

"Agriculture not only gives Riches to a Nation, but the only Riches she can call her own."

NEW SERIES.]

TORONTO, MARCH, 1845.

[VOL. I.—No. 3.]

WORK FOR THE MONTH.

The near approach of spring should admonish the thrifty farmer, that every operation on the farm, adapted to this season of the year, that can be conveniently executed before the ploughing season arrives; will have the effect of expediting the spring work. Much of the business of this month will consist in preparing for spring seeding. Farming implements must now be prepared if they require it; and where new ones are needed, no time should be lost in having them in readiness. Every farmer should be supplied with an ample stock of good ploughs, harrows, drill-barrows, and roller. No one need plead *hard times* in excuse for not having supplied himself with these and other useful farming implements. A successful system of agriculture cannot be carried on to any extent upon old cultivated land, without the aid of efficient farming implements;—therefore no time should be lost in providing such as cannot be dispensed with upon a well organized farm. It is not sufficient to have those implements made

strong, but they should be of the most approved kinds. A great saving in time and labour to man and beast may be made by having implements of husbandry constructed upon scientific principles, and besides, the work will be more perfectly executed than if the old-fashioned kinds be used.

As soon as the snow leaves the ground, the fences will require repairing; and instead of leaving this work until the land is in order for ploughing, it should all be performed as soon as practicable after the ground is clear of snow. Some time in the early part of this month the season for sugar-making will commence. Every necessary preparation should now be fully completed, to carry on this department of labour. By judicious management it need not interfere with any other needful branch of farm labour.—No farmer who is in possession of a good sugar-bush should depend upon a foreign supply of sugar. We know of scores of farmers who manufacture 1000 lbs. of maple sugar annually, and besides, an abundance of molasses and vinegar for

the use of their own families. The labour and expense that this amount of sugar costs a farmer, is scarcely felt:—and in fact where the whole apparatus is complete, and a good sugar-house provided, the sugar season being a short one, not usually lasting more than three weeks, it is a sort of agreeable diversion to gather and boil down the sap from the sugar maple. It is a matter of private as well as of national importance, that the Canadian markets be supplied with sugar of home manufacture. The State of Vermont, with less than half the population of Canada, manufactures some years upwards of six millions of pounds of maple sugar. The facilities for manufacturing sugar from the maple in Canada, are ten-fold greater than in Vermont. Our natural forests of full grown maple are almost inexhaustible, and the lands upon which those grow may be had from Government for the low price of eight shillings per acre—each acre averaging about thirty trees—and each full grown tree will average three pounds of sugar per season. Millions of the sugar maple are to be found in the forests of Canada: whereas in Vermont a large proportion of the sugar orchards, as they term them, are planted upon the side hills and rocky and most barren places of the state. If the above quantity of sugar be annually manufactured in the State of Vermont, certainly the Canadian population with their superior advantages, and more than double the population, might, if public attention were properly directed to the importance of this subject, produce in an average of years 10,000,000 lbs.—This quantity, at the low rate of \$8 per 100 lbs. would be worth to the country \$80,000 per annum. These figures may appear absurd to some, but

when the subject has been fully investigated, it will appear clear to every unprejudiced mind, that even a greater amount of sugar than what we have supposed, could be produced in the country, if only encouragement and attention be given to this branch of industry. Nine farmers out of ten could manufacture a surplus, and this surplus might be sold to the merchant and clarified, after the style that is practiced with sugar made from the cane. In new settlements a large business of this kind might be carried on, and by a little skill and care, as fine and as white an article could be manufactured as the very best imported article from the Indies. It only requires well directed efforts on the part of the inhabitants of Canada to supply all the sugar that is required for home consumption, and even a surplus for exportation. We wish it to be remembered that Vermont ranks next to Louisiana as a sugar state, and that Canada can and should produce twice as much of this article as Vermont. The manner in which this business has been carried on is rude in the extreme. The apparatus that is usually used is not only imperfect, but the amount of chemical skill employed in the business is not at all calculated to produce an article that ~~could~~ find a ready sale in the market. *Cane and maple sugar are absolutely identical when pure; it would appear worth while then to improve this manufacture, and to make the maple sugar equal to any now in use. This can be readily accomplished if the farmers will study the most approved method of sugar making. The best lot of premium sugar that was exhibited at a late exhibition of the New York State Agricultural Society was made in the following

manner: "In the first place, I make my buckets, tubs, and kettles all perfectly clean. I boil the sap in a potash kettle set in an arch in such a manner that the edge of the kettle is defended all around from the fire. I boil through the day, taking care not to have anything in the kettle that will give colour to the sap, and keep it well skimmed.— At night I leave fire enough under the kettle to boil the sap nearly or quite to syrup by the next morning. I then take it out of the kettle and strain it through a flannel cloth into a tub, if it is sweet enough; if not, I put it in a caldron kettle, which I have hung on a pole in such a manner that I can swing it on and off the fire at pleasure, and boil it till it is sweet enough, and then strain it into the tub and let it stand till the next morning. I then take it and the syrup in the kettle, and put it all together into the caldron, and sugar it off. I use, to clarify say 100 pounds of sugar, the whites of six eggs well beaten, about one quart of new milk, and a spoonful of saleratus, all well mixed with the syrup before it is scalding hot. I then make a moderate fire directly under the caldron, until the scum is all raised, then skim it off clean, taking care not to let it boil so as to rise in the kettle before I have done skimming it. I then sugar it off, leaving it so damp that it will drain a little. I let it remain in the kettle until it is well granulated. I then put it into boxes, made smallest at the bottom, that will hold from fifty to seventy pounds, having a thin piece of board fitted in two or three inches above the bottom, which is bored full of small holes to let the molasses drain through, which I keep drawn off by a tap through the bottom. I put on the top of the sugar in the box, a clean damp cloth, and over that a board well

fitted in so as to exclude the air from the sugar. After it has done, or nearly done draining, I dissolve it, and sugar it off again, going through with the same process in clarifying and draining as before." The above mode, as practised by Mr. Joel of New York State, would produce a most beautiful sample of sugar, and is well worthy of a trial by the sugar manufacturers of this country. A very superior article of sugar may be made by mixing with sufficient syrup for one hundred pounds of the whites of twelve eggs, and seven pounds of fresh burnt charcoal powder. This mixture should be put into the syrup when cold, then apply heat for a short time, and strain through a bag, mixing a little pulp of brown paper with the syrup before putting into the filter; it should then be boiled down into sugar, carefully skimming off the scum that may rise to the top.

From what has been here hastily advanced for the benefit of the Canadian farmers, it is to be hoped that every possible exertion will be used to extend the manufacturing of sugar and improve its quality. Canada is yet a new country, and the people have scarcely opened their eyes to the importance of producing such articles as their country is pre-eminently adapted to afford,—our products must be multiplied and increased, and our money kept at home, if we ever expect to gain the confidence of the nations with whom we transact business.

THE OHIO CULTIVATOR.

The first number of this paper has come to hand. From the experience and well known ability of its editor, M. B. Batcham, Esq., we should judge that the *Cultivator* will be well received in Ohio. It certainly deserves the support of every farmer in that great wheat-growing state. Published at Columbus. One dollar per annum.

NEWMARKET FARMERS' CLUB.

The fifth meeting of this Club took place on Saturday, 20th Jan., and was pretty numerous attended by the farmers of the surrounding neighbourhood. The meetings will continue regularly on Saturday evenings during the remainder of the season at the Newmarket School House, and will most probably be kept up through the summer months at the same place. The few discussions which have taken place have had the very desirable effect of bringing the institution into pretty general favour. The best recommendation that can be given to induce others to adopt the same patriotic measures in improving the agriculture of this colony, would be to report the proceedings of the Newmarket Farmers' Club. We shall therefore feel much pleasure in laying before the public the substance of the discussions, and also such remarks as we may from time to time consider it judicious to make upon the opinions advanced by the several speakers who may address the meetings of the Club.

Subject for discussion:—"What is the most approved method of cultivating land, and preparing the seed for the fall wheat crop?" Mr. Peter Pearson in the chair.

Mr. Samuel Pearson remarked, that between 20 and 30 years ago it was a common practice with him to harvest from 36 to 40 bushels of fall wheat per acre, but within the past few years his average products of wheat had not equalled 20 bushels per acre. He considered this by far the most valuable crop grown in this country, and therefore any light that could be thrown out upon the cause of the falling off in the average produce which he as well as the great bulk of the farmers had experienced, would at all times be most acceptable. For his part he was not prepared to give a cause, although he had thought much upon the subject. His usual practice in making summer fallows, is to plough in the fall, cross some times in the following June, and plough for seed

the latter part of August, and sow the first of September. He had found from experience that his chance for a rusty crop of wheat was generally in proportion to the amount of barn-yard manure applied to the soil—he was therefore of opinion that the wheat crop did not require a very rich soil or one that was deep with vegetable matter. From what he had observed of late, he was inclined to the opinion, that too much ploughing was equally as prejudicial to the fall wheat crop as too much barn-yard manure. He had met with a number of instances where land that was tolerably clean had been summer fallowed by breaking up the latter part of June, and subsequently harrowing a few times, and crossing the latter part of August for seed. Where this plan had been practiced, the straw was comparatively short, the sample bold, and the product a fair average paying crop. Although this method may be objectionable in some points of view, still he felt confident that it was a more profitable plan of management than the thorough system of cultivation which is generally practiced in this part of the country. The one producing a fair average crop of good wheat that covers the expense of production, and the other affording a small return of an inferior sample that in a majority of cases would scarcely cover costs. One of the greatest difficulties, with the successful wheat-grower, was to get his crop safely through the winter: he had found that ploughing in long manure with the seed furrow, and leaving the land rough after seeding, secured that object to a much greater degree when the winters were open, and the plants consequently greatly exposed to the changes of the weather, than any other mode that he was acquainted with, and it in a great measure prevented the strong clays running together, and thereby forming in the spring a hard and impenetrable crust. This, like all other systems with which he was acquainted, was not all times adapted to the seasons—when the snow falls very deep in the commencement of winter, and remains upon the ground without cessation until spring, without there being any frost in the ground, the long straw was apt to hurry the fermentation process, by which the entire crop is sometimes destroyed;—and it is also a doubtful practice upon strong rich lands, as it is apt to cause too great a growth of straw. He considered that rust was occasioned from the overflowing of the sap vessels of the plant, which is most generally promoted by too exuberant and rapid a growth. He was not pre-

pared at this time to go any further into the details of this very interesting subject, but felt confident a more thorough system of draining must be practiced to ensure more profitable returns from the soil.

Mr. Moses Knight agreed with the former, that land might be made too rich for wheat, and he felt satisfied that he had sustained heavy losses from this source. Thirty years ago there was no difficulty in getting good wheat, but now the case is altered, especially in this part of the province. Farmers formerly were great slovens, and apparently but little trouble or skill was bestowed in preparing their land for the wheat crop, but since the improved system of management has been introduced, the rust has become gradually more prevalent; and it is now concluded by many, that it is the most judicious course to substitute spring for fall wheat. He was not at present prepared to assign the cause of this fatal disease, but it was evident that the system which is generally practiced in this section of country, in a great measure promoted it, and in a large majority of cases, the wheat crop did not pay for the costs of production. In a recent conversation with one of the most successful wheat growers in the Home District, and one whose crops have never been affected with rust, he informed him that he manured and broke up his fallow grounds in the fall, ploughed them the following summer as many times as was requisite to clear the ground from weeds, grasses, &c., and used the harrows during the whole process only once, for the covering of the seed, which he invariably sowed the first of September, in seams or ribs, which admitted a free circulation of air between the rows of the plants. Manure might be judiciously applied to the land for the wheat crop upon the farm alluded to, as the clay came very near the surface, but upon all deep loams he felt confident that it could not be used without manifest injury unless thoroughly decomposed before being applied to the soil.

Mr. Lot Hartman.—When he received his first lessons in the art of farming, such a thing as a failure of the wheat crop was scarcely known. The system which he was taught to pursue at that period was to cultivate clover extensively, to summer fallow three years' old clover ley, and to plough only three times during the summer season. He had harvested one crop managed in this way, that yielded throughout 40 bushels per acre;

and others which came a mere trifle short of that quantity. Dear bought experience had convinced him of the error of manuring his summer-fallows with long barn-yard manure. A few years since he made three experiments in manuring his summer fallow. The first he manured before breaking up; the second before crossing; and the third after the wheat had been sown; that which was manured before breaking up produced by all odds the best return. The present low prices of wheat clearly point out the necessity of some cheaper method of cultivation being adopted; he was rather inclined to the opinion, that a bastard fallow after clover, peas, or some other smothering crop, that could be removed from the land in time for the wheat crop, might with much advantage be substituted for the naked fallow, and he felt confident, by attention and skill, that this mode would be far more profitable than the old system.

Mr. Joseph Willson concurred in most of the opinions already advanced. The highest parts of his fields, where the clay came the nearest the surface, always produced sound grain, but where the black soil was deep, his crops were almost invariably injured with rust. He had about abandoned the idea of manuring his summer fallows.

Mr. John Clubine was of the opinion, that too much farming was injurious to the wheat crop. The best crop of wheat that he ever harvested, was sown upon barley stubble. The ground was manured and ploughed in the autumn, and once in spring for barley; and after the crop was harvested, it was once ploughed for wheat. His practice has been to plough deep, and he has found it to be productive of the greatest advantages to his crops.

Mr. Eli Irwin said, that the land did not require to be made fine for wheat. From an extensive observation, he had come to the conclusion, that the farmers in this part of the country work their land too much for the benefit of their wheat crop. He had travelled much through Ohio and other Western States, and there the summer fallows are never ploughed more than twice, and the work is mostly performed in a most slovenly manner; but notwithstanding, he noticed that the average yield was much greater than in this country. This is certainly a most interesting subject to the practical farmer, and no trouble should be spared in giving it a thorough investigation.

