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THE AGRICULTURIST

AND CANADIAN JOURNAL.

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

WM. McDUGALL, EDITOR.

WM. McDUGALL & Co., PROPRIETORS.

VOL. I.

TORONTO, JUNE 15, 1848.

NO. 11.

OUR DIFFICULTIES.

Many of our subscribers will no doubt be disappointed at not receiving the eleventh number of the *Agriculturist* sooner. But when they are made acquainted with the true position of its affairs, we trust they will be disposed to admit the necessity of the changes we are about to announce.

When the *Farmer* and the *Cultivator* were merged in one at the commencement of the year, certain calculations were made, and arrangements entered into, based upon what had been done during the last year, and what it was therefore expected could be done this year. The question was discussed between the proprietors, whether the paper should be *monthly*, like the *Cultivator*, or *semi-monthly*, like the *Canada Farmer*. We had no doubt, from our own knowledge, and from the representations of our agents, that a *semi-monthly*, containing a variety of matter, but still adapted to the agricultural reader, would be more generally acceptable than a monthly paper, exclusively agricultural. But the expense of printing and conducting such a paper, we knew would be considerably more than double that of a monthly, and the question then was, whether we could get a sufficient number of subscribers, at so low a price as one dollar, to pay that additional expense. We came to the conclusion that, by sending active agents into every District in Western Canada and allowing them a sufficient commission to induce them to work—our subscription list could be so increased as to cover the expenses at least—and that by requiring our share of these subscriptions in *advance*, or at the time the orders were sent us, we should be able to pay as we went along.

Accordingly, we commenced with an edition of 8000—(which would just about pay all expenses, if we could get our share of the money when we were entitled to it)—and sent out our agents. Six months of the year have now passed; and instead of having got rid of our edition of 8000, as we anticipated, we have only sent off a little over 5000. Instead of getting our share of the subscription money *in advance*, we have received not quite enough to pay for the paper! We have on our books, charged against Agents and Societies over £300, but when we will get it, or whether we will ever get it is, we are obliged to say, not very certain. Agents say there is no money in the country. Some have given up, because, though they can find plenty of persons who would take the paper, yet they cannot collect money enough to pay their travelling expenses! Three or four Societies paid according to our terms, but several others wished us to wait until they received the Government allowance, for otherwise they could not take the paper. Anxious to circulate our paper as far and as wide as possible, and thinking the amount coming from Societies, at all events *safe*, we have, so far, complied with their request. But whether they will get any money at all from Government *this year*, is, in our opinion, very doubtful; and whether these Societies will, in such a case, be in much of a hurry to pay us, is also we confess, having regard to past experience, open to some doubt.

Thus, all our calculations on one side have been disappointed,

chiefly, we believe, from the extraordinary scarcity of money in the country; and on the other side, our *expenses* and the *labour* of carrying on the work, have considerably exceeded our calculations! But the worst of the matter is that we see very little hope of *reversing this state of things*. Even with a circulation so much less than we had expected, if we had realized by the middle of the year what was due us, we could have weathered out the gale by knocking down our edition to something nearer the number circulated, and looking to another year and better times for remuneration. As it is, we have arrived at a crisis when we must either give up the publication, or make some change that would afford a better hope of our being able to overcome the difficulties that surround us. If we abandon it entirely, we must lose a very large amount, in addition to breaking faith with our subscribers, both of which we anxiously wish to avoid, if it be possible. What we propose is as follows:—After the next number, which will not be published till the 15th July—we will alter the form of the work so as to make it more like a book, and publish it *monthly*. To all *paid* subscribers we will send the new monthly *Agriculturist* complete for the year. Those who have not yet paid may, if they do not wish to patronize the work, pay for the half year, or twelve numbers sent, and order their names taken off our books. But this must be done before the 1st August next.—Payment must either be made to us or to our authorized agents.—We must again insist upon all letters to us being *post paid*.

In making this change we trust to meet the approbation of the great majority of our subscribers. We have neither grumbled nor complained to excite sympathy from the public. Since the writer has had charge of the Editorial department, he has endeavoured to avoid such expedients. It was preferred to let the paper stand upon its own merits, but the pressure of the times has been such, and our well-founded expectations (as we thought) have been so sadly disappointed, that we are driven to let our readers know the real position we are in, and to solicit real support for an agricultural paper, which many think has done good, and all admit is much needed in the country. By the arrangement above mentioned, we think we shall be able to set agents to work in those parts of the country where none have yet been, and at a time when we trust there will be more money afloat; and we shall also be able to keep faith with our subscribers, so far at least as sending them twenty-four numbers of an agricultural paper. Our agents will be able, we hope, to collect and transmit what remains unpaid, and by adhering strictly to the cash principle hereafter, we may manage to live till better times.

It has also become necessary that a change should take place in the proprietary of the *Agriculturist*, but what it will be we are unable to state until the next issue. Circumstances connected with this latter change have caused the delay in the present number, which could not be avoided.

GUANO DESTRUCTIVE TO THE WIRE WORM.—Amongst the communications lately sent to the Council of the Royal Agricultural Association, was one from Mr. Dickinson, on the application of volatile alkali as it exists in guano, for the extirpation of the wire worm.

Agriculturist and Canadian Journal.

TORONTO, JUNE 15, 1848.

CHEESE DAIRIES.

In this number we have given the remainder of an article, being the report of a committee of New York State Agricultural Society, on the above subject, copied from the Transactions of the Society. The remarks of the committee, as well as the matter taken from the work of Mr. Youatt, are worthy the attention of every farmer who is in a situation to follow the business of cheese and butter making. It is by seeking the best information that can be had, and endeavoring to make it our own, that we may expect to attain to perfection in the several branches of domestic economy. The bad butter and the inferior cheese that are brought to market in the different towns of Canada, are a reproach to our farmers. Too much attention has been given to raising grain, or, we should rather say too exclusive attention. Cheese has been made in such small quantities, that it has not been thought worth much trouble or care. We hope, soon to see signs of improvement, and to see on the shelves of our grocers, an article of home manufacture, that will take the place of what is now imported:—

Cheshire Cheese is generally made with two meals of milk.

"The general custom is, to take about a pint of cream, when two-meal cheeses are made, from the night's milk of twenty cows. In order to make cheese of the best quality, and in the greatest abundance, it is admitted that the cream should remain in the milk. The more common practice is, to set the evening's milk apart till morning, when the cream is skimmed off, and three or four gallons of the milk are poured into a brass pan, which is immediately placed in a furnace of hot water, and made scalding hot; then half the milk thus heated, is poured into the night's milk, and the other half is mixed with the cream, which is thus liquified, so as when put into the cheese tub to form one uniform fluid. The morning's milk is then immediately added to that of the evening, and the whole mass is at once set together for cheese.

"The rennet and colouring being then put into the tub, the whole is well stirred together; a wooden cover is then put into the tub, and over that is thrown a linen cloth. The usual time of 'coming' or surdling, is one hour and half, during which time it is frequently to be examined. If the cream rises to the surface before the mixing takes place, as it often does, the whole must be stirred together so as again to mix the milk and cream; and this as often as it rises, until coagulation commences. If the dairy woman finds that the milk is cooler than was intended, or does not come on account of coolness, hot water or hot milk may be poured into it. This must, however, be done before it is all coagulated, for the forming of the curd must not be tampered with. If it is too hot, the opposite means may be resorted to; but the more general practice is to suffer the process to proceed hot as it is, until the first quantity of whey is taken off, a part of which, being set to cool, is then returned into the tub to cool the curd. If too little appears to have been used, it renders the curd exceedingly tender, and an additional quantity may be put in; but this must be done before the coagulation takes place; for if added afterwards, it will be of little effect, as it cannot be used without disturbing the curd; which can then only acquire the proper degree of toughness; by having heated whey poured over it.

"When coagulation is formed, a point which is determined by gently pressing the surface of the milk with the back of the hand; but in this test experience is the only guide, for the firmness of the curd, if the milk be set hot together, will be much greater than that from the milk which has been set cold together. If the curd be firm, the usual practice is to take a common case-knife, and make incisions across it to the full depth of the blade, at the distance of about one inch, and again crosswise in the same manner, the incisions intersecting each other at right angles. The cheesemaker and two assistants proceed then to break the curd, by repeatedly pressing their hands down into the tub, and breaking every part of it as small as possible; this part of the business being continued until the whole is uniformly broken small; it generally takes about forty minutes, and the curd is then left covered over with a cloth, for about half an hour to subside.

"The bottom of the tub is set rather airt, the curd is collected to the upper side of it, and a board is introduced of a semi-circular form, to fit loosely one half of the tub's bottom. This board is placed on the curd, and a sixty pound weight upon it, to press out the whey, which draining to the lower side of the tub, is ladled out into brass pans; each part of the curd as are pressed from under the board, are cut off with a knife, placed under the weighted board, and again pressed; the operation being repeated again and again, until the whey is entirely drawn from the curd. The whole mass of curd is then turned upside down, and put on the other side of the tub, to be pressed as before. The board and weight being removed the curd

is cut into pieces of eight or nine inches square, piled upon each other, and pressed both with the weight and hand; these several operations being repeated as long as any whey appears to remain.

"The next thing is to cut the curd into three nearly equal portions, one of which is taken into a brass pan, and is there by two women broken entirely fine; a large handful of salt being added and well mixed with it. That portion of curd being sufficiently broken, is put into a cheese vat, which is placed to receive it, on a cheese ladder, over the cheese tub; the vat being furnished with a coarse cheese cloth. The second and third portion of the curd are treated in the same manner, and emptied into the vat; except that into the middle portion eight to ten times the quantity of salt is usually put. By some dairy women, each portion is salted alike, with no more than three large handfuls to each.

"The curd, when put into the cheese-vat in its broken state, is heaped above the vat in conical form, to prevent it from crumbling down, the four corners of the cheese-cloth are turned over it, and three women placing their hands against the conical form, gently, but forcibly, press it together. So soon as the curd adheres together so as to admit of it, a small square board, with a corner of the cloth under it, is put on the top with a 60 lb. weight or a lever is pressed upon it. Several iron skewers are at the same time stuck in the cone, as well as through holes in the side of the vat, from which they are occasionally drawn out and fixed in other spots, until not a drop of whey is discharged. The weight and skewers are then removed, and the corners of the cloth are either held up by a woman, or by a wooden hoop, while the curd is broken as small as possible, and skewering is repeated. The women then take up the four corners of the cloth, while the vat is drawn away and rinsed in warm whey; a clean cloth is then put over the upper part of the curd, and it is returned inverted into the vat. It is then broken half way through as before—these operations occupy from three to four hours."

"When no more whey can be extracted by these means from the cheese, it is again turned in the vat and rinsed as before in warm whey. The cloth now made use of is finer and larger than the former, and is so laid, that on one side it shall be level with the edges of the vat, and on the other wrap over the whole surface of the cheese; the edges being put within the vat, thus perfectly enclosing the whole mass. In this stage of the business the cheese is still higher than the edge of the vat; and to preserve it in due form, recourse is had to a binder, about three inches broad, either as a hoop, or as a cheese-fitter, which is a strong, broad coarse sort of tape, which is put round the cheese, on the outside of the cloth, and the lower edge of the binder pressed down within the vat, so low as that the upper edge of it may be level with the surface. The cheese is then carried to the press, and, a smooth strong board being placed over it, the press is gently let down upon it, the usual power of which is 14 or 15 cwt. In most dairies, however, are two presses, and in many three or four, of different weights; the cheese being by some put first under the heaviest, and by others under the lightest.

