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# THE AGRICULTURIST

## AND CANADIAN JOURNAL.

Devoted to Agriculture, Literature, Education, Useful Improvements, Science, and General News.

WM. McDOUGALL, EDITOR.

WM. McDOUGALL & Co., PROPRIETORS.

VOL. I.

TORONTO, JUNE 1, 1848.

NO. 10.

**MARKING SHEEP.**—A Member of the Windsor Co. Agricultural Soc. states that the clip of wool sold by the late Dr. Jarvis, of Claremont one year (known always to be of the first quality and in good condition otherwise,) shrunk  $2\frac{1}{2}$  per cent by clipping off the tar marks; and that the whole loss in consequence of the large amount of tar used, was  $3\frac{1}{4}$  per cent. The writer recommends, as a substitute for tar, a paint that can be more easily removed as follows:—"The materials for marking should be lamp-black and linseed oil. If the latter cannot be procured, hogs' lard will do. Mix a small portion of turpentine with the lamp-black before mixing with the oil. It should stand twenty-four hours before using. These who will use tar at all events, for marking, should endeavour to make one small mark answer all purposes."

**GASES OF MANURE.**—At the Farmer's Club of the American Institute in the city of New York, a paper was read from Mr. J. P. Downey, furnishing his views and experience on the disputed point of the ascension or descension of the gases of manures. His experiment appears simple in the process and successful in the issue; he plowed a small patch of ground from eight to nine inches deep, and spread his manure in the furrows as he plowed; he then took another piece of ground adjoining, plowed it and spread the manure on the top, harrowing it in thoroughly, the soil being of the same quality.—He found the former to yield twenty per cent. over the other, although on the first start the corn on the first piece did not thrive so rapidly as the latter; yet, in two or three weeks after it came up, it began to gain, and so increased until the time of gathering, confirming his belief, that the gases of manure "will not (in his own language) descend, but ascend."

**ECONOMY IN CANDLES.**—If you are without a rush-light, and would burn a candle all night, unless you use the following precaution, it is ten to one an ordinary candle will gutter away in an hour or two, sometimes to the endangering of the house:—"This may be avoided by placing as much common salt, finely powdered, as will reach from the tallow to the bottom of the black part of the wick of a partly burned candle, when, if the same be lit, it will burn very slowly, yielding sufficient light for a bedchamber; the salt will gradually sink as the tallow is consumed, the melted tallow being drawn through the salt and consumed in the wick."

**BEAN MEAL VS. OILCAKE.**—The following interesting experiment is copied from a recent number of the Transactions of the Highland Society of Scotland. Mr. Bruce, of Haughton, in East Lothian, tried the comparative value of linseed, linseed cake, and linseed and brans, on lots of 20 ewes each. He estimated each pound of increased weight had been produced at a cost of—

Linseed-Cake,	- - - -	101oz.
Beans,	- - - -	133½
Beans and Linseed,	- - - -	59
Poppy Cake,	- - - -	106

Last lot of sheep had, in addition, an unlimited supply of turnip tops, grown on grass land. By this experiment, the beans and linseed mixed were the most productive, weight for weight, the linseed-cake next, and the beans least productive.

**HOW TO PREVENT THE BURNING OF CHIMNEYS.**—Fires in chimneys in France have recently been prevented by placing three frames of wire-work one foot above each other, near the base of the chimney; no flame will pass them.

### VEGETABLE MANURES.

The principal vegetable substances employed as manure are straw of all kinds, leaves, saw-dust, bran, oil-cake, sea-weed, and green manures, or crops which are merely sown to be ploughed in, and thus afford food to a second crop, of some more valuable plant.

All these manures when mixed with soil slowly decay, and yield carbonic acid and small quantities of saline and earthy matters. They are most advantageously used when employed in combination with some kind of animal manure; this is the case in farm-yard manure. Straw alone decays but slowly, but when mixed with the dung and urine of cattle it soon begins to change, and in a short time the whole is brought into a state of decomposition.

In this case a sort of putrid fermentation is caused; the animal manure decomposes rapidly, and causes a similar change to take place in the vegetable substances with which it is mixed; decomposition proceeds rapidly, heat is evolved, and if the bulk of the mixture is large, this action becomes so energetic that the value of the manure is seriously injured by the high temperature to which it is thus exposed.

The decay of vegetable manures may also be facilitated by the addition of lime; for the objection which applies to the mixture of lime with animal manures is not applicable to the ordinary vegetable manures. The latter for the most part contain but little nitrogen, their value principally depending on their mechanical action, and on the formation of carbonic acid.

Vegetable manures decay more or less rapidly, in proportion to the quantity of nitrogen which they contain; green manures contain a notable quantity of gluten and albumen, and accordingly decompose rapidly, whilst sawdust, which consists principally of woody fibre, and contains hardly any nitrogen, decomposes slowly. Sawdust is therefore a most excellent substance to mix with the excrement of animals, and other strong animal manures.

Wood sawdust is valuable as manure in proportion to the facility with which it decomposes, and the inorganic matters which it contains; that obtained from young trees decomposes with more facility than the sawdust of old wood. The wood of those trees which contain much resin decays less rapidly than other woods, and is therefore not so valuable as a constituent of mixed manures. Those woods which when burnt yield a large quantity of ashes rich in alkaline salts, are useful additions in the state of sawdust to manures rich in ammonia.—*Rural Chemistry.*

**NEST EGGS.**—The eggs are made of clay, formed to the right shape, in the hands. After being dried they are white-washed; when they are ready for use. The matter is so simple, that it only requires to be thought of, to be available.—These eggs answer the purpose perfectly—the hens accepting them as fully as those of their own make.

**EFFECTS OF CULTIVATION.**—Buffon asserts that wheat is a factitious grain, and there is scarcely a vegetable, whatever its present character on our farms, that can be found growing naturally. Rye, rice, barley, and even oats, cannot be found wild; that is to say, growing naturally, in their present perfect state, in any part of the world.

## Agriculturist and Canadian Journal.

TORONTO, JUNE 1, 1848.

### THE CROPS.

From all we can hear and see, there is every reason to expect that Canada will be blessed this year with a fair, if not bountiful harvest. The spring crops are looking exceedingly well, and the fall wheat, though in many cases much damaged by the winter, has recovered wonderfully within the last few weeks, and bids fair if no untoward circumstances happen between this and harvest to yield more than an average. It is impossible to tell with any certainty thus early in the season, what the result may be at the time of harvest, but this we know that with a bad winter and bad spring, and poor looking crops of all kinds in the latter part of May, it requires no great experience or prophetic power to foretell that there will be a bad harvest—that the farmer will be disappointed in his expectations—that if he be in debt he will find himself deficient in the means to pay—and if he had intended to make improvements or incur expense, he will do well to keep clear of all unnecessary liabilities. On the other hand, with even a bad winter, if the spring be favourable, as on the whole the present has been, and with the various crops promising as fairly as they now do, he may reasonably entertain the hope that his labours will be well rewarded, and that he will have the means to help himself in the way he had laid out. But it must be borne in mind, that the Canadian Farmer has to contend with new enemies—to overcome difficulties, the nature and extent of which he is hardly yet able to justly estimate. The potato disease is a serious evil. The potato crop was one generally cultivated in Canada, and nearly, if not quite as much relied upon for supplying food to the family as wheat, and for feeding cattle and fattening hogs, it was of course more in use.—Whether the disease will appear again this year is indeed uncertain, but the probability is that it will, and with this expectation a much less quantity of land than usual will no doubt be planted. It would be unwise to risk the loss of much time and labour in attempting to raise a large crop of potatoes, until there is good proof to shew that the disease has disappeared. Among the numerous remedies that we have seen recommended, is a recent one said to have been discovered, and tested for the last three years by a German Chemist, Dr. Klotsch. He is to receive as a reward the sum of \$1,400, from the Prussian Government, if the remedy proves successful this year. The mode he adopted was—to pinch off about one-half an inch of the end of each stalk or branch of the plant when it grew to eight or nine inches in height, and to repeat the operation in the tenth or eleventh week after planting. This would be a process somewhat tedious, and in this country where labour is so dear, too expensive to warrant the raising of large crops. In the case of small patches it might be done, and we would recommend the trial of the experiment at all events.

Another evil that is much complained of, and seems every year to be getting worse, is the freezing out of clover, especially on clay land. After repeated trials many farmers have become discouraged, and despair of being able to grow clover to any profit. A friend of ours near this city had a field of clover, which yielded last year from two and a half to three tons per acre, and a good crop of seed besides; this year it will not pay for mowing. The roots were all left above the surface of the ground by the action of the frost, and have withered and died. Now, if two years' crop could be depended on when a field is laid down to clover, there would be some encouragement, but in this case, and in many others only one was obtained. Timothy and other grasses soon introduce the wire-worm,

which proves itself a formidable enemy. It is impossible for farmers subject to these evils, to keep a large stock of cattle; because in Canada the pitch fork must have something to keep it bright, more than half the year. The dairy therefore in such circumstances can hardly be profitable. Wheat is the great resource, but in addition to the increasing casualties of weather, the *Hessian Fly* threatens destruction to this crop. Its ravages may not be so extensive this year as last, but we fear they will be greater. We have thus touched on a few points in Canadian farming which suggest important reflections. One is, the great necessity that exists for the application of more science, and more skill to the cultivation of the soil, in order to grapple with these difficulties and overcome them. Another, which is all we shall mention at present, more particularly refers to the wheat crop, and is this; that we should not build too much on present appearances. While our commercial and monetary affairs remain in their present unsatisfactory state, every farmer as well as every other person should zealously avoid debt, whether the crops be good or bad.

### CHEESE DAIRIES.

(From Transactions N. Y. State Agricultural Society.)

"The choice of those who perform the duties of the dairy should never be entrusted but to persons in whose unremitting care and gentleness the utmost confidence can be reposed. All its operations should be conducted with the most punctual regularity, and with such extreme cleanliness that no speck or taint shall be discoverable either about the interior of the house or the utensils. Throughout Ireland, Scotland and the north of England, it is invariably left to women, and were men to be employed they would consider themselves degraded; but in the southern counties, great hulking fellows may be seen seated at the udder, and handling the teats with their huge fists, as if they had the delicate fingers of a girl. Females are in every way competent to the work, to which they are better suited by their delicacy and tenderness than men; it is, indeed, a truly feminine employment, and to their hands it should be left.

"The nature of the land, the oldness of the pasture, the age of the stock, and the state of the season, have each a separate influence upon the quantity and quality of the milk; thus the milk given by cows in autumn and winter is decidedly richer than that produced in spring and summer, and yields the greatest quantity of butter in those months, with the least cheese; and therefore, no general average can be made with such accuracy as to merit confidence. The same remark will apply with even greater force to the produce of butter and cheese; for, besides these circumstances, cows even of the same breed yield a different amount from equal quantities of milk. Generally speaking, a fair annual product of either from each cow in good condition, may be considered as about 160 to 180 lbs. of butter of superior quality, and 350 to 400 lbs. of whole milk cheese, with a small quantity of whey butter."

