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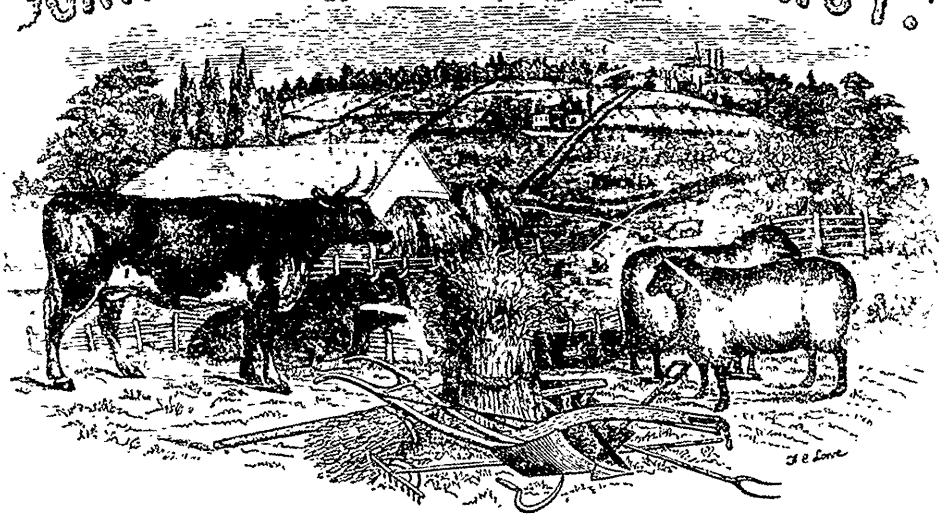
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# CANADIAN AGRICULTURIST.



“The profit of the earth is for all; the King himself is served by the field.”—ECCLES. v. 9.

GEORGE BUCKLAND,  
WILLIAM McDougall,

{ EDITOR,  
{ ASSISTANT EDITOR.

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### TERMS:

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### THE WINTER MANAGEMENT OF LIVE-STOCK.

Every farmer is but too well acquainted with the difficulties of sustaining, in a thriving condition, any large number of the domesticated animals, during our long and usually severe winters.—How frequently is it asserted that the value of the animals when brought to market, in spring and

summer, is not equal to the cost and trouble of maintaining them. Besides the actual loss from disease and death, mainly induced by exposure and insufficient nourishment is in all seasons, more or less, of considerable amount. There is too, no small share of unpardonable inhumanity to be taken into the account, under a sense of which every rightly constituted mind must feel ill at ease: for “the merciful man is merciful to his beast.”

The following suggestions may be of use to several of our readers, in reference to this important department of rural economy.

1. It should be borne in mind that *atmospheric temperature* exerts an astonishing influence on the healthy condition of animals and the amount of food they require. With plants, which are also living, organised beings, this principle is well known to everybody; each zone of the same mean temperature having its own distinctive class of vegetation. It is true that the range of the same kinds of animals on the earth's surface, is

greater than those of plants; but it is easily proved, that such animals which the farmer raises for the market, may be placed in physical conditions, which require to be improved, or modified by art, in order to ensure him a profitable business.

2. It has been long known to those who have had experience in the rearing and fattening of animals, that by keeping them in a warm temperature during the winter months, a great saving is effected in the amount of food consumed, and their general health and improvement are thereby greatly promoted. Science has recently thrown a new and striking light, pregnant with benefit and instruction to the farmer, on the hitherto mysterious subjects of animal heat and nutrition. According to the theory of Liebig, which is now generally accepted, we believe, by the most eminent chemists and physiologists of the age, the food received into the stomach of the animal, is there subjected to a sort of combustion, by means of which animal heat is supported, and the vital action of the various organs of the body sustained. Upon this intelligible principle then it is evident, that if animals be exposed to the severe cold of a Canadian winter, however well they may be fed, by far the larger portion of the food will be absorbed in generating animal heat, and but comparatively little will remain for replacing the daily recurring waste of the system, or at most not enough to retain the animal in a comfortable and thriving condition. Whereas, exposure to cold on a poor and insufficient food, is the sure precursor of starvation and death; as the opening of every Spring but too frequently witnesses.

