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

Vol. I.

TORONTO, FRIDAY, APRIL 9, 1847.

No. 6.

WOOD CUTS.

We send this number to our readers, as they will observe, without any wood-cut, or pictorial embellishment. We did not promise them in every number, and shall not, therefore, break our promise by withholding. For the illustration of such subjects as were contained in our last two or three numbers they are very useful and indeed indispensable, but, we cannot see what benefit is to be derived (unless by the children, who are fond of "pretty pictures," and that to be sure is something,) by presenting likenesses of bulls and cows that lived and died somewhere in the neighborhood of New York eight or ten years ago? We could illustrate in this way at a cheap cost, by sending off to Albany or New York for the old stereotyped plates to be found there in any number. But we are more utilitarian in our belief, and so long as better cannot be had we shall not take much trouble to obtain these. After we become thoroughly established we shall make a practice of giving at least one illustration of something useful in every number. For the remainder of this volume we shall make no promises, though if any thing important comes in our way we shall not neglect it and our readers will, we feel sure, approve the policy of such a course, when we inform them that every cut of the kind we have presented them, cost five and six dollars. It will be seen that this would make a pretty important item in our bill of expenses by the end of the year. We must therefore wait till the good and liberal public have moved in our behalf.

AGRICULTURAL COLLEGES.

The 19th century presents the singular anomaly, of an age, skillful to a degree beyond any that has preceded it, in all the arts that minister to the comforts and luxuries of man, with the single exception of that art, which is alone the base and support of all others—the art of an enlightened agriculture. All the elegancies of life too, and the refinements of intellectual culture, the useful and recondite sciences, literature, poetry, music, painting, and sculpture, have been patronised, illustrated, and studied, under every advantage, and have thus been pushed far toward their maximum of improvement; yet is the foundation of this varied and beautiful superstructure, the only portion of the edifice which is destitute of strength, order, symmetry, or design. And if we look back through the history of the ancients, reaching, according to the most approved chronology, much farther than 6,000 years, we find no record from which we can learn that any branch of the world's ancestry has been wiser in this respect, than their descendants of the present day.

We shall not attempt to account for this gross and most inexcusable neglect, beyond the effect of that principle, which may be almost taken as an axiom in human conduct, that man's exertions are withheld, just in the ratio of the Deity's munificence. Supreme Benevolence has wisely provided for the success of the humblest efforts of unenlightened reason, in its struggles to procure from the earth the elements of subsistence; and on the very threshold of success, have all human efforts been arrested. Content with having achieved the bare means of existence, the human mind has been stayed in this vast field of enquiry; and has turned away from it, if not with loathing, at least with indifference, and with a keen and delighted relish for other and less important and less praiseworthy objects of ambition. Whence comes this lack of reason, this short-sightedness to our own best interests? We must acknowledge ourselves incompetent to give the answer, and we gladly assign the solution of this difficult problem to our modern philosophers, who are so worthily busying themselves with the "law of progress;" from whom alone it must come, if it come at all.

Whatever the cause may be, certain it is,

that the world has hitherto taken but the inchoate steps in the art of agriculture; and this broad land, like the western hemisphere in the days of Columbus, remains almost incognita, an unexplored continent, inviting the most intelligent research, and ready to pay its explorers with the richest rewards. It may be true, indeed, that portions of this goodly land have been heretofore discovered by the Northmen of preceding times, and even inhabited by a refined race of Aztecas possessing a high degree of culture; yet to the present race of man, no chart or history has been bequeathed, to point out its location or well-defined boundaries. Whatever discoveries may have been made in this great art in the early ages of the world, by the Egyptians, or other early civilized nations, who possibly, may have inherited from the antediluvians, a science and practice far beyond any thus far reached by successive generations—it is certain, that modern enquirers must re-discover it for themselves, if they wish now to have it in possession.

We would not be ungrateful for the worthy and efficient service rendered, since the commencement of the present century, by the devoted sons of genius, who have given a portion of their time to the elucidation of the principles of agriculture, and who have begun a systematic investigation of the laws of nature, that needs only to be followed up, rigidly and unremittingly, to result in all the benefits which may fairly be demanded at their hands. But, we ask, what has been the success in this all-important pursuit, that will compare with the improvements in the mechanic arts, as shown in the application of steam, machinery for the manufacture of the different fabrics from wool, cotton, silk, the metals; and the various other new and important arts rendered to the useful occupations of the present day? With the facilities afforded by the above inventions, one person can now do as much, as could have been accomplished by twenty, without them, only 40 years ago. Can any approximation to such improvement be shown in the cultivation of the soil? We speak not of the mechanical instruments of the farm, which have measurably, and perhaps to the extent which could reasonably have been expected, participated in the modern progress of improvement.

Our meaning is much broader and deeper, and includes the whole science of agriculture, in all its varied phases and relations. We look to, and demand for agriculture, that enlarged and liberal measure of discovery, which will enable the human race to provide sustenance for its thousand millions of inhabitants, now covering the face of the earth, destined, probably, hereafter, to be indefinitely augmented; with an approximation to that certainty and success, that attends human labour in the other departments of life. We prepare our land and sow it to wheat, or plant it in corn; and after much doubt and uncertainty, reap from the first an average, in these United States, probably, not exceeding 14 bushels; and gather from the last, not more than 20 bushels per acre. Yet we have seen under favourable circumstances, that the former has yielded 80 bushels, and the latter over 180 bushels per acre. We claim, that alating somewhat from the accidents of seasons, unusual droughts, humidity, or frosts; or perchance, the destruction following upon the eccentricities of the elements, as a hail-storm, or whirlwind, on an ungarnered crop, we might look for the highest results from every well-directed effort, with the same confidence that we now look to the attainment of any given speed from a steamboat, after providing it with a suitable model, engine, and fuel; or the weaving a definite number of yards by a power loom, properly constructed, and moved by the requisite force. To accomplish thus much, we have but to place our soil, and seed, and culture, in the same precise conditions, that have once been successful; and yet how seldom is this achieved, even on the same field, and under the same direction as many have been before employed.

If we look beyond the discoveries hitherto applied, and bring the science of agriculture such analogies as are appropriate to the subject, as shown from the progress of human invention in other departments of enterprise, we may reasonably expect developments in aid of this object, which would now be con-

sidered as perfectly Utopian. What brilliant results may yet crown the researches of the devotee of agricultural science, and what green and enduring wreaths of glory are destined to circle the brow of genius, who may hereafter successfully explore this hitherto almost untrodden waste. And how the comforts of this world, and its means of subsistence will be multiplied, when all the aids to its cultivation are rendered, which mankind have a right to demand.

We have then our deficiencies for the present and past, and our hopes for the future pointed out. Where are the remedies for the former, and the proper and reliable foundations for the latter? First and mainly, it may be answered, in bringing the right minds to the just and full consideration of this subject; and secondly, and as a necessary sequence to the former, the application of the requisite amount of funds, which shall secure genius of the highest cast, under all the circumstances of advantage, essential to its fullest effect.

Briefly, and in a form that all may comprehend, we say; we want an agricultural institution, founded and arranged on the best principles which can be dictated by enlightened experience, sound judgement, and a shrewd common sense; and so guarded, as to be unassailable by the corruptions of party, and beyond the reach of any hostile innovations of the fickle multitude; and such an institution should be endowed with a permanent fund of one third, to half a million of dollars. In this institution, we would place a chemist and geologist; an anatomist and physiologist; a botanist; an entomologist; and a practical agriculturist, who should give embodiment and effect to the suggestions of science, and run each out to a clear distinct and definite result. These professors should be such as the choicest spirits of the age could afford; surrounded with all necessary assistants, books, and apparatus, and a well conducted and sufficiently extended farm; and their services should be secured by a compensation perfectly adequate to their entire independence for life. Under these circumstances, we should have a series of experiments following each other in well-arranged and appropriate succession; the results of one, constituting the starting point for another, and each department would be aided in its researches, by all the light afforded to it by the others.

With such an institution, how long would it be, ere the tyro in agriculture could go to it, with the same certainty of receiving the requisite information, that the mariner now does in consulting his chart and compass? The slow and dangerous coasting, amid shoals and breakers, that now mark out his benighted course, would at once give way to bolder movements, and more direct and certain success.

Such an Institution Mr. Allen remarks, would revolutionize the practice of agriculture within the present age, and more than double the products of the earth with the same labour and expense now devoted to them. Expressing his doubts that his government, which annually makes a peace appropriation of from \$10, to 12,000,000 for war—as a preparation for human butchery, will be likely to give even the twentieth part of that sum for such a purpose, he urges the necessity of individual bounty.

"Here indeed, is a glorious field for immortality, for one sufficiently enlightened to grasp it, and the man who shall have the good sense and liberality, to found the first Agricultural College on the enlarged and magnificent plan proposed, will secure a fame for all coming time, before whose brightness that of an Alexander or a Napoleon would become dim, or distinguishable only by its intensity of darkness.

We must confess our hopes in the beneficial results of the present efforts in the cause of agriculture—our enquiries and discussions—our treatises and periodicals—our agricultural premiums and shows—come up to this extent, and scarcely more; they are awakening the public mind to a sense of its deficiencies; they are discovering the vacuum which yet remains to be filled. They are the cre-

puscular light which heralds the coming morn, but they are not the glorious effulgence of the king of day. But his approach is indicated beyond the possibility of doubt; and ere long the world will be in the full enjoyment of his benignant rays. They are not the Light so long looked for, and so much desired, but they are "the witnesses of that light."

We shall soon have, not only one, but a multitude of agricultural colleges, and when they have had time fully to mature their fruits, a certain and overwhelming abundance will crown the efforts of every enlightened agriculturist. But we must have them, unassociated with other departments of human investigation and acquirement, where they would be exposed to a foster-mother's kindness. They must be planted, in all the vigour of manhood, on an immovable basis, where agriculture, and nothing but agriculture, shall be the theme and sole object of pursuit, to both professor and student. And well might they content themselves with the study of this single science, that embraces within it comprehensive grasp, (however disdainfully it may heretofore have been considered, by flippant scholars and shallow philosophers,) almost the entire range of the natural sciences, embodying as they do, the most abstruse, as well as the most beautiful investigations of the human intellect.

[Agriculturist. R. L. ALLEN.

How TO TREAT BREAD WHEN TAKEN FROM AN OVEN.—Never set it flat on the table, as it sweats the bottom, and acquires a bad taste from the table. Always take it out of the oven, and set it up end way, leaning against something. If it has a thick, hard crust, wrap it in a cloth wrung out of cold water. Keep it in a tin box, in a cool place, where it will not freeze.

GRASS.

(Goth. *gras*; from *gro*, to germinate, to sprout.) The common herbage of the field on which cattle feed.

The grasses, it has been often and well said, "are nature's care." There is, perhaps, no class of the vegetable world so little understood as this. "Grass," says Professor Martyn, "vulgarly forms one single idea, and a husbandman, when he is looking over his enclosures, does not dream that there are upwards of 300 species of grass, of which 30 or 40 may be at present under his eye. They have scarcely had a name besides the general one till within these 20 years; and the few particular names which have been given them are far from having obtained general use, so that we may fairly assert that the knowledge of this most common and useful tribe of plants is yet in its infancy." (*Letters on Botany*, xii.) It is certain, however, that since Professor Martyn wrote, much has been done to add to our knowledge of the grasses. These grow in all parts of the world promiscuously, and without cultivation, affording both directly and indirectly the means of subsistence to man. Europeans live chiefly upon wheat, rye, and barley, to which list their American descendants have added maize or Indian corn. "The cultivation of the earth," says Professor Johnson, "preceded the improvement of the intellect, and was the herald of civilization. It is remarkable that we have no direct criterion of the origin of many of those grasses met with everywhere in cultivation, as none of them are, to any extent, found wild. Some travellers have thought, that barley was indigenous to Tartary, rye to Crete, and wheat to Asia, but these might have been diffused from some cultivated source years previously. Corn is not only the support of man, but the grasses are the subsistence of the animals which form his nutriment. The nutritive quality of grasses is principally owing to the sugar which they contain, and of which some English grasses contain large quantities, but the sugar cane is the only grass that is exclusively cultivated for obtaining this article for commerce. The grasses are applied to a vast variety of important mechanical purposes; they are found in every part of the world, from the Poles to the Equator; on the land, as well as floating on the water, and are the universal food of animals."