Mr. Chairman said, that in addition to what had been so ably advanced by the speakers which

preceded him, he would only add, that a few summers since he made an experiment of sowing wheat upon inverted clover ley, by ploughing two furrows deep, and the result turned out as he previously anticipated. The portion of the field which he managed in this way, yielded fully twice as much as the remainder of the field which was ploughed only one furrow deep.

February 1, 1845.

Subject for discussion:—“*Draining Land.*” M. P. Empey, Esq., President, in the Chair.

Samuel Pearson said that he was most anxious to get information upon this subject, and was of opinion that no better opportunity than such as those meetings are calculated to afford, could be offered to the farmers to exchange their views upon this and all other practical questions with which they were acquainted. From close observation, he had come to the conclusion, that the crisis had arrived that energetic measures must be adopted to drain the clay lands of this part of the province. He had some experience in draining, and was prepared to state, that he had received the greatest advantages from both open and under-draining. A few years since he made thirty rods of under-drain in a field that he summer fallowed: that part which was drained was an intervale, and had never before produced as much wheat as would pay for the costs of harvest. Since this piece of land had been drained, it had proved the most productive on the farm. The first year's crop more than paid the expense, and that part which bordered on the drain ripened a number of days earlier than any other portion of the field. He was credibly informed that owing to the thorough system of draining which has of late years been introduced in Scotland, that the harvests are fully two weeks earlier than formerly; or in other words, that where the land had been thoroughly drained the crops ripened two weeks earlier than upon the undrained. In that country they used tiles and other expensive modes that might not be adapted to this country. But here we may use durable timber, which will answer nearly as good a purpose as tiles. The material which he used was rails covered with slabs. The drains were dug two and a half feet deep, and the rails laid in the bottom about four inches asunder, then covered with slabs and a layer of straw, and filled up with the soil which had been previously thrown out. Drains made in this way

will last upwards of twenty years. Some that he made twenty-five years ago, were still as efficient as the day they were made. Both grain and grass-land will be benefitted by being drained; and, most of the cultivated grasses absolutely required the land to be freed from the surplus water, to keep them from deteriorating.

John Clubine had very little experience in draining, but he had noticed much benefit from it on various farms where it had been extensively practiced, and he was decidedly of opinion that it would be very advantageous upon much of our lands for tillage crops. Instead of timber, he was inclined to the opinion that if the drain was brought to an angle at the bottom, and filled up with hemlock brush, and then packed close with the soil which had been thrown out, it would answer equally as good a purpose, and cost less money than the mode described, providing that other suitable material of a similar description could be had without drawing too great a distance. This kind of drain, will last upon a close relentive subsoil at least twenty years.

George Playter.—Although he had not drained to any great extent upon his farm, still the little he had done, fully convinced him that it would pay him a heavier rate of interest if the drains were judiciously constructed, than any other improvement that he could carry out. He makes his drains thirty inches deep, and uses rails of durable wood, and covers with slabs, straw and soil, as described by one of the speakers that preceded him. Much of his land was rather sandy; the subsoil being a hard pan, and consequently was materially benefitted from the system of draining that he had adopted. He was fully convinced that much of the land that required draining would pay in the increase of produce for the whole expence, the first crop that was taken from the land. He had frequently proved this to be a clear demonstration upon his own farm. Most of the farmers are too poor to drain to any considerable extent, and so long as they go on cultivating their land, and performing their farming operations in the old beaten track, they will always be too poor to execute those improvements upon their land that are so much required to ensure profitable cultivation. Those who have been for some years past endeavouring to improve their stock, implements of husbandry, and system of farming, are frequently laughed at for their pains, by those who are opposed to any innovation upon

the old system of agriculture practiced and taught by their grandfathers; but so long as benefit results from those improvements, they should not get discouraged.

W. G. Edmondson agreed with the former speakers in relation to the benefits that would accrue to the farmers of this part of the country if more attention were paid to the draining of the land. The best land is now unproductive for the want of a little capital being expended in this very important operation. The scarcity of capital has been urged against the general introduction of draining. It must be admitted that not one farmer in a hundred has much spare capital to invest in improving his land, but no farmer, no matter how small or how poor, can urge poverty as an excuse for not draining a little every year; and if only twenty or thirty rods of good drains were made each year, the benefits would be visibly felt in the farmer's pocket, that each year's operation might be increased to a great degree.

The expensive systems of draining practiced in Europe would scarcely be applicable to this new country; but it has been found by experience, that cedar timber, covered with slabs of the same material, will last for fifty years; where this wood cannot be had, other durable wood may be used, or brush-wood, as described by a former speaker, would answer no doubt an excellent substitute. Stones are the cheapest, best, and most durable material that can be employed; but as they are not to be had in this section of the country, wood, or brush, must be substituted. The usual depth of making drains, is thirty inches, and if the land be free from stumps and roots, the labour may be greatly lessened by using the common plough—a strong span of horses, and an expert ploughman, may clean out the drain to the depth of fifteen inches. Where draining is carried on, upon an extensive scale, a great saving in labour may be effected by the aid of the plough. The land in this neighbourhood being undulating; land springs are the cause in a great many instances of much injury to the crops. In draining such land, it is obvious that the operator must begin at the fountain-head and follow the course of the spring. When the intervales have been thoroughly drained, by the methods which have been advanced in the course of the discussion, the farmers then may wisely consider the propriety of adopting measures to drain the high land. At present the

only thing that can be done with common tillage land is, to lay it as dry as possible with the plough. The wheat crop being the one most likely to receive injury from an excess of water, every precaution should be used to make the land as dry as possible with this implement. The land should be made into narrow ridges, and after seeding should be completely water-furrowed. Various methods are practiced to deepen the furrows between the ridges, and cross-furrows, but the most efficient implement that has yet been employed for this purpose is the subsoil plough. After the furrows have been cleaned out to the usual depth with a common plough, they are then deepened with a subsoil plough five or six inches, and afterwards cleaned out with a common plough. This system of furrow-draining, has been found to be an excellent substitute for thorough or furrow-draining as practiced in Europe. Land cannot be made too dry for wheat; as evidence of this fact, he would mention a case that came under his observation. A German settler, whose land laid low, and the soil deep with decayed vegetable substance, had been for a long series of years most unsuccessful as a wheat grower—he at last resolved to try the following experiment upon a ten acre field. He summer-fallowed his ground, and sowed the seed on the first of September, and after sowing, ploughed the entire field into one row or two-furrow ridges, which gave it the appearance of a potatoe field. He then put his horses to the plough, one before the other, and deepened the furrows as much as possible. The result was that he harvested upwards of four hundred bushels of wheat from this field, the following harvest, which was four times as much produce as the field ever bore in one season. The cause of Mr. Pearson's wheat being so much better on the immediate edge of the drain, than upon any other portion of the field, may not only be attributed to the fact that the land had been made dry, but also to the influence of the subsoil, which in this part of the country abounds with lime. The result of this one experiment clearly shows the necessity of draining and deep ploughing both of which will no doubt be practiced to a much greater extent when the farmers are convinced of their advantages.

To prevent the Hair falling off

Wash the head once a day with good old Jamaica rum.

AGRICULTURAL SOCIETIES IN THE
COUNTY OF DURHAM.

A late number of the *Port Hope Gazette* was kindly handed us by a friend, in which the proceedings of the annual meeting of the above society were published. It gives us much pleasure to publish the following resolutions, which were carried unanimously:—

“That it would be advisable to establish Township Societies throughout the county in connection with the County Society.”

“That each Township Society shall be entitled to receive from the County Society’s funds an amount equal to their subscriptions, being half the government bounty, drawn for said amount.”

“That a committee of David Smart, Henry Munro, and J.W. Cleghorn, Esqs. do draw up a report, forming a constitution for the government of the Township Societies, to be submitted at the next meeting of the County Society, to be held on the 10th Feb. next.”

The editor of the *Gazette* very ably portrays the advantages of township auxiliary societies, and the results of diffusing agricultural knowledge among the members of those local institutions. He very properly asks the question, “How can that knowledge be best made to exercise its reforming hand upon our infant, and therefore imperfect system of farming? The best methods, as proved by experience, are the circulation of agricultural periodicals and the establishment of agricultural societies. These could hold monthly or semi-monthly meetings to discuss such subjects as might prove advantageous to all: a precarious dependance on individual experience would no longer exist—each member would have the benefit of the experience of all the others. But we need not dwell upon the advantages to be gained by the establishment of township societies as auxiliaries—these must be obvi-

ous to every one. We sincerely hope that a scheme calculated to produce such immense benefits to agriculture will not be abandoned, now that it has been once proposed; and we have the more reason to believe that it will not be, from a knowledge of the tireless exertions and steady aim of purpose of David Smart, Esq., President of the Durham Agricultural Society, and originator of the proposition to establish Township Societies in the County.”

The great benefits that the farmers of Durham have received from Agricultural Societies and Magazines, have had the salutary effect of opening their eyes to their true interests. The people of this County have been liberal and steady supporters of our efforts for improving Canadian agriculture, and the present movement is the strongest evidence that we require, to prove that those efforts have not been altogether fruitless. A large proportion of Durham is admirably well adapted to wheat culture, and indeed large sections of it cannot be excelled by any land in the world for the production of bread-stuffs. We are credibly informed that one of its most populous townships averaged the past harvest the enormous quantity of 30 bushels of wheat per acre. This yield will compare with the average products of East Lothian in Scotland, which is acknowledged to be the most productive wheat district in Europe. We cordially unite with the editor of the *Gazette*, in the hope that the scheme of organizing township societies may not be abandoned, and that they may be organized upon such a sound basis, that the interests of the parent and children may not clash. Without any desire to dictate to our agricultural friends in this quarter, we would only offer a few suggestions, which may be found equally

applicable to our friends in other districts and counties, who are about organizing township societies. The hints we have to offer will have the tendency no doubt of satisfactorily explaining to the comprehension of all who may have an opportunity of reading, the objects and advantages of organizing auxiliary branch societies to the District and County Agricultural Societies at present established in the province. The great aim and object to be gained by the exertions of agricultural associations is, the introduction of an improved system of agriculture among the agricultural classes, and the circulation of practical and scientific knowledge upon the several branches of improved agriculture that are adapted to the circumstances of the country. These objects being of such a general nature, and likewise wisely calculated to improve and develop the resources of the country, the Government of the province have graciously set apart a portion of the general revenue to encourage a spirit of competition among the agriculturists in the improvement of their farming operations. Each farmer in the colony pays a portion of the general revenue, and consequently each should make it a point to gain some advantages from the expenditure. Hitherto £200 per annum has been conditionally granted to each District, for the purposes which we have been mentioning, and the probability is, that this sum will be considerably increased the moment that government is apprized of the fact, that the people are determined to generally unite in improving the agriculture of the country, and in developing its natural and artificial resources. The history of the past will bear us out in the assertion, that only a few comparatively have been benefitted by those praiseworthy associations; and

the individuals who have received the greatest share of benefit, required it the least, because they were acknowledged on all hands to be the best farmers in the province. This state of things naturally led the discerning philanthropist to devise means by which the small as well as the great, the poor as well as the rich farmers could enjoy some of the benefits that must in a large degree result from competition and emulation brought about and fostered by agricultural societies, and from the dissemination of useful knowledge pertaining to the science and practice of agriculture. The means which have been proposed to bring about a general reform in Canadian agriculture are, Provincial, District, County, and Township Agricultural Societies, Farmers' Clubs and Libraries, and Model Farms. Each of these classes of institutions have a work to perform peculiarly their own, and if carried out under proper regulations, there could not possibly be the slightest clashing of interests. The machinery in fact cannot be made complete without the aid of the whole, but notwithstanding, much good might be done through the agency of any one of those institutions. We most anxiously hope the day is not far distant that the friends of Canadian agricultural interests will be alive to the importance of taking a more decided stand in elevating the character and condition of the agriculture of their country. A noble beginning has already been made, which only requires to be closely followed up by well directed efforts on the part of the leading and influential of all classes in the several Districts of the Province, by which the agricultural, mechanical and mineral products may be very shortly increased to an extent that will place our commercial relations with other countries upon

a sound basis; and the only probable way to consummate this desirable object is, to engage heartily in the work, and begin at the root, first, by organizing Branch Societies to the District and County Societies already in existence. The County of Durham is setting a most praiseworthy example; and it is to be hoped that the efforts of the true friends of the County who have been selected to co-operate in the execution of the scheme, may be crowned with a great degree of success. To secure that desirable object, we beg to offer a few suggestions, which may be found of use in strengthening the confidence of those who may take a prominent part in organizing the auxiliary Societies referred to. The Government Bounty which the County is entitled to, should be equally divided between the County Society and the several Township Societies in the County. The Township Societies should each receive a share of their dividend, in proportion to their several annual subscriptions. Each township society should elect its own officers, and pass, alter, or amend its own by-laws, and appropriate its funds as the wisdom of the officers may direct. The county society should be governed by a given number of Directors, who should be selected jointly by the county society and the several township societies, and be so distributed through the several settlements in the county, that none should have occasion of being dissatisfied at being represented in the general association. The exhibitions of the county society should be held in such parts of the county as the majority of the Directors may from time to time determine. The annual subscription to the county and township societies should each be one dollar, and as much more as the members may think proper to subscribe. To secure a large attendance, and a general interest in favour of the county society's exhibitions, the members of the township societies should be admitted, upon certain conditions, to exhibit their stock, &c. Those conditions of course will depend in a great measure upon the liberality of the officers of the county society. If we were called upon to furnish a scale, it would be something like the following: If a township society consisted of fifty members, the members thereof should be allowed to avail themselves of any advantages that the county society's exhibitions may offer, by paying to the treasurer of the county society the sum of one pound five shillings, and for every additional ten members the sum of five shillings. By this rule, a society consisting of 100 members, would pay two pounds ten shillings, and one of 200 members, five pounds. The six townships in the county of Durham would in all probability average 100 members to each township society, and by the scale we have proposed, they would contribute £15 to the funds of the county society. By holding out such liberal inducements as those we have mentioned, none would become members of the county society but such persons in the county who have a soul in the cause; we opine that the number of such patriotic individuals would be constantly on the increase if the suggestion we have proposed should be carried into operation.

