recitals with perfect truth.
13. Never allow of tale-bearing.
14. Teach them self-denial, not self-indulgence, of an angry and resentful spirit.

If these rules are reduced to practice—daily practice—by parents and guardians, how much misery would be prevented, how many in danger of ruin would be saved, how largely would the happiness of a thousand domestic circles, be augmented. It is lamentable to see how extensive is paternal neglect, and to witness the bad and dreadful consequences in the ruin of thousands.

NATURAL SELF-PRINTING.—A new era has dawned in the publication and historical representation of scientific objects by the introduction of natural self-printing. This is the most important discovery made in the art of printing since Guttenberg's invention, and the honor of it is due to Dr. Alois Auer, of Vienna. We will describe the successive steps of this process. In order to obtain a copy from the original corresponding thereunto in its minutest details, be it a plant, a flower, an insect, a piece of cloth, or any inanimate object, we must proceed in the following manner,

Place the object to be printed between a well polished copper plate and a lead plate, and then let the two plates pass between two cylinders moving parallel to each other. The pressure produced by the cylinders causes the original to leave a perfect picture of itself upon the lead plate. This plate needs no special preparation, but the common lead plates sold in every tin store will answer every purpose, if they are only smooth on one side. After being submitted to this pressure between the cylinders, the lead plate will no longer be perfectly flat, but slightly bent to the form of the cylinder; it must therefore be placed upon a smooth, hard surface, that its shape may be restored both through its own weight and a little mechanical aid. As soon as this is done, one or more copies can be taken from the plates, if it be charged with any colored fluid, and treated generally as any copper plate form when you wish to get an impression. It is evident that the copies taken directly from the lead plate must be limited in number, as the soft lead cannot long resist this pressure, and soon becomes, in consequence, unimpressible. But to obtain a large number of copies the lead form may be stereotyped, or a galvanic precipitate thrown upon it, to make a printing plate from which a proper form may be obtained. The lead plates only need to be subjected to the action of a smoothing cylinder to render them again fit for use, and the copper plates may also be used again.—*N. G. in Scientific American.*

PRAISE YOUR WIFE.

A farmer's wife who reads the *Agriculturist* complains that we give "advice to wives" without anything *per contra* for husbands. We were not aware that we had been guilty of any partiality in the case, and therefore willingly give room to the following extract which she kindly sent us:—

Praise your wife, man; for pity's sake give her a little encouragement. She has made your home comfortable, your hearth bright and shining, your food agreeable,—for pity's sake tell her you thank her, if nothing more. She don't expect it, it will make her eyes open wider than they have this ten years. but it will do her good, for all that, and you too.

There are many women to day thirsting for a word of praise, the language of encouragement. Through summer's heat, through winter's toil, they have drudged uncomplainingly, and so accustomed have their fathers, brothers, and husbands become to their monotonous labours, that they look for, and upon them as they do the daily rising of the sun and its daily going down. Homely, every-day life he may be made beautiful by an appreciation of its very homeliness. You know that if the floor is clean, manual labour has been performed to make it so. You know if you can take from your drawer a clean shirt whenever you want, somebody's fingers have ached in the toil of making it so fresh and agreeably lustrous. Every thing that pleases the eyes and the senses, has been produced by constant work, much thought, great care, and untiring efforts, bodily and mentally.

It is not that many men do not appreciate these things and feel a glow of gratitude for the numberless attentions bestowed upon them in sickness and in health, but they are so selfish in that feeling. They don't come out with a hearty 'Why how pleasant you make things look, dear wife! or, 'I am very much obliged to you for taking so much pains!' They thank the tailor for giving them 'fits'; they thank the man in the full omnibus who gives them a seat; they thank the young lady who moves along in the concert room; in short, they thank everybody and everything out of doors, it is the custom, and come home, tip their chairs back and their heels up, pull out the newspaper, grumble if the wife asks them to take the baby, scold if the fire has gone down; or if every thing is just right, shut their mouth with a smack of satisfaction, but never say, I thank you?

