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THE AGRICULTURIST

AND CANADIAN JOURNAL.

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

WM. McDOUGALL, EDITOR. WM. McDOUGALL & Co., PROPRIETORS.

VOL. I. TORONTO, MAY 15, 1848. NO. 9.

USE YOUR JUDGMENT.—Men to whom agricultural papers are new often object to them, that they contain things which are not true; or, that Mr. so and so followed some prescription found in such a journal, and came out badly with his experiment.

Let such a man ask himself what proportion of the whole matter found *in any newspaper* is true. Here are two papers on opposite sides in politics, contradicting each other, through the whole length of their columns. Which of these is right?

The fact is, that pure and absolute truth is not to be looked for in the present-imperfect condition of the human mind, in any mortal production. To suppose that it is so, is to make men not only universally honest, but infalliable.

Every man, who either relates a story, or gives an opinion, either in conversation or writing, mixes up with the absolute and ascertained facts in the case, certain inferences of his own, which he states in the same breath, and without any indications that they are inferences; and though they may appear to him entirely legitimate, they are liable to be wrong. Hence, on the part of the hearer there is requisite a use of judgment to sift and settle to what is right or wrong in the story. Nothing is therefore to be swallowed whole. Make use of your judgment.—*Prairie Farmer.*

STEEP FOR SEEDS.—We are requested to republish a steep for seeds which appeared in the Cultivator last fall from the Albany Cultivator. The following is the substance of the article.—Caution is necessary in trying steeps of powerful chemical substances.

"Soak garden seeds four hours in a solution of chloride of lime, to one gallon of water." The writer observes that seeds which were soaked thus, came up some days sooner than those which were not soaked, and that the plants kept the lead through the season. One fourth of an ounce of chloride of lime to a gallon of water.

On the 10th of May, 1845, I put cucumber, muksmelons, beet, summer savory and radish seeds, and corn, beans and peas into the solution let them soak for two hours, and planted immediately. Twenty-four hours after planting, I dug up some of the corn and peas, and found that their roots were from one to one and a half inches in length. In forty-eight hours the roots were three to four inches, and the spire one to one and a half in length. The precise day that they broke the ground I now forget.—My cucumbers and melons came up quick and well, and for the first time in my life. My beets were up before any weeds were started. Two or three of my neighbors have tried the experiment this year with the like good results.—*Boston Cultivator.*

FROST.—The following simple and easy method of securing fruit trees from the effects of frost, we have seen highly recommended. Take a thick rope and entwine it among the branches of a fruit tree in blossom, the end of which should be directed downward, so as to terminate in a pail of water placed at the root of the tree; should a slight frost take place during the night-time, it will not in the smallest degree affect the tree, while the surface of the pail which receives the rope will be covered with a thin ice; though water placed in another pail by the side of it, by the way of experiment, may not, from the slightness of the frost, have any ice on it at all.—In this case the rope aids the evaporation of the water, and thereby cools it down to the freezing point.

CHARCOAL BEDS FOR MELONS.—We would say to our farming friends, if you have been burning charcoal during the past winter, be sure you fence up the site of your coal pits, as vine patches for cucumbers, squashes and melons. In these situations the insects are pretty much burned out of the soil, body, eggs, and all, and they will not eat up your vines as soon as these come out of the ground. The annihilation of worms and insects will enable your vines to get a start before flies and bugs will be much abroad; the coal itself, furnishes one of the greatest constituents of vegetable existence. If, you have no such patches as we have referred to, a few loads of charcoal dust might by purchased from the nearest blacksmith's shop, or foundry, and used with profit in this culture.

TO CURE GAPES IN CHICKENS.—Steep lobelia and red pepper in hot, not boiling water, and mix the food with this liquor as strong as they will eat it, until the chickens *gape* "for certain."

Laugh at this prescription, and call it "*Thompsonian*" if you will, but *try* it. It is both a preventive and a remedy. We tried it to see if it would kill some hopeless chickens, but they would live in spite of it, and now we have no trouble with this disease. T.

Jefferson Co., O., 1848.

Remarks.—The foregoing remedy is easily tried, and if it should indeed prove an effectual remedy for this formidable disease, the knowledge of it will prove worth many times the cost of our paper to thousands of farmers and housewives in our land.

We hope some of our readers will inform us of the results of their experiments with it.—*Ohio Cult.*

CAMWOOD.—For five yards of cloth take one lb. of camwood, one oz. of vitriol, and one oz. of copperas. Put three pail-fulls of soft water into a kettle and let it boil—put it in the camwood and the cloth (the cloth having been wet,) let it remain two hours with frequent airing, then take it out and air thoroughly, add the vitriol and again put in the cloth, keep it rolling for three quarters of an hour, after which add the copperas and continue stirring for half an hour. Rinse in cold water.—*Ib.*

TO DRESS RICE.—A lady recommends the following:—"Soak the rice in cold salt and water for seven hours; have ready a stew pan with boiling water, throw in the rice and let it boil briskly for ten minutes, then pour it in and then serve. The grains are double the usual size, and quite distinct from each other."

HORTICULTURE.—There is probably no employment or recreation which has a stronger tendency to purify the heart, improve the taste, or strengthen the physical constitution, than a love of horticulture. If a man would truly enjoy his garden, take delight in his flowers, and appreciate his fruits, he must be his own gardener, prune his own trees, gravel his own walks, and cultivate his soil.

VALUABLE RECEIPTS FOR COLORING.—ORANGE.—For one lb. of cloth take two oz. of annatto, two oz. of saleratus and two and a half gallons of water. Boil the ingredients in brass one hour. Wet the cloth, then drain it well, put it in the dye and let it remain one hour, keeping the dye at nearly a boiling heat, drain and rinse.

FRECKLE WASH.—White sugar, lemon juice, and borax, powdered; rub well together, and put into glass phials.

Agriculturist and Canadian Journal.

TORONTO, MAY 15, 1848.

CHEESE DAIRIES.

We commence the publication of the Report of the committee on cheese, of the N. Y. State Agricultural Society, which we alluded to in our last. We at first thought we would give a few extracts only from the report, but on a more careful perusal, we find that the whole of it is well adapted to our pages. The subject is one of great and increasing importance to the farmers of Canada. They can no longer depend with the same confidence as formerly, on large profits from their wheat crop, and the *dairy* is one of those things to which the necessities of their situation will compel them to resort. The great object, will, or at least ought to be, to conduct the business of the dairy on the most improved and economical plan. The extracts from the standard English author, Youatt, which the committee insert in their report, we could have given from the original work, but finding the directions of the English writer so highly recommended to the American cheese maker, by such good authority, their applicability to Canada, and the non-existence of any later or better instruction on the subject, became more apparent. We shall be obliged to extend the report into two or three numbers, in order to give it entire:—

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

The committee to whom was referred the applications from the owners of cheese dairies, &c, respectfully report:

That they have examined with care the applications which have been presented, to which particular reference will be had in a subsequent part of their report.

The manufacture of cheese both for the domestic and foreign markets, is increasing rapidly in this State, and is becoming a source of wealth to our farmers, and adds much to the income from our internal channels of communication. The importance then of securing the largest yield, and a superior article for market, is apparent. From all the means of information which has reached the committee, they are satisfied that an improvement is making in each of these particulars, though slowly.

First in importance in the management of a dairy, after the necessary buildings are prepared, which should be of such dimensions as to afford room for all the operations without inconvenience, is cleanliness in every thing connected with it. "Cleanliness may be said to be not only necessary in dairy husbandry, but to be the foundation of it, and the most indispensable part of good management. A farmer may be in possession of the most valuable breed of cows, and these may be fed on the richest pastures, but unless cleanliness prevail in the dairy, his butter or his cheese will never stand high in general estimation."

The increasing importance of the dairy interest demands from this Society all the encouragement they can give to this branch of agricultural industry. From our location, and the peculiar adaptation of most of our State to the raising of stock and for dairy purposes, it is becoming a question of deep interest to our farmers, in what manner their farms shall be cultivated. The great emporium of our own State, and the numerous towns in New-England, studded with manufactories, are opening increasing markets for our beef, butter and cheese, and the experience of the last few years has abundantly proved, that the farms devoted to the dairy have yielded a larger return, than any other, when they have been managed with care and economy. The competition from the Western States in our grain markets, has tended to render the products of the grain farms somewhat less lucrative than formerly. Our soil and climate are well adapted to Indian corn, and there is no more valuable food for fattening animals, it is believed, than this, and its usefulness for soiling when sown broadcast or in drills is unsurpassed. We would, therefore call the attention of our farmers to the importance of directing their energies so as to secure the best returns from their investments. Our railroads, canals and plank roads, are opening speedy and safe channels of communications to the seaboard; and when the railroads now in progress shall be completed, two unbroken channels of communication from Lakes Erie and Ontario to the ocean will be secured. The cattle and the products of the dairy will then find a ready, and, it is to be hoped, eventually a cheap transit to market at all seasons. How important, then, that, in these departments, in which for a long time to come, there will a demand exist at home and abroad, for all our supply, vigorous efforts should be made to bring our land, especially in the eastern, central and southern counties into a suitable condition for grazing.

The selection of cows best suited to the dairy must be attended to, if success is expected. Experience has proved that the milk of some cows has a much thicker consistence and richer quality than others, and he that would be successful in securing a large yield from his dairy, must give attention to this; and when he has succeeded in obtaining cows suited to his purpose, care should be taken to breed from these, so as to continue the same superiority in his stock.

In relation to the selection of cows for the dairy, the description given by Mr. Youatt in his Treatise on Cattle, may be useful, and the same points substantially are given in various other treatises as regards cows suited to the dairy.

"The milch cow should have a long, thin head, with a brisk but placid eye, be thin and hollow in the neck, narrow in the breast and point of the shoulder, and altogether light in the fore quarter, but wide in the loins, with little dew lap, and neither too full fleshed along the chine, nor showing in any part an indication to put on much fat. The udder should especially be large, round and full, with the milk veins protruding, yet thin skinned, but not hanging loose or tending very far behind. The teats should also stand square, all pointing out at equal distances, and of the same size; and although neither very large nor thick towards the udder, yet long and tapering to a point. A cow with a large head, and high back bone, a small udder and teats, and drawn up in the belly, will, beyond all doubt, be found a bad milker.

"Besides these qualifications, a great point to be considered is the temper; for kindly cows will not only give far less trouble in their management than those of an unruly disposition, but are commonly observed to have a more copious flow of milk, as well as to part with it more readily."

Experiments should be made by those who are engaged in the dairy business, as to the value of their cows for dairy purposes. Let them be fed with the same food, measure its quantity, as well as that of the milk from each, and when used separately, it will be no difficult matter to determine which is the most profitable. This is all important to success in this business.