3. The teachings, then, both of science and experience, impress upon the farmer's mind, *the necessity of providing for all domesticated animals, adequate shelter.* And in a country like this, where the range of the thermometer is so great, and the changes of temperature so frequent and sudden, we regard all attempts at improved or profitable rearing of live-stock as utterly hopeless; unless this common sense principle is practically observed.

We are fully aware of the great difficulties that lie in the way of erecting warm and commodious buildings during the settlement of a new country; notwithstanding, they are none the less essential to the successful and economical management of stock. But a great deal more might be done towards the attainment of this important object, than what we see accomplished, is certain. Even the first settler might manage to shelter the yoke of oxen, and cow or two that he possesses, by means of a temporary shanty of boughs and grass. But in old settled districts to see poorly fed cattle shivering beside the corners of a fence, when the thermometer is ranging between the freezing point and zero, or perhaps below; with nothing but some open leaky shed to go into during the night, and it may be even not that;—to see all this, and the accompanying other *et ceteras*, no one need feel surprised, that animals subjected to such treatment, should be poor, miserable, and stunted; that many of them will be so reduced, as to be unable to rise when they lie down; and that their owners should complain that cattle breeding is an *unprofitable* business.

We have referred, it is true, to extreme cases; and between them and the best arranged buildings and modes of management there are almost infinite gradations. What might be classed under the head *indifferent*, are extremely and most unnecessarily numerous. We have seen many instances of excellently arranged and comfortable farm buildings in Canada, the State of New York, and in Ohio, that reflect much credit on the taste and knowledge of their projectors and owners; a subject to which we may hereafter refer, in more detail.

4. The *preparation* of food for cattle is next in importance to warmth and shelter. A *mixture* of food has been determined by experience to be the most beneficial, and the straw-cutter and steaming furnace, have been found, in well conducted farmeries, exceedingly advantageous. The cutting of hay and straw, the boiling of flax-seed, and the steaming of roots, given either separately or in a state of mixture when

warm, has now been ascertained, from extensive practice, to be the most effectual and economical mode of preparing food. Animals thus treated and properly housed, will be less subject to disease; *will thrive and fatten on 25 per cent. less food*, than under the ordinary mode of management. We state this as the result of extended observation and personal experience in England; and what we have seen and learnt on this continent, only tends to confirm us in the belief of its general beneficial application. The reader must not infer that we advocate cooked food alone, for horses and cattle; but for the latter, especially, a large portion of the food, properly mixed and given warm, is highly economical and nutritious, both for increasing muscle and laying on fat, admits not of a single doubt. We saw the other day, at Mr. Spencer's foundry, in this city, a boiler fitted to a portable furnace, that seemed well adapted to the wants of farmers; and the price is moderate.

5. In the construction of buildings for the accommodation of animals, due regard must always be had to *ventilation*. This may appear to some as almost an unnecessary caution, since the prevailing defects that now abound, consist in numerous apertures frequently in the roof, as well as in the walls, through which snow and rain find an ingress, with chilling draughts of air. In the construction of stone or brick buildings, however, there is seldom sufficient attention paid to such an admission of pure air, and the escape of that which has been vitiated by breathing and exhalations, as effectually to secure the comfort and well-being of the animal. Close stables are particularly objectionable, and sheep when housed in winter, frequently suffer for want of room and fresh air.

In a word, the same great object must be kept in view with regard to domesticated animals, which our friend, Mr. Sheriff Rattan, is so laudably endeavoring to promote in reference to man and his abode. No animal that breathes, can exist in a state of health, *without a constant supply of pure air*. If a farmer adds to this, pure water; a warm shelter; nutritious food,

properly prepared and regularly given; with scrupulous attention to *cleanliness*; he will be amply rewarded by the health, comfort, and improvement of his stock; and what is also worth a great deal,—the approval of his moral and rational convictions. It may be said, that to do all we have recommended, is a difficult, and to many, an almost impracticable task. We answer, that in doing your utmost to reach the standard, you will be sure to find your reward;—and remember the old adage: that what is worth doing at all, should be worth doing well.

