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A Family Journal, devoted to Agriculture, Internal Improvements, Literature, Science, and General Intelligence.

Vol. I.

TORONTO, SATURDAY, JULY 17, 1847.

No. 13.

The Essay of which the following is a part, received the prize offered by the Massachusetts Society. The writer S. L. Dana is well known in the United States as an Agriculturist, and ranks among the first both for practical and scientific knowledge. His writings are numerous and of the very highest order. This little Essay was intended to be plain and practical, and to lay down those well-proved principles which ought to be understood by all who have to do with the cultivation of the soil. The farmer who is anxious to add to his stock of knowledge and have more clear and intelligible notions of the very first principles of his business may by giving the essay of Dr. Dana (which we shall publish) and the Agricultural Chemistry of Professor Johnson, (part of which has already appeared in our Columns) a careful perusal, be greatly pleased as well as greatly benefited. It is the want of such knowledge that makes farming a yearly experiment. Why is not more effort made by all interested parties to diminish its accidents and uncertainties, by making it a science?

CLEARING AND BREAKING, UP AND MAKING COMPOST.

There is one thing settled in farming; stable manure never fails. It always tells. There are no two ways about it. There is here neither theory, nor speculation, nor doubt, nor mis-giving. "Muck it well, master and it will come right," is an old proverb. It is considered a fact so well established, that nobody thinks of disputing it. There is advantage in asking why barn-yard manure never fails. The answer is easy. It contains all that plants need for their growth. If we know then what plants contain, we can easily tell what is in manure. The whole doctrine of manures, then, falls into two plain principles, on which hang all the law and the "profits" of agriculture.

1. Plants contain and need certain substances which are essential to their growth.

2. Manure contains all those substances which plants want. If, then, we would find out what it is which manure contains, that makes plants grow, we must first find out what a grown plant contains. This cannot be done without some little, a very little knowledge of chemistry. Do not be startled, reader. I suppose that you may know nothing of chemistry, no, not even its terms. As a very sensible man, who wrote letters on Botany to a young lady, said, to encourage his pupil, it was possible to become a very good agricultural chemist, without knowing little more than the chemical names of a very few substances. You know nothing of chemistry it may be, and as little of law; yet you will go to law and learn some of its terms by a dear-bought experience. The law terms are harder to learn than the chemical terms. Now I fear that some persons, who have followed me thus far, will shut up the book. It is, say they, all stuff, book-farming, and beyond us. If one may not understand what manure is without it is learning, we may as well begin where our fathers ended, and that was where our forefathers began ages ago. By a little law, however, picked up as a jurymen, or witness, selectman, townclerk, justice of the peace, yea, perhaps, hearing an indictment read, men do come to understand what a lawyer means when he talks. So, too, by a little chemical talk, a man may learn what a chemist means when he talks of oxygen, hydrogen, nitrogen, chlorine, and carbon; potash, soda, lime, (and these are old friends,

the very names make us feel at home again,) alumina, magnesia, iron, manganese and silic, sulphur, and phosphorus. Here is a long list. Long as it is, perhaps it will be thought worth learning, when you are told, that these are the name of all the substances found in plants, every substance which they want. Out of these is made every plant. Every part of every plant, from the byssop on the wall to the mountain cedar, contains some of all of those. Be not disheartened. Look over, read, the list again carefully, see how many are old names of things which you know. Of the fifteen, you know nearly one half by name and by nature. These are potash, soda, lime, magnesia, iron, sulphur. Perhaps you will add, that you know carbon is coal, or rather coal carbon. You have heard from our travelling lecturer at your town Lyceum, that oxygen and hydrogen together form water. That oxygen and nitrogen form the air you breathe; that nitrogen and hydrogen form ammonia, or sal volatile, which gives the sharp smell to the smelling bottle. Besides, the thing has been said to so often, that you must have heard it that chlorine the substance which bleaches in bleaching salts, united to soda, makes common salt; or if chlorine is united to ammonia, sal ammoniac is formed. Now changes and combinations among these fifteen things, nature makes everything we find in plants. Many of these are invisible as is the air. The substance called chlorine, perhaps you have never seen, but if you ever smelt it you would never forget it. It is often smelt in a piece of bleached cotton, when opened in the shop. It gives smell to bleached powder used to disinfect the air, during cholera and other diseases. If you could see it, it would appear merely a faint yellowish green air. It is all-powerful on vegetation. As it forms a part of common salt, say half of its weight, we may dismiss the further consideration of it, by saying, that, in some shape or other, chlorine is universally diffused in soil and plants.

The list above may be divided as follows: First, the airy or volatile; secondly, the earth and metals; thirdly, the alkalies; fourthly, the inflammables. Only the third and fourth divisions require to be explained or defined. The substances called potash and soda are termed alkalies. They are said to have alkaline properties. Touch your tongue with a bit of quicklime, it has a hot burning, bitter taste. These are called alkaline properties. Besides these they have the power of combining with and taking the sour liquids or acids, that is, the acid and the alkali neutralize each other. This word alkali is of Arabic origin; its very name shows one of the properties of alkalies. "Kali" is the Arabic word for better, and "al," is like our word super, we say fine and superfine; so kali, is bitter, or truly alkali means, the "dregs of bitterness." I wish, reader, for your own sake, as well as my own, that you should fix your mind what I have said about alkali and alkaline properties. Alkali is a general term. It includes all those substances which have an action like the ley of wood ashes, which you use for soap making. If this ley is boiled down dry, you know it forms potash. Now lime, fresh stacked, has the alkaline properties of potash, but weaker, and so has the calcined magnesia of the shops, but in less degrees than lime. Here we have two substances, earthly in their look, having alkaline properties. They are called, therefore, alkaline earth. But what we understand chiefly by the term

alkalies, means potash, soda, and ammonia. Potash is the alkali of land plants; soda is the alkali of sea plants; and ammonia is the alkali of animal substances. Potash and soda are fixed, that is, not easily raised in vapor by fire. Ammonia always exists as a vapor unless fixed by something else. Hence we have a distinction among alkalies which is easily remembered. This distinction is founded on the source from which they are procured, and upon their nature when heated. Potash is vegetable alkali, derived from land plants; soda is marine alkali derived from sea plants; ammonia is animal alkali derived from animal substances. Potash and soda are fixed alkalies; ammonia is a volatile alkali. Potash makes soft soap, with grease, and soda forms hard soap. Ammonia forms neither hard nor soft; it makes, with oil, a kind of ointment, used to rub a sore throat with, under the name of volatile liniment. But though there be these three alkalies, and two alkaline earths, I want you to fix in your mind, reader, that they all have common properties, called alkaline and which will enable you to understand their action, without more ado about their chemistry. The inflammables, or our fourth division, are sulphur and phosphorus; both used in making friction matches. The phosphorus; first takes fire, by rubbing, and this sets the sulphur burning. Now the smoke arising from these is only the sulphur and phosphorus united to the vital part of the common. This compound of vital air, or oxygen, as it is called, and inflammables, forms acids, called sulphuric and phosphoric acids. So if you burn coal, or carbon, it is well known you form fixed air, or carbonic acid. That is by burning, the coal or carbon unites with oxygen or vital part of common air, and forms carbonic acid. The heavy, deadly air, which arises from burning charcoal, has all the properties of an acid. And now let us see what these properties are. All acids unite or combine with the alkalies, alkaline earths, and the metals. When acids and alkalies do thus unite, they each lose their distinguished properties. They form a new substance, called a salt. It is very important you should fix well in your mind this definition of a salt to common salt. That is a capital example of the whole class. It is soda, an alkali, united to an acid, or chlorine, or, to speak in terms the most intelligible, to muriatic acid. So saltpetre is a salt. It is potash united to aqua-fortis. Yet in saltpetre you perceive neither potash nor aqua fortis. These have united, their characters are neutralized by each other. They have formed a neutral salt. Our list of substances found in plants is thus reduced from things which you did not know, to things which you do know; and so we have saved the troubles of learning more of their chemistry.

We have reduced the airy or volatile into water, formed of oxygen and hydrogen; or volatile alkali, formed of nitrogen and hydrogen; or into acids, as the carbonic, formed of oxygen and carbon—as the sulphuric, formed of oxygen and sulphur—as the phosphoric, formed of oxygen and phosphorus; and having thus got water and acids, these unite with all the alkaline, earthy, and metallic bodies, and form salts. To give you new examples of these, I may mention Glauber's salts and Epsom salts. Glauber's salts is formed of soda and sulphuric acid; Epsom salts, of magnesia and sulphuric acid; alum, of alumina, or clay and sulphuric acid; green vitriol, of iron and sulphuric acid; white vitriol of zinc and sulphuric acid; plaster of paris, of lime and sulphuric acid; bones, of lime and phosphoric

acid; chalk and limestone, of lime carbonic acid. These are all examples of salts; that is an acid, or substance acting the part of an acid, united to an alkali metal, or earth.

To be Continued.

THE CROPS IN EUROPE.

ENGLAND.—The accounts throughout all parts of the kingdom are most favourable and encouraging. The seasonable change which has taken place in the weather has given to vegetation a new vigor, and forced forward the growing crops with an astonishing rapidity. In Lancashire the wheat crop is expected to start into ear in the coming week; the spring corn is much improved by the late rain, and the potato crop looks most luxuriant.—From Suffolk, the want of rain had put a check to vegetation; notwithstanding, wheat looked well, and the potato never had a better appearance. The crops in every part of Cambridge are in most promising condition.—Favourable accounts have been received from Somersetshire; the crops in general had a healthy and promising appearance.—In Nottinghamshire the crops of all descriptions are described as looking very luxuriant.—In every direction in Wiltshire the grain crops have a favourable appearance, and an early harvest is anticipated. The contrariety of opinions with regard to the existence of disease in the potato is amply sufficient to induce a proper degree of circumspection in receiving them; it is quite evident, however, that in some localities the disease has put on so positive an appearance that a denial is as absolutely impossible. In the majority of instances, where reports have been made up to the present time, the balance of testimony is of a cheering nature. In the neighbourhood of Devizes the crop never looked more healthy.—From Cumberland we learn that the harvest is anticipated three weeks earlier than last year. The wheat crops in the neighbourhood of Ryeglass, Bootle, Millom, and Broughton, are remarkably promising. Potatoes were scarcely ever known to wear so luxuriant an appearance, and without the least symptoms of the late disease.—Around Cocker-mouth they present a most luxuriant and healthy appearance, and. It is stated that around Dalton, in the early gardens, disease has appeared.—Wheat looks well in Kent, and with fine weather there is every appearance of an early and abundant harvest. In Dorsetshire the wheat; barley and oats, were never seen in finer condition. The potatoes are still healthy, except in a very few instances.—In Lincoln the crops are also described as having never been in a more flourishing condition: the prospects of an abundant harvest are of the most cheering description.—In Worcester the wheat is ready to burst into ear; turnips and potatoes are looking well, and there is as yet no indication of disease in the potato.—The rich verdure of the crops in Cornwall is truly wonderful. Around Penzance potatoes are very healthy in appearance.—From Yorkshire the accounts are very favourable. A correspondent from Doncaster writes:—"The wheat lands are making extraordinary progress; and there never was known a season in which with regard to this description of grain, a richer luxuriance presented itself. The same remark applies to other descriptions of grain; and the whole is not only remarkably healthy and vigorous, but promises, provided fine weather continues to prevail, an early harvest." In Bedfordshire for the last ten years the potatoes have not looked so vigorous; all

other crops are looking well.—In Hunts the growing crops of every description are looking luxuriant, with the prospect of an abundant yield. The potato crop never looked better.—From Sussex we learn that the wheat is looking most luxuriant, and has in many places come out into ear. The barley and oats are looking remarkably well, although the latter is rather short in the straw. The potato crop still wears a most healthy appearance.—[Willmer & Smith.

HOW TO PRESERVE GIRDLED TREES.—Mr. Pliny H. Badditt, of this town, showed us, a few days since, an apple tree in his orchard which two years ago last winter, was completely girdled by mice, for the space of about ten inches around the trunk which was a little less than a foot in diameter.—Soon after the snow was gone, Mr. B. took several thifty sprouts from the tree of sufficient length to span the girdled part, and champering off the ends inserted one in the bark below the girdle and the other above with wax, left them. One of these sprouts lived, and the tree bore as usual the ensuing summer. This year the tree is again in full blossom, drawing its entire sustenance through this sprout, which has grown to about 3-4 of an inch in diameter. The tree has a heavy top, and the girdled part, or about one foot of its trunk, close to the ground, is entirely dead.—*Barre Patriot*

INCOMBUSTIBLE WASH—Slack some stone lime in a large tub or barrel, with boiling water, cover the same up to keep in all the steam. When thus slacked, pass six quarts of it through a fine sieve. It will then be in a state of fine flour. Now, to 6 quarts of this lime add a quart of salt, and one gallon of water; then boil the mixture, and skim it clean. To every five gallons of this mixture add one pound of alum, half a pound of copperas, by slow degrees, three quarters of a pound of potash, and four quarts of fine sand, or hard wood ashes, sifted. This mixture will now admit of any coloring matter you please, and may be applied with a brush. It looks better than paint, and is as durable as slate. It will stop small leaks in the roof, prevent the moss from growing over and rotting the wood, and render it incomcombustible from sparks falling upon it. When laid upon brick work, it renders the brick impervious to rain or wet.

CEMENT FOR FLOORS.

It is often desirable to have floors rat proof. The following recipe was procured by J. S. Skinner, from Col. Totten, of the U. S. Engineer Department:

The mortar is to be made of one part of hydraulic cement, measured in rather stiff paste. Then one part mortar, thoroughly mixed, is to be used with two and a half parts of broken stone or bricks, the largest piece not exceeding four ounces in weight, or of gravel of similar sizes, or of oyster shells, or of either or of all these mixed together. The coarse materials must be free from sand or dirt. The concrete thus made must be put down in a layer of not more than six inches, which will be about the proper thickness for the floor; rammed very hard, and until the coarse particles are driven out of sight, care being taken to bring the top of the mass into the true plane of the floor by the first process; no subsequent addition of plaster being admissible. By the help of a straight edge drawn over guide pieces, the top surface may be made smooth and even by the first operation. The concrete should contain no more water than is necessary to give the requisite plasticity to the mass. The floor should be covered as soon as finished, with straw or hay, which should be kept wet for several days, the longer the better.—[*Boston Cultivator*.