In regard to the management of cows, we select from British Husbandry, vol. 2d, page 389, some suggestions that are worthy of consideration:

"Experience has very decidedly shown, that no food is comparable to that of good natural pasture for milch cows; for not only does it yield a greater quantity of milk, but the flavor of grass butter may always be distinguished by its superior richness and delicacy from that which has been made from milk produced from soiling in the house, and its quality may be injuriously effected even by the application of manure to the land. Common salt given in moderate quantities to cows, increases the quantity and improves the quality of the milk. Milch cows should at all times be maintained not only in good condition, but in what may be termed a "milky habit," and for this purpose during winter, roots or grain should be given, so as to prepare them well for the opening of the pastures."

"The *act of milking* is one that requires great caution; for if it be not carefully and properly done, the quantity will be considerably diminished, and the quality also will be inferior, as not only is the first of the milk the poorest, but it gradually becomes richer, until the last drainings of the udder, or what is commonly termed the 'strippings.' It should therefore be thoroughly drawn from the cow, both to secure this latter portion and to ensure the continuance of the usual supply; for if any be allowed to remain in the udder, she yields a less quantity at the next milking—a fact which has been accounted for by supposing that the portion left in the udder is absorbed into the system, and that nature generates no more than to supply the waste of what has been taken away. The greatest care therefore should be paid, to have them clean milked. They should also be treated with great gentleness, and soothed by mild usage, especially when young and ticklish, for they never let their milk down pleasantly to a person whom they dread or dislike. If the paps are sore or tender, they ought to be fomented with warm water before milking, and, indeed, if the operation of milking be nicely performed, they should each time be clean washed, but this, we are sorry to say, is too often neglected.

TO PREVENT THE ROT IN POTATOES.

We take the following letter from the *Montreal Transcript*. It is only from experiments like that which the writer appears to have made, that we are ever likely to arrive at any thing like a remedy for the potato rot. We publish his statement in order that our readers who are so minded may verify the experiment:—

Spread a little slacked lime under the seed, and cover the seed about two inches deep; then spread more lime over the whole surface of the field, to the amount of 100 bushels slacked-lime, to the acre. What is put on the surface may be roach, but what is put under the seed must be slacked. I have

tried the above for the last three successive years, and have not found one rotten potatoe where the lime was applied, although my neighbours lost great quantities by the rot the same years, and not only so, but two of the crops I tried on part of the same field with lime, and another part without it, and lost the greater part of my crop by the rot for want of lime, though the unlimed part of the field was as productive as that part which was limed, yet at the last of November three fourths the produce was lost by rot.

It is but a trifling additional expense, and the crop will amply repay all the expense, and future crops will be improved for five or six years afterwards. A farmer writes in the *New York Evangelist* that the addition of half a pint of lime to each hill, increased his crop of potatoes at the rate of 100 bushels to the acre over those that had been planted in a similar soil, and in all other respects managed in the same manner, except the application of lime. The writer knows of only two farmers who have applied lime to their potatoes since the rot made its appearance, and they have positively asserted that they had not one rotten potatoe, though most of their neighbours lost heavily.

Mr. Evans, whose opinion in agricultural concerns is entitled to much weight, recommends the use of old mortar, and his authority is sufficient where the mortar can be obtained; but lime can be obtained every where, and ought to be universally applied.

N. B. All newspapers, magazines, &c., throughout the Province, friendly to agriculture, are requested to publish the above, and those who publish in French should translate into that language. Let editors in all cases consider that while they are thus pointing out a ramedy for this disease of an extensively used esculent root, they are but contributing their part towards furnishing their own tables as well as those of their fellow mortals with a wholesome nutricious vegetable.

JOHN MERLIN.

Hemmingford, May 1st, 1848.

TIME FOR PLANTING INDIAN CORN.

The time of planting Indian corn varies, according to the locality or season in which it is intended to grow. In the southern portions of the United States, it is generally planted in January or February, whereas, at the extreme north, or east, it is not usually done before the latter part of May, or early in June.

It is a rule with many, to make the flowering or unfolding of the leaves of vegetation, and the appearance, or pairing, of certain birds, as natural guides. For instance, some plant when the apple tree is bursting its blossom buds or when the June-berry or shad fish is in full blow; others adhere to the old Indian rule, in planting as soon as the leaf of the white oak is of the size of a squirrel's ear; while not a few listen to the notes of the whip-poor-will and cuckoo, as unerring guides. But we have ever found, from experience, that a period somewhat later than those just named, when the ground has become sufficiently warmed by vernal heat to cause a speedy germination of the seed, is far more favorable and safer from late frosts and the depredations of blackbirds and crows. Corn, planted in the middle and northern states, from the 20th of May to the 1st of June, with proper management, can be made to vegetate in four or five days, and in a week more, will be large enough to weed. If planted too early, it will often lie in the ground two or three weeks before it will come up, and by the middle of June, it will not be near so large nor vigorous as that planted towards the end of May.

Previous to planting, the germination of the corn may be hastened by steeping it, and the kernel may be completely protected against the ravages of grubs, wire worms, birds, squirrels, &c., by smearing it over with tar, dissolved in boiling water, and then rolling it in powdered plaster until it is dry. Thus treated, it has been known to come up in 24 hours.—*Am. Agriculturist.*

DEPTH OF MANURE.

Considerable discussion is going on in the papers, relative to the proper depth to bury manure. Some assert that its best parts descend, and therefore it should be but slightly covered; while others maintain that nearly the whole strength becoming gaseous, rises, and it must therefore be buried deep. All this difference of opinion results from the attempt to make a rule that will apply to all circumstances.

One farmer applies manure to the surface of a newly plowed field late in the spring, and harrows it in. Hot and dry weather follows, and being only partially covered, much of it escapes in vapor and is wasted; the few light rains which occur are insufficient to wash much of the soluble portions into the soil, it never reaches the roots of the crop, and consequently produces little or no effect. Again, he plows it deeply into the soil, and the reverse in every respect takes place. Hence he becomes thoroughly satisfied that manure should *always*, under all circumstances, be buried deep.

Another farmer applies his manure late in autumn, to the surface. Cold weather prevents fermentation, and the enriching portion which otherwise would escape in vapor, is washed by the abundant rains, in the form of liquid manure, into the soil; and by the usual time of plowing in spring, the surface of the soil for a few inches, is saturated with the most fertilized parts, the plow turning under the rest. All is thus saved, and the farmer is convinced that surface application is *invariably* the best.

They "both are right and both are wrong." They should act according to circumstances Every farmer is aware, by the smell, that but little manure escapes from his yard in winter, but much in summer. Hence in winter and in late autumn and early spring, manure may safely lie at or near the surface, and its soluble parts will descend deep enough into the earth. But in dry soil, and during a dry warm season, it can scarcely be plowed too deep, for benefitting the roots of plants. Indeed, by a shallow covering, it will be likely to do no good at all, the moisture of the earth being sufficient to dissolve it, and hence the reason that manure in dry seasons sometimes does more harm than good. And hence, too, why a thorough harrowing, to break it fine and mix it with the soil, after it is spread, and before plowing in, is found so useful.—*Alb. Cult.*

DIRECTIONS FOR SACKING WOOL.—Wool, intended to be sent to a distant market, may be put up and pressed in bales after the manner of cotton, or it may be crowded into sacks holding from 200 to 250 lbs. If designed to be shipped on a long voyage, it would be more economical to press it into square bales, as it would then occupy less bulk, and consequently effect a saving of freight. But in the interior of a country, where conveniences for baling are not always on hand, sacks may be employed, made of 40-inch "burlaps," or 45-inch "gunny cloth," 7½ feet long. Each of these sacks may be made of a piece of cloth 5 yards in length, by doubling the ends until they meet and sewing up the sides with twine.

The mouth of a sack may next be sewed to a strong hoop of iron (diameter 25 inches for the burlaps, and 28 inches for the gunny cloth); then let down its body through a circular hole, two inches less in diameter than the hoop, cut in an upper floor of a building, or a temporary scaffold erected for the purpose, where it can swing clear beneath. One man may then get into the sack, while another hands him the fleeces, which he should place in regular layers, pressing them down in the mean time, with his feet, until it is filled. After this, the sack may be slightly raised, the hoop disengaged, the mouth of the sack sewed up with twine, and the operation is complete.—*Am. Ag.*

INFLUENCE OF FORESTS ON THE DISTRIBUTION OF RAIN AND HAIL.—In every instance, and in every country of the globe, where the forests have been cleared, a diminution of the fall of rain or snow has been the result; and these regions annually suffer, more or less, from tempests or storms of hail. In some parts of Europe, it is well known that insurance companies against hail demand, for certain districts, a higher premium than in others on this account.

The evidence of Humboldt, Von Buch, Daniell, and others, is so powerful on this subject, that it should be particularly impressed upon the attention of the reader how important the existence of wooded spots become to the agriculturist. "By felling the trees that cover the tops and sides of the mountains," says Humboldt, "men, in every climate, prepare at once for two calamities for future generations—the want of fuel and the scarcity of water. Trees, by the nature of their perspiration, and the radiation from their leaves, in a cloudless sky, surround themselves with an atmosphere constantly cool and moist." Hence all large forests tend to attract the clouds formed by the condensation of the moisture which rises from the earth, and thereby produce an abundance of rain.

SPRING FAIR OF THE HOME DISTRICT AGRICULTURAL SOCIETY.

The Exhibition of this Society was held on the 10th inst.—The animals were of good quality, but few in number. There were but few implements on the ground, and nothing particularly attractive or novel in their appearance. The reaping machine of Mr. Bell was again exhibited, and there being none to compete with it, obtained as a matter of course the first prize. We have nothing to say against this reaper, but on the contrary, believe it a very valuable implement; but we have something to say against the practice of taking the same animal or the same machine to all the Shows within reach, for the purpose of carrying off the first premium; and especially do we condemn the practice of allowing the same animal or thing to be entered for premiums at the same Show two, three or four times in succession, *after* it has obtained the *first* premium.—This is an abuse of the funds of a Society, and in no degree tends to accomplish its objects. When an animal has had the first premium awarded to it at the Provincial Show, it should not be allowed to compete at a District or Township Show. Its character has been established—it has received the highest honors—and the owner should be satisfied. He should consider it derogatory to compete on meaner ground. The object of premiums is to stimulate and encourage improvement among the many, not to bring into existence one or two animals of such great superiority as to shut out all hope of successful competition. The general rule should be laid down and acted upon, (or our exhibitions will become a mere mockery) that when anything has reee ved the first premium at the Show of a higher class, it shall not be allowed to compete for a premium at the Show of a lower class. We believe the custom in the State of New York is, to allow such things to be exhibited, but to give them only a certificate or diploma. We hope to see some regulation of this kind put into practice forthwith. There is no satisfaction in seeing the same Bulls, the same Horses, the same Cows, and the same Implements appearing every spring and fall, with as much regularity as the return of the seasons, to carry off the same prizes. We get *used* to them; "familiarity breeds contempt," and we begin to think they are not so good as we took them to be.