It is not too much to expect that a county with the intelligence and wealth of Durham would make up an annual subscription to the funds of the county society equal to £25 per annum; indeed we know of a few individuals who would subscribe their £2 or £3 each, if only they could see the farmers acting up to the figure that we have been contemplat-

ing. It follows, from our suggestion, that the funds of the county society would equal £50 from government and £40 from subscription; and the funds of the six township societies collectively, would equal, according to our calculation, £185, of which £75 should be expended in the purchase of Canadian Agricultural Magazines, to be furnished to the society at the cheapest possible rates. If these hints are worth anything, they may be made to work equally as well in forming district branch societies.

Pruning Peach Trees.—The Editors of the *Albany Cultivator*, in giving an account of their visit to the beautiful and extensive grounds of Messrs. Downing, at Newburgh, N. Y. and their management in the nursery and fruit orchard, describe their mode of pruning peach trees as follows:

“Messrs. Downing practice a new mode of pruning peach trees; at least, it is new to us. It is cutting off half to two thirds the new wood off the limbs every autumn. The advantages are, that the wood hardens better—the soft and tender twigs, not sufficiently matured to stand the winter, and which are besides most likely to be injured by the aphid or other insects, are taken away, by which the sap and wood of the remainder are rendered more sound and healthy. The number of fruit buds for the succeeding year are increased, and there are plenty of leaves by which the sap is more perfectly elaborated, and the fruit made large and higher flavored.

WILL FARMING PAY EXPENSES?

Messrs. Editors,—I was yesterday introduced to a small shopkeeper, who cites himself a living witness, that “Farming will not pay expenses;” pointing to his own failure as a proof of the doctrine, that it takes “a quarter of a dollar to realize 20 cents.” On leaving his house, a friend remarked, “Poor M. is indeed a living witness of the truth of that adage, “you can't get something for nothing.” He started upon the starvation principle, that land would not pay for

good management; he therefore kept no help during the winter, selling all the crop and buying no manure: keeping no stock, as they would require attendance, ploughing nothing under that could be removed to market, and destroying no weeds, as he too, considered, that “few of them would pay a dollar a day for pulling;” his axiom being, the less of capital and science there is expended in farming, the greater will be the profit; but poor man, he soon came out slick and straight at the little end of the horn, believing, of necessity, that all others must do the same, and truly he was proved that land will never pay for bad management, whatever it might do for good; his wife having always made more by the sale of the poultry than he could do by that of the crops.”

Now, by way of contrast, just oblige me by giving, in your instructive columns, the following account of the management of a farm in England, where our countryman, Mr. Colman, observes, “They go to any length in the expenditure of capital, in the full of conviction, the more that can be judiciously invested, the greater will be the profit.” It is contained in a late work by a French nobleman, Count De Courcy, who thus speaks, while examining the farming establishment of a young agriculturist in Scotland.

“The manner in which capital is employed in farming, is well illustrated in the case of Mr. Hoggart, near Coldsream. Mr. H. is a young man and took his farm on a lease of only fifteen years; yet he expended at once \$20,000 in draining, embanking, ditching, &c., and employed a further capital of \$25,000 in carrying on the farm, stock, &c. The first five years he makes nothing, the second five years he receives a return of his expenditures, and will net \$25,000 on the third five years. It is nothing uncommon, where the lease is for 20 years only, to expend from \$5,000 to \$15,000 in draining.

In this part of the country he found the average of crops to be 38 bushels of wheat, and 60 bushels oats per acre; while many of the dairy cows—the Ayrshires, of which very peculiar breed you lately gave us so excellent a portrait—often yield 35 quarts of milk, and some have reached 45 quarts per day during the best of the season. These are some of the effects of farming upon the *feeding* principle, and is an excellent commentary on our friend M's starvation system, which can never pay or prosper, depend upon it; for where little is given, little ought to be required. It is the bountiful man to whom the promise is made, that he shall reap “a rich reward for his labour.”—*Bost. Cult.* Z.

Ring Worm,

May be, in most cases, simply cured by scratching around the outer surface with the point of a sharp pin. The disease will pass the line, if the skin is thus cut,

AGRICULTURAL KNOWLEDGE.

In the *Farmer's Monthly Miscellany* we find an address by Professor Johnston. The subject of the address is the "Diffusion of Agricultural Knowledge." The following quotations may serve to give our readers some idea of the importance which the learned Professor attaches to liberal agricultural education. In the course of his remarks he concludes that the most efficient means that can be adopted to produce the blessings to the agricultural population, that he so fully enumerated, was by establishing cheap agricultural papers, of which he says nine have lately been started in Scotland. In confirmation of the Professor's opinion, we would mention one fact which is too notorious to be contradicted. Twelve years ago agriculture in the United States was in the lowest possible state of degradation, but owing to the agency of cheap agricultural magazines, the improvements which have been subsequently made, are without a parallel in the history of agriculture in any age or country. There is in that country upwards of fifty agricultural papers, all of which have their thousands, and some their tens of thousands of paying subscribers; and the beneficial influence that those journals have upon the minds of the general community, can scarcely be imagined, much less described. There are but few who have formed a correct estimate of the requisite support which enables a publisher to afford his work at an unusually cheap rate. It requires a large circulation to even cover the actual costs of a cheap production. The circulation, which the *Cultivator*, with its present circulation, has involved its editor in a loss of £500, besides upwards of three years' valuable time. With a circulation of 10,000 copies, at the average price of

two shillings and six pence each, he would have sustained no loss, and would have been moderately remunerated for his time. There is every probability that this circulation will very shortly be had, as the interest in favour of the enterprise is gradually on the increase. But suppose by way of illustration, that agricultural improvement should become the popular question of the day, and that 30,000 of the inhabitants of Canada should before the lapse of the present year resolve to become readers of the *Cultivator*; with this support at the low price mentioned, the publisher could afford to issue *four extra numbers, or, a volume of 512 pages, illustrated with more than 100 costly engravings,—and this valuable volume could be afforded for the very low price of two shillings and six pence.* If those who desire cheap and valuable agricultural information would bear these facts in mind and act accordingly, it might possibly so turn out that the advantages and results we have adverted to, would be even more than realised in Canada.

The next subject is agriculture in schools. Those of our readers favourable to this project will oblige us by informing us of their views, at their earliest convenience.

"There is in some parts of the country and in the heads of some a great deal more knowledge than in other parts of the country and in the heads of others; and the first object is to do away with this inequality—to remove those heaps and level the ground just as we do with our fields, so that uniformity of knowledge may be diffused throughout the whole population and all practical farmers may be on a level, and able to compete with one another, each having the same end in view, and the same means of attaining it.

"You know if you send missionaries abroad into heathen countries in order to convert the natives—as in India among the Hindoos, or in Africa among the Hottentots or Caffres—they seldom succeed in making converts of the grown-up people, but they get hold of the children and establish schools—and no country has been so

successful in this respect as Scotland. They get a great number of the children and inculcate right principles into their minds before prejudice take possession of them; and thus they are enabled to train up a new race of converts. In like manner we hope to improve the agriculture of our country more and more, by getting hold of the young minds, and teaching them principles which their fathers understand with difficulty, and are sometimes unwilling to receive even when they do understand them. This has been done long in Prussia; in every one of the schools of that country agriculture is taught, and books are prepared for the purpose, one of which is put into the hands of every child the instant he leaves the cottage for the school. In Ireland the National Commissioners have introduced the teaching of agriculture into the national school. There are 3000 of these schools, and agriculture is to be taught in every one of them; and schoolmasters are now being trained up for the purpose in the Normal school.

"In connection with the agricultural schools of Ireland and England, there are small farms of greater or less extent. The national schools in Ireland have little farms attached of five or six acres, which the master and the boys cultivate."

• *Sound Advice to Business Men.*—The following may be old, but it is sound and good. We copy it from a foreign journal, and recommend it in an especial manner to the attention of all who are young in the ways of the world:

"The way to get credit is to be prudent; the way to preserve it, is not to use it much: settle often; have short accounts. Trust no man's appearance—it is deceiving, perhaps assumed for the purpose of obtaining credit. Beware of a gaudy exterior; rogues usually dress well. The rich are plain men. Trust him, if any one, who carries but little on his back. Never trust him who flies into a passion on being duped; make him pay quickly, if there be any firm in the law. Be well satisfied before you give credit, that those to whom you give it are safe men to be trusted. Sell your goods at a small advance, and never misrepresent them; for those whom you deceive will beware of you a second time. Deal uprightly with all, and they will repose confidence in you, and soon become your permanent customers. Most of all, beware of idle, designing, and shy 'pettifoggers,' unlearned, honourable in law, who are too lazy to get an honest living by industry; who go prowling about to undermine and destroy the peace of society, by urging on to law-suits the ignorant and hair brained. Beware of such unprincipled 'fugases,' on society; they first drive you into mischief, and then pick your pockets. Trust no stranger; your goods are better than doubtful charges. What is character worth, if you make it cheap by crediting all alike? Agree beforehand with persons about to do a job, and if a large one, put it in writing.—*Am. Ag.*

THE UNITED STATES PRACTICAL RECEIPT BOOK.

This valuable book of reference, for the manufacturer, tradesman, agriculturist, and house-keeper, contains many thousand valuable receipts in all the useful and domestic arts, and is probably the most practically useful work published in the English language. Quite a number of agents to the *Cultivator* have intimated, that our magazine would be more generally sought after, and highly prized, especially by the agricultural reader, if more space were occupied with valuable receipts. In conformity with the views of those friends, we shall devote in future two or three pages to this department, and shall copy freely from the above work. Many of the receipts may not particularly interest the farmer, but it must be remembered that all classes of the community patronise this work, and to make up this deficiency, we shall select many valuable receipts from other sources which will be invaluable to the farmer. If twenty four pages in each number be devoted to the discussion of agricultural topics, the agricultural readers will have no just reason of complaint. It is truly desirable that every individual should become acquainted with the agricultural resources of the province, and to create a desire for such knowledge, and also a thirst for a better acquaintance with the science and practice of agriculture, we shall endeavour to intersperse through our columns a greater measure of spicy matter, which will be highly interesting and at the same time useful.

• *Turnip Fly.*—L. B. Parsons, says the *New Genesee Farmer*, soaks his rutabaga seed in tanner's oil; and then rolls it in plaster. The odor keeps away the insects. A small quantity of oil answers the purpose.

THE MERCANTILE AND GENERAL
AGRICULTURAL IMPROVEMENT SO-
CIETY FOR THE JOHNSTOWN DIS-
TRICT.

From the minutes of a public meeting of the merchants, farmers, and others of Brockville, we gather, that owing to the great importance of the success of agricultural improvement to all classes of the population of this country, the merchants, and gentry, and others friendly to the cause, have formed themselves into an association for the accomplishment of the following very laudable objects:—
“The taking of such steps as may be necessary to procure the institution of regular fairs and markets for the sale of agricultural stock and produce in the district; the dissemination of the best published treatises on agriculture; the collection and diffusion of information concerning improvements in that science, the procuring of good seeds, improved breeds of cattle and agricultural implements for the use of the farmers of the district; the awarding of premiums for the best samples of produce and specimens of stock; and generally the production of measures calculated to develop and improve the agricultural resources of the district. Each subscriber of ten pounds to the funds of the society shall be a member thereof for life. Each subscriber of five pounds shall be a member for five years; and each subscriber of one pound and five shillings shall be a member for one year.”

The merchants of Brockville have set a most noble and patriotic example to the commercial classes of other portions of Canada, and we doubt not but this movement will be a precursor of a general league among all classes in favour of the productive interests of this highly favored and fertile province. The mercantile class is more interested in the success of

the agricultural prosperity of the country than are the farmers themselves. There is probably one merchant to one hundred farmers in this colony, and it is obvious, that if the great proportion of the farmers are in a thriving condition, and free from encumbrance, they would be wholesome customers to the merchants and tradesmen. Persons in trade would not only obtain the cash, or an equivalent, for every article of worth which they manufacture or have to dispose of, but in trading with such a thriving community, they would be able to make many turns with their invested capital in their business, that they cannot do under the present uncertain mode of dealing. We know of no class of the community but what is materially interested in the cause of agricultural improvement, and it gives us great pleasure to notice, that the merchants, millers, large landed proprietors, gentlemen of fortune, and mechanics, are all identifying their interests with the noblest of all classes, the cultivators of the soil. There are few men in Canada but what intend some day or other to become farmers, and strange to say, up to a very recent period, no occupation was more neglected than that of husbandry. We are happy to say, that the case is now altered; the commencement, however, of this great work has only been made, and its ultimate success will in a great measure depend upon the part which the farmers themselves take in this grand movement. We wish the Canadian farmers to remember the adage, “*That the gods help those who help themselves.*”—When men of wealth and intelligence lend their aid and means to encourage the agriculturists, they would, as a matter of course, very shortly become dispirited in their efforts, unless those who are practically engaged in agricultural

pursuits should evince a readiness of disposition to further the advancement of improvement. The Canadian people are not less patriotic than the people of other civilized countries; but nevertheless, as far as enterprise and scientific enquiry go, they have much to learn, before they come up to the high standard that characterises the inhabitants of their neighbouring country. With the advantages which the colonists possess, through the strong arm and liberal purse of the British Government, they should excel their American neighbours in every thing that is excellent, and they will unquestionably do so when the people of all classes shall cordially unite in promoting a spirit of emulation in the praiseworthy objects that the merchants of Brockville have so liberally and nobly resolved to foster.