I tell you what, men, young and old, if you did but show an ordinary civility toward those common articles of house-keeping, your wives, if you would give them the one hundred and sixtieth part of the compliments you almost choked them with before they were married—if you would stop the badinage about who you are going to have when 'number one' is dead, if you would cease to speak of their faults, however banteringly before others, fewer women would seek for other sources of happiness than your apparent so-so-ish affection.—Praise your wife, then, for all the good qualities she has, and you may rest assured that her deficiencies are fully counterbalanced by your own.

MEDICAL USE OF SALT.—In many cases of disordered stomach, a teaspoonful of salt is a certain cure. In the violent internal aching, termed colic, add a teaspoonful of salt, to a pint of cold water; drink it and go to bed, it is one of the speediest remedies known. The same will revive a person who appears almost dead from receiving a fall.

In an apoplectic fit, no time should be lost in pouring down salt and water, if sufficient sensibility remain to allow of swallowing it; if not, the head must be sponged with cold water until the sense return, when salt will completely restore the patient from the lethargy.

In a fit, the feet should be placed in warm water, with mustard added, and the legs briskly rubbed, all bandages removed from the neck and a cool apartment procured if possible. In many cases of severe bleeding at the lungs, and when other remedies failed, Dr. Rush found that two teaspoonsful of salt completely stayed the blood.

In case of a bite from a mad dog, wash the part with a strong brine for an hour, and then bind on some salt with a rag.

In toothache, salt and warm water held to the part, and removed two or three times, will relieve it in most cases. If the gums be affected, wash the mouth with brine. If the teeth be covered with tartar, wash them twice a day with salt and water.

In swelled neck, wash the part with brine, and drink it also twice a day, until cured. Salt will expel worms, if used in food in a moderate degree, and aids digestion, but salt meat is injurious, if used much.

INDIAN CORN.

Maize or Indian Corn, originated in America, and is not yet, we think, cultivated to any extent on the European continent. Though the people of Great Britain cannot be made to appreciate its merits very fully, the aggregate exports of corn in 1856, in the form of whole grain, meal, cornstarch, farina, etc., amounted to between seven and eight millions of dollars, or about one-fortieth of the whole exports of the country, and 6,700,000 bushels, considerably more than half, went to England alone.

Corn has always been an important article in this country, both of consumption and export. The total amount of this produce exported in 1770 was 578,349 bushels; in 1791, 2,064,936 bushels, of which 151,695 were Indian meal. The value of corn and its manufactures exported from the United States in 1830 was \$597,119; in 1835, \$1,217,665; in 1840, \$1,043,516; in 1845, \$1,053,293; in 1850, \$4,652,804. The export increases more rapidly than the production. The export of corn quadrupled between 1840 and 1850 while the production did not quite double.

The great amount of invention bestowed on corn planters, corn cutters, shellers, cob grinders, etc., tends each year to increase the amount of production. It has been estimated that, as a general rule, seven pounds of corn will produce one pound of pork; so that in localities where through distance from market or from transportation facilities, the cereal cannot be raised as a profit for sale, it is frequently the material used in fattening the more concentrated form of diet, and on which, consequently, the freight is less. Cob meal we believe, is most valuable for animals that chew the cud; horses and hogs, as a general thing, deriving less benefit from the cob-grinding inventions. With all animals however, we believe, there is a perceptible advantage realized by mixing the cob with the denser meal.—*Scientific American*.

FUNNY RAT TRAP.—A correspondent of the *Genesee Farmer* relates the following funny way of catching rats: "I build my corn crib on posts about eighteen inches high, made rat-proof except at one of the back corners. Here, where they will like it best, make a nice hole with a spout five inches long on the outside, where they can go in and out and eat at pleasure. Then, if I think the rats are too numerous, I take a bag, after dark, and slip the mouth over the spout on the outside of the granary. Then send "Ben" in at the door with a light, and the rats and mice will run into the bag. Then slip the bag off the spout, and slap it once or twice against the side of the granary. Turn out the dead, and in an hour or two repeat the process. After all are killed, stop up the hole till new recruits arrive, which catch the same way."