After the Show was over we understand a large company sat down to a good dinner provided by Mr. John Elgie. We were unable, from other engagements, to be present; but somehow or other we have never been quite convinced that there was much to be learned, gained, or enjoyed, by drinking toasts to the "Queen," the "Army and Navy," &c. &c., and listening to the stereotyped and unmeaning speeches that usually follow such toasts. The *occasion*, it seems to us, is not the proper one. Besides, it is highly important to unite all classes if possible, in the good cause of agricultural improvement; and while there are large numbers of our most worthy farmers conscientiously opposed to all drinking usages, and will therefore not attend meetings where they are indulged in, we think it is unfortunate that such a custom has been introduced at our agricultural meetings. A well-conducted discussion, or a good lecture on subjects connected with farming, after a good dinner, would, we believe, be more agreeable, and productive of much more benefit.

For a Kicking Cow.—A few weeks ago, we stood for some time to witness an attempt to milk a cow that had just had her calf taken from her, and who kicked so furiously as to render it dangerous to attempt the operation. Coaxing and beating were of no avail, and it at length struck us to suggest that the kicking leg be tied up. A cord was procured, a slip-knot in one end passing round the leg below the knee, and the other end thrown over a beam; drawing away on this, she soon had no leg to spare to kick with, and was as quiet as a lamb.

AGRICULTURAL LIBRARIES.

Of all the varied occupations and pursuits of man, that of Agriculture requires the most study and research. The mechanic, after he has learned the use of tools, and a few certain rules, which always produce the same results, is master of his trade; he forms his creatures and they retain their shape; he knows what effect each blow or effort will produce. How unlike the science of agriculture: a man, in order to become a good practical farmer, must devise means in order to keep a portion of the vegetable and animal kingdom in existance, and multiply their products to the greatest extent; and to destroy or retard the growth of such as would be injurious. The farmer should study the laws of nature, and the effect that certain causes will produce; hence, the successful farmer requires more book, as well as practical knowledge, than the mechanic. As far as books are concerned, the farmer should profit by the example of those who follow the various professions. The lawyer who ever expects to become eminent or successful in practice, must not only carefully study the general principles upon which the laws of nations are founded, but make himself acquainted with the laws of the country or state in which he practices, as well as the decisions of the superior courts. It is no less necessary that the farmer should study the laws that govern the vegetable kingdom, and keep himself familiar, by attentively reading a good Agricultural paper, with all the improvements that are being made in the various modes of culture, the application of manures, the improvements in farming implements, and new inventions, the introduction of imported stock, &c., &c. The Physician must study years before he is allowed to practice; and, then is behind the age, unless he receives a weekly or monthly medical journal, reporting the new diseases that make their appearance, and the new and different remedies applied to each. By looking over the long list of diseases that the farmer's field-crops, his garden, his fruit-yard and orchard, his horses, cattle, sheep, swine, and poultry, are liable to, all must admit that the farmer's library should be well supplied with books and periodicals, describing new diseases and giving the remedies. It is gratifying to know that there has been a great change brought about, within the last few years; the term "book-farming" is not, as formerly, a by-word—farmers are seeking information relating to their business, and science is lending her aid in advancing the general prosperity, by elevating the Agriculturist. Many valuable books and periodicals have been published; and it is hoped, that every farmer will, at least, add some one of them to his library, as well as to subscribe for and read *The Cultivator*, or some other periodical advancing their interest. While upon this subject permit me to suggest to the different County Agricultural Societies, the propriety of offering a premium, at their next fair, for the best Agricultural Library. If our farmers will but read and reflect, it will teach them what they are and what they should be. Let knowledge and labour go hand in hand, and then the practical farmer will feel that he approached nearest to fulfilling the design of his Creator—that he can, and should be, emphatically, "the noblest work of God,—an honest man."—*Transactions of the New York State Agricultural Society.*

PEACH TREES.

Whether the assertion below as to the exposure is true in Canada or not, we are unable to say. So far as our knowledge goes, Peach trees are tender and difficult to raise, and we had supposed our cold climate was the cause. On this assumption a southern aspect, or at least shelter from the north wind, would seem requisite. What say our readers who have had experience in the matter? The *Albany Cultivator*, speaking for the State of New York, says:—

Peaches should be grown on the coldest part of the farm. Orchards that are exposed do well while those secured from the north wind often fail. While trees are young, they need particular attention as well as a child. Remove the buds that would form improper shoots and pruning will be unnecessary. The rough bark should be scraped from trees, and they should be washed. The following composition is good: 1 part plaster, 1 soft soap, 1 cow manure, applied with a brush. It should be used twice a year, when the flies are plenty laying their eggs on the trees. Hard soap was good to put on wounds made by pruning. Some will not set trees lest they shall not

live to eat of their fruit. Why not set trees for their children, as well as to lay up *money* for them. And besides will not the setting of fruit trees add value to lands?

FLAX CROP.

In old times, every farmer had a flax patch, and every farmer's wife had a foot wheel. The farmers raised the flax and prepared it for the distaff, and the farmer's wife would spin it evenings by the side of a large kitchen fire. The flax was made into linen, in the shape of table cloths, and towels and sheets, and the farmer always had a clean dickey of his own raising and manufacture, and the tow was made into frocks, and such like things. Those were happy days. There were no factories nor steamboats nor railroads nor magnetic telegraphs, and yet those were happy days. Why? Because there was a reliance upon industry, a self-dependence and independence, more industry, less pride, more equality. But let them pass—lest you may think we are about to *flax* out of the subject, we will just say that many farmers consider flax an exhausting crop. It is somewhat so, but not more so than wheat. It exhausts the soil more of some ingredients than wheat does and not so much of other things.

Dr. Hodges, of England, has made some chemical examination of the ingredients of flax, compared with other crops, and he finds that one hundred parts of the ashes of the following plants, yield as follows:

	Phosphoric acid.	*Potash and Soda.*
Flax,	7	12
Wheat straw,	3	13
Oat straw,	3	29
Bean, (English,)	7	55
Red clover,	8	36
Cabbage,	12	32
Potato stalks,	7	44
Turnip tops,	9	34

He found the two tons of flax straw raised upon an acre, took from the soil fifteen and one half pounds of phosphoric acid, and fourteen pounds of potash. From his experiments, he recommended the following compound as manure for an acre.

Muriate of potash,	30 pounds.
Common salt,	100 "
Plaster of Paris,	34 "
Bone Dust,	54 "
Epsom salts,	50 "

As most of these ingredients, except the bone dust, are found in kelp, those who live near the sea would make an excellent manure for flax, from it, with common ashes and bone dust.—*Maine Farmer.*

SWAPPING HORSES.—The editor of the *Mass. Ploughman*, talks thus sensibly about "dickering" in horses, &c.

Think twice before trading off a horse that has served you well on the whole though he may have some faults. We have known men to swap off horses that had but one or two faults for others that had a dozen. This generally arises from the bad temper of the owner. A horse refuses to draw before oxen, and he is put off for one that is not willing to draw any where Another is high spirited and the women can't drive him; he is put off for one that cannot be coaxed out of a walk. Another is not willing to be caught in the pasture; he is exchanged for one that is worthless when caught.

A low horse that hardly keeps your boots from the ground, is put off for one that you cannot mount without a block. A lazy horse is put off for one that has no patience to let you be seated in the chaise before he must go.

On the whole we would not advise farmers to think of changing off any of their stock for slight faults; whether cattle or horses or children or wives. It is better to bear with them than run the risk of faults they know not of.

REMEDY FOR A SCALD OR BURN.—Scrape, or grate a raw potato and apply the pulp, as a poultice, to the scald or burn. When dry, repeat the operation until the smarting shall cease. If the skin be broken, the sore may be healed with basilicon salve, or merely by binding on some dry lint, covered with a linen rag burnt brown. Should the part affected be very bad, it may be washed with alum whey; but the operation of the potato poultice is so effectual, that the burn seldom causes an after break in the skin.

MARL, it is believed, will last longer in the ground than any other manure.

GLASS MILK PANS are coming more and more into use in Europe. Their advantages on the score of cleanliness must be obvious. It were to be wished that societies or institutes would appoint a standing committee, and put aside a small portion of their ample funds for the insta... importation of sample articles invented abroad, connected with agricultural and rural economy. True it is, that in general, this may be left to the vigilance and rivalry of tradesmen and manufacturers; but many years elapse before we get the benefit of many things which might at once be profitably introduced. The same reason and policy that prompt the offer of premiums for useful things of home invention, would warrant the introduction of things which have been recently invented and patronized by agricultural societies abroad. Satisfied that glass milk pans (on which the manufacturer should indicate the capacity of the vessel) would be a valuable acquisition to our dairy women, we respectfully suggest the importation of a dozen, and the offer of a premium to the glass manufacturer who shall first produce them in this country at a cost that will justify their being brought into general use. It has been seen in an interesting and valuable "Essay on the management of Holstein Dairies," published in the Farmers' Library, that there the dairy women are allowed one dollar a year for "pan money," and charged for all their breaks; yet they always "make by the operation." Let us have glass milk-pans.—*Farmers' Library.*

PROPERTIES OF EGGS.—Eggs are popularly supposed to be so much alike, that what can be said about one egg, is thought applicable to every other laid by the same species of bird, the common hen for example; but there is nearly as much distinguishable difference between the units in every egg-basket which is carried to market as there is between the faces in a crowd of men, or the hounds in a pack. To every hen belongs an individual peculiarity in the form, color, and size of the egg she lays, which never changes during her whole lifetime, so long as she remains in health, and which is as well known to those who are in the habit of taking her produce as the hand-writing of their nearest acquaintance. Some hens lay smooth cream-coloured eggs, others rough, chalky, granulated ones; there is the buff, the snow-white, the spherical, the oval, the pear-shaped, and the emphatically egg-shaped egg. A farmer's wife who is interested in the matter, will tell you with precision, in looking over her stores, "this egg was laid by such a hen"—a favourite perhaps—"this one by such another;" and it would be possible that she should go on so throughout the whole flock of poultry. Of course the greater the number kept, the greater becomes the difficulty in learning the precise marks of each. From a basket of 30 eggs, gathered in a farm-yard as they came to hand, 11, laid by one or two hens whose race we were desirous to continue, were selected in about two minutes by the friend who supplied us with them.—*Gardeners' Chronicle.*

IMPROVEMENT IN GRINDING WHEAT.—A new mode of grinding has of late been invented in Maryland, consisting of ridding the grain of its skin or bran before grinding.—This is said to be done very completely, and to be attended with several important advantages. These are, that all the different sorts of wheat, the red as well as white, are rendered equally good, other things being equal, whereas the red wheats are now sold in most markets for several cents less per bushel than the white. All the brown particles are removed effectually from the flour; a saving of from 40 to 50 pounds per barrel is gained; time is also saved to the amount of from 25 to 50 per cent. The flour is greatly improved for hot climates—a very important item to the shipping interest.—*Prairie Farmer.*

PRESERVING HAMS.—A canvass cover for each ham, well whitewashed, is an infallible protection of hams, against flies. They may also be well kept in dry sawdust.