"As soon as the cheese is put in the press, it is immediately well skewered—the skewers being of strong wire eighteen or twenty inches long, sharp at the points and broad at the end; the vat and binder having holes, seldom more than an inch asunder, to receive them. As the press always stands near the wall, only one side of the cheese can be skewered at the same time, and it must therefore be turned half way round, whenever that is necessary; but this occasions no inconvenience, as the skewers must be frequently shifted, and many more holes are made than skewers to fill them. In half an hour from the time the cheese is first put in the press, it is taken out again, and turned, in a vat, into another clean cloth, after which it is returned to the vat; but is by some persons previously put naked into warm whey, where it stands an hour or more for the purpose of hardening its coat. At six o'clock in the evening the cheese is again turned, in the vat, into another clean cloth, and some dairy women pick its upper surface all over an inch or two deep, with a view of preventing blisters. This can be remedied if they occur by opening them with a penknife, and pouring hot water into the incision; then press down the outer side, put on a little salt, and place a piece of slate with a half pound weight on it. At six o'clock the following morning it is again turned in the vat, with a clean cloth as before, and the skewers are laid aside; it is also turned two or three times more, both morning and evening, at the last of which finer cloths are used than at first, in order that as little impression as possible may be made on its coat.

After the cheese has remained about forty-eight hours under the press, it is taken out, a fine cloth being used merely as a lining to the vat, without covering the upper part of the cheese, which is then placed nearly mid-deep in a salting tub, its upper surface being covered all over with salt. It stands there generally about three days—is turned daily, and at each turning well salted, the cloth being changed twice in the time. It is then taken out of the vat, in lieu of which a wooden hoop is made use of, equal in breadth to the thickness nearly of the cheese, and in this it is placed on the salting bench, where it stands about eight days, being well salted all over, and turned each day. The cheese is then washed in lake-warm water, and after being wiped, is placed on the drying bench, where it remains about seven days; it is then again washed and dried as before, and after it has stood about two hours it is empared all over with about two ounces of

sweet whey butter, and then placed in the warmest part of the cheese room.

"While it remains there, it is, during the first seven days, rubbed every day all over, and generally smeared with sweet butter; after which it should for some time be turned daily, and rubbed three times a week in summer, and twice in winter. The labor is performed almost universally by women, and that in large dairies where the cheese are sometimes upon an average 140lbs. each. The details above are for cheese of 60lbs. weight. The quantity of salt used is uncertain; about three pounds each, is the largest quantity, though much of it is wasted, and whether the cheese acquires much saltiness in the salting house, dairymen themselves are doubtful, though much salt is there expended. The sponginess and heaving of the cheese, which are sometimes complained of, Mr. Holland thinks, are faults to be attributed more to the inattention on the part of the work people than want of skill—"three certain preventives being, careful breaking, good thrashing, frequent skewering and powerful pressing," but may not improbably arise, partly from the use of cold and warm milk, which if mixed together will generate gases. Those of pungency and rankness, which are generally imputed to impurity in the rennet, and by some to want of salt, he thinks may be also more properly ascribed to the fermentation occasioned by the imperfect discharge of the whey."

The committee believe that the publication of the foregoing remarks on the manufacture of Cheshire cheese, which, taking all its properties into account, is probably one of the most valuable varieties for the English market, will prove useful to our dairymen. There are certainly many suggestions connected with the management of the dairy, which must prove highly advantageous to those who are engaged in the business. The demand for our cheese abroad is constantly increasing, and the nearer we can approach ours to the standard in England, the higher price will be obtained, and the larger profit to the dairyman. We desire to do all we can to aid in this matter, and to direct the attention of our dairymen to those methods which have stood the test of time, and which have ever proved successful when adopted,

There are many other varieties of cheese which have great celebrity in England,—the *Gloucester*, *Stilton*, *Dunlop*, &c.; but it is not thought advisable to give at length the process of their manufacture, as the committee are satisfied that cheese made in the manner of the Cheshire will prove as profitable as any that can be sent from this country.

The committee take pleasure in referring to the statements accompanying this report, made by Alonzo L. Fish of Herkimer county, in which many very interesting experiments are detailed, and many important directions are given as to the manner of preparing cheese for foreign markets, which cannot prove otherwise than valuable to the dairy interests of our State. Mr. Fish is entitled to great credit for the researches and investigations which he has made, and it is hoped he will continue them during the year and report the result to the society. The plan suggested for a dairy book, possesses many valuable requisites worthy of attention, and if generally adopted, will tend much to increase the quantity of superior cheese. Mr. Fish, in the opinion of the committee, is justly entitled to the special premium of \$50.

Mr. Newbury Bronson of Warsaw, Wyoming county, who received the first premium for his dairy last year, presented a statement this year. There are no very material facts stated in the present report of Mr. Bronson, different from those which were contained in the report of last year. The committee recommend a premium of \$20.

Mr. Bronson says that he has been reading "A treatise on milch cows, by M. Francis Guenon, and has made comparisons between his delineations and observations, and the cows of his dairy. The views of the author are, in his opinion, worthy of attention, and the information it contains is valuable to dairymen. Mr. B. has tried experiments to make hard milkers milk easy, and has been entirely successful. A slim penknife blade, sharpened at the back, making it two-edged, is the instrument used. The point of it for about half an inch, is run up at the end of the teat; and when this is carefully done, it has so far as experience goes, removed the evils of hard milking.

The manufacturing of cheese in our State is rapidly increasing, and the demand for foreign markets continues also to increase. If our dairymen give attention to the preparation of cheese for export, there can be little doubt, that the demand will equal the supply for a long time to come. Already the American cheese has almost entirely superseded in the English market all other foreign cheese, and it will soon affect materially the price of English cheese.

The amount shipped on the canal, in 1847, the product of our own State, was, 15,983 tons, exceeding that of 1746, 566 tons, as will be seen by the statement annexed to this report. The quantity of cheese from out of the State, in 1847, was 4,056 tons. The value of cheese received at tide water, the product of our own State, at seven cents per pound, which is the average price as estimated by the Canal Board, will be \$2,237,630. To this is to be added the cheese consumed in the interior of the State, as well as that which reaches the market from the landings on the North River, and the value of the cheese manufactured in the State probably exceeds \$8,000,000.

It cannot be disguised that much of the cheese which is sent to market is of inferior quality, and it is of the first importance that its

quality should be improved. There are many causes which tend to the production of an inferior article, but there are no innumerable difficulties in the way of manufacturing such an article, except it may be in some localities, where, from the nature of the soil and water, it may be difficult to make a superior article, particularly of that description suited to foreign markets. Mr. Bronson gives the following, as causes producing bad cheese. "Unclean and sour milk vessels, bad rennet; sour milk; too much salt, or insufficiently mixed; too slight pressing; neglect of cheese after it is made." The experiments of Mr. Fish show the various causes which contribute to the deterioration of cheese, and we would especially call attention to his suggestions, and urge upon dairymen the importance of making experiments themselves. Unless this is done, it is in vain to expect that our cheese will be materially improved.

It is doubtless true, that even our best dairymen have much yet to learn, before they will attain perfection. It is encouraging, however, to be assured that continual efforts are making, to improve in this highly important branch of agriculture—and from the well-known energy of our people, we are satisfied there will be no relaxation, until complete success shall crown their efforts.

The committee would urge upon our dairymen, to compete for the premiums offered by the society for the best managed dairies. The investigations required, will prove useful to themselves, as well as beneficial to others. Every experiment made, whether successful or otherwise, will prove advantageous. If successful, many will be led to adopt it, and thus increase the value of the article manufactured, if otherwise, all who hear of it, will take the precaution to avoid a practice which has proved injurious. By communicating freely and fully, the results of their experience, farmers can best benefit their profession, and thus have the assurance of contributing to the advancement of one of the most important interests in our country.

BUTTER MAKING.

That portion of milk, of which butter is made, it is conceded by chemists, consists of minute globules of semi-fluid fat, about one ten thousandth part of an inch in diameter, each covered with a thin pellicle, or shell, of a peculiar substance, resembling curd, but slightly differing from it in composition. When set aside and left undisturbed, where the temperature of the air is about 50° F., these globules of fat, with their coatings, generally rise to the surface of the milk, within 24 hours, forming a thick, soft, white or yellowish crust, commonly known by the name of *cream*. This crust consists of two layers, the uppermost of which contains a larger proportion of butter than the under one.

After this cream has been kept in the dairy, four or five days, at a constant temperature of from 46° to 50°, and then violently agitated for a time, in a churn, or otherwise, at a certain temperature, the thin coatings burst, or are torn asunder, and the particles of half-fluid fat unite and form *butter*. The latter substance includes some of the thin envelopes of the fatty globules, with a little curd, sugar of milk, and a considerable proportion of water.

There are several facts known to the dairy maid, in the preparation of her butter, which are not without interest, both in a chemical, and in an economical, point of view. One is butter obtained on the same farm, and by the same process, or method of churning, is frequently observed to be harder at one season of the year than at another; and even the same milk, under different management, yields butter of different degrees of hardness, at all seasons of the year. This has been satisfactorily and chemically explained, in stating, that the same milk, or cream, by the absorption of oxygen in greater or less abundance, produces a butter proportionably hard or soft. Yet, it must be conceded, that the presence of the air and oxygen, or their renewal, are not necessary to the operation of churning. For this can be as completely effected by prolonged agitation in a close vessel—by corking up the cream. For instance, in a glass bottle, and shaking it rapidly for nearly half an hour. When this is the case, the quality of the butter thus formed, and the changes which the milk, or cream, undergoes, are obviously entirely independent of any chemical influence from without.

In the process of churning, the oxygen of the atmosphere may exercise an influence upon the several ingredients which the milk contains. And it is highly probable, that churning with an excess of air, causes the envelopes to absorb oxygen, to become partially soluble, to thin off, and finally burst, and thus liberate the fatty matter within. It is equally probable, also that, in ordinary churning, the presence of air exercises a real influence upon the process, by modifying its rapidity and the quality of the butter obtained. The form of the churn,

therefore which admits the air to the most intimate and renewed contact with the milk, or cream, may facilitate the changes by which churning is attended.

It is supposed by some, that, if the cream for churning is not taken off whilst the milk is sweet, the butter cannot be good—but this is an error. Milk should stand, undisturbed, as long as it is sound, before it is skimmed, in order to afford the most butter and that of the best kind. In cold weather, it may stand 6 or 7 days before it is skimmed; but in hot, close or thundery weather, perhaps not more than 10 or 12 hours. The cream will keep best on the milk, as long as the milk is sound; and the sooner it is churned after it is taken off, the sweeter the butter. And butter produced from sweet cream has the finest flavor, when fresh, and appears to keep longest without acquiring rancidity; but the buttermilk so obtained is poor and small in quantity. When the cream is intended for churning, however, it may be kept until it turns slightly sour; as then, the butter will the more readily “come.” If or if churned when quite sweet, the operation will be tedious, and will frequently fail. In occurrences of this kind, the dairymaids of old, used to declare that the milk was “bewitched,” and fearfully proceeded to devise some means of driving away the “spell.” The cause of this, is the want of acidity, which is not the case when the cream is kept for a certain time. The addition of a little rennet, strong cheese, or vinegar, is the proper remedy in this case, and will cause it almost immediately to appear.

Milk, when scalded, it is said, yields the largest quantity of butter, which if intended for immediate use, is agreeable to the palate, meets with a ready sale; but if designed to be salted for long keeping, it is liable to acquire a rancid flavour. Besides, the process of scalding is troublesome, and the milk after the removal of the cream, is poor and unfit for use.

During the operation of churning, it is very important that the milk or cream, is brought to a proper temperature; any, from 58° to 60°. This can be ascertained by the use of the thermometer churn, and may be effected by means of hot or cold water. In summer, the churn may be kept cool by placing it in a tub of cold water, or by covering it with a cloth previously dipped; and in cool weather, a contrary effect may be produced by using hot water instead of cold. The churning may also be performed in a warm room, but not near a fire.