"On proper attention to the construction of the dairy house, materially depends the perfect manufacture of cheese and butter, and nothing should be spared in rendering it as complete in accommodation as the nature and size of the farm will admit. The apartments which are peculiarly appropriate to dairy husbandry are, one for milk, another for scalding, pressing and salting cheese, and a third for the implements, and a store room, in the cheese dairies, which may be placed under the roof. The building should be apart, (though convenient to the farm-yard,) from any immediate contact with the odor of the farm-yard or other impurity, as well as from any pond of stagnant water, as nothing more readily acquires an unpleasant taste or smell than milk or cream. The site should be such as to be as little as possible affected by extremes of heat or cold, as a uniform temperature is all-important. The floor should be raised a few inches above the level of the outer ground, with slanting gutters to carry of the water used in washing, which is frequently done, both for cleanliness and coolness. On this, it should be observed, that every particle of milk that happens to be spilled on the floor should be carefully washed off, or its sourness will impart an unpleasant odor, which will infect the entire house; and it is extremely material that the building should be kept as dry as possible, as damp is also highly prejudicial to the operation of the dairy.

"The utensils of the dairy are familiar to all engaged in the business. The form of these utensils, is matter of secondary importance, in comparison with that of extreme cleanliness which is the chief requisite in all the operations of the dairy; and those vessels which can be the most easily cleaned, are the best to be employed. The dairy maid should be a careful, cleanly person, and the floor of the dairy should be kept dry, for water thrown down in bad weather, will necessarily be again in steam, and effect the milk with its humidity. The vessels

used for holding the milk, and all the dairy utensils, after being first washed thoroughly clean, should then be rinsed a first and second time with sweet milk: "a cruet, washed ever so clean with water, will cause vinegar to become dreggy, but if rinsed with a little of the same, will always appear limpid and clear"

"The main point is the *superintendence of the dairy*; for unless that can be confided to the mistress of the family, and she be in every respect competent to conduct it with judgment, regularity, and that persevering industry which is actuated by motives of self-interest, it will be only rarely found to afford any material profit. The making of butter and of cheese are also essentially different; for although every dairywoman ought to be well acquainted with the former, yet excepting in the United Kingdom and in Holland, no two districts in any other part of Europe manufacture cheese of a similar flavor. This extraordinary difference has been attributed to the nature of the pasture on which the cows are fed; and this, doubtless, must have some effect, for experiments have been made by experienced persons brought from places where they have regularly lived, and well acquainted with the mode of making the peculiar quality there known, and yet when moved to another spot, they have not succeeded."

*Milk*.—The chief component parts of milk are those, which, when separated, are known as forming butter and cheese; the residue of which is called whey. These are distinguished by scientific persons as the *butyraeous*, or oily substance producing cream, of which butter is composed; the *caseous* matter of which cheese is formed, and *serum* or whey:

Cream forming.....	4 5 parts,	} of 100
Cheese.....	3.5 do.	
Whey.....	92. do.	

This can only convey a general idea of the component parts, for they must necessarily vary according to the quality of the milk.

The analysis of skimmed cows' milk is stated by chemists to be:

Water.....	978.75 parts,	} of 1000.
Cheese with a trace of butter.....	37. do.	
Sugar of milk.....	35. do.	
Muriate of potash.....	1.70 do.	
Phosphate of potash.....	0.25 do.	
Lactic acid with acetate of potash.....	6. do.	
Earthy phosphates.....	0.30 do.	

"Instruments have been invented, called lactometers, for ascertaining the richness of milk in nearly the same manner as that employed for trying the strength of spirits. The difference in the quality of milk between particular cows may thus be determined, but it does not show whether the caseous or butyraeous matter predominates."

"The making of butter appears to have been known from the earliest history of the Island, for when invaded by Julius Cæsar it was a common food of the Islanders; but the art of making cheese they learned from their conquerors. It seems extraordinary, that a people in possession of large herds of Kine, could be ignorant of the art of making some sort of cheese from the sour curd with which they must have been acquainted; it is indeed described in many ancient authors; yet no mention is there made of the rennet with which it is now formed, nor is it known when the use of that article was first discovered."

"The mode of making cheese, though in the main points apparently the same, yet is subject to more variety of minor details in the practice, than that of anything formed of one material; and thus many different qualities are brought to market, each bearing some distinct character of its own. That many of those kinds, which are by connoisseurs thought indifferent, might, by other management be more nearly assimilated to the superior sorts, there can be little doubt; these peculiarities have, in many districts, attached a certain degree of value to their flavor, while in others it would seem to be imparted by the natural grasses on the soil. This applies more especially to Cheshire than to any other county; for although imitations of different districts have been, in some cases, successfully made in others, yet in no trial has cheese of true Cheshire flavor been produced when made from cows fed on other soils. Whether justly or not, it has been attributed to the abundance of saline particles in the earth, as evinced by the numerous salt springs which abound throughout a large portion of that county, and is so old a remark, that Fuller, in his "Worthies," when speaking of the county, says: "It doth afforde the best cheese for quantitie and qualitie, and yet the cows are not, as in other countries, housed in the winter. Some essayed in vain to make the like in other places, thought from thence they fetched their Kine, and daime maids; it seems they should have fetched their ground too, wherein is surelie some occult excellence in this kind, or else so good cheese will not be made." There must indeed be some truth in the observation, for it is well known that where the springs most abound, the cheese is ever esteemed, to be of superior quality. Whatever may be the foundation of the fact, the quality is, however, always better when the cows are pastured during the summer months.

"Although cheese may be made from the curd, which has been formed by the coagulation of the milk when it turns sour, yet when thus obtained it is hard and ill flavored; many have therefore been found to curdle it with "rennet," which is made from the gastric juice of animals, but more especially from that found in the maws or stomachs of sucking calves, that have been fed entirely on milk.

The preparation in Cheshire is as follows: "When the maw comes from the butcher, it is always found to contain a chyle or curd-like matter, which is frequently salted for present use; but when this chyle matter is taken out, and the skin cleaned from slime and every apparent impurity by wiping or gently washing, the skin is then filled nearly full of salt, and placing a layer of salt on the bottom of a mug, the skin is placed flat upon it. The mug is large enough to hold three skins in a course, each of which should be covered with salt; and when a sufficient number of skins are thus placed in the mug, it should be filled up with salt, and put with a cover over it, into a cool place till the approach of cheese making, in the following year. The skins are then all taken out, and laid for the brine to drain from them, and being spread upon a table, they are powdered on each side with fine salt, and are rolled smooth with a paste roller which presses in the salt; after that, a thin splint of wood is stuck across each of them, to keep them extended while they are hung up to dry.

"The maw skins are put into an open vessel, and for each skin pour three pints of spring water; let them stand 24 hours, then take out the skins and put them in other vessels; add for each, one pint of spring water and let them stand 24 hours as before. On taking the skins out the second time, gently stroke them down with the hand into the infusion; they are then done with. Mix these two infusions together; pass the liquor through a fine linen sieve, and add to the whole a quantity of salt rather more than is sufficient to saturate the water, that is, until a portion of salt remains undissolved at the bottom of the vessel. The next day, and also the summer through, the serum as it rises, is to be cleaned off, and fresh salt should be added. Somewhat less than a half pint of this preparation will generally be sufficient for 60 lbs. of cheese; but when for use, the whole should be well stirred up"

**PRESERVING CLOVER SEED.**—The unusual productiveness of seed in the clover crop of last season, induces me to seize this auspicious moment to offer to agriculturists, the following remarks, referring to the supposed deteriorating influence of age on clover seed:—

There is a general opinion that seed is not fit to sow which has been kept over one year, or, that its vegetative principle is less active. Acting on this opinion, a farmer will sell all his surplus seed at four or five dollars per bushel, and be constrained perhaps the following year, to supply his farm at the rate of \$8. and sometimes \$10. This often happens, as for the last twenty years in our country, we have not had two consecutive seasons favorable to clover seed: this error, therefore, so injurious to the farmer's interest, should be at once corrected.

The seed of the second year may be slower in sprouting than the first, I admit, this may be accounted for, in the increased hardness of the hull, a difficulty easily overcome by soaking the seed 24 hours previous to sowing, in a solution of salt-water of the temperature of 120 Fah. Then dry it with lime, plaster of Paris or ashes, and with a good season and soil, it must grow *and no mistake*.

Let the farmer then, while seed is plenty, attend carefully to its preservation. When brought from the mill, (if perfectly dry) put it away in one or two bushel sacks, suspend them from the joists of his granary, where the temperature is equal, and I will guarantee its fertility for ten years or more.

No agricultural paper to my knowledge has ever given a hint, on this subject, and should you deem these remarks of any value, you may give them a resting place in your admirable journal.—*Am. Far.*

**MANGEL WURTZEL AND CARROTS.**—Dr. Thompson, who was employed by the Royal Agricultural Society to superintend some experiments in feeding stock, states that after trying mangel wurtzel for four successive years, he came to the conclusion that cows fed on it gave quite as much milk, but *much less* butter and cream than when fed on carrots or turnips; that when ewes were fed on mangel wurtzel the lambs did not thrive, owing to the poor quality of the milk.

A few years ago we had occasion to feed three cows during winter with several kinds of vegetables. We fed mostly with potatoes, giving each cow about a peck per day. On changing from potatoes to the same quantity of sugar-beets, the milk decreased, and was evidently of poorer quality. The beets were increased to half a bushel to each cow per day, and this brought up the quantity of milk to what it had been with the peck of potatoes; but the quantity was still inferior, affording a less quantity of cream, and proportionately less butter, which was of a lighter color, of a less firm texture, and not so rich a flavor as that made while the cows ate potatoes. It is proper to say that about a quart of corn meal was given to each cow per day, through the whole trial.

## THE POTATO ROT.

The *Boston Courier* contains a communication from Professor Horsford of Cambridge, giving the views of Baron Liebig, the celebrated chemist, and Dr. Klotsch, an eminent vegetable physiologist, keeper of the Royal Herbarium in Berlin, on this baffling disease. The substance of Dr. Klotsch's discovery is annexed:—

In the 5th, 6th, and 7th week after setting the tubers, and in the 4th and 5th week after planting out germs furnished with roots, or at a time when the plants reach the height of six to nine inches above the soil, we pinch off the extreme points of the branches or twigs to the extent of half an inch downwards, and repeat this on every branch and twig in the 10th and 11th week, no matter what time of day.

The consequence of this check to the development of the stem and branches, is a stimulus to the nutritive matters in the plants in the direction of the increase, both of roots and of the multiplication of the branches of the stem above ground, which not only favors the power of the root, but also strengthens the leaves and stalks to such a degree, that the matters prepared by the physiological action of these parts are increased and applied to the formation of tubers. The checking of the transformation in the leaf is equivalent to the interruption of the natural change of the leaves into calyces, corolla, stamens and pistils, which is effected at the expense of the nutritive matter collected in the plant; and these, when this modification of the leaves is arrested, are turned to account in the formation of tubers.

Led by these views, I made, in 1846, experiments on single potato plants, carefully marked, by pinching off the ends of the branches.—They were so readily distinguished, in their subsequent growth, from the plants beside them, by more numerous branches, darker and larger foliage, that, in truth, no marking was necessary.

The produce from these plants of tubers was abundant, and the tubers were perfectly healthy—while the plants next them, which had not been so treated, gave uniformly a less produce, at the same time the tubers were rough on the surface, and in many instances attacked with the prevailing disease. This experiment was incomplete, and did not give a positive result, but it was not yet encouraging for me.

In the middle of April, 1847, an experiment was made on a low lying field, with the round white potatoes generally cultivated here—a variety which had not suffered much from the disease which first appeared in 1845. The potatoes were planted in the usual way by an experienced hand.

After weeding them in the end of May, I renewed my experiment, by pinching off the points of the branches of every second row, and repeated this in the end of June. The result surpassed all expectations. The stalks of the plants not treated on my plan were long, straggling, and sparingly furnished with leaves, the leaves themselves small and pale and green.