The botanist has shown that there are

more than 130 distinct native species and varieties of grass in Great Britain, all possessing distinct properties, and varying in their degrees of value to the farmer, from the most worthless, to those on which his successful farming chiefly depends. The researches, too, commenced by the late Duke of Bedford, and carried on during a series of years in the grass garden at Woburn, have added very materially to our stock of knowledge concerning these plants; for, instituted with a public object, and under the careful and skilful management of one of my earliest correspondents, the late Mr. George Sinclair, the results were given by him to the public in the *Hortus Gramineus Woburnensis*, a valuable and elaborate work, to which I am chiefly indebted for the matter of this and other articles upon the grasses. The manner in which these celebrated experiments of the Duke of Bedford were conducted, is thus described:

"Spots of ground, each containing four square feet, in the garden at Woburn Abbey, were enclosed by boards in such a manner that there was no lateral communication between the earth included by the boards, and that of the garden. The soil was removed in these enclosures, and new soils supplied; or mixture of soils were made in them, to furnish as far as possible to the different grasses those soils which seem most favourable to their growth, a few varieties being adopted for the purpose of ascertaining the effect of different soils on the same plant.—The grasses were either planted, or sown, and their produce cut and collected, and dried at the proper seasons, in summer and autumn, by Sinclair, his Grace's gardener. For the purpose of determining, as far as possible, the nutritive powers of the different species, equal weights of the dry grasses or vegetable substances were acted upon by hot water till all their soluble parts were dissolved; the solution was then evaporated to dryness by a gentle heat in a proper stove, and the matter obtained carefully weighed. This part of the process was likewise conducted with much address and intelligence by Sinclair, by whom the various details and calculations were furnished. The dry extracts supposed to contain the nutritive matter of the grasses, were sent to me for chemical examination. The composition of some of them is stated minutely; but it will be found, from the general conclusions, that the mode of determining the nutritive power of the grasses, by the quantity of matter they contain soluble in water, is sufficiently accurate for all the purposes of agricultural investigation." (*Agr. Chem. app.*)

In regard to the description of soils—1st. By loam, is meant any of the earths combined with decayed animal or vegetable matter. 2d. Clayey loam, when the greatest proportion is clay. 3d. Sandy loam, when the greatest proportion is sand. 4th. Brown loam, when the greatest proportion consists of decayed vegetable matter. 5th. Rich black loam, when sand, clay, animal, and vegetable matters are combined in unequal proportions, the clay, greatly divided, being in the least proportion, and the sand and vegetable matter in the greatest. The terms light sandy soil, light brown loam, &c., are varieties of the above, as expressed.

The systematic arrangement of grasses is a difficult and unsatisfactory task, and has occupied the attention of many botanists.—The most recent work upon the subject is *Kuntz's Agrostographia*, published at Berlin in 1836.

In choosing the mixture of grass seeds most valuable for the farmer's soil, many considerations must be taken into calculation: not only the nature of the soil, and the supply of water to which its habits are best adapted, but also the objects which the farmer has in view. Thus, the meadow foxtail (*Alopecurus pratensis*), although an early, nutritive, and productive grass, requires more than two years to arrive at perfection: it is, therefore, better adapted for permanent pasture than for the alternative husbandry. And then, again, the meadow cat's-tail or timothy (*Poa pratensis*), although remarkable for producing the most nutritious culms of all the grasses, and that, too, in a considerable bulk, yields afterwards of very little value. Valuable, therefore, as it is for hay, it is of little consideration for feeding purposes if sown by itself: it must, therefore, be combined with other grasses. So the cock's-foot orchard grass (*Dactylis glomerata*), which soon arrives at perfection, and yields early and late a profusion of leaves, which are highly nutritive: has culms or stalks of little value; it is a grass, therefore, most profitable for feeding purposes. "Under these different relations, therefore," says Mr. G. Sinclair, "a grass should be considered, before it is absolutely rejected, or indiscriminately recommended."

The knowledge of the relative nutritive matters contained in different grasses, will also not only be a highly important object of research, as connected with their feeding pro-

erties, but as throwing considerable light on the powers of the different grasses to exhaust or impoverish the soil, a question which I shall examine more at length under the head "Rotation of Crops." A more intimate and extensive knowledge, with regard to the composition of plants, may be derived from even an examination of their external appearance than many persons would deem possible. The following are some of the general results of the observations of Sinclair:

1. Grasses which have culms with swollen joints, leaves thick and succulent, and flowers with downy husks, contain greater proportions of sugar and mucilage than those of a less succulent nature.
2. When this structure is of a light glaucous colour, the sugar is generally in excess.
3. Grasses which have culms with small joints; flowers pointed, collected into a spike or spike-like panicle; leaves thin, flat, rough, and of a light green colour, contain a greater proportion of extractive matter than others.
4. Grasses which have culms furnished with numerous joints; leaves smooth and succulent; flowers in a spike or close panicle; florets blunt and large, contain most gluten and mucilage.
5. When this structure is of a glaucous colour, and the florets woolly, sugar is in the next proportion to mucilage.
6. Grasses which have their flowers in a panicle, florets pointed or awned, points of the culm smooth and succulent, contain most mucilage and extractive.
7. Grasses with flowers in a panicle; florets thinly scattered, pointed or furnished with long awns; culms lolly, with leaves flat and rough, contain a greater proportion of saline matter and bitter extractive.
8. Grasses with strong, creeping roots, culms few, leaves flat and rough, flower in a spike, contain a greater proportion of bitter extract with mucilage. (*Hort. Gram. Wob. p. 42.*)—*Farm. Encyclopaedia.*

TO CORRESPONDENTS.

J. J. B. Thorold. We are very much gratified with the efforts he has made in our behalf. We hope many Farmers' Union Clubs will be formed in the country for the same object. And if they would meet together, and discuss freely and familiarly Agricultural topics, communicating to each other the results of their reading and experience, and, when anything of importance transpired, sending a short account of it to us, we would be willing and glad to insert it in our paper, and by these means an invaluable amount of good would accrue to themselves, and to the country at large. We would be obliged to J. J. B. if he would get a few persons of influence, in the places he mentions, to act as Agents for us. He might, without much trouble, write to them, as he will know who are interested in the cause of Agriculture in those localities, and in this way add to our list. At any rate, we trust he will not stop with the 12 names sent. He took more trouble than we expect from correspondents, in copying the pieces enclosed, as these kind of things can be had in any quantity from our exchanges, and as it is much easier to get from printed than from written copy, we should much prefer something on Agriculture; or, if J. J. B. has a literary taste, we should be glad to find room for him in that department.

U. W., Walsingham. Your case, if you tell the truth, is certainly a bad one. We commiserate your misfortune; and though you have mistaken our promise, which was to "farmers" who could not afford to pay 7s. 6d. for our paper, yet we will send you a copy on credit, hoping you will soon be able, not only to pay postage, but to send us the subscription. You may, at least, induce others to subscribe, who can pay. It was not a treatise on cut food that we asked for, but the statement of an experiment, by which its advantages has been proved. Your remarks are in some respects very good, but we have not room for them this week.

CANADA FARMER.

April 9, 1847.

AGRICULTURAL COLLEGE, AND AGRICULTURE A BRANCH OF STUDY IN THE COMMON SCHOOLS.

We have copied, on our first page, some excellent general remarks from the *Agriculturist*, by L. F. Allen, Esq., Author of the *American Herd Book*, a very extensive farmer, and one of the best agricultural writers in the State of New York, or indeed in the United States. We have inserted this article because we think it contains several suggestions particularly worthy of consideration by the intelligent farmer of Canada, at the present moment. There has lately been some talk about establishing an *Agricultural College and Model Farm*, in the neighbourhood of Toronto. The subject at present, however, seems to be lost sight of by the Press, though we have been told by a person who has taken

all these matters under his special control, that the thing is already "cut and dried." We confess we are disposed to question the fact, as well as the soundness of such early maturity. We are always suspicious of these "sub silentio," "hole and corner" proceedings, and we shall not be slow to sound the alarm should we discover any thing to justify public apprehension. The inestimable benefit such an Institution as that outlined by Mr. Allen, adequately supported and properly conducted, would confer upon our country in every branch of her industry, and in every department of her progress, we need not at present stop to shew. Upon the healthy and prosperous condition of Agriculture in Canada, every thing depends. To foster, encourage, improve and protect it, should be the first object of solicitude with the true patriot, to whatever class he may belong, or whatever pursuit he may follow, and should also first attract and longest occupy the attention of the politician and the legislator. As agriculture is incomparably the most important occupation—in which the greatest portion of our population are, and must ever be engaged, so it is that in which unfortunately there is to be found the greatest amount of ignorance, prejudice, mismanagement and disregard of improvement. There is no field of human labour (we speak of *productive* labour) which affords more room for the profitable and successful application of science, which in fact absolutely requires for its tolerable cultivation more preparation, more intelligence and training, than that of farming, taken in all its branches. There is none, in which more beneficial, more wonderful results have followed the application of scientific knowledge and philosophical investigation, in so short a time, as in this. We might easily refer to the instances and the proofs, but we must leave that part of the subject until another time. Is it not strange, then, that while the blacksmith must serve his apprenticeship before any man will allow him to nail a shoe upon his horse—the surveyor, the doctor, the lawyer, go through a course of preliminary study of years, and finally undergo examination, and attain permission to practice their several professions, the veriest dolt, he who has failed in every other business, and who could not perhaps tell you the difference between a dung-fork and a harrow, thinks himself quite equal to the business of farming; and that while hundreds of this class are defacing and abusing the generous earth, and thousands more of those who have served a sort of apprenticeship to very ignorant and unskilful masters, are daily "suffering for lack of knowledge," no effort should be made to alter this state of things? That neither Government nor associations of individuals should think it worth while to try the experiment of adopting the same means for the diffusion of knowledge upon this subject, and for the advancement of the interests of all who are concerned in the success of this art, (and who is not) that they use in every other?

We shall return to this subject again, and we shall not drop it till we see the "ball in motion," and in a fair way to roll on in triumph, gaining in velocity and force as it proceeds, and overcoming all obstacles. We shall advocate the propriety of introducing the study of agriculture, and the elementary principles of those sciences with which it is more immediately connected, into our common schools. Our common school system is in a very imperfect state. There is great room for improvement, and we think we shall be able to show that this is one of the most essential. There are branches of study pursued in the schools of this country, that might just as well be dispensed with, if it should be found that the addition of another would be too much for the attention of the pupil. We may instance English Grammar. There never was a greater farce than the attempt to teach children under the age of twelve or fifteen, a knowledge of its rules and principles. We have never seen an instance of any real benefit derived from such teaching. It more frequently happens that children acquire so great a distaste for that which they have been

made to study, but could not understand, that when they have become sufficiently acquainted with the meaning of words to be able to apply the rules of grammar to the construction of language, they throw it aside in disgust. The study of an elementary work on agriculture might very well be substituted for that of grammar; it would be something that a child could be made to understand and in which he would feel interested, and if it did nothing more than give him a taste for the study, he would follow it up as he grew older, and the effect upon the prosperity of our country from the general adoption of this means of awakening the attention of the rising generation to so useful, so necessary a study, could not be foretold.

HARROWING GRAIN.

The practice of harrowing wheat fields in the spring, wherever it has been properly followed, has, we believe, been attended with evident benefit. We have seen it done ourselves, and at the time we had great fears for the result; the wheat plants were trodden down, some torn up, and others covered over with the loosened earth, and altogether it looked like a piece of foolish, willful destruction. But in less than four days the good effect might be seen in the contrast between the dark, green, healthy, and luxuriant appearance of those lands over which the harrow had been drawn, and the yellow, sickly appearance of those parts that were left. We find the practice highly recommended by several of our American cotemporaries. They state that oats, barley, hemp, and all spring crops of grain may be harrowed with advantage whenever the surface of the ground becomes hard and encrusted, which all clay soils are liable to after a heavy rain.

The benefit of harrowing, we think, will be greatest when applied to wheat fields, which have been somewhat winter killed. It should not be attempted until the ground has settled and become dry; and the harrow, which should be a light one, with fine teeth and not too many of them, may be followed by a roller to press the roots that are laid bare by the harrow into the earth. We should think that the morning of a day that promises showers in the afternoon, would be the most suitable time for the operation. It was at such a time that we saw it done, and although the plants were pretty large, and were consequently knocked down by the harrow and roller, yet after a couple of showers, you would hardly know that any thing had been going on in the wheat-field unless from its freshened appearance. Stirring the earth encourages tillering, adds to the strength and growth of the plants, and thus makes up far more than is lost by the few that are destroyed. Some have used harrows with wooden teeth, asserting that much less injury was caused by them. We hope these remarks may induce some of our readers who have never tried this practice to make the experiment this spring, and satisfy themselves of its usefulness. From all appearances there will be occasion to make use of every expedient to remedy the effect of the present winter upon the wheat crops of a great part of Canada.

THE GARDEN.

No one who has the control of a square rood of ground should be without a garden. To those who are engaged in sedentary, indoor pursuits, the cultivation of a small garden affords an agreeable, healthful recreation, and it enables the poor man to enjoy many luxuries, without the usual expense of such enjoyments. The farmer, whether rich or poor, should never be without the "Kitchen Garden." He will find it quite as profitable as any other part of his business, requiring an equal amount of labour. The garden work can, in most cases, be performed by the female members of the family, except perhaps the digging and manuring of the soil, which, we assure the ladies, we think they ought not to be expected to do. But we must remind them, at the same time that we thus show our devotion to their interests, we expose ourselves to the censure of very high

authority, viz., to that of a lady herself. Mrs. Louden, the wife of the celebrated agricultural writer, in her excellent little work "Gardening for Ladies," lays down very particular directions for the mode of digging the soil, preparing and applying the proper kind of manure, making hot beds, &c. &c.; and she gives drawings and descriptions of the implements they must use, and of the little barrow which they are to fill up, and trundle along with their own fair hands. By the way, we must not forget that she allows them to wear a leather gauntlet, to protect their delicate fingers from the rude touch of the vulgar earth.

Such a garden as almost every farmer may cultivate without trenching upon the labours of the field, may be made to supply one-fourth, at least, of the food which is required for the consumption of his family during the summer, to say nothing of the air of comfort and sociability it gives to his dwelling, and the rosy hue of health such employment imparts to the young ladies, a matter of no small moment to an affectionate and indulgent father. We say, then, to all, however multifarious the objects demanding your attention, do not forget your garden.