The butter, when churned, should first be worked in fresh, cold, spring water, so that it may become firm; and at the end of the fourth washing, some salt should be thrown into the water, in order to raise the color of the butter, as well as to wash or purge away the milk that may remain. Then, after thoroughly working the butter with a wooden slice or spoon, and gently pressing it with a clean wet towel, or with a clean soft sponge, wrapped in a cloth, it will be fit for immediate use; but, if intended to be long preserved, let it be put up forthwith, in a cask, holding 60 or 70 lbs, and cured by a mixture of 1 part, by weight, of raw sugar; 1 part saltpetre; and 2 parts of best St. Ubes, Cadiz, Liverpool, or Turk's-Island salt, well incorporated together and reduced to a fine powder. One ounce of this mixture is enough to preserve one pound of butter; or if salt alone be used, one ounce to a pound will be sufficient. In working butter, the hands should not come in contact with it more than can possibly be helped.

When packed for sale, butter cannot be too firmly pressed into the cask, nor too carefully covered, to exclude the air. One of the best methods of doing this, is to fill up the pots, or casks, to within an inch of the top, and then lay on common course salt to the depth of three fourths of an inch, just before heading or covering them up.

Butter should never be left unsalted till the next churning, for the purpose of mixing the two particles together; for this injures the flavor and renders ever-afterwards the whole mass too soft to become firm.

THE STUBBORNEST ANIMAL IN THE WORLD.—A crowd, who had gathered round a tavern door, was busy in discussing what animal, of all others, is the most contrary. Some contended the mule is, some a hog, and others a yoke of oxen. A Dutchman, who had very gravely listened to the conversation, gave his experience as follows:—“Der mule, der hoe, and der ox, said he, “ish vary stupporn’ poot der hen ish der stuppornest thing in der worldt. I had von and I wanted to hatch zom chiggen. I made von fine leetle nest, und boot him in it, und she gets up and runs away. I den makes anoder shmall nest und boots him on dat, und she runs away agin. I den makes von nide leetle pox, und boots it alkover der hen; und for all der poude mit I have, fen I becped unfer der leetle pox, dar hen vas shettin’ stan in’.”

EMBELLISHMENTS FOR FARM HOUSES.

Talk not to me of the suburban residences, with their windows decorated with geraniums and hents, with hyacinths and iisis. I would always have the windows of our farm-houses adorned with flowers, not in rusty tin measures, and old black glazed spoutless teapots, and glass bottles with their necks broken off, but in whole and handsome flower pots, or neatly painted wooden boxes, for they reilly cost little or nothing. I would have the piazzas or porches trellised with vines, even with scarlet runners, if nothing else could be had. I would have the door yard filled with flowers and shrubbery, and the road-side lined with trees; here a clump, and there a single line, mingling the varieties as nature mingles them, cultivating them for fruit, and cultivating them also for ornament and beauty; but this is all, you will tell me, for mere appearance sake. Well, I will reply, is appearance nothing? Do you think nothing of appearance when you choose your wives, and nothing of your own appearance when you wish them to confirm the selection? But why should the pleasures of sight be so lightly esteemed? Why should they be spoken of in language of disdain or indifference? Are they not as rational, as respectable, as valuable, as abundant, and as innocent as the other senses? Are they not, indeed, the very elements of some of the most refined pleasures of the mind and heart? Has God given us the sense of sight, so wonderful, so capacious, so infinitely varied in its resources and objects, for no purpose? Is appearance nothing, even though it be the window of a farm-house? What is more studied than appearance throughout the work of the Creator? What object is their in nature, from the highest to the lowest, animate or inanimate, swimming in the sea, or in the air, or the surface of the earth, or buried beneath it, which is not, upon examination, found to be as beautiful as if it were finished for no other purpose than to be looked at! Take the shell that lies at the bottom of the ocean, the bird that bathes his wings in heayen's purest light, the flowers that carpet the earth with their varied splendor, the glittering stars that light up the deep arches of the skies with an eternal glory—take the combination of the countless elements of beauty, when the morning slowly lifts up the veil of night, and, as at the dawn of the creation, reveals the glories of the visible world, or when spring breathes upon the earth and recalls the dead to life, and myriads and myriads of forms of new things come forth at her voice—take the descending sun as he reclines upon his western throne, and wraps around him the gorgeous robe of unrivalled majesty—take the perfection of beauty as seen in a nearer but more transcendent form in man himself, in his symmetrical stature, in his well turned limbs, in the web of unmelted softness and texture which covers him, in the tints of his complexion, in the grace of his movements, in the melody of his voice, in the eloquence of the eye, pouring out the fires of genius, or radiant with the charms of the affections that speak so powerfully to the soul—and will, then, men say that appearance is nothing, and that the pleasures of the sight are not to be valued and cultivated. I say, that appearance is always to be regarded, and that we cannot render our homes too beautiful and attractive. Home is the paradise of human life, and poor and wretched, indeed, must that creature be, who looking round the habitable world, cannot point to one nook of earth, and say, “There is my home!”—Our first object should be to make our homes as convenient and comfortable as we can make them, and our second object should be to render them, to an equal extent, tasteful and elegant.—*London Gardener & Florist.*

CURING HAMS.—Much as has been written and published upon the subject of curing and preserving Hams. The following excellent mode of protecting them from the attacks of flies, I do not remember of ever seeing noticed; and perhaps may not be generally known to the readers of your valuable agricultural journal.

It is simply this:—*Let the last application of smoke be made with sulphur.* Although the amount applied be not sufficient to affect their flavor; yet such is its efficacy, that no other system of defence against the mischievous attacks of flies will be required, until midsummer, at least, (experimentally speaking,) and even those newly cut, will remain undisturbed. The same treatment is beneficial in case of cheese.

—*Gen. Far.*

W. HANFORD, JR.

EXPERIMENTAL FARMS AND AGRICULTURAL SCHOOLS

Messrs Editors:—

To-day, by mere matter of accident, I saw *The Statesman*, in which I read with much pleasure, the proceedings of an agricultural meeting held in Brockville on the evening of the 12th of June inst., for the purpose of adopting measures, for the establishment of an Experimental Farm in connection with an Educational Institution for the education of the rural, mechanical, and other classes of the county. The leading men of Brockville and vicinity attended the meeting, and the proceedings on the whole appear highly creditable to the inhabitants of the Johnstown District. For your information as well as your readers, I have thought, it might be acceptable to give an abbreviated account of the foregoing movement in your paper, in the hope that it might be a means of inducing the farmers and those friendly to the cause of agricultural improvement in the Home and adjoining districts to do something more than has been done to move forward the important cause of agricultural and mechanical improvement.

The following is the method by which the fund is proposed to be raised:—

Model School Assessment.....	£100	0	0
Government grant for Model School.....	50	0	0
Tuition Fees from Common School Scholars.....	30	0	0
Government grant for District School.....	100	0	0
25 Scholars at £6 per annum each.....	150	0	0
<hr/>			
Total now paid for Model and District School.....	430	0	0
Common School Assessment for the Town.....	213	0	0
Government grant to the Town.....	65	0	0
3 Common Schools Scholars, say 260 at \$3 each....	195	0	0
<hr/>			
Total paid for Model, District & Common Schools	903	0	0
Mr. Dick's Academy, say 100 Scholars at £4 each	400	0	0
Government grant to Agricultural Society.....	250	0	0
<hr/>			
	£1553	0	0

It will be seen that it is the intention of the friends of the scheme under notice, to blend the Agricultural Society of the district, and the Grammar and Common Schools of the county town into one mammoth Educational Institution, the funds of which by the previous showing will be ample to ensure success. The Institution is to be placed under the management of a Board of Trustees, consisting of 13 persons, of which three should be chosen by the Government, three by the Municipal Council, three by the Town Corporation, and the remaining four to consist of the Warden, the Judge, the Sheriff of the District, and the President of the Board of Police. For the purchase of the farm and the erection of buildings, it is proposed to ask the Provincial Government to vest in the before-mentioned trustees certain school lots within the Johnstown District to be sold, and the proceeds applied for that purpose. Being a practical farmer, and having seen that I wish to have educated with an eye of making them scientific as well as practical agriculturalists, I may be excused for troubling you with my crude matter of fact observations; but the subject under consideration is one of such importance to the interests of this rising Province, that I cannot close, without adding my own opinions, in relation to the cause of agricultural improvement in Canada.—The Provincial Government has clearly shown its willingness to render aid in developing the agricultural resources of the country;—as evidence of which I need only mention the liberal annual grant of \$20,000 for the encouragement of Agricultural Societies in Upper Canada. By reading the Act of Parliament, by which the above grant is made to societies, it will be seen that it is clearly intended, that the entire grant shall be expended in the importation of live stock, agricultural seeds, and implements, or any thing else that will conduce to the improvement of agriculture. Those who have watched the progress of Agricultural Societies, must have observed that no portion of the Government grant has been expended in the manner laid down in our Statute Books, but that it has been frittered away in awarding paltry premiums to A. B. and C. who might have articles of their own growth, or manufactures to exhibit at the district, county, or township societies' exhibition, which might in the judgment of the awarding committees be the best exhibited; and it frequently so happens, that the same article draws a prize a number of times in succession. It will require very little discernment to

see that money and time expended in this way will never accomplish much for the good of the country.—The money granted to Agricultural Societies might be made instrumental in accomplishing a vast amount of good in developing the agricultural and mechanical resources of the country. If it had been expended in the purchase of the improved breeds of horses, horned cattle, sheep, and swine, and the most improved patterns of agricultural implements, and other labour saving machines, together with the choicest varieties of seeds, roots, &c., and if those choice productions, after being imported had been offered to public sale, and the proceeds allowed to revert back into the funds, for premiums, and the benefits that would have accrued from such a course, would be incalculable. I am not prepared to advise the abolition of Agricultural Societies as at present constituted, but as a farmer, and one who is most anxious to have the agriculture of my country placed upon a healthy and substantial basis, I am desirous to urge upon the attention of those who take an interest in these matters, the importance of encouraging native genius; and especially that portion of it that may be found in a comparatively latent state among the youth of our agricultural and mechanical classes. The movement, in the Johnstown District, if adopted in the other districts of the country, and backed by the liberal support of Government, and the Municipal Councils, would have a powerful influence in developing the agricultural resources of the Province—and in connection with such Institutions a central depot should be opened under the patronage of Government for the exhibition of the choicest varieties of seeds, roots, implements, &c., where the farmers might at all times rely upon obtaining a choice selection of those articles at moderate prices. Hoping that some of your old correspondents will take the foregoing subject under their special notice.

I am, your

CONSTANT READER.

Township of York,
June 12th, 1848.

COMMON SALT AS A MANURE.—Mr. J. B. Lawes, of Rothamstead, expresses his full belief in the *Gardeners' Chronicle*, that salt can never be a substitute for the constituents ammonia and phosphoric acid; that no soil exporting corn and meat can be restored to fertility without the application of these two substances; that much of the money now expended in purchasing salt for agricultural purposes would be more profitably employed in procuring ammonia and phosphates; that salt, although apparently essential in the animal economy, and perhaps in that of plants also, is exported from a farm in such small quantities that many soils will, under an ordinary system of cultivation, never require its direct application, and others will do so seldom, and to a small extent only.

Spanish Hens' Eggs are advertised for sale in London at 6s. per dozen. The hens, by which they were laid, were imported last autumn from Anpalusir. They are represented as beautifully speckled, and much superior to the spanish black hens, being unequalled as layers, both in the size and number of the eggs.

ELLERMAN'S DEODORIZING LIQUID.—Mr. Tower, of Weald Hall, lately called the attention of the Council of the English Agricultural Society, to the good effects he had found to arise from the use of the deodorizing liquid of Mr. Ellerman, the component parts of which, according to the analysis he submitted to the council, could not, he thought, but render the use of this preparation valuable as an agricultural as well as a deodorizing agent.