In the next field, potatoes of the same variety were planted on the same day, and left to nature. They appeared in the first six weeks healthy, even strong, but gradually acquired a poor aspect as the time of flowering and fruit approached, and finally exhibited precisely the same appearances as the rows not treated by pinching off the extremities, in the field in which my experiments were made.

The harvest began in the surrounding fields in the month of August, and was very middling. The tubers throughout were smaller than usual, very scabby, and within these fields, to a small extent, attacked by the wet rot.

In the end of August the difference between the rows treated by me and those not treated, became so striking, that it astonished all the work-people in the neighborhood, who were never tired of inquiring the cause. On the contrary, the rows treated as above, were luxuriant and in full vigor, the plants bushy, the foliage thick, the leaves large and dark green, so that most people supposed they had been later planted.

But the difference in the tubers was also very decided. The tubers in the plants in the rows treated on my plan were not indeed larger, but vastly more numerous, and they were neither scabby nor affected with any disease whatever. A few had pushed (which was ascribed to a late rain) and were apparently incompletely developed, while scab and wet rot attacked more and more the tubers of other plants which also fell off on the slightest handling.

**POISONOUS PROPERTY OF BRINE.**—It is not to be wondered at that your pigs should be suffering, if, as you state, "a portion of brine got mixed with their wash," and they partook of the same. We have the authority of the late celebrated veterinarian, Mr. Youatt, for stating that "the brine in which pork or bacon has been pickled is poisonous to pigs;" and that "several cases are on record in which these animals have died in consequence of a small quantity of brine having been mingled with the wash, under the mistaken impression that it would answer the same purpose and be equally as beneficial as is the admixture of a small quantity of salt."

## CRUELTY IN THE MANAGEMENT OF SHEEP IN LOWER CANADA.

We find the following communication in the *Montreal Witness*. If the statements of the writer be correct, we must say that the farmers of Lower Canada are deplorably blind to their own interests, and more than semi-barbarous in their feelings. If they can grow rich by managing sheep upon such a system, we can only say that it would be an impossibility in Upper Canada:—

*Virtue Roadhead, April 27.*

DEAR SIR,—An earnest desire that breathes through the columns of your paper to improve the condition, and increase the comforts of our own race, induces me to hope that you will admit into the agricultural department of the *Witness* a few words in behalf of a numerous race of animals, to which we are indebted for a great many of our temporal comforts—I mean the sheep. The miserable condition to which these useful animals are annually reduced, through the ignorance or negligence of those who have the management of them, is really deplorable. One would almost need to see before believing the almost incessant torture to which they are subjected by their ignorant and merciless owners. One would think they are kept by many of the Lower Canada farmers for the very purpose of vexing themselves, and making the poor creatures miserable. Profits from them there can be none; those of them who are able to crawl about at this season are allowed a kind of lawless liberty, during which period they acquire restless habits, for which they shall severely suffer by and by. As soon as the "braid" is so long that they can crop it, they are taken and shut up along with, perhaps, some half dozen or more swine, very like what is called the land-pike breed, into a small enclosure, which is called the sheep pasture, but would be better designated the prison. If there happen to be any green thing at all upon it, it is quickly eaten off or rooted out. Hunger and previously acquired habits induce them to break their prison, and then commences a course of punishments painful to relate. The first I shall mention consists of four pieces of wood about three feet long, fixed together so as to fit tightly about the neck. A flock of sheep loaded in this way present rather a comical appearance when all are moving forward with their "gates" on their necks; but this does not always answer the purpose—if the fence is low they will sometimes crawl over, "gate" and all; then paring off the hoofs to the quick, tying two legs together, and similar tortures are resorted to. The last I shall mention is worthy of the Inquisition—in consists in doubling up one of the fore legs with the sole of the foot towards the shoulder, and tying a string firmly about the double leg, a little above the knee joint. This always proves effectual; to get a little ease they must lie down, as this posture brings the distorted limb into something nearer its natural position. Whenever I see this mode resorted to, I feel a sympathetic aching in my own hand and arm, with a strong inclination to be over the fence and cut the string; but as that would be considered meddling with other people's business, we must leave the sheep to "dree their weird" until the month of October or November, when they will get a short respite, but for which many flocks would never yield increase. But there are yet other measures awaiting them of a scarcely less revolting and painful nature than those mentioned above. As soon as winter sets in they are shut up every night in a narrow and unclean place, where their dung is allowed to accumulate for months, and if any quantity of straw has been supplied, the whole often gets into a state of strong fermentation, and not the least attention is paid to ventilation. Open the door of one of those pens on a clear frosty morning, and the gases accumulated within will blow into the atmosphere like smoke from the mouth of a cannon, the poor half-suffocated creatures run out into the cold in a state of perspiration, and in a few minutes are shivering with cold. Their food is pea straw, an article that contains but a small amount of nutriment, and more especially after a French Canadian barnman has had satisfaction at it with his fall—a search for a pea, after him, would be a fruitless one. The natural consequence of this hunger and filth is swarms of vermin, so that by the middle of winter their coat is all in tatters, and by the middle of March some of them almost entirely naked; and this is not the case only amongst the French, but even in the hands of those who ought to, and I believe do, know better, and what are reckoned some of the best flocks in the country, too. Only think of a half naked creature subjected to the alternate extremes of heat and cold, ill fed, and now to eat instead of water to drink! You might conclude they were experimenting on scientific starvation.

Now, Sir, there is no mystery at all about the management of a small flock of sheep in Canada, so that they may prove a source of both pleasure and profit to any who may choose to keep them. I shall say nothing of the merits of the different breeds, lest this turns out too long a story, and be thrown out for intrusion. Let every body please themselves in this respect, but the treatment in all should be nearly the same. Just now is the time to catch their affections, and give them a kind of moral training, which will prevent them from running into mischief through the course of the whole year. Keep them close confined, but as much in the open air as possible, feed them regularly three times a day with clean, nourishing food, say tur-

nips or carrots, and clover hay as much as they can eat each time, but nothing more; speak to them in a kind tone, and never get angry with them, although they should run upon your legs and tumble you down; a few days of this treatment will subdue the hardest heart amongst them, and they will follow wherever you please to guide. When the grass is sufficiently long, they should be led to their pasture, and the gates shut after them. I prefer leading, or learning them to follow, to driving; the idea is much more tender and practical, and likely to raise the mind in love and gratitude to the great, the true Shepherd, who "leadeth his flocks in the green pastures by the still waters."

BUTTERS' PATENT BRICK MACHINE.

The following remarks are supplied by a respected correspondent:—

These machines, of which favorable notice was made in the *Agriculturist* on a former occasion, are giving excellent satisfaction to those who have purchased them. They are an entirely new machine, combining principles that were never brought into use before in the manufacture of brick, and are completely destitute of complication, and hence are not likely to get out of repair. The horse grinds the clay, and at the same time moulds the bricks and brings them out upon the pallets, so that they may be put upon the barrows, and thence placed in the hake, under cover, without being exposed to receive damage from the rays of the sun or rain. With the machine, one horse, five men, and two boys, fifteen thousand bricks may be manufactured in a day of ten hours. The pug-mill or grinding apparatus is the most efficient machine that has yet come under notice for grinding and tempering clay. The *presser*, which fills the moulds, is attached to the shaft, and the amount of pressure required for the different kinds of clay may be regulated by raising or lowering it upon the shaft. This machine is exceedingly portable, so much so, that it may be removed from one point to another with as great facility as the ordinary portable threshing machine. This one machine may be made to supply a whole settlement or township with brick. They are particularly adapted for country villages, and may be worked with the greatest ease and certainty, by persons entirely unacquainted with the usual practical operation of brick-making.

The patentee, Mr. Butters, has secured a patent for his machine in the United States, and is now manufacturing them in Buffalo, with a view of supplying that country. The demand for them in the Western States, it is said, has already exceeded the most sanguine expectations of the inventor, and as a large amount of money and time has been expended in perfecting the machine, we trust that he may reap a rich harvest from the sales.

We are informed that George Munro, Esq., of this city, has made arrangements with Mr. Butters, by which he will be able to keep a full supply of these Brick Machines at his establishment, where they may be seen by those who are desirous of inspecting them. A. E.

BUTTER AND CHEESE.

Butter and cheese are articles of produce which might be made of great value to Canada. Our milk, as it comes from the cow, is admitted to be of most excellent quality, equal to that of any other country. It must, therefore, be our own mismanagement of it, in manufacturing it into butter and cheese, that is the cause of these articles being generally of inferior quality. It is undoubtedly very discreditable to us, that when nature gives us milk of the best quality, we should make butter and cheese from it, very frequently, of the most inferior quality. This, we maintain, is altogether from the want of suitable dairies, and skilful management of the milk in the process of manufacturing into butter and cheese. We have, in this number, given a description of what would be suitable dairies, and we may safely state that few, if any, farmers have such dairies. They might be constructed on a judicious plan, and to answer the farmer's purpose without incurring a great outlay. We do not expect that farmers generally should have them equal in every respect to those we have described, but they might approximate to the plan, if they would only see the necessity of the dairy being the most well finished, best ventilated, and appropriately furnished apartment on their premises, for the use in which it is intended. If cleanliness, a perfect ventilation, coolness, and pure dry air, are actually necessary in any place appropriated to the keeping of milk, and making butter and cheese, how many such dairies have we in Canada? We may safely answer, there is scarcely one! The milk is very generally kept here in a portion of the dwelling house, partly, if not altogether, below the level of the ground, and not having sufficient ventilation. In the same cellar is kept all sorts of vegetables, meat, fish, and other articles, not perhaps in the same apartment with the milk, but in a situation to impregnate the air of the entire cellar with all

sorts of smell, and it is well known that milk and butter is sure to partake of any foul air in the immediate vicinity of where it is kept. The floors of cellars are usually damp, and loose planks are usually placed on this damp floor, where milk is frequently spilled, and creates a most foul smell. The walls are also damp, and indeed the whole thing is as unfit for a dairy as possible, and never can be washed, cleaned, and aired, as it should be. How then can we expect to have good butter and cheese under such circumstances? The thing is impossible. We know there are many farmers who have neat little buildings for summer dairies, detached from all the other buildings, but they are generally without any shade, and defective in their construction. It is not possible to make good butter or cheese in our climate, however good our milk, without suitable dairies, proper temperature, and skilful management.—*Agri. Jour.*

THE HESSIAN FLY.—We are very glad to find that this destructive insect is not likely to do much injury this year. On Monday last, we examined two or three wheat fields in the vicinity of this city, and had to search some time before we could get a sight of the "enemy" at all. At length we pulled up a stalk on which were two of the larvæ or eggs of the fly. Last year, in an adjoining field, about two weeks later than this, we could hardly find a stalk on which there were not three or four, and in many ten or twelve. The weather of last winter and spring has probably been unfavorable to the fly, for which the farmers have good reason to be pleased. If other fields are not visited to a greater extent than those which we examined, there is very little to fear from the Hessian Fly this season. We have some reason to complain of our readers and correspondents for not giving us any information on this or other topics during the last month. We are thereby unable to speak with any certainty as to the prospects in other parts of the country. In the Home District, wheat, generally speaking, never looked better on the 1st June, than it does at present. Spring crops also are coming on splendidly. The farmers' hopes are sanguine. These observations are made after a short tour in the country, and just before going to press. Those on the same subject on another page were written two weeks ago.

FLAX.

From the *Montreal Agricultural Journal*.

I now propose making a few further remarks on flax, and, as I do not intend troubling you with long articles, I may address you frequently. My object is to keep the subject before the people, and to give them a *monthly* hint.