### AGRICULTURE AN ART.

We take the following article from that excellent paper, *The Rural New Yorker*, with the remarks thereon of the Editor. The writer evidently belongs to the more intelligent and thinking class of practical farmers. We agree with much that he says; but if more candour had been shown, in pointing out the true connection between so important an art as agriculture and the scientific principles upon which it is built, a healthier and juster impression would have been made on the mind of the reader. No man in his senses ever asserted, that farming could be learnt either in the laboratory or from books. But the knowledge of practice acquired from work and observation in the field, may, and has been materially improved, and rendered more intelligible and certain in its results, by the aid and light afforded it, by means of science. What is science, but *Truth?—the truth of nature*; and all successful art or practice, must be in accordance with it. If chemistry, for instance, has not as yet realised all the expectations which sanguine minds indulged in reference to agriculture; it has unquestionably been most beneficially suggestive; it has thrown light on many of the obscurest points of practice;—and it has furnished the practical farmer, with an intelligible theory of his art. All honor then to such men as Liebig, Johnston and others, who are devoting the highest attainments in science, to increasing the earth's fruitfulness;—

and rendering more rational and elevating, the primitive and healthful pursuits of the tillers of the soil.

Let every farmer who has a son to educate, believe and remember that science lays the foundation of everything valuable in agriculture.—*Exchange paper.*

Science, i. e. knowledge, is just as valuable to a farmer as to a lawyer, a clergyman, or a physician. Ignorant men practice law and physic, and preach—after a fashion. Sometimes they make money. The same thing may be said of ignorant agriculturists. Nevertheless it is quite true that knowledge—education—learning, if you please—contributes as much to the elevation, prosperity and happiness of him who directs the plough, as of any other man.—*Rochester American.*

That knowledge is necessary to him who would succeed in business of any kind, none can or will deny. That the same kind and amount of knowledge and mental discipline are requisite for success in the several callings enumerated above by the editor of the American, few, if any will claim.

It is a popular notion at the present day to urge that everybody must know something about every thing. If any one undertakes to follow out this notion, he will find in the end that he knows but little of any thing. It requires no little time and effort to know every thing about any thing, even the most limited subject.

What folly then to urge, as is not unfrequently done at the present day, that a farmer needs to master the sciences of Chemistry, Geology, Mineralogy, Botany, &c., &c., with vegetable and animal Physiology,—Latin and Greek and Mathematics, and other specific branches of science too numerous to name, in order that he may practice farming successfully.

That knowledge is a good thing and is desirable for all, who will question? That a knowledge of the science of Chemistry is absolutely necessary to the successful practice of the Art of Agriculture, we deny.—To acquire a knowledge of agricultural chemistry and vegetable and animal anatomy and physiology, in a sufficient degree to enable a farmer to conduct his labor in strict harmony with the laws of Nature, as developed and demonstrated by these sciences, would require close study and experimenting for many years—more than are ordinarily allotted to man in these latter ages of the world, and stronger mental powers than the majority of mankind possess. Dr. Liebig, with the unusual natural capacity which he possesses for, and his undying enthusiasm in the study of the science of chemistry, has not yet, according to his own views, mastered the elements of this branch of science to which he has thus far devoted his life. And with all his theoretical and scientific knowledge of agriculture, we doubt very much whether Dr. Liebig would succeed in practical farming, as well as some of our Monroe county farmers, who never looked into a chemistry and perhaps have pledged themselves never to do such a bookish act. Here, then, we have two men, each successful in his vocation, eminently so.—The one is devoting

his life to the science of agriculture, and the other to the art.

The knowledge of science is one thing—one kind of knowledge—the knowledge of art is another and a different sort of knowledge.