TO CLEANSE MATTRESSES.—Hair mattresses that have become hard and dirty, can be made nearly as good as new by ripping them, washing the ticking, and picking the hair free from bunches, and keeping it in a dry, airy place several days. Whenever the ticking gets dry, fill it lightly with hair, and tack it together.

HEALING OINTMENT FOR WOUNDS, &c.—Take a quarter of an ounce of white wax, and half an ounce of spermaceti, and put them in a small basin by the side of the fire, till the wax and spermaceti are dissolved. When cold, the ointment is ready for use. This is an article which it is much better to make than to purchase. When you make it yourself, you know that it has no irritating or inferior material in it.

GOOSEBERRIES.—I have preserved my gooseberries from mildew by mulching with coarse gravel, and applying water freely. One kind, on which I had never tried the experiment and which I had considered worthless on account of mildew, I mulched with gravel this year, and obtained perfect fruit, free from mildew.—H., *Pt. Wayne, Ind.*

PRESERVED PUMPKIN.—Cut a good pumpkin in strips like citron; sprinkle sugar on them over night, pound for pound, and the juice of four lemons in the morning; boil the peel and a little ginger root, and add to the syrup. Boil the pumpkin till tender, then turn on the syrup boiling hot.

THE YORKSHIRE AGRICULTURAL SOCIETY rivals the National Exhibitions as to the extent of its shows both as regards implements and stock. The population of the shire is stated at 2,000,000, and includes several of the most celebrated breeders of all descriptions of stock from the thorough-bred horse to the small pig. This year, with a prize list amounting to nearly £1,000, the number of competitors was unusually large.

Knowledge directs practice yet practice increases knowledge.

PRICES OF FANCY BEASTS AND BIRDS.

The New-York *Tribune* furnishes the following table of "fancy prices for fancy beasts and birds," which we transfer to our pages because we are frequently inquired of as to these things. Many of them are readily obtained in the New-York markets, whilst others are only to be had of breeders and dealers in various parts of the country.

Bremen Geese, per pair.....	\$ 12	Scotch Terriers, each	\$ 5-25
Poland and Chinese Geese.....	10	English Terriers, "	10-30
Wild Geese	12	Spaniels, "	10-25
Aylesbury Ducks.....	8	King Charles Spaniels "	15-50
Rorica Ducks	8	Fox and Rabbit Hounds, each	10-30
Wild Ducks	6-8	Tigers and Leopards, each.....	50-75
Top Knot	4	Bears, each	25-50
Black Swan, each	75	Wild Cats, Hyenas and Congars, each...	20-40
White Swan, each	40	Ferrets and Monkeys, each	10-25
Cranes and Crown Birds	35	Badgers, Coons and Squirrels, each.....	5-10
Pelicans and Storks	30-45	Canaries (common), each	3-4
Golden Hamb. Fowls, per pair.....	10	Canaries (long breed), males, each	4-5
Silver Hamb. Fowls, "	8	Canaries (long breed), females, each ...	1.50-3
Black Spanish Fowls, "	12	Canaries (German), males, each	5
Cochin Fowls, "	4-5	Sparrows, each	1-2
Shanghai Fowls, "	3-4	Mocking Birds, each.....	10-15
Speckled Dorking Fowls, "	12	Goldfinch, "	3-5
White Dorking Fowls, "	8	Blue Jays, "	2-3
Game Dorking Fowls, "	10	Bulfinch, "	10-12
Poland Fowls, "	4	Robins (singing), "	3-5
White Bantams, "	3	Parrots (talking), "	5-15
Black Bantams, "	5	Quails (domestic), "	2
Seabright Bantams, "	6	Doves, "	2-5
Japanese Fowls, "	8	Pouter Pigeons, "	3-5
Golden Pheasants, "	30	Fantails, "	2-4
Silver Pheasants, "	20	Carriers, "	8
Shetland Ponies, each.....	25-75	Roughs, "	2-4
Setter Dogs (broke), each	30-60	Tumblers, "	4
Pointer Dogs, "	20-50	Blackbirds (sing'g) "	2
Newfoundland Dogs, "	10-50	Bobolinks, "	3

It has for some time been proposed to construct vessels of zinc. A zinc vessel, while it is hardly inferior in strength to one of iron, it is said to possess many advantages over the latter. It will cause no deviation of the compass; the plates not being liable to corrode or rust, do not require painting; in ordinary cases of collision, while iron would, in all probability, crack or break, causing a leakage in the vessel, zinc would yield and bend without endangering the safety of the vessel and hands, or interrupting her course.