Mr. Ellerman's fluid, it will be recollected, is very efficacious as a means of destroying the odor of night soil, and others similar substances. It possesses, also, this advantage, that, while it neutralizes the odor so as to admit of the soil being removed, at any time, without creating a nuisance, it does not in any degree interfere with the efficacy of such matters as manures. On the contrary, it rather tends to increase the fertilizing quality. It is also stated that fluid possesses a greater power than any agent invented for destroying the smell of faecal matter, and leaving in the end only a slight acid odor.

CAUSE OF THE GAPS IN POULTRY.—The cause of this disease is stated to be the use of filthy, sour diet, and drinking from dirty puddle water, infected with putrid decaying substances. The symptoms are gaping, coughing, and sneezing, dullness and inactivity, ruffled feathers, and loss of appetite.

PRECAUTIONS AGAINST THE CABBAGE AND TURNIP FLY.

At a period when a great deficiency of potatoes prevails, a partial substitute for that valuable root may be formed by the finer kinds of the turnip and the cabbage for human food, and of the coarser kinds for that of animals; but one of the greatest drawbacks in the cultivation of these vegetables, in times past, in this country, particularly that of the turnip, has been the losses sustained by the ravages of the fly. This difficulty doubtless, might be obviated by artificial means, among which we would recommend for experiment the following:—

1. It appears from a trial made at the suggestion of Sir Humphrey Davy, that lime slaked with urine, and mixed with three times the quantity of soot, by measure, and sprinkled in with the seed, at the time of sowing, protected them and the germs from the ravages of insects; but this antidote cannot be conveniently applied unless the seed is sown in drills.

2. A simpler remedy than the above, which has proved perfectly successful, is to steep the seeds, 24 hours, in tepid (blood-warm), sulphur water, mixed in the proportion of one ounce of sulphur to a pint of water. This quantity is sufficient to soak 3 lbs. of seed.

3. Mixing equal parts of old seed with new, dividing one half and steeping it in tepid water 24 hours, and then mixing it again with dry seed, has often been tried with good effect. By this means four different times of vegetation are brought about, and consequently as many chances of escaping the ravages of the fly.

Radish seed has also frequently been mixed with that of the turnip, and as the fly prefers the former, the latter remains untouched.

4. Dusting the plants, when in the seed leaf, with finely powdered quicklime, has likewise been tried with good effect. A bushel of quicklime is sufficient to dust an acre of turnips, sown in drills, the young seed leaves being powdered in the least degree is sufficient; but, should the lime be washed off by rain, before the plants acquire their secondary leaves, it may be necessary to repeat the dusting, should the fly again appear.

5. In the heat of summer, it is of great importance to sow just before, or in the time of rain; for fermentation, caused by heat and copious showers, gives an extraordinary quickness of vegetation to the seed, which in a few days, will be in the rough, or secondary leaf, and out of all danger from the fly.

This insect is always weakened, or killed, by drenching showers, and never does injury to the crop, if it is attended with early and copious rains.—*Am. Ag.*

SYMPTOMS OF DISEASE.—A white fur on the tongue attends a fever or inflammation; yellowness on the tongue shows a disease of the liver, and is common to billious and typhus fevers. A tongue vividly red on the tip and edges, or down the centre or over the whole surface, arises from an inflammation of the *mucus membrane* of the stomach or bowels. A white velvety tongue exhibits mental disease. A tongue red at the tip, turning brown, is the symptom of typhus state.

To the Editors of the Agriculturist.

GENTLEMEN,—

Having been lately engaged in sowing grass seeds to a considerable extent, and observing in your work frequent allusion to and a recommendation of a greater quantity of seed being used than what generally is in this province, I think that the publication, in your useful journal, of the following table, with the accompanying remarks, may be of great benefit to many of your readers, who may not have had an opportunity of seeing the original; they are copied from "*The third report of Drummond's Agricultural Museum, at Sterling. Being from March, 1833, till November, 1834.*" &c.

"It may be presumed, that from the attention which has been bestowed upon the grass husbandry, with the aid of museums, &c., such general information may exist as to supersede the use of any made out selections or lists; such work is the proper province of the cultivator, who should also be most competent, so much depending upon local circumstances. As an assistant to their construction, we give the following table of the average number of fertile seeds furnished to each square foot, by sowing 1 lb. weight per acre:

	Seeds to each square foot	Seeds to each square foot.	
Perennial Rye Grass	6	Wood Meadow Grass	10
Italian ditto	6	Yellow Oat Grass	5
Timothy	15	Woolly Soft Grass	5
Siberian Lynn Grass	3	Sweet Vernal ditto	8
Cocksfoot	7	Crested Dogtail	12
Foxtail	6	Fiorin	25
Meadow Fescue	6	Common Bent Grass	25
Hard ditto	8	Red Clover	4
Sheep's ditto	10	Red Perennial ditto	3
Rough Meadow Grass	10	White Clover	10
Nerved ditto	10	Yellow ditto	3

"The above numbers were found by careful computation, and may be taken as expressing the plants that may be expected from the given weight, under favorable circumstances. It is hoped they will contribute to greater certainty and precision; for, so far from equal weights or measures furnishing nearly equal numbers, the one, it is easily perceived, may give four or five times more than the other.

"In determining the whole number to be sown per square foot, it will be necessary to keep in view the social habit of the grasses—that when a number of species are associated, more plants can be got to thrive closely together; if, therefore, one or two sorts are to be sown for hay and pasture, from 200 to 300 will be required; if a number of sorts for permanent pasture, there should not be less than 300 to 400 per foot when a grain crop is taken, or 400 to 600 without a grain crop. Should the surface be rough or uneven, more seed is required than when it is of a fine tilth. The greatest number of plants may be expected from a surface previously consolidated by rolling, the seeds then sown, and merely covered by a very light harrow or rake, finishing by a second rolling; as the smaller seeds will not vegetate at the depth to which they are often thrown by the common harrow. Again, in selecting species and adjusting their proportion for permanent pasture, the aim should be to accomplish the greatest produce throughout the most extended season, by attending to their productive powers, periods of growth, &c., and adaptation to soil.

"The number of pounds weight per acre required of each, will then be found by dividing the proportionate numbers thus fixed, by those of the table."

The foregoing table (considering the source from which it is derived) may be depended upon as accurate, and furnishing good data from which to calculate the quantity of seed to be used, of whatever kind is required or intended to be sown. But there are few farmers who have had a year or two's experience in this new country, but what will at once observe, that the number of plants recommended as being proper to raise, for the different purposes mentioned in the remarks, as suitable in Great Britain, far exceeds what will be perfectly sufficient in any part of Canada. But so much depends upon the nature of the soil, the circumstances under which the seeds are deposited, and the weather to which the young plants are exposed in their infant state, that no determinate quantity can be mentioned as proper to use upon an acre.

Some of us use from 6 to 8 lbs. of clover seed per acre, others think 4 lb. quite sufficient; and a friend, who has got a little mixture of sand in his soil; sows only one pound, and, in his own way of talking, says that "it is thousands." Upon my own land, which has only been recently dug out of the bush, I have generally used about two pounds of seed, and have always had a sufficiency of clover for two or three years. But I am clearly of opinion, that as lands are more ploughed, and are longer under cultivation, we will be under the necessity of using more seeds—of clover as well as of the cereal and other grasses, than what farmers have been in the habit of sowing upon recently improved lands.

Crops sown rather late in the season, particularly if the soil has been recently turned up by the plough, require a larger portion of seed; and it may be taken as a good general rule rather to seed abundantly than otherwise. For so long as an additional bushel of seed sown upon an acre will produce two bushels more of thrashed grain, it must be profitable to use it. All other expences may be taken as being perfectly the same; hence it is evident that bushel of seed has been laid out at cent. per cent. for the season.

"Can a farmer learn to analyse his soil?" I cannot but think, gentlemen Editors, that your answer to the above inquiry, by Mr. Boyle, is somewhat disheartening and also somewhat from the point. I would say, yes, Mr. Boyle, a farmer can learn to analyse his soil. A farmer can learn to analyse any theorem in trigonometry, and

apply the truths which he discovers by that analysis to the solution of the problems of that science. A farmer can learn to calculate all the motions and revolutions of the heavenly bodies, with the effects which they produce upon each other, both in retarding and accelerating their motions. Such knowledge has been acquired and such things learned by many, who, although less conversant with horses, are much more allied to asses than many farmers of my acquaintance. I see nothing to prevent a farmer from acquiring "possession of the highest skill" even "of a practical analytical chemist."

Unless a farmer can learn, what in all the world is the use of such a fuss being created, as is now made about agricultural shows, agricultural colleges, and experimental farms? And pray what would be the use of even the famed Mr. Buckland delivering a course of lectures to any club or society of farmers, provided that they are a set of kangaroos, whose intellects are inferior to that of other men?

But to assist many who will never arrive at a full degree of perfection, and as a step toward that enviable point, I shall again have recourse to Messrs. Drummond's excellent report for (page 18) "A simple formula and apparatus for the analysis of soils."

"The apparatus particularly wanted is only a Wedgewood's mortar, a Hessian crucible, a set of grain scales and weights, and a little muriatic acid (spirit of salt), sulphuric acid (oil of vitriol and prussiate of potash)."

"The formula here given is in substance the same that was adopted in a late geological survey of the county of Albany, in America, taken under the direction of the agricultural society of that county; and in conducting the analysis of soils, "those circumstances which form mere subjects of chemical speculation were not so much taken into account, as the search after and adoption of a simple method for obtaining results calculated to advance the interests of agriculture."

"Let a portion of the soil, in a dry state, including such of its gravelly pebbles as might pass through a corn sieve, be pulverized in a Wedgewood's mortar; of this, weigh two parcels of 200 grains each, and proceed with the analysis.

"1st. Put one of the parcels into a crucible, which heat gradually, stirring the soil with a dry pine stick, until the stick becomes a little brownish from the heat, or pressing it on the bottom of the crucible. Weigh it again, and what it wants of the 200 grains may be set down as water.

"2nd. Return the parcel into the crucible, and continue it at a high red heat for a minute or two, stirring with a glass rod, until in taking it off the fire no blackness appears in the soil. Allow it to cool a little, weigh, and note down the loss as organic matter.

"3rd. Let it now be put into an ale glass or tumbler, adding two gills of water. After repeated stirring for ten minutes, let it stand about three minutes, to allow the silicious matter to settle; pour off all which stands over it into another glass. Dry the sediment in a high red heat, weigh, and set it down for the silica.

"4th. Let the part which was transferred to another glass stand until it settles, leaving the liquid clear, which pour into a glass or porcelain evaporating basin. Dry the sediment in a high red heat, and set it down for the alumina.

"5th. The liquor is then evaporated in a gentle heat, and the solid matter which it leaves weighed for the soluble salts.

"6th. The other parcel of 200 grains must be put into a phial, containing about half a gill of equal portions of muriatic acid and water, the weight of the phial and its contents having been previously ascertained. After remaining about two hours, and being again weighed, the deficiency in the whole weight will be the carbonic acid given off, which we will suppose amounts to four grains; this, with one-fifth part more or five grains its base, the lime; and the two added, or nine is the carbonate of lime. The lime must now, however, be deducted from the silica, and the carbonic acid from the organic matter; since the heat that burnt out the organic matter, also expelled the carbonic acid, and left the lime with the silica.

"7th. By filtering, and washing off the acid liquor from the soil in the phial, through blotting paper, and then dropping into the liquid a little of the solution of prussiate of potash, the amount of oxide of iron may be nearly inferred from the quantity of blue precipitate thus formed; but this substance occurring only in small quantity and of immaterial consequence, it was seldom considered necessary to ascertain its proportion—generally from 1 to 3 per cent. The quantity may be correct if found by subjecting the soil more thoroughly to the action of the acid in a saucer, filtering as before; the precipitate being collected by another filter, dried at a red heat, and weighed.

"It is of consequence to note the time required for the alumina to settle, which varies from half an hour to 24 hours, as this is found a much better criterion of adhesiveness, and the power of retaining water, than the actual proportion of alumina; the water here retains the soil, as that soil retains the water.