We extract the remarks below from Garner's Dictionary. They are taken by him from an English writer, and refer chiefly to market gardens; many of the hints, however, will be found useful for ordinary cases:—

Deep trenching in some degree prevents that peculiar deterioration of the soil which would be the consequence of the frequent repetition of similar plants. This effect is most perceptible when the plants profit of their seed, which is seldom or never allowed to take place in market gardens; but great attention is paid to the species of plants which succeed each other on the same spot. The principle which explains this theory is the frequent recurrence of plants which belong to the same natural families. The greater variety cultivated in gardens, in comparison with the common produce on a farm, enables this principle to be fully acted upon. Those gardeners who overlook this, and repeatedly sow or plant the same kind of vegetables in the same spots, are soon aware of their error by the diminution of the produce, both in quantity and quality, and by various diseases which attack the plants, however abundant may be the food supplied to them or careful the tillage.

The principle on which the gardens are cultivated is that of forcing vegetation by means of an abundant supply of dung, constant tillage, and occasional watering. The whole surface is converted into a species of hot-bed, and crop succeeds crop with a rapidity which is truly astonishing. Those vegetables which arrive at a marketable state in the least time are always the most profitable, and those also for which there is a constant demand at all times of the year. With an abundant supply of manure, the market gardeners have no fear of exhausting the soil, and dissimilar vegetables may grow together on the same ground. Trees bearing fruit may be planted in rows, especially those of the dwarf kind, and under them those vegetables which do not require much sun may be raised to advantage. Raspberries, gooseberries, and currants, are planted in the rows between the trees. These rows being thirty or forty feet apart, leave ample room for vegetables; but in those gardens where the finest vegetables are raised, and particularly in those which are appropriated to the growth of seeds, no trees are permitted to shade the ground; even the hedges, if there are any, are kept low and clipped, that they may not give any shade, or harbour small birds.

A garden should always be laid out in a regular form, with narrow parallel beds, and paths between them. One or more roads, of sufficient width to allow a cart to pass, should intersect these beds at right angles, for the convenience of bringing manure and taking off the produce. The beds should not be above six feet wide, so that a person may easily pull up weeds or gather the vegetables without treading upon the beds. The surface soil taken from the paths serves to raise the beds, and in retentive soils may carry off the superfluous water after sudden and violent rains. The whole ground should have been trenched two spits deep or more; and this trenching should be frequently repeated, to mix the upper with the under part of the soil, and distribute the decomposed dung throughout the whole depth. Thus in time a rich black mould will be produced, in which every kind of vegetable will grow most rapidly. For early plants, and those which are used

in winter, and require to be protected from frost, narrow beds are made, lying in a direction east and west, and sloping towards the south, with the north side raised high, so that their surface forms an angle of twenty or thirty degrees with the horizon. This gives the plants a protection from the north winds, and exposes them more to the influence of the sun. In very frosty weather, these beds are covered with mats or loose straw. We do not mention frames covered with glass, as they belong to a higher kind of horticulture; but a moderate hot-bed, made with fresh dung, and covered with mats laid over hoops, is indispensable for the raising of early vegetables. By these means, radishes and various salads may be raised very early in the spring, and sometimes in mild winters, without any interruption the whole year.

An abundant supply of manure is indispensable in a market garden, and this can generally be obtained in large towns at a trifling expense. The neighbourhood of a town is therefore a necessary circumstance towards the production of the crop, as well as its sale. It would be impossible to make a sufficient quantity of manure by means of the horses which are employed to carry the produce to market, and the extent of land usually had out in garden ground could not raise sufficient food for cattle without taking up a space which may be more profitably employed. The only animal which can be kept to advantage by a gardener is a pig. This animal will live well on the offal of vegetables, and the gardens of cottagers could not well be kept in a fertile state if it were not for the manure made by the pigs.

The profits of a garden near a large city, of the extent of 10 or 12 acres, are as great as that of a farm of ten times the extent cultivated in the best manner, without the help of purchased manure. But if manure can be obtained at a reasonable rate, as is often the case in great thoroughfares, where many horses are kept for public conveyances, although there be no immediate demand for vegetables, a garden may be very profitably cultivated, entirely for the purpose of raising seeds. The demand for seeds of all the most common productions of a garden, and especially of flowers, is very great, and the profit of those who retail them in small quantities is so great that they can afford a liberal price to those who raise them with proper care, so as to keep the varieties distinct.

Many plans have been proposed for the distribution of the crops in a garden; but none of them are suited to every situation. Much depends on the nature of the soil, which may be better suited to one kind of produce than another, and also to the demand for any peculiar class of vegetables. New sorts may often be introduced with advantage. The raising of any useful plant with great care will often give a man a reputation, which makes it advantageous to him to confine himself to these principally, and raise them in the greatest perfection. An ingenious man will find out what is most for his own advantage; and, from the list of plants which may be cultivated for ornament or for use, a selection may be made which may be well suited to the situation of the ground and the circumstances of the grower. The practice of the market gardeners may be examined with advantage; and long experience, with the test of profit, will lay down better practical rules than the most plausible theories.

The application of the garden husbandry must be in the preparation of the soil by deep trenching and digging, carefully drilling or dibbling all the seeds in rows, stirring the soil between the growing plants, and keeping the ground clear of weeds by the hand and the hoe. These last are the most essential part of the cultivation. By daily attention to the progress of the plants, and continual assistance at critical periods, sometimes thinning out, and at other times transplanting to produce an equal crop, and treating every plant as if it were a rare plant in a garden, the ground may be made to produce more than double what the most attentive farmer could expect on a larger scale.

These short rules may be added for garden cultivation:—

1. Regulate the distribution of your plants with respect to shade and sun. Ordinary standard trees should be on the north and west sides, near or against the wall or fence, so as not to shade too much from the sun.
2. Alternate the crops, and do not plant varieties together, lest the pollen should mix.
3. Plant immediately after preparing the soil.
4. Seeds and young plants require to be kept moist, and with light soil about them.
5. Stirring the ground about well-set plants is one of the most certain and rapid means of forwarding vegetables.
6. Trench the soil over sixteen or eighteen inches deep regularly every four or five years, taking a fifth part annually.

The following remarks from Judge Buel are concise, and well adapted to farmers:—

"The month of May is an important one in the operations of the garden. If not already done, no time should be lost in sowing the seeds of onions, salads, early cabbage, pease, radishes, and in planting early corn and potatoes. The beet, carrot, parsnip, and summer squash, may also be sown. Cabbages for winter use may be sown in time from the 20th to the 30th. As soon as the soil and the season are warm enough to bring up corn, which here is generally from the 15th to the 20th, plant your melons, pumpkins, and cucumbers, though it will do equally well to plant the latter for pickles, in the early part of June. The 15th will ordinarily do for Lima beans, which are the best of the bean family. Soak the seed of these in warm water a few hours, and cover them slightly when planted. My practice is to save this crop for winter use. They afford a good product. When frost is apprehended the beans are all picked, the unripe ones shelled out and dried, and, if soaked before cooking, are nearly as good as when first gathered from the vines. Perennial products require very little care after they are once established. We will name of fruits, the strawberry, the currant, gooseberry, plum, pear, quince, grape, and, in situations where they will thrive, the apricot and peach. But of fruits we would have none but the best sorts, for the best are as cheap as the worst, are as easily cultivated, and are infinitely more healthy and grateful. These, if well selected, will give a succession of fruit from June to November, and in a preserved state during the year. Plants to begin with will cost from three to five dollars. They may be multiplied by grafting, budding, &c. The trees should be so arranged as to shade as little as possible the grounds that are to be tilled. Half a dozen roots of the pie-plant (rhubarb) will furnish abundant materials for pies and tarts, in no wise inferior to the gooseberry, from April to July, or until the fruit is sufficiently advanced to supply its place. These should be planted two feet apart in good soil. A bed of forty by three and a half feet will supply the table with delicious asparagus during a part of April and the whole of May and June, if kept in good order. For this the ground should be dug deep and made rich.

"The annual products which go towards subsisting a family, and which are seldom produced but in the garden, are numerous, as the onion, beet, carrot, parsnip, cabbage, pease, beans, pot-herbs, salads, radishes, squash, cucumber, melon, &c. Some of these are in use most of the season, and most of them afford valuable winter stores."

Correspondence.

THE POTATOE DISEASE.

For the Canada Farmer.

GENTLEMEN.—If you think the following remarks might prove serviceable to the readers of your highly interesting journal, you will please give them publicity.

In investigating the nature of a disease like that which has destroyed the potatoe crop to a very great extent both in Europe and America during the last few years, we cannot be too cautious in recommending any preventive that we may, by close observation, have discovered. I say partial preventive, because we have no reason to believe that an effectual one has yet been found out, though scientific men have devoted much attention to the subject. We are justified in applying supposed antidotes, unless for mere experiment—only so far as they afford us a reasonable prospect of ample remuneration for all additional labour and expense that may thereby be incurred.

Last year I planted my potatoes in "new land," (something rather unusual in this part of the country) having cleared a few acres principally for the wood, and determined not to leave it in the slovenly condition in which we find so many patches where firewood has been taken off. I thought it might be profitably planted with potatoes and turnips, as it could be easily prepared in time for these, though perhaps not early enough for any other seed, besides, an opportunity was offered for an experiment. We commenced planting about the 20th May, and continued until the 15th of June; the work having been given to one man, who performed it with a common hoe. The few weeds that made their appearance during the summer were carefully removed, but no additional earth brought to the hills, which had been made full large when planted, a circumstance that will in part account for the long time occupied in planting two acres. When the proper season for digging arrived I was struck with the difference between those that had been planted either in rich vegetable mould mixed with ashes, or fresh clay where knolls had been removed, similarly mixed, and others planted similar in all respects, excepting that they wanted the ashes, which were not equally

distributed, on account of the leaves and rubbish in many places not burning, and requiring to be removed. Of this fact I became satisfied, that wherever the ashes were liberally mixed with the soil, which was by far the greater portion, the tubers were nearly all sound, but in the absence of this ingredient more than two-thirds of the tubers showed traces of the disease; upon the whole I had a very good crop. About one bushel in ten being unfit for house-use, were eagerly consumed by both pigs and cattle. In confirmation of this statement, I may mention that a neighbor planted on "new land," but in consequence of not getting a "good burn" his potatoe crop was affected very materially.

With regard to the failures immediately adjoining my own farm on every side, potatoes were planted on "old land" well manured with barn-yard manure, and ploughed several times, as is usual for such crops. The result may be judged from the fact that nine-tenths of the land thus planted, has remained undisturbed to the present time. The same rule so far as my observations go, may be practiced to great advantage in cultivating turnips.

Potatoes planted very early, generally speaking, are the best; but notwithstanding the difference as already noticed in the time in which mine were planted, no perceptible advantage could be observed. In the comparatively new Townships of this as well as other Districts of Western Canada, scarcely any loss has been sustained in the Potatoe crop; while many farmers of the older Townships, have to go to the "Bush" to get a supply for table use.

The above observations are submitted with greater confidence on account of the writer's having read several well authenticated statements of the application of common ashes to soils that had been cropped for ages, with the most signal success.

A CANADIAN FARMER.

Markham, March 23, 1847.

We strongly recommend the above to the attention of our readers. We had written a few remarks on the effect of salt in preventing the disease, but were obliged to leave them out to make room for our correspondent. A friend in England, who lives on the sea coast, in a letter just received, states, that scarcely any trace of the disease was seen in a number of fields that had been overflowed by the sea; and from many other experiments, we believe salt, which contains a large portion of soda, and wood ashes, composed chiefly of potash, both alkaline substances, afford the best remedy that has been discovered. We shall go more fully into the consideration of salt as a preventive of the disease and as a manure, the quantity, time, and mode of application, in our next number.

For the Canada Farmer.

Mrs. S. L. L.—In a conversation with a brother farmer, relative to an article which appeared in your journal, (No. 2.) copied from an American paper, on the destruction of the grub and wire-worm, by ploughing the ground three or four inches deeper than usual, and then pressing it down with a heavy roller, so as to prevent their working to the surface;—he observed, that from personal and practical experience, he found, by sowing and working the land with Buckwheat, either for grain or manure, will not only effectually destroy them, but at the same time, leave the soil in an enriched and high state of cultivation. One or two crops will be enough to attain the desired result.

This remedy, he considers much surer than ploughing and rolling, and better adapted to the interests of the farmers of this country than the American plan.

Yours faithfully,

J. J. B.

TIMELY HINT—SOOT IN CHIMNEYS.—Towards the latter part of winter, it often happens that the soot in chimneys has become much accumulated, and large fires, in windy weather, causes it to take fire, and burn with violence, throwing out from the top large masses of flame and smoke, and many sparks and burning cinders fall on the roof. If the shingles are dry, the danger is imminent, and many house-burnings doubtless originate in this way, more especially if this happens to take place in the night. To remove this difficulty and danger, burn out the soot in calm wet weather, by setting fire to straw, properly placed in the chimney for this purpose.—[Albany Cultivator.]

TO PREVENT FLIES ATTACKING MEAT. The butchers of Geneva have a singular mode of preventing flies from attacking the meat in their shops: they rub the walls and boards on which the meat is placed with the essential oil of laurel, the smell of which keeps away this troublesome insect.

Civil and Social Department.

EMIGRATION—MR. SULLIVAN'S LECTURE.