COMPARATIVE MERITS OF HORSES AND OXEN FOR FARM WORK.

At the Gloucester (England) Farmers' Club, a member stated the result of four years' experience, whereby he was convinced, that for field labour, with the exception of carting, oxen were superior to horses. He found that a team of four oxen could plough as much, and with as much ease, as three horses could; the cost of the former not exceeding £12 per head, while the latter would cost £25 per head. The cost of mainte-

nance was decidedly in favour of the former, for while his horses cost him 7s per head per week, his oxen did not cost him more than 4s. He usually began to work his steers when they were two years and a half old, and found them capable of ploughing an acre a day throughout the year, if required; and setting aside the saving in the first outlay—maintenance, harness, and attendance—which was very considerable, the sale of the oxen produced on an average a profit of £1 per head per annum. He therefore strongly recommended that on all farms requiring two or more teams, one-half should be oxen. By so doing, not only would a profit be received, but a much greater advantage would be conferred on the country by having to sell that stock, which, when fed, makes the best of all animal food—good beef—instead of supplying food for dogs, which is the case on most farms."

TO CORRESPONDENTS.

C. P. H. The information we want is simply the appearance of the Crops, your own success and future prospects, and any facts relating to Agriculture that may be of general interest.

H. B. Montreal. If you have ever transmitted your subscription, we have not heard of it. Will you be good enough to act upon your promise.

CANADA FARMER.

July 17, 1847.

Mr. Charles P. Hall is our general agent for the Brock District. We trust the friends of Agriculture in that part of the province will aid him by their advice and support. We have a considerable amount of our back numbers on hand, which, we think those who have read them will admit, contain a great deal of useful information worthy of being preserved. To persons who subscribe for the paper now, our agents are authorised to supply the first volume for one dollar. Save us from the man who can have a conscience to ask it any cheaper. Will the farmers of this country—destined to be in every sense a great country—remain indifferent to their best interests, and allow one of the most efficient instrumentalities in the elevation of their social condition, and in securing their individual and general prosperity as farmers, to die for want of support? Although quite a number of persons have unsolicited sent us their names, yet unless our subscription list is considerably extended we shall not feel warranted in beginning a second volume.

THE POTATOE DISEASE AGAIN.

We are sorry to find that our apprehensions are likely to be realized to their fullest extent in the reappearance, or rather the progressive development of the potatoe malady. Last Wednesday, for the first time this year, we observed the plain effects of the disease in a mess of fine looking kidney potatoes, at a public dinner table in this city. They were grown somewhere in the neighbourhood for early use, and were not more than two-thirds of their full size. We could not find a single one, large or small, which when cut with the knife, did not exhibit the dark-coloured spots—unmistakable signs of sure and speedy decay. The circumstances under which these were grown probably favoured the early development of the disease, but there can be little doubt that when the period arrives at which it has usually made its more general appearance, we shall have proof enough of its existence.

We believe it will be found to have extended itself more widely this year than in any previous one, for although, as we remarked in a former number, there may be an absence of some of the aggravating circumstances of other years, yet the cause of the fatal results is still in operation. Every reproduction is a step in the downward scale; the evil will therefore go on increasing until the true course is taken to arrest and remove it. We must in this case reverse the process usually adopted, and instead of going to the bottom of the matter—to the root of the mischief—we

must give our attention to the top of it. Return to the seed. Abandon our unnatural mode of propagation, and adopt that which the all-wise creator has provided.

DUTCH METHOD OF MAKING "GOUDA CHEESE."

The following article is taken from the *American Agriculturist*, and will no doubt be interesting to those who are willing to avail themselves of the improvements of other countries. The Dutch are famous for cheese making; a superior article of their manufacture is sent into all parts of the civilized world. We have seen it sold in this city by some of our grocers at one dollar per lb. Now we have the milk, and if its quality is not good enough, we can get better cows and give them better food, and thus get better milk, with which if we adopt the same process, we see no reason why the same results may not be obtained in Canada as in Holland. At all events we can safely say that there is room for considerable improvement among our dairy farmers in this country, and we recommend to them the information given by Mr. Norton, an intelligent correspondent of our New York contemporary:—

With a view to the gratification of your cheese-making subscribers, I send you this month a translation of directions for the manufacture of the celebrated Gouda cheese, considered by the Dutch themselves as their choicest variety. These directions were published by some of the largest dealers in cheese of Rotterdam.

Experience has shown that, in the following summer, and in accordance with the accompanying precautions, cheese can be made which has neither bitterness, toughness, nor want of solidity, defects very common, and which cannot be too carefully avoided.

In the commencement, care should be taken that the sun does not shine upon the milk; the vessels in which it is received should be provided with covers. As soon as the milk is brought to the house it should be provided with covers. As soon as the milk is brought to the house it should be strained into a tub, and the rennet added, the tub then to be carefully covered so as to retain as much as possible of the natural heat of the milk. Three or four hours after the addition of rennet to the milk it must be strained, and the curd slowly broken with a wooden instrument; this is uninterruptedly continued until the curd has become fine and separated from the whey. After this it is left to settle four hours, to separate as much more of the whey as possible. It is now kneaded with the hand, separating still another portion of the whey. After this working it is placed in the cheese press and worked anew to render it fine again, and also by this it is strongly packed into the press, which, being full, a cloth is laid over it, and the cheese turned over. The bottom now turned up, being broken, is smoothed by the hand, and covered by the follower. Upon this follower is laid a weight corresponding to the intended weight of the cheese.

The cheese must be turned every hour, and after three hours taken from the press, the first cloth replaced with a dry one: it is then again covered with the follower, and the weight laid upon it doubled, care being had that the side that was before under is now above; the cheese is pressed nine hours by this weight, and must be turned once in three hours.

At the end of nine hours the cheese is again taken from the press, the cloth is removed, and it is placed in the 'pickle-float'; the part floating above the pickle is covered with coarse salt to the thickness of 3 guildens (about the same as three dollars in thickness). This pickle must not be stronger than fifteen degrees of Baume; if it is used stronger than this it is liable to crack the cheese.

The cheese remains in this pickle twenty-four hours, and during this time is turned twice, always taking care that it is covered with salt. It is now placed in a pickle of twenty degrees Baume, in which it is turned once in twelve hours, always being covered with salt. At the expiration of eight or nine days, it is taken from the pickle and washed, after which it is placed on the stand or shelves, and should be turned at least once a day.

All of the above directions have reference to cheeses weighing ten Dutch pounds (equal to about 21 lbs English).

Principal rules to be observed.

1. Never to employ warm water or whey in the working of the cheese.
2. The pickle for the rennet as well as for the 'floating vessel,' must not be stronger

than fifteen degrees, and for the pickling-tub must always be twenty degrees of Baume.

3. The bottom of the cheese press should be as flat as possible.

4. Whatever the weight of the cheese, the curd must be finely divided, and the whey perfectly pressed or wrung out.

5. In warm weather the cheese requires more salt, and is thus more quickly salted. Seven or eight days in summer, when the air is warm, are equal to ten or twelve days in cold weather or in autumn.

Directions for the preparation of Dutch Rennet.—For twenty-five lobber (the Dutch name for the calves' stomachs), take seven Netherlands pounds of pickle of fifteen degrees Baume. The lobber must be cut in bits of the length of a half finger. The pot containing it should be well covered, and set in a warm place. After ten days the solution becomes good, but if allowed to stand twenty days it should then be strained through a muslin cloth, or a very fine sieve, and preserved in air-tight bottles. Not more than two table-spoonfuls of this are necessary for ten Netherlands pounds of cheese.

This rennet should thoroughly curdle the milk in three-fourths of an hour; if sooner than that, it is too strong, and if longer a little more must be added to assist its operation.

Reference is made above to fifteen and twenty degrees Baume. This is an instrument contrived by M. Baume for measuring the strength of solutions by their density. I have not his tables by me, but as nearly as I can calculate that pickle of 20 degrees, referred to, contains about 21 per cent of salt, and is therefore very strong. In one of the tables given by Berzelius it is stated that a saturated solution of common salt contains 29 per cent of salt.

JOHN P. NORTON.

LIGHT IN STABLES.

Mr. Stewart, the celebrated Veterinary Surgeon, in his "Stable Economy" makes the following remarks, in his usual terse and happy style, on the bad effects of dark stables. In England and Scotland (for which he wrote) the evil was probably worse than in this country. There is no excuse for thrusting a horse into a dungeon here. Windows are not taxed, nor is space much of an object. One fault in the construction of stables, which Mr. Stewart vehemently condemns, is insufficient ventilation. There is not much ground for complaint in Canada on this score. There are generally holes enough for that purpose, for if it entered into the original plan to leave spaces for one or two windows, you will find in nine cases out of ten that they are boarded up in a careless manner, or stopped with straw. It is managed to exclude the light at all events. Hear, ye horse-owners of Canada, who "love darkness rather than light," the opinion of an experienced writer on the subject:—

"Most people seem to think that light is little wanted in a stable; and, truly, after all the horses have become blind for want of it, there is not much need for windows. There is in general some kind of apology for a window. There may be a pane or two of glass above the door, or a hole at one end of the stable. When the man is working he has light enough from the door, and the horses have the benefit of that. Besides it is said, horses do not require light. They thrive best in the dark!

From these and similar abuses, innovation always meets with some resistance. Some miserable plea is offered in favour of an old usage, merely to avoid open conviction of ignorance. Dark stables were introduced not because men thought them the best, but because they had no inclination to purchase light, or because they thought the horse had no use for it.

A horse was never known to thrive better for being kept in a dark stable. The dealer may hide his horse in darkness, and perhaps he may believe that they fatten sooner there than in the light of day. But he might as well tell the truth at once, and say that he wants to keep them out of sight till they are ready for the market. When a horse is brought from a dark stable to the open air, he sees very indistinctly; he stares about him, and carries his head high, and he steps high. The horse looks as if he had a good deal of action and animation. Dark stables may thus suit the purposes of dealers, but they are certainly not the most suitable for horses. They injure the eyes. There is not perhaps another animal on the earth so liable to blindness as the horse. It can not be said with certainty that blindness is the

cause; but it is well known that the eyes suffer most frequently where there is no light.

Whether a dark stable be pernicious to the eyes or not, it is always a bad stable. It has too many invisible holes and corners about it, ever to be thoroughly cleansed. The gloomy dungeons in which boat and coach horses are so often immured are always foul. The horses are attended by men who will not do their duty if they can neglect it. The dung and the urine be rotting for weeks together, and contaminating the air till it is unfit for use. The horses are never properly groomed. They cannot be seen.

All these things considered, it is evident that the stable ought to be well lighted, and that the expense attending it is a prudent outlay. When side windows can not be conveniently introduced, a portion of the hay loft must be sacrificed, and light obtained from the roof. This, in ordinary cases, will not be greatly missed. Let it be well done, if done at all.

COMPARATIVE VALUE OF DIFFERENT KINDS OF FODDER FOR CATTLE.

A table of the comparative value of different kinds of fodder for cattle has been published by M. Antoine, in France, and is the result of experiments made by the principal agriculturists of the continent, Thuer, Gernerhausen, Petro, Rueder, Weber, Krantz, Andre, Block, De Dumbasle, Bousingault, Meyer, Plotow, Pohl, Smece, C. and Schwartz, Pabst. It is unnecessary to give the figures which each of these experimentalists have set down, but the mean of their experiments being taken, there is more chance of the result being near the truth. Allowance must be made for the different qualities of the same food on different soils and different seasons. In very dry summers the same weight of any green food will be much more nourishing than in a dripping season. So likewise any fodder raised on a rich dry soil will be more nourishing than on a poor wet one. The standard of comparison is the best upland meadow-hay, cut as the flower expands, and properly made and stacked, without much heating; in short, hay of the best quality. With respect to hay, such is the difference in value, that if 100 lbs of the best is used it will require 120 lbs of a second quality to keep the same stock as well, 140 lbs of the third, and so on, till very coarse and hard hay, not well made, will only be of half the value, and not so fit for cows or store cattle, even when given in double the quantity. While good hay alone will fatten cattle, inferior hay will not do so without other food.

100 lbs. of good hay is equal in nourishment to	102 Lattermath hay
90 "	90 " hay-made Clover, when the blossom is completely developed.
88 "	88 " Ditto, before the blossom expands.
98 "	98 " Clover, second crop, is equal in nourishment to
98 "	98 " Lucerne hay
89 "	89 " Sainfoin hay
91 "	91 " Tare hay
90 "	90 " Spargula arvensis, dried
246 "	246 " Clover hay, after the seed
410 "	410 " Green clover
457 "	457 " Vetches or tares, green
275 "	275 " Green Indian corn
425 "	425 " Green spargula
325 "	325 " Stems and leaves Jerusalem artichoke
511 "	511 " Cow-cabbage leaves
600 "	600 " Beet-root leaves
300 "	300 " Potato halm
374 "	374 " Shelter wheat-straw
442 "	442 " Rye straw
192 "	192 " Oat straw
153 "	153 " Peas halm
159 "	159 " Vetch halm
140 "	140 " Bean halm
195 "	195 " Buckwheat straw
170 "	170 " Dried stalks Jerusalem artichokes
400 "	400 " Dried stalks of Indian corn
250 "	250 " Millet straw
201 "	201 " Raw Potatoes
175 "	175 " Boiled do.
220 "	220 " White Silesian beet
639 "	639 " Mangold Wurzel
504 "	504 " Turnips
276 "	276 " Carrots
287 "	287 " Cohlkalis
308 "	308 " Swedish turnips
350 "	350 " Ditto with leaves on
54 "	54 " Rye
45 "	45 " Wheat
54 "	54 " Barley
59 "	59 " Oats
50 "	50 " Vetches
45 "	45 " Peas
45 "	45 " Beans
64 "	64 " Buckwheat
57 "	57 " Indian corn
32 "	32 " French beans, dried
47 "	47 " Cheanuta
68 "	68 " Acorns
50 "	50 " Horse-cheanuta
62 "	62 " Sun-flower seed

69 "	69 " Linseed cake
105 "	105 " Wheat bran
109 "	109 " Rye Bran
167 "	167 " Wheat, peas, and oat chaff
179 "	179 " Rye and barley chaff
73 "	73 " Dried lime-tree leaves
83 "	83 " oak leaves
67 "	67 " Canada poplar leaves

Lattermath hay is good for cows, not for horses. The second cut is generally considered as inferior in nourishment to the first. New hay is not wholesome. At Paris, when a load of 1000 kilos is bargained for, the seller must deliver—if between haying and October 1, 1300 kilos—from October 1 to April 1, 1100 kilos—and after April only 1000. This is fair, and allows for loss of weight in drying. In London, a load of new hay is 20 cwt; of old hay, only 18 cwt.