"Sometimes the sulphate of iron (copperas) is found in soils, impairing and destroying their fertility; in that case it may be detected in the soluble salts, of a light green colour, and sharp sour taste. A top dressing with quick lime is the remedy, which, abstracting the acid, forms gypsum, and thus converting the enemy into a friend.

"Specimens of soils, &c., on being submitted to the above formula, and the products reduced to hundredth parts, in order to shew at one view the per centage of each constituent, stood as follows:—

No.	SITUATION AND DESCRIPTION.	CONSTITUENTS.							Setting of Alumina.
		Silica.	Alumina.	Carbon of Lime.	Organic Matter.	Oxide of Iron.	Soluble Salts.	Water.	
1	Forthbank, clayey loam	50 27	3 1/2	7	2	1 1/2	9	12 hours.	
2	Whitehouse, clay soil...	45 35	2 1/2	5	2	1 1/2	9	18 hours.	
3	Coney Park Nursery. sandy loam	52 5	2	6	1	0 1/2	3 1/2	1 hour.	
4	Do. do. clay stratum	48 38	2	0	2 1/2	1 1/2	8	20 hours.	
5	Do. do. medium loam	67 14	2 1/2	8	1 1/2	1	6	4 hours.	
6	Near Kippen, sandy subsoil	82 6	5	1	2 1/2	1	2 1/2	3/4 hour.	
7	Near Denny do. do.	92 3	0	0 1/2	1 1/2	1 1/2	1 1/2	3/4 hour.	

"No. 1. The more open coarse soil, east of Sterling. 2. The stiffer coarse soil, west of Sterling. 3. The light portion of the nursery ground. 4. Found from 8 to 10 feet under the surface. 5. About 10 per cent. of the alumina was introduced by synthesis, 20 years ago, from No. 4, with very great advantage. 6. A marly sand, that may be taken up with benefit to the soil. 7. A stratum, too, siliceous for introducing, except in small quantities, into a light soil.

"The alumina in light soils will generally be found under 12 per cent., in medium soils it ranges from 12 to 24, in heavy soils from 24 to 40 per cent. Several of the specimens were tested and analysed by chemical re-agents, after another method, the formula for which is also on the table, with very nearly the same results.

"A synopsis or tabular view might thus be easily given of the whole soils, subsoils, and available strata of a farm, an estate or a county, by a process agreeable as simple, and which would be found satisfactory, and in the highest degree useful."

The foregoing table of seeds, and directions and formula for analysis, I think may prove very useful to the readers of your Agriculturalist. I therefore send them for publication therein, provided you approve; and I hope that you will be able soon to make your paper more exclusively agricultural and scientific.

17th May, 1848.

B.

CIVIL AND SOCIAL.

NAVIGATION LAWS.

By recent news from England we learn that the Imperial Parliament have taken up the subject of the Navigation Laws with a view to their removal. It is proposed to place the regulation of these laws so far as they relate to the Colonies under the control of each Colony for itself. The views expressed by a City cotemporary on this subject so nearly accord with our own that we insert them below—

"The shipping monopoly is about to receive its death-blow. The navigation laws so long defended as necessary for securing the defence of the Empire are about to be consigned to oblivion by the active commercial spirit, and the superior intelligence of the age. The history of restrictions by one nation on the commerce of another is but the history of retaliations and mutual injuries. Even at the present moment England was menaced with further restrictions on her commerce by other nations, if she would not consent to abandon the Navigation Laws. Her Colonies in every part of the world were loud in their complaints of the restrictions imposed by the Navigation Laws. The condition of England and that of her numerous Colonies rendered the necessity of modifying these laws imperative. The prospect of an European war is imminent, and England must look to her trade with the United States. The Colonies complain of the retention of restrictions on their commerce after the withdrawal of the preference formerly given to their products in the English market. It is well that the Russell Ministry had the good sense to yield to the necessities of the times. The United States is prepared to reciprocate. This mutual concession, while it will benefit both, will be a guarantee for continued peace between the two nations. As regards Canada, this mo-

* Memoirs of the Board of Agriculture of New York, vol. 1st.

dification of these laws will give us the power to take any course which our interests may dictate. The days of shipping monopoly in Canada are numbered. Our beautiful Lake Ontario will not long be the preserve of one steam-boat proprietor who buys off all opposition, and thus in addition to the monopoly of the navigation laws, purchases another. The burthen of both will soon be thrown from the shoulders of the public; and this fine Lake will present a scene of activity to which it has hitherto been an entire stranger. Our lumber trade, now in a state of positive decay, may be revived and preserved. We shall get a better price for our timber and other products, and be enabled to buy what we want cheaper. If the competition of foreign with British and Canadian vessels reduce the rate of freights, it may be said that this result must be obtained at the expense of the two latter. But the result of previous relaxations of the navigation laws disproves this supposition. Competition has been found to stimulate enterprise, and the greater it has been, the more has British shipping flourished and its tonnage increased. The shipping monopolists have ever been the blind foes of their own interests. If we may judge of the effects of the proposed relaxation of the navigation laws by the history of the vicissitudes through which the commercial marine of England has passed, the shipping interests of England will be benefited rather than injured thereby.

Our commercial position is undergoing great and advantageous changes. We have got rid of differential duties; our tariff will undoubtedly undergo some further modification; we have a prospect of free trade with the United States; and inter-colonial free trade is being established between all these British Provinces. We entertain a well-founded hope, if we have no positive certainty, of getting a grand Provincial Railway from Halifax to Lake Huron. The Provincial Post Office has come under the controul of the local Legislature, and the system will speedily undergo a thorough reformation.

LITERATURE.

SIR WALTER SCOTT AND WILBERFORCE.

In reading a few evenings since, the diary of the great and good Wilberforce, we were struck with the following passage in reference to the Waverly novels, (which were just then in the course of publication):—

"I am always sorry that they should have so little of moral or religious object. They remind me of a great giant spending his strength in cracking nuts. I would rather go to render up my account at the last day, carrying up with me 'The Shepherd to Salisbury Plains than bearing the load of all those volumes, full as they are of genius.'"

Without entering here into the vexed question of the lawfulness of writing and reading romances, we must be permitted to express our earnest sympathy with this beautiful and truthful sentiment. For Walter Scott, the man so full of generosity, of hearty genial humor, and of hospitality, we have a warm admiration. To him we are indebted for many delightful hours. In the living tapestries of his unrivalled romances we have seen the shape and spirit of the stirring days of chivalry, "bodied forth" with a strange and picturesque beauty.

We have laughed with Caleb Balderstone and Dugald Dalgetty, and mourned with old David Deans over that sad calamity for which "he wrestled in privacy on his knees; and followed that most perfect of his heroines, Jeanie Deans, up to London; and listening to the sweetly eloquent appeal for her sister's life, have found ourselves ready "to gush out with tears." And yet after reading all his most celebrated productions, with a hearty admiration for the splendour of their conception we are tempted to ask ourselves, Why all this vast expenditure of so much that was rich and precious, and that too, without even the outward show of devotion manifested by her, who had expended so much of her substance in order to anoint her master's feet.

Were there no great living truths for him to defend? Were there no contests waging with error that called for the aid of his powerful arm?—Were there no burning wrongs for him to expose and labour to correct, that he should have squandered the treasures of his mighty intellect in devising cunning romances for a winter evening's entertainment?

Contrast his career with that lofty philanthropist whom we have just named, who although his inferior in point of natural gifts, has yet rendered his own life sublime. Wilberforce, like Scott, was a man of great geniality of temper—like Scott, he seemed to "touch life at a great many points." But he did not live merely for the amusement of his fellow-men. He lived for their higher good. He had a quick eye for all the wrongs and sufferings of his fellow-beings, and a warm heart for their relief. All day long his cottage at Clapham was thronged by men—not like those who crowded the doorway at Abbot'sford, in order to pay homage to high intellect alone—but by those who came to ask of him alms for some of God's poor, or to devise some plan to enlighten the ignorant of London, or to supply the Bible in some desolate region, or to suppress the infamous traffic in the bodies and souls of men on the coast of Africa. For thirty-three long years, through sneers, and taunts, and discouragements—with a lofty moral heroism, unsurpassed, since the days of the Apostle of the Gentiles, he had waged a war upon this monstrous traffic—and when the tri-

umph was at last gained, and Sir Samuel Romilly announced, amidst the cheers of the House, that William Wilberforce would that night lay his head upon his pillow a more honored man than the Emperor of France—what mere literary triumph was worthy to be mentioned in the comparison? Follow these two men to the bar of God; and in that awful hour, big with the fate of coming eternities, who among the myriad hosts that turn their eyes upon the Infinite Glory, and the "great white throne," would willingly step forth and prefer the place of Walter Scott to the place of William Wilberforce?

But we need no such supposition as this. The close of their lives had a portentous significance. Wilberforce's death was a calm and holy falling into sleep. The last hours of Walter Scott were but sorrowful records of pain, anxiety, and darkness. His dying words were, "Lockhart, be a good man—be virtuous—be religious—be a good man—nothing else will give you any comfort when you come to lie here." Mournfully expressive words, wrung from him by that great "detector of the heart," a dying bed. In the midst of those trying agonies there was a thought that might have buoyed them up—but alas! it was denied him)—the thought that amid all his splendid literary achievements, he had ever written a single page which had for its aim the highest, greatest interests of the immortal soul.—*Presbyterian.*

THE MONARCHS OF EUROPE—TERRITORY AND POPULATION.

The excitement in the old world, the revolution, reforms, and the threatening aspect of affairs at our last accounts, have induced many inquiries as to the names and ages of the reigning sovereigns, the extent and population of their various governments. We have, therefore, turned to the latest authorities and gather the following.

Great Britain—Victoria, Queen of Great Britain, was born May 24th 1819. Ascended the throne June 20, 1837, at the age of 18. Government, limited monarchy, with two Houses of Parliament. Population 26,831,105. Territory 116,700 square miles. Religion Protestant.

France—Louis-Phillippe, late King of France, now a Republic, was born October 6, 1773. He ascended the throne August 9, 1830, aged 57. Government, late limited monarchy, now a Republic. Population 34,194,875. Territory 202,135 square miles. Religion Catholic.

Nicholas I. Emperor of Russia, was born July 6, 1796. He ascended the throne Dec. 1, 1825, aged 29. The Government is an absolute monarchy. The territory 2,041,809 square miles, and the population (including Poland) 62,500,000. Religion, Greek Church.

Frederic William IV. King of Prussia, was born Oct. 15, 1795. He ascended the throne June 7, 1840, aged 45. The Government has heretofore been an absolute monarchy, with a population of 14,330,060. Territory 106,302 square miles. Religion, Evangelical.

Ferdinand, Emperor of Austria, was born April 19, 1798 and ascended the throne March 2, 1835, aged 45. The government has heretofore been an absolute monarchy, except Hungary &c. with a population of 36,519,560. Square miles 255,256. Religion, Catholic.

Louis, King of Bavaria, (now said to have abdicated) was born Aug. 25, 1780, ascended the throne October 13 1825, aged 39 the kingdom is a limited monarchy, with two chambers. The population 4,315,460. Territory 28,433 square miles. Religion Catholic.

Oscar I, King of Sweden and Norway, was born in July 1790. He ascended the throne March 8, 1844, aged 45. Government, limited monarchy, with a diet. Population 4,156,900 Religion Lutheran

Christian VIII, King of Denmark, was born September 18, 1786 He ascended the throne December 3, 1839, aged 59 Government, absolute monarchy. Population, 2,033,265. Territory 59,762 square miles.

William II King of Holland or Netherlands, was born December 6, 1792. Ascended the throne October 7 1840, aged 48. Government, limited monarchy, with two chambers. Population 2,915,369. Territory 13,890 square miles. Religion Reformed.