We make no apology for the frequent mention of the subject of emigration. It is one that will force itself upon the attention of the people of this country whether they will or not, and it will be wise to consider it well, before we are obliged to encounter the approaching tide, and submit to all its consequences. There are two great aspects in which it presents itself to the people of Canada. The effect upon the country which the emigrant leaves, including the effect upon himself, and the effect upon the country to which he comes. The former is remote from us; our attention is aroused by words of startling sound it is true,—misery, starvation, death; but the feelings of humanity, compassion, charity, are not the strongest of our nature, nor those in which we most frequently indulge. The latter aspect in which the subject is to be viewed is more likely to attract our notice, and to afford us matter for graver reflection. Our safety, our comfort, in a word, our interest is concerned. Mr. Sullivan affects to sneer at the "Australian quackery" of those statesmen who, with Mr. Smith O'Brien, apprehend serious consequences from the sudden inundation of this colony by the overflowing millions of Ireland, and all, or nearly all of the pauper class. But, if 50,000 families are received here yearly, now, without any disturbance of the labor market, it does not follow, that two, three, or if the Government assist, four times that number can be received this year or next, without great inconvenience and perhaps much misery. As soon as the Spring opens, the high price of grain will cause our farmers to sell every bushel they can spare, without any calculation as to how much may be required for the support of one or two emigrant families during the summer. The potatoe crop is almost sure to fail, there are not more potatoes now in the country than will be required for seed, and when we know that the voluntary emigration will be more than double what it ever has been in any previous year; that immense sums of money are being sent out of the country, not only by public charity, but by the laboring poor among us, for the purpose of enabling their friends at home to "come out," which strips them of their present means of support for themselves except their labor, and will deprive them of the power of helping to relieve the wants of their friends when they arrive; when we look at all these things, we confess we are not disposed to dismiss the consideration of the effect, not merely upon the "labor market," but upon every other market, of the additional discharge of 50, or 100,000 government emigrants upon our shores, so flippantly and summarily as Mr. Sullivan has done. If there is to be starvation, and we believe it is sometimes heard of even here, as things are at present; if the burden of supporting the poor, whose labor is not wanted, is to be borne by the proprietors of any country, it should be by the "princely" landlords of those countries which produced them. If the Irish landlords will reside abroad, and will not break up their pleasure grounds, and will not cultivate their estates in improved modes, so as to give more labour and more food, and if like Lord Londonderry, they will put down their names for the paltry sum of £20! on the same list with those of merchants, artisans, and others, who subscribe £100 and £200 to relieve their starving countrymen, let some plan be devised to oblige them to give labour and food to their own poor. But do not send paupers here in such numbers as to impose grievous burdens upon the industrious, though not "princely," farmers of this country, and to ensure certain suffering to the poor wretches themselves.

In a former number, we showed the extent to which emigration would have to be carried, in order to produce any sensible or beneficial effect upon those who remain. If

Government undertake any project of emigration, it will, of course, be with a view to remove the evils at home; it must, therefore, be on a large scale. Government cannot send them to the United States, for, as Mr. Sullivan says, such an attempt would be opposed at once. Canada, then, is the field that must be occupied. Well, let us suppose that the "passage" is paid, and that money enough is advanced to support each family for one or two years after they get here. Did Mr. Sullivan ever shoulder his axe, and go into the bush with one of his witty, willing, but raw and stupid countrymen? We have done so; and though we considered ourselves adepts at the business, and took the greatest pains (because our sympathies were enlisted, and our hearts burned with indignation at the recital of the oppressions that had compelled them to leave their native country), yet we have often been weeks, and months before we dare trust them in the woods alone. Even after they had learned "to chop" (which, to a man who has never handled anything but a spade is no easy lesson), if they delayed coming home till after dark, the lantern was lighted, and two or three persons set off to the bush, expecting to find the poor chopper crushed by a tree of his own felling. Mr. Sullivan refers, in the first part of his lecture, to emigration (as he terms it, though, in our opinion, without much propriety) in the United States. But who are the emigrants, and to what kind of land do they emigrate? Not the poor and ignorant Europeans, but native Yankees; and they go, not to encounter the dark, tangled forest, but the treeless prairie. The European, who knows nothing of clearing land, never attempts it, in the first instance. He must learn how. The "newcomers," in Mr. Sullivan's own language, "displace the old, pushing them gradually to the Westward." What, then, would become of 100,000 men, of the very lowest class (for such they will be), taken from the public roads and bogs of Ireland, and set down in the wild woods between this and Lake Huron? Who will teach them to swing the axe, and avoid chopping off their feet, to grind it, to make a new handle every other day to replace those they break, to—in a word, go through all the operations necessary to clear up a farm, and grow their bread? No, they would starve, in spite of all that Government could do; they would flock in upon the settlements, and hang about the towns, in a state not much better than they are in at present. And if land is to be given to emigrants, why not give it to the sons of our farmers, or to native Canadians, or to emigrants who came here two or three years ago, and have got the proper education? They will make settlers worth having, and will leave room for these "new-comers," who, "quackery" though it may be, we still contend must not come faster than we can employ them in the settled parts of the country, and prepare them in due time to seek the banks of the Saskatchewan, or, if you will, "pursue the setting sun."

GENERAL MANUFACTURING LAW.

If some splendid edifice which should be the glory of our country, were about to be built, the architect who should plan, the builder who should execute, and the public from whose purse the means would be drawn, would all be interested in having the foundation laid on firm ground. If the foundation were laid in sand, destruction of the building and ruin to the public, would follow, and shame and remorse would fall upon the unskillful architect and builder. Just so it will be with our manufactures. If laws based on corruption, be framed and passed by our Legislature, the result will be wide-spread and disastrous ruin. The time has come when the foundation must be laid, and the building raised. Let us build upon a rock. So long as companies have to go to the Legislature for special acts of incorporation, they will not cease to ask for special privileges.

The first thing they ask for is, that the liability of the stock-holders may be limited: that the Company may be protected in the refusal to pay their debts. The arguments by which this demand is supported are, that if it be refused, capitalists will not engage in the enterprise; that it is the interest of the public to encourage domestic manufactures, and that a refusal on the part of the Legislature to relieve the stockholders from risk and place it upon the shoulders of the public is very unpatriotic! There is no difficulty in disposing of such worthless arguments. To the first the reply is, that capitalists will enter into that speculation, which promises the greatest amount of profit; that it is not to benefit the public but themselves, that Companies are formed; that individuals are held liable for all the debts they contract, and that associations of individuals can claim no privilege in their corporate capacity, which every individual in the community is not entitled to. To the second argument, that it is the duty of the public to encourage domestic manufactures; we answer, that in this matter the public has no duty separate from its interest. If it be profitable to buy home manufactures, individual and national interests unite in saying they should be encouraged. If domestic manufactures be not profitable to the producer and the public, the time has not arrived when we can engage in them to advantage. This position might be illustrated by reference to almost any article now imported. But we will take only one example. The cost of the iron, annually imported into Canada, amounts to a large sum, while the iron ore in the township of Marmora, Victoria District, lies in the earth unproductive. A protectionist would say that the money spent in the purchase of English and Swedish iron, is so much thrown away, as we could keep the money in the country, if we chose to work our mines. But the argument is totally fallacious. If it would consume more labour in producing a given amount of iron from our mines, than if applied to the cultivation of the soil, would be sufficient, by an exchange of products, to purchase the iron from England, we should lose by the domestic operation. This is a great economic truth, and it proves two things. First, that to encourage a branch of domestic manufactures that is unprofitable, will lead to a national loss instead of securing a national advantage; and second, that for a company to ask special advantages, on the ground that their domestic manufactures will benefit the public, is to ask what they have no right to obtain; because if it will benefit the public it will benefit the company, and if it will not benefit them it will not benefit the public. But limiting the liability of the company is not the way to encourage domestic manufactures. It is to give encouragement to fraud, and hold out a premium to bankruptcy. If the company know that, like the rest of the community, they will be held responsible for all the debts they may contract, the motives to act with prudence will be as strong as the instinct of self-preservation. But if, after contracting debts to ten times the amount of their capital, the law compels them to pay only to the amount of their shares subscribed; what a strong motive does it give them to deal fraudulently with their creditors! Their greatest pecuniary advantage then lies in bankruptcy; and there is no check against their following this advantage through the dark mazes of crime, but the slight barrier which their compunction, and the care they have for their reputation, may raise! But whoever heard of a corporation, a thing proverbially soulless, having compunctious feelings, or caring for its reputation! The stigma, in case of bankruptcy, falls upon no individual; the responsibility is so divided that it is impossible to fix it upon any one. It is a consciousness of this absence of moral responsibility, united to an ordinary love of gain, that quets all scruples in the breast of the stockholder; and he readily participates in an act which he would shudder to perform in his individual capacity.

We know that Banking Companies have

been formed in the United States, with a premeditated determination to get largely in debt to the public by issuing their promises to pay, and to end the affair in bankruptcy. Other companies, and in other countries, have been formed with precisely the same object. Had each stock-holder been responsible for the debts of the company, this iniquity could not have been practiced. All the Scotch Banks are established on the individual liability principle; and failure amongst them is unknown. It is in the power of our Legislature to put an end to charter-mongering and the evil consequences to which it ever leads, by passing a general law on the subject of manufacturing corporations. Such a law, based on correct principles, would afford facilities for the formation of companies that cannot now go into operation without a special act of incorporation: it should afford to all "a fair passage and no favour;" it would protect the public against possible loss; and under its benign operations would grow up, not the sickly hot-house plant, shrinking from the cool breezes of heaven, nor the tropical plant, nipped by the keen frost of a northern winter; but the domestic oak, planted at a season, and in a soil and climate congenial to its growth, defying the adverse winds of competition; spreading its branches with a rapidity or slowness proportioned to the fertility or sterility of the soil, and adorning the earth by its foliage.

THE CORN TRADE OF AMERICA.

The total deficiency in the supply of food in England, Ireland, and Scotland, for the present year, has been estimated at sixteen millions of quarters, or one hundred & twenty-eight millions of bushels. The deficiency in France is also very great. The whole amount that will be required in Europe we have as yet no means of ascertaining, but in several of the European States there is a deficiency; though in some there is an overplus. Turkey & the ports on the Black Sea will probably be able to supply ten millions of bushels. There is no question that the total deficiency of bread stuffs in Europe will keep up an active demand, for the surplus which America can supply. It appears from the best American authorities that, in addition to what has already gone, the United States have about forty millions of barrels of Flour, & over one hundred millions of bushels of Corn for exportation. This, with what has already been exported, will more than supply the deficiency in the harvest of Great Britain. The advanced period at which the navigation of the American rivers and canals open this spring, owing to a continuance of cold weather, and the scarcity of vessels for transporting the grain to England, will tend to keep up prices to a high point in Europe, and to depress them at least temporarily here. There will be a large accumulation of grain in the American sea-ports, from which, for want of vessels, the deluge will not be able to keep pace with the influx, so rapidly will the grain pour in from Ohio, Michigan, Illinois, Wisconsin, and the other great producing States of the Union. The scarcity of vessels in Europe also is proved by the fact, that the rates of freight from the Danube, Odessa, and the Baltic, are about 40 per cent higher than in ordinary years; a fact which proves pretty conclusively that if foreign vessels could ascend the St. Lawrence, and if the trade of the Western States would take that channel, the rates of freight would not be materially lowered this season, as there are no vessels which can conveniently be transferred from the European to the American trade. The scarcity of vessels in the American ports arises from the fact, that nautical disasters have been uncommonly frequent during the last year, and that the amount of produce to be shipped to Europe is vastly greater than in previous years. In view of these circumstances we think it quite possible that prices here may suffer a temporary depression, but it can only be temporary, as there will be no diminution of the demand for our produce.

GOD SAVE THE PLOUGH.

The following nervous tribute to the Plough is from the pen of the gifted Mrs. Signourney, and will be appreciated by those who guide the Ploughshare.

See—how the shining share
Maketh the earth's bosom fair,—
Crowning her bow —
Bread in its furrow springs
Health and repose it brings,
'Tis treasures unkenown to kings,
God save the plough!

Look to the warrior's blade,
While o'er the world's glade,
He breathes his vow,—
Stride its unsparing wakes,
Love at its lightning quakes,
Weeping and woe it makes,
God save the plough!

Ships o'er the deep may ride,
Storms wreck their bumper's pride,
Waves when their prow,
But the well-loaded wain
Garners the golden grain,
Gladdening the household train,
God save the plough!

Who are the truly great?
Mimo is of pomp an state,
Where the crowd bow!
Gave us hard hands and free,
Cultivators of field and tree,
Best friends of liberty,
God save the plough!

Literary Department.

EXTRACT FROM MR. SULLIVAN'S LECTURE, BEFORE THE MECHANICS' INSTITUTE.

Among the United States, then, to receive voluntary and private emigration, we have to turn to territories, and see what resources they offer for the purpose of reception of emigrants.

The settlers in Canada would no doubt find it profitable to receive a labouring population, if the effect would be to reduce wages. I mean to say that the 40,000 families which Mr. Smith O'Brien speaks of could be easily employed in Upper Canada, if they would wait for even three times the rate of Irish wages. But we shall see in a moment that would be the consequence of such a movement. For, though the United States will not receive an extensive pauper population at the Atlantic city, they will receive any number that present themselves on their boundaries who are able to pay their way. Let us then take the 120,000 labouring men and their families. Suppose them brought out to, and up the country at Government expense they will then hang on the Government for present subsistence until they can find employers; when they do find employers, it will be at a rate of wages probably reduced to five or six dollars a month. Then at the farm servants in Canada will find their wages reduced to the same rate; then all these will pack up and away into the United States. Your new labourers will remain with you just until they have enough of money to enable them to go away. Then you follow the same process next year, your next year's emigration displaces your obsolescent, at your expense, all the savings of labour, and the expenditure of Government, all the private energy, will thus be employed in finding a population for the United States, and the process must continue until, by flooding that extensive continent with your labourers, you reduce the price of labour there, and until that price reacts upon this country.