The dried halm of the Trifolium incarnatum, after the seed is ripe, is little better than straw. Clover, lucerne, and sainfoin are generally supposed to lose three-fourths of their weight in drying; but in general they lose more, especially in most climates, where the sap is more diluted. When touched by the frost they become very unwholesome, and should never be given to cattle except quite dry.

Straw is, on the whole, but poor food, and unless cattle have something better with it, they will not keep in any condition; when given with turnips or other roots, straw corrects their watery nature, and is very useful; cut into chaff it is very good for sheep when fed on turnips and oil-cake, and when newly thrashed is as good nearly as hay. By a judicious mixture of different kinds of food, a more economical mode of feeding may be substituted for a more expensive one, and the same result obtained. The value of straw depends much on the soil; a very clean crop will not give so nourishing straw as one containing many succulent weeds. Peas and vetch halm are superior to straw, especially when cut into chaff; it is by some thought equal to hay. The same may be said of bean halm not left too long in the field, and cut before it is completely dry. Buckwheat halm is of little value; it is thought unwholesome if given to sheep.

16 lbs of raw, or 14 lbs. of boiled potatoes will allow a diminution of 8 lbs of hay.

Turnips will feed store pigs, but they will not fatten on them. Carrots and parsnips are excellent for horses, and, when boiled, will fatten hogs. Ruta-baga is liked by horses; it makes their coats fine, but must not be given in too great quantity, or it will gripe them.

FEEDING.—A certain quantity of food is required to keep an animal alive and in health; this is called his necessary ration of food; if he has more, he will gain flesh, or give milk or wool.

An ox requires 2 per cent of his live weight in hay per day; if he works, he requires 2½ per cent; a milch cow 3 per cent; a fitting ox, 5 per cent at first; 4½ per cent when half fat; and only 4 per cent when fat; or 4½ on the average. Sheep grown up take 3½ per cent of their weight in hay per day, to keep in store condition.

Growing animals require more food, and should never be stinted.—[Journal Royal Agricultural Society.

GREEN PEAS FOR WINTER.

The lovers of green peas will be pleased to learn that they can be preserved for winter use, by simply gathering them at the proper season for using them green, shelling them and drying them in the shade, and when well cured and perfectly dry, packing them away for use.

When required for use they should first be immersed in warm water for ten or twelve hours, which will render them as tender and deliciously succulent as when taken from the vines. The best method of preserving them, after they have been thoroughly cured by the above process, is to put them into close jars or bottles. In this way, not only green peas, but green beans and green corn may be had the year round.—[Farmer & Mechanic.

IMPROVED CANDLE-WICKS.—An improved candle may be made by steeping cotton wicks in limewater, in which a considerable quantity of saltpetre (nitre) has been dissolved. By this means is obtained a pure flame and a superior light; a more perfect combustion is ensured; snuffing is rendered nearly as superfluous as in wax lights; and the candles thus made do not run nor waste. The wicks should be thoroughly dry before they are covered with tallow, otherwise they will not burn with a uniform, and clear light.

HOW TO MAKE GOOD TEA.—Boil rain water and pour upon your tea, letting it steep from one to two minutes if you wish to realize the true taste of the "plant divine." Well,

river, or spring water, in many parts of the country, is strongly impregnated with lime, which acts chemically on the tea-leaf, and greatly deteriorates, or destroys its fine aromatic flavour. In fact, water, containing lime, or much vegetable matter in solution, has more or less effect on all kinds of cookery. Besides, it is highly injurious to the health of most persons.

HOW TO MAKE GOOD VINEGAR.

Common household vinegar is usually obtained from wine, cider, beer, malt, fermented sugar, molasses, &c. the alcohol contained in them being converted into acetic acid by the absorption of oxygen, which is more or less intermixed with gum, sugar, and other vegetable matter. The principal requisites necessary to form any of these substances into good vinegar, are, contact with the air of any temperature between 70° and 80° F., the presence of alcohol, and the addition of some extraneous vegetable matter to promote the acetous fermentation.

Pure, unadulterated cider-vinegar, reduced to a proper strength, is considered the best for general use in this country, and is always attainable by those who possess apple-orchards or cider of their own, and should be more abundantly supplied in market than it is. An excellent article may be made by putting away good strong cider, without adding anything to it, in one or more substantial casks in a warm place under cover, with the bung-holes open, but covered with fine gauze, in order to admit the air, and there let it gradually undergo the necessary fermentation. If the casks are frequently shaken, and their contents occasionally drawn from one to another, the process is hastened. When fit for use, a small portion of the vinegar should be drawn from each cask, and its place supplied with a like quantity of cider that is fresh. In large establishments the operation may be carried on with a number of casks at once, worked in pairs, by commencing with one filled with good vinegar and another of the same capacity filled with pure cider. First draw out a quart or a gallon, as may be, from the cask containing the vinegar, and replace it with an equal quantity from that which contains the cider. Thus, by continuing the operation daily, for some weeks, one or more hogsheds, of good, wholesome vinegar may be formed, without the addition of any foreign or injurious materials. When sufficiently sharp, the vinegar should be drawn off into smaller casks or bottles, tightly bunged or corked, and put away in a moderately cool place for use.

A superior vinegar may be made by filling a barrel one-third full with strong cider, reduced by freezing, and letting it stand with the bung-holes slightly covered for at least nine months. If the fermentation does not proceed with sufficient rapidity, a few quarts of the liquor may be withdrawn, boiled for a short time, skinned, and then poured back into the cask.

A vinegar of good strength may be produced by putting 6 lbs of sour yeast made of leaven and rye-flour, mixed with hot water, into a cask containing 100 gallons of good cider, agitating the whole with a stick, and then let it remain for six or eight days. It is necessary to draw off this vinegar and bung it up close, as soon as it is made, otherwise it will quickly grow rapid or flat.

Those who have not cider or grape juice, at their command can make a tolerably good vinegar, by any of the following directions, which we copy from Cooley's "Cyclopedia of 6000 Practical Receipts," but it will be less pure and more liable to spoil, than that made from cider, malt, or wine:—

Sugar-Vinegar.—Add brown sugar, 4 lbs, to each gallon of water, and proceed as with cider.

German Household Vinegar.—Take soft water 7½ gallons; honey or brown sugar, two lbs; cream of tartar, 2 ounces; corn-spirit, one gallon. Ferment as above.

To prevent mouldiness in vinegar, the following methods have been proposed:—Concentrate by freezing or by distillation; put up the vinegar in bottles and keep them well-worked; or boil it in a well-tinned kettle for a quarter of an hour; put it in uncorked bottles; place them in a kettle of water with their necks above the surface, and let them boil for an hour; then take them out, cork them up, and the vinegar will keep for several years without growing mouldy or turbid.—[American Agriculturist.

CROPS IN THE UNITED STATES.

The Boston Traveller, (Massachusetts), says the crops in that neighbourhood promise an abundant harvest. New wheat has arrived in market at Saint Louis. In Virginia the wheat crop has been harvested, and is said to be good both as to quality and yield. In Georgia it is said the crops will turn out very well. From other States we have no late accounts.

Civil and Social Department.

PRICES OF GRAIN IN ENGLAND AND IN CANADA.

Few of our farmers who have given any attention to the subject but must have noticed the very wide discrepancy between the prices which they receive for their produce here and the prices which the speculators receive for it in the English market. Cupidity is explained as a necessary caution; ruined speculators are pointed out to quiet the complaints of the farmer, and he becomes reconciled to his fate, or expresses his sad conviction of the necessity of some more reliable and less expensive agency by which to convey his grain to the English consumer than that of the spiritless merchants, cramped in means or enjoying that species of monopoly which ever arises from the absence of necessary competition; but this expression does not go beyond an unmeaning murmur: it leads to no practical result: produces no remedial measure. Years pass away and the same system continues. The Banks are partial, rigidly, illiberal, or unfair in their discounts, which they confine to a comparatively few merchants, who contrive to get a monopoly of the market. The Banks, in fact, hold the purse-strings of the country; the merchants whom they favour are generally Stock-holders, so that in reality their favours are confined to themselves. Here is the nucleus and the strong-hold of a monopoly. A paper currency thus mismanaged produces evils which are not the necessary results of the system, but only the inseparable concomitants of its abuse. The partiality and favouritism which attend the whole system of bank discounts necessarily prevent competition among buyers, and compel the farmers to take such prices as are offered to them by the few merchants who have practically a monopoly of the market. To this cause, in a great measure, may be traced the fact, that on almost all occasions the price of wheat is much higher at New York, Boston and Portland than at Toronto, Hamilton, Kingston and Montreal. We have no desire to mislead the reader by assuming that this is the sole cause of the discrepancy in the price of produce in the Canadian and in the American markets. We are free to admit that higher freights from Quebec than from New York and Boston to England, add their quota towards producing this result. But the evil, we insist, does exist. Our merchants want the spirit of honourable competition; they are too few in number and too needy; the farmer wants to be insured of fair prices. Merchants, on the other hand, would be very foolish to act recklessly or run imminent risk of ruin. There is great difficulty in calculating the probable state of the English market some months hence. Merchants must, therefore, have a wide margin to cover the chances of possible loss. They may be occasional losers, but on the whole their profits must be large. How then are we to rid ourselves of the expense entailed by this uncertainty, the want of spirit, capital and competition amongst grain buyers, and the juggling system on which our banking operations are conducted? Shall we mend the old machine or construct a new one? If we determine to take the former course, how is it to be done? We cannot infuse honour into the breast of avarice by legislation; we cannot by legislation create new capital and a new race of merchants; and it is questionable whether by legislation we can convert Bank monopolists into impartial dealers in money, and divest them of all arbitrary controul over the monetary affairs of the country. No; legislation has not the talismanic power to metamorphose corruption into virgin purity, to infuse life into the motionless corpse of the commercial body, or to call into being a new, energetic race of merchants. The present system must be superseded. The farmers must bring in the matter. They must assist in bringing about the necessary commercial reform.

We are not merely dealing in vague speculations and proposing impracticable theories.

ries. As the organ of the farmers of Western Canada, we have had communicated to us the outlines of a plan of vast importance to their interests; and the carrying out of which is destined to produce a complete revolution in the present clumsy system of commercial agency. The plan, which has been exclusively communicated to us, is this: A commercial house in Scotland, strictly responsible, propose to commence a commission agency in Canada produce; to forward to their agent here a given amount of capital, from which he is to make advances of, say 50 per cent on the price as determined by the latest arrival, on the shipment of the grain at our ports, consigned to the firm in Scotland, who are to effect sales, and place the balance of the proceeds in the hands of their agent here, through whom it is to be paid to the farmer, the commission-merchants retaining a reasonable commission for their services. By this plan the farmer will, in fact, become his own merchant, and the profits which now go into the pockets of speculators will go into his.

Of course the perfect responsibility of the agents must be shown, or rather the farmer here must have some fair tangible security that he will not lose from their dishonesty or failure.

Such is the plan which we are enabled to lay before the intelligent farmers for their consideration. That it will meet their approval we cannot doubt. Satisfied of the responsibility of the parties transacting the business, they will be certain of getting the highest price, whatever it may be, current in the English market. At present it often happens that the grain before it reaches the consumer goes through the hands of three sets of speculators, each of whom abstracts a profit from the price. The Upper Canada speculator sells to the Montreal speculator, who sells to the English speculator, and through him it reaches the consumer.

We have fairly explained the causes of the wide discrepancy in prices of grain in England and the Canada market. It is now for our farmers to say whether they wish to have the system reformed or not.

THE UNIVERSITY QUESTION.

Although it was hinted in the early part of the Session, that the Government did not intend to bring in any Bill on this subject, yet they have come down to the House with a measure (which we feel satisfied a large majority of the people will strongly object to) and it is said, intend to urge it through Parliament at once. Its chief points are the following:—The Endowment, i. e. the estate which yields now about £10,000 a year, is to be split up, one half in value, (according to the statement of those who know its value,) is to be given to the Church of England, and £3,000 a year out of the remainder; £1,500 a piece is to be given yearly to the three following bodies: the Residuary Presbyterians, the English Methodists, and the Catholics. The Church of England is to get the buildings and land in the neighbourhood of Toronto, while the other favoured bodies retain their own Colleges, viz., Queen's, Victoria, and Regiopolis. £125 per annum is to be ap-

propriated (if there be any to appropriate) to the assistance of the District Schools, and there is also a flourish about Agricultural schools, and Model Farms. But where are the funds to come from? "Instead of the present unproductive school lands the government will according to their promise (so it is worded in the Montreal papers) made in 1835, give a similar number of acres of the best and most available lands of the Crown." These "will, in a short time [all conjecture, something in the clouds!] generate a fund of £4,000 to £5,000." Out of this, £2,500 is to be first taken for Grammar Schools. The remainder [of this supposed revenue] "will be expended, first, in giving £500 to each District, which will contribute £250 for the purpose of building a commodious Grammar School." There are, we believe, 20 Districts, so that if they all accepted so advantageous an offer it would require £10,000 to supply them! "Then," the statement gravely continues, "second, to establish a model agricultural farm, with a practical agricultural master in the vicinity of each Grammar School, to be paid a moderate salary and to have the profits of the farm!! It is well the sum was not mentioned that would be required for these purposes. We fear it would have been transparent that our legislators know about as much of the nature and expense of model farms, &c., as they appear to know of the wishes of the country or the doctrine of chances. After nearly half the land (in value) and £3000 are given to the Church of England, and £1500 each to the three sects, or rather to their Ministers, for their people will derive little benefit from it; and £2500 to the Grammar schools: and after the Government have performed a promise made twelve years ago, and given some of their best (wild) lands, and these have been sold or become cleared and yield a revenue of £4000, and after £500 have been given out of this to each District, then model farms are to be purchased and set in operation out of the "REMAINDER"! The interests of agriculture are to be cared for by our legislators after all! Yes, after all. Will any farmer (and we can tell our Ministers that there are a goodly number who think more of the public interests than of the interests of religious sects, and they are daily increasing,) be gulled by such silly calculation—such arrant mockery? If so, we would advise his friends to look after him.