Leopold I King of Belgium, was born Dec 16, 1790. He ascended the throne July 31, 1831, aged 40. Limited monarchy, with two chambers. Population 4,242,600. Territory 12,569 square miles. Religion, Catholic.

Frederick, King of Saxony, was born May 18, 1797. Ascended the throne June 6, 1836, aged 39. Government, limited monarchy, with two Chambers. Population, 1,652,114. Territory, 5,705 square miles. Religion, Catholic.

Ernest Augustus, King of Hanover, born June 5, 1771. Ascended the throne July 20, 1837, aged 66. Government limited monarchy, with two Chambers. Population, 1,706,280. Territory, 14,600 square miles.

William, King of Wurtemberg, was born September 27, 1781. He ascended the throne July 20, 1816, aged 35. Government, limited monarchy, with two Chambers. Population, 1,634,654. Territory, 7,568 square miles.

There are, besides, 26 other German Principalities, Grand Duchies, Langravines, Electorates, &c., some in the form of absolute and others of limited monarchies. There are also in Germany, Bremen, Hamburg, Frankfort, Lubec, free cities, which are separate and republican.

Isabella II. Queen of Spain, was born Oct. 10 1830. She ascended throne Sept. 29, 1833, aged 3 years. The government is a limited

ted monarchy, with a Legieture (the Cortes) The population is 12,286,941. Territory, 176,480 square miles. Religion Catholic.

Maria II. Queen of Portugal, was born April 4, 1819. Ascended the throne May 2, 1826, aged 7 years. Government, limited monarchy, with one chamber. Population 3,550,000. Territory, 34,500 square miles. Religion Catholic.

Switzerland is a Republic, with a Diet. Population 2,135,480. Territory, 17,208 square miles. Religion Catholic and Protestant.

Charles Albert, King of Sardinia, born October 2, 1798. Ascended the throne April 27, 1831, aged 32. Government, absolute monarchy. Population 4,168,000. Territory 28,820 square miles. Religion Catholic.

Leopold II. Grand Duke of Tuscany, born October 3, 1797. Government, absolute monarchy. Population 1,436,785. Territory, 8302 square miles. Religion Catholic.

Pius IX. Pope of Rome, is the temporal Sovereign of the States of the Church. Born, Dec. 23, 1792. Was elected by the College of Cardinals, June 21, 1846, at the age of 54. Elective Sovereignty. Population, 2,732,436. Territory, 17,048 square miles. Religion Catholic.

Ferdinand II., King of the two Sicillies, born Jan. 12, 1810. Ascended the throne Nov. 8, 1830 at the age of 20. Government, limited monarchy, with a council. Population, 7975,850. Territory, 41,531 square miles. Religion Catholic.

There are also Duchies in Italy—Parma, Modena and Massa ; and the principality of Monaco. Neither should we forget the small Republic of San Marino, in Italy, with 7,900 inhabitants, that of Andorre in the Pyrenees, with 7,000—and that of the Ionian Islands, with 208,100 inhabitants, in the Mediterranean, under British protection.

Otho King of Greece, was born June 1, 1815. He ascended the throne May 7, 1832, aged 27. The Government is a limited monarchy. Population 926,000. Territory, 10,206 square miles. Religion Greek Church.

Abdul Mec'id, the Sultan of Turkey, was born April 20, 1823. He ascended the throne July 1, 1839, aged 16. Government absolute monarchy. Population 9,545,000. Territory, 183,340 square miles. Religion Mah. metan.

The foregoing outline possesses unusual interest at the present time, and will be found useful as a matter of reference.

ELOQUENCE OF ACTION—Demosthenes and Daniel Webster agree in attributing eloquence to action. Both proved the theory true by their action. A clergyman we have read of did the same thing more demonstrably. His wife had just been buried, and he was closing the service over her grave. Stretching forth his hand and pointing towards the grave, he said—"There the wicked cease from troubling," and then placing his hand on his breast he continued "and the weary be at rest."

A GOOD IDEA—Mr. Goodale of South Orrington, in a communication published in the Bangor Whig, on the subject of raising fruit, says:—"I never knew a boy to steal fruit, whose father raised it himself, and I would say to all persons who own land and boys, if you wish to make them honest, set out trees, and let them see that it takes something to raise fruit."

FEAR OF INNOVATION.—An instance is given by Sir Walter Scott, very pleasantly, of a fanning mill introduced into Scotland over a hundred years ago, and the objections to its use:—"Your ladyship and the steward has been pleased to propose, that my son Cuddie should work in the barn wth a new fangled machine for dighiting the corn from the chaff, thus impiously thwarting the will of Divine Providence, by raising wind for your ladyship's own particular use, by human art, instead of soliciting it by prayer, or waiting patiently for whatever dispensation of wind Providence was pleased to send upon the sheeling hill." The fanning-mill, it seems, was introduced from Holland in the year 1710, by Fletcher of Soltoun, and its use was publicly denounced from the pulpit, as impious. But innovation is not much feared now ; and to see a farmer ploughing in the same furrow his grandsire turned, is not so common as it was thirty years ago.—*Genessee Farmer*.

DRY AS DUST.—Sandy Welsh tells a story of a man who was in the country on a visit where they had no liquor. He had got up two hours before breakfast and wanted his bitters.—None were to be had, of course he felt bad.

"How far is it to a tavern ?" he asked. "Four miles."
So off this thirsty soul started—walked four miles in a pleasant frame of mind, arrived at the Tavern, and found it was a Temperance house.

THE HORSE.—Why is the ear of a horse so interesting a part of his anatomy ? Because it is one of the most beautiful parts about him, and even more intelligible than the eye ; and an observer of the horse can tell by the expressive motion of the ears, almost all that he thinks or means.

Why is it a good sign for a horse to carry one ear forward and the other backward when on a journey ? Because the stretching of the ears in contrary directions, shows that he is attentive to every thing that is taking place around him, and, while he is so doing, he cannot be much fatigued, or likely to become so. Few horses sleep without pointing their ears ; above, that they may receive notice of objects in every direction.

"When horses or mules march in company at night, those in front direct their ears forward ; those in the rear direct them backward ; and those in the centre turn them laterally or across ; the whole troop seeming thus to be actuated by one feeling, which watches the general safety."

THE HOG'S LITTER.—The natural term of the hog's life is little known, for the plain reason that every man's hand is raised against him, as if he were "hostis humani generis," a pirate and an outlaw ! But it is related by Rev. Gilbert White on this subject, that a neighbour of his kept a half-bred Bantam sow, who was as thick as she was long, and whose belly swept the ground, until she was seventeen, when she showed some tokens of age, by the decay of her teeth and the decline of her fertility, and was then fattened and killed. For ten years she produced two litters annually, of about ten, and once above twenty at a litter. At a moderate computation, she was allowed to have been the mother of some three hundred pigs.

A LAKE OF BLOOD.—Dr. Dick estimates the number of those who have perished directly or indirectly by the war, at 14,000,000,000. Elihu Burrit, the learned Blacksmith, has taken the estimates of Dr. Dick, and estimating the average quantity of blood in a common sized person, states that the blood in the veins of those fourteen thousand millions would fill a circular lake of more than seventeen miles in circumference, and ten feet deep, in which all the navies of the world might float.

"Hiram, my boy," said a tender father to his son, you must be more careful of yourself than you are. You have not got the constitution of some ?"

"Don't believe a word on't. Golly, I've got the constitution of a hoss. There's ain't no break up or down to me. Dang it, if I don't believe I've got the *Constitution of the United States!*"

ADVERTISEMENTS IN THE LONDON TIMES.—"Jane, your absence will ruin all, Think of your husband—your parents—your children. Return—return—all may be well—happy. At any rate enclose the key of the cupboard where the gin is."

AN UNEXPECTED QUESTION.—When Casaubon first entered the Sorbonne it had not been rebuilt. Some one observed ; here is a hall where disputations have been carried on for four hundred years. Casaubon inquired,—*What has been decided ?*

NOT THE ONLY ONE OF THE SORT.—A chap away down east, who served four days on a jury, says he is so full of law that it's hard work for him to keep from cheating somebody.—*Boston Liberator*.

UNEXPECTED INFORMATION.—The other day, while a monitor was hearing a boy recite his lesson, the following passage occurred:—"The wages of sin is death!" The monitor wishing to get "wages" out by deduction, asked, "what does your father get on Saturday night ?" The boy answered, "drunk."—*New York Standard*.

CLEAN HANDS.—Dr. Wall, once at a dinner party, very unwisely persisted in playing with a cork in such a manner as displayed a hand long divorced from the lavatory. One guest happened to express his surprise to another, and in too loud a whisper exclaimed, "Heavens, what a dirty hand !" The doctor overheard, and turning sharply round said, "Sir I'll bet you a guinea there is a dirtier in the company !" "Done," replied the first, sure of winning. The guineas were staked ; and the doctor showed his other hand. He was judged to have won without a dissentient voice.

INGERSOLL WOOL FAIR.—We are happy that our friends in this Town proved successful in their public spirited undertaking.—For the three days Ingersoll was full of Buyers and Sellers—and much wool changed hands chiefly for cloth, at fair rates ;—next year we look for many U. S. neighbours visiting this market with *cash* in their pockets—and if we are in existence and do go ahead in this locality we shall take care to remind them of the 1st 2nd and 3rd of June, and of the Ingersoll Fair. We may here point out to all parties on both sides of the Lines, the great advantages which would flow from free trade between Canada and the U. S.—Such wool as sold here for 15 cents per lb is worth 27 cents in Rochester, and the farmers there say it is really worth 33,—and Wheat, which here brings 6s York, is worth 10s in Buffalo ; Oats, Peas, Barley and Corn,—every thing in short are in the same ratio, and would there find a ready market.

GREEN PEAS.—Last week we were presented by Mr. McFaul, with a dish of delicious Green Peas. This is about the earliest lot we have heard of being brought to market.—*Ham. Gaz.*—Is there no Green Peas in Dumfries.

PARLIAMENT.—The last *Gazette* announces the further prorogation of Parliament to the 24th of July, not then to meet for the despatch of business. The *Examiner* says, it is generally understood that the time of assembling will be about the beginning of September.

BANK OF UPPER CANADA.—Wm. Proudfoot, Esq., has been unanimously re-elected President, and Dr Widmer, Vice President of this Institution.

A man named William Sparks was found dead in his house in Ter-
auly Street, on Sunday afternoon last, with a wound in his breast, evidently caused by the stab of a knife. An inquest was held by the Coroner, on Monday morning, and Sophia Sparks (the wife of the deceased) and Hugh Bryson, who resided in the house, were committed for trial on a charge of wilful murder. The evidence showed that both parties were drunk at the time the deed was committed.—*Globe*.

THE LADIES.

THE WELCOME BACK.

BY ELIZA COOK.

Sweet is the hour that brings us home
Where all will spring to meet us—
Where hands are striving, as we come,
To be the first to greet us.
When the world has spent its frowns and wrath
And care been sorely pressing,
'Tis sweet to turn from our roving path,
And find a fireside blessing.
Oh, joyfully dear is the homeward track,
If we are but sure of a welcome back.

What do we reckon a weary day,
Though lonely and benighted,
If we know there are lips to chide our stay,
And eyes that will beam love blighted?
What is the worth of the diamond's ray
To the glance that flashes pleasure,
When the words that welcome back betray
We form a heart's chief treasure?
Oh, joyfully dear is our homeward track,
If we are but sure of a welcome back.

A JEWISH WIFE.

"He that hath found a virtuous wife, hath a greater treasure than costly pearls."