TRY IT.—It is said that a bowl containing two quarts of water, set in an oven, when baking, will prevent pies, cakes, bread, etc., from being scorched.

SUBSTITUTE FOR POTATOES.—A large importation of West India yams has lately taken place in consequence of the anticipated scarcity of potatoes.

HOW TO MAKE METHEGLIN.—Take honey 100 lbs; water 24 gallons; put them in a cask, and stir daily until dissolved. Then add yeast 1 pint, and a decoction, from 1 lb of hop previously boiled in water, sufficient to make 6 gallons liquid. Mix well and ferment.

CIRCULAR FROM THE HON. ADAM FERGUSSON

We are much pleased to find that the Funds of the Provincial Association are hereafter to be wholly applied to the promotion of its legitimate objects, and not squandered on buildings, fences, show-grounds, and mere temporary fixtures, which ought, and in the neighboring State always are defrayed by the inhabitants of the place where the Exhibition is held. We trust the following appeal will be generously responded to. The success of the "Association" is a matter of interest to the farmers in every Township of Canada. We have not room in this number for all we wished to say on the subject:

To the Presidents, Vice-Presidents, Directors, Secretaries and Members of the Agricultural Societies throughout the Province.

At a meeting of the Directors of the Provincial Agricultural Association, lately held at Toronto, an extract from the proceedings of which is hereto appended,* you will observe that amongst other things, the President is directed to address the Agriculturists throughout the Province in behalf of the Association.

You are aware that an Act incorporating this Institution has been recently passed, and that under its provisions, two Exhibitions have been held,—one in Toronto in October, 1846, and the second in Hamilton, in October last. It is also decided that the next Exhibition shall be held in Cobourg, in the Newcastle District, on the first Tuesday, Wednesday, Thursday, and Friday in October next.

The Premiums awarded at the two former Exhibitions, amounted to about twelve hundred pounds; of this sum, nearly 3 hundred pounds remain yet unpaid. The amount required for Premiums at the next Exhibition, will fall little short of seven hundred pounds.

Thus, Gentlemen, you will see that nearly one thousand pounds will be required for the above purpose, and for this the Provincial Association are wholly dependent upon you.

An Application will be made at the next Sessions of the Legislature for a grant from the public funds in aid of this important Institution, and it is confidently expected to be successful. But it must be clearly understood that no part of this can be got for this year's operations; and under these circumstances, the Society must, as on former occasions, appeal to you for the contribution of a sum equal to the amount of Premiums to be awarded at the next Exhibition.

It is proper that you should be informed that; in future, all sums of money, voted or otherwise raised, for this object by the several Agricultural Societies throughout the Province, shall be applied solely to the payment of premiums; and that the local expenses, for enclosures, erections of buildings and other necessary preparations, shall be borne by the inhabitants of the locality in which the Exhibition for the time being shall be holden.

Besides the sum necessary for the last mentioned purpose, which will not be less that £250, to be raised by subscriptions in the vicinity of Cobourg, I am authorised to state that the several Agricultural Societies in the Colborne and Newcastle Districts have appropriated nearly £250 towards the Premiums.

Placed, as I have the honour to be, at the head of this Institution, which must if supported, command an influence upon the destinies of Canada beyond that of any other Association, it would indeed be surprising, if on that account alone, I should not feel a great anxiety and lively interest in the success of our infant society. But being a practical farmer myself, and having spent nearly half a century amidst the practical operations as well as the science of Agriculture, in a part of Her Majesty's dominions, which stands unsurpassed for spirit, zeal and industry in the cause of husbandry, I cannot sufficiently express to you the deep solicitude with which I regard the dawn of a scientific system, which has done so much for the Farmers of the British Isles.

Amidst the various Associations formed on every hand for the purpose of fostering and protecting the arts, science, and the numerous learned professions, it would indeed be strange, as it would be disreputable to the people of this Province, if this Association, calculated as it is to support and encourage that great class of the community to whom all others must look for the supply of food, should be permitted to languish for want of pecuniary sustenance.

It has been charged, and I fear with too much truth, upon Agriculturalists, that improvements in husbandry encounter great difficulties, if not direct opposition, from those whose interest it is to support them, and therefore work their way very slowly; whereas innovations and improvements made in the mechanics and manufacturing departments are seized upon and turned to advantage as soon as promulgated. The reason of this is obvious: Manufacturers, mechanics, merchantile men, and various other classes, are generally residents of, and congregated in, the towns and villages, and have intercourse and interchange of sentiments, by reason of greater facilities than the farmers, from their insolated position, can ever possess. We must therefore, if we would improve our condition, either physically, morally, or mentally, remove the obstacles by increased exertion, and determine to unite and make common cause with our brethern all over the world, in placing *our* profession upon a scientific foundation, by which, with far less labour and toil, we may expect to reap advantages which every other effort and exertion in the power of man will fail to accomplish.

From such considerations have arisen those numerous public Societies from which so many advantages have been produced,—Societies for promoting science and literature, arts and manufacturers, and for encouraging knowledge industry, and virtue in general. Foremost among these Associations may be classed those for the support of Agriculture and manufactures.

Now, as *all* are more or less intimately concerned in the benefits, and dependent on the skill of the tillers of the soil, it behoves *all* to aid and assist in all measures calculated to benefit the community at large. It is, indeed, imperative on all who have a spark of patriotism, to combine with such bodies as are formed for carrying out to the utmost the whole available resources of the country, and genius and abilities of its population.

In proportion as we can raise amongst ourselves those necessaries which *all* demand, and those supplies which its more wealthy require, in such proportion will be our true happiness and independence.

Wealth, in whatever shape, must in Canada, as an agricultural country, spring from the soil, and proceed from the skill and industry of the farmer; and to encourage that industry and develope that skill, such Societies as "The Provincial Agricultural Association" are formed, and in the benefits arising from such institutions, every class must participate—artisan, mechanic, manufacturer, and merchant.

Experience has so fully proved that without unity of purpose no community can expect to accomplish any great object, that it would seem a work of supererogation to dwell upon the topic.

From small beginnings, within the term of about twenty years, a partial and imperfect organization has indeed been going on in isolated situations within the Province; and without a combination and centralization of our energies, no lasting good to the Province at large need be looked for.

The means for such an union have now been afforded by the Act passed for the Incorporation of the Provincial Association; and a grant of five thousand pounds per annum has been made to aid in the formation and extension of District, County and Township Societies; but no money has, as yet, been appropriated for the support of this Institution.

It remains, therefore, for you, Gentlemen, and indeed the whole of the population (for *all* are interested) to say whether you will apply part of your means, either public or private, to the support of this *your own* Agricultural Society, and thereby place it on a fair basis,—or whether, by with holding your aid at this critical juncture of its history, you ruin the prospects now opening before you.

Such a result I cannot by possibility anticipate, and in the fullest confidence of your support commit the interests of the Institution to your keeping.

I have the honor to be, Gentlemen,

Your obedient humble servant,

ADAM FERGUSSON,

President, Provincial Agricultural Association, C. W.

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* Note from Minutes of Committee Meeting:

Resolved,—That an appeal to the several Agricultural Societies of Western Canada be drawn up and circulated, urging the necessity of renewed and vigorous action on the part of the friends of Agriculture, Manufactures, &c., &c., throughout the Province, especially for the purpose of sustaining this association; and that Thomas Page and Henry Ruttan, Esqs, of Cobourg, be a committee to carry this resolution into effect.

APPLICATION OF MARL.—Experience proves that marl is a treasure to the farmer when properly applied to light sandy soils; yet, the same experience teaches him, that it cannot be applied, with success, to weak, worn-out lands, without some kind of vegetable or grassy matter covering the surface to prevent it from sinking into the earth. Therefore, instead of being applied to broken ground, it is better that all clays and marls, should be spread on the sod in the form of top-dressing, where they should remain for one or more years, in order that the frost may shiver and temper the clods by bringing their particles to a complete separation, and where the vegetable matters may putrefy, keep moist, and cause a fermentation that will mix or unite these bodies together.

COMPARATIVE VALUE OF HUMAN FOOD.—According to Dr. Lyon Playfair, at London prices, a man can lay a pound of flesh on his body with milk, at 3s.; with turnips, at 2s, 9d.; with potatoes, carrots, and butchers' meat, free from bones and fat, at 2s.; with oatmeal, at 1s. 10d.; with bread, flour, and barley meal, at 1s. 2d.; and with beans at less than 6d.

Mixing salt with stable and other manures has a great tendency to prevent the development of grubs and vermin, which are frequently bred in dung when carried unsalted to the fields.

CIVIL AND SOCIAL.

BUILDING SOCIETIES.

These Institutions are rapidly extending throughout the Province. They certainly present to the tradesman, mechanic, farmer, and even professional man, one of the safest, most convenient and profitable modes of investing money that can be found. We shall endeavor to give a brief description of the principles on which they are framed, and their mode of operation.

The Society consists of persons who agree to subscribe for one or more shares of £100 each. These shares are to be paid up by monthly instalments of 10s. The sum of 7½d. is added to each instalment, to defray expense of management. The number of shares usually created is 1000, and the capital to be divided when the Society winds up, would, therefore, if no shares were previousiy paid, amount to £100,000.

The period of duration.—If the Society were to provide a strong box, into which each member deposited 10s. a month, and no money were to be taken out till there was enough to pay each shareholder £100, it would require to last sixteen years and eight months. But as soon as a sufficient sum is received, it is loaned; when all the shares are taken up there will be £500 from instalments alone, to dispose of every month, upon which *interest* is paid to the Society until its close; besides which, a *bonus* of 30, 40, or 50 per cent is given for loans. We have heard one instance in this city of £62 10s. being paid as a *bonus* for £100! This serves rather to show the extraordinary tightness of the money market and the consequent distress, than to illustrate the ordinary working of a Building Society. These *bonuses* add immensely to the funds of the Society, and are also loaned; the interest as fast as it is received is loaned; bonuses and interest are received in respect of these first bonuses and interest, and thus, by a sort of geometrical progression, the capital goes on increasing till it has reached an amount sufficient to pay off all the shareholders. The interest is a sum that can be calculated beforehand, but the average bonus or premium which borrowers will pay, will depend upon the money market, or the facilities of borrowing from individuals. The time during which the Society will last must therefore be uncertain. The larger the bonuses paid, the sooner will the Society end, and the better will it be for the shareholders. The following is a calculation, showing the number of months such a Society will last, at the different rates of bonus:—

Bonus.		
40 per cent	82	months.
35½ "	85	"
37 "	88	"
32½ "	92	"
30 "	96	"
27½ "	99	"
25 "	103	"
22½ "	106	"
20 "	110	"
17½ "	113	"
15 "	117	"
12½ "	121	"
10 "	124	"
7½ "	128	"
5 "	132	"

The rate of bonus here has been above 50 per cent, but towards the close of the Society it will of course be much less. If we take 30 per cent as the average, the society will end in eight years. The amount paid by the owner of a share in instalments and fees, is £6 7s. 6d. per annum—making in all, for eight years, £51, for which he receives £100.