If there is to be no University, and upon the proposed plan there will be none, in the name of all that is honest and sane, give this splendid endowment to the people; let superior Schools be established in every township of the province; talk then of Agricultural Masters and model farms, and let our purse proud and purse made Aristocrats send their sons to Cambridge or Oxford which they so much admire. But rob not the country of that which was given for the general good, to purchase the support of two or three sects. Where did they get the right to enjoy exclusively, what was intended for all? Shame on the proposer of so atrocious a measure. The execrations of posterity will assuredly follow those who enact it.

Some alterations have been made in the proposed rates of duty published below. They are, however, few in number, and we shall take occasion to specify them in our next. The following table will be valuable for reference; our readers, therefore, if they have not preserved the previous numbers, will do well to lay this one by for future use. There are very few but have occasion some time or other to know the rates of duty:—

ESTIMATE OF THE AMOUNT OF CUSTOMS' DUTIES FOR 1847, AT THE RATES PROPOSED BY MR. CAYLEY. THE CALCULATIONS BEING FOUNDED ON THE IMPORTS IN 1846.

ESTIMATE

Of amount of Customs' Duties which would accrue at the proposed rates, taking the Imports of 1846, as data.

No. 1.—SPECIFIC DUTIES.

Under the old Acts all Specific Duties were calculated at £1 4s. 4d. Currency the £ Sterling.

ARTICLES.	PRESENT RATE OF DUTY.		Proposed Rate of Duty	Totals Classified.
	Imperial	Provincial		
Cows and Heifers.....No.....	Free.....	20s	each. 2s 6d each	
Calves.....No.....	Free.....	5s	" " 5 " "	

		Present.	Proposed.	
Goats.....	"	Free.....	2s 6d " "	2s 6d "
Horses.....	"	Free.....	30s " "	35s "
Kids.....	"	Free.....	2s 6d " "	2s 6d "
Lambs.....	"	Free.....	1s " "	1s "
Oxen, Bulls, Steers.....	"	Free.....	30s " "	35s "
Pigs, Sucking.....	"	Free.....	6d " "	6d "
Swine and Hogs.....	"	Free.....	5d " "	5d "
Sheep.....	"	Free.....	2s " "	2s "
Cocoa.....	lb	1s per cwt.....	1d per lb.....	3d per lb
Chocolate Paste.....	lb	4 per cent.....	2d " "	2d "
Green Coffee.....	"	5s per cwt.....	1d " "	1 1/2d "
Roasted do.....	"	5s " "	2d " "	2 1/2d "
Ground do.....	"	5s " "	3d " "	4d "
Wax Candles.....	{	7 per cent.....	2d " "	3d "
Sperm do.....	}	15 " "	2d " "	2 1/2d "
Tallow do.....	"	7 " "	1d " "	1 1/2d "
All other do.....	"	7 " "	1d " "	2d "
Salt or Dried Fish.....	Cwt	2s per cwt.....	1 per cent.....	2s 6d per cwt
Pickled do.....	brls	4s per brl.....	1 " "	5s per brl
Flour.....	"	2s " "	6d per brl.....	3 " "
Almonds.....	"	4 per cent.....	1d per lb.....	1 1/2 per lb
Apples.....	bshls	Free.....	6d per bush.....	6d per bush
Do Dried.....	"	4 per cent.....	1s " "	1s "
Currents.....	lb	4 " "	5s per cwt.....	1d per lb
Figs.....	"	4 " "	5s " "	1d "
Nuts of all kinds.....	"	4 " "	3d per lb.....	1d "
Pears.....	bshls	Free.....	1s per bush.....	1s per bush
Peaches.....	"	Free.....	10 per cent.....	1s "
Prunes.....	lb	4 per cent.....	1d per lb.....	1 1/2d per lb
Quinces.....	bshls	4 per cent.....	10 per cent.....	1s per bush
Raisins } Boxes.....	lbs	4 " "	1d per lb.....	1 1/2 per lb
Raisins } Otherwise.....	lbs	4 " "	3d per lb.....	1d "
Barley.....	qrs	Free.....	3s per qr.....	3s per qr
Buckwheat.....	brls	Free.....	3s " "	3s "
Maize.....	"	Free.....	3s " "	3s "
Oats.....	"	Free.....	2s " "	2s "
Rye, Bean, and Peas.....	"	Free.....	2s " "	3s "
Wheat.....	"	Free.....	3s " "	3s "
Meal.....	brl	Free.....	2s per brl.....	2s per brl
Bran.....	Cwt	Free.....	3d per cwt.....	3d per cwt
Hops.....	lb	4 per cent.....	3d per lb.....	3d per lb
Indian Rubber Boots and Shoes.....	pairs	4 " "	6d per pair.....	7 1/2 per pair
Women's Boots and Shoes.....	doz	7 " "	5s per dozen.....	6s 6d per doz
Girl's Boots and Shoes.....	doz	7 " "	2s 6d " "	2s 6d "
Men's Boots.....	pairs	7 " "	2s 2d per pair.....	2s per pair
Do Shoes.....	"	7 " "	6d " "	7d "
Boys' Boots.....	"	7 " "	9d " "	1s "
Do Shoes.....	"	7 " "	4d " "	4d "
Infants' Boots and Shoes of } Leather, and under 3 inches } in length.....	doz	4 " "	5 per cent.....	1s 6d per doz
Goat Skins.....	doz	4 per cent.....	5s per dozen.....	5s per dozen
Lamb or Sheep Skins.....	"	4 " "	2s 6d " "	2s 6d "
Calf Skins.....	lb	4 " "	4d per lb.....	4d per lb
Kip Skins.....	"	4 " "	2d " "	2d "
Harness.....	"	4 " "	1 1/2d " "	1 1/2d "
Upper.....	"	4 " "	1 1/2d " "	1 1/2d "
Sole.....	"	4 " "	1 1/2d " "	2d "
Patent, classed as Sheep and Calf.....	"	4 " "	4d " "	4d "
Cut into shapes.....	"	4 " "	4d per lb.....	4d "
Bacon and Hams.....	cwt	3s per cwt.....	5s per cwt.....	6s per cwt
Salted.....	"	3s " "	2s " "	6s "
Pickled.....	"	Free.....	4s " "	4s "
Fresh.....	"	Free.....	4s " "	4s "
Molasses.....	"	3s per cwt.....	1s " "	5s "
Maccaron and Verucelli.....	lb	4 per cent.....	1d per lb.....	1 1/2 per lb
Olive Oil, in casks.....	galls	4 " "	1d per gallon.....	5d per gallon
" in bottles.....	"	4 " "	1s " "	1s 3d "
Lard.....	"	4 " "	4d " "	5d "
Linseed.....	"	4 " "	2d " "	2d "
Coarse and Wrapping Paper.....				1d per lb.
Printing.....				1d "
Writing.....				1 1/2d "
Drawing.....				1 1/2d "
Pasteboard and Cards.....				1d "
Milled and Trunk Makers.....				1d "
Music Paper, Ruled.....				1 1/2d "
Marble or Glazed.....				1 1/2d "
Tissue Papers.....				1 1/2d "
Playing Cards.....	pkts	7 " "	10 " "	3d per pack
Potatoes.....	bshls	Free.....	3d per bush.....	3d per bush
Butter.....	"	8s per cwt.....	2s per cwt.....	7s 6d per cwt
Cheese.....	"	5s " "	2s 6d " "	5s "
Salt.....	bshls	Free.....	2d per bush.....	2d per bush
Cassia.....	lb	4 per cent.....	2d per lb.....	2 1/2 per lb
Cinnamon.....	"	4 " "	2d " "	2 1/2 "
Cloves.....	"	4 " "	2d " "	2 1/2 "
Mace.....	"	4 " "	3d " "	4d "
Nutmegs.....	"	4 " "	4d " "	5d "
Pimento.....	"	4 " "	3d " "	1d "
Pepper of all kinds.....	"	4 " "	4d " "	1d "
Refined or Candy Sugars.....	cwt	20 per cent.....	2d per lb.....	27s 6d per cwt
Muscovado do.....	"	5s per cwt.....	7s 6d per cwt.....	15s 3d "
Bastards do.....	"	"	"	10 per cent. Estimated.
In which are preserves do.....	"	"	"	2s 6d per cwt Not know
Succades.....		Refined Sugar		2d per lb
Syrups, containing Spirits O. W. gal.....			1s per gallon	
Do not containing Spirits.....			9d "	94 7 1/2
Ale and Beer, in Casks.....	"	4 per cent	3d per gal	4d "
Do do in bottles.....	"	4 do	1s "	1s 3d per dozen
Cider and Perry.....	"	4 do	1d "	1 1/2d per gallon
Vinegar.....	"	4 do	3d "	3d "
Rum, as of Proof Old Wine.....	"	6d per gal	6d "	1s "
Do sweetened or mixed.....	"	6d "	2s "	3s "
Spirits, except Rum, Old Wine	"	1s "	1s 3d "	2s "
Do sweetened.....	"	1s "	2s "	3s "
Tea.....	lb	1d per lb	1d per lb	2 1/2d "
Tobacco, Unmanufactured.....	"	4 per cent	1d "	1 1/2d "
Do Manufactured.....	"	7 do	1d "	2 1/2d "
Do Segars.....	"	7 do	2s "	3s "
Do Snuff.....	"	7 do	4d "	6d "
Wine		Old Wine gal	7 }	8d per gal
Wood, Staves, Oars, and Hand-				1s per gallon
spikes, at last year's average.				10 per cent

£258,401 11 1/2

SCHEDULE No. 2.

Calculations of the Customs Duties on Articles to be charged with an ad valorem duty under the proposed Tariff, taking as data the importations of 1846. This Schedule includes only the Imports of Inland Ports.

ARTICLES.	PERCENT DUTY		Proposed Rate of Duty	Estimated Proceeds
	Imperial	Provincial		
Anchovies and Fish preserved in Oil..	4 per cent	10 per cent	15 per cent	£ 2 11 7
Ashes..	Free	1 do	1 do	23 17 5
Bark..	4 per cent	1 do	1 do	8 19 8
Berries, Nuts and Vegetables	4 do	11 do	1 do	21 9 7
Biscuits and Crackers.....	Free	0 do	10 do	240 6 0
Books.....	7 per cent	5 do	7½ do	935 5 2
Carrriages.....	4 do	10 do	12½ do	823 3 7
Clocks.....	7 do	10 do	12½ do	1,428 14 7
Coals.....	4 do	1 do	1 do	36 17 4
Cordage.....	7 do	5 do	7½ do	215 1 9
Corks.....	7 do	5 do	10 do	97 11 10
Cotton Manufactures.....	7 do	5 do	7½ do	2,271 1 4
Cotton Wool.....	Free	1 do	1 do	19 5 0
Drugs.....	Free	5 do	5 do	383 11 1
Dye Woods	4 per cent	1 do	1 do	19 5 0
Eggs	4 do	10 do	10 do	1 17
Extracts	4 do	10 do	15 do	162 17 1
Fanning Mills	4 do	10 do	12½ do	61 10 6
Fins	15 do	5 do	7½ do	10 1
Fish, Oysters, &c.....	Free	1 do	7½ do	526 15 9
Fruit, preserved	4 per cent	10 do	15 do	10 9 1
Fruit, unenumerated	Free	10 do	10 do	709 13 10
Furs and Skins	4 per cent	1 do	5 do	69 4 2
Glass Manufactures	15 do	5 do	7½ do	691 6 3
Gams and Resins.....	Free	5 do	5 do	45 16 10
Hardware	7 per cent	5 do	7½ do	4,533 17 6
Hay	Free	6s per ton	1 do	5 8 3
Hemp, Flax, and Tow	Free	1 per cent	1 do	36 8 4
Hides	Free	1 do	1 do	267 19 6
Iron, Pig	4 per cent	1 do	1 do	22 18 0
Lard	4 do	1 do	1 do	9 7 6
Leather Manufactures	7 do	5 do	10 do	522 5 2
Linens Manufactures	7 do	5 do	7½ do	42 12 2
Machinery	4 do	10 do	12½ do	2,292 10 0
Mahogany and Hardwood	Free	1 do	1 do	24 5 0
Medicines	4 per cent	5 do	7½ do	575 16 2
Oakum	7 do	Free	1 do	2 19 4
Oil, unenumerated		10 per cent	10 do	203 17 1
Oil, Palm	4 per cent	1 do	1 do	14 7 2
Oil, Fish	15 do	1 do	15 do	923 0 3
Paper Manufactures	7 do	5 do	10 do	891 4 7
Pickles and Sauces	4 do	10 do	15 do	67 19 0
Poultry	4 do	10 do	10 do	23 12 8
Rice	Free	5 do	5 do	552 1 3
Sausages	4 per cent	10 do	10 do	8 5
Saw Logs	Free	1 do	1 do	12 6 2
Seeds	4 per cent	10 do	10 do	572 7 8
Straw		3s per ton	1 do	1 1 2
Silk manufactures	15 per cent	5 do	10 do	780 6 1
Silk " liable to additional duty, say 15 do		5 do	12½ do	250 0 0
Soap	7 do	5 do	10 do	134 7 10
Salt, Fine			5 do	15 0 0
Soda Ash	4 per cent	1 do	5 do	8 1 0
Spermacetti	15 do	5 do	7½ do	0 12 3
Sarcocolla			20 do	120 0 2
Tallow	Free	1 do	1 do	204 18 1
Trees	4 per cent	Free	1 do	21 2 2
Vegetables	Free	10 per cent	10 do	29 0 6
Wine, at Inland Ports,			10 do	201 3 4
Woollen Manufactures,	7 per cent	5 do	7½ do	2,274 18 1
Unenumerated	4 do	5 do	7½ do	6,375 0 0
Goods at Quebec and Montreal paying 1 per cent				£ 81,731 10 1
Do do do 7½ per cent				2,000,000 0 0
Do do do 10 per cent				22,624 3 3
Estimated Proceeds of ad valorem Duties				183,967 1 8
Add Estimate of Schedule No 1				258,404 11 43
Gross Estimated Custom Revenue as based on the Trade of 1846				£ 442,371 13 0

enjoy themselves too, I endeavoured to persuade myself that I did so too; and, consoled by the reflection that if the tiger had positively eaten half a bullock yesterday afternoon, it never could be worth its while to scale our elephant, and run the risk of being shot, for the sake of devouring me, I felt rather bold than otherwise. After proceeding for some distance through the jungle, and roused, as it seemed to me, every beast that had come out of Noah's Ark, except a tiger, our elephant, who had hitherto conducted himself in a very quiet and gentlemanly manner suddenly raised his trunk, and trumpeted several times,—a sure sign, as the mahout informed us, that a tiger was somewhat close at hand.