LINSEED AS FOOD.

The only apparatus required is a Linseed-crusher, an iron copper, a hand cup, a stirrer, one or two half-hogsheads, two or three pails, and wooden rammer. These will cost about £12. Large coppers are found inconvenient for stirring when compounds are made with the meal of Peas, Beans, &c. The sizes most in use contain from 30 to 40 gallons. Upon large farms it will be desirable to have two—one smaller than the other. The stirrer is an iron-ribbed spoon, fastened to a shaft of wood 4 feet long, and somewhat less than the handle of a pick. The rammer is 3 feet long, about 5 inches square at the bottom, and 2½ at the top; through which a pin 14 inches long is passed for the convenience of being used with both hands; mine is nothing more than one end of a broken axle of a cart, with a stick thrust through the lynch-pin hole. I commenced winter-grazing this year upon white Turnips grown after Flax, the tops of which, being extremely luxuriant, are cut with Pea-straw into chaff, compounded with Linseed-meal, and given to my bullocks according to the following plan:—Upon every six pails of boiling water, one of finely crushed Linseed-meal is sprinkled by the hand of one person, while another rapidly stirs it round. In five minutes, the mucilage being formed, a half-hogshead is placed close to the copper, and a bushel of the cut Turnip-tops and straw put in; 2 or 3 hand-cups full of the mucilage are then poured upon it, and stirred in with a common muck-fork. Another bushel of the Turnip-tops, chaff, &c., is next added, and two

or three cups of the jelly, as before, all of which is then expeditiously stirred and worked together with the fork and rammer; it is afterwards pressed down as firmly as the nature of the mixture will allow, with the latter instrument, which completes the first layer. Another bushel of the Pea-straw, chaff, &c., is thrown into the tub, the mucilage poured upon it as before, and so on till the copper is emptied. The contents of the tub are lastly smoothed over with a trowel, covered down, and in two or three hours the straw having absorbed the mucilage, will also, with the Turnip-tops, have become partially cooked. The compound is then usually given to the cattle, but sometimes is allowed to remain till cold. The bullocks, however, prefer it warm, but whether hot or cold, they devour it with avidity. The cost for Linseed, according to the above rate of feeding, is 2s. 3d. per week. It will be seen that the real fattening properties of the above compound centre in the Linseed; and that, in order to produce a greater or less effect, it is only necessary to regulate the quantity of that important ingredient. Also, that Wheat, Oat, and Barley-straw, or Bean-stalks, may be used either with or without Turnip-tops, according to circumstances; nothing more being required than fibrous matter to act as a vehicle for conveying Linseed to the stomach of the animal, and for conveying it to the mouth for rumination. Unfortunately for the extension of my plans, few really practical agriculturists are disposed to promulgate their own individual success. I subjoin, however, an extract from the letter of a gentleman in Essex, with whose enlarged and philanthropic views I have long been acquainted, and who will rejoice if the simple relation of his own experience should in any way be rendered serviceable to his country:—“My Flax-crop was pronounced by the Belgian agent, at Ipswich, to be as fine as any he had ever seen. It was nearly 4 feet high, very thick in the ground, and perfectly free from weeds. The expenses for harvesting my crop were under 20s. per acre. I have had 10 acres in a hovel and stacked 3. For the want of water I was not enabled to steep any; and shall not now make the attempt till the spring. My experiments with compound last year were satisfactory. I am now feeding 14 horses and colts with straw and hay compound. My plan is, 8 bushels of cut hay, and 8 bushels of Wheat chaff, are added 28 lbs. of crushed Linseed boiled in 18 pails of water. I give the horses this quantity at night in the yard. In addition, they have one pint of Pea-meal per day, and one hundred weight of straw per week. The boiling Linseed is poured upon the chaff, and both are thoroughly mixed together. I intend giving my young stock 1½ lbs. of Linseed-meal with a bushel of chaff daily; my cows the same.”—*James Barker, Sourhall, Ramsey, near Harwich.* A bushel of good Linseed at 5s. 6d., weighing 48 lbs., if properly formed into compound with three or four times the weight of Bean, Pea, or ordinary Wheat-meal, and a little more than double the weight of the whole in water, will cost about £2 15s. per ton.—*John Warnes, in the Farmer's Journal.*

AGRICULTURAL SOCIETIES IN PRINCE EDWARD DISTRICT.

We are happy to notice by the late *Picton* papers, that the officers of the Prince Edward District Agricultural Society have taken the necessary steps to organize a Township Agricultural Society in each Township of this old and wealthy District. The members of the parent and branch Societies, are each to be supplied with a copy of the *Cultivator*. For the information of the officers of these Societies, as well as all others who may favour us with their support, we would mention, that the *Cultivator* will be sent in small packages addressed to any parties to whom they may be ordered. If an Agricultural Society were to order one hundred or more copies of the *Cultivator*, they might be directed to the address of ten or more individuals with but trifling more trouble to the publisher than if they were sent direct to one address; and if this plan were adopted it would relieve the Society of much trouble in distributing the papers.

It has frequently been asserted that the Districts bordering on the Bay of Quinte are inferior to many others in Western Canada for agricultural purposes; but those who made such assertions could not have made themselves acquainted with the natural good qualities of the soil in a large proportion of the Prince Edward, Victoria, and Midland Districts. We will admit that the agriculture of these districts is not in such high state of improvement as in the Home and Gore Districts, but this fault must be attributed in a great degree to the want of efficient Agricultural Societies, and not particularly to the lack of ability on the part of the Agriculturists. The *Picton Sun* very beautifully illustrates the benefits of such associations:—

"Agriculture has hitherto been too much neglected in Canada, and altho' the evils which have sprung from this neglect cannot be suddenly, nor perhaps entirely eradicated, yet it is the duty of every one who has the good of his country at heart to assist as much as possible in their removal. Agriculture is the first evidence of civilization, and the chief boast of enlightened life. It is a science of the first order; but as such it is rarely studied by our farmers. Its handmaids are chemistry, natural philosophy, mathematics, natural history and botany, and without a knowledge of these it cannot be studied to perfection, or practiced with real advantage. A knowledge of the first enables the farmer to ascertain with accuracy the qualities and component parts of his soil—to amalgamate with advantage, and without superfluous labour, such portions of that soil as may require improvement—to note the qualities of all vegetable and animal matter, and the effect which the decomposition of such matter produces upon certain kinds of soil—to ascertain the changes produced in manures by atmospheric action, absorption, evaporation, &c., and the changes produced in the soil from year to year by the succession or rotation of green crops. The other sciences which we have mentioned are equally beneficial, but we cannot enter into details at present. Agriculture is looked upon by many as the last resource—as an employment fit only for the unlettered portion of the community, and unworthy even of an hour's study or attention. How often do we hear an indulgent father exclaim, after having vainly endeavoured to prepare his son for one of the learned professions, "he has no talent whatever, I must keep him on the farm." The youth is accordingly set to work. He thinks himself degraded beyond conception. He knows nothing, and he cares less about his new employment.—The consequence is, that after a few years ineffectual attempts to wring a subsistence from his mother earth, he finds himself a ruined man.

"If the rudiments of agriculture were taught in our schools, and if those who grace the halls of our universities were required to crown their academical education with this all-important science, they would become fascinated with its solid charms, and instead of crowding into the learned professions, and seeking for preferment there, they would return to the farms of their fathers, replenish and invigorate a calling now languishing under oppression and contempt. Until this is the case, the only thing that can be done is to try by some artificial means and produce a competition among the farmers, a change in public opinion and public encouragement, and to restore in some measure this truly beneficial science to its primary dignity. We know of no method by which this desirable object can be so well attained as by the formation of agricultural societies, and attentively perusing that excellent Agricultural periodical, the *British American Cultivator*. Every farmer should take a copy, and be guided in a great measure by its precepts."

TWO-HORSE PORTABLE THRASHING MACHINES.

We have on former occasions fully expressed our views upon the great advantages that would result to the farmers were a two-horse portable thrashing machine substituted for the four and six horse power machines that are at present employed. We are informed that such machines have been in use in the United States for many years, but they have not been introduced to our knowledge in this country, with the exception of those manufactured at the Dundas Foundry, which we are told require three or four horses for ordinary work. The following description will comprise the kind of machine that we have been so anxious to introduce to the attention of the Canadian farmers,—an account of which has been kindly sent us by the Rev. Hugh Bourne. This machine is in the possession of Mr. Robert Woodhill, Post-master, Stanley Mills P. O. The following quotation from the letter referred to may not be uninteresting to our readers. “The diameter of the horse-ring is twenty-four feet. The poles at which the horses draw, extend each thirteen feet from the centre. The horse wheel has spur-gear, and it is eight feet in diameter. The nut, or small cog wheel, in which it works, is eight inches in diameter. The bevel wheel is two feet four inches in diameter; and the bevel nut is six inches and a quarter in diameter. The drum or strap wheel is two feet seven inches in diameter; and the sheave on the cylinder is five inches in diameter. The cylinder is two feet two inches long, and eleven inches in diameter. It has six rows of teeth, and eleven teeth in each row, and the concave has four rows of teeth. The cylinder makes four hundred and thirty-two revolutions while the horses go round

once; or in other words, the horses in going once round cause the cylinder to go or turn round four hundred and thirty-two times.

“This machine will with ease thrash ten or twelve bushels of wheat in an hour; and it is easy to the horses, and it does its work clean and well. The cost of this machine was ninety dollars; and Mr. Woodhill has had it rather more than two years, the whole of which time it has never been out of repair, and it has given him entire satisfaction. With such a convenient machine a farmer may soon thrash a large quantity of grain, or if he wishes for a small quantity for either mill or market, or desires fresh straw or chaff for the cattle, he has but to harness two horses and put them into the ring, and the machine is ready for action.

“As this machine was an experiment, the maker was reluctant to undertake it from a fear that it would not answer; but Mr. Woodhill taking the whole responsibility, he proceeded, and it has fully answered' his expectations.”

NEW YORK FARMER AND MECHANIC.

This is one of the best family newspapers in the United States. It is published weekly at the low price of two dollars per annum. It is devoted to agriculture, mechanics, manufactures, news, education, temperance and religion, and contains the authentic reports of the New York Farmers' Club, the conversational meetings of the American Institute, and other similar associations. It also represents the interests of those engaged in the silk culture. Able correspondents are secured upon other subjects, and apparently no expense is spared to make this periodical worthy the support of all classes. Flett & Starr, Nassau Street, New York.

ANNUAL MEETING OF THE HOME DISTRICT AGRICULTURAL SOCIETY.

The Annual Meeting of the Home District Agricultural Society took place at the Court House in Toronto, on the 12th ult. For the information of the friends of agricultural improvement in this old and wealthy district, we publish the leading features of the plan which was proposed and adopted at the meeting in question, for the establishment of Township Auxiliary Agricultural Societies. For the convenience of the reader we shall embody the substance of the plan adopted in the following sections:—

1. To induce the farmers in the several Townships in the District, to form themselves into Branch Agricultural Societies, the members of those societies shall be qualified to exhibit their stock, &c., at the District Shows upon presenting a certificate at the gate, that they have actually paid to the Treasurer of the Township or Riding Society, as the case may be, the annual subscription of such society, for the year in which the exhibition is held. By this rule the members of the Township and Riding Societies are entitled to be competitors at the District Society Shows and ploughing matches, without any further ceremony, than to produce a receipt from the Treasurer of the Society to which they belong, that their subscriptions for the current year have been paid.

2. Township or Branch Societies are represented in the District Society by two Directors each, viz: the Presidents and Treasurers. Two efficient officers of each Branch Society, are *ex-officio* Directors in the District Society.

3. The District Society is represented in the several Townships in the District by one Director in each, who is elected, at the annual meeting of the society.

4. The Quarterly Meetings of the District Society will take place on the second Wednesday of February, May, August, and November, being the periods in which the District Council is in session; and to ensure a respectable attendance at those meetings, a District Councillor for each Township has been elected to the office of Director in the District Society, with but a few exceptions. It will thus be seen, that the District Society is under the direction of three Directors residing in each Township—one elected by the members of the District Society, and the other two by the members of the Branch Society. When the farmers in the Townships think proper to form themselves into Branch Societies, the District Society will then be governed by about sixty Directors.

5. At the next quarterly meeting of the society, the Directors in attendance shall determine what proportion of the Government Bounty shall be appropriated among the Township Societies.

6. The sum of £75 shall be appropriated for a spring show; and the sum of £25 for a spring ploughing match. These exhibitions, as previously stated, shall be open for competition to the members of the branch societies, without any entrance fee.

The above are the leading features of the constitution, by which the Home District Agricultural Society is governed; and as this society is now established upon a sound and liberal basis, we shall embrace every favourable opportunity of impressing upon the friends of agricultural improvement in the district the importance of earning, and sustain a character for the society worthy of the cause of agriculture, in this, the wealthiest and most populous district in Western Canada. This society has thrown itself completely as it were upon the benevolence of the friends of agriculture of the district, be-

cause it is obvious, that nine out of ten of its former members will become members of branch societies, and will therefore have all the privileges in the exhibitions and ploughing matches, as though they were actually members of the general society. There can scarcely be a doubt, but that the choicest productions of the district will be concentrated at the District Shows, and that a general interest will be manifested in favour of these laudable demonstrations of improvement, by all who have the welfare of the District at heart; and it is also evident, that the moment the wealthy and patriotic become satisfied that the proceedings of this institution are calculated to benefit and improve the country to a large degree, they will liberally subscribe to its funds. A more liberal plan than the one adopted by the Home District Society, could not be devised; and it would be strange indeed if the inhabitants of this district are so indifferent to their true interests as not to take the necessary steps to establish branch societies in their several townships; and also evince an unwillingness to contribute to the funds of an institution that is about doing so much real benefit to the cause of agriculture.