The position of the Borrower.—None but a shareholder can borrow; so that although he pays a large bonus and interest upon a larger sum than he actually gets, yet being a shareholder, he enjoys advantages, which make the amount he agrees to pay for the loan much less than it appears. At 30 per cent. bonus, he realizes £70 for each £100 borrowed. For this he pays 10s. and 7½d. a month, by way of instalment, and 10s. more as interest upon the £100—making £12 7s. 6d. per annum, for eight years, or while the society lasts; or £99 in all for the £70 borrowed. The cost of mortgage, &c., is to be added. At this rate the borrower would be paying little more than 4 per cent for the money. But we must recollect that the borrower begins to pay back the *principal* at once, therefore he cannot be said to have the use of £70 for eight years—and here lies the secret of the society's rapid dissolution. They are enabled to loan the *same* principal money to, it may be, a hundred different persons at one and the same time, and receive bonuses and interest from that number in respect of it. And the borrower does not find himself in a difficult position, because, instead of having to pay interest in the interim, and at the end of eight years the whole sum in a lump, as in the case of borrowing from an individual, he returns the borrowed money in small monthly payments, and at the expiration of the society finds his debt paid and his mortgage discharged. The borrower must beware, however, of carrying the principal too far. A *bonus* of £60 is beyond all reason. Under any circumstances we prefer Building Societies for investment. To farmers we think they offer a capital chance of providing portions for their daughters. A man has a farm of 200 acres, worth £1000 or £2000, he has three or four sons and three or four daughters, he may not be able to lay up enough to buy land for all these, and when he makes his will, he divides his farm into three or four pieces for his sons, and charges £200 upon each, as portions for his daughters. The result is, that the sons cannot raise the money—they must sell. Now, if father and sons could lay by enough to pay for shares in a Building Society, while they were all living together, when the old man died, if the shares were not all paid up, they easily could be, and the sons would have their land unincumbered, and the daughters would be sure of their portions.

We expect to be able to announce before long, the formation of a Society which will be adapted to such cases, and in the matter of fees and charges, will, we hope, be some improvement on those already formed.

We cut the following from the *Globe* of this city, a paper which is supposed to reflect the opinions of the present government. The Montreal *Herald*, from which the statement is taken, is a tory paper, opposed to the present Government. The same views are expressed by the most talented journals on both sides of politics. Our readers will therefore see that the question of "free trade," as it affects the people of Canada, is not a *party* question, but a Canadian question—one which involves the prosperity of the entire country.—If a large portion of the trade of the Great West can be made to pass through our waters, by the removal of absurd and obstructive laws, it will surely be a great national benefit, cheaply obtained. Facts like the following are not to be disregarded:—

WOULD FREE TRADE BENEFIT CANADA?

It is to us quite surprising that any reasonable person can doubt that the sure road to prosperity for this country, is to throw open our ports and our country to the traders of all nations. During the past season our farmers have been dependent on the Americans for the sale of their produce; severe enough the times have been with their assistance—but what would have been our position had there been no foreign competition? nothing can prevent our drawing a large portion of U. States traffic through our canals and shipping ports, if we get rid of the navigation laws. Confirmatory of this, we find in the *Montreal Herald* of the 3rd, the following interesting statement:

We yesterday had an opportunity of conversing with a very intelligent gentleman from Troy, in the State of Ohio, who is now in this city, to dispose of a somewhat large lot of mess pork. He gave us the following account of the difference of cost between the route he had hitherto taken with his produce, and that which he has adopted on this occasion. New York had been the market to which he had hitherto consigned his provisions, and the charges per barrel were then as follows, viz.:—

From Troy, Ohio, to Cincinnatti,	$0 40
Across the City,	0 6
Cincinnatti to New Orleans,	0 62½
Drayage and Commissions at New Orleans,	0 15
Lighterage	0 6
Total into Inspection Store,	$2 09½

This round occupies two months.

The lot which he has now brought to this city, has been liable only to the following charges, viz:—

Troy, in Ohio, to Toledo,	$0 60
Toledo to inspection Store in Montreal,	0 60
This round occupies but three weeks.	$1 20

Our friend considers, that within certain limits, the Montreal Market is as good as that of New York; but he says that the knowledge of the narrow extent of our transactions, makes people fear to consign their produce to this port. If the existing duties and custom-house restrictions were removed, and the sea freights reduced as low as there is reason to suppose competition would bring them, he believes that the connections of our merchants would be so extended, as to render Montreal far superior to New York as a depot for Western produce.

In connection with this subject, we may mention that one of our merchants who has lately been in Bremen, states, that he was informed that one hundred vessels would have been chartered from that place to bring Emigrants to the St. Lawrence, if the suspension of the Navigation Laws had continued. Of course such a competition would have tended materially to have reduced the rates of freight.

LITERATURE.

PLOUGH DEEP TO FIND THE GOLD.

Plough deep to find the gold, my boys!
Plough deep to find the gold!
The earth hath treasures in her breast
Unmeasured and untold.

Clothe the mountain tops with trees,
The sides with waving grain!
Why bring over stormy seas
What here we may obtain?
Oh, Britain need not bring her bread
From countries new or old,
Would she give her ploughshare speed,
And Depth to find the gold!
Plough deep to find the gold, &c.

Mark yon field of stately stooks
Rise on an Autumn day!
Lusty Labour jocund looks
Amidst their thick array;
Mark the barn-yard's ample space,
How grateful to behold!
Towers of riches fill the place—
Plough deep and find the gold!
Plough deep to find the gold, &c.

Earth is grateful to her sons
For all their care and toil;
Nothing yields such large returns
As drained and deepened soil.
Science, lend thy kindly aid,
Her riches to unfold;
Moved by plough or moved by spade,
Stir deep to find the gold!

Dig deep to find the gold, my boys!
Dig deep to find the gold!
The earth hath treasures in her breast
Unmeasured and untold.

OHIO RIVER—THE VINE—CINCINNATI PORK.

The extracts below, are from a letter of Mr. R. L. Allen, an agricultural writer of high repute, published in a late number of the *American Agriculturist*. America is a great country, and a greatly *progressive* race inhabit it:—

"If shorn of its forests, more densely populated, and thoroughly cultivated, with numerous vineyards up its steep hill sides, with here and there an old castle occupying its almost inaccessible heights, the banks of the Ohio would resemble those of the Rhine. The castle and their feudal oppressors, I trust we may never see; but the cultivation of the vine is destined to be much more extensive than it ever was or ever can be on the banks of Germany's famed river. Many vineyards are now planted on the Ohio, and the soil and climate are found suited to the production of the grape. Its success is now placed beyond a doubt. The perseverance and skill already enlisted in its cultivation will eventually enable the vine growers of Ohio to supply the Union with its wine and winter grapes. I have full confidence in the future application of chemical principles to the preservation of this delicious fruit. This will furnish us a bountiful supply for months after its harvest, as a substitute for the insipid foreign grape which now graces the desert, rather as a luxury to the eye than to the palate. I have seen many specimens of wine from the native vines, which, though generally differing in character from most of the imported, are rich in flavor, and yield the luscious odor and taste peculiar to that of the well-ripened foreign grape."

Of the city of Cincinnati he remarks:—

"What a vision is opened from the summit of this hill! What profusion of nature and art! A population of 100,000 lie at your feet, in the possession of wealth, luxury, and intelligence, far beyond the average enjoyed by civilized nations. They are surrounded by wealthy farmers, mechanics, merchants and professional men, whose homes reach beyond the great northern lakes, beyond the Mississippi, and to the very shores of the Mexican gulf. And this whole region, but half a century since, was an almost unbroken wilderness."

"Although heretofore, and probably destined for a long time to remain a large element in the prosperity of Cincinnati, there is one feature which detracts much from the interest that would otherwise attach to it. It is the Porkopolis not only of America, but of the world. No other place on its surface, ever witnessed the annual slaughters of so many of the "swinish multitude" as is here compressed within the limits of a few weeks. It is estimated that nearly 400,000 will yield up their greasy lives at this place the present year. It is the height of the packing season, and the streets are filled with their unwieldly forms, wending their weary steps to their last home. The air is redolent of their grunts and odors; and the tables groan beneath their spare ribs, their joints, their hams, their head cheese, souse, sausages, and sides. Every waggon you meet is loaded with them, piled up like ricks of hay; and every warehouse is crammed with these precious freights. I have seen piles of coffee and cotton, before at New Orleans and elsewhere; but the piles of dressed swine here far exceed (relatively) anything of the kind I have ever witnessed."

A COVETOUS CHRISTIAN.

Yes, I recollect something of him. He lived in Moses' day. He coveted a goodly Babylonish garment and a wedge of gold. It was a sad thing however. It brought him to a fearful death, and involved others in a dire calamity. I am not quite certain, however, that Achan was a Christian. Perhaps he is not the person to whom reference is made. Balaam may be the person intended. He was sufficiently covetous; but though he said "Let me die the death of the righteous, and let my last end be like his," I think it far from clear that Balaam was a Christian. Ahab was remarkably covetous. So much so that he committed murder to secure the coveted vineyard. But probably no one would think of calling him a Christian Gehazi had something of the lust. His covetousness led him into falsehoods, and made him a leper, and brought the same dreadful disease on his posterity. It is certain that Gehazi, though he had a pious master, was a true believer? There was one of wretched memory, who lived in the days of our Lord. Judas was one of the original twelve professed disciples. He was so covetous as to betray his Lord for the pitiful sum of forty pieces of silver. I know that there are those who positively affirm that Judas was a Christian, and is now in heaven. They are not certain of it. Judas betrayed the Lord, and died a suicide. Annanias and Sapphira made a profession, but their end has left us little evidence that they were Christians. They were 'professors.' And I would suggest whether it would be better to say a covetous 'professor,' than a covetous Christian. The Bible calls covetous idolatry. What sort of a Christian is an idolater? I know that there are not a few in the Church visible who are covetous to a proverb. Whether they belong to the Church invisible, is altogether another matter.

Perhaps there is some risk in speaking thus plainly of a popular class. There are many of the rich and influential among them. I fear they are more accustomed to flattery than rebuke. But were it not as well that the truth should be told, though it give offence to some? 'The wicked boasteth of heart's desire, and blesseth the covetous, whom the Lord abhoreth.' We are assured that the covetous shall not inherit the kingdom of God. If it is so, they are not Christians.

CHEESE VERSUS CANNON SHOT.

The greatest annihilation that we have heard of lately, was used by the celebrated Commodore Coe, of the Montevidean navy, who, in an engagement with Admiral Brown of the Buenos Ayrean service, fired every shot from his lockers.