"Now then, Frampton," cried my companion, cocking his double-barrel, "look out!"

"For squalls," returned I, finishing the sentence for him. "Pray is there any particular part they like to be shot in? Whereabouts shall I aim?"

"Wherever you can," replied Slingsby, "be ready, there he is, by Jupiter! and, as he spoke, the long grass about a hundred yards in front of us was gently agitated, and I caught a glimpse of what appeared a yellow and black streak moving swiftly away in an opposite direction—"Tally ho!" shouted Slingsby, saluting the tiger with both barrels. An angry roar proved that the shots had taken effect, and in another moment, a large tiger lashing his sides with his tail and his eyes glaring with rage, came bounding towards us.

"Now what's to be done?" exclaimed I,—"if you had but left him alone, he was going away as quietly as possible."

Slingsby's only reply was a smile, and, seizing another gun, he fired again. On receiving this shot, the tiger stopped for a moment, and then, with a tremendous bound, sprang towards us, alighting at the foot of a small tree, not a yard from the elephant's head.

"That last shot crippled him," said my companion "or we should have had the pleasure of his nearer acquaintance—now for the coup de grace, fire away!" and as he spoke, he leaned forward to take a deliberate aim, when suddenly the front of the howdah gave way, and to my horror, Slingsby was precipitated over the elephant's head, into, as it seemed to me, the very jaws of the tiger. A fierce growl and a suppressed cry of agony, proved that the monster had seized his prey, and I had completely given my friend up for lost, when the elephant, although greatly alarmed, being urged on by the mahout, took a step forward, and, twisting his trunk round the top of the young tree, bent it down across the loins of the tiger, thus forcing the tortured animal to quit his hold, and affording Slingsby an opportunity of crawling beyond the reach of its teeth and claws. Forgetting my own fears in the imminence of my friend's danger, I only waited till I could get a shot at the tiger, without running the risk of hurting Slingsby, and then fired both barrels at its head, and was lucky enough to wound it mortally. The other sportsmen coming up at the moment, the brute received his quietus, but poor Slingsby's arm was broken where the tiger had seized it with its teeth, and his shoulders and chest were severely lacerated by its claws, nor did he entirely recover from the shock for many months. And this was my first introduction to a royal tiger, Sir. I saw many of them afterwards, during the time I spent in India, but I can't say I ever had much liking for their society—umph!

A WOLF CHASE.

During the winter of 1844, being engaged in the northern part of Maine, I had much leisure to devote to the wild sports of a new country. To none of those was I more passionately addicted, than skating. The deep and sequestered lakes of this northern state, frozen by intense cold, present a wide field to the lovers of this pastime. Often would I bind on my rusty skates, and glide away up the glittering river, and mazy streamlet that flowed on towards the parent ocean, and feel my pulse bound with the joyous exercise. It was during one of these excursions that I met with an adventure, which event at this period of my life, I review with wonder and astonishment. I had left my friend's house one evening just before dusk, with the intention of skating a short distance up the noble Kennebec, which glided directly before the door. The new moon peered from her lofty seat, and cast her beams on the frosty pine that skirted the shore until they seemed the realisation of a fair scene. All nature lay in a quiet which she sometime chooses to assume; water earth and

air, seemed to have sunk into repose. I had gone up the river about two miles when coming to a stream which emptied into the larger, I turned to explore its course. Fir and hemlock of a century's growth met over head, and formed an archway, radiant with frost-work. All was dark within, but I was young and fearless as I peered into the unbroken wood that reared itself to the borders of the stream. I laughed in very joyousness. My wild hurrah rung through the silent wood, and I stood and listened to the echo that reverberated again and again, until all was hushed. Occasionally a night bird would flap his wings from some tall oak.

The mighty lord of the forest stood as if nought but time could bow them. I thought how oft the Indian hunter concealed himself behind these very trees, how oft the arrow had pierced the deer at this very stream, and how oft his wild hallo had rang for his victory. I watched the owls as they flitted by, until I almost fancied myself one of them and held my breath to listen to their distant hooting.

Suddenly a sound arose. It seemed from the very ice beneath my feet. Loud and tremulous at first, until it ended in one wild yell. I was appalled. Never before had such a noise reached my ears.

I thought it more than mortal, so fierce, and amid such unbroken solitude that it seemed a fiend from hell had blown a blast from an infernal trumpet. Presently I heard the twigs on shore snap, as from the tread of some beast, and the blood rushed back to my forehead with a bound that made my skin burn, and I felt received that I had to contend with things earthly and not of spiritual mould. My energies returned, and I looked round me for some place of retreat. The moon shone through the opening by which I entered the forest, and considering this the best means of escape, I darted through it like an arrow. 'Twas hardly an hundred yards distant, and the swallow could scarcely excel my desperate flight; yet as I turned my head towards the shore I could see two dark objects dashing through the underbrush, at a pace nearly double that of my own. By their great speed, and the short yells which they occasionally gave I knew at once that they were the much dreaded gray wolf.

I had never met with these animals but from the description given of them, I had but little pleasure in making their acquaintance.—Their untameable fierceness, and untiring strength, which seems a part of their nature, render them objects of dread to every benighted traveller.

"With their long gallop which can tire, The deer-hound's hate, the hunter's fire."

They pursue their prey, and nought but death can separate them. The bushes that skirted the shore flew past with the velocity of lightning, as I dashed on my flight. The out let was nearly gained; one second more and I would be comparatively safe, when my pursuers appeared on the bank directly above me, which here rose to the height of ten feet. There was no time for thought, so I bent my head and dashed madly forward. The wolves sprang, but miscalculating my speed, sprang behind, while their intended, pray glided out into the river.

Nature turned me towards home. The light flak's snow spun from the iron of my skates, and I was some distance from my pursuers, when their fierce howl told me that I was still the fugitive. I did not look back, I was not afraid, or sorry or glad; one thought of home of the bright faces awaiting my return, of their tears if they never should see me, and then every energy of body and mind was exerted for an escape. I was perfectly at home on the ice. Many were the days that I spent on my good skates, never thinking that at one time they would be my only means of safety. Every half minute an alternate yelp from my fierce attendants made me but to certain that they were in close pursuit. Nearer and nearer they came; I heard their feet pattering on the ice nearer still, until I fancied I could hear their breathing. Every nerve and muscle in

Literary Department.

CHARITY.

By Martin Farquhar Tepper.

Fair Charity, thou rarest, best, and brightest,
Who would not gladly hide thee in his heart
With all thine angel guests; for thou delightest
To bring such with thee—guests that utter depart?
Cheerful with what enticement thou invitest,
Perfect in winning beauty as thou art,
World-wearied man to plant thee in his bosom,
And graft upon his cares thy balm blossom.

Fair would he be frank-hearted, generous, cheerful,
Forgiving, aiding, loving, trusting all;
But knowledge of his kind has made him fearful—
All are not friends, whom friends he longs to call;
For prudence makes him cold, and misery fearful,
And not least holds him true upon his fall.
And while they seek their selfish selves to caress,
And leave the wounded stag alone to perish!

MR FRAMPTON'S INTRODUCTION TO A ROYAL TIGER.

When I was a young shaver, having lived in the world some twenty years or so, I was engaged as a sort of supernumerary clerk in the house of Wilson and Brown, at Calcutta; and having no one, else who could be so easily spared, they determined to despatch me on a business negotiation to one of the native princes, about eight hundred miles up the country. I travelled with a party of the—dragoons, commanded by a Captain Slingsby, a man about five years older than myself, and as good a fellow as ever lived. Well, some how or other, he took a great fancy to me; and nothing would do but that I should accompany him in all his sporting expeditions—for I should tell you that he was a thorough sportsman, and, I believe, entertained some strange notion that he should be able to make one of me. One unfortunate morning, he came into my tent, and woke me out of a sound sleep which I had fallen into, after being kept awake half the

night by the most diabolical howls and screams that ever were heard out of Bedlam, expecting every minute to see some of their performers step in to sup, not with me, but upon me.

"Come, Frampton, wake up, man!" cried Slingsby, "here's glorious news."

"What is it?" said I, "have they found another hump of ale among the baggage?"

"Ale—nonsense," was the reply, "A shik-karee (native hunter) has just come into camp to say, that a young bullock was carried off yesterday, and is lying, half eaten, in the jungle, about a mile from this place: so at last, my boy, I shall have the pleasure of introducing you to a real live tiger."

"Thank ye," said I, "you're—but if it's at all inconvenient to you this morning, you can put it off; another day will do quite as well for me—I'm not in the least hurry."

It was of no use, however; all I got for my pains was a poke in the ribs, and an injunction to lose no time in getting ready.

"Before we had done breakfast, the great man of the neighbourhood, Rajah somebody or other made his appearance on his elephant, attended by a train of tawnies, who were to undertake the agreeable duty of beating. Not being considered fit to take care of myself—a melancholy fact, of which I was only too conscious—it was decreed that Slingsby and I should occupy the same howdah. Accordingly, at the time appointed, we mounted our elephant, and, having a formidable array of guns handed up to us, we started.

As my companion, and, indeed, every one else concerned in the matter, evidently considered it completely as a party of the utmost pleasure; and seemed to be prepared to

my frame was strained to the utmost tension.

The trees along the shore seemed to dance in the uncertain light, and my brain turned with my own breathless speed, but still they seemed to hiss forth a sound horrible, when an involuntary stumble on my part, turned me out of my course. The wolves close behind, unable to stop and as unable to turn, slipped, fell, still going far ahead, their tongues were lolling out, their white tusks glaring from their bloody mouths, their dark shaggy breasts were fleeced with foam, and as they passed me their eyes glared, and they howled with fury. The thought flashed on my mind that by this means I could avoid them, viz: by turning aside when they came too near for they, by the formation of their feet, are unable to turn on ice except in a straight line.

I immediately acted upon this plan. The wolves having regained their feet sprang directly towards me. The race was renewed for twenty yards up the stream; they were already close on my track, when I glided around and dashed directly past my pursuers. A fierce yell greeted my evolution, and the wolves slipping upon their haunches sailed onward, presenting a picture of helplessness and baffled rage. Thus I gained nearly a hundred yards at each turning. This was repeated two or three times, every moment the wolves getting more excited and baffled until coming opposite the house a couple of staghounds, roused by the noise, bayed furiously from their kennels. The wolves taking the hint, stopped in their mad career, and after a few moments' consideration, turned and fled. I watched them until their dusky forms disappeared over a neighbouring hill.—Then taking off my skates, wended my way to the house, with feelings better to be imagined than described.

PRESENT AND FUTURE.

The men who place their hopes exclusively in the future, confess, by the very act, that they are incapable of enjoying the present (and by enjoyment much more is meant than the mere taking of pleasure), but not wishing to make this humiliating admission, they flatter themselves that something else than what they possess is essential to peace and comfort. This is nothing less than an excuse for want of contentment; because, when the object of search is attained, they are as far from what they really need as ever. He who does not begin by placing contentment as the basis of external good, heaps up in vain, and might as well try to fill a sieve with water, as to construct a building of happiness upon a shadowy foundation. Besides, a constant restlessness is the greatest possible hindrance to sound education of the mind. The feverish gaze of the fortune-seeker cannot look aright upon the beautiful creation which is around him, if it ever looks upon it all. There are many men surrounded by the comforts of life, who, if you told them to divert their eyes awhile from future prospects, to cease envying their associates, to admire the wonders of nature and the beautiful world we live in, to be rejoiced at the remembrance of their daily blessings, and to be fully satisfied with their numerous advantages, would put you down for a madman or a fool. It is quite as easy to cultivate such a state of mind as to be constantly pining after what you have not got, or distressing yourself because you are not so well off as other people! and while every man of active mind must desire to go through his daily duties with energy and skill, and to fulfil his vocation with diligence, yet when he has done all this, calm contentment is one great means to make him happy, and keep him so.—The poet Horace when a young man, saw these important truths, and in his first satire lashes the folly of mankind in a very just and lively manner. That satire is not directed merely against avarice, as many critics have supposed, but against the deeper spirit of disquiet, which is at the root of all.

PREVENTION OF INFECTION FROM TYPHUS FEVER.—Dr. J. C. Smith obtained £5000 from Parliament for the following receipt:—Take six drachms of powdered nitre, (salt petre) and six drachms of sulphuric acid (oil of vitriol); mix them in a teacup. By adding one drachm of the oil at a time, a copious discharge of nitric acid gas will take place. The cup is to be placed during the preparation on a hot hearth or a plate of heated iron; and the mixture stirred with a tobacco pipe. The quantity of gas may be regulated by lessening or increasing the quantity of ingredients. The above is for a moderate sized room, half the quantity would be sufficient for a small room. Avoid as much as possible breathing the gas when it first rises from the vessel. No injury to the lungs will happen when the air is impregnated with the gas, which is called nitrous acid gas; and it cannot be too widely known that it possesses the property of preventing the spread of fever.

WOUNDS.—"Wounds break no bones," says an old proverb; true, they do not; it would be well if their power were limited to such fractures;

they do infinitely worse—break hopes which may have been the life and nourishment of a young heart—they throw a deadening chill over the high aspirations of many a bright and noble spirit—they sever the mystic woven threads of affection that were fondly deemed all enduring and immortal, and they break (perhaps, irremediably), many a tender and trusting heart, for hearts can break "yet broken live on;" and thus they inflict bruises and wounds that the balm of Gilead alone can heal.