This will never do. We have seen the same course of events on a small scale, and often. It is true that we can receive into Canada in its present improved condition, very many more labourers than ever before were received, and we can retain them by paying the same wages they would receive in the United States and if any be dissatisfied, we can afford to lose them. But all this will be accomplished by ordinary emigration; it will not afford the relief we wish to gain. Therefore let us leave the labour market to itself, and not attempt by any Australian quackery to regulate matters wholly beyond our control, and utterly independent of our interference. We must then find some mode by which the Mother Country can be relieved of her population, in sufficient numbers to afford relief without great inconvenience, and, if possible, with advantage to herself.

I have shown you how the Americans emigrate, the simple mode in which they provide for a population, which chooses to consider itself in excess. They are able to do this on more advantageous terms than we can be for their poorest people manage without assistance, to journey to the land on which they mean to settle, and to pay a small price for it besides. The great States of Michigan, Iowa, Missouri, are in the course of rapid settlement in this manner and in the State of Wisconsin, a country lying considerably to the Northwest of this place, in one land District, 700,000 acres were disposed of last year. The American settlers would have peopled Canada at least one portion of it, thickly, long ago, if they could have been permitted to do so. Indeed, so far as I am able to judge, they have a strong inclination to do so without our permission. Our countrymen have greater numbers, from whence to supply us with settlers, than they have—our countrymen have fifty times the inducement to emigrate, and yet this country is almost a desert; even the little peninsula on which we live, which thrusts itself forward into the United States territory, is not one quarter settled. What is the reason? Our countrymen are too contented; they have not the restless ambition of Americans to better their condition; but poverty and privation will drive them from home. They have no means of paying for their transportation hither. But Mr. Smyth O'Brien says—the landlords of Ireland would willingly pay for the passage of their poor

countrymen across the Atlantic, and that it would be cheaper to do so, than to maintain them at home. Our countrymen have not the means of purchasing land; but the settlement of our rear country is of a thousand times more importance to us than its paltry price is worth. I never saw a dollar taken by Government from a settler as the price of land, that I did not think it a loss to the public. Believe me, the money can be nowhere better than in the settler's pocket—if he has it, and if he has not, let us get our country settled at all events. Here is the passage paid, the land given, the settler arrived without disturbing the status of any one. What then remains—but, that he has not the means of settling on land; that is, he cannot feed himself until his first crops are gathered.

Mr. Sullivan then referred to the settlement at Peterboro, under Mr. Peter Robinson, which cost £22. a head. He thinks it would not cost half that sum now. He stated an anecdote of a settler who had gone into the bush without any means, and made himself rich, and said it was the history of thousands who are now independent.

But let us return to our subject. I have got my settlers here, and I have got land for them, and I only want the means of maintaining them a year in Canada, instead of maintaining them for several years in Ireland. How shall this be done? Why simply by advancing the money, and charging it on the land. Those who require but little, to be charged with little; those who require to be added to the full extent of a year's provision, to be charged with it; their deeds to be withheld until the money is repaid, with interest. The advance, including all expenses, need not, I am sure, be more than at the rate of £1 a head, or £20 for each family of five.

Can they repay the money? Most certainly they can. Not in the first, second, or third year; but after that they can begin to pay. If any abandon the land, let the advance be a charge upon the land; in the midst of settlement it will be worth far more than the sum advanced; there will be plenty of men willing to purchase. The settler may turn labourer; or he may go to the United States, if he chooses; others will take his place, who will buy the land, and the land will certainly be secured, for the charge upon the land will be its price. It will no longer be opened for free grant it will become the possession of some successful settler, or of some man of the country. Then suppose the passage money to Toronto, or to the land, paid by the Irish landholders, or an advance or loan of four millions, or even five millions, sterling, by the Government, to be repaid with interest, you have a million of surplus population provided for, who can be received in this country faster than all available means of transport could bring them without any inconvenience. Would not this be an object gained worth the expenditure? Twenty millions, sterling, was paid for the redemption of the West India slaves. Are the miseries of the poor in Ireland less, or their claims on the country less, or the difficulties caused to the Government by their condition less, than in the case of the West India slaves? The emancipation of the latter was a pecuniary loss to the revenue and trade of the nation. Is it not absolutely certain that the addition of a million to the population of Canada would be a great gain the way of commerce and consumption of British manufactures?

There are between this city and Lake Huron, I should think, two millions of acres which might be settled in this way. An appropriation of fifty acres to each family would provide for forty thousand families, or 200,000 people. Twenty thousand, at least, would be required to occupy villages and towns, and thus you would have 220,000 settlers provided for, who might as well come in one year as in twenty. But settlements need not be confined to this quarter; the greater part of the country between Lake Huron and the Ottawa is vacant—whole regions are without an inhabitant, and millions of men might be sustained by cultivating them. Provisions are abundant and cheap in the country. Upper Canada, with her present products, could sustain a million of additional inhabitants at once. If you bring her 500,000, she will still be an exporting country; but the best market she can have is at home.

In the course of three or four years, most of these settlers will have provisions to sell; those who do not succeed as well as others, will find provisions for their work; and all of them who want necessaries, will find employment at favourable and busy seasons, by coming into the old settlements. For several years to come, there is scarcely an article an old farmer will have to spare which will not be as good as cash to these settlers. Young cattle, pigs, sheep, seed, house-and-clothing. Fill your country thus, and you will have cheap labour, because it will be labour where it is wanted, and the men will be confined within your country by the best of all bonds, property.—You will not have the wives and children of labourers to provide for, for they will be fully employed at home. You will not have to pay cash, for you will have what is quite as valuable as cash to the settler; and what is better, it is what the farmers of this country cannot export or find a market for. I shall be asked by some landholders, what is to become of us if lands are thus given away for nothing? But you know well that Canadians, and emigrants who can afford to buy land, would disdain the grant of fifty acres; they would not accept or live upon so small a quantity; and then the means which presses on the value of land, in the shape of vacant Government territory, would be removed. Land would rapidly rise, instead of falling in value. I shall be told, —You must provide roads for these people. But all the roads necessary in the Owen's Sound tract are already provided. New settlers have very

little use for roads. Furnish them with their first provisions, and you do not want to hear of them or see them for several years. They have nothing to export, and what they import can be taken in on any roads. Nothing can be so wasteful and extravagant as the attempt to make good roads through the forest; trees may be cut down and a few causeways and bridges built; these the settlers can do by their own labour, under proper regulations, time will rot out the stumps, sun and air will dry up the allowances, and then is the time to make good roads. It is then settlement and scattered inhabitants which make roads so bad and difficult. Give me a tolerably thickly settled population who have real use for roads, and I will furnish you with made-roads, or reclaimed roads, plank roads, or even railroads, from Gaspe to the Rocky Mountains. You may proceed by making the roads first, and it is not a bad plan when there is plenty of money, but the way I have seen succeed best, is, to find the people first, and let the roads come after.

Well then, in the next place I shall be told to provide Churches and Schools for the new comers. For the Churches, I should like to see land given liberally; and I should trust to the people from whom the Landgrants come, not to leave them without clergymen, priests, and ministers.—Zealous men they must be who have their vocation at heart, and who will not turn from a settler's fare. For their support, in the first instance, and for the erection of the first homely places of worship, I should trust to the contributions of the godly and charitable in the country from whence the settlers came,—the future should be left to the Landgrants themselves. Schools I should like to be provided for by the Legislature of the country. At first it would be absurd to think of them, but in the course of three or four years the new Landgrants, with the same public aid extended to the rest of the country, would be able to provide for themselves.

I have hitherto spoken of this concourse of people, as if there were among them, no men of property sufficient to build mills, set up shops, and settle on lands; but all I can say on this subject is, that if such persons do not come, they will be the losers, for such a settlement is the very place for enterprise with small capital, the place where money will return in a short time, cent. per cent. But why should I say anything on this subject? Do we not know where farmers are thickly settled and have anything to sell, there will be shops; and when they have plenty to grind, there will be millers? I think Government (with the exception of the erection of a few saw-mills, which may be rented to persons who understand the business,) may leave these matters alone. Let them take care of the mill-sites, that they fall into the hands of those who will use them,—let them choose proper sites of towns, so that they may not be monopolized by some chance grantee, and I think Canada can provide trading enterprise enough for the accommodation of the new settlers, if they bring it not with them. What would be the effect of such a settlement of the back country upon our frontier towns? Why, it is almost incalculable. When this back country, which is now unproductive and vacant, begins to pour forth its produce,—when these men become able to purchase imported goods, the towns will really rise to importance. What would Toronto, London, Hamilton, be, with a million of people settled on this peninsula? What would Bytown be with the lands of the Ottawa filled with population? What would Kingston, Brockville, Port Hope become, if, instead of vacant lands in their rear, they had an active and prosperous population? Then would our streets be filled with shops; then would our artisans become the masters of large establishments, then our public works would pay, and then we may speak of rivalry of our neighbours. I shall tell you bye and bye what shall become of us if these things do not take place.

I dare say by this time I have established my character for being visionary and over-ardent, and impatient; but I have to lead you yet farther. Just take the map of Canada—but no, that will not do—take the map of North America, and look to the westward of that glorious inland sea, Lake Superior. I say nothing of the mineral treasures of its northern shores, or those of our own Lake Huron, but I ask you to go with me to the head of Lake Superior, to the boundary line; you will say it is a cold journey, but I tell you the climate still improves as you go westward. At the head of Lake Superior, we surmount a height of land, and then descend into the real garden of the British possessions, of which so few know anything. Books tell you little of the country, and what they do say, will deceive and mislead you. I tell you what I have heard directly from your townsmen, Mr. Angus Bethune, and indirectly from Mr. Ermatinger, very lately from that country.

A little to the westward of Lake Superior is Lake Winnipeg, and into Lake Winnipeg runs the Saskatchewan river—it takes its rise in the Rocky Mountains, and the Lake Winnipeg discharges its waters towards and into Hudson's Bay. This river runs from west to east fifteen hundred miles without an obstruction—it is navigable for boats carrying ten or twelve tons, it runs through a country diversified with prairie, rich grass, clumps of forest, and in one of the branches of the rivers are coal beds, out of which coals can be obtained by any one with a spade in his hand or without, and the plains are covered by the wild Buffalo of America. I am told that you may drive a waggon from one end to the other of this country of the Saskatchewan, and I am told, moreover, that it is superior in soil and equal in climate to any part of Canada, and that it produces wheat, barley, oats, potatoes, in short, all the crops of temperate climates in abundance. North of the boundary line, and still keeping within a climate equal to that of Montreal on the North, and to this place in the South, you have a breadth of perhaps six hundred miles, by a length of eight-

cen hundred. North of this again you have a country and climate equal to that of the powerful States in the North of Europe. Here is a country worth all Canada, told twenty times over, it was still more valuable until 1822, when in one of these accursed Yankee negotiations, two degrees of latitude, from the head of Lake Superior to the Rocky Mountains, were given up to our moderate neighbors. The lost territory takes in the great bend of the Missouri, and the whole territory is nearly as accessible by the way of the Mississippi and its tributary waters from the ocean, as the place you sit in.

Now the Russian empire contains more than seventy millions of inhabitants, with Poland, Sweden, Denmark, Norway and part of the Austrian empire, it occupies the position in Europe which Canada and the North Western territory of England exhibit in America. Both seem made alike, for the scenes of great deeds and of great events. The American North is the territory of an empire, overcrowded at home with thirty millions of inhabitants, a portion of them starving for want of ground in which to raise their food. That nation is the wealthiest and fullest of resources of any in the world. On the other hand, we have the United States—a country thinly inhabited, busy spreading its conquests to the southward—a nation by no means rich in money, having little plan in policy, and scarcely any power of Executive Government; and this country, by the sole and undirected energy of individual citizens, is rapidly advancing upon one splendid field of the best portion, which we have scarcely heard of, or only heard of, to neglect and despise. Already Michigan is peopled, Missouri, and Iowa are filling with inhabitants. Now they speak of adding the new States, which are to reach the British boundary, and they have the audacity to speak of the Saskatchewan as a river which they must have, with its fertile plains and beautiful lakes and streams, three hundred miles within our boundary—because they say it is the way to their ill-gotten acquisition in Oregon. Now all the advantage they have over us is a month's voyage across the Atlantic, and their wide-awake individual energy. To counterbalance this, we have men, and brave men, two to one; wealth beyond any dream of theirs, a necessity for emigration which they have not, and territory quite equal to theirs.

What, then, will be the consequence to us, if no great movement is made to people the British territories in this quarter of the world? The United States have pressed on us in the North-west—they have got to us in the N. thward of the West. We are advancing slowly—our Government is speaking with complacency of their emigrants being received into the United States, and our public minds are held back from settlement, and kept up for years. Why, the consequence will be that, out-flanked by a powerful population, left without the natural increase and nurture which a wholesome distribution of the people of the empire ought to cause, we must fall at no distant period into dependence on the American Republic. Then indeed, British subjects will come and settle among us, and they will buy the land from strangers, which their forefathers bled to win and to maintain, and England will have the satisfaction of considering that she was very careful in keeping the peace, and very learned, respecting the labour market of America. I have not the happiness of supposing, for a moment, that any, the most distant approach to my plan, will be adopted. Something I have heard of log houses being built, of acre lots being appropriated to labourers, when they can buy them—every care being taken, that they might have no temptation to rise beyond the condition of labourers; something I have heard about the necessity of cheap labour, and the fear of disturbing our labour market, but I have heard of nothing which will do us, or the Empire, any good. The objects I have in view, are too general, they promise no immediate exclusive benefit, to any class or party, here or at home; the unhappy people, who would benefit by my plan, are unrepresented, poor and powerless, and I know, even in this country, none who would reap exclusive advantages from what I propose. Money would be required to carry out my system, strict vigilance and unflinching superintendence, would be necessary, from the representative of Her Majesty, down to the lowest officer employed; otherwise, the whole plan would be a job and a failure. But there is no fear of this, the attempt will never be made, and I shall have, for my share of the project, to bear the ridicule attached to the character of a dreamer, and a visionary.