We must not be discouraged because our fellow-countrymen are so listless to all agricultural improvements. The Belfast Society at first began with but one mill—now, there are twenty-five mills in Belfast, and from fifty to sixty thousand persons employed in the trade. The objection that Flax exhausts the ground, ought not to be considered a very serious one. If the flax be steeped in a pit about ten feet deep, and, after the flax is removed, this pit should be filled with weeds and bog stuff, peat or mould, this will make manure of the best quality, and restore to the soil what the flax drew from it.

Why do we import linseed oil in Canada, a country so favorable to the production of flax? We should not only manufacture all the linseed oil we require, but we should not allow a pound of linseed cake to be exported: we should consume it all here,—feed it to cattle, the manure from which would be famous for the lands upon which a flax crop is to be raised. Linseed cake is sold in the city of Montreal at an extravagant price: this is the effect of want of competition.

I am persuaded that Flax Mills would be of great benefit to the whole country. They would employ the poor,—introduce a new crop,—make good farming more profitable. In Flanders, flax is a staple crop. The industrious and intelligent farmers of that country must be satisfied that it is a remunerating crop, or they would not engage in it.

I perceive by the *Toronto Cultivator* that Messrs. M'Gee & Co., proprietors of the Patent Hemp, Flax, and Oil Mills, at Toronto, advertise that "having secured by Royal Letters Patent, the invention of an entirely new process, especially adapted for this country, for the preparation of Hemp and Flax, hereby give notice that they are now ready to enter into engagements to an unlimited extent with all persons wishing to sow the same." I should like to see a similar announcement from a Montreal house, in a succeeding number of the *Canadian Agricultural Journal*. The Lachine Canal of late, for various reasons, one of the most favorable spots for the erection of such mills. If by no other means, could not such mills be erected by the establishment of Joint Stock Companies? AGRICULTURE

## NEW MODE FOR SETTING POSTS.

The first, and one of the most important subjects to be considered in the commencement of farming is that of fences, and as there is no other business that requires more wisdom and economy to ensure success, it is necessary first to determine on good fences in all cases, and then to consider how they may be made good at the least possible expense. As the post and board fence is adapted to more situations and circumstances probably than any other, and as the manner of constructing it is somewhat varied and expensive under any and all circumstances, it may be well to suggest here a new and cheap mode of setting posts, which is the most expensive part in labor of constructing a good and cheap board fence.

A small pile driver may be constructed so as to fit the bolsters of a common waggon, with the hammer to work immediately behind the hind axle tree; the hammer should weigh about two hundred pounds, to be able to drive large posts with facility, without being too heavy for one horse to draw up without a purchase; the frame work may be so constructed as not to be unwieldy, or much more inconvenient to shift on or off of a waggon than a common hay or wood rack. When in use, the waggon containing the machine must be placed on a line with the fence, with the hammer directly over where the post is to stand, the wheels firmly blocked, and the horses detached. The post, having been sharpened, is raised to its place by the hammer rope, in the same manner as heavy piles are raised, when a few drops of the hammer set it firmer than could be done by digging a hole for the purpose, and with less than half the expense of labor. The horse is then attached to the waggon which is drawn to where the next post is to stand, and the same process repeated. This method may be adopted on all level land with the best success; it is a perfectly simple operation, and so cheap that it only requires an introduction to get it into use in a very short time.

Pile-driving, heretofore, has been very correctly considered a heavy and expensive business; but when we consider the difference between the expense of building and working a machine to drive large piles, thirty or forty feet deep, and another to drive small ones, two or three feet, it will be readily seen that fence posts may be driven, in the manner described above, much cheaper and better than they can be set in any other way. When the posts are set, the boards should be nailed on the middle post with one nail in each, and allowed to lap at the ends from four to six inches. A narrow board should be put up and down the posts to cover the ends of the boards, and pins made of cedar or some durable timber, put through into the posts, passing under the boards to prevent any bad effects from the expansion and contraction of the boards in wet and dry weather, which, though very small in one length, amounts to enough to do much mischief, in loosening posts and breaking nails, in a long stretch of strait fence. The posts should be sawed off at the top, with an inclination downwards from the face, and a short sound piece of board nailed on to carry off the rain. This is the cheapest good board fence that can be made, and should you consider it of consequence, I will give you a plan and estimate of the expense of a mechanic, and the building of such a fence.—*Cultivator*.

**PRESERVATION OF TIMBER.**—The *Vermont Chronicle* gives the following method of preserving timber, which was communicated by A. A. Haynes, Esq., of Roxbury Laboratory, some time since. As many inquiries are being made in regard to the method of *kyanizing* timber, it will doubtless be acceptable to many of our readers:—

“1st. Blue vitriol is the article used for preserving timber from atmospheric exposure. 2nd. One lb. dissolved in 40 lbs. of water, gives a solution, in which the timber must be immersed *till it is saturated*. The saturation is observed by boring one of the sticks, boards or shingles. A moderate warmth greatly aids the penetration. 3rd. It preserves all kinds of timber from rot, by taking up and rendering solid the albuminous juices, or sap.

The reports of the railroad agents are full, in relation to trials continued now through five years under all exposures. All the unprepared timbers have been twice replaced, and the prepared timbers are all as sound as when first laid. The retail price of blue vitriol is from 8 to 9 cents per lb.”

**WIRE WORM.**—It is said that plowing late in autumn, and seeding two successive years with buckwheat, will destroy all wire worms in the soil. Another way is to summer-fallow very thoroughly, so as to starve them out, as they cannot subsist on the elements of soil.

**CARROTS AS FOOD FOR STOCK.**—At one of the agricultural meetings held in Boston during the past winter, the subject of cultivating “root crops” for stock, was discussed. The general expression was, that the carrot is the best root for this purpose, in situations adapted to its growth. Hon. Mr. Brooks stated that he had made experiments in feeding carrots, and for young stock he thought them as valuable in weight as good hay. He thought they did not produce as much milk, when fed to cows, as potatoes; and hogs preferred potatoes. He considered carrots compared with oats, to be worth 33 cents per bushel when oats were worth 50 cents—that 10½ lbs. of carrots were equivalent to 3 1-2 lbs. of oats. He considered the tops of carrots of sufficient value to pay the expense of harvesting. He put them up in small stacks out of doors, and they kept good till mid-winter.

Mr. Rice said he sowed carrots early in May on light land—usual crop 500 bushels per acre—40 bushels weigh about a ton, and were worth as much as half a ton of hay.

Mr. Proctor said 35 tons of carrots had been grown on an acre at a single crop, and it was not uncommon to obtain 32 tons. Most of the speakers mentioned that the blight had injured their carrots, more or less, of late years.—*Cultivator*.

**OLD OPINIONS OFTEN CORRECT.**—An opinion very long since prevailed that the beneficial effect of snow on vegetation was produced by the nitre (saltpetre) contained in it, and that the same salt existed in hour frost. Thompson undoubtedly entertained this idea, when he wrote his “Winter,” in which he alludes to the fertilizing influence of snow.

Chemists, however, some years since, exploded this notion; but the nicer analyses of modern investigators have detected alike in snow and in rain water, the nitrogen which was dissolved in the atmosphere, showing that “there is nothing new under the sun,” and that our forefathers were not so ignorant as we idly think them. The most profound researchers of chemistry also, now prove that the old practice of fallowing was based on the soundest chemical principles; and that, in the days when cattle were principally maintained on common pastures, and manures consequently rare, nothing could be better for the soil than frequent fallows.—*Am. Ag.*

**HOW TO RENDER NIGHT SOIL INODOROUS.**—By mixing this substance with burnt mud or peat, and finely pounded charcoal, its odor will be instantaneous removed, while they will retain the ammonia, by means of the power they have of absorbing that substance. The quantity of charcoal or burnt mud necessary to be used, will depend on circumstances, and can only be determined by actual experiment. As a general rule, one part, by measure of the charcoal or peat, to five parts of the night soil, will be sufficient to remove the smell and form a rich manure.—*Am. Ag.*

**HOW TO MAKE RUSKS.**—Take 7 eggs well beaten; new milk ½ pint; melted butter ¼ lb.; yeast ¼ pint; sugar 3 oz.; and beat the whole well together, with as much flour gradually added as will make a very light paste. Let it rise before the fire for half an hour; then add a little more flour; from the mass into small flattened loaves or cakes five or six inches wide; and bake moderately. When cold, cut them into slices the size of rusks, and put them into the oven again to brown a little. This makes a nice tea-cake when hot; and when seasoned with caraway-seed, it is good to eat cold.

**KEEPING DRIED FRUITS.**—In answer to the inquiry in a late number of the *Cultivator*, a correspondent at Fredonia, N. Y., writes—“Give the fruit a thorough steaming, after it is dried, so as to kill the nits of insects; then put them in some secure place where the flies cannot get to them.”

**CHEAP PLASTER FOR COARSE FINISH.**—Take one part clay, three parts of river sand, mix with a portion of the sand when wet, sufficient quantity of hair—thoroughly mix the whole mass until of a proper consistency, and use as lime mortar.

The above makes a good hard wall-nearly or quite as serviceable as lime for inside finish. The above has been tried in this vicinity and endured for years.—*Cultivator*.

**LEPROSY.**—Put a piece of lime the size of a goose egg, into a tight vessel—pour in four quarts of hot water, and cover the vessel with a cloth—I do not vouch for the truth of it, but it is said to be better than when the vessel is left uncovered. When it has become cool, turn off the clear water, and wash the disordered spots two or three times with it, which is all I have found necessary to work a cure.—*Cultivator*

**MOths.**—A small piece of paper or linen moistened with turpentine, and put it into the wardrobe or drawers for a single day, several times a year, is sufficient preservative against moths,

## CIVIL AND SOCIAL.

## THE CURRENCY AND BANKING.

CONCLUDED.

With this paper we draw our remarks on this subject to a close. The question of a Bank of Issue we shall not enter fully into, but leave it for the discussion of political journals. We may, however, glance at some of the more prominent features of a bank of issue.—We are quite at sea as to the form in which such a scheme would be proposed by the finance minister; so that we have nothing tangible to criticise. "Just as the painter pleases," we are at liberty to make a bank of issue assume either the form most agreeable or most hostile to our own opinions on the matter. Perhaps the greatest objection to any scheme of the kind would be, its placing too much power, for good or evil, in the hands of the government; though we imagine that a system of this kind might be devised, in a great measure free from such influence. The common notion upon the subject appears to be, that if a bank of issue were to be established, all the paper money in the country would necessarily be issued on the credit of the province, as it is called: that is, that the public revenue should be held responsible for the payment of the notes. This seems to carry the idea of a scheme necessarily very contracted.—The usual revenue of the province is about half a million pounds currency; and this, every one will admit, is much too narrow as a basis for the amount of artificial currency that may be necessary for the trade of the province. But there are other sources than the annual revenue of the country for widening the basis of a national currency, issued on the plan now under consideration. This plan would necessarily supersede all the banking institutions now in existence in the country. They would probably become circulators of the Provincial paper, sharing with the government, or in other words the profits upon the issues. When they received the provincial paper, they would be required to pay, in hard cash, a large percentage thereon; and give security for the payment, at a definite period, of the remainder. This money so received at the principal establishment, would form, at least add to the basis and security of the provincial paper, and answer occasional calls for cash that would be made upon the bank. Under this plan the currency might be kept free from any very violent actions upon it; and the extent of it might invariably be kept within the bounds of prudence. The public would then share the profits on artificial augmentations of the national currency, which profits now flow exclusively into the pockets of private companies. On a superficial view of the scheme, this undoubtedly appears as its chief recommendation; as indeed it will be, if ever so closely scrutinized. Such a scheme having clearly one advantage in favor of the public, the whole question becomes one of advantages and disadvantages—of certain good and possible evil. These we do not intend to weigh in the scales, or to pronounce a judgment upon. We leave that to the nice discrimination of the politician, who takes cognizance of motives and tendencies to corruption, and who sees the germ of national ruin in things which it is not our province to examine. He will, however, find that this is no subject to dogmatize upon. Undoubtedly the aid of history may be invoked. The Bank of England, and the National Bank of the United States, (the latter long since ceased to exist) and their influence upon the prosperity of these countries, will no doubt furnish legitimate illustrations. Some contend that any system of banking, connected in any way with the government, is bad; and perhaps an equal number hold the contrary opinion. We shall not assume the office of umpire between them.—If the question should ever come up before the country in a practical shape, we should feel ourselves free to enter upon the discussion of it. We apprehend, however, that no measure will, during the next session of Parliament, be proposed for establishing a Bank of Issue.