Scientific.

CATECHISM OF AGRICULTURAL CHEMISTRY AND GEOLOGY.

II.—Of the Soil on which Plants Grow.

- Q. What does the soil consist of?

A. The soil consists of an organic or combustible, and of an inorganic or incombustible, part.
- Q. How do you show this?

A. By heating a portion of soil to redness on a bit of sheet iron, or on the end of a knife, either in the fire or over a lamp. The soil will first turn black, showing the presence of carbonaceous matter, and will afterwards assume a grey brown or reddish colour as this black organic matter burns away.
- Q. Whence is the organic part of the soil derived?

A. It is derived from the roots and stems of decayed plants, and from the dung and remains of animals and insects of various kinds.
- Q. Does this organic part form a large proportion of the soil?

A. Of peaty soils it forms sometimes three-fourths of the whole weight; but of rich and fertile soils it does not usually form more than from a twentieth to a tenth of the whole weight.
- Q. Can soil bear good crops which does not contain a considerable portion of organic matter?

A. Not in our climate. A rich soil generally contains at least one-twentieth of its weight (5 per cent) of organic matter.
- Q. Does the organic matter increase or diminish in the soil, according to the way in which it is cultivated?

A. Yes, it diminishes when the land is frequently ploughed and cropped, or badly manured; and it increases when the land is planted, when it is laid down to permanent pasture, or when large doses of farm-yard manure or of peat compost are given to it.
- Q. What purpose does this organic matter serve in the soil?

A. It supplies the organic food which plants draw from the soil through their roots.
- Q. Do plants draw much of their organic food from the soil?

A. The quantity they draw from the soil varies with the kind of plant, with the kind of soil, and with the season; but it is always considerable, and is necessary to the healthy growth of the plant.
- Q. If plants always draw this organic matter from the soil, will not the soil become gradually poorer and less productive?

A. It will if badly managed and constantly cropped.
- Q. Then how can you keep up the supply?

A. By ploughing in green crops,—by growing clovers and other plants which have long roots in the soil,—by restoring all the hay and straw to the land in the form of manure,—or by laying down to pasture.

[As the principles here laid down are so easily proved, and are now established beyond all question, how ruinously foolish is the practice of those farmers who sell hay, straw, and every thing they can carry off without taking any means to supply the soil with those essential elements of which it is thus deprived. Every load of manure, arising from the produce of a farm, which is not returned to it, is so much taken from its fertility, and to that extent diminishes its power of bearing crops. Hereafter let the farmer reflect upon this.—Ed. Canada Farmer.]
- Q. Whence is the inorganic part of the soil derived?

A. The inorganic part of the soil is derived from the crumbling down of the solid rocks.
- Q. Of what do these rocks principally consist?

A. They consist of more or less hardened sandstones, limestones and clays.
- Q. Do soils consist principally of the same substances?

A. Yes, soils principally consist of sand, clay and lime.
- Q. How would you name a soil which contained one of these substances in large quantities?

A. If it contained very much sand, I would call it a sandy soil; if much clay, a more or less stiff clay soil; if much lime a calcareous soil.

- Q. But if the soil contained two or more of them in large proportions how would you name it?

A. A mixture of sand and clay with a little lime, I would call a loam; if much lime was present, I would call it a calcareous loam; and if it were a clay with much lime, I would call it a calcareous clay.
- Q. What do you understand by light and heavy lands?

A. Light lands are such as contain a large proportion of sand or gravel, heavy lands, such as contain much clay.
- Q. Which of these two kinds of land is most easily and cheaply cultivated?

A. The light lands, called often also barley or turnip soils.
- Q. Why are these lands called barley or turnip soils?

A. Because they have been found to be peculiarly fitted for the growth of barley and of turnip, and other green crops.
- Q. Do heavy or light lands usually stand most in need of draining?

A. The heavy clay lands retain water most, and should therefore generally be drained first.
- Q. Do light lands not require draining?

A. Yes, though dry at the surface, such soils are often wet beneath, and would pay well for draining.
- Q. To what depth would you drain your lands?

A. If I could get a full I would never have my drains shallower than 30 inches.
- Q. Why would you put them so deep?

A. Because the deeper the dry soil is made, the deeper the roots can go in search of food.
- Q. Can you give me any other reason?

A. Yes when my drains are so deep I can go down 20 or 22 inches with my subsoil plough, without any risk of injuring them.
- Q. Does draining serve any other purpose besides that of carrying off the water from the land?

A. Yes, it lets in the air to the subsoil, and allows the run water to sink down and wash out of it any thing which may be hurtful to the roots of the plants.
- Q. Do such substances often collect in the subsoil?

A. Yes, very often, and crops which look well at first, often droop or fail altogether when their roots get down to the hurtful matter.

[This may be illustrated by referring to the layers of iron-ochre, or *pan*, which in many districts are met with in the subsoil,—and to such curious facts as that observed in the East of Fife, where the beans and oats, which look well up to April or May, often blacken and fall in June or July, when the roots get down to the ochreous subsoil. It is the local saying when this happens,—that the beans or oats have gone to Auchtermuchty—a fair being held there about that time when the beans usually fail.]
- Q. Why are many of the heaviest clays in the country laid down to permanent pasture?

A. Because the expense of ploughing and working these soils is so great, that the value of the grain reaped from them is not fit to pay the farmer for his trouble.
- Q. How could these heavy clay lands be rendered lighter and more cheap to work?

A. By draining, subsoil ploughing, or by the addition of lime or marl when it is required.
- Q. Would the land after this treatment, also give greater crops of grain?

A. Yes, not only would it be more cheaply worked, but it would yield a greater number of bushels of wheat per acre than before.
- Q. Would this increase be sufficient to pay the cost of draining?

A. Yes, the cost of draining clay lands is generally paid back in three, or at the utmost, in five years, and the crops still continue greater than before.

For the Ladies.

Park Benjamin thus gracefully addresses the Daguerreotype presentment of a pretty woman:—

Oh, I would labour many an hour,
And journey many a mile,
To catch the tender sweetness
Of that delicious smile!
There never was a lovelier
From lips of woman won,
And truly could be copied by
No artist save the Sun.

WEAR A SMILE.—Which will you do—smile, and make others happy, or be crabbed, and make every one around you miserable? The amount of happiness you can produce is

incalculable, if you show a smiling face—a kind heart—and speak pleasant words.—Wear a smiling countenance—let joy beam in your eyes, and love grow on your forehead. There is no joy like that which springs from a kind act or a pleasant deed—and you may feel it at night when you rest, at morning when you rise, and through all day, when about your business.

"A smile; who will refuse a smile,
The sorrowing breast to cheer?
And turn to love the heart of guile,
And check the falling tear!
A pleasant smile for every face,
O, 'tis a blessed thing!
It will the woes of care erase,
And spots of beauty bring.

DOMESTIC FAULTS.

It has been the fashion, may we not say it to a nauseating excess to direct counsel on the domestic virtues to women only. Dean Swift complains that young ladies make nets instead of cages; and the whole phalanx of writers on such subjects have ever treated women as if she alone of the whole creation was not to live for her own happiness, but for the happiness of others—as if she was a sort of moral moon, to shine only by reflected light, and have only a reversionary interest in the grand estate of universal good. But the time is coming when it will be demanded of all to be workers, so will it be not uncommon. We will not enquire on which side the amount of idleness is heaviest; let us rather see the readiest mode of retrieving the past, and giving security for the future. Homes are more often darkened by the continual recurrence of small faults, than by the actual presence of any decided vice. These evils are apparently of very dissimilar magnitude; yet it is easier to grapple with the one than the other. The Eastern traveller can combine his forces, and hunt down the tiger that prowls upon his path, but he finds it scarcely possible to escape the mosquitoes that infest the air he breathes, or the fleas that swarm in the sand he treads. The drunkard has been known to renounce his darling vice—the slave to dress and extravagance her besetting sin; but the waspish temper, the irritating tone, the rude dogmatic manner, and the hundred nameless negligences, that spoil the beauty of association, have rarely done other than proceed till the action of disgust and gradual alienation has turned all the currents of affection from their course, leaving nothing but a barren track, over which the mere skeleton of companionship stalks alone.

THE FEMALE DRESS OF THE PRESENT DAY.

We are inclined to think that the female attire of the present day is upon the whole in as favourable a state as the most vehement advocates for what is called nature, and simplicity could desire. It is a costume in which they can dress quickly, walk nimbly, eat plentifully, stoop easily, loll gracefully, and, in short, perform all the duties of life without let or hindrance. The head is left to its natural size—the skin to its native purity—the waist at its proper region—the heels at their real level. The dress is calculated to bring out the natural beauties of the person, and each of them has, as far as can be seen, fair play. Flounces are a nice question. We like them when they wave and flow, as in a very light material—muslin, gauze, or barege; when a lady has no outline and no map, but looks like a receding angel or a dissolving view; but they are certainly objectionable in a rich material where they flop, or in a stiff one, where they bristle, and where they break the flowing lines of the petticoat, and throw light and shade where you don't expect it. In short, we like the gown that can do without flounces, as Josephine liked the face that could do without whiskers; but in either cases it must be a good one.

Scraps.

THE PRAIRIES.—A poetical contributor to the Burlington, (Vt.) Free Press, thus apostrophizes the prairies:—

Great western waste of bottom land
Flat as a pancake, rich as grease!
Where gnats are full as big as toads,
And skeeters are as big as geese!
O, lonesome, windy, grassy place,
Where buffaloes and snakes prevail!
The first with dreadful looking face,
The last with dreadful sounding tail!
I'd rather live on camel's rump,
And be a yankee doodle beggar,
Than where they never see a stump,
And shake to death with fever 'n' ager!

"Mien Got?" says a Dutchman in the market house at Monterey, a short time ago who was searching in vain for some cabbages, "dosh Mexigans is no better than Hottentots—dey ish'nt got no kale, no kront, no notten. Dunder and blizen no wonder dey can't fight."

"Mr. Green," said a tolerably dressed female the other day, entered a grocery in which were several customers, "have you any fresh corned pork?" "Yes, ma'am." "How much is this sugar a pound?" "One shilling, ma'am." "Let me have," she continued, lowering her voice, "half a pint of gin, and charge it as sugar on the book."

Mrs. Butler, in her 'Year of Consolation,' describes how poor a rival of Nature, art in its highest perfection is; and does it too with a single stroke of the pen. She is painting a moon-light night at Rome:—"The full moon hung over

the river in a sea of mellow light, indescribably soft and powerful; the purple line of the Alban hills was distinctly visible against the pearly horizon, while the roses in the garden near the bridge showed their colours as though by day, so potent was moonlight, with us to wane and colourless. Opposite this great and lovely glory flamed in the distance like a huge blazing thimble.

A Yankee paper says: 'Our glass went clearly thirty degrees below nothing, and would have went much lower but it wasn't long enough.' Another paper says: 'We have no thermometer in the town, so it gets as cold as it pleases.'

Which is the laziest class of persons? Tall people. Why? Because they are always longer in bed than others.

News Department.

EMIGRANTS.—We are sorry to state that the condition of emigrants in the city from sickness is deplorable: 350 patients are in the hospital, and one of the medical attendants, Dr. Grasset, is dead.

THE EMIGRANTS.—The *Montreal Pilot* gives the following awful intelligence as regards the condition of the emigrants in that place, upon the authority of a respectable eyewitness:

There are at the present moment 48 men sick from exposure, fatigue, and the attacks of disease. All the Grey Nuns in attendance, 2 of the Sisters of Charity, 5 physicians, and 8 students, now he sick; to which gloomy and sickening record we must add the number of 1563 persons, of all ages and sexes, huddled on beds of wretchedness and corruption, in many cases without an attendant to afford a drop of water, or to even attend to those decent formalities which the sad solemnities of death require.

The great danger to the health of the city had caused the citizens to take steps to procure Boncherville Island for the erection of sheds, hospitals, &c., to which the sick might be conveyed.

EMIGRANTS HOSPITAL, TORONTO.

Admitted during the week ending July 11th, 149; died, 24; discharged, 23; remaining in Hospital, 315.—besides 43 admitted up to ten o'clock yesterday.—Patriot.

The *Montreal Gazette* says that the proprietors of the American steamboats on Lake Champlain have come to the resolution of not conveying any emigrants by that route, to the United States, however apparently healthy, for, they allege, disease continually breaks out among them.

Weekly return of sick in the Marine and Emigrant Hospital, Quebec, from June 27th, to July 3rd, 1847.

Discharge	Remain- ing	Since admitted.	To- tal.	Dis- charged.	Died.	Re- main- ing
Men,	431	210	791	168	22	601
Women,	170	81	251	44	8	199
Children,	28	21	49	14	11	24
Total,	629	322	1091	226	41	824

(Signed) Jos. PAINCHAUD, Junr.,
House Surgeon.

QUARANTINE HOSPITALS.—The following statistics will show the condition of the marine hospitals on Staten Island at the present time.

Rem-ain-
ing in Hospitals, June 28th - 607
Admitted since - 948

Total under treatment - 945
Discharged - 152
Died - 25

Remaining in the Hospital - 768

KINGSTON HOSPITAL.—Dr. Stewart complains bitterly of the medical management, under Drs Robinson and Meagher, of this institution, that males and females have been indiscriminately placed together in the same ward, and, in short that the Drs. paid by Government to attend the institution, are totally incompetent to manage its affairs. Dr Stewart, asks for an enquiry into the abuses of which he complains.

The following is alleged by the French reformers to be the average postage at present prevailing among the principal nations, and is a statement which I believe to be pretty correct.

	Centimes.
England—uniform postage	10
Prussia—3 zones	26
Spain—uniform	27
United States—3 zones	23
Sardinia—7 zones	34
Austria—2 zones	34
Russia—uniform	40
France—11 zones	43

A MAN ATTACKED BY A BEAR.—The *Bytown Packet* states that a man was attacked by a bear near the Madawaska River, a few days ago. As the man attempted to escape up a tree, the bear nearly tore his legs off. The animal was at length frightened away by the cries of the man, who was so severely hurt that his life was despaired of.