And now, ladies and gentlemen, I have to thank you for coming to listen to me, and still more for your patient and favourable audience. The facts I have stated to you are not new or doubtful. My opinions may be questionable, I may have been led to wish too much for my native country and for this. I may have spoken too harshly of them who, with the example of Americans before them, will think it liberal and wise to praise American enterprise and success; but who will not see the elucidation of what appear wonderful to them, and who will not follow the example of that people. I may be mistaken in my views, and what is worse, I probably have made a very interesting subject dull and tedious; at all events, however, I shall have called public attention, here, to the subject most important and interesting of all, both to this and the mother country, and I shall be more ready and willing to learn than I have been to lecture.

CIRCUMSTANTIAL EVIDENCE.

In reading the narrative of circumstantial evidence in your paper, I was forcibly reminded of a case which came under my personal notice, many years since. A schooner sailed from New York for Charleston, S. C., with some 18 or 20 passengers. On the voyage some hashed meat was served for dinner, and while eating it several passengers became sick, and it was suspected that poison was the cause. The cook, a black man,

was suspected, and after charging him with the deed, which he denied, the captain asked him to eat of the meat, which he declined. Some one of two of the passengers died. When the vessel arrived at Charleston, the cook was arrested, and held for trial. The mate of the vessel was not to be found, and no one knew his name, or where he had gone. The cook was brought to trial. A New England lawyer defended him. I was present at the trial and the only evidence against him, was the fact that he refused to eat the poisoned meat. All the eloquence of his young attorney could not save him. He was found guilty and sentenced to be hung. I visited him in prison, and heard him many times, assert his innocence. He was allowed a Minister of the Gospel to visit him, to whom he asserted his innocence in English, so convincing, that on the scaffold he stated his firm belief that he was innocent. I saw him hung and the last words he uttered, I shall never forget— "I die an innocent man," said he, in a solemn and convincing tone that seemed to carry conviction through the spectators, of his innocence, but nothing could save him. Many years passed, and this scene was burnt in the thoughts of those who witnessed it, but I could never forget it— We all remember the pirates who were hung in this city years ago. One of them was Gibbs, who confessed that he was a mate of that schooner, put to a severe trial, and was hanged on the arrival of the vessel at Charleston. This is no fiction, but a melancholy fact—and witnessed by the writer; and is one of the many instances of *Ignis maris*—the result of circumstantial evidence.—[Boston Whig.]

THE STARS AND THE EARTH.

Light waves 213,000 miles in a second. There is no one to see the moon till a second, and a quarter after she is actually above the horizon, nor to see her for eight nor Jupiter for fifty-two minutes, nor Uranus for two hours. The light of the nearest fixed star is three years in coming to us. Light of a star of the seventh magnitude travels 150 years before it reaches our eyes. The very ray the reader will behold to night quitted the star about the time that Charles the Second hid himself in the oak. The ray of a star of the fourth magnitude must have started for this island by sea, to be visible to us now. The conclusion, when applied to each of the former positions, gives the following results:—We do not see the moon as it now is, but as it was one and a quarter before; i.e. the moon may already have been dispersed into atoms for more than a second, and we shall see its entire and perfect. We do not see the sun as it now is, but as it was a second and a quarter before. Jupiter, as it was fifty-two minutes before; Uranus as it was more than two hours before; the star in Centaur as it was three years ago; Vega, as it was nine and a quarter years; and a star of the twelfth magnitude as it was four thousand years ago.—The Stars and the Earth; or, Trajectories on Time, Space, and Eternity.)

A WORD TO BOYS

The learned Bacon says: "Boys, did you ever think of this great world, with all its wealth and woe; with all its mines and mountains, oceans, seas and rivers; with all its shipping, its steamboats, railroads and magazines of goods, with all its millions of darkly groping men, and that all the science and progress of ages, will soon be given over to the hands of the Boys of the present age? boys like you assembled in school rooms, or playing without them on both sides of the Atlantic? Believe it, and look abroad upon your possession. The Kings, Presidents, Governors, Statesmen, Philosophers, Ministers, Teachers, Men of the future, are all Boys, whose feet are yours, cannot reach the floor, when seated on the benches upon which they are learning to master the monosyllables of their respective languages."

The Trappists.—Mr. Migg, at a late meeting of the New York Farmer's Club, read a report from a late number of the Paris *Times* relative to the Trappists at Staoueli, showing most excellent farm management. Founded with 2000 acres of cultivated land in 1815, on an amount of but little more than 30,000 francs a year, the Trappists have obtained an income which may now be estimated at 25,000 francs per year; and yet they have a large grange for travellers, and receive ten visitors a day. All the colonies without employment, the convalescents from the hospitals and the indigent are sent to and there work, sowing and reaping, no one has ever been refused. The Trappists have increased the value of their estates to the value of 100,000 francs. They sell a surplus of cattle, which are much sought after, and Staoueli meat is everywhere considered the best. They have planted 3,000 mulberry trees, 1,000 fruit trees, and, as an experiment, three acres of vines. They have cultivated and sown 700 acres, of which 400 are cleared and laid down for pasture, 117 for wheat, 27 planted for coppice wood; finally, 300 cleared and remaining fallow. They rear 1007 swine, of which 50 are African or European swine, hogs, and cows, 699 cats, ewes, and lambs, 2 hares, 76 pigs, and 151 foxes. They have 1,100 individuals, of whom 60 belong to the religious order, 30 workmen, and 10 visitors. They have erected a square building as a monastery, a large and handsome chapel, a farm, mills, various work-hops for smiths, wheelwrights, carpenters, turners, a bake-house, and wash-house, being together a building of 146 feet in length, hucksheds, and a large inn on the roadside for travellers. The value of these buildings exceeds 500,000 francs.

VITAL STATISTICS.—A statistical report, published by order of the State of Massachusetts gives the following facts in relation to the duration of life in the several trades and professions:—The average age of the clergymen was 64.07 years; of the gentlemen without professions 65.20; Merchants 55.67; blacksmiths 51.09; carpenters 48.91; coopers 51.21; harness makers 38; mill-wrights 49.50; printers 40.25; printers 32.50; sail-makers 42.33; shoe-makers 42; tailors 51.40; tanners 37; laborers 49; fishermen, 45.14; seamen 48.76; female domestics 30.60; dress-makers 29.87; ladies 70; milliners 41; seamstresses 38.83; and tailoresses 38.71 years. In this abstract no person under 20 years of age is included, as it is supposed that occupations have no particular influence before that time.

Scientific.

A NOVEL AND USEFUL DISCOVERY IN IRON.—Mr. Stephenson, after a variety of experiments, has discovered that the cold blast is much superior to the hot blast iron. In the construction of the level bridge at Newcastle-on-Tyne, which connects the York and Newcastle with the Berwick railway, he ascertained that the superiority of the one over the other was in proportion of 9 to 7. He also ascertained that pig-iron 3, is better than pig-iron 1, notwithstanding the latter carrying more money in the market.—[English paper.]

A MOST COMFORTABLE INVENTION—AN ELEGANT SHOE.

A friend has called our attention to an invention which appears likely to become universally adopted, as it certainly deserves to be. The name which the deserving inventors, Messrs. DuPont and Hyatt, of this city, have given to it is the "Congress shoe." It is made to fit the foot and ankle with elegant precision, close as a stocking, and yet when drawn on the foot there is no lacing or buttoning, the usual annoyance being dispensed with by the substitution of gores of gum elastic shirred goods attached to the uppers at both sides, and so elastic as to admit the foot without the least trouble, affording a perfect fit, and acting at the same time as an elastic brace to the arch joint, greatly facilitating the migratory powers of the wearer. In addition to its great comfort and convenience it is elegant in appearance, and does not cost more than the ordinary heel shoes and boots. At the South where high boots are both unnecessary and uncomfortable, the Congress shoe will have great favour and we predict for it, at no distant day, universal adoption.—[Farmer and Mechanic.]

IMPROVEMENT IN LEATHER.

The durability which tanning gives to leather, without destroying its elasticity, is an illustration of the adaption of one substance to enhance the value of another. The immense consumption of leather, and the great difficulty in augmenting its supply, render its improvement in quality of an of very importance. Various efforts have been made to lessen the time, labor, and expense of tanning leather. They have been successful in a degree; but I am not aware that any very decided improvements have been made by giving to the leather any greater durability. A gentleman, of German birth, who has had much experience as a practical tanner, has been for three or four years past experimenting on leather. He extracts the tanning with greater facility, and in greater quantity, by the aid of a moderate portion of alkali. The liquid, immediately afterwards, undergoes a fermentation when it becomes ready for the immersion of the hides. The time required for the tanning of hides is thirty days; but by the aid of Lander's air pump, the time is reduced to three, four, or five days. Some have spent much money in attempting to vacuum the air after the hides have been immersed in the liquid. In this way but very little effect is produced. If, however, the air is first exhausted, and the tanning liquid then let in upon the hides, it will readily enter the pores of the leather from which the air has been extracted. Mr. G., the inventor of this process, considers that tanning, in the ordinary method, crystallizes in the pores, and thus lessens the elasticity of the leather, and cuts the fibre under the hammer of the shoemaker, and under the pressure of the wearer. Fermentation destroys the tendency to crystallize, and gives a much increased ability for the leather. Mr. G. estimates the leather made by this process to be 20 to 50 per cent superior to any other.

SUBMARINE EXPLOSION IN THE THAMES.

The Harbor-master, Capt. Fishes, has within the last few days, completed the removal of three sunken wrecks, which have for some considerable time greatly impeded the navigation of the river in the Lower Hope. Their removal was effected by submarine explosions, of various charges, averaging from 50 to 500 pounds, fired by means of galvanic battery. An immense shoal of fish was passing the spot, and nearly the whole of them were blown out of the water to the extent of 80 feet, the circumstances being followed by the raising of a huge column of water to about as great an altitude, which emitted a large portion of the destroyed wreck as if from the force of a volcano. The river from London-bridge to the Nore is now perfectly free from obstruction.—The dangerous shoal of hard shingle off Jamestown-reach, which stopped the navigation of vessels of a large draught; at low water, has recently been entirely removed by the same means. The depth of water has been increased from 4 to 17 feet at low water.—[London Globe.]

MINUTE AQUATIC WONDERS.

From some water containing aquatic plants, collected from a pond on Clapham Commons, I select a small twig, to which are attached a few delicate flakes, apparently of slime and jelly.—Some minute fibres standing erect here and there on the twig are also daily visible to the naked eye. This twig, with a drop or two of water, we will put between two thin plates of glass, and place under the field of view of a microscope, having lenses that magnify the image of an object two hundred times in linear dimensions. Upon looking through the instrument we find the fluid swarming with animals of various shapes and magnitudes. Some are darting through the water with great rapidity, while others are pursuing and devouring creatures more infinitesimal than themselves. Many are attached to the twig by long delicate threads, (the *Vorticella*.) Several have their bodies enclosed in a transparent tube, from one end of which the animal partly protrudes and then recedes (the *Floccularia*.) Whole numbers are covered with an elegant scale or case (the *Brachionus*.) The minutest kinds (the *Monads*.) many of which are so small that millions might be contained in a single drop of water, appear like mere animated globules, free and single, and of various colors, sporting about in every direction. Numerous species resemble pearls or opaline cups or vases, fringed around the margin with delicate fibres that are in constant oscillation (the *Vorticella*.) Some of these are attached by slender tendrils; others are mounted by a slender stem, to one common trunk, appearing like a bunch of hare-bells (the *Chesnut*); others are of a globular form, and grouped together in a definite pattern on a tabular or spherical membrane case for a certain period of their existence, and ultimately become detached and locomotive, (the *Comma* and *Volvox*), while many are permanently clustered together, and die if separated from the parent mass. No organs of progressive motion similar to those of beasts, birds, or fishes, are observable in these beings, yet they traverse the water with rapidity, without the aid of fins or limbs; and, though many species are destitute of eyes, yet all possess an accurate perception of the presence of other bodies, and pursue and capture their prey with unerring purpose.

For the Ladies.

FALSE ONE! I MEET THEE!

False one! I meet thee, but not as of yore.— As I once used to greet thee, I greet thee no more. Thy dark eye is beaming, thy red lip is proud; Of what art thou dreaming? The gaze of the crowd!
False one! I hear thee, thy hand on the lute! And of all those who hear thee, no one but is mute! Oh! well may they listen, and dwell on thy song; And every eye glisten, amid the proud throng.
False one, they know not how perfjured thou art; Thy well, for I show not the pang in my heart. They see thou art smiling, nor guess they thus thine wile.
When thou art beginning, how false is that smile!
False one! I meet thee, the proud by thy side;
False one! I greet thee in silence and pride! Our heart dream is over; our lips may not meet; Farewell to thee, false one! I go to forget!

ARAB WOMEN.