Art is the application of knowledge to effect a desired purpose. Music, for example, is both a science and an art. And there are multitudes of excellent singers who are as ignorant of the science of music as many of our best farmers are of the science of chemistry. And, on the other hand, there are those who are deeply read and skilled in the science of music, to whom, should they attempt to sing, Dodd's epigram would apply with great force :

"Swans sing before they die: 'twere no bad thing,  
Should certain persons die before they sing."

The art of farming, and consequently the success, depend more on personal observation and experience than on books; not that we discard books—no, by no means—neither would we substitute them for observation and experience.

Your success as a farmer depends vastly more upon the knowledge of the art of agriculture, than of the science—the one is within the reach of all—the other can be enjoyed only by your Liebig's, your Norton's and your Emmons's. These doctors are ever willing to instruct you in the manipulations of yours, the noblest of arts.

In what we have written here we are not to be understood as opposing the most thorough liberal course of agricultural education;—but as opposing the notion that no man can succeed as a farmer without being an agricultural chemist. There is but one Liebig among the Germans—but one Boussingault in France—but one Johnston in England, and but one—in America. Every farmer should, and may, without the knowledge of these distinguished swans, derive aid in the practise of his useful art, from their excellent writings.—Let all do so—and no one would rejoice more than we, to see every farmer a good practical chemist—but as this is entirely impracticable, we have sought in what we have written, to demonstrate that a man may be a good, thorough, and successful farmer, without being a learned chemist.

W.

REMARKS.—Without fully endorsing the above article, we must admit that it contains much truth. There is no doubt that some writers on chemistry claim too much for their favorite topic—thus taking the opposite extreme of those who reject all science in farming. They depend too much upon science alone—which our correspondent, who properly represents a numerous class of strong-minded farmers, is as far wrong in depending exclusively upon the results of observation and experience. We hold that science and art should be combined—that farmers should not only observe and experiment, but avail themselves of the knowledge to be obtained from the investigations of others. The subject is a suggestive one, and we may hereafter take occasion to discuss it more fully.—*Ed.*

## DRAIN FOR ROADS.

(For the Canadian Agriculturist.)

Stamford, C. W., 4th Jan., 1851.

Sir,

Mr. Moyle, in a late number of the *Agriculturist*, has given a section of a drain to be built with plank, under the centre of plank roads. That a drain is necessary who can doubt, that has travelled upon the planks with the mud flap, flap, flap beneath them, and at times squitting six or eight feet right into your face. Likely Mr. Moyle's is the best or most convenient. I will suggest another mode of obtaining the same object, by having the two middle timbers, not scantlings, but whole trees, hewed to 10 inches or more, according to the size of the trees; these laid under the wheel tracks, would leave an open space, the width of the track, to be filled with large stones at the bottom and small stones for a covering under the planks, thus forming a drain and a solid foundation for the horses' feet;—and wherever stones can be conveniently obtained, a road more solid and much more durable can be made.—Likely the expense would be too great; yet as the road would remain firm with so solid a centre and last many years longer, it would pay. Roads are not made for the passing day, and no reasonable expense should be spared in the making, so as to ensure durability. Plank or scantling, as now used upon the bare soil, sink, and the planks begin to spring. If this can be prevented, in any way, a great point will be gained. A practical difficulty in laying down the plank, from the thickness of the centre pieces, may be a fatal objection to my plan. That more strength in the centre of the road is necessary, few will doubt, and likely some person conversant with the subject, may suggest a suitable remedy; more scope being given to private enterprise by sale of the roads.

Yours, &amp;c.,

J. J.

INQUIRY AS TO THE CAUSE OF SICKLY VEGETATION  
IN SPRING.

(For the Agriculturist.)

Sir,

A ten acre field in cultivation, has for the six preceding years presented a curious appearance in May or early June; whether winter wheat or spring crop, uniformly bearing a sickly appearance, and suspending all growth in the plants, while a yellow cast is predominant. Having attained that stage, in a few days it begins to recover, the crop is not behind at harvest, but it does not amount to more than two-thirds of the usual produce. Twice in six years a light dressing of dung from the yard, has been spread, with benefit. Plaster has been used four seasons, and yet each spring presents the same sickly hue; the soil is heavy clay, far from rich; works heavily and with small profit.