## OUR PRESENT DIFFICULTIES.

The present is a trying time for Canada. The crisis is probably more severe than any that has yet been felt. All kinds of trade, traffic and mechanical industry are at a stand still. Hundreds of our

mechanics have already left, and more are every day leaving for the United States. Every public enterprise is paralyzed, and many private ones ruined. Even our own efforts to supply the farmers of the country with a cheap, useful, entertaining semi-monthly paper, by which they may know what is going on around them, and be informed of that which is to their advantage and advised of the contrary, are threatened with failure, because even the farmers, the most independent class, have not, many of them, one dollar to spare! But we must struggle on; nothing will be gained by sitting down in despair. The credit system which has been the means by which other fine systems have worked to the ruin of Canada, must be abolished. The whole country is in debt beyond its ability to pay. What little money we possessed has been sent out of the country, to pay for the excessive imports we have made. The circulating medium is short, we have wealth, but we have nothing to represent it. The Banks are of course in difficulty, and can afford no relief. In fact they make the evil worse, by holding out to those who have been in the habit of getting accommodation, the hope that discounts will be made when there is no ground for it, and disappointment is sure. We have already considered the question, as to how far they have been the cause of this crisis. We take the following remarks upon the remedies to be applied, from an able city cotemporary. As far as they go we believe in their efficiency, but there are other remedies that must be sought out, and that before long:—

"There is no remedy for these evils under which Canada groans, but to increase the export, or diminish the imports from abroad. If the latter is done, the country must relinquish many of the comforts of civilized life, and fall back in the scale of nations. But what are the true remedies?"

"First.—One object must be to produce more from the soil, by enlarging the breadth of arable land, and raising a sufficient surplus to pay for foreign imports. But the United States will not take our wheat, although we had it, unless a duty of 25 cents a bushel be paid, and thus the Canadian wheat grower cannot afford to pay, and yet bear a competition with Ohio and Michigan. This restriction must be done away with if possible, and it is to be hoped that the Canadian Government will direct their serious attention to get the duty on wheat and other produce abolished. Canada might buy far more goods from the States if she had the means of paying for them. The trade is at present one of the greatest causes of the internal derangement and distress of the country.

"Second.—Canada must strain every nerve to raise such articles as she has never yet exported to the European market. It has often been shown that as much flax and hemp might be raised and exported with a profit, as would pay for all the tea and sugar she consumes.

"Third.—Canada must manufacture for herself, beginning with articles, the raw materials of which are of her own growth. We are no advocates for making the public pay bounties on certain manufactures by laying heavy taxes on foreign commodities, but in a young country, where advance in population is far more rapid than the increase of her capital, the government may, with perfect propriety offer high premiums for skill and improvement in the manufactures of the country.

"The evils of our insulated state have risen to a great height this year. They will be remedied to some extent temporarily by the small amount of importations this spring. But Canada will never know permanent commercial or monetary prosperity until she has free trade with the United States, and has manufactures in a rising and improving state."

EMIGRATION TO CANADA.—Lord Stanley having in the House of Lords called the attention of the administration to the Passenger Act of the Canadian Legislature, as oppressive, and calculated to direct the stream of emigration from the British Colony to the United States, Earl Grey said, he had received a copy of the Bill mentioned by him from Lord Elgin, who stated that it had already passed the House of Assembly, and that many members wished to make its provisions much more severe. He (Earl Grey) regretted that some of its provisions should have been proposed; they appeared to him calculated to operate very injuriously indeed upon the interests of the colony. He was happy to state that the act was only proposed to last till the end of next year. In answer to his noble friend he could only say, that until the bill had been received in the shape of a law, it was impossible to give her Majesty any advice whatever upon the subject. He, however, intended to send out a despatch to the Governor-General, which he hoped would reach him while the Provincial Parliament was still sitting, recommending that some of the most objectionable clauses of the Bill should be reconsidered. The noble Earl concluded by stating, that he would lay on the table a copy of the bill. On the 28th ultimo, the Royal assent was given by commission to the North American Passengers Bill of the Imperial Parliament.



## LITERATURE.

## THE INDIAN'S LAMENT O'ER THE GRAVES OF HIS KINDRED.

I come, ye shadows of the dead,  
To gaze once more upon the lands  
That once were thine—for them ye bled!  
Your bones are bleaching on the sands.  
Low in the dust, illustrious Chiefs,  
Ye glorious fell in battle's fray;  
Ye cannot feel the aching griefs  
That now oppress the Indian's lay.

How can I sing the happy scene,  
When all to me is bleak and bare?  
How can I sing of what has been,  
And I oppressed with grief and care?  
The noble forest is no more,  
Nor glides the stream a joyous run;  
For here, amid the tempest's roar,  
Powhaten feels he is undone.

'Twas here the wigwam village stood,  
And here my infancy was reared;  
A chieftain of illustrious blood;  
My word, six hundred warriors feared!  
But, ah! how changed—the pale-face came,  
Then fell my brave ennobled band;  
Bereft of all—there rests the claim—  
Not mine, a single grain of sand.

Here Soonsetah became my bride,  
And brought her first-born child to me;  
The squaw and papoose, side by side,  
Now lie beneath the poplar tree.  
'Tis all that's left me to decry  
My kindred's home, my kindred's grave;  
O! may it flourish, never die,  
And history from oblivion save.

Farewell! for though I visit you,  
'Tis but to brood upon the past;  
To all Powhaten bids adieu—  
His strength and sight are waning fast.  
For eighty years press on his heart,  
He feels life's pilgrimage is done.  
The spirit comfort does impart,  
And bids him seek the setting sun.

ANDREW GRUBB.

Etobicoke, 1848.

## DAYS WITHOUT NIGHTS, AND NIGHTS WITHOUT DAYS.

Dr. Baird, in his lecture at the Conference Room, gave some interesting facts. There is nothing that strikes a stranger more forcibly, if he visits Sweden at the season of the year when the days are the longest, than the absence of night. Dr. B. had no conception of it before his arrival. He arrived at Stockholm, from Gottenburgh, 400 miles distance, in the morning, and in the afternoon went to see some friends—had not taken notes of the time—and returned about midnight; it was as light as it is here half an hour before sundown. You could see distinctly. But all was quiet in the streets; it seemed as if the inhabitants had gone away or were dead. No signs of life—stores closed. The sun in June goes down at Stockholm a little before 10 o'clock.—There is a great illumination all night as the sun passes round the earth towards the north pole, and the refraction of its rays is such that you can see to read at midnight. Dr. B. read a letter in the forest near Stockholm, at midnight, without artificial light. There is a mountain at the head of the gulf of Bothna, where on the 21st June, the sun does not go down at all. Travellers go there to see it. A steamboat goes up from Stockholm for the purpose of carrying those who are curious to witness the phenomenon. It only occurs one night; the sun goes down to the horizon, you can see the whole face of it, and in five minutes it begins to rise.

At the North Cape, latitude 72 degrees, the sun does not go down for several weeks. In June it would be about 25 degrees above the horizon at midnight. The way the people there know it is midnight, they see the sun rise. The changes in those high latitudes, from summer to winter, are so great, that we can have no conception of them at all. In the winter time the sun disappears, and is not seen for six weeks. Then it comes and shows its face. Afterwards, it remains ten, fifteen or twenty minutes, and then descends, and finally it does not set at all, but makes almost a circle around the heavens. Dr. Baird was asked how they managed in regard to hired persons, and what they consider a day? He could not say, but supposed they worked by the hour, and twelve hours would be considered a day's work.

Birds and animals take their accustomed rest at their usual hours.

The doctor did not know how they learned the time, but they had, and go to rest whether the sun goes down or not. The hens take to the trees about seven o'clock, p. m., and sit there until the sun is well up in the morning, and the people get into this habit of late rising, too. The first morning Dr. Baird awoke in Stockholm, he was surprised to see the sun shining into his room. He looked at his watch, and found it was only 3 o'clock; the next time he awoke, it was 5 o'clock; but there were no persons in the street. The people are not in the habit of rising so soon. The Swedes in the cities are not very industrious, owing probably to the climate.—*Hartford Times.*

## CAFFRE ARMS AND MODE OF FIGHTING.

It is now pretty generally admitted that the Caffres belong to the negro race of mankind, but the characteristic peculiarities of that race, with the exception of the woolly hair, are less strongly marked in them than in the natives of Guinea or Mozambique; the lips are less thick, the nose less flat, the lower part of the face is not remarkably prominent, and the forehead is often as high and as amply developed as in Europeans. The colour of the skin appeared to me, in most of the individuals I saw, to be a dark amber brown, frequently approaching to black, while in others it had a tinge of yellow or red; but the skin is so often smeared with red ochre, that it is not easy to judge accurately of its real native tint. The Caffre men are in general tall, though not gigantic, and extremely well proportioned; indeed, their fine forms and easy attitudes often remind one of ancient statues; but they are more remarkable for activity than for strength, and, it is said, have generally been found inferior in muscular power to British soldiers. They wear no clothing except the skin cloak or *kaross*, and this is worn only as a protection against weather, not with the view of concealing any part of the body. The skins of which these cloaks are made are dressed in such a manner as to be as soft and pliable as glove leather, and acquire a red-brown colour, which is not at all unpleasant to the eye. The Caffres call these cloaks *ingubo*; *kaross* is, I believe, a word borrowed by the Dutch from the Hottentots. Many of the chiefs wear mantles of leopard's skin, prepared with the hair on. They ornament their hair on great occasions with red ochre, which is applied in a very elaborate manner, the hair being twisted up into a multitude of little separate knots or lumps, and every knot carefully covered over with grease and ochre. This process, which is performed by the women, is said to be very long and tedious; but the appearance which results from it, though whimsical in our eyes, is considered by them as highly ornamental. In truth, I do not see that this practice is in any degree more barbarous or irrational than that of covering the hair with white powder, which not long ago was so fashionable in the most civilised parts of Europe. The Caffre women, as I have already mentioned, are inferior in personal appearance to the men, and differ from them, in point of costume, by constantly wearing a cap of dressed leather, shaped a little like a turban, and decorated with beads and brass buttons. Their cloak, which is usually much ornamented with these same articles, is arranged more decently than that of the other sex, being in general wrapped close round them, and covering them from the throat to the ankles; but the unmarried women sometimes fasten it round the waist in the manner of a petticoat, leaving the upper part of the person exposed. All the Caffres at Block Drift, with the exception of their chiefs, were armed with their national weapon, the light spear or javelin, which they themselves call *umkonto*, but to which the colonists have given the name of *assagai*. It has a slender shaft, about five feet long, made of the tough and elastic wood which the Dutch call *assagaihout*, and an iron head or blade somewhat like that of a lance, generally without any barb, but sharp at the edge as well as the point. The whole thing is very light, and is but a paltry weapon for warfare against European troops; it can be thrown fifty or sixty yards with effect; but beyond that distance they have no certainty of aim. Another weapon used by the Amakos is the *kirrie* or *keerie*, which is simply a thick stick of a very hard and heavy wood, with a knob at one end: this is likewise used as a missile, and it is said that they can bring down birds on the wing with it. A considerable number of these people are now provided with fire-arms; and though, as yet, few are expert in the use of them, there seems to be no reason why the Caffres should not in time become as skilful marksmen as the North American Indians. They will in that case be truly formidable enemies in the bush.—*Bunbury's Residence at the Cape of Good Hope.*

## THE ROTHSCHILDS.

The following account of the origin and progress of the house of Rothschilds, will be found interesting. It will be recollected that Baron Rothschild, resident in London, has recently been elected Member of Parliament; and a change in the English Constitution being necessary to admit a Jew to Legislative honours and privileges, the necessary amendment was made, and the "dog of a Jew" was plied by the side of the "proud Saxons." Recently, the English were compelled to yield the legal restrictions on the issue of the Bank of England, because the Baron Rothschild threatened to withdraw his depo-

its unless the Ministry changed the law; and again, the Saxons were compelled to yield to the Jew.