The fair sex is not altogether fair here, at least in my opinion. No one can deny that the Arab women have graceful figures and regular features, but they want those essential requisites of beauty—a soul and individual expression. They are all exactly alike, and their faces express but two passions—love and hate. All milder shades of feeling are wanted. How, indeed, would it be possible for them to acquire intellectual or bodily cultivation, when the greater part of their time is spent seated cross-legged grinding corn in a hand mill, or asleep? The married women are seldom seen out of their houses, and then only closely veiled. The young girls, on the contrary, are to be found every morning at sunrise outside the gate of the town, standing by the fountain, at which they assemble with stone jars on their shoulders, to fetch water for the day's consumption. This truly eastern scene calls to mind Rebecca at the well, drawing water for her father's flocks. If a stranger asks a daughter of the town to give him a draught of water (*alma*), the maiden reaches him a jar with a kindly nod; but, when he has sipped his thirst she pours away the remainder and draws fresh water, for the lips of the maiden have polluted it. The Arab women wear a white woollen garment confined under the breast by a girdle, and a white cloth twisted round the head. Their ornaments consists in rings in their ears and on their ankles, which are invariably naked. One cannot deny the efficiency of this graceful manner of calling attention to the beauty of their feet, which are truly exquisite.

These rings, among women of the lower class, are silver; among those of the higher class (and here, as in every other country, there are distinctions of class) they are of gold. A few days ago, my friend Ben Jusuf invited me to go with him to his house. I, of course, seized with joy this opportunity of seeing him in his domestic circle. He knocked at the door, which is invariably kept shut by day and by night in all Arab houses; a woman shortly appeared, and inquired who was there. At Ben Jusuf's answer the door was opened; but, when the woman saw me with her husband, she instantly concealed her face and I was about to run away. My friend, however, commanded her to remain. She was his wife, and besides her, he had two others, who were seated cross-legged in the court, one of them grinding corn in a hand-mill, the other counting the hair of a boy about five or six years old. I should have guessed them all three to be at least forty, but Ben Jusuf assured me that they were all under five-and-twenty. Their faces and figures were withered, and the bloom of youth quite gone, their eyes alone still retained fire.

At twenty the Arab women begin to fade, and at thirty they are old matrons. They all seemed to live in perfect harmony, and the manner of the women towards their lord and master was obliging even to servility. To judge by appearance, it must be easier to keep house with three wives than with one. Perhaps the rule, "*diem et impera*," holds good in love as well as in politics. I must, however, confess that I do not envy the Mahomedan gentlemen their frigid joys, nor do they seem to find much satisfaction in them themselves.—*The French in Algiers.*

Scraps.

A CONTROVERSY.

One of the most important and best conducted controversies of the day, is one which not long since occurred between the London *Post* and the *Morning Post*. It was a great deal better than the sharp-shooting between two theologians. The *Post* said something which Punch did not like, and the next week Punch came out with a series of articles like the following:

"Military Regulation.—We understand that an order has been issued at the Horse Guards, positively prohibiting a certain morning paper in the barracks, for when the Journal alluded to has been admitted, it has been found quite impossible to prevent the soldiers from sleeping their *Posts*." Again:

"Improvement in Railway.—Since the issuing of the order from the horse-guards, all the back numbers of the *Morning Post* have been purchased by a wealthy Railway Company, on the ground that the *Posts* make the *soundest sleepers*."

"Rare Curiosity.—The only old gentleman, lately discovered reading the whole of one of the *Post's* leaders, has been procured at a high price for the Royal Museum."

A fire of small grape-shot of this sort soon silenced the heavy antagonist.

The same witty authority, in announcing the opening of parliament, illustrated the Queen's speech—the part relating to "friendly assurances from foreign powers" (Prince Albert) being represented by a cart load of chubby faced babies, drawn in a splendid air by a mob of meagre-looking Johnny Bulls.—[*Charleston Mercury.*]

A YANKEE'S ESTIMATE OF MARRIAGE.—They said marrying was fun—pretty fun, to be sure. When I was a jingle man, the world wagged along well enough. It was just like an omnibus. I was a passenger, paid my fare and hadn't nothing more to do with it than to sit down, and not care a button for anything. Sitting the omnibus got upset—well, I walks off, and leaves the man to pick up the pieces. But then I takes a wife, and bang! to me. Its all very well for a while; but afterwards its plaguy like owning an upset omnibus. What did I get by it? How much fun? Why, a living old woman, and then squallers. Mighty different from courting. Instead of 'Yes, my duck!' No, my dear.' 'Is you please honey.' and 'When you like, lovey' like what it was in courting times, its rig ferrow—sour looks and cold potatoes, children and table-cloths badly off for soap, always darning and mending and nothing over darned or mended. If it wasnt that I am particularly sober, I'd be inclined to drink. My *missus* ain't my own—my money ain't my own—I belong to four people besides myself, the old woman and three children—I'm a partnership concern, and so many has got their finger in the till that I must bust up—I'll break, and sign over the stock in trade to you.

A RAZZOON.—A young lady, having asked a surgeon why woman was made from the rib of a man, in preference to any other bone,—he gave the following excellent answer:—"She was not taken from his head lest she should rule over him; nor from his feet, lest he should trample upon her; but she was taken from his side, that she might be his equal, from under his arm, that he might protect her; and from near his heart, that he might cherish and love her."
On the occasion of the 30th depot firing a few *de jure* in commemoration of our arms in China, a gentleman asked another in the street to inquire the object of the firing; "Don't you know," he replied, "that our old friend, Sir Hugh Gough, has compelled the Chinese to give us their Congou and Bohea teas, in exchange for our gunpowder? and the 30th depot are just discharging their samples."

Typographical Errors.—These little difficulties, so offensive to some readers, and much more to the writer, cannot be entirely avoided in a newspaper. Read as carefully as you will, among the innumerable blunders that some printers make, a few will escape your eye; and often in correcting the errors you have marked, greater errors will be committed. We have marked some the third time, and after going away, saying to ourselves, "well, you'll surely get it right this time," have returned to find, that "seven drabs" had been at it "worse than the first." Some of these blunders are laughable as well as vexatious. For instance, in our last number, in the article on "Dribbling, speaking of "after treatment," the author is made to say, that a "clever blubber will not lose more than 6 or 8 cents;" which should be, of course, "6 or 8 per cent." In the leading article on the 25th page, under the title "Orchards," we direct that the ingredients of a composition for covering the wounds caused by pruning, should consist of "one part resin, one part bees-wax, and two parts patch!" whether cloth patch, or turpentine patch, the reader is left to guess; meaning, however, "as this department is informed and believes" patch, to wit, the "resin of the pine extracted by fire and impregnated," otherwise thickened. Such an attempt to detract, or rather subtract from our Journal, by making us spell the noble adjective "British" instead of the full, bold, sturdy B—i—t—i—s—h, displays so diabolical a spirit, that our readers will at once see through the design, and place every thing of this kind to the account of the infernal map that haunts every printing office.

Tooth Ache.—Take a tea-spoonful of black pepper and mix it with the same quantity of salt, then place the same mixture upon a shovell, hold it over the fire until it smokes; then inhale some of the smoke through the nose, and the ache ceases instantly. The above receipt, will in all cases, give immediate relief.—[We find the above in an Exchange paper. It is easily tried, and we hope the victim of this distressing pain, may prove it to be a remedy.]

PROVINCIAL EXHIBITION

Of Stock, Farming Implements, Manufactures, Agricultural and Horticultural products, Fine Arts, &c. &c.

The second Exhibition of the Provincial Agricultural Association is to be held at Hamilton on the Sixth and Seventh days of October next. The list of prizes to be awarded on that occasion has been published in a monthly paper, two or three numbers of which have appeared in this city, called the "Provincial Advertiser." It fills five or six columns of about two hundred lines each, and its insertion, we are told, costs the Society 4d. per line! We shall insert it, and we presume any other paper having a country circulation would have done the same, for the benefit of our readers, just as we insert a column of news or any thing else. It is well that the public who contribute the funds of the Society should know how they are expended. We regard it not only as unnecessary, but, appropriated as it is, by an officer of the Society, a scandalous waste of money, never given or intended for such a purpose. We give below a list of all the prizes for Live Stock. In our next number we shall publish the remainder of the list, except those parts, (such as the fine arts,) in which our readers are not particularly interested:—

LIST OF PREMIUMS TO BE AWARDED.

Table with 2 columns: Description and Premiums. Includes sections for Class A—Horned Cattle—Durhams, Class B—Hervfords, Decons, and other improved Breeds, and Class C—Horses.

Table with 2 columns: Description and Premiums. Includes sections for Class C—Horses, Class D—Sheep—Lancaster, and Class E—Pigs.

News Department.

LATEST FROM THE SEAT OF WAR.

Late accounts from the seat of war state, that the town of Vera Cruz and the Castle surrendered to the American Army. It is further stated that the Mexican priests had come forward with \$20,000,000 to assist Santa Anna in carrying on the war.

BY TELEGRAPH.

Later from Europe.

The packet-ships, Northumberland and Columbia, arrived this morning, with Liverpool dates to March 6. Corn is rising in France and Belgium. The English markets were all firm at an advance of 2s. for wheat. In London, there was a great demand for exportation to France and the continent. Liverpool grain market to the 6th March closed firm. The relations between Turkey, Greece, and France threaten a speedy war. There had been dreadful food riots in France, Belgium, and Scotland. Supplies were pouring into Ireland, and the famine is greatly arrested. The French government had made a loan of 5,000,000 francs for the relief of the poor. Several of the leading European powers are on the point of war. LIVERPOOL MARKETS.—Some wheat was selling at 2s. per quarter, and flour 6d. per barrel higher than it was on the 4th instant. BUFFALO MARKETS.—Market to-day continues with the same firmness, up to the time of the receipt of the intelligence by the packets at New

York, with large orders from the East, many of which were limited below the views of holders. Sales of 1500 barrels Michigan flour were made in the morning at \$5.25c.—[Colonist.]

ANOTHER ARRIVAL!

Arrival of the Packet-ship Gladiator.

The Gladiator has arrived from London—10th March. Advices from the Liverpool grain market of March 9. Large arrivals of grain, &c., direct into the Irish ports have limited the orders from this market, but the rates from France and Belgium have improved, and given increased confidence to holders here; and with a fair amount of business on speculation, and for local consumption. The price of flour has advanced 1s. 6d. per barrel, and on wheat 2d. to 3d. per bushel. Western canal flour brought 43s. to 43s. 6d. per 196 lbs.

The Lear, from Newcastle on the Tyne, states the stoppage of the North of England Joint Stock Bank of that town, with its ten branches. The consequences are likely to be serious.

AUTHENTICATED NEWS FROM THE ARMY.—BATTLE OF BUENO VISTA—GEN. TAYLOR VICTORIOUS.—SIXTY-THREE AMERICAN OFFICERS KILLED AND WOUNDED.—LOSS OF McKEE, HARDIN AND HENRY CLAY, JR.—FURTHER ACCOUNTS OF THE BATTLE.

We have at last some reliable news from the Army. The Albany papers which arrived by Friday's afternoon mail contained the following particulars of the late conflict in Mexico between Gen Taylor and Santa Anna:—

From the N. O. Delta, March 23

On the 9th March, Doct. Turner, U. S. A., arrived in safety at Matamoras. Previous to his arrival the communication between Monterey and our lines had been closed for several days.

Dr. Turner communicated to one of our corps a printed account of the battle at Buenavista, between Santa Anna's forces, about 17,000 strong, and Gen. Taylor's little army, between 4000 and 5000 volunteers.

The battle began on the glorious birth-day anniversary of the birth of Washington.

The scene of this bloody fight was Buenavista, the point upon which General Taylor had fallen back from Agua Nueva, about 7 miles from Saltillo.

The Mexicans advanced upon our line with great boldness, bravely led by their best officers, but were met by our volunteers with the firmness of veterans.

A fierce battle ensued, the Mexicans charging with their bayonets to the very muzzles of our artillery, and receiving a destructive fire from our guns, with unflinching courage.

Our men gave not an inch, but maintained their position on the bloody field the whole day of the 22d, and on the next day until evening, when the Mexicans retreated to Agua Nueva, leaving their killed unburied, and the wounded where they fell.

The killed and wounded Mexicans are estimated at 4000. Mexican officers admit their loss to be 2,000. American loss about 700, killed and wounded.

This victory is at great sacrifice on our part.

The ardor of the volunteers officers led them into the hottest part of the fight, and the number of field officers killed is lamentably great.

Gen. Taylor's official despatches are cut off.

Col. Morgan's Ohio Volunteers have been reinforced by a command from Monterey had reached that place in safety.

Col Curtis, of Ohio, with one company, Capt. Hunter, of U. S. Dragoons, his own Regiment, and one Indiana Volunteers, the Virginia Regiment and some Texan Rangers, in all about 2000 men, was about to leave Carmargo and attack Gen. Urrea, who is said to be about 30 miles south of that place with 4 or 5000 men.

He is believed to have with him only 1,500 regular troops.

We learn from a passenger who arrived last evening, that it was supposed by many in Tampico, that if the bombardment should take place, the citizens of Vera Cruz will leave the city.

There was little doubt that there would be severe fighting at San Juan de Ulloa.

We have a report from the best information, that the attack was to have been made on Vera Cruz on or about the 23rd of the present month, (March.)

Santa Anna's Account.

We annex Santa Anna's own account of the actions of Buena Vista, as translated from the Tampico Sentinel. We have the original Spanish account in our possession:—

Camp, near Buena Vista, Feb. 23.

Excellent Sir,—After two days battle, in which the enemy, with a force of eight thousand to nine thousand men, and twenty-five pieces of artillery, lost five of his positions, three pieces of artillery, and two flags: I have determined to get back to Agua Nueva to provide myself with provisions, not having a single biscuit or a grain of rice left. Thanks to the position occupied by the enemy; he left on the field about 2000 dead. Both armies have been cut to pieces; but the trophies of war will give you an idea on which side has been the advantage.