"What shall we do, sir?" asked the first lieutenant; "we've not a single shot aboard—round, grape, canister, and double-headed, are all gone."

"Powder gone, eh? asked Coe.

"No, sir,—got lots of that yet."

"We had a very hard cheese—a round Dutch one—for desert at dinner to-day, do you remember it," said Coe.

"I ought to—I broke the carving knife in trying to cut through it, sir."

"Are there any more aboard?"

"About two dozen—we took 'em from a drover."

"Will they go into the 18-pounders?"

"By thunder, Commodore, but that's the idea. I'll try 'em," cried the first luff.

And in a few minutes the fire of old Santa Maria, (Coe's ship) which had ceased entirely, was re-opened, and Admiral Brown found more shot flying over his head. Directly one of them struck the mainmast, and as it did so shattered and flew in every direction.

"What in the devil are that which the enemy is firing?" asked Brown,—but nobody could tell.

Directly another came in through a port and killed two men who stood near him; then, striking the opposite bulwarks, burst into flinters.

"By Jove, this is too much: this is some new-fangled paixhan or other—I don't like 'em at all!" cried Brown: and then as four or five more of them came slap through his sails, he gave the order to fill away, and actually backed out of the fight, receiving a parting broadside of Dutch cheeses.

This is an actual fact, our informant was the first lieutenant of Coe's ship.—*Aristocratic Monitor.*

A WEDDING AT JERUSALEM.

As we ascended the Mount of Olives, a procession of women appeared, wending its way towards the little village behind the mosque. This proved to be a wedding. The ladies were all unveiled, and their dresses were by far the prettiest I have seen, and contained a mixture of the gayest and most brilliant colors. They wore curiously emboidered handkerchiefs thrown back from the head, and, as usual; a profusion of coins and ornaments in the hair. We followed them into an assemblage of huts, where we found about fifty men and boys, and as many more women and girls. There was a great uproar with drums and pipes, but we looked unmolested at the wild groups and the various costumes that were collected there.—The Bedouins were leaning on their guns, ready for the customary *feu-de-joie;* the elder ones were talking, as usual, about money—the women about dresses and the bride's fortune. The tops of the huts were crowded with spectators, several of whom were veiled; but the generality were not anxious for concealment, and we saw much beauty among the dark eyes that looked down upon us. In a few minutes, the noise increased; the peculiar yell of the women was heard, and a shot or two were fired. From one of the huts, where the ceremony had probably taken place, the procession sallied forth. First, there was a huge wooden figure, dressed up as the bride, probably in her own trappings; it had a head dress, and all the usual female appendages. The people passed this over their heads, and it was handed about from one to another for some time, until it was borne away into a neighboring field, into which the whole crowd followed, screeching and yelling round it. At a large olive tree they halted, fired off their guns and redoubled their music.—*Lord Castlereagh's Journey to Damascus.*

THE PRESS.—The art of printing is perhaps the mightiest instrumentality ever contrived by man for the exertion of moral influence. The Rev. Dr. Adams, in his late address to Yale College, remarked:

In the city of Strasburg, on the eastern frontier of France, there stands, in the principal square, a large bronze statue of Guttenburg, the inventor of the art of printing with movable types. It is a full length figure of that fortunate individual, with a printing press at his side and an open scroll in his hand, with this inscription: "*And there was light.*"—Upon the several sides of the high pedestal on which the effigy stands, are four tableaux in bas-relief, designed to represent the effect of the art of printing on the general progress of the world. In one stand the names of the most distinguished scholars, philosophers, and poets of all times; in another the names of those who have been most eminent for their achievements in the cause of human freedom;—conspicuous among which is an allusion to the declaration of independence, with the names of Washington, Franklin, Hancock and Adams.—On the third side is a representation of philanthropy knocking off the fetters of the slaves, and instructing the tawny children of oppression in useful knowledge; and on the fourth is christianity, surrounded by the representatives of all nations and tribes, and people, receiving from her hand, in their own tongue, the word of eternal truth. Christianity! Heaven born Christianity! Divine philosophy! look down with indifference or dismay on that bearded man at work with tools in his smutty shop, away on the Rhine. Affect to overlook and undervalue him as a mechanic! A mechanic! why, out of those bars of wood, and pounds of metal, and ounces of ink, he is constructing a machine to make the nations think. He is constructing wings for Christianity herself, which shall bear her, with the music of her silver trumpet, to all quarters of the globe—to the magnificent mansion of the potentate, and the lonely cottage of the peasant.

A NEGATIVE REPLY FROM A LADY.—While Miss Dix, the well known philanthropist, was on a visit to Tennessee to aid in establishing an Institution for idiots and the insane, the ladies of Nashville requested her to sit for her Portrait. In declining the honor she remarks:—

"Permit me, ladies, rather *to dwell in your hearts,* affectionately and kindly remembered as a fellow-laborer in the world's wide harvest fields; and though our paths may conduct to different objects, our aims are alike decided, to lessen the woes of suffering humanity, and to soften the trials which are so often the same discipline by which the soul acquires that heavenly knowledge which causeth not to err.

"To us women it peculiarly belongs to reveal in its holiest aspects the spirituality of religion—to bring consolations upon the troubled earth—to sanctify and perpetuate by our lives, and through our actions, a remembrance of our existence, which shall cause many to feel that the world is better for our having lived therein."

EDITOR'S TABLE.

TO CORRESPONDENTS.

We have received letters since last issue from—

H K,, Berlin. The name was not entered. You will find the papers have since been sent.

T. K, Mosa. Your first letter was received, and the papers were sent. As the y must have miscarried, we send them again.

J. S, Darlington.

J McF, Niagara. There is but one such name on our list. It must have been omitted by the agent

F B M, Cooksville. The person you mention as not calling has removed. He and the others are attended to.

W. L, Perth. Sent.

C N, New Hope. We instructed our clerk to forward the back numbers as you ordered, which he says he did. We have sent them a second time.

A. M. L, Mariposa. Papers sent as ordered.

J. H, Woodstock.

W. L. W., Port Colborne. The numbers you request have been sent to Brantford.

T. G, Kingston. Your order attended to.

W. A. S., Ballinafad. Your wish as to writing will be respected.

G. A., Allanburgh. Received. Paper forwarded.

TO SUBSCRIBERS.

We would respectfully request all subscribers who have not paid their subscriptions, to forward them to us without delay. Our *terms* are stated to be payment in *advance*, but even for the small sum of five shillings we have found it impossible to enforce them. Our agents have represented to us that they could hardly get money enough in advance payments to cover their travelling expenses, but that by giving one or two months' credit they would do a fair business. We have allowed our travelling agents to delay remittances for a short period, so as to give them time to collect. But more than three, and in the case of some agents, more than *four* months have elapsed since the paper was ordered, and we have received little or no money.—This is what we never intended, and what we never can stand. Our expenses are very heavy. The item of paper alone costs £16 each issue. With the large number of travelling agents we have sent out, and the high commission we allow them, it is not likely that we shall realize a single dollar of profit this year. And if through the tardiness and neglect of subscribers, or the remissness of agents, we *do* not receive what is already subscribed to us, to enable us to meet our engagements, we shall be seriously inconvenienced. We beg those who wish to "support" an agricultural paper, to bear in mind that "taking" such a paper, but neglecting to *pay* for it as they agreed, though it may be "support" for them, "it is death to us." We want no man's patronage who is either unwilling or unable to pay *one dollar* for a semi-monthly paper such as the *Agriculturist.* If there be not in the country a class of the able and the willing sufficiently large to support this journal, we hope we shall soon find it out, and we will then make up our minds to abandon the enterprize.

Some difficulty seems to have occurred west of this city by the misrepresentation or mistakes of agents or subscribers. We here beg to state again, what we said in a former number, that none but the persons whose names are published on the first page, are authorized travelling agents in the Districts opposite the said names. Any person who chooses may act as an agent in soliciting a subscription and transmitting to us the name and money, but all local agents must send the cash before we send the paper, consequently those who confide in such must run the risk of their neglect or dishonesty. When subscriptions are paid to our travelling agents, they are, so far as the subscribers are concerned, paid to us. Those who remit their subscription to us by post or otherwise, will please mention the name of the who took their names.

AGENTS.—We beg to intimate to our Agents in this c ner, that we shall expect them to collect what may be the *Agriculturist,* as speedily as possible. We f our books, that there is more than £300 due u require to carry on the paper. The above will, we trust, prepare them to be called

THE LADIES.

THE BACHELOR'S COMPLAINT.

Returning home at close of day,
Who gently chides my long delay,
And by my side delights to stay?
Nobody.

Who sets for me the easy chair,
Sets out the room with neatest care,
And lays my slippers ready there?
Nobody.

Who regulates the cheerful fire,
And piles the blazing fuel higher,
And bids me draw my chair still nigher?
Nobody.

When plunged in dire and deep distress,
And anxious cares my heart oppress,
Who whispers hopes of happiness?
Nobody.

When anxious thoughts within me rise,
In sore dismay my spirit dies,
Who soothes me by their kind replies?
Nobody.

When sickness racks my feeble frame,
And grief distracts my fevered brain,
Who sympathizes with my pain?
Nobody.

Then I'll resolve, so help me Fate,
To change at once the single state,
And will to Hymen's altar take—
Somebody.

PLANTING.