Nasmyth's direct-action Steam-Hammer.—

We find that this important invention (which was fully described and illustrated in the *Mining Journal* of February 11, 1843) has been introduced into the Government dock-yard at Devonport; the principle itself is confined by no limitation. A forge hammer of 20 tons weight, with a clear fall of 10 feet, is as attainable and as easy to manage as the smallest yet constructed, which vary in size and power from 1 cwt., striking 220 blows per minute, to those of 5 tons. Few inventions have made more rapid progress in the same period than this, the merits of which are so self-evident as to be at once appreciated by practical men. Foreign governments, among whom we may mention those of Russia and the United States, have introduced it, and in those countries it is making the most rapid progress. At present Mr. Nasmyth's steam-hammer is in use at the Low Moor Iron Company's work, Bradford; at the works of Messrs B. Hick & Co., Newcastle upon Tyne; Messrs Penn & Co., Greenwich; as well as in twenty other establishments in Europe and America, and, doubtless, ere long it will be exerting its energetic and docile power in every important establishment in the world.—*Mining Journal*.

LABELS FOR FRUIT TREES.

Editor of the Cultivator—I noticed in a recent number of your paper, a mode for preparing labels for fruit trees. &c. from wood; I send you another, and think far better label. Take slips of zinc, of size suitable, say 3 inches long, by half an inch in width, (any tin plate worker will cut them out of the size desired) drill or punch a hole near the end of each slip; then write upon them the name of the fruit, &c., or its number in your fruit list, with the following composition:

•Take verdigris in powder, one part
sal ammoniac, one part.
amp black, half a part.
water, ten parts.

Mix them in a glass of wedge wood mortar, at first adding as much water as will mix the ingredients well together, then add the remainder of the water; when placed in a vessel, let it be well shaken up from time to time, and in a few days it will be ready for use. Shake well before using it. The mixture writes about as easily as common writing ink, and makes a permanent black mark upon the zinc. I have used this composition for labels on my trees for a number of years past, and I do not find that the exposure to the weather has obliterated a single mark; the names are as legible now as on the day they were written; painted cedar labels marked with a black lead pencil, put on at the same time with the zinc labels, have ceased to be of any use, the wood being mostly worn out, and the writing illegible.

The foregoing recipe was furnished me by a gentleman some years since; he said he believed it had been published in some agricultural paper. The labels are to be attached to a limb of the tree by a copper wire.

My plan is to write the name of the fruit, &c. on one side of the label, and on the opposite side I place the number which I have affixed to that variety in my fruit book; thus on one side, "*Broca's Bergamot*," on the opposite side of the label "*No. 100*," No. 100 being *Broca's Bergamot*, in my list. Your's, &c. W. N. Green.
Worcester Mass., Nov. 8, 1824.

—*Alb. Cult.*

Look at the swamp and meadow lands with which our country abounds, that are now worthless, and causing sickness and death in their vicinity. All these might be reclaimed, and made the most productive land, by a small outlay of time and capital. The owners have neither, because they have too much land already calling for their attention. The muck contained in these places can be made to pay better interest than bank stock; yea, if properly used, it may be the farmer's mine of wealth.—*Gar. & Far.*

CULTIVATION OF FRUIT.

The Strawberry.—The varieties of this delicious fruit enumerated in catalogues, are very numerous. The late President Knight considered them all as having originated from one species, while others regard them as properly divisible into several species. Passing from the notice of these, it may be useful to cultivators in this country to give a brief description of the different classes into which the numerous varieties are divided. Mistakes in names are very frequent, and this may assist in rectifying them.

Class I. includes *scarlet strawberries*, and the general character is thus described by Loudon:—“Leaves nearly smooth, dark green, of thin texture, with sharp pointed serratures; the fruit mostly of small size, and bright color, with the seeds more or less deeply imbedded between ridged intervals; the flavor acid, with slight perfume.” Examples, Roseberry, Methven Scarlet, or Methven castle, Old Scarlet, &c.

Class II. *Black Strawberries.* The general character is, “leaves rugose, (or swollen between the veins,) pale green, and small; fruit conical, with a neck; seed slightly imbedded; flavor rich and highly perfumed.” Examples, Downton, Pitmaston black, Elton seedling.

Class III. *Pine Strawberries.* “Leaves almost smooth, dark green, of firm texture, with obtuse serratures; flowers large; fruit large, varying from almost white to purple; seeds prominent on a smooth surface: flavor sweet and often perfumed.” Examples, Keen’s seedling, Carolina, Mulberry, Southborough seedling.

Class IV. *Chile Strawberries.* “Leaves very villous, hoary, with small leaflets of thick texture, with very obtuse serratures; fruit large; seed prominent; flesh insipid in the True Chile, and more or less so in the varieties which have originated from it.” Example, Wilmot’s Superb.

Class V. *Hautbois.* “Leaves tall, pale green, rugose; scapes tall and strong; fruit middle-sized, pale greenish white, tinged with dull purple; flesh solid and musky.”

Class VI. *Green Strawberries.* Characterised as the *Fragaria collina* & *F. viridis* of botanists, the varieties of which are little known and not of much value.

Class VII. *Alpine or Wood Strawberries.* Characterised as *F. semperflorens* & *F. vesca*. Examples, Red and White Alpine, Red and White Wood.

The following are descriptions of some of the best varieties:

Old Scarlet, Early Scarlet, or Early Virginia; fruit middle-sized, globular, of a very light scarlet colour, seeds deeply imbedded, flesh pale, and very high flavored. Although not a great bearer, yet highly deserving cultivation, as it ripens several days earlier than any other.

Grove End Scarlet, or Atkinson’s Scarlet. Fruit large, roundish, somewhat hemispherical, brilliant scarlet, flesh pale, with an agreeable sub-acid flavor. Remarkable for the wide serratures of its leaves. A good bearer and early.

Roseberry. Fruit large, conical, with a very short neck, dark red, flesh firm, pale scarlet, with a rich flavor. An abundant and long-continuing bearer.

Methven. Fruit very large, round, sometimes coxcomb shaped, bright scarlet; flesh pale and not firm; flavor good, but not so rich as the preceding. Sometimes weighs upwards of half an ounce.

Downton, or Knight’s seedling. Fruit large, with a neck, often assuming a coxcomb shape, dark purplish scarlet; flesh scarlet, firm, with a rich, juicy, and high flavor; a good bearer, ripening late. Requires good culture.

Elton Seedling. Fruit large, ovate, often compressed or coxcomb shaped, and not filled out at the end of the berry, shining dark red; flesh fine deep red, firm, juicy, with a sharp rich flavor; fruit on long footstalks, frequently projecting above the foliage; ripens late; must be allowed to remain on the stem till it becomes very dark coloured, to avoid too great acidity.

Keen’s Seedling. This variety requires protection in the winter by a covering of straw, and is somewhat difficult of cultivation; but when it succeeds well, it is an abundant bearer, and has a very fine appearance. The fruit is very large, ovate, the largest of a coxcomb shape, dark shining red, especially next the sun; flesh scarlet, firm, of a rich and agreeable flavor; ripens rather early in the season. It is considered the best strawberry for forcing.

Wilmot’s Superb, is only to be recommended for its great size; the fruit is round or irregularly ovate, sometimes compressed, pale scarlet, shining, seeds projecting, flesh pale red, nearly white, and woolly at the centre; flavor moderate.

Prolific or Conical Hautbois, Hudson’s Bay, double bearing, Musk, or Spring Grove. Fruit medium size, (large for this class) conical, very dark dull red, inclining to purple on the sunny side; flesh greenish, rather dry, but of a rich and highly perfumed flavor. An abundant bearer. Considered by some as the finest of all strawberries. According to the London Horticultural Society’s Catalogue, “of all strawberries, the hautbois are the most variable. They certainly retain a general character, from which they naturally do not depart; but constancy of character in varieties, denominated as distinct, is but little to be depended upon; the fruit will occasionally change from globular to ovate, and the contrary, while fertile plantations will produce runners that may perhaps, be sterile, and seedlings, many of which will certainly prove so. They ought to be carefully looked after and extirpated, which can be only effectually done in plantations newly formed while the plants are single, and at the time they are in blossom. It is also necessary to observe, that in all the sorts of hautbois here enumerated, there exists both the *Prolific*, and also these sterile plants commonly called *Males*, which have long stamens. The latter ought, in all cases, to be certainly destroyed.” The sterile flowers are distinguished in all the varieties of the hautbois

by their long stamens, except in the *Prolific*, which also has long stamens; from this they are distinguished by their smaller flowers, and imperfect fructification. Thompson, in Loudon's Encyclopedia of Gardening, says: "I believe there is no such thing as distinct plants of male and female hautbois. Stamens and pistils are to be found in either a *perfect* or *imperfect* state in every individual flower. Imperfection generally takes place in the pistil, together with the receptacle. To see that these are sound is all that is necessary to be attended to."

Red Alpine. Fruit, the largest of this class, conical, red; flesh sweet and high flavored. Bears abundantly in suitable soils and situations from early in summer till late in autumn. I have seen a dish of them on the table picked the first day of the twelfth month (December.) The *white alpine* is similar to the preceding, except the fruit is white instead of red. These two varieties are frequently grown promiscuously together.

The *Red Wood* and *White Wood* resembles the alpine, but the fruit is smaller and rounder.

The *Bush Alpine* is distinguished by not spreading by runners. It is not so good a bearer as the red and white running alpine, nor is the fruit quite as good.

The following is nearly the order of succession in which the preceding varieties ripen, except the alpine which continue in succession.

Old Scarlet, Grove End Scarlet, Roseberry, Keen's Seedling, Methven, Prolific Hautbois, Wilmot's Superb, Downton, Elton Seedling.

A. J. Downing, in Hovey's Magazine, says, "The finest of the large English varieties of this fruit which we cultivate here, is the Bishop's. It is remarkably large, a most abundant bearer, and of superior flavour. It appears to us to unite all that can be desired to constitute a truly fine and delicious strawberry." Hovey's Seedling, for size, productiveness, and excellence of flavour, is recommended as one of the very finest by those who have thoroughly tried it.

Modes of Propagation. Strawberries multiply during their growth, by runners from the parent plant, which rooting at every joint, form numerous new plants. To form new plantations, these need only to be removed to the bed where they may flourish. This work may be done early in autumn, or early in the spring; the former is best. If done in autumn, care should be taken that the plants are not thrown out by frost, especially on heavy soils. This may be prevented by treading the soil closely about the roots before the ground becomes frozen. Such beds will bear some fruit the summer following the transplanting, and will furnish an abundant supply the second season. The alpine produce well in one year.

The only exception to this mode of increasing, is the *Bush Alpine*, which never increases by runners; the only way for this variety is dividing the root, and transplanting as above described.

Strawberries are only propagated from seeds for producing new varieties, except the woods and alpine, which, says Loudon, "come regular from seed, and bring a finer fruit than from offsets."

Soil and Situation. The best soil for the strawberry is a deep rich loam, though it will succeed and bear on any soil which is fertile.—The situation should be open and well exposed to light and air. It succeeds very well when planted in single rows as edgings. The alpine and wood strawberries may be placed in a more shady situation than the others; it is during hot and dry seasons of the year that they are intended chiefly for bearing. They are consequently well adapted to edgings for shrubbery. When the soil is rich, the advantages of employing strawberries for edging is great, as they succeed in such soils much better when in single rows than when crowded together in a bed.

General Culture. A very general error is to plant too near together, especially if the soil be fertile and well prepared. *Thorough* culture is by far the best, at the same time that it is, ultimately, the *cheapest* method. It is true that on common rich garden soils, a bed may be transplanted which will produce fine fruit and good crops with little care after once prepared; we have known beds to yield plentifully which were almost untouched for years, not even having been weeded, the thick growth of the strawberry keeping down in a great measure, every thing else. But by the following thorough mode, or one similar, practiced by Keen of Isleworth in England, who first raised the celebrated variety known as Keen's seedling, the greatest amount of fruit may doubtless be obtained for the care and labour expended, while the quality is greatly superior. The soil for this mode of culture, should be ploughed or trenched deep, and mixed with decomposed stable manure; if the subsoil be somewhat stony, it should not be thrown to the surface. The ground should be prepared at least a month before transplanting. "The best way," says Keen, "to obtain new plants, is, by planting out runners in a nursery, for the express purpose, in the previous season; for it is a very bad plan to supply new plantations from old plants." The distances of the rows asunder are about two feet, and six inches in the row, for the large varieties, as Methven and Keen's seedling; the smaller varieties may be a little nearer. This distance may seem too great, but it is necessary for sun, air and culture. "These large distances," says Keen, "I find necessary; for the *trusses of fruit in my garden ground are frequently a foot long.*" This fact is a sufficient proof of the excellence of his mode of culture. "After the beds are planted, I always keep them as clear of weeds as possible, and on account allow any crop to be planted between the rows. Upon the growing of the runner, I have them cut when necessary; this is usually three times in each season. In the autumn I always have the rows dug between; for I find it refreshes the plants materially; and I recommended it to those persons to whom it may be convenient, to scatter in the spring, very lightly, some loose straw or long dung between the rows. It serves to keep the ground moist, enriches the strawberry, and forms a clean bed for the trusses of fruit to lie upon; and thus by a little extra

trouble and cost, a more abundant crop may be obtained. A short time before the fruit ripens, I always cut off the runners, to strengthen the root; and after the fruit is gathered, I have what fresh runners have been made, taken off by a reaping hook, together with the outside leaves around the main plant, after which I rake the beds, then hoe them and rake them again. In the autumn, unless the plants appear very strong, I have some dung dug between the rows, but if they are very luxuriant, the dung is not required; for in some rich soils it would cause the plants to turn nearly all the leaf. I have also to remark, that the dung used for manure, should not be too far spent; fresh dung from the stable door is preferable to split dung, which many persons are so fond of."