In the year 1740, in a little Jewish settlement in Frankfort-on-the-Maine, dwelt a family of poor, but respectable, Jew pedlars, and in that year they were blessed with a son, whom they called Mayer Anselm Rothschild. They gave him that education their small means would permit, but, died when he was at the age of eleven, left him to his own resources. He then earned a scanty living by writing, which he soon abandoned for a trade. But his ambition was to be a priest of his religion. Fortunately for tottering dynasties of the present day, this was not accomplished. His trade required him to travel, and after some years he returned to his native place, and established a small business. He soon, however, gained considerable notoriety as a collector of old and curious coins, which brought him much in contact with persons of rank, among whom it was fashionable to make such collections; and finally he went to Hanover as a clerk in a large house. Subsequently, with a few years' savings, he returned to Frankfort, married, and commenced a little exchange business. His great sagacity, strict punctuality, and rectitude of conduct, pushed him rapidly forward, and towards the close of the century, the Frankfort banking-house had become famous, and the profits large. The banker in the meantime brought up ten children, of whom five sons were "after his own heart;" and when he died, he left them his vast wealth and extensive business, with the injunction to dwell in strict and unbroken unity. And the injunction then bestowed has been faithfully carried out. The five sons conducted as many banking-houses at the leading capitals of Europe. They were as follows: the eldest, Anselm, was born in 1773, and was the most substantial citizen of Frankfort; and, representing the father, was the head of the whole operations of the house. The second, Solomon, born in 1774, became a citizen of Vienna, where he is held in high estimation as a man, as well as a member of the most stupendous banking-house in the world. The fourth son, Charles, was born in 1788, and has since 1824, conducted the house of Naples, where his popularity is equal to any of his brothers. The youngest son, Jacob, was born in 1792, and is the banker for Paris, where he maintains a splendor that eclipses most of the princes of Europe. The third son we have yet to mention, Nathan, who was born in 1777, and became the head of the London house in 1798, and was in every intellectual respect a giant. It was observed of him, that should he share in the chase, it could only be to hunt elephants.

These five houses, combining all the financial resources of Europe in their movements, which are always simultaneous, have exercised for fifty years a power unseen, but overwhelming. Nearly all the government debts of Europe are of their contracting. Through the wars of Bonaparte their information was always correct, and always in advance of the British government, which was often a dependant upon them for information, as well as means of action. Although their residences were always widely separated, each controlling all means of information, no important transaction was entered into without consultation and strict harmony of opinion among them all. Commercial exchanges and all movements of business were often known to, and controlled by, the old Jew in Frankfort, who could in the exercise of his great power look with contempt upon feeble despots crying to him for help; and the aid asked dependant on the assent of the five brothers. Accordingly they were courted in every possible way. In 1813, they were made private commercial councillors of the Hessian government; also to the Austrian Emperor, who conferred on them the rank of *Barons*. In 1836, Nathan died, leaving his wealth and seven children, of whom four were sons. The eldest, Lionel, who had been made Knight of Isabella by the Catholics at Madrid, and who is a Baron of Austria, in right of his father, appeared, in 1836, on the London Change, in the place his father had occupied for thirty-eight years. This gentleman it is who has become a Member of Parliament at the expense of a change in the English Constitution.

The House combined has loaned the King of the French the money necessary, to keep him on the throne a few years longer. It is manifest that as this house has grown up with government debts, the continuance of this power is in some degree dependant upon existing government. A branch of the house has been established in New York, conducted by Auguste Belmont, a relative of Solomon Rothschild, of Vienna. Republican free trade, however, is not the soil on which the stupendous business of the great loan contractor will best flourish.

**A WISE BAILIE.**—In a recent case of summons for nonpayment of wages, before a Scotch bailie (alderman), the defence was that the claimant had by her negligence suffered a favourite squirrel belonging to the defendant to escape. The worthy magistrate replied that the defence would not do, as the lady "should have clipped the wings of the creature, squirrel as ye call it, and then it could na' have made its escape." The astonished defendant replied that the animal was a quadruped; but the sapient bailie rejoined, "quadruped here or quadruped there, you should have e'en clipped the wings o' it,"—and ordered the wages to be paid to the claimant.

**THE TRUE PHILOSOPHER.**—"What do you mean to do with K.?" said a friend to Theodore Hook, alluding to a man who has grossly vilified him. "Do with him?" replied Hook, "why, I mean to let him alone most severely."

## EDITOR'S TABLE.

### TO CORRESPONDENTS.

W. E. W., Brantford. Your order has been attended to. Mr. E. has written in reply.

S. C., Brantford. Received, and papers sent.

D. K. C., Glandford. When you again write so impertinent and senseless a letter to the publisher of a newspaper, it would be as well to give your name. You say you have been in the habit of reading our paper. We don't find your name, or rather your initials on our list, and it may be that you have appropriated someone else's paper. So far as you charge us with sending our paper to unpaid subscribers regularly, and not sending it at all to those who have paid, we say the charge is false. The persons mentioned as having paid for the *Agriculturist*, we know nothing about. A. Gillespie was a subscriber to the *Cultivator* for 1847. In several cases of this kind we have sent the paper, upon the statement of the party writing, and have been informed by our agent that the person was a subscriber of last year. We have sent the papers in this instance, and shall write to our agent to see if it be an omission of his—if not we shall stop them. And hereafter, when we have reason to believe, from the agent's name not being stated, or the writer using his initials only, and abusive language, we will write to our agent first. With the exception of one or two mistakes, we have had no proof that any of our authorised agents have been acting dishonestly towards subscribers. Those who are not authorised we are not accountable for.

A. M., Port Robinson. We are obliged to you for the compliment with which your letter closes. The name you mention is on our list, and has been from the commencement. The only difference was, that it was entered Leo. S. instead of Jno. S. It could not have been omitted every issue by our clerk. You had better look in your own office for the missing numbers. As to the irregularity you speak of we can give no explanation further than this, that "Port Robinson" is entered in our *Western Mail Book* instead of the *Southern*, which is a mistake of course, but this should not make a delay of more than one day. We have had the list transferred to the proper book, and beg to say to those people whom you represent as so much dissatisfied,—that we have always (except the last number,) put our paper to press two days before publication day, and immediately commenced mailing; that it takes four days to print the number required to send off; that they can't be mailed before they are printed; that therefore some subscribers must wait a day or two longer than would otherwise be necessary; that the paper is only semi-monthly, and not filled with mere news—matter that can't be read when it gets cold; and lastly, as we are giving about one-third more matter than we can afford for the money, and instead of making, are every day losing by the enterprise, with but slight hope of improvement, we think reasonable people will be disposed to complain, if they complain at all, in a more civil strain than you have done.

**ENGRAVINGS.**—Our wood engraver has been absent from town during the last month, which has prevented us from giving illustrations in the last two or three numbers. We have not met with any subject of immediate importance that appeared to us to require an engraving, and have not therefore had much occasion to regret his absence.

**CROPS.**—We are happy to state that the crops in this District look excellent; we have not heard a single complaint, and the farmers are unanimous in saying that they never had a more cheering prospect before them.—*Peterboro Dispatch*.

General Lewis Cass, of Michigan, has been nominated by the Democratic National Convention, held at Baltimore, for President; and General W. O. Butler, of Kentucky, now commanding the army in Mexico, as Vice-President.

We believe that Dr. La Terriere, M. P. P., is to be the Deputy Adjutant General for Canada East.

The Territory of Wisconsin has been admitted into the Confederation of the United States, as a Sovereign State.

## THE LADIES.

## BLESSINGS IN DISGUISE.

BY BLANCHE BENNAIRDE.

A thousand blessings in disguise  
About "our daily paths" are strewn  
And though unseen by mortal eyes,  
Yet none the less are they our own.  
We weep a beautiful spirit flown,  
Its body mouldering in the earth;  
While it, near a celestial throne,  
Has joys of heavenly birth.

A thousand blessings in disguise  
From infancy our lives have blest;  
Yet, while we saw the clouded skies,  
We thought not of the promised rest;  
Though pictured in the purpled west,  
Like radiant clouds at close of day,  
Bright Hope appeared in beauty drest,  
To glad our future way.

A thousand blessings in disguise  
Within our home's bright hemisphere,  
In His wise providence arise,  
While we lament that they appear.  
We mourn for those beloved and near  
When we are called to bid adieu,  
We weep for them a bitter tear,  
While they have heaven in view.

A thousand blessings in disguise  
Attend our way through manhood's prime,  
And few there are, who, truly wise,  
Improve them in this golden time.  
We dream of fairer, brighter climes,  
Where only beautiful flowers are found,  
Nor hear the sweet and pleasing chime  
From Truth's delightful ground.

A thousand blessings in disguise  
Surround us while we mournful stand,  
And breathe despair in heart-felt sighs,  
At loss of hopes that rose so grand.  
We think of friends with open hand,  
Who greeted us when Fortune smiled,  
Nor she that brighter hopes expand  
While thus from them exiled.

A thousand blessings in disguise  
On us are showered—on you and me,  
And hope before us ever lies,  
Though we her form may fail to see.  
Then, if in deep despair we be,  
Though all seems dark, let's look above,  
And to the Blest One ever flee,  
Where all is light and love.

**KIND WORDS DO NOT COST MUCH.**—They never blister the tongue or lips. And we have never heard of any mental trouble arising from this quarter. Though they do not cost much, yet they accomplish much. 1. They help one's own good nature and good will. Soft words soften our own soul. Angry words are fuel to the flame of wrath, and make it blaze more fiercely. 2. Kind words make other people good-natured. Cold words freeze people, and hot words scorch them, and bitter words make them bitter, and wrathful words make them wrathful. There is such a rush of all other kinds of words in our days, that it seems desirable to give kind words chance among them. There are vain words, and idle words, and hasty words, and spiteful words, and silly words, and empty words, and profane words, and boisterous words, and warlike words. Kind words also produce their own image on men's souls. And a beautiful image it is. They soothe, and quiet, and comfort the heart. They shame him out of his sour, morose, unkind feelings. We have not yet begun to use kind words in such abundance as they ought to be used.—*Pascal*.