Planting is the operation of inserting plants in the soil, either in the free ground or in pots. The simplest kind of planting is that which consists in removing small seedling plants, or such as have been struck from cuttings or layers; and this is commonly performed by making a round hole with a dibber, and putting in the root of the plant to the same depth as it had been covered with earth before, and making it fast by thrusting the dibber into the firm earth beside the hole, and pressing it to the root. In this operation, the great art is to make the root fast at the lower extremity. Thus, in planting common seedlings of annuals, or even cabbage plants, if the earth be pressed close to the root at the upper part, and not at the extreme points, the success will hardly be complete; and in tender plants, or in a dry season, a failure will be the result. In planting plants of a larger size, a small pit should be opened by the spade or trowel; the bottom of the pit having been formed into a cone or small hill, the plant should be placed in the centre, and the roots spread out equally over it on every side. The roots are then to be covered with soil gently pressed over them; and the operation must be finished by watering, so as to consolidate the soil equally, without making it firmer on one part of the roots than another. If the soil should have been previously dug, trenched, or loosened to the depth of a foot, or probably two feet or three feet, the pit should not be made so deep as to throw the neck or collar of the plant below, or even on a level with the surface, when the soil is consolidated by watering. On the contrary, it must be left of such a height above it, as that when the soil is finally consolidated by its own gravity, influenced by the weather, the neck shall still be above the general surface of the ground, and the plant stand on a small hillock. This condition of planting cannot be too carefully attended to; for nothing can be more injurious to transplanted plants than having the neck buried more than it was in a natural state. Nothing is more common than too deep planting; and the temptation to it is the greater, because deep planted plants, from having the roots more accessible to moisture, are more certain of growing the first year, and are in less of want of mulching to exclude the heat and drought, and of staking to prevent them from being moved by the wind. Hence, in planting trees or shrubs, it is of the greatest importance, not only with a view to their future growth, but also to their natural appearance above the surface, to have them planted on little hillocks, greater or less in height, according as the soil may have been moved to a greater or less depth, either in the operation of digging the pit in firm soil, or in planting in soil which has been moved by digging, or trenching, or otherwise. In small gardens it is generally desirable, for the sake of producing immediate effect, to plant plants of considerable size; and in this case, in addition to the precautions which have been already mentioned, it is desirable to plant by what is called fixing with water. This operation is performed in the following manner: the hole being properly prepared, the plant placed in it, and the roots spread out on every side, and extended as far as they will go, one person holds the plant upright, a second sprinkles earth over the roots, and a third supplies water from a watering-pot, with a rose on, if the plant be small, and without a rose, if it be a tree of six feet or eight feet in height, holding the pot as high above his head as his arms will reach. The weight of the water coming down from such a height, consolidates the soil about the roots, and fixes them in such a manner, as to render the plant, if it has been carefully taken up, almost in the same state as it was in before removing. Large trees or shrubs, if planted in this manner in the autumn, and staked, where there is danger from high winds, will grow, and even flower and fruit, the following year, as well as if they had not been removed. In this kind of planting, with large plants, the hillock, left after the operation is finished, should not be less than a foot or eighteen inches above the surrounding surface; and to lessen evaporation during the ensuing summer, the hillock, should, if possible, be covered with short litter, moss, turf turned upside down, or even small stones, for the first year. In staking large plants of this kind, the stakes should be placed close to the stem of the plant, in which position they are much less likely to injure the fibrous roots, than when placed at a distance from the tree; and the stakes should be made fast to the stem of the plant, by a piece of straw or hay rope, or by a piece of twisted matting, or any kind of cord; the part of the stem to which the stake is tied, having previously had a small handful of straw, or moss, or mat, bound round it, to prevent the tie from galling the bark of the stem, and preventing its increase during summer. These stakes should remain for a year, or sometimes two years, according to the size of the plant and its facility of making roots. In general, the sooner the stakes are taken away the better; because the motion of the stem by the wind, is essential to its increasing in thickness. In this matter much must be left to the discretion of the planter, who must always bear in mind that a staked plant is in a most unnatural position; and also that if the tree should lean somewhat to one side for some years after planting, it will ultimately become more or less erect; and that a strong, vigorous-looking plant leaning a little to one side, affords a greater evidence of its being secure and in sound health, than a straight, erect plant, kept in that position by a stake. In the case of planting trees with stems three or four inches in diameter, in exposed situations, two or three stakes may be used, placed at a short distance from the base of the stem and leaning towards it; and where they are made fast, they should be joined by matting, hay-ropes, or some other soft material, so as not to injure or confine the bark. Before transplanting trees of a timber size, the main roots are frequently cut at the distance of five feet or six feet from the stem, a year previously to transplanting; in consequence of which, they send out fibres which in the course of the summer become small roots, so that when transplanted, the tree, instead of drawing its principal nourishment from spongioles at the distance of twenty feet or perhaps thirty feet from the stem, is enabled to draw it from the distance of six or eight feet, and thus to continue growing, though not with the same degree of vigor as if it had not been transplanted. Some kinds of trees, when of a large size, such as the Sycamore, the Lime, the Horse-chesnut, and a few others, may be transplanted without this precaution; but in this case, the operation must be performed in autumn, as soon as the leaves have dropped, in order to give the roots time to form some fibres during the winter; and the greater the distance from the stem at which the roots are cut, the greater will be the success. Large trees with wide-spreading roots when transplanted, seldom require to be staked, because the roots form a broad base, which prevents the stem from being blown to one side. Where there is danger anticipated from high winds, the tree may be secured by three guy-ropes tied to the upper part of the stem, and made fast to stakes driven into the ground at such a distance from the tree as that the ropes may form an angle with the ground of 45°; or the stronger roots may be kept in their position by stakes driven into the ground with their heads beneath the surface of the soil, the main roots being made fast to them by cords.

WIVES AND CARPETS.—In the selection of a carpet, you should always prefer one with small figures, for the two webs of which the fabric consists are always more closely interwoven than in carpeting where large figures are wrought. There is a good deal of true philosophy in this, that will apply to matters widely different from the selection of carpets. A man commits a sad mistake when he selects a wife that cuts too great a figure on the great green carpet of life, in other words makes much display. The attractions fade out, the web of life becomes worn and weak, and all the gay figures that seemed so charming at first, disappear like summer flowers at autumn. Many a man has made flimsey linsey woolsey of himself, by striving to weave too large a figure, and found himself worn out, used up, and like an old carpet hanging on the fence, before he has lived out half his allotted days of usefulness. Many a man wears out his carpet that is never swept, by the dust of insolvency; like the same carpet, he needs shaking or whipping; he needs activity, something to think of, something to do. Look out for the large figures, and there are those now stowed away in the garret of the world, awaiting their final consignment to the cellar, who had they practiced this bit of carpet philosophy, would to-day be firm and bright as a Brussels fresh from the loom, and everybody exclaiming, it is wonderful how well they do it!

SCIENCE AND MECHANICS.

HYDRAULIC CEMENT.

This valuable article is beginning to be more extensively known and used than formerly, and we are satisfied that it only requires to be universally known to be universally applied to uses hitherto unthought of, even by our most practical builders. A writer in the *Prairie Farmer* (Jas. Clarke, Esq.,) observes:

"I have been manufacturing and using hydraulic cement for a number of years—consequently I feel as though I am capable of throwing a little light on the subject. It is in general use for building cisterns, cellar bottoms, cellar walls, a cheap and durable pipe for conveying water, mill flumes, mill dams, houses, &c. Cement makes a much stronger mortar than quick lime, and will set as hard as a rock in the water. For plastering the exterior of buildings in imitation of stone, and for plastering the inside of houses, it makes a very hard smooth surface, capable of being washed with soap and water, without injury, and presenting a smooth unabsorbing basis for paint.

Cisterns are variously constructed. The best way, however, in my opinion, is to excavate a hole in the ground, in the shape of an egg, with the little end down, plastering on the ground, building an arch with brick to form the covering. Cisterns are more frequently covered with large stone or plank, which will answer a very good purpose. Five bushels, or about 300 pounds, which would be in a barrel of cement, is sufficient for a cistern containing 30 barrels of water.

Cellar Bottoms—Take spalls of stone or coarse gravel, and cover your cellar bottoms to the depth of four or five inches; make your mortar into a thin grout; fill your gravel full of the grout, and smooth the top of the same with a trowel. This will make an excellent bottom, and is an effectual remedy against rats.

Pipe.—Excavate a ditch of sufficient depth, and bed down the mortar made of cement; then take a leather bag four feet long, of the size you require, filled with sand, which you have prepared for the purpose. Lay down the leather bag on the mortar, and build over the same with mortar. In a short time it will set sufficiently, so that you can draw the bag forward, and build over as before. This pipe will soon bear a great pressure of water, and is a cheap and durable pipe.

Mill Dam.—Build a wall one and one-half or two feet in thickness, taking spalls of stone or clear gravel; make your mortar into this grout, and mix it well with your gravel. It will be necessary to have a frame of one plank on each side to hold the grout and garvel, until it is set; then make a slope wall on each side, or any other plan to form strength to hold the weight of the water.

There have been a number of houses built on this plan in Ottawa and vicinity the past season, which nothing can surpass for cheapness, durability and beauty. For plastering dairies and forming water courses for milk pans, it is admirably adapted.

Directions for use.—As a mortar, two parts of coarse, clean, sharp sand, to one part of cement—mix together dry, and temper with water; mix in small quantities, as it hardens quickly. If loamy sand is used, a greater portion of cement is required. River or creek washed sand is the best. When used for plastering cisterns, by plastering on the ground, three coats of one-half inch thickness should be put on, one coat each day, until completed—scoring the first two and using more cement in the last coat, which should be well smoothed. Daily sprinkling with water for ten or twelve days will strengthen the plastering of cisterns: and this should be done before the cistern is filled with water. Care should be taken to procure fresh cement; that which is imported is generally old, and nearly worthless."—*Maine Farmer*.

Improvement in Paints.—The perishable nature of paints, and their failure to afford protection to buildings but for a short time, has latterly been a subject of much complaint. Mr. Richard Dally claims to have discovered a remedy for this difficulty. He states that one cause of the failure is the adulteration of white lead and colored paints, by the sulphate of barytes. Pure white lead, however, he states, though "admirable for every purpose of interior decoration and ornament," is unfitted to stand exposure to the weather, and when thus exposed, rubs off like whitewash. Mr. D. says, "At the suggestion of an aged and experienced painter, Mr. Henry Roome, the subscriber was induced to make an experiment twenty years since, and from its remarkable preservation, in comparison with painting as generally performed, (the principles having been corroborated by recent discoveries in chemical science,) he can promise a degree of durability to all paints exposed to the weather, that shall place the art of house painting in a much more favorable light than ever before—for singular as it may seem, most of the paints have hitherto been the result of accident, and not of any fixed principles." He also states that by the application of his discovery, black, yellow ochre, Venetian-red, and Spanish-brown, will be rendered nearly indestructible, "and will continue for a generation unaffected by atmospheric action, thereby furnishing ample protection from the weather for expensive steeples, railroad and other bridges, roofs, fences, &c.

Foreign Patents.—The British Government grants patents, both of importation and invention, for 14 years, which term may be extended for the like period. A patent for England and Ireland costs $1046. Patents are issued in France to citizens or foreigners for all industrial inventions; the charges for five years are about $100, and in proportion for ten or fifteen years. The subject patented must be put in practical operation within two years from the date of the grant. In Austria patents of invention are granted to applicants, whether natives or aliens, for terms of from one to fifteen years, at the option of the petitioner. For fifteen years a patent costs 440 florins; the value of a florin is 47 cents. The government of Prussia usually grants patents for eight years. The Russian government grants patents of invention, and also of importation, both to citizens and aliens. The actual charges to patents of invention are—for three years $75, for ten years $375; and patents of invention are not granted for a longer period than ten years. In Belgium, a patent either of invention or importation, may be granted for five, ten or fifteen years, at the option of the petitioner. If a patent of importation be granted, it expires with the original patent procured in the country from which the importation is made.—*Sci. Mech.*

Buckle Making Machine.—We have just completed and forwarded to the Patent Office, the model, drawings, and description of one of the most extraordinary machines of modern times, invented by Messrs. A. North & Son, New Britain, Ct. The machine is in successful operation in the business of manufacturing harness buckles of various sizes and patterns. In the process the machine takes the wire from a coil, bends and perfects the squares or square rims, shapes and bends the tongues, and bends and closes the tubular rollers, and polishes the buckle complete. The miniature model construction at this office embraced sixteen different movements, put in operation, by connection, with a single small crank; and the drawings comprised *fifty* different figures. The specification occupied fifteen pages, written in our ordinary brief and condensed style. It is a first rate invention.—*Sci. Mech.*

Curiosities of Arithmetic.—An eastern prince was so much delighted with the game of chess, which had been devised for his amusement, that he desired the inventor to name his own reward.—The philosopher, however, was too modest to seize the opportunity of enriching himself; he merely begged of his royal master a grain of corn for each square on the chess table, doubling the number in proceeding from the first to the sixty-fourth square. The king honoring his moderation, made no scruple of consenting to the demand; but on his treasurer making the necessary calculations, he was somewhat surprised to find that he had engaged to give away the impossible quantity of 87,076,425,546,692,656 grains of corn, equal to 80,000,000,000 bushels.