We have struggled with hunger and thirst during forty hours, and if we can provide ourselves with provisions, we will go again and charge the enemy. The soldiers under my command have

done their duty, and covered the arms of the Mexican nation with glory. The enemy has seen that neither the advantage of his position, nor the broken nature of the ground, nor the rigour of the season, (for it has been raining during the action,) could prevent the terrible charge with the bayonet, which left him terrified.

SANTA ANNA.

EMIGRATION.—It appears by "papers relative to emigration to the British Provinces in North America," published by order of the House of Commons, that a despatch from Earl Grey to Lord Ligon, dated 31st December, 1846, offering to make payments out of British funds in aid of parties erecting villages for Emigrants, has been withdrawn, and that by a subsequent despatch, dated 29th January, the assistance to emigrants will be confined to forwarding them to places where they are likely to get work. Lord Grey expresses his "entire approbation" of the manner in which Mr. Buchanan and Mr. Hawke have carried on this service in past years. In a despatch to Sir W. M. G. Colebrooke, of the 20th of January, Earl Grey approves of a suggestion to allow land to be sold to emigrants on credit, "to be repaid in work on roads."—[Quebec Gazette.]

RAILWAY SURVEY.—Capt. Robinson, R.E., who was employed on the late Boundary Survey, has been appointed to conduct the Railway through the Province, in place of the late Capt. Pipon. It is stated that Capt. Robinson would leave England in the steamer of the 4th of March, and that the Survey will proceed as early as possible in the coming spring.—[New Brunswickier.]

THREE LIVES LOST.—A sad accident occurred on Tuesday last, by which three individuals lost their lives, and two or three were most seriously injured. Between one and two o'clock on Thursday morning, as one of the stages from Boston to Montreal was passing through Charon, near Royalstown, about sixty miles on the other side Burlington, it was upset and thrown off the road, down an embankment about thirty feet. Two of the passengers, a Captain Leary, who was on his way to Quebec, to take charge of the John Munn steamer, a Miss Hunter, of Middlebury, and the driver, were killed on the spot. Two gentlemen of this city, Mr. A. McFarlane, and Mr. F. H. Howard, were severely injured: the former, we understand, has sustained a fracture of the thigh. A lady from Quebec, a Mrs. Henderson, and an American gentleman, were also injured. A second stage was close at hand, by the passengers of which assistance was given to the sufferers.—[Montreal Courier.]

Major-General the Hon. Charles Gore's numerous friends in Canada will be much gratified to learn, that his name appeared in General Orders, of yesterday's date, as appointed to succeed Major-General Sir James Hope, in the command of her Majesty's Forces in Canada East, from the 1st proximo. The gallant General's eldest son, Lieut. James Gore, 71st Highlanders, has been appointed Aid-de-Camp to his father—he is at present on leave of absence, and, until his return, we understand that Lieut. Rich, 71st Highlanders, will act for him.—[Montreal Herald.]

VIOLENT STORM IN LOWER CANADA.—We learn from the Quebec Canadian, that the storm of Friday and Saturday night was very violent in the neighbourhood of Quebec. Several buildings were blown down at Ste. Anne de Beaupre, at Charlebourg, and other parishes on the North bank of the river. The ice bridge at Isle d'Orleans has been carried down to the Sault de Montmorency, and the ice thrown up in large masses on the quays of the city.—[Montreal Courier.]

It is with unfigined sorrow that we announce the decease of Colonel Sir Charles Chichester, commanding the 81st Regiment in Garrison here—which melancholy event took place yesterday (Sunday) afternoon, after an illness of only four days.—[Toronto Herald.]

NEWFOUNDLAND.—The mail brig Sandwich arrived at Halifax on Friday last, bringing St. John's papers to the 2d inst. In many parts of the Colony the people are stated to be suffering dreadfully from the want of food, and would starve were it not for the relief administered by the public authorities.

PETERBORO' AND PORT HOPE RAILROAD.—Vigorous exertions are being made, which it is believed, will insure the success of this undertaking.

The immigration of pigeons continues, but they fly so high in this vicinity that pigeon pie is still a rarity.—[Niagara paper.]

PRODUCE TRADE OF DUNDAS.—There are now in the store-houses, adjacent to the Desjardins Canal Basin, about 40,000 barrels of produce! These have been forwarded here for shipment since the close of the Navigation.—Dundas War-der.

ST. MARY'S CANAL.—A bill incorporating a company to construct a canal for opening the communication between Lakes Superior and Huron, has passed the Legislative of Michigan.

Toronto Market Prices.

Table with 4 columns: Item, Price, and other details. Includes items like Flour, Oatmeal, Wheat, Rye, Barley, Oats, Peas, Potatoes, Onions, Beef, Pork, Hay, Straw, Timothy, Matton, Veal, and Tub Butter.

AGENTS FOR "THE CANADA FARMER."

The following persons have consented to act as Agents for the *Canada Farmer*. We allow to local Agents 20 per cent. for their trouble, which we hope will remunerate them, and induce them to make an effort to extend our circulation.

W. H. Smith, } *Travelling Agents.*
Dr. Smith, }
James Wetherald, }

Local Agents.

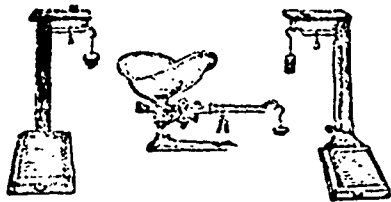
- Windsor—Mr. James A. H. Gerrie, Bookseller.
- Oshawa—Mr. Gavin Burns, Postmaster.
- Bowmanville—Mr. James McFeters, Merchant.
- Newcastle—Mr. Myron Moses, Innkeeper.
- Port Hope—Mr. Alexander Fisher, Merchant.
- Bloomfield—Dr. J. W. Howe.
- Peterboro—Mr. Robert Nichols, Merchant.
- Cobourg—Mr. John Field, Merchant.
- Grafton—Mr. John Taylor, Postmaster.
- Colborne—Mr. Albert Youngton, Postmaster.
- Brighton—Mr. J. Lockwood, Postmaster.
- River Trent—Mr. Alexander Cumming.
- Bellefleur—Mr. A. Menzies, Postmaster.
- Shannonville, Victoria District—Mr. Hiram Holden, Postmaster.
- Napanee, Midland District—Mr. E. A. Dunham, Merchant.
- Kingston—Messrs. Oliphant & Watt, Merchants.
- Cananogue—J. Lewis MacDonald, Esq.
- Rockville—Mr. Henry Jones, Postmaster.
- Berwickville—Mr. E. H. Whitmarsh, Postmaster.
- Kempville—Mr. Wm. H. Boutwell, Postmaster.
- Smith's Falls—Mr. Robinson Harper, Merchant.
- Perth—Mr. James Allan, Postmaster.
- Batavia—Captain Baker, Postmaster.
- Markham—Mr. David Reesor.
- Vaughan—Mr. Thomas Noble, Merchant.
- York—Mr. Daniel McMullen, Farmer.
- Reach—Mr. A. Hurd, Postmaster.
- Chunguacungy—Mr. P. Howland, Postmaster.
- Bronte—Mr. B. Hagan, Jr.
- Guelph—John Smith, Esq.
- Palermo—H. M. Switzer.
- Thorold, and parts adjacent—J. J. Ball, Farmer.

Advertising Department.

Wanted to Purchase

A GOOD HORSE, about 14 or 15 hands high, and not more than six years old. He must be gentle to drive, as well as good under the saddle, and a first rate traveller. A Mare would answer, but a horse will be preferred. Colour not much of an object, though black would be most liked. A good price will be given for one that suits, and cash. Any person having such an animal to sell, will hear of a purchaser by addressing (post-paid) "Editors Canada Farmer, Toronto," Toronto, 22nd March, 1847.

Fairbank's



Platform and Counter Scales.

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

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

Scales for weighing Wheat, both portable and to be set in the floor, furnished with weights to weigh even bushels. For Sale by WORKMAN BROTHERS & Co. Toronto, 22nd March, 1847.

Workman Brothers & Co.,
No. 36, KING STREET,

- OFFER FOR SALE:—**
- 60 tons English Iron,
 - 20 tons Best Iron,
 - 20 tons Swedes Iron,
 - 15 tons Hoop and Band Iron,
 - 10 tons Sheet Iron,
 - 3 tons Plough Shares,
 - 2 tons Wagon Boxes,
 - 2 tons Cast Steel,
 - 3 tons Blister Steel,
 - 1 ton Spring Steel,
 - 1 ton Eagle Steel,
 - 2 tons Camp Ovens,
 - 2 tons Bellied Pots,
 - 5 Blacksmith's Bellows,
 - 60 Blacksmith's Vices,
 - 15 "Hills" warranted Anvils,
 - 120 Sugar Kettles,
 - 40 Potash Cookers,
 - 10 boxes "Pontoon" Plates,
 - 25 Box Stoves, 21 to 36 inches,
 - 45) casks Cut Nails,

- 50 casks Wrought Nail,
- 20 casks Patent Pressed Nails,
- 35 casks Horse Nails,
- 40 casks Wrought Spikes,
- 40 casks Coil Chain,
- 200 boxes Windows Glass,
- 2 tons Patty,
- 20 dozen Common English Spades,
- 10 dozen Common English Shovels,
- 5 dozen Irish Spades,
- 2 dozen Scotch Spades,
- 60 dozen Steel Shovels,
- 8 dozen Steel Shovels,
- 10 dozen Grain Scoops,
- 40 Philadelphia Mill Saws,
- 40 "Fairbanks" Platina & Counter Scales.

—ALSO—

JUST RECEIVED, ex ships *Capricorn, Baron of Bramor and Rockshire*, in addition to their present Stock of **HARDWARE,**

18 PACKAGES OF SHEFFIELD & BIRMINGHAM **Shelf Goods,**

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



Home District Mutual Fire Company.

Office—Nelson Street, opposite Adelaide Street, Toronto.

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

DIRECTORS:

- W. A. Baldwin,
- Dr. Workman,
- John McMorris,
- James Leslie,
- J. B. Warren,
- William Mathers,
- John Duell,
- John Eastwood,
- B. W. Smith,
- A. McMaster,

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

All Losses promptly adjusted.

Letters by Mail must be post-paid.
December 25, 1846. 444-

Notice.

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

Brewer, McPhail, & Co.,

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

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

Drug & Medicine Business,

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

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

Toronto, 9th March, 1847.

R. H. Brett,

161 KING STREET, TORONTO.

GENERAL MERCHANT—WHOLESALE

IMPORTER OF HEAVY HARDWARE, Birmingham, Sheffield and Wolverhampton SHELF GOODS, EARTHENWARE, and GLASSWARE, in Crates and Hhds.

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

Together with a select Stock of STATIONERY, English, French & German Fancy Goods, Combs, Beads, &c. &c. &c.
Toronto, Nov., 1846. 1-6m.

FOR Cheap Birmingham and Sheffield Goods, try the **NEW HARDWARE STORE,** No. 77 Yonge Street, a few doors North of King-st.

J. Shepard Ryan,

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

CASH PURCHASERS will find it to their advantage to give us a call, as we calculate on clearing off our Old Stock every winter.
Toronto, 1st January, 1847. 1-12m.

Improved Durham Bulls FOR SALE.

ONE, two years and four months old; colour dark red and white, but mainly red.

One, one year old; colour nearly the same as above, and promises to make a splendid animal.

For pedigrees and further particulars apply to H. Parsons, Lancaster, C. W.

Mr. C. Kahn,

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

Boot and Shoe Store,

4, CITY BUILDINGS, TORONTO.

SIGN OF THE GOLDEN BOOT.

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

JAMES FOSTER.

January 18, 1847. 1-

J. Ellis, Civil Engineer.

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

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

Peter-street, Toronto, }
January, 1847. }

Notice.

NOTICE is hereby given, that an Application will be made to the Legislature, at their next Sitting, for an Act to Incorporate a Company to construct a Plank Road from the Kingston Road, South of Gate's Tavern, through Scarborough, to Markham Village, and thence to Scouville.

15th November, 1846. 2

CROWN LAND DEPARTMENT,

Montreal, 10th March, 1846.

NOTICE is hereby given, by Order of His Excellency the Administrator of the Government in Council, to all persons who have received Locations of Land in Western Canada, since the 1st January, 1832, and also to parties located previous to that date, whose locations were not included in the list of unpatented lands, liable to forfeiture, published 4th of April, 1833, that unless the claimants, or their legal representatives, establish their claims, and take out their Patents within *two years* from this date, the land will be resumed by the Government, to be disposed of by Sale.

Swain & Co's Hygeian Medicine,
OR, WORSDELL'S

Vegetable Restorative PILLS,

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

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

Authorised Travelling Agents.

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

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

STRIKING CURES.

WHO WISHES TO THROW AWAY HIS CRUTCHES!

Read the following Extract of a Letter received from our Agent at Richmond, Dalhousie Dist:—

Richmond, 5th August, 1846.

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

I remain, Gentlemen,
Yours with respect,
P. McELROY.

To J. Swain & Co.,

Edwardsburgh, January, 1847.

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

ABRAHAM WILSON.

CURE OF OLD-STANDING STOMACH COMPLAINT.

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

To J. Swain & Co.

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

I remain, Gentlemen, yours respectfully,

MARGARET WILSON.

REMARKABLE TESTIMONY.

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

To J. Swain & Co.

Wellington Square, January, 1847.

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

I am yours very respectfully,

C. J. FORSYTH.

MARK THIS.

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

J. WETHERALD.

CURE OF INFLUENZA.

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

THE

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