**DRESS FOR THE MIND.**—On Sunday morning, before going to church, what a dressing there is among all classes, and what a stir to appear gay and pleasing! Is it quite sufficient for the great purpose of our existence, to wash the out side of the platter? Curis may be arranged, fine tortoise shell combs fixed, sparkling ear-rings hung, splendid garments displayed, and yet, perhaps, the gay fair one's mind may be poisoned with conceit, and troubled with rivalry, and kept on the torture by ignorance and vanity. Windsor soap does not wash out the stains of the heart. Cologne water cannot throw a fragrance over an impure mind; nor will the rubies of Golconda dazzle the recording angle into forgetfulness of filling up the leaves of the book of retribution.—*Ex.*

## ON THE CARE OF PARLORS.

In selecting the furniture for parlors, some reference should be had to correspondence of shades and colors. Curtains should be darker than the walls; and, if the walls and carpets be light, the chairs should be dark, and *vice versa*. Pictures look best on light walls.

In selecting carpets, for rooms much used, it is poor economy to buy cheap ones. *Ingrain* carpets, of close texture, and the *three-ply* carpets, are best for common use. *Brussels* carpets do not wear so long as the three-ply ones, because they cannot be turned. *Wilton* carpets wear badly, and *Venetians* are good only for halls and stairs.

In selecting colours, avoid those in which there are any black threads, as they are always rotten. The most tasteful carpets are those which are made of various shades of the same colour, or of all shades of only two colours, such as brown and yellow, or blue and buff, or salmon and green, or all shades of green, or of brown. All very dark shades should be brown or green, but not black.

In laying down carpets, it is a very bad practice to put straw under them, as this makes them wear out in spots. Straw matting, laid under carpets, makes them last much longer; as it is smooth and even, and the dust sifts through it. In buying carpets, always get a few yards over, to allow for waste in matching figures. In cutting carpets, make them a few inches shorter than the room, to allow for stretching. Begin to cut in the middle of a figure, and it will usually match better. Many carpets match in two different ways, and care must be taken to get the right one. Sew a carpet on the wrong side, with double waxed thread, and with the *ball-stitch*. This is done by taking a stitch on the breadth next you, pointing the needle towards you, and then taking a stitch on the other breadth, pointing the needle from you. Draw the thread tightly, but not so as to pucker. In fitting a breadth to the hearth, cut slits in the right place, and turn the piece under. Bind the whole of the carpet with carpet binding, and nail it with tacks, having bits of leather under the heads. To stretch the carpet, use a carpet fork, which is a long stick, ending with notched tin, like saw teeth. This is put in the edge of the carpet, and pushed by one person, while the nail is driven by another.—Cover blocks or bricks with carpeting like that of the room, and put them behind tables, doors, sofas, &c., to preserve the walls from injury, by knocking, or by the dusting-cloth.

Cheap footstools, made of a square plank, covered with tow-cloth, stuffed, and then covered with carpeting, with worsted handles, look very well. Sweep carpets as seldom as possible, as it wears them out. To shake them often is good economy. In cleaning carpets, use damp tea-leaves, or wet Indian meal, throwing it about, and rubbing it over with the broom. The latter is very good for cleansing carpets made dingy by coal-dust. In brushing carpets in ordinary use, it will be found very convenient to use a large flat dust-pan, with a perpendicular handle a yard high, so that the pan will stand alone. This can be carried about, and used without stooping, brushing dust into it with a common broom. The pan must be very large, or it will be upset.

When carpets are taken up, they should be hung on a line, or laid on long grass, and whipped, first on one side, and then on the other, with pliant whips. If laid aside, they should be sewed up tight, in linen, having snuff or tobacco put along all the crevices where moths could enter. Shaking pepper from a pepper-box, round the edge of the floor, under a carpet, prevents the access of moths.

Carpets can be best washed on the floor, thus: First, shake them, and then, after cleaning the floor, stretch and nail them upon it.—Then scrub them in cold soap-suds, having half a tea-cupful of ox-gall to a bucket of water. Set open the doors and windows for two days or more. Imperial Brussels, Venetian ingrain, and three-ply carpets, can be washed thus; but Wilton, and other plush-carpets, cannot. Before washing them, take out grease, with a paste made of potter's clay, ox-gall and water.—*Miss Beecher*.

**FLOWERS.**—"How much flowers resemble the young heart, in its bright morning, ere it has stained the plumage of its sinless years. Tradition of them tells us that they were once like youth—even in this—that they loved, and talked, and had passion like ours. Whether the golden age of flowers has passed or not, they are still invested with these susceptibilities in song. How often, and how fondly the poet revels in the field of flowers. Do they not talk to him? Who has ever heard the soft, low whispers of the green leaves and bright flowers on a spring morning, who did not feel rainbow gleams of gladness running through his heart? Like beauty in the human form, flowers hint and foreshow relations of transcendent delicacy and sweetness, and point to the beautiful and unattainable. From the garden favorite to the dainty wild flower of the mountain, all have a charm inexpressible, beauty unapproachable, leading the way, and wooing the spirit onward and upward. How sweetly and instructively the flower bows its head to the breath of night, or the rude storm. At morning it yields its fragrant orison, borne to heaven on the soft wings of the dew-drop.—Thus the heart learns to bring a holier offering to the shrine of all good."

**TO TAKE THE OUT OF LINEN.**—Take a piece of mould candle, or common candle will do nearly as well, melt it, and dip the spotted part of the linen into the melted tallow. It may then be washed, and the spots will disappear, without injuring the linen.—*Ohio Cult.*

## SCIENCE AND MECHANICS.

## LORD ROSSE'S TELESCOPE.

At the meeting of the Dublin Royal Academy, on March 17, Dr. Robinson gave an account of the present condition of Lord Rosse's telescope. Dr. Robinson found that the speculum (whose figure, as he had formerly stated, was not quite perfect,) as well as a duplicate one, had been polished by the workmen; and as he apprehended no difficulty in the process, it was repeated. An unexpected difficulty, however, occurred, which made much delay, till Lord Rosse discovered the cause. The success of the operation requires that it be performed at the temperature of 55 degrees. In winter this must be obtained by artificial heat—which, however, increases the dryness of the air, so that the polishing material cannot be kept on the speculum. In this case the surface is untrue, and gives a confused image. This was verified by the hygrometer, and remedied by a jet of steam so regulated as to keep the air saturated with moisture. The result was immediate; and at the first trial the speculum acted so well that it was unnecessary to try any further experiments. Three additions had been made to the telescope:—1. The movement in right ascension is given from the ground by machinery intended to be connected with a clock movement which is in progress. 2. To obviate the difficulty of finding objects, an eye-piece of large field and peculiar construction is connected with a slide, so that it can be replaced by the usual one in an instant. It magnifies 208 times, and employs nearly four feet of the speculum, the same as Herschel's 40-feet; thus giving the power of trying what that instrument might show. 3. The micrometer is peculiar—a plate of parallel glass, with a position circle attached. Light admitted at its edge cannot escape at the parallel surfaces, except they be scattered, and a scale of equal parts engraved on one of them with a diamond—luminous in a field absolutely black. The exceedingly unfavorable state of the weather subsequently preventing much from being done; in fact, there was but one good night, the 11th ult. In the moon he observed the large flat bottom of the crater covered with fragments, and satisfied himself that one of the bright stripes, which have been often discussed, had no visible elevation above the general surface. In the belts of Jupiter, streaks like those of Pyrrhus's cloud were seen; and the fading of their brown colour towards the edge is evidence that they are seen through a considerable and imperfectly transparent atmosphere. A similar shade in the polar regions, where little cloud is to be expected, seems to indicate that the brighter bands are cloudy regions, and the more dusky show the body of the planet. Several nebulae were examined—and, as formerly, all were resolved. That of Orion is most remarkable. Even before the mirror was perfect, and in bad nights, that part of it which prevents the strange flocculent appearance described by Sir John Herschel is seen to be composed of stars, with the lowest power, 360. But Dr. Robinson's eye required 530 to bring out the smallest stars, amongst which these are scattered. Having seen them, and known the easiest parts, they were seen with the 3-feet and 500. Dr. Robinson having seen a recent notice in which this nebula is said to have been resolved by the observers of Harvard University, U. S., with a Munich achromatic of from 15 to 16 inches' aperture. He has often seen it with Mr. Cooper's of 13.5, a difference easily to be allowed for, but never saw any trace of resolution. He does not in the least dispute the observation; for a precise knowledge of the place (which Dr. Nichol had mentioned) with a purer atmosphere and sharper eyes than his are sufficient to account for it; but he cannot refrain from remarking, that the epithet "incomparable," which they apply to their telescope, would be less extravagant if—in addition to the two stars of the trapezium which were discovered by the telescopes of Dorpat and Kensington—they had seen the other two which the 6-feet showed at the first glance, after its polish was completed. Another interesting object is the planetary nebula, h. 464, situated in the splendid cluster, Messier 46, and probably a part of it. It is a disc of small stars uniformly distributed and surrounded by the larger. Messier, 64, is a singular modification, of the annular form seen obliquely. The opening seems black as ink, and as its margin is one of those interior clusters of bright stars so often noticed before. But the most remarkable nebular arrangement which this instrument has revealed, is that where the stars are grouped in spirals. Lord Rosse described one of them (Messier, 51) in the year 1845; and Dr. Robinson found four others on the 11th, of which he exhibited drawings, h. 604 (seen by Herschel as a bi-central nebula,) Messier, 99, in which the centre is a cluster of stars. Messier, 97, looks with the finding eye-piece like a figure of eight; but the higher powers show star spirals related to two centres, appearing like stars with dark spaces round them—though probably high powers in a fine night would prove them to be clusters. Another fact deserves to be noted, from its bearing on Struve's "Eutides d'Astronomie Sellaire." In that admirable book, among other curious matters, he infers that the 18-inch telescope of Herschel penetrated into space only one-third of what was due to its optical power. He explains this by supposing the heavenly spaces imperfectly transparent. In computing the limit, however, he assumes that the Milky Way is in its greatest extent "unfathomable by the telescope." Dr. Robinson, however, chanced to observe it when it is deepest at 6-4, and is certain that its remotest

stars were very far indeed within the limit of the 6-feet, and very much larger than those of the nebula of Orion.—*Athenæum*.

## AN IMPORTANT INVENTION.

There's nothing of utilitarian cast that is above the aim, beyond the reach, or beneath the notice of a *Yankee*. *Franklin* was the individual type of the race, equally at home in bringing down the lightning from the clouds or applying his discoveries in air, light and electricity to the safety of dwelling or to the construction of a new stove or to the remedying a smoking chimney. If of practical use, all were of equal importance in his eyes.

DRUMMOND—who has not heard of the *Drummond light*—is a man of this cast. He has invented and patented the candlesticks of the age—A candlestick, which not only holds the light but *makes its own candles!*

The tallow chandler has become an obsolete man—his light and glory is departed—his occupation gone.

I shall describe this invention as closely as necessary brevity will permit. The base of the candlestick forms a chamber. A screw passes its entire length, which being tubular carries the wick, as fast as needed from its coil below. Melted grease, lard or tallow is poured into the lower chamber of this candlestick, whence, after it cools, it is forced by the action of the screw upon an iron washer or wallower whose Upper side is coated with leather to render it air tight, into the upper tube which becomes a mould, turning out a candle as hard and smooth as can be made in any other mode, and of any desired length from an inch to two feet.