CURE FOR COLIC IN HORSES.—3 ounces spirits of turpentine, 1 oz. tincture of opium. If relief is not obtained in one hour, repeat the dose with one ounce of best powdered aloes well dissolved together.

HUMAN LONGEVITY IN AMERICA.—From Professor Tucker's analysis of the American Census, from 1790 to 1840, published a year ago, we derive the strange result, if true, that the chances of living to above 100 years are 13 times as great among the slaves, and 40 times as great in the free negroes as in the white population of the country.—*Edinburgh Review*.

AGRICULTURAL SUICIDES.—Was it an ordinary event in the days of Elizabeth for farmers who had hoarded corn, to hang themselves because the season in which they had expected to realize their profits, was one of plentiful crops? One would think so from the copious allusions to the practise in the works of fiction of the time:—

"Here's a farmer that hanged himself on the expectation of plenty."—*Macbeth*, Act ii. Sc. 3.

"And hang'd himself when corn grows cheap again."—Hall's *Satires*, Book iv. Satire 6.

Wind up your conduct like a watch every day, examining minutely whether you are "fast" or "slow."

In the State of South Carolina, the marriage laws are so stringent that not a single divorce, it is said, has ever been granted.

MAKING VINEGAR.

An exchange paper gives the following directions to a correspondent who says he has no luck in making vinegar:—

Cider in this country, malt liquors in England, and fermented grape juice in vine countries, are used for making vinegar. All these contain an abundance of organic matter, which induces fermentation: they absorb oxygen and give off hydrogen in the form of water. Hence, unlike the vinous fermentation, the presence of air is essential. But it must not be too largely admitted, lest it carry off certain parts essential to success. A barrel or cask is most convenient, with the bung open and covered with gauze to exclude insects.

Vinegar may be made by exposing one part of brown sugar with seven parts of water, and a small quantity of yeast, in a cask with open bung hole, for some weeks to the action of the sun's rays. But this vinegar is not as good as made in some other ways, being more or less viscous.

An excellent mode is the following: Mix a gallon of molasses with a barrel of cider, warm it in a large kettle, then put the mixture in a barrel with a few sheets of brown paper. Keep it in a warm place with the bung open, through which a stick is inserted for stirring it, to break the scum and admit the air. The vinegar may be drawn as needed, and its place supplied by cider, which in its turn will be converted to vinegar.

MANUFACTURE OF SUGAR FROM THE SORGHO.

MESSENGERS. EDITORS.—In answer to an inquiry in your paper of the 3d, as to the way to make sugar from Sorgho or cane, I should say that a pair of tinsmith's rollers would answer for a small quantity, or any other contrivance that would squeeze out the juice. A clean copper pan to boil it with. It will require a small quantity of lime-water to kill the acid—if too much, it would prevent crystalizing. The quantity can only be known to one unaccustomed to boiling by litmus paper. Whites of eggs to raise the scum. Boil as quick as possible.

When the juice becomes thick and clammy between the fingers, about half water and sugar, strain through thick flannel cloth, and if possible, filter through coarse bone black keeping the black covered as long as the syrup lasts, or letting it out at the bottom of filter no faster than put on top. Then boil until a string can be obtained between the thumb and finger, so strong that it breaks and turns up like a corkscrew. A very little beyond this, and it will be about four-fifths sugar and one water. It will then require a box of other vessel to grain or sugar it in. Stir it well with a flat stick, the sides into the middle, &c. A conical box to drain away the molasses; and if white sugar is required, a strong white syrup is to be poured on the top, to wash away the molasses.