The writer has found great advantage, both as a matter of economy of labour, and for the increase of productiveness, to set out strawberries in long rows about two or two and a half feet apart, and ten inches apart in the rows, so that they may be cultivated with a horse. The difference between suffering a bed to become thickly matted over, and keeping the plants or hills well hoed separately, is almost incredible to one who has not seen it. A half pint of the largest and finest strawberries from one hill is easily thus procured.

The strawberry, though never diœcious, from an imperfection in the fructification contains fertile and barren flowers in most varieties, except the Alpine and Wood. The barren plants are the most vigorous and productive of new plants; and in some cases will overrun and crowd out the fertile ones. Hence the unproductive state of many beds of fine varieties where this has taken place. A few sterile plants, perhaps one-tenth, are necessary to cause fertility to others; for the proper management of which, see an article on the culture of the strawberry on page 217, current volume of the *Cultivator*.

In England, where the climate is much more moist and less hot than here, decided advantage is found in watering strawberries during hot weather.

Beds, once prepared, generally continue in a good bearing state from three to five years.—*Alb. Cult.*

J. J. T.

AGRICULTURAL PAPERS, AND AGRICULTURAL WRITERS.

In the January number of the *Southern Planter*, the editor, who we suppose from his severe strictures is a practical farmer, very justly points out the absurdity of the agricultural quackery with which most of the works upon this interesting science are filled. His charges against Liebeg and other distinguished chemists cannot be substantiated, but it is evident that by far too many who have

written upon agriculture have had no knowledge whatever of its practice. To write well, a man must at least understand his subject; and unless he be in possession of that description of knowledge, the reader has a perfect right to question the correctness of his conclusions. An agricultural magazine should be considered as a storehouse or depository for the practical farmers to store their choicest and most valuable experience; and if the intelligent and best practical farmers were to act upon the principal of supplying us with the results of their several successful experiments, we could glean from such resources valuable treasures, which would prove highly edifying to all who would take the trouble of reading for themselves. We have respectfully solicited the Canadian farmers to write for the *Cultivator*, and we again press the matter upon their attention. The *Cultivator*, may be made interesting and useful without their contributions, but it would be infinitely more so if those who are capable would enrich our columns with their practical experience. It cannot be said that the editor of this Journal is not a practical farmer—no one in Canada is more so; and as the editorial matter is all written upon the farm, the style of the articles will give evidence that they are not fine spun theories. We do not wish to be too importunate, but at the same time we again appeal to our agricultural brethren to help us with their pens as well as their influence and purse. In the words of the *Planter*, we desire to transmit to one farmer, in the simplest and most condensed form, the observations and experience of others engaged in similar pursuits. If the farmers of this country will not write, probably they may be induced to establish farmer's clubs and libraries, and by

having the speeches and reports published in their local papers, we may glean from such sources, their experience, and thereby the whole community may have the benefit of the practice of the best farmers in the province at their own fire-sides at nominal cost. The following remarks by the *Planter*, are so much in unison with our own views, that we shall copy them.

"Agriculture is the obvious pursuit of civilized man; all other arts are secondary; the earth furnishes in some shape or form the raw material, the moulding and fashioning of which constitute all those arts, that minister to the natural or artificial wants of man. It is not wonderful, then, that agriculture should have been the first to attract the attention of mankind: but if it is the most important, it is also the most complex and difficult of the arts. Whilst in the others, experiments can be tried and repeated every fifteen minutes, in this, *one* only can be instituted in a season: and as might be expected, the progress in this art bears about the same relation to that in others, as fifteen minutes does to three hundred and sixty-five days. Experiments may be compared to a bunch of keys, with which we seek to unlock the secrets of nature; and the result of experiments is the only solid foundation of human knowledge. It is upon the facts disclosed by these experiments that the man of genius erects his theory, and from them he deduces the laws of nature. But of what avail is genius without the facts: what is the architect without the materials for the building; what can he do but build "castles in the air!" He who would arrive at a knowledge of the laws of nature, must study her in the midst of her works: he must give a close and attentive eye to all her freaks and pranks, and then he will find that there is a method in her madness.

"We hope we shall not be understood as sneering at the science of agriculture. For true science of every kind, we entertain the most profound respect: but science, as we understand it, is a knowledge of principles derived from a generalization of facts, and the small amount of agricultural facts that are known are as yet in the possession of what are called practical men; it is then a report of facts from practical men rather than the surmise of any fancy, no matter how brilliant, that we seek to present to our readers. The opinions of learned men are always valuable: but who are the men learned in agriculture; are they those who mix their ingredients in a crucible over a few coals, and from the result pretend to teach the great experimental farmer himself what will be the result when he uses the earth for his crucible and the sun for his fire? A few useful suggestions may have emanated from the laboratory; but it is certain, that in the operations of

nature so many important agents are brought to bear that are carefully excluded from the chemist's crucible, that the result in the one case hardly authorises a guess at the effect in the other; in short, chemistry is an exact science; peculiarly so. Results are only the same, or even similar, when the simples, the proportions and the temperature, are exactly the same. How illegitimate then is a conclusion for the field derived from a result in the closet. Why is "book-farming" so much derided by a large number of the intelligent inhabitants of the country—why are good farmers accustomed to turn up their noses at agricultural papers! Simply because a great mistake has been committed by the editors of such papers. Men do not fall out with their bread and butter—they are quick enough to discover their pecuniary interests, and if agricultural papers had been all that they have been cracked up to be; if they had indeed pointed out the road to wealth and prosperity, the farmers would have found it out long ago, and there would have been no complaint of a want of patronage. But they have seen that agricultural knowledge resided in one set of men, and the faculty of eliminating a pretty theory upon paper, existed in another; and that the latter class were permitted to fill the pages of our agricultural papers, to the exclusion of their more homely but more useful rivals. It is true that this error is in a fair way to be remedied, and the papers of the present day are infinitely more useful and practical than those that preceded them; but still there is much to be amended; there are many quacks and pretenders, fine writers, men whom habit has made ready with their pen, some seeking pecuniary profit from a subject of which they are totally ignorant, who should be discarded and exposed; whose guesses although we may not be able to demonstrate them to be wrong, we have little reason to believe to be right; men sometimes very learned upon other subjects, who are totally ignorant of the one they profess to elucidate; they state opinions or facts, and deducing a theory from false premises, they mislead the incautious and unwary; a burnt child dreads the fire—and one who has been misled by such statements is very apt to consider everything new as false, and to discard all written advice because he has found much of it erroneous.

"For these reasons then we have eschewed, and we mean to eschew, long winded theories from men, no matter how learned in other respects, who from the nature of their pursuits must be ignorant of facts in agriculture. Of course we do not mean to exclude all inference, and require a simple statement of facts; but we mean to exercise a sound discretion in choosing such inferences as are fairly deducible from well established facts. We greatly prefer the facts without the inference, to what we so often get, the inference without the facts."

Grubs in Horses.

Take 1 pint strong vinegar, 1 ounce chalk in powder, stir it well and drench the animal.

FEMALE EDUCATION.

"Our correspondent L. S. has kindly furnished us with the following extract from the writings of Ezra Sampson on female education:—

"The great benefit of education, and what should be its ultimate design, consists in its tendency to prepare the pupils to act with propriety the parts allotted them both as immortal and mortal beings. Female education respects the parts that females are destined to act on the theatre of social life. Besides they are moral accountable beings, destined to an immortal existence, and should therefore be assiduously taught the moral and religious knowledge of right and wrong,—or their duty to God, to themselves, and to their fellow creatures. As social beings their understandings must be cultivated. As moral and immortal beings their hearts should receive moral and pious culture. They should be taught self government, modesty, and delicacy of thought, speech and action. They may meet with hard and distressing trials, and should be early taught the value of a meek, quiet and humble spirit, which, in some females under adversity, has shone with a lustre surpassing that of the diamond.

Moreover, they may be desired (however worthy or estimable,) to lead a single and solitary life; and they should be so educated, that having resources in their own minds; they will be able not only to endure, but to enjoy their hours of retirement and solitude, and to make themselves respectable, agreeable and useful, by the good sense of their conversation, and the benevolence of their dispositions. Again, they may be wives; and it is the part of education to qualify and prepare them to be good wives—mild and affectionate—discreet and hospitable—and yet frugal—looking well to the ways of their household. Finally they may be mothers! and it is the office of education, to qualify them, as mothers, to educate their children. In this one particular, woman has a most particular part to act. As mothers, they do in a great measure form the character of future generations; since the formation of infant character depends chiefly on them. If they are moral, discreet and well informed, their children are made, partly by their own instruction, and partly by imitation to assimilate to these qualities. But if they are vain and frivolous, their little ones soon catch the contagion of their vanity and frivolity.

"The foregoing particulars embrace most of the primary qualities, or indispensable rudiments of a good female education. And yet it is often remarked of females that they have an excellent education, merely because they have been taught what are called female accomplishments. Very little attention was ever paid to the culture of their understandings, their minds, their hearts, or their tempers. But with much pains, and at considerable expense, they have got a smattering of what are called fine arts, such as embroidery, drawing, music, &c. They have learned the discipline of the finger, and of the feet: and for this reason alone, their education is held in great ad-

miration; as if mere accomplishments, which usually become obsolete soon after marriage, were sufficient to prepare women to become excellent wives, mothers and house-keepers; as if a merely accomplished woman were fitted either to act her part respectably in society, or to take comfort in the solitude of confinement, or under the decays of age, or as if the modesty and refined manners of women spring from accomplishments, rather than from their being well instructed in moral and religious duty. So far from all this, a married woman of mere accomplishments, and whose chief ambition is to make a figure in the eye of the public—seldom fails of rendering both herself and her husband unhappy.

"In the school of Fashion female accomplishments have long had the ascendant. Nor is it my purpose to decry or despise them. Let those have them if they please, whose rank in life require them, and whose ample fortunes can well afford the expense. Yet even by them be it remembered, that they are but of trifling account in comparison with the solid and useful branches of education. If accomplishments be added to these they may serve for advancing the whole: but hapless will be the husband and the children of that woman, yea, and quite as hapless the woman herself, who rests her character and conduct in life upon accomplishments alone.

"With regard to our labouring people of moderate fortunes, surely, a plain and useful education is the best for their daughters, and is all that can ordinarily do them any good. More than this, may do them much harm. Saint Paul, whom we ought to consult much oftener than we do—hath told us of a knowledge that puffeth up. And perhaps there is no kind of knowledge more puffing, than the one I have now been considering. A female of scanty information and perhaps weak intellect, so values herself, for the circumstances of her having been initiated into some of the fine arts, that she loses by it the use of her hands. She will vouchsafe, indeed, to employ her pretty fingers now and then in fancy work, for amusement, but in nothing that is really useful; in nothing which benefits a suffering fellow mortal—in nothing which earns bread for the hungry—or turns to any valuable account. Perhaps she is in impoverished circumstances; perhaps her condition is such as imperiously calls for the labour of her hands. It makes no difference. She is not of the labouring class but far above it. She do the common work of womanhood. She who had gone through all the grades of a fashionable education! The idea is too monstrous.

"Thus instead of being made, by their education, the more capable of helping themselves in this work of "thorns and thistles," of labour, toil, and hardship; there are some, and perhaps not a few, whose very education renders them the more helpless.

"I will conclude with an interesting portion of history, which shows the unspeakable worth of a sensible right-hearted, and well educated woman. In the arbitrary and odious reign of one of the

Stuarts there came before Judge Croae a case between the crown and a subject; a case upon the issue of which, the liberties of the nation were suspended. The Judge depended upon the crown for a livelihood, liable at any moment to be thrust from his office, and having a family to support, had resolved to give his opinion in favour of the royal prerogative; when his tutelary angel—his wife—rescued his sinking virtue. She told him "she hoped he would do nothing against his conscience for fear of any danger or prejudice to him or his family. That she would be content to suffer want or any misery—rather than be the occasion for him to do or say anything against his judgment or conscience."

"She prevailed; the decision was given in favour of the rights of the people, and the nation was saved from civil opposition and thralldom by her means."—*Bost. Cult.*

Cure for Fistula in Horses—Mr. Harmon, in the *Genesee Farmer*, attests to the efficacy of the following singular method of curing the fistula;

"Procure a large warty toad, and having a thick glove or mitten on the hand, take up the toad and hold his back on the fistula for one or two minutes; take it off a short time, then put it on again, and rub its back slightly over the affected part, and continue to rub it thus for about an hour, by which time the toad will be dead, and should be buried. The horse will be rather uneasy at first, but after a few minutes he will stand quietly. Care should be taken not to hold your head too near or over the place of application, as the fumes are somewhat sickening. A milky fluid, said to be poisonous, exudes from the warts on the back of the toad, which is supposed to give efficacy to the remedy.

"The sore will discharge for three or four weeks after the operation, when the pus will come out and the place speedily heal. Very bad fistulas, of long standing, may require a second application, but in all ordinary cases one will prove sufficient."