EXTRAORDINARY HAIL STORM.—The *Bytown Packet* states that a thunder-storm in the Township of Horton, was succeeded by a hail-storm, in which the hail stones were five or six inches in circumference. The storm cut up or laid down all the crops along its course.

The corner stone of a Provincial Lunatic Asylum was laid at St. John, New Brunswick, about a fortnight ago.

A toll house, between Brantford and Hamilton, was broken open one night last week, and robbed of \$25.

The late Hamilton excursion to the Falls, did barely pay the expenses.

The *Brantford Courier* says, the crops in that neighborhood are much better than had been represented.

The *Brantford Courier* complains of the large numbers of starved and diseased emigrants thrown upon the generosity of the inhabitants of that town.

A vote to exclude from the Jury box all Odd Fellows, was passed at a late town vote Westfield, Mass.

A new iron steamer called the *Magnet*, was launched at Niagara a few days ago.

A riot took place on the steamer *Victoria*, at Oswego, a few days ago, principally occasioned by a party of a few lads going on board, throwing over the anchors, &c. The U. S. Sheriff took the ringleaders into custody.

The Lachine Canal will be closed on the seventeenth of August next, from which date the Navigation through the Canal will be suspended until further notice is given by the Board of Works.

Travellers from Boston to St. John now frequently, by steamboat, perform the distance in 24 hours.

225 Emigrants died at the Sheds in Montreal in the week ending 3rd July.

It is stated that General Taylor has been superseded in the command of the army by General Scott.

CONGRESS OF NATIONS.—Dr. Bowring has proposed in the British House of Commons that a Congress of Nations be assembled, to agree on a scale of coins, weights and measures for all countries.

EXECUTION OF COGHLIN.—Coghlín the murderer of Oliver, was executed at Guelph, on Tuesday the 29th inst. He addressed the multitude assembled to witness his execution nearly half-an-hour and prayed forgiveness of the wife of the murdered man. He desired his father to go away, and not witness his last moments. It appears that about 1500 persons were assembled. So strong was the fear of retaliation, that the carpenter who had commenced to put up the scaffold, abandoned his labours, lest he should fall a victim for the part he took in the affair; and he was only induced to complete the work by the priest declaring that if necessary he would do it himself. Coghlín made a written statement the evening before his execution. He declared that he was not a murderer, but that the Oliver's were disturbers of the public peace; that several quarrels which had taken place between them had been brought for adjudication before magistrates, but that from first to last he (Coghlín) had never had justice done to him. He stated that on the day of the murder, Oliver had severely beaten his (Coghlín's) brother; that Coghlín asked Oliver why he had done so, but received no answer. Robert Oliver struck him with a stone, and Richard struck him with a bayonet several times. Coghlín says he had no intention of murdering any one, and told Oliver to turn his bayonet away and fight with his hands, and fight like a man. Coghlín took out his knife, and made a stroke at Oliver, but he declares he had no intention of killing, and did not even know where he had struck. When he heard of Oliver's death, he would not believe it.

THE EMIGRANTS.—The *Kingston Argus* says that from 1st April to 1st June, 182 patients have been admitted into Hospital. Of these 22 have died and 32 have been discharged. During that time 166 out-patients have been under medical treatment, of whom 33 have died.

Since the 15th June, 53 have been admitted into Hospital, of whom 8 have died, and 6 have been discharged. During the latter period 40 out-patients have been visited, none of whom have died.

EMIGRANT PASSENGERS.—From the 21st of April, to the 27th of June, inclusive, 74,184 emigrant passengers arrived at New York, of whom 2,073 were admitted into the Marine Hospital. Of those admitted, four per cent, or 197 died; 1,227 recovered, and were discharged; remaining in the Marine hospital, 649.

Office of the Chief Agent for the Superintendence of Emigration to Canada.

Quebec, 26th June, 1847

Number of Emigrants arrived at the ports of Quebec and Montreal, during the week ending this date:—

	Steerage.
From England	2641
From Ireland	3250
From Scotland	9
From Germany	138
From Lower Ports	42
Total	5123
Previously reported	26215
Total	32338
To same period last year	21532
Increase	10806

A. C. BUCHANAN,
Chief Emigrant Agent.

Comparative Statement of Arrivals and Tonnage at Montreal, in the years 1846 and 1847, up to 26th June, inclusive:

	Vessels.	Tonnage.
1846	659	241,349
1847	439	187,825
Less this Year,	170	56,024

The *Montreal Herald* says, seven German Vessels have arrived in the river, and at Montreal, under the provisions of recent British Statutes and Orders in Council. These we believe are the first vessels bearing a foreign flag that have acceded the St. Lawrence since the Con-quest.

The *Bytown Packet* says Arrangements are being made to construct a Rail road between Carillon and Grenville, on the Ottawa.

The *Houston Telegraph* learns that the holders of Texas promissory notes and bonds are going to make strenuous exertions to get the next Congress to assume the whole debt of Texas.

The *Quebec Gazette* says, we are happy to hear that the five Roman Catholic Clergymen who lately returned sick from *Grosse Isle* are now considered out of danger.

At the fourth sale of funds of the St. Catharines Building Society, five shares were sold, at from £49 to £50 1/2 per cent bonus.

The Propeller *Earl Cathcart*, arrived at Windsor on Monday the 21st, and will proceed to the Bruce Mines in the course of next week for a load of copper ore.

The inhabitants of Brantford have erected sheds for the reception of emigrants. The *Courier* states that many of them are in a wretched condition.

The President of the United States is making a tour of the country, he has visited New York and other places; he is generally received with great attention and some pomp.

The Legislature of Nova Scotia has been dissolved by proclamation. The writs for a new election are made returnable on the 21st August. The elections will take place about the 6th of August.

Accounts lately received from the Emigrant Station are more and more favourable. A better class of emigrant is arriving—especially from Liverpool—from which port previously the most sickly and wretched arrived.—*Transcript.*

There is an immense deal of disease among the emigrants who have reached this city. There are, at this moment, we understand, nearly 350 sick in the hospital. Half a dozen new sheds that were erected lately are occupied with the more convalescent. We fear there is real ground for apprehending danger to the health of the city. Complaints are made that the decks of the steamboats bringing emigrants to this city are suffered to be crowded almost to suffocation without the slightest reference to the health of the emigrants. If, as is alleged, 1000 human beings have been crowded on the deck of one steamer, it is high time this barbarous cruelty, arising from the cupidity of the steamboat proprietors, should be put a stop to. We have heard that there is an intention to call a public meeting, to devise measures to meet the present fearful emergency.—*Examiner.*

During the last eight months more recruits have been enlisted for the army at Skibbereen, Cork, where distress has been extremely great, than during the previous twenty years.

The Government, at the instance of Mr. Shell, has increased the sum payable to the Catholic Bishop of Newfoundland, from £75, to £300 a-year.

A dreadful storm of wind, lightning, and rain, occurred on the 21st ult., at the mouth of the Danube. Nearly all the ships in the river were driven ashore, and several were capsized.

The Norwegian silver mines at Kongsherg have lately become more productive, and their produce, during the first three months of this year, has been sold for more than £22,000.

A German newspaper states that the potato rot has appeared in Hadelberg, and that the potatoes affected by the disease become decomposed sooner than was the case last year.

The gross receipts of the German Customs Union in 1846, amounted to 25,746,831 thalers and the net receipts, after the expenses had been deducted, were 22,113,132 thalers (£3,310,963.)

A correspondent of *Herapath's Journal* estimates the amount of railway calls for June, at £3,896,756, viz: English £1,998,678, Irish £193,750, Scotch £154,328, and Foreign £1,550,000. The calls already advertised for July, amount to £3,000,000.—*[Walker & Smith's European Times.]*

BARRELS WILL BE CHEAPER.—A machine has been invented, and is now in operation at New Haven, and also in Albany, for dressing barrel staves. It will make 7000 such staves, or hog-head staves in ten hours.

A return, moved for by Mr. T. M. Gibson, shows that the gross total quantity of grain and meal landed in Ireland during the ten weeks preceding the 22nd May last, amounted to 1,238,073 quarters, of which 900,176 quarters came from foreign countries, and British possessions, and 337,897 quarters from Great Britain.

The quantity of corn imported into France amounted, on the 31st April last, to 4,000,000 of hectolitres, about one-half of that imported into England.

The consumption of cotton in France, in the first four months of 1846, was 43,432,000 lbs; in the corresponding period of this year, 26,000,000.

The free importations of all sorts of grain into France has been extended to the 31st January, 1848.

SECRETARY'S OFFICE.

Montreal, 26th June, 1847.

HIS EXCELLENCY THE GOVERNOR GENERAL has been pleased to make the following appointment, viz:—

The Honorable WILLIAM HENRY DRAPER, to be one of the Judges of the Court of Queen's Bench, in that part of the Province formerly known as upper Canada, in the place of the Honorable Christopher A. Hagerman; deceased.

Provincial Parliament.

LEGISLATIVE ASSEMBLY.

Monday, July 5.

Mr. PRICE inquired of Ministers whether it be true that the present Judge at the late Western Assizes, did, upon committing a prisoner to gaol—for a crime of which he had been convicted, for six months—commit him for a further period of two years and a half, for impertinence?

Mr. SHAWWOOD replied he had received no authentic information on the subject, and consequently, could not tell whether it were true or not.

Tuesday, 6th July.

EMIGRATION.

On motion of Attorney-General Sherwood a committee was formed to inquire into the best means of conducting emigration, &c. and moved its members to compose said committee, the Hon. the Receiver-General, the Hon. A. N. Morin, the Hon. Mr. Aylwin, the Hon. Mr. Moffat, Dr. Rousseau, Mr. McConnell, and the mover.

Wednesday, July 7.

WANT OF CONFIDENCE IN THE COMMISSIONER OF CROWN LANDS.

Mr. Cameron (of Lanark) brought forward his motion of want of confidence in the Commissioner of Crown Lands, charging him with general incapacity, and also making the following specific charges: Members of that House, who were desirous of procuring information at the Crown Lands office were forbidden to enter the office; they were compelled to send up their names and to state their business; and the consequence was that information which could be obtained by the applicant for himself, by merely asking over the map, with the assistance of a single clerk, was only obtained after long and unnecessary delay. But the most serious charge he had to advance was the manner in which the mercantile community were injured by an order of the Commissioners, that they should be compelled to cut double the quantity of timber which they were formerly required to cut. The effect of this order was easily to be traced in the bankruptcies published in the *Gazette*.

A debate ensued, and the motion was finally lost by a majority of two; yeas, 32; nays 30.

SIMCOE ELECTION.

Mr. Baldwin brought up the matter of the Simcoe Election, and examined the Clerk of the Crown in Chancery.

He then moved a resolution embodying the principle, that the power to issue writs was vested in the House, except in certain cases.

The question was referred to the Committee on privileges and elections.

LIVERPOOL AVERAGE PRICE OF GRAIN.

	Wht.	Rly.	Oats.	Rye.	Buz.	Peas.	Flour.
May 8	81 1/2	51	0 3/4	6 1/2	3 1/2	3 1/2	0 0
May 15	85	52	7 1/2	11 1/2	2 1/2	3 1/2	0 0
May 22	91 1/2	55	10 1/2	3 1/2	4 1/2	6 1/2	11 0 0
May 29	102 1/2	56	5 1/2	3 1/2	11 1/2	5 1/2	3 0 0
June 5	99 1/2	55	3 1/2	11 1/2	0 60	3 1/2	0 0
June 12	88 1/2	53	0 3/4	1 1/2	1 1/2	3 1/2	1 0 0
Aggregate Average of the Six Weeks	92	53	10 3/4	2 1/2	6 1/2	5 1/2	6 0 0
Only on Foreign Produce present Work	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Do other Br. Col.	0 0	0 0	0 0	0 0	0 0	0 0	0 0

LATEST NEWS FROM ENGLAND.

Corn Market, Liverpool, July 4th.

Prices have become unprecedentedly low, and universal gloom is every where felt. At the closing of our market yesterday afternoon, the best Western Canal brands would not fetch more than 34s. 6d. per barrel—in some few instances it reached 35s.; but the transactions were generally of a retail character, and did not indicate the slightest speculative disposition. Large quantities sold at 34s. per brand, but that is a price which could not be realised for any considerable quantity to day. Richmond and Alexandria are quoted at 34s.; Philadelphia and Baltimore 32s.; New Orleans and Ohio 31s.; United States and Canadian, sour, 22s. and 23s.

Toronto Market Prices.

	s.	d.	q.	d.
July 17.				
Flour, per barrel, 196 lbs.	25	0	30	0
Oatmeal, per barrel, 196 lbs.	25	3	27	6
Wheat, per bushel, 60 lbs.	3	9	5	3
Rye, per bushel, 56 lbs.	2	9	3	4
Barley, per bushel, 48 lbs.	2	4	2	8
Oats, per bushel, 34 lbs.	1	10	2	2
Peas, per bushel, 60 lbs.	2	8	3	4
Potatoes, per bushel.	3	6	4	0
Onions, per bushel.	3	9	4	0
Tub Butter, per lb.	0	6	0	7
Fresh Butter, per lb.	0	6	0	7 1/2
Eggs, per dozen.	0	5	0	6
Beef, per cwt.	17	6	22	0
Beef, per lb.	0	2	0	3 1/2
Pork, per 100 lbs.	20	0	22	6
Hay, per ton.	35	0	40	0
Straw, per ton.	25	0	30	0
Timothy, per bushel, 60 lbs.	5	0	6	3
Mutton, per lb., by the qr.	0	2	0	3 1/2
Veal, per lb., by the qr.	0	2	0	3 1/2
Turkeys, each.	0	0	0	0
Geese, each.	2	6	3	9
Ducks, per couple.	2	6	3	9
Fowls, per couple.	1	6	2	0
Chickens, per couple.	1	0	1	6
Bacon, per lb.	0	4	0	5
Hams, per cwt.	35	0	50	0
Lard, per lb.	0	3	0	5 1/2

Advertising Department.

Wanted to Rent by the Board of Health.

A LARGE DWELLING HOUSE, or other Building, suited for a *House of Refuge* for the temporary residence of the Widows and Orphans of diseased Emigrants, and other Emigrants who are too feeble to work for a livelihood, and too indigent to support themselves. Apply to the Chairman of the Board of Health Toronto, July, 12, 1847.
 [E] All the city papers to insert once.