It will be perceived that the ingenuity of this contrivance is surpassed only by its simplicity. The wonder of the beholder is that an article so efficient, convenient and necessary, has not been invented long since.

Among its various advantages, the following are apparent at a glance:

1. Its simplicity, as well as its strength will keep it in order and repair for years. It must outlast any candlestick on the old principle.
2. There is no waste of remnants, the grease, lard or tallow consuming to the last particle.
3. As the candle can be made of moderate length there is no necessity of its running down by faring and wasting in a current of air or breaking down on one side, as is always the case with long candles during the summer season.
4. The wick is dry and smooth, and burns therefore with a clearer light.
5. The candlestick needs filling with grease, &c. but once a week, and with wick but once in six weeks.
6. It can be kept perfectly free from grease outside, as its construction manifests.
7. The farmer can use lard—always on hand at a farm—and of a quality which he cannot sell to advantage. Lard burned in lamps is dearer than lard oil in the same degree that it is cheaper when compressed into candles. This every one knows who has tried it.
8. The paramount advantage of this candlestick is that the light can always be kept near the object to be seen; the candle being if desired, always of the same length. This is a benefit every student can appreciate as of incalculable value.

What the demand for this candlestick is likely to become, may, be inferred from the fact that the demand for the article is three thousand candlesticks ahead of the supply, although one of the largest manufacturing in Cincinnati is steadily employed in turning them out.—*Cist's Daily Ad.*

FALL OF METEOR DUST.—Accounts from Vienna describe some remarkable phenomena of this sort, which occurred during the night of the 31st of January, and covered the snows near the city and the greater part of Lower Austria with a layer of grey, earthy, impalpable powder, blown thither by a sharp east wind of continuance. When the dust fell the wind ceased and the temperature rose. Professor Reissck, Dr. Wedl, and other scientific persons, have carefully analysed this substance, the chief portions of which consist of granules of quartz, particles of mica, humus, organic remains, and some fragments of wood coal, plants, insects, and infusoria. The air thus laden is held to have been derived from the steppes of Russia, and to have passed over the Carpathian chain. The learned professor maintains this view, by comparing the circumstance with the falls of manna which occur periodically in Asia Minor, Persia, and the Caucasus.—*Literary Gazette.*

The *Lancet* remarks on the use of ether and chloroform: "Anæsthetic substances, besides being useful in diminishing the shock of operations and subsequent reaction, operate beneficially by rendering the after exhibition of opiates unnecessary."

WHEEL GREASE.—Two parts hog's lard by bulk, and one each of black-lead and wheat flour. Waggon wheels may be heard a mile off on a still morning, uttering the most dismal sounds, from the want of a little of this material, and which a very little imagination might trace late into the words—*meeze-e-ry, meeze-e-ry, meeze-e-ry!*

## NEWS FROM EUROPE.

The French Chambers met on the 4th instant. All passed off satisfactorily. Maudry, senior Deputy, took the chair. Fears are entertained of trouble from the defeated Radicals. 34 delegates from the departments of the Seine, 25 are moderates, and 4 Ultra Democrats. Thiers was defeated. The elections passed off quickly. Lamartine is to be first President of the French Republic.

The *Independant de L'Ouest* declared Duke de Bordeaux King at Rouen. Barricades were erected. The troops came in collision with the people; but the number of killed and wounded is not very great. At Limoges the insurgents hold possession. Provisional Government about to send troops to attack the town.

A Plot was discovered to blow up the Hotel de Ville in Paris.

French Government about to dispatch Count Appony to Vienna to promote the pacification of Italy.

No outbreak in Spain, except that of Valencia, which was suppressed. The Cabinet at Madrid appear better disposed toward Great Britain. Lisbon tranquil.

The formation of a National Guard is taking place throughout England. Sir W. Somerville introduced a resolution in Parliament extending Irish suffrage. Crops in England look well. Money market in London improving. Greater confidence prevails. More activity in trade.

French funds were improving. Trade slowly improving on the Continent.

Russia, Sweden, and Denmark, have formed a treaty offensive and defensive.

A conspiracy has been discovered and suppressed at Warsaw, among Russian soldiers.

The Danes are retreating from Holstein. All is quiet at Vienna. At Pesth, in Hungary, there has been a serious riot.

An amicable settlement between Austria and Italy is said to be in prospect.

No serious battles in Italy, but in several skirmishes the Austrians have gained advantage. Reports are current that the army of the Alps have entered Savoy, to aid in defence of Italian independence against Austria. The *Constitution* denies any truth in the report that France is about to declare war against Austria. Later accounts state that King Charles Albert had gone to attack the Austrians in their entrenched camp at Verona, and was within a league and a half on the 28th.

At Posen the Guerilla war continues to be waged in a fearfully bloody manner.

The German constituent Assembly met at Frankfort on the 18th.

In Poland excesses continue to occur, and bloody engagements have taken place between Landwicks and the military. Attacks on the lives and property of the Jews and Germans are the order of the day.

In Galicia, Moldavia and Wallachia the people are in insurrection.

At Presburg the cruelties against the Jews are shocking.

In Baden the Republicans have attempted to revenge their late defeats.

Hecktor passed the Rhine at the head of 1000 French and German troops. Two engagements took place between the Wirtemberg forces. The marauders left have now fled into Alsace and Switzerland, having been dispossessed and disarmed in virtue of the late decree of the French Government.

Belgium tranquil.

Hanover and Prussia absorbed in military operations against Denmark, in which at present they are completely successful. Capture at sea by the Danes must occasion great loss to the Prussian commerce in the Baltic.

## COMMERCIAL NEWS.

There has been more activity in the several departments of trade and commerce during the past week. The returns of the elections in France and the general tenor of our advices from all other parts of the European continent, lead to the agreeable hope that the political ferment which has distracted the several kingdoms and states therein, will now quickly settle down, and were it not that a general war may, ere long, burst forth, and involve England, France, Germany, Prussia and Austria against each other, there would, we are confident, have been visible effects of a still greater improvement. There is yet an abundance of money and bank accommodation can still be had on moderate terms. The colonial produce markets are rather buoyant, and sugar has obtained an advance on last week's quotations.

The corn markets throughout the three kingdoms, influenced by the state of the weather, and the encouraging prospects of the crops, were less active this week, and prices have receded. The accounts from the manufacturing districts in Lancashire, Yorkshire, &c., are still improving. More business is doing, in manufactured goods; but we can not note any advance worthy of notice in the prices current. The market for English and foreign securities was in a satisfactory position during the past week, and the value of most descriptions has experienced a further advance.

The weather has set in delightfully fine, and is now everything that can be expected or wished for. The young crops are shooting forth with the most promising appearance, and everything betokens a rich, luxuriant, and seasonable harvest. These circumstances have had a telling effect upon the corn markets throughout the three kingdoms

during the week. We hear nothing yet of the old cry of "failure in the potatoe crop;" but from all we learn, the yield of potatoes this year will be like that of wheat and other grain—very productive. At Mark-lane, on Monday, English wheat sold at a decline of 1s. to 2s. per quarter, without leading to a clearance of the stands; the best old white did not bring more than 49s. to 58s. per quarter, while the best red sold at 46s. to 55s.; Canadian Flour sold at 22s. to 26s. per barrel, and United States 22s. to 27s. which rates are about our last quotations, but at these prices the transactions are limited.—*European Times*, May 6.

## ARRIVAL OF THE HIBERNIA.

## SEVEN DAYS LATER FROM EUROPE.

The Steamer *Hibernia* arrived at New York on Saturday the 27th inst., at 2 P. M.

## MARKETS.

Flour.—26s. a 27.

Corn—26s a 27s. for white, 28s. a 29s. for yellow. Meal, 11s. 6d. a 12s. 3d.; demand moderate.

Cotton down  $\frac{1}{2}$ . Money market, heavy.

Brown's Circular says the market for Breadstuffs remains without material change, and though in parts of the Corn Market Wheat has declined, yet Indian Corn is again in better demand, and selling freely at 26s. a 28s. Meal is 12s. 3d. Fresh American Flour is scarce, and the quotations are 27s. a 27s. 6d.; Sour 24s. a 25s. The duty 7s. on Wheat, 4s. 2 $\frac{1}{2}$ d. on Flour.

## FRANCE.

In France the following government *ad interim* has been appointed by a Committee of the National Assembly:—

*Foreign Affairs*, Bastide; *War*, Chase; *Finance*, Druclere; *Justice*, Cremieux; *Instruction*, Carnot; *Commerce*, Flocon; *Religion*, Bethmont; *Public Works*, Trelet; *Marine*, Cazy; *Interior*, Recusat; *Under Secretary of Foreign affairs*, Fabre.

The German Legion is returning in scattered bands into France. It is said that the total separation of Church and State will be one of the first measures adopted by the National Assembly.

An official order has been announced to put the whole line of coast in the District of Boulogne in a state of defence, and fortify the town.

It was reported in Paris that Ledru. Rollin has tendered his resignation.

Order has not yet been restored in the Provinces.

## ITALY.

The Pope has been compelled to declare war against Austria.

## IRELAND.

Nothing very startling from Ireland. Messrs. Duffy and Meagher continuing their appeals to the people to arm, and are joined by some of the Roman Catholic priests.

The potatoe crop is believed to be very abundant. A blight has appeared on only a few very limited places.

The name of Mr. W. S. O'Brien has been struck off the roll of the magistracy in the county of Limerick.

GROSSE ISLE INTELLIGENCE.—The passengers of the *Jessy* were embarked yesterday, after purifying, and it was expected she would leave the station to-day.

The brig *Governor*, Hugill, from Limerick on the 14th April, arrived at Quarantine on Monday last, the 15th. She had one cabin and 174 steerage passengers, 10 sick, and 18 deaths on the voyage. Of the 10 who were sent to hospital, one died the night beforelast. The *Jessy* and the *Governor* were the only two vessels not discharged from Quarantine yesterday.

The bark *Envoy*, Patton, from Londonderry, on the 10th April, arrived at Grosse Isle on the 14th inst. She had one cabin and 214 steerage passengers—one death on the voyage. She has since arrived in port. The *Ayrshire*, aground on her way up, had 214 passengers—3 deaths on the voyage, and only one sick when she arrived. The *Schr Eliza Ann* from Kilrush, likewise on her way up, had 5 cabin and 93 steerage passengers—one death on the voyage, and one sick on reaching Grosse Isle.—*Quebec Chronicle*.

## HOME MARKETS.

The following table gives the highest average prices at each of the three places:—

	Toronto, May 31.	Hamilton May 31.	Montreal May 29.
Flour, per barrel	£1 1 3	£1 1 3	£1 4 0
Wheat, per bushel	0 4 6	0 4 1	0 5 6
Barley, per 48 lbs.	0 2 7	0 2 4	0 4 6
Rye, per 56 lbs.	0 3 0	0 3 0	0 3 9
Oats, per 34 lbs.	0 1 9	0 1 3	0 2 0
Peas, per 60 lbs.	0 2 9	0 2 0	0 3 6
Oatmeal, per barrel	1 0 0	0 18 0	1 10 0
Potatoes, per bushel	0 4 6	0 3 9	0 4 0
Hay, per ton	2 10 0	1 15 0	2 10 0
Beef, per 100 lbs.	1 7 6	0 17 6	1 5 0
Pork, per 100 lbs.	1 2 6	0 17 6	1 10 0
Lard, per lb.	0 0 4	0 0 5	0 0 7
Butter (fresh) per lb.	0 0 10	0 0 8	0 1 0