A friend at our elbow says, "put a seton in the fistula, at the lower part of it. This will discharge the pus. Then inject soap-suds, made from fine soap (Castile is the best,) frequently for one day. Next inject a weak solution of oil of vitriol, two or perhaps three times a day, for one or two days. After this, wash clean with soap-suds. In a short while the fistula will be well. Poll-evil may be cured in the same way.—*Am. Ag.*

Simple Cure for Croup.—When a child is taken with croup, instantly apply cold water (ice water, if possible,) suddenly and freely to the neck and chest with a sponge. The breathing will almost instantly be relieved. So soon as possible, let the sufferer drink as much as it can; then wipe it dry, cover it up warm, and soon a quiet slumber will relieve the parent's anxiety, and lead the heart in thankfulness to the Power which has given to the pure gushing fountain such medicinal qualities.—*Am. Ag.*

Mechanics' Wives.—Speaking of the middle life, a good writer observes:—"There we behold woman in all her glory, not a doll to carry silks and jewels, not a puppet to be flattered by profane adorations, revered to-day, discarded to-morrow; always jostled out of the place which nature and society would assign her, by sensuality or contempt; admired, but not respected; desired, but not esteemed; ruling by passion, not affection; imparting her weakness, not her constancy, to the sex she would exalt; the source and mirror of vanity; we see her a wife partaking the cares and cheering the anxiety of a husband, dividing his toils by her domestic diligence, spreading cheerfulness around her for his sake, sharing the decent refinements of the world without being vain of them, placing all her joys and happiness in the man she loves. As a mother, we find the affectionate, the ardent instructress of the children whom she has tended from her infancy, training them up to thought and virtue, to piety and benevolence; addressing them as rational beings, and preparing them to become men and women in their turn. Mechanics' daughters make the best wives in the world.

Maxims of Bishop Middleton.—Persevere against discouragements—Keep your temper—Employ leisure in study, and always have some work on hand. Be punctual and methodical in business, and never procrastinate. Never be in a hurry; preserve self-possession, and do not be talked out of a conviction. Rise early, and be an economist of time. Maintain dignity, with the appearance of pride; manner is something with every body, and everything with some. Be guarded in discourse, attentive and show to speak. Never acquiesce in immoral or pernicious opinions. Be not forward to assign reasons to those who have no business to ask them. Think nothing in conduct unimportant and indifferent. Rather set than follow examples. Practice strict temperance; and in all your transactions, remember the final account.

Food for Cows.—We would recommend the following article to the careful perusal of our readers, as it embraces a topic of great practical importance. With those familiar with the writings of M. Chabert, and his exalted character as a scholar, any commendation on our part would of course appear superfluous. M. Chabert, the director of the veterinary school at Alford, England, had a number of cows which yielded 12 gallons of milk every day. In his publication on the subject, he observes, that cows fed in the winter on dry substances, give less milk than those which are kept on green diet, and also that their milk loses much of its quality. He published the following recipe, by the use of which his cows afforded him an equal quantity and quality of milk during the winter as during the summer. Take a bushel of potatoes, break them while raw, place them in a barrel standing up, putting in successively a layer of bran and a small quantity of yeast in the middle of the mass, which is to be left thus to ferment during a whole week, and when the vinous taste has pervaded the whole mixture, it is given to the cows who eat it greedily.—We have been promised a communication on this subject by a person to whom we casually mentioned the views of M. Chabert, and who has some experience of late as regards the process he commends. Experiments of this description are much needed at this day, and we are glad that there is one among us, if no more, who is disposed to make them, and favor us and the public with the details.—*Maine Cult.*

KEEP YOUR BEST STOCK.

Many farmers are in the habit of selling their best animals, as they will bring the highest price. A greater mistake cannot be made. A difference of ten or even twenty per cent. in the price of a single animal, is a small affair compared with this difference in a whole herd. By keeping the very best to propagate from, the whole may be made of equal excellence, and in the course of a few years, numerous animals might be produced having the excellent properties that now distinguish some few of the best.

What should we say of a farmer who has several highly valuable varieties of potatoes, and other

kinds that are inferior, and for the sake of ten cents extra a bushel, he sells for consumption all his best varieties, and plants those that are inferior, when in consequence of this imprudent measure, his next crop will fall short twenty-five per cent? Every one will condemn this course, and few, if any, are so wanting in discretion as to pursue it; yet many take a similar course in selling their best animals and propagating from the poor.

For the purpose of work, beef, and the dairy, there are probably no cattle superior to our native breed, where attention has been given to improve them, though some improvement for certain purposes may be made by a cross with foreign breeds, that excel in the qualities desired. There is a vast difference in our cattle in sections where much attention has been given to improvements by selecting the best, when contrasted with those where little or no attention has been paid to the subject, and as a matter of course, the best have been sold, or eaten up, because they were the fittest. Every man that raises stock has it in his power to make improvements, and he should avail himself of all the advantages around him to turn this power to the benefit of himself and posterity.—*Best Cult.*

HEALTH AND COMFORT.

To prevent cold feet, wash them frequently, and rub them thoroughly with a coarse cloth; this removes obstructions from the pores, and produces a healthy state which is conducive to warmth. When the feet appear clean, the pores may be obstructed and the perspiration impeded so as to produce discomfort, and in some measure injure the health.

To prevent cold feet at night, in addition to the cleansing process, take off the stockings a short time before retiring, and with them rub the feet hard until they are not only warm, but begin to feel hot. This will greatly add to pleasure and health, which, in many cases, greatly depend on things which may to some appear trifling.

To keep the feet dry, use good stout boots or shoes, and stuff the leather, upper and lower, full of some waterproof composition. Tar is a good ingredient as it will bend and not break. Two parts of tar, two of beef's tallow, and one of beeswax, make a good composition for boots and shoes. Apply it quite warm, and warm the leather that it may penetrate. As farmers are generally exposed to wet, they should be careful to keep their feet dry and warm, for on this their health and comfort, in a good measure, depend.

There are many kinds of composition that are good to resist water, and preserve leather, and the proportions of the above may be varied. Tar and tallow will answer well alone; so will tallow and beeswax. Linseed oil is used as a good ingredient in water proof composition. Neat's foot oil is excellent and preserves the leather soft. Castor oil has been highly recommended for this purpose.

—*Am. Ag.*

SHEEP FLY.—This tormentor of the flock (*æstrus ovis*) is more particularly troublesome in August, though its depredations commence before and continue after that month. It deposits its egg in the margin of the nostril, which is soon hatched, and crawls up the cavity till it reaches the frontal sinus. Here it grows till it falls out and hides in the earth where it hatches, when it is ready to follow the steps of its predecessor. While the worms are in the head, the ears of the animal droop, bloody matter is exuded from the nose—scouring and loss of limbs sometimes follow, and death. We know of no remedy when such is the case. As a preventive, tar rubbed on the nose or put into the bottom of the salt trough, so that they smear their noses with it, is generally effective. A piece of plowed ground, or at least a few furrows, to which the sheep can have access, is a very great aid in resisting the tormentor. Its presence may be known by the sheep huddling together, with their noses to the earth—and sometimes running in great alarm about the pasture, or by their crowding into a dusty road if one is to be found.—*Prairie Far.*

To fix Ammonia and Disinfect Night-Soil.—Add two cwt. of gypsum to one ton of night-soil, and it will fix the ammonia, which contains the nitrogen. Burnt bones will also fix the ammonia, and disinfect the night-soil. Dry coal-ashes, and the charred substances of any kind, are destroyers of the bad smell. Soot mixed with saw-dust answers both purposes.—*Agriculturist.*

Another (considered superior to anything of the kind).—Dissolve a tea-spoonful of super-carbonate of soda, in a sufficient quantity of sweet unskimmed milk; three tea-spoonfuls of cream of tartar with a heaping quart of flour, mixed dry and well rubbed together; then mix up the whole and bake immediately. If milk is not at hand, water will answer, slightly sweetened with sugar, and a little shortening added to it. The flour and all other materials must be of a first-rate quality.—*Am. Ag.*

HOW TO KNOW GOOD GUANO.

The farmer should never purchase guano, except its composition be warranted by the analysis of a competent chemist. He should cork up in a bottle a half-pound sample of each kind of guano that he buys; and if his crop should disappoint reasonable expectation, he should cause the samples to be analysed; and should the result not correspond to the analysis exhibited at the sale, he is fairly entitled to damages for the loss of his labour, rent, crop, &c. The necessity of following this advice will appear on considering the delusive, if not utterly false, analyses under which cargoes of guano have been too often sold. In a recent case which came under my cognisance, in consequence of having been employed professionally to analyse the identical cargo, I found the guano to be nearly rotten and effete; containing altogether only 2½ per cent. of ammonia, ½ per cent. of urate of ammonia, nearly 9 of sea-salt, 24 of water, and 45½ of earthy phosphates. Now, this large cargo of many hundred tons, fetched a high price at a public sale, under the exhibition of the following analysis:—

Urate of ammonia, ammoniacal salts, and decayed animal matter	17.4
Phosphate of lime, phosphate of magnesia, and oxalate of lime	48.1
Fixed alkaline salts	10.8
Earthy and stony matter	1.4
Moisture	22.3
	100.0

The purchasers, I was told by the brokers, brought it readily under a conviction that the guano contained 17.4 of ammonia, though the proportion of ammonia is not stated. By the following hypothetical analysis much guano has been well sold:—"Bone earth 35; lithic acid, &c., 15; carbonate of ammonia, 14; organic matter, 36—100." I am quite certain that no sample of guano can contain 14 per cent. of carbonate of ammonia—a very volatile salt. We shall see presently the state of combination in which the ammonia exists. It may contain at the utmost 5 per cent. of the carbonate; but such guano must have been acted upon powerfully by humidity, and will, therefore, contain little or no uric acid. In the very elaborate examination of guano by T. Oellacher, apothecary at Innsbruck, published in a recent number of Buchner's "*Repetorium of Pharmacy*," it is said, that if a glass rod dipped into muriatic acid be held over guano, strong fumes are developed; and the solution of guano has an alkaline reaction with litmus paper. These phenomena evidently indicate the presence of carbonate of ammonia, and of course a partially decomposed guano; for scund Chinha and Bolivian guano have an acid reaction, proceeding from the predominance of phosphoric acid. Farmers frequently judge of the goodness of guano by the strength of the ammoniacal odour; but in this judgment they may egregiously err, for the scundest guano has no smell of ammonia whatever; and it begins to give out that smell only when it is more or less decomposed and wasted.—*Dr. Ure.*

Nutritive Qualities of Tea.—M. Peligot states that tea contains essential principles of nutrition far exceeding in importance its stimulating properties; and shows that, as a stimulant, tea is in every respect the most desirable object of habitual use. One of his experiments upon the nutritive qualities of tea, as compared with those of soup, was by no means in favor of the latter. The most remarkable products of tea are: 1st, the tannin or astringent property; 2nd, an essential oil to which it owes its aroma, and which has a great influence on its price in commerce; and 3rd, a substance rich in azote, and crystallizable, called *theine*, which is also met in coffee, and is frequently called *cafeine*. Independently of these three substances, there are eleven others of less importance, which enter more or less into the compositions of tea of all the kinds imported into Europe. What was more essential, as regards the chemical and hygienic character of the plant, was to ascertain the exact proportion of the azoted (nitrogenized) principle it contains. M. Peligot began by determining the total amount of azote in tea, and finished by finding that it was from 20 to 30 per cent. greater than in any kind of vegetable. M. Peligot states that by reason of this quantity of azote, and the existence of *cafeine* in the tea leaf, it is a true aliment.—*Am. Ag.*

Mile.—There is a great difference in the number of yards contained in a mile in different countries. The following table, showing the difference will be very useful to many persons as a reference:

Mile in England or America	1760 yds.
“ Russia	1100 “
“ Italy	1476 “
“ Scotland and Ireland	2200 “
“ Poland	4400 “
“ Spain	5028 “
“ Germany	5866 “
“ Sweden and Denmark	7223 “
“ Hungary	8800 “

Though every body knows that an hour is sixty minutes, yet few seem to know that sixty of these brief portions of time make an hour.

A Delaware Farm.—Mr. Luke Coverlade, residing near Smyrna, Del. states in a communication to the editors of the *Wilmington Journal*, that he raised the past season on one field of about fifty-four acres, eleven hundred and sixty-six bushels of wheat, weighing from 61½ to 62 lbs. per bushels. This field was limed two years previous to the wheat being sowed, at the rate of one hundred and sixteen bushels to the acre—The field was one year old, stalk ground, and ploughed in the month of July, and August, about seven inches deep, then ploughed the second time the first of October, the wheat sowed on the top and then harrowed with a spike harrow. About four acres of the field were injured by the frost in the winter so that there was very little wheat on that portion of the ground in harvest.

We believe that this fine crop of wheat may chiefly be attributed to the liberal application of *Lime*. Our farmers in this county, as well as those in our neighbouring State of Delaware, are becoming every year more and more convinced of its utility as a fertilizer of the soil. With us lime acts almost immediately, and we have known many of our agriculturists apply as much as one hundred and thirty bushels to the acre, the result of which is a heavy, and consequently a profitable crop, in almost every instance. We should be much pleased to hear the experience of some of our farmers as to the manner of applying lime, and the results of its application.—*Chester (Pa.) Republican.*

Preservation of Apples.—Apples, intended for keeping long, should be carefully gathered by hand, when they are quite ripe, in dry weather. They should be spread singly on a floor, in an open room, for about ten days, and then stowed in an airy place, with a layer of dry wheaten straw beneath each layer of apples. By careful management, some kind of apples are preserved in England for two years.

The Spotted Disease in Pigs.—As this disease has been very prevalent, and carried off many pigs of late, the following remedy will be found most successful. The gentleman who has so kindly communicated this remedy to us, has found it effectual in every instance in which it has been applied: As soon as the pig is observed to be seized with the disease, give him a gill and a half to half a pint raw linseed oil, with about a thimble-full of the spirits of turpentine, well shaken together; repeat the dose in four hours, if necessary. Plan of administering the dose: Place the pig in an upright position, on its tail; tie round the upper jaw a small cord, leaving the under jaw and tongue quite at liberty; the man holding the pig will throw the cord over his shoulder to a second person, who will hold so as to enable the other to pour the mixture over the tongue, when the animal will at once swallow it. Care should be taken not to hold the cord too tight, the object being merely to keep the head in a steady but not quite upright position.—*Dover (Eng.) Recorder.*

A Hint.—Don't suffer your revolving hay rake, and your wagon rack, and hand rakes, and whatever else you have used in haying or harvesting, or indeed tools or implements you have used in any other work, to lie out in the fields exposed to the weather, but see them well housed for another season. The weather destroys more tools than hard work, with some farmers; and more valuable time is lost hunting up and repairing lost implements, than their original cost.—*Albany Cultivator.*

Buckwheat Cakes.—To three pints of buckwheat flour, mixed into a batter, add one tea-spoonful of carbonate of soda, dissolved in water, and one ditto of tartaric acid, dissolved in like manner; first apply the carbonate, stir the batter well, and then put in the acid; thus the use of yeast is entirely superseded, and light cakes are insured. One great advantage is, that the batter is ready for baking as soon as made.