Such a treasure had the celebrated teacher Rabbi Meir found. He sat during the whole of one sabbath day in the public school, and instructed the people. During his absence from his house, his two sons, both of them of uncommon beauty, and enlightened in the law, died. His wife bore them to her bed chamber, laid them upon the marriage bed, and spread a white covering over their bodies. Towards evening Rabbi Meir came home. "Where are my beloved sons," he asked, "that I may give them my blessing?"—"They are gone to the school," was the answer. "I repeatedly looked round the school," he replied, "and I did not see them there." She reached him a goblet; he praised the Lord at the going out of the Sabbath, drank, and again asked, "Where are my sons, that they may drink of the cup of blessing?" "They will not be far off," she said, and placed food before him, that he might eat. He was in a glad and genial mood, and when he had said grace after the meal, she thus addressed him:—"Rabbi, with thy permission, I would fain propose to thee one question." "Ask, it then, my love!" he replied. "A few days ago, a person entrusted some jewels to my custody, and now he demands them again: should I give them back again?" "This is a question," said Rabbi Meir, "which my wife should not have thought it necessary to ask. What! wouldst thou hesitate or be reluctant to restore to every one his own?" "No," she replied, "but yet I thought it best not to restore them without acquainting thee therewith." She then led him to their chamber, and stepping to the bed, took the white covering from their bodies. "Ah, my sons! my sons!" thus loudly lamented the father: "My sons! the light of my understanding; I was your father, but ye were my teachers in the law!" The mother turned away and wept bitterly. At length she took her husband by the hand, and said, "Rabbi, didst thou not teach me that we must not be reluctant to restore that which was intrusted to our keeping? See, the Lord gave, the Lord has taken away, and blessed be the name of the Lord!" "Blessed be the name of the Lord!" echoed Rabbi Meir, "and blessed be his name for thy sake too! for well is it written, 'He that has found a virtuous woman has a greater treasure than costly pearls.' She openeth her mouth with wisdom, and on her tongue is the instruction of kindness."

How to MAKE DOUGH NUTS.—RECIPE.—Take 3 pints of sweet milk, 1½ lbs. butter, 6 well beaten eggs, 1 tea-cupful of good yeast, 1½ lbs. clean brown sugar, and spice to your taste: Warm the milk and mix it with the eggs; then stir in the flour, which should also be warmed; heat the butter and pour it over the dough, *hissing hot*, and work it well in; then add the yeast (brewers' yeast is best, and can always be got in winter), and work the mass until the hands come out clean. Set it to rise in a warm place; and when light enough, have ready a broad, shallow boiler, half filled with boiling lard; cut off from the dough, pieces about an inch and a half each way, in a lozenge, or diamond shape, and drop them into the lard. When of a light brown, and puffed out on both sides, they are done, take them out with a skimmer, drain them on a colander; remove them to broad dishes, and sprinkle them, while hot, with pulverized loaf sugar. Pure lard will not bubble when boiling hot, and must be tried by throwing into it a small piece of the dough; when, if at the boiling point, bubbles will instantly form around it.—*Agriculturist*,

FRIENDSHIP.

Poets may sing of love, and romantic youths may dream they realize the soft delusion; strong hearts may swear they break and wisher away with unrequited passion, and keen brains may be turned by the maddening glances of woman's eyes; but all these to me seem weak and common emotions when compared with the intenseness of man's or woman's friendship—that pure, devoted identification with each other which two congenial souls experience when the alloy of no sexual or animal passion mingles with the devotion of the spirit. I could go through fiery ordeals, or submit with patience to the keenest tortures, either of mind or body, so that I felt the sustaining presence of one real friend.

How sweet, oh, friendship! is thy magic charm!
Our souls to elevate—our hearts to warm!
Within thy realm no discord's jarring sound
Is heard, nor Cain and Abel there are found!
Congenial friendship brings the potent spell,
To bid the young affections softly swell,
The sweets of fond society impart,
Whose cordial balm exhilarates the heart.
The friendly bosom that can share our grief
Is the best sanctuary to yield relief;
To quench the fiery aspect of despair,
And ease the labouring mind of half its care.

WIDOW OF BURNS.—An English gentleman visiting the widow of Robert Burns, the Scottish poet, at Dumfries, was exceedingly anxious to obtain some *relic* of the bard, as he called it; that is, some scrap of his handwriting, or any other little object that could be a memorial of the deceased. Mrs Burns replied to all his entreaties, that she had already given away every thing of that kind that was remarkable, or which she could think of parting with; that, indeed, she had no relic to give him. Still the visitant insisted, and still Mrs Burns declared her inability to satisfy him; at length pushed by his good-humoured entreaties to very extremity, she as good-humouredly said, "Well, Sir, unless you take myself, I really can think of no other *relic* (relect) of him that is in my power to give, or yours to receive." Of course, this closed the argument.

A NECROTE.—An old lady was telling her grandchildren about some troubles in Scotland, in the course of which the Chief of her clan lost his head. "It was nae great thing of a head, to be sure," said the old lady, "but it was a sad loss to him."

Major Noah, editor of the *New York Sunday Times*, in reply to a Pittsburgh editor, who contended that an "immense fortune" was not likely to give happiness, offers to settle the question by having it tested in his own person.

HOW TO CLEAN SILVER PLATE.—Well kept silver plate seldom requires more than to be washed every time it is used, with a swab, or soft brush, in strong soap suds. Soft soap is best. Rinse the article in clean, soft, hot water, and wipe dry, while hot, with a linen towel, after which, it must be well rubbed with soft goat skin. If it has become dull and greasy looking, after washing and wiping, clean it well with a piece of flannel, wet with spirit, or common whiskey, dipped in powdered chalk, or whiting. Let this dry, and then rub it off with a soft, dry brush, taking care to clear it out of the engraved lines, and then polish with soft leather.

The insides of coffee and tea pots must be scoured frequently with wood ashes and soap suds. Forks and spoons should be cleaned daily with dry whiting only. The stains made upon these, by boiled eggs, can easily be removed by rubbing the spots, with table salt, while wet, after washing in warm water. The black spots upon castors, saltcellers, &c., may be taken off by rubbing them with flannel wet with spirits of hartshorn, and dipped in powdered magnesia; when dry, rub off with a brush and leather.

Silver filigree, and frosted ornaments, that have become tarnished, and are too delicate to be cleaned in the common way, should be soaked for a few minutes in one part spirits hartshorn to two parts water; then rubbed very gently with a soft leather, afterwards dipping them in hot water and drying them with a cambric handkerchief.—*Agriculturist*.

How to REMOVE RUST FROM FINELY-POLISHED STEEL.—Rub the spots with any kind of soft animal fat, and lay the articles by, wrapped in thick paper for two or three days; then, after cleaning off the grease with a piece of soft flannel, rub the spots well with powdered rotten stone and sweet oil, after which, the polish may be restored by rubbing with powdered emery on a soft leather; and the process may be finished with finely-powdered chalk, or magnesia.

To MAKE A PLEASANT COSMETIC SOAP.—Shave a quarter of a pound of old Castile, or palm-oil soap into soft, hot water enough to cover it; boil and stir it quite smooth; turn it into an earthen bowl, and, while hot, stir in enough Indian corn or bean meal, to make a thick paste; add an ounce of oil of almonds, and some oil of lavender, rose, or other agreeable perfume; cover it closely in small China toilet boxes, or jars, and put one on every wash-stand.

SCIENCE AND MECHANICS.

PROTECTION OF BUILDINGS FROM LIGHTNING.

"If there be one time more than another," says a late writer on electricity, "in which man feels that he is entirely in the hands of One mightier than himself, in which all his personal pride sinks in the conviction of his utter helplessness, it is when the forked bolts of heaven glare about him with frightful brightness, and the dread artillery of the skies stuns him with its deafening peals, and shakes the very earth on which he treads. Then I say, it is that his conscience tells him how entirely dependent he is; and how, in a moment, the next flash might be to him the instrument of death, without his having the slightest power to avert his fate. In respect to the other great and irresistible powers of nature, man, in some sort, seeks them out—the lightning's flash seeks out him. It is true he may go to shores where thunder-storms are less violent, or to others where they are much more violent than in his own land; but regarding it generally, lightning is no respecter of time nor place; it was as much known to the ancients as to ourselves; it comes to us, so to speak, 'in season and out of season'—its geographical distribution is less restricted than that of any other of nature's great phenomena—tempests, perhaps, excepted."

With this startling admonition before him, let any one of the readers of these observations pause for a moment and count the number of lightning-rods in his own neighborhood. Does he hesitate? He thinks there may be one on the village spire, and perhaps another on yon tall chimney; but where else, he knows not. Now he is led to ask: What is the cause of this apparent neglect? Why this consummate audacity in trifling with the eternal laws of nature by erecting monuments and inviting down the fire of heaven, and providing no means of conducting it safely away? The leading reasons for this, are, first, the comparatively few accidents by lightning; second, the very recent adoption of lightning protectors; third, the want of confidence in the efficacy of the latter; and fourth, their cost.

Although the extreme magnitude of accidents by lightning cannot be otherwise than recognized by all, and the almost certainty of some one or more buildings being the marked victims at every season; yet each man builds with the chance of his edifice not being the fatal one. Amongst so many, the chances are so much in his favor, that he will run the risk; or else he comes to the still more unphilosophical conclusion, that, as storm after storm has left him unscathed, so will he for ever be safe.

With regard to the very recent discovery of means of averting the effects of lightning, it will be remembered that it was not until the month of June, 1752, that mankind knew what lightning really was. Then it was that Dr. Franklin first drew down lightning from the clouds, by means of a kite, and proved its entire identity with electricity, which discovery led him to the construction of lightning conductors. But before treating of these, perhaps it may be interesting to give some of the precautions adopted by the ancients, in order to protect themselves against this "ethereal fire." According to Herodotus, the Thracians, in times of lightning, were in the habit of shooting arrows against the sky, to repel it from the earth. Augustus used to retire into a cave during thunder-storms, on the strength of an opinion then prevalent, that lightning never penetrated into the ground more than five feet deep. The emperors of Japan, it is said, possessed, a refinement on this mode, by building reservoirs above the caves, into which they re-ired, and kept them constantly filled with water, in order, as they thought, to put out the fire of the lightning. Augustus, who appears to have been terribly alarmed at this element, used, also, to wear a seal-skin cloak during storms, on account of its assumed protecting efficacy. The Romans used to build seal-skin tents into which the timid retired; and the shepherds of Cevennes, even at the present day, wear hat-bands of serpent skins for the same purpose. Tiberius wore a chaplet of laurel, whenever he dreaded danger from a storm, with a belief that lightning never touched the foliage of the laurel. And it is a notorious fact, that the American Indians, whenever the sky wears the appearance of a thunder-storm, quit their pursuits and take refuge under the nearest beech, with the full assurance that the electric bolts never scathe that tree.

If the ancients were thus industrious to use what, in their ignorance, they thought to be the means of safety against an agent, the nature of which they knew little or nothing, and the action of which they knew still less, how much more does it seem to be the duty of the present generations, who both understand this agent and the means of averting its effects, to avail themselves of the advantages of their knowledge, and employ the remedies they have at their command. Not a year passes without numerous cases of buildings being struck by lightning, for want of proper protection, particularly barns, which, in consequence of the humid gases ascending from the newly-gathered crops, are peculiarly liable to this injury. The necessity and value of lightning rods are obvious and need no further comment.

As scientific knowledge has now obtained its proper rank in our schools, but few of our readers can be ignorant of the fact, that all matter is divided into two general classes, *conductors* and *non-conductors* of electricity. These names, however, are only comparative; for the two classes gradually merge into each other, leaving the dis-

tinctive term merely an expression of degree. For instance, copper ranks very high in the scale of conductors; and air occupies a very low rank among insulators; yet, an electric shock will sooner pass through a short interval of air than along a long copper wire. This fact is dependent on a law, the due observance of which, can alone ensure the efficacy of any protecting apparatus. Another modification in a conducting body of a comparatively high class, is its *capacity*, which exercises an important influence over its conducting power. Thus an electric charge, which will pass safely and quietly along an ordinary copper wire, will deflagrate and burn up, entirely, an extremely fine wire of the same kind of metal.