This is as near a direction as I can give by writing. I have some growing. It is now about ten feet high, and just showing its seed, but I am afraid that I have it too thick to ripen.—WM. WATSON. *Mich. Country Gentleman.*

TEMPERATURE OF THE EARTH.—By experiments made during the last year by Professor Smith, at Edinburg, with a series of earth thermometers, imbedded in the earth at varying depths, it was proved that there was a gradually increasing heat of one degree, Fahrenheit, for every forty feet in depth, so that at less than two and a half miles, water would be at a boiling heat, and at less than one hundred miles depth all things must be in a state of fusion. This confirms numerous previous experiments.

USEFUL RECIPE.—Wounds in cattle are quickly cured by washing several times a day with a mixture of the yolks of eggs and spirits of turpentine.

Equal is the government of heaven in allotting pleasures among men, and just is the everlasting that hath wedded happiness to virtue.

There is no such thing as forgetfulness in its true sense. A thousand incidents may, and will, interpose a veil between our present consciousness and the secret inscription on the mind; but alike, whether veiled or unveiled, inscription remains for evermore.

CARROTS RUNNING TO SEED.

MILLBROOK, Sept. 8, 1957.

DEAR SIR,—Would you be kind enough to inform me what is the reason of carrots which were sown this spring going to seed? A great deal of the carrot crop in this section of Canada has become useless in that way. I may state that I imported, from a very respectable house in England, last spring, a quantity of "field seeds," and among the rest carrot seed of different varieties. I heard of no complaints till within the last three weeks, when the farmers to whom I had sold came in one after another and told me the carrots were in a great measure going to seed. It seems confined to the *red* variety; still, in some places there are a few of the white. The root is from six inches to a foot in length, and about three quarters of an inch in diameter at the large end, and tapers off gradually to a point; is quite tough, and perfectly useless for food. Farmers generally blame the seed, and say it was bad. This I can scarcely think is the case, as in every instance it grew remarkably well, and looked as well as usual, till within about a month. Be kind enough to give me your opinion as to the reason, and you will confer a favor on

Your obedient servant,

R. W. ERRETT.

Remarks.—We learn upon enquiry that nearly all the carrot seed imported from Great Britain last season proved imperfect, and in many cases exhibited its weakness in the manner represented by our correspondent. The fault rests chiefly with the seed. The seed imported from France has not exhibited this peculiar defect. Some of our best seedsmen in this vicinity knowing, or suspecting the evil, took care to mix seed imported from other countries with their English seed, and thus averted the loss to their customers which would otherwise have occurred.

TOWNSHIP AND COUNTY FAIRS.

Several of these interesting Exhibitions followed closely upon the Provincial Show at Brantford. We had the pleasure of attending the Exhibition of the Fullerton, Logan, and Hibbert Society at Mitchell, in the County of Perth, on the 7th inst. The display was highly creditable to the new but thriving Townships which the Society represents. The young horses, sheep and cattle, as well as the domestic productions, afforded evidence of the beneficial operation of the Society. A large number of people, old and young, thronged the Village during the day. In the evening a meeting was held for discussion, and was well attended. Mitchell is a rising place; it is favourably located in the heart of a rich agricultural district, that, in a few years, will be second to none in the Province.

The writer attended the County Show at Stratford, on the 8th. The quality of the Exhibition spoke well for the enterprise of the farmers of Perth. Mr. McCulloch's bull, which took the 2d prize at Brantford, was on the ground. Sheep made an excellent show. The roots and dairy produce were also worthy of special praise. There was a large crowd of spectators, who evinced great interest in the proceedings. A meeting for conversation on agricultural topics was held in the afternoon, and a dinner was given to the Judges and guests in the evening. Both passed off agreeably, and, we believe, profitably. We have nowhere met more intelligent farmers, or those who display more zeal for improvement, than in the County of Perth. Agricultural Societies are there well supported, and agricultural papers extensively read.