Silk Culture.—The second annual convention of silk culturists and manufacturers was held in New York last fall. It was stated that in a little town in the West, called Gloversville, gloves of the value of from \$300,000 to \$500,000 were annually made, and this manufacture at that place consumed in the same period \$10,000 worth of American silk. The same quantity of Italian silk was formerly used. A communication from Myndert Van Schaich was received, enclosing \$1,000 to be distributed at \$100 a year, for the best piece of manufactured silk. The communication spoke of the writer's conviction that in a short time the silk manufacture of this country would raise to \$20,000,000 annually, and alluded to the acknowledged fact, that American silk was superior and made less waste in reeling from the cocoon than any other. The facts were admitted by persons perfectly conversant with silk culture.

Pennsylvania Apple Butter.—To make this according to German law, the host should, in the Autumn, invite his neighbors, particularly the young men and maidens, to make up an apple butter party. Being assembled, let three bushels of fair sweet apples be paired, quartered and the cores removed. Meanwhile, let two barrels of new cider be boiled down to one half. When this is done, commit the prepared apples to the cider and let the boiling go on briskly and systematically. But to accomplish the main design, the party must take turns at stirring the contents without cessation, so that they may not become attached to the sides of the vessel and burn. Let the stirring go on till the amalgamated cider and apples become as thick as hasty pudding, then put in powdered allspice, when it may be considered as finished and committed to the pots for further use. This is Apple Butter; and it will keep sweet for many years. It is a capital article for the table.—*Housekeeper's Annual.*

Chimneys Destroyed.—Those who have used airtight stoves with considerable pipe, know that quite a quantity of Kresote is deposited. The *Maine Farmer* says that this destroys chimneys, by acting upon the lime of which the mortar is composed; and that in Bedford some have fallen down in consequence. If this is so, the chimneys will have to be lined with sheet-iron—perhaps.

FROM THE PRACTICAL RECEIPT BOOK

Growth of Hair increased and Baldness prevented.

Take 4 ounces of castor oil, 8 do. good Jamaica rum, 30 drops oil of lavender, or 10 do. oil of rose, anoint occasionally the head, shaking well the bottle previously.

Black Ink improved.

To a pint of common black ink add one drachm of impure carbonate of potassa, and in a few minutes it will be a jet black. Be careful that the ink does not run over, during the effervescence caused by the potassa.

Grafting.

Melt beeswax and tallow together, stirring in a little chalk if handy; while hot dip in some strips of rags; then tear them into strips suitable to envelop the stock and scion. Let the stock and scion be so covered as to prevent the escape of the sap or the introduction of water, and the work is finished.

Ward's Paste for the Piles.

Powder of elecampane 4 ounces; black pepper 4 ounces; fennel seed 6 ounces; honey 8 ounces; sugar 8 ounces; mix and take a spoonful two or three times a day.

Watchmaker's Oil, which never corrodes or thickens.

Take olive oil and put it into a bottle, then insert coils of thin sheet lead. Expose it to the sun for a few weeks, and pour off the clear.

Varnish for Water Colour Drawings.

Take Canada balsam 1 part; oil of turpentine 2 parts mixed; size the drawing before you apply the varnish.

Potter's Patent Water-proof Cloth.

Isinglass, alum, soap, equal parts; water sufficient. Dissolve each separately, and mix the solution, with which imbue the cloth on the wrong side; dry and brush the cloth well, first with a dry brush, and afterwards (lightly) with a brush dipped in water.

Wainscot Varnish.

Gum anime 32 parts; pale oil, 100 parts; litharge (in powder,) 1 part; sugar of lead (in powder,) 1 part; boil, until stringy, then cool a little, and add spirits of turpentine, 170 parts. Mix well and strain.

To make fine Black Writing Ink.

Take two gallons of a strong decoction of log-wood, well strained, and then add 1½ pounds of blue galls in coarse powder; 6 ounces sulphate of iron; 1 ounce acetate of copper; 6 ounces well ground sugar; and twelve ounces gum arabic. Set the above on the fire until it begins to boil, then set it away until it has acquired the desired black.

Red Ink for Writing.

Boil over a slow fire 4 ounces of Brazil-wood, in small raspings or chips, in a quart of water, till a third part of the water is evaporated. Add during the boiling, 2 drachms of alum in powder. When the ink is cold, steam it through a fine cloth. Vinegar or stale urine is often used instead of water. In case of using water, adding a very small quantity of sal-ammoniac would improve the ink.

Blue Ink.

Take sulphate of indigo, dilute it with water till it produces the colour required. It is with sulphate very largely diluted, that the faint blue lines of ledgers and other account books are ruled. If the ink were used strong, it would be necessary to add chalk to it to neutralize the acid. The sulphate of indigo may be had of the woollen dyers.

Fire and Water-proof Cement.

To half a pint of milk put an equal quantity of vinegar, in order to curdle it; then separate the curd from the whey, and mix the whey with four or five eggs, beating the whole well together. When it is well mixed, add a little quicklime through a sieve, until it has acquired the consistency of a thick paste. With this broken vessels may be united. It resists water, and, in a measure, fire.

To Whiten Beeswax.

In March or April melt yellow wax without boiling; then having several pewter dishes ready, dip the outside bottom of each dish in fair water; then dip them in the wax, and take up a very thin plate of wax, the thinner the better: take them off, and expose them upon the grass to the sun, air, and dews, until they be milk-white, turning them often. Try some of them by sprinkling water on them with a cloth. Query, whether white lead may not in this way be made with very thin plates.

Fly in Sheep.

Make a strong decoction from the leaves of tobacco, or from chewing tobacco, and apply with a small squirt, or syringe, repeated several times during the fall months.

To preserve Fruit Trees from Mice and Insects.

Apply, early in the fall, around the root a thick layer of lime and ashes. It would be well to sink the earth around the tree about six or eight inches, throw in a few shovels-full of the lime and ashes, and then cover up with earth, tramping it well down.

Pine Boughs for Sheep.

Give to your sheep pine boughs once or twice a week; they will create appetite, prevent disease, and increase their health.

Gapes in Chickens.

May be easily cured by giving them small crumbs of dough impregnated with a little soft soap; once or twice is sufficient.

Burnt Rhubarb Diarrhœa

It may be very useful to know the value of burnt rhubarb in diarrhœa. It is more serviceable in the diarrhœa, attendant on the last stage of consumption, than the chalk-mixture and opium, or any other of the usual remedies.

It has been used, with the same pleasing effects, for more than twenty years, in incidental diarrhœas. After one or two doses, the pains quickly subside, and the bowels return to their natural state. The dose is from five to ten grains.

The manner of preparing it is to burn the rhubarb powder in an iron crucible, stirring it until it is blackened; then smother it in a covered jar.

It loses two-thirds of its weight by the incineration. It is nearly tasteless. In no one case where it has been given has it failed. It may be given in port-wine, milk, and water.

The Celebrated Brilliant French Varnish for Boots and Shoes.

Take $\frac{3}{4}$ of a pint of spirit wine; 5 pints white wine; $\frac{1}{2}$ lb. gum senegal in powder; 6 oz. loaf sugar; 2 oz. powdered galls; 4 oz. green copperas. Dissolve the sugar and gum in the wine. When dissolved, strain; then put it on a slow fire, being careful not to let boil. In this state put it in the galls, copperas, and the alcohol, stirring well for five minutes. Then set off, and when nearly cool, strain through flannel, and bottle for use. It is applied with a pencil brush.

Note.—If not sufficiently black, a little sulphate of iron and $\frac{1}{2}$ pint of a strong decoction of logwood may be added, with 1-16 oz. pea lish.

Cure for Headaches.

Liquor of ammonia (Qy. the strength?), 100 parts; distilled water, 900 parts; purified marine salt, 20 parts; camphor, 2 parts; essence of rose or some other scent, in the necessary proportion. The whole dissolved cold. A piece of linen is to be steeped in this solution and applied over the part of the head that the patient points out as the seat of pain, taking care, if it is on the forehead, to apply a thick bandage over the eyebrows, to prevent any drops of the fluid passing into the eyes.

Itch Ointment.

1. Take lard, 1 pound; suet, 1 pound; sugar of lead, 8 ounces; vermilion, 2 ounces. Mix. Scent with a little bergamot.

2. Take bichloride of mercury, 1 ounce; lard, 1 pound; suet, 1 pound; hydrochloric acid $1\frac{1}{2}$ ounce. Melt and mix well, and when perfectly cold, stir in essence of lemon, 4 drachms; essence of bergamot, 1 drachm.

3. Take powdered chloride of lime, 1 ounce; lard, 1 pound. Mix well, then add essence of lemon, 2 drachms.

4. Take bichloride of mercury, 1 part; lard, 15 parts. Mix well together.

5. Take white precipitate, 1 part; lard, 12 parts. Mix.

A portion of either of these ointments must be well rubbed on the parts affected, night and morning.

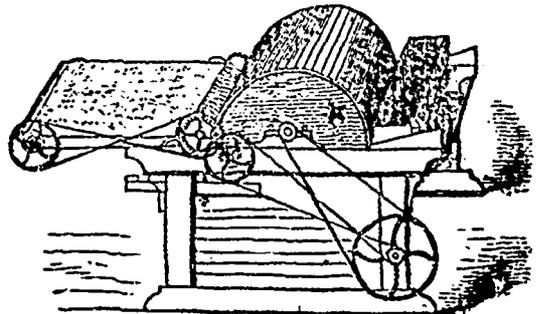
Liquid Japan, for Boots and Shoes, Harness, &c.

Take treacle, 8 parts lampblack, 1 part; sweet oil, 1 part; gum arabic, 1 part; isinglass, 1 part. Mix well in 32 parts of water. Apply heat. When cool, add one ounce of spirit of water. You may add an ox's gall. Place the bottle by the side of the fire before use, and apply with the tip of the finger or sponge.

To improve the Wicks of Candles.

First steep the wicks in a solution of lime-water, in which saltpetre has been dissolved. To 1 gallon of water add 2 ounces saltpetre and $\frac{1}{2}$ pound of lime. Dry well the wicks before using. It improves the light, and prevents the tallow from running.

PATENT WOOL PICKER.



TO WOOLLEN MANUFACTURERS.

THE Subscriber begs leave to inform the public that he has been engaged with Mr. Christopher Elliot at the *Phoenix Foundry, Toronto*, for the last two years past, in building *Woollen Machinery*, but in consequence of having suffered a serious loss by the late fire, he has been obliged to give up the business with Mr. Elliot, and therefore does not hold himself accountable for the working of any of the machinery built at the *Phoenix Foundry* after the first January last.

The Subscriber has now made arrangements with Mr. J. R. Armstrong, Proprietor of the new *City Foundry*, to make and furnish all kinds of

WOOLLEN MACHINERY

that may be required in manufacturing Woollen Cloths in this Province, such as follows, viz:—

Pickers, Carding Machines, Condensers, Spinning Jacks, Broad and Narrow Power Looms, Fulling Mill Cranks, Napping and Teazling Machines, Gigs, Shearing Machines, Finnyes, Stoves for Heating Press Plates, Cast Iron Dye Kettles, together with every other kind of Machinery required to manufacture Cloth.

The machinery will be made under his personal superintendence on the most approved plans, and the material and workmanship will be of the best description.

All orders addressed to *Archelaus Tupper, City Foundry, Yonge Street, Toronto*, will be promptly and neatly executed on moderate terms.

ARCHELAUS TUPPER.

Toronto, March, 1845.

Press On!—This is a speech, brief, but full of inspiration, and opening the way to all victory. The mystery of Napoleon's career was this—under all difficulties and discouragements, '*press on!*' It solves the problem of all heroes—it is the rule by which to weigh rightly all wonderful success and triumphal marches to fortune and genius. It should be the motto of all, old and young, high and low, fortunate and unfortunate, so called.

'*Press on!*' Never despair, never be discouraged, however stormy the heavens, how ever dark the way, how ever great the difficulties and repeated the failures, '*press on!*'

If fortune has played false with thee to-day, do thou prove true to thyself to-morrow. If thy riches has taken wings and left thee, do not weep thy life away; but be up and doing, and retrieve the loss by new energies and action. If any unfortunate bargain has deranged thy business, do not fold thy arms, and give up all as lost; but stir thyself and work the more vigorously.

If those whom thou hast trusted have betrayed thee, do not be discouraged, do not idly weep, but '*press on!*' find others; or what is better, learn to live within yourself. Let the foolishness of yesterday make you wise to-day. If thy affections have been poured out like water in the deserts, do not sit down and perish of thirst, but press on—a beautiful basis is before thee, do not thou increase the evil by being false to thyself. Do not say the world has lost poetry and beauty; 'tis not so; and even if it be so, make thine own poetry and beauty, by a brave, a true, and above all, a *religious* life.

EASTWOOD & Co.

Paper Manufacturers, Stationers,
School Book Publishers, &c.

HAVE constantly on hand an assortment of **SCHOOL BOOKS**, such as are in general use throughout the Province.

—ALSO,—

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(New Series,)

Is published on the First Day of every Month, at Toronto, by EASTWOOD & Co., to whom all orders must be addressed.

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DUGALD STEWART.