The most important things to be considered in the choice of lightning rods, are, that they should consist of good conducting materials; good capacity; and should have a good connexion with moisture in the earth. In addition to these, the area of their protecting influence should be regarded; the number of rods required for each building; their position in special cases; and the modes of arranging them.

With regard to the *conducting materials* employed in their construction, metal is undoubtedly the best, and the choice would seem to lie between copper and iron. M. Pouillet makes the conducting power of copper from $5\frac{1}{2}$ to $6\frac{1}{2}$ times that of iron; Dr. Priestly makes it 5 times as much; and Professor Faraday 6 2-5ths times as much; so that, after having determined the sectional area of an efficient copper rod, an iron one of about 6 times that area, will possess the same conducting power. Iron, however, will not make durable and efficient conductors, unless they are entirely coated with silver, gold, copper, or tin, in consequence of their liability to rust, or oxidate, by the action of the weather.

As to the *capacity* to be given to a rod, it has been decided by common consent, that, the *sectional area* of one composed of copper, should vary from a circle one half of an inch to three-fourths of an inch in diameter, the larger area being for very tall conductors, and the smaller, for shorter ones. And now, in respect to the *form of the rods*, it is quite immaterial whether they be square, round, or flat; but let it be remembered, that, in all cases, each conductor should be as entire and as straight as possible, presenting a *single point* to the clouds, with the apex tipped with palladium, or gold.

Of all considerations, the most important is a good *connexion with the earth*, which is so very essential, that without this, all other precautions will be in vain. It is not enough that the conductor enter the earth; for it must penetrate it to some depth, in fact, till it reaches the subsoil, where it is well impregnated with water. In order to reduce the destructive action of this moisture (the oxydation of the metal), and at the same time to give the buried portion of the conductor every facility for dissipating its charge, it is better that the rod should terminate by several branches in a sunken bed of well-burnt charcoal, wood ashes, or spent tan bark.

Another important point to be considered, is the *situation and position* in which the rods are to be placed after they are put up. In all cases, they should be elevated above every other point of attraction, at least, *four times the diameter of the area* to be protected; say, in a common-sized house from 10 to 15 feet above the top of the highest chimney, or other object extending above the roof. And as before intimated, the integrity and upright position of the rods should be maintained, as far as practicable, avoiding, also, all abrupt angles and short turns. If a house, barn, church, factory, &c., be located in the immediate neighborhood of each other, and only one of them be protected, the danger of all the others will, thereby be increased. The remedy, in such a case, is so obvious, that nothing is necessary to be added on that score.

The question now presents itself, How are the rods to be affixed to the building, by *conducting*, or by *insulating staples*. Our unequivocal reply would be, by *conducting staples*—not those covered with copal varnish, or insulated by necks of glass bottles, as has often been recommended by writers on this subject; for, let it be remembered, that the flash, which may have forced its way through many yards of air, would find no difficulty in passing so slight obstacles as these, if such a direction formed a part of the lightning's path previously prepared, or "felt out." It is a well-established truth, that, if a conductor pass near a mass of metal in tolerable connexion with the earth, the flash will sometimes divide itself between the two channels, one portion of it continuing its course down the rod, and the other portion leaving it to pursue the side-path. Therefore, in order to alleviate this "lateral discharge," or deviation from the main channel, all suspected vicinal electrified bodies should be united to the conductor itself, by means of metallic wires or bands. Then, if the building is predisposed, by the antecedent inductive action, to share with the rod, in conveying away the fluid, let it be done in good sooth, without an explosion, without a *fracas*, as the French emphatically call it.

Conductors should neither be painted nor varnished, as that would diminish their conducting power. If made of iron, they should be coated with metal, as before suggested, and may be erected at either, or both sides, or ends of a building, at a distance of about four inches from the walls, supported by iron staples or wooden supports.

Thus we have endeavored to point out the necessity and value of lightning rods, and faithfully describe their chief characteristics, without entering much into theoretical speculations or trivial detail—*American Agriculturist*.

IRELAND—SENTENCE OF MITCHELL.

The English papers by the *America*, which arrived at Boston on the 13th inst., have come to hand, and contain interesting accounts of the trial of Mitchell, the Editor of the "physical force" paper, the *United Irishman*. Mr. Maclell, Smith O'Brien, and others, were tried under the authority of an Act of Parliament passed to meet their case. The jury, in the case of O'Brien, could not agree, and he consequently escaped for the present. But, in Mitchell's case, they in a short time returned a verdict of "guilty." He was sentenced the next morning to 14 years transportation to the prison hulks at Bermuda, and almost immediately sent off. His property was confiscated. The indignation of the Repealers of both sections at what they regard as an unjust sentence, is excited to the highest pitch. The division between the old and young Ireland party is likely to be healed up by the course the Government has taken; and a more formidable opposition than ever organized against England—Many protestants and orangemen have joined in the Repeal movement, and at their meetings passed resolutions strongly condemnatory of the conduct of the Government.

When Mr. Mitchell, was asked if he had any thing to say why sentence should not be passed, he remarked—

"I have to say that I have been found guilty by a packed jury—by a jury of a partisan sheriff—by a jury not empaneled even according to the law of England. I have been found guilty by a packed jury obtained by a juggle, a jury not empaneled by a sheriff, but by a juggler.

The High Sheriff—My Lord, I claim the protection of the Court. Mr. Mitchell—This is the reason I object to sentence being passed on me.

The Judge denied the imputation of the prisoner, and proceeded to pass sentence, after which the following scene took place:

Mr. Mitchell having expressed a wish to address the Court, was allowed to do so. He said—

"The law has now done its part, and the Queen of England, her Crown and Government in Ireland are now secure, pursuant to act of parliament. I have done my part also. Three months ago I promised Lord Clarendon and my Government in this country, that I would provoke him into his court of justice, as places of this kind are called, and that I would force him publicly and notoriously to pack a jury against me to convict me or else that I would walk a free man out of this court, and provoke him to a contest in another field. My Lord I knew I was setting my life on that cast; but I knew that in either case the victory should be with me. Neither the jury nor the judges, nor any other man in this court, presume to imagine that it is a criminal who stands in this dock. (Murmurs of applause, which the police endeavored to repress.) I have shown what the law is made of in Ireland. I have shown that the Government in Ireland sustains itself by packed juries, by partisan judges, by perjured sheriffs."

Baron Lefroy—The court cannot sit here to hear you arraign the jurors of the country, the sheriffs of the country, the administration of justice, the tenure by which the Crown of England holds this country.

Mr. Mitchell—I will not say anything more of the kind; but I say this—

Baron Lefroy—Anything you wish to say we will hear; but but I trust you will keep yourself within the limits which your own judgment must suggest to you.

Mr. MITCHELL.—I have acted all through this business from the first, under a strong sense of duty. I do not regret anything I have done, and I believe that the course which I have opened is only commenced. The Roman who saw his hand burning to ashes before the tyrant, promised that three hundred should follow out his enterprise. Can I not promise looking at his friends, who surrounded the dock, for one, for two, for three, ay for hundreds.

A loud shout of exultation here rung through the court, accompanied by immense cheering, clapping of hands, and great manifestations of excitement.

ARRIVAL OF THE AMERICA!

SEVEN DAYS LATER FROM EUROPE.

NEW YORK, June 14, 1848.
The steamship *America* arrived at Boston last night. She made the passage in 10 days 8 hours. The quickest trip on record.

LIVERPOOL, June 3rd.
Flour—Western Canal, 27s 6d a 28s; Southern, 27s a 28s; New Orleans 26s a 27s.

Wheat—United States and Canada, white and mixed, 7s 7d a 8s.
Indian Corn, per quarter, 32s a 36s 6d.
Corn Meal 14s 6d a 15s per barrel.

Flour and Grain are scarcely changed. The statements of potato blight are false.

The exports are chiefly confined to the United States. Money plenty; accommodation liberal. Bank of France improving in business.

John Mitchell has been sentenced 14 years transportation, and the same day was sent to Cork and shipped as a convict to the prison hulks at Bermuda.

No outbreak has yet occurred, but an ominous silence prevails. John O'Connell is severe on the Government; he denounces it most fiercely.

Mitchell's parting with his family was deeply affecting. His property is confiscated.

The *United Irishman* is suppressed. Mitchell's family was adopted by the association and people.

Trifling disturbances have taken place at London, Bradford, and Manchester, principally by Chartists and Irish sympathizers. Some ringleaders were arrested by the police. The working classes are in great distress. It is supposed the Government will adopt extensive emigration as the relief.

On the evening of May 1st, the Government announced two very important measures for Ireland. The first of these measures leaves the Irish counties the use of the instalments due under the Eight Millions Loan, for the next three years, to be employed in public works; the second extends the county franchise to all occupants of land rated at £8 per year.

FRANCE.—Paris generally tranquil. Small riots had taken place; were generally put down. The National Assembly is strongly guarded by troops.

They are beginning to legislate in earnest. They have determined to break up the Louis Blanc system of organization of labour, which made some disturbances amongst the workmen.

New disturbances at Lyons. The Ministers to the United States are said to be appointed.

Prince Louis Napoleon entered Paris in disguise, but was ordered to leave.

Rothchilds' cottages burnt by the conspirators. The police have arrested Blanqui and Floccor. Louis Blanc is to be tried with others for the conspiracy of the 15th May.

The Constitutional Committee decided to have but one Chamber, and to make the present one ineligible for the next.

PRUSSIA.—A violent riot occurred at Berlin, on the night of the 20th; many people were hurt by the National Guards.

AUSTRIA AND ITALY.—The Austrians defeated the Italians at Lake Ledro.

DENMARK.—The Danes attacked the Germans at Sunderhill Chleswig and defeated them. The combined Swedish, Russian, and Danish fleets off Copenhagen. Prince Constantine was on board.

No news from China or India.

The three officers found guilty of robbery and burglary in the city of Mexico were sentenced by the court martial to be hung on the 25th ultimo. General Butler had approved the sentence. Lieuts. Hare and Dutton belong to the Pennsylvania volunteers, Tilden, it is said, belong to the second regiment of infantry, or regulars. If this be the case he must be Lieut. P. Tilden, a graduate of west Point, in the class of 1840.

GENERAL TAYLOR.—The friends of General Taylor called a spontaneous meeting at Lafayette Hall this evening, when a number of those opposed to Gen. Taylor entered the Hall and broke up the meeting, benches, tables, &c.

A Western paper out west in speaking of a Bankrupt out there, says he has broke every Bank and Sabbath day that has been in that State for the last five years.

The new and beautiful cathedral of Detroit will be dedicated on the 29 h of June.

SWIFT STEAMING.—A trial of speed recently occurred on the Hudson river, between the Hendrick Hudson and Alida. The Alida beat by 13 minutes, making the trip, 156 miles, in 8 hours 3 minute.—Nothing is said of the tide, but she probably had a flood half way, that is to Poughkeepsie.

HOME MARKETS.

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

	Toronto June 14.	Hamilton June 14.	Montreal June 13.
Flour, per barrel	£1 1 3	£1 1 3	£1 4 0
Wheat, per bushel	0 4 6	0 4 1	0 5 6
Barley, per 48 lbs.	0 2 7	0 2 4	0 4 6
Rye, per 56 lbs.	0 3 0	0 3 0	0 3 9
Oats, per 34 lbs.	0 1 9	0 1 3	0 2 0
Peas, per 60 lbs.	0 2 9	0 2 0	0 3 0
Oatmeal, per barrel	1 0 0	0 18 0	1 10 0
Potatoes, per bushel	0 4 6	0 3 9	0 4 0
Hay, per ton	2 10 0	1 15 0	2 10 0
Beef, per 100 lbs.	1 7 6	0 17 6	1 5 0
Pork, per 100 lbs.	1 2 6	0 17 6	1 10 0
Lard, per lb.	0 0 4	0 0 5	0 0 7
Butter (fresh) per lb.	0 0 10	0 0 8	0 1 0