Can you, or any of the correspondents of the *Agriculturist*, say which of the chemical proportions of the soil is lacking? The sulphates were partially supplied by the plaster and the dung; are the phosphates or carbonates wanting? If so, in what way can they be profitably supplied? Can subsoiling be useful on a hard poor clay?

Yours truly,  
J. J.

Stamford, January 1851.

[Our correspondent does not inform us how the field in question has been farmed for many years past. From what we have observed of the heavy clays in his district, and from the description which he gives of this particular field, we are inclined to think that the appearance and results of which he complains are induced by a general, rather than special exhaustion of the soil by over-cropping. It requires a very carefully conducted *chemical analysis* of a soil to determine accurately its exact constituents and their relative proportions; such knowledge too, when obtained, can rarely be turned to any good account in the management of a farm, except under the guidance of a sound judgment and much practical experience. In the case in question, the crops assume a yellow hue (a sure indication of sickness,) and their progress retarded, just at the time when their growth should be the most vigorous and uninterrupted. Now this may arise from chemical or mechanical causes, or from both. If on dry land, deeply and thoroughly cultivated, the crops put on a yellow sickly appearance in spring, not traceable to drought or sudden changes of temperature, it may be fairly assumed that the soil is deficient in *nitrogenous* substances, and the only means of meeting the evil, during the period of growth, is to apply manures, rich in nitrogen, which can be readily yielded up to the pressing wants of the crop. The nitrates of potash and soda (the former, common saltpetre,) being deliquescent salts, are well adapted for such a purpose. We have applied them to all kinds of grain in a growing state in England, more or less every year, for *doctoring* sickly crops, and generally with complete success. Unhealthy patches in the same field arising from very local causes may by these

means be brought into as vigorous a state as the remainder. These kinds of manure should be evenly sown upon the growing plants in spring, but not too late in the season. From 150 to 250lbs. per acre will generally be found sufficient, and in a few days after a shower or a damp atmosphere, the change will appear quite magical; the color of the plants rapidly changes from a sickly yellow to a swartly green and their growth is greatly promoted. Guano, when of good quality, acts in a similar way, but as this manure contains a larger number of ingredients that enter into, and build up the organism of plants, and being frequently rich in *phosphates*, it is more generally to be depended on than the *nitrates*; particularly in developing the grain in the ear. Woolen rags are an excellent manure, but their action is slow, and they yield many nutrient principles during their tardy decomposition. Farm-yard manure varies greatly, both as regards its composition and fertilising power. When it is the result of poorly fed animals, with a mixture of straw and other refuse, after a long exposure to the action of the rain and atmosphere, it is but of little worth.

We would suggest to our correspondent, the propriety of improving his field by *subsoiling*; deepening the entire soil can scarcely fail of being beneficial, provided it be sufficiently dry; if not, draining should be resorted to as the first step to any kind of improvement. The manures before mentioned, (except dung,) have been referred to more with a view to show what is done in other countries, and to throw a little light on the important subject of the nutrition of plants, than from any hope of their becoming available by Canadian farmers, to any great extent, for many years to come. If the soil upon the application of strong vinegar, does not slightly effervesce, a good dressing of lime (say from 100 to 130 bushels per acre) would, no doubt, be highly beneficial. In this country, however, it is very rare that a large expenditure for manures can be justified, by the value of the returns. The grand secret is to sustain the original stamina of the soil, not by expensive manures, but by husbanding and judiciously applying all that can be

made in the farm-yard, and by adopting a *less scourging system of cropping*. Our correspondent would most probably find, that laying down his field to grass, for a few years, so as to carry a goodly number of cattle and sheep, it would afterwards yield a profitable grain crop. Soils of naturally a second-rate quality, should be very leniently dealt with, and in a country where labor is high and produce low, such lands should be allowed long alternate intervals of rest