The Velocity of Light.—The eclipses of the moons of the planet Jupiter had been carefully observed for some time, and a rule was obtained which foretold the instants, in all future time, when the moons were to glide into the shadow of the planet and disappear, and then appear again. It was found that these appearances took place sixteen minutes and a half sooner, when Jupiter was on the same side of the sun with the earth, than when on the other side; that is, sooner by one diameter of the earth's orbit, proving that light takes sixteen minutes and a half to travel across the earth's orbit, or eight minutes and a quarter to come to us from the sun.

Chinese Grass.—There is in China an article grown and manufactured into clothing, no description of which is to be found in any of the works of travellers who have been in that country. Its native name is *Mae*, and it answers the purpose of silk and hemp combined. It is annual, sown in drills, in February, and gathered in August. It grows on dry, hilly soil, like tea, all over China, and in every variety of climate—much of it within two or three day's journey of Canton. Its consumption is enormous; it may be found in its various degrees of quality, among all classes of the vast population, worked into almost every description of fabric: in the largest cables of their junks and in the choicest texture of clothing worn by the luxurious classes. Like silk, it is there an article of universal consumption. There is no article at present known in the country that could be substituted for it. It is scarcely exported at all.

Manufacture of Glass.—A mountain of Silex has been discovered at Hartsville, Sumner county, Tennessee, which is pronounced by the State geologists to be the finest in the Union. Tennessee bids fair to outrival any of her sister States in the manufacture of glass.

Mexico City.—The city of Mexico is nine thousand feet above the level of the sea: and in this locality narrow chests and diseased lungs are unknown; while from the extreme dilation of the atmosphere animal substances never become putrid.

To Keep Chimneys Clean.—Plaster the inside with mortar made with one peck of salt to each bushel of lime, adding as much sand and loam as will render it fit to work, and then lay on a thick coat. If the chimney has no off-set for the soot to lodge on, it will continue perfectly clean and free from all dangers of taking fire.

A New Rat Trap.—Take a tub or kettle fill it to within six inches of the top with water, cover the surface with chaff or bran, and place it at night where the rats resort. By this method thirty-six rats have been taken in one night.

NEWS FROM EUROPE

We again give up the greater part of our news space to the details from Europe. The state of Ireland, gradually and surely approaching to anarchy and bloodshed, is of the greatest interest to us just now — The great Chartist demonstration in England, which was regarded with no little apprehension, seems to have been only a demonstration of weakness. Instead of containing 5,000,000 of signatures, it appears their petition contained only 2,000,000. Still there is a strong, a universal desire among the middle classes, for thorough reforms in all the departments of government, which must soon be effected. The following, from he *Liverpool Times*, without mentioning all the important facts in the news by the *Britannia*, will give a fair idea of the state of Ireland :—

IRELAND.—The deplorable state of Ireland, apparently on the verge of a civil war, continues to occupy the deepest attention of all classes. The majority of the people of Ireland, now to a great extent armed, seem resolved upon some desperate act, which will secure for them the accomplishment of their darling hopes, or plunge them still deeper into the abyss of misery. The divergence between the Repealers headed by Mr. O'Connell, and the party led on by Mr. Mitchell, becomes greater every day. The O'Connells manfully declare that they will take their stand upon *ne plus ultra*, the uttermost bounds of the law and constitution, and will adhere to the counsels bequeathed to them by their father, to obtain Repeal by peaceable and constitutional means only.

If the Association transgresses this line, the O'Connells will take no part in their proceedings. At the last meeting of the Repeal association, Mr. Maurice O'Connell said significantly, that if the people were to be hurried, coerced, compelled beyond the law, the guilt must fall on the heads who counselled them to that carreer; but the sons of O'Connell and those around them would not be seduced beyond the bounds of the law. Upon circumstances, which might shortly happen, would depend whether he ever again should appear in Conciliation-hall. Mr. John O'Connell repeated this declaration, so that but a short time can elapse before a crisis takes place. The rent has fallen to £25, and it is evident that a numerical majority of the Irish people are in favor of outrageous measures. The people in every part of the country continue to supply themselves with arms; some arrests have indeed taken place in Dublin, Cork, and Limerick, to check the progress of the armament, but those steps are, of course, wholly inadequate to ward off the danger.

The train of discontent seems now to be laid so extensively, that we doubt whether the whole weight of the government, with even the support of the O'Connells, will be able to prevent some great explosion. The run on the Savings' Bank in Cork and in the South of Ireland, goes on with accelerated speed. The depositors desiring their funds are paid in Bank of Ireland notes, which are speedily converted into gold. Mr. Mitchell's language in the *United Irishman* increases in violence daily. The *Nation* also vies with the younger journal in disseminating treasonable doctrines A late number contains a letter from a parish priest, setting forth the doctrine of Catholic resistance. It inculcates the duty of arming quietly, and goes on to say to the people,—"Make your peace with God; put your houses in order and prepare to die." It then teaches them to bide their time; and then, when it comes, every man must vow "before God and his country, to lessen, if he can, by one man at least, the enemies of his native land, and then die.

ARMING.—The drilling act has been put into operation in Dublin. Accordingly a number of young men, 13 in number, were arrested on Sunday last. April 16, while performing military evolutions in a large room of that city. They were lodged in a station house, and brought up for examination at the head police office on the following day, when they were committed for trial at the next commission. The offenders, if convicted, are liable to transportation.

Notwithstanding the vigorous determinations of the Government to put a stop to the movements of the disaffected throughout Ireland, the preparations for rebellion still proceed. A communication from Youghal states, that the spirit of insurrection is rapidly spreading in the southeast, from Youghal to Mallow, Cappoquin to Clonmel, and that nothing is spoken of but rifles, and rifle clubs, pikes, barricades, &c. The writer mentions the meeting of a rifle club at Clay Castle, at which over 2000 persons were assembled. This state of things is becoming a matter of general notoriety. The most formidable rebellion that ever shook Ireland from sea to sea is, unfortunately, at this moment, threatening the community.

A Limerick paper, alluding to the state of the country, says—"We have it from authority which we have the best reason to trust, that in a quarter not quite a thousand miles from Limerick, 9000 men are nightly engaged in practising the pike exercise. The Limerick rifle Club had sharp practising yesterday evening. The target was a rude sketch, in chalk, of the 'human face divine,' over which was inscribed, in large letters, the word 'Clarendon.' One gentleman gave a most convincing proof of his proficiency, by planting a ball on the tip of the nose of this flattering likeness of Vice Royalty, a feat which elicited much laughter."

As an evidence of the "shifts" which are made to procure fire arms and other deadly weapons of warfare, the following extract from a letter written at Limerick will testify :—"Leaving a coal yard, some days back, in Limerick, a woman might be seen seated in a car, and leaning, in evident or apparent affection, over a coffin. Her emotions were indicative of the profoundest affliction. She certainly wept, and her body and head swung from one side to the other in palpable sorrow —The car moved away, bearing off the coffin and the solitary mourner. When it had travelled, we shall not declare what number of miles, the journey was finished, the coffin removed, the cover uplifted, and no, not the body—but a plentiful store of well prepared arms taken out of the interior."

At Cork, pikes are publicly inquired after by those who cannot afford a gun.

FRANCE.

An immense meeting of the workmen came off at the *Champ de Mars*. 150 men marched to the Hotel de Ville, crying "*A bas Lamartine*," "*A bas Government La Provisionelle*." The National Guards and the troops of the line turned out in great numbers and overawed the insurgents. No outbreak occurred.

The National festival to celebrate the fraternization of the Army and National Guard took place on the 20th. The whole under arms, consisting of 300,000 National Guards and Guards Mobillas, and 5000 troops of the line. They marched round the Boulevards through the city.

The procession took 8 hours to pass any given spot. The greatest enthusiasm prevailed, and the most kindly feelings manifested toward the troops, the National Guards, and the government. Up to the hour of post the greatest tranquility prevailed.

It is considered that this demonstration will strengthen immensely the power of the moderate members of the Government.

French funds advancing. Large amounts of gold arriving in Paris from England.—Business improving slightly. On some parts of the continent disturbances continue to take place.

Insurrection in Alsace The whole of the Prussian troops advanced into the Danish Territory.

The Danish war vessels appeared along the Settin Swineland. Denmark asked England to interfere.—Palmerston declined.

The Croats fired the village of Castel Nueva, and burned all the inhabitants—2,000 in number.

The Swiss Diet met to liberate upon the Federal Constitution.

The Neapolitan army was marching to join Charles Albert. Apprehensions were felt of an outbreak in Spain. Montpensier has been banished to Seville.

Russia is still making preparations for war. 300 pieces Russian cannon were reported arriving in Warsaw.

The troops now in Poland, amounted to 80,000. The Poles have apparently made but little progress.

ADMISSION OF CANADIAN PRODUCE INTO THE UNITED STATES.—With the utmost pleasure we observe by the New York *Tribune*, of Saturday last, that Congress has taken up the subject of a reciprocal commercial arrangement with Canada. Our cotemporary says :—

"Mr. Grinnell, of Massachusetts, reported in the House, on Thursday, 4th May, a bill providing that grain and breadstuffs of all kinds, vegetables, fruits, animals, hides, wool, tallow, horns, salted and fresh meats, ores of all kinds of metals, &c., the product of Canada, shall be admitted into the United States free of duty when imported direct from the said Provinces: provided always, that similar articles shall be admitted from the United States to Canada on the same terms."

The passage of this measure would be most advantageous to Canada; it would infuse new vigour in our Commercial system It would would raise the price of grain greatly—increase the value of land—and influence the current of emigration in our favour; it would also enable our Banks to extend their issues with more safety and to give facilities of a less fluctuating character to our merchants. The importance of this Bill cannot be too highly estimated.—*Globe*.

HOME MARKETS.

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

	Toronto, May 15.			Hamilton May 13.			Montreal May 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	6	0	1	3	0	2	0
Peas, per 60 lbs.	0	2	6	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