Boot and Shoe Store,

4, CITY BUILDINGS, TORONTO. SIGN OF THE GOLDEN BOOT.

THE Subscriber embraces the present opportunity of returning thanks to his numerous Customers, and the Public for the liberal patronage he has received from them since his commencement in Business, (being about fourteen years,) and begs to inform them, that having recently added to his Premises, and greatly enlarged his Stock, he has now on hand a large Assortment of Ladies', Gentlemen's, and Children's BOOTS & SHOES, INDIA RUBBERS, &c., of all sizes and quality, which he is disposed to sell on the most moderate terms.

JAMES FOSTER.

January 18, 1847.

Notice.

THE BOOK, STATIONERY, PAPER-HANGING, and BINDING BUSINESS hitherto conducted by R. BREWER will, from and after the 1st of April ensuing, be carried on by the undersigned Firm, under the Name of

Brewer, McPhail, & Co.,

At the present well-known Stand, No 46 KING STREET EAST.

In connection with the above, the Subscriber will open, on the 1st of May next, in the same Premises, the

Drug & Medicine Business,

In all its Branches, Wholesale and Retail. This Department will be conducted by one of the Firm, Mr. JOHN BENTLEY, who possesses, from many years experience in several of the best houses in England and in this Country, a thorough and practical knowledge of the Profession.

RICHARD BREWER, EDWARD MCPHAIL, ROBERT MCPHAIL, JOHN BENTLEY.

Toronto, 9th March, 1847

J. Ellis, Civil Engineer.

HORIZONTAL, Inclined, and Undulating Lines of Railways Surveyed, Macadamized and Plank Roads, Canals, Docks, Harbours, every description of Drainage, Tunnels, and Bridges of Brick and Stone, Iron and Wood, both Pendant and In-sistent, with correct Specifications. Sections or Model Maps and Estimates showing the true cost of construction, founded upon Rules and Principles strictly Mathematical, obtained through sixteen years experience and active practice, both as Engineer and Contractor.

N.B. J. E. will give detailed Estimates, if required, to persons employing him, showing and proving that the Calculations are founded upon true principles, with Plans, Sections, or Model Maps, showing the true Cubic Measurements of Cuttings, Embankments, Grading, and Side Drains, so simplified that almost any person may keep a correct check as the work proceeds upon the quantity of work done.

Peter street, Toronto, }
 January, 1847. }

Notice to Agriculturists.

JOHN BELL, No. 7, VICTORIA STREET, TORONTO, CARRIAGE, SLEIGH, AND AGRICULTURAL IMPLEMENT MANUFACTURER, begs to acknowledge his sincere thanks to his numerous Friends and Customers, who, for a series of years, have so liberally patronized him in the above line. J. B. continues to manufacture, and keeps constantly on hand, Double and Single Carriages, Lumber Wagons, Carts, Lumber and Pleasure Sleighs, Cutters, Harrows, Scotch Ploughs (Wooden),—an article that defies competition, one of which was awarded the first prize at the late Provincial Agricultural Exhibition—Horse Rakes, Turnip Drills, and every article in the Agricultural Implement line.

He calls particularly attention to his "Premium two Horse Reaper," which obtained the prize at the late Meeting of the Agricultural Society of this District, and was pronounced by the Judges to be superior to any Machine of the kind ever imported into the Country. The machine is warranted to cut from 15 to 20 acres per day in a satisfactory manner, and will be sold at \$90 cash or \$100 at six months with good security.

J. B. in offering the above mentioned articles to the Public, begs to be understood to warrant every article manufactured by him, and having had a long practical experience in the business, and employing none but first rate Mechanics, feels confident that he can give general satisfaction.

All orders punctually executed when accompanied with cash or approved references in the City.

Mr. C. Kahn,

SURGEON DENTIST, King Street, 2 doors West of Bay street, Toronto.



Home District Mutual Fire Company.

OFFICE—Nelson Street, opposite Adelaide Street, Toronto.

INSURES Dwellings, Houses, Warehouses, Buildings in general, Merchandise, Household Furniture, Mills, Manufactories, &c.

DIRECTORS:

W. A. Baldwin, William Mathers, Dr. Workman, John Doel, John McMurrich, John Eastwood, James Leslie, B. W. Smith, J. B. Warren, A. McMaster.

J. H. PRICE, Esq., President. J. RAINS, Secretary.

All Losses promptly adjusted.

Letters by Mail must be post-paid. December 26, 1846. 444-

Workman Brothers & Co.,

No 36, KING STREET.

OFFER FOR SALE:—

- 60 tons English Iron,
- 20 tons Best Iron,
- 20 tons Swedes Iron,
- 15 tons Hoop and Band Iron,
- 10 tons Sheet Iron,
- 3 tons Plough Shares,
- 2 tons Waggon Boxes,
- 2 tons Cast Steel,
- 3 tons Blister Steel,
- 1 ton Spring Steel,
- 1/2 ton Lisle Steel,
- 2 tons Camp Ovens,
- 2 tons Bellied Pots,
- 5 Blacksmiths' Bellows,
- 60 Blacksmiths' Vices,
- 15 "Hill's" warranted Anvils,
- 120 Sugar Kettles,
- 40 Potash Coolers,
- 10 boxes "Pontpool" Plates,
- 25 Box Stoves, 21 to 36 inches,
- 450 casks Cut Nails,
- 50 casks Wrought Nails,
- 20 casks Patent Pressed Nails,
- 35 casks Horse Nails,
- 40 casks Wrought Spikes,
- 40 casks Coal Churn,
- 200 boxes Windows Glass,
- 2 tons Putty,
- 20 dozen Common English Spades,
- 10 dozen Common English Shovels,
- 5 dozen Irish Spades,
- 2 dozen Scotch Spades,
- 60 dozen Steel Shovels,
- 8 dozen Steel Shovels,
- 10 dozen Grain Scoops,
- 40 Philadelphia Mill Saws,
- 40 "Fairbanks'" Platform & Counter Scales.

—ALSO— JUST RECEIVED, ex ships *Capricorn*, *Baron of Brander* and *Essex*, in addition to their present Stock of **HARDWARE.**

18 PACKAGES OF SHEFFIELD & BIRMINGHAM **Shell Goods.**

With an Assortment of American Hardware. Toronto, 25th March, 1847.

R. H. Brett,

161 KING STREET, TORONTO.

GENERAL MERCHANT—WHOLESALE

IMPORTER OF HEAVY HARDWARE, Birmingham, Sheffield and Wolverhampton SHELL GOODS, EARthenWARE, and GLASSWARE, in Crates and Hubs.

Also,—Importer and Dealer in Teas, Sugars, Tobaccos, Fruits, Spices, Oils, Points, Dye Woods, Gunpowder, Shot, Window Glass, Cotton Bating, Wadding, and Candle Wick.

Together with a select Stock of STATIONERY, English, French & German Fancy Goods, Combs, Beads, &c. &c. &c.

Toronto, Nov., 1846. 1-6m.

FOR Cheap Birmingham and Sheffield Goods, try the

NEW HARDWARE STORE,

No. 77 Yonge Street, a few doors North of King-st.

J. Shepard Ryan,

Having a Partner in England, can purchase Goods at as Low Prices as any other House, and respectfully solicits a share of public patronage.

CASH PURCHASERS will find it to their advantage to give us a call, as we calculate on clearing off our Old Stock every winter.

Toronto, 1st January, 1847. 1-12m.

Swain & Co's Hygeian Medicine,

OR, WORSDELL'S

Vegetable Restorative PILLS.

RECOMMENDED as the best FAMILY MEDICINE now in use, by thousands in Great Britain, the United State of America and Canada, for Restoring Impaired Nature to Health and Vigour, and preventing Disease in the Human System, by Purifying the Blood.

Prepared solely by J. SWAIN & CO., 65, Yonge Street, Toronto; who respectfully call the attention of their Agents, and the Public in general, to their various other Medicines, particularly their **CARMINATIVE for CHILDREN**, and their **STOMACHIC BITTERS, LSSSLSLS, PERFUMERY, &c. &c. &c.**

Authorised Travelling Agents.

Mr. Jacob Hick, Mr. James Wetherald, Mr. W. H. Smith, and Mr. D. Swallow;

By whom (and at their Establishment, as above) Orders will be received, and punctually attended to.

STRIKING CURES.

WHO WISHES TO THROW AWAY HIS CRUTCHES?

Read the following Extract of a Letter received from our Agent at Richmond, Dalhousie Dist:— Richmond, 5th August, 1846.

Messrs. John Swain & Co.—As Agent here, I beg leave to inform you, that in all cases where your invaluable Pills have been used in this vicinity, they have been productive of the most happy results; the relief afforded to individual suffering in various ways has been almost incredible; therefore I cannot pretend to give a detailed account of their various virtues; but at the same time I cannot forbear mentioning one particular case of a man, who, for some four or five months, was confined to his house, and most commonly to bed, and not able to reach the door of his dwelling, excepting by the use of Crutches, from the effects of inveterate running sores in both legs; yet, surprising to say, the Pills have entirely effected a cure, and the man is now able to work, and travel about his business, whole and sound; his name is William Lackey, residing in the Township of Goulbourne, in this District. I remain, Gentlemen,

Yours with respect, P. McILROY.

To J. Swain & Co.,

Edwardsburgh, January, 1847.

GENTLEMEN,—I have now great pleasure in handing you the annexed certificate, from my wife, which will speak for itself. Your General Agent, Mr. Wetherald, desired me to give you a certificate as soon as she was cured, but I refused to do so until she had remained well six months. That period has now elapsed, and I am happy to inform you that she has had no return of her complaint, but is in perfect health. ABRAHAM WILSON.

CURE OF OLD-STANDING STOMACH COMPLAINT.

By Swain & Co's Hygeian Medicine, or Worsdell's Vegetable Pills.

To J. Swain & Co.

GENTLEMEN,—For sixteen or seventeen years I was afflicted with a Stomach Complaint, attended with distressing pain and general debility, and for the last two years of the time I was not expected to recover. At that time my husband was appointed Agent for the Sale of your Pills, when I determined to try them myself, and, by persevering in taking them every day, till I had used five boxes, I was perfectly cured, and have remained entirely well ever since. I remain, Gentlemen, yours respectfully, MARGARET WILSON.

REMARKABLE TESTIMONY.

Testimony of C. J. Forsyth, Esq., Wellington Square.

To J. Swain & Co.

Wellington Square, January, 1847.

GENTLEMEN,—I have been in the practice of using your Pills myself, and recommending them to others, and I have found them to be unequalled in their effects upon the human system; and I believe your Medicine is a safe and efficient remedy against those afflicting disorders to which mankind is subject.

I am yours very respectfully, C. J. FORSYTH.

MARK THIS.

MRS. OLIVIER, Wife of F. A. Oliver, Esq., Tyandemago, parted with a Tape Worm from 25 to 30 feet long, from the use of Swain & Co.'s Vegetable Restorative Pills.

J. WETHERALD.

CURE OF PAIN IN THE SIDE.

Mr. E. T. Martin, of Bayham, was afflicted with a pain in his right side for two years, but from the use of the Restorative Pills for two months, he was perfectly cured.

CURE OF INFLUENZA.

Mr. B. Wisco's CHILD was sick for three months, from Influenza, and was reduced to a skeleton, and all hopes of his recovery were given up. He was advised to take the Vegetable Restorative Pills, which soon effected a cure, and he is now enjoying good health.

CURE OF INFLAMMATION IN THE BOWELS.

Mr. W. H. SMITH, Toronto, was suddenly attacked with Inflammation in the Bowels; in this alarming state he took a few doses of the Vegetable Restorative Pills, and was perfectly cured in four days.

CURE OF GRAVEL.

Mr. SLATER of Simca, Grand River, suffered severely from Gravel, but, by taking a few boxes of the Restorative Pills, he is now entirely cured of that distressing complaint.

CURE OF LIVER COMPLAINT.

Mrs. Slater suffered for years from Liver Complaint, and tried various remedies without effect; she, however, took a box of the Restorative Pills, and, to the great astonishment and joy of herself and the whole family, she is now perfectly cured, and never enjoyed better health.

WONDERFUL RESTORATION TO HEALTH.

Mr. AVERILL, of the Township of Brantford, farmer, was unable to work during the most of the summer; but, by taking the Restorative Pills for five days, he was so much better as to be enabled to perform a good day's work at cradling wheat.

WONDERFUL CHANGE.

SUSANNAH ZIMLS, of Weston, received an injury when four years old, which made her a cripple for years, attended with an alarming swelling in her leg and body. After receiving medical treatment for a long time, without effect, at last I was advised to take the Vegetable Restorative Pills, which speedily reduced my body to its natural size, and my lameness is much relieved, and I am now in a fair way of recovery.

CURE OF CHILL FEVER AND INFLAMMATION OF THE LUNGS.

Mr. E. DICKSON, of Port Rowan, has been entirely cured of Chill Fever and Inflammation of the Lungs by the use of the Vegetable Restorative Pills, even after good medical skill had failed.

Fairbank's

Platform and Counter Scales.

THESE SCALES are constructed with great care by experienced workmen, under the supervision of the inventors. Effort is made to secure not only perfect ACCURACY, but also the greatest STRENGTH and DURABILITY. They have been long known and severely tested, and have been found ALWAYS RIGHT.

These Scales are adapted to every kind of business transacted by weight; and from the extensive use, and the high repute they have attained, both in England and the United States, as well as in other countries, may now be regarded as the universal standard.

Scales for weighing Wheat both portable and to be set in the floor, furnished with weights to weigh even bushels. For Sale by

WORKMAN BROTHERS & Co.

Toronto, 22nd March, 1847.

NEW CHEAP

Clothing and Tailoring ESTABLISHMENT,

130 YONGE STREET, TORONTO.

Samuel Morphy

BEGS to inform his numerous Friends and the Public that he has commenced business in the above line at No. 130 Yonge Street, Two Doors North of Queen Street, and adjoining Mr. Good's Foundry.

A VARIETY OF

READY-MADE CLOTHING

suitable for country use, constantly on hand and will be sold Cheap for Cash.

Farmers' Cloth received and made up to order on the most reasonable terms.

Toronto, March 17, 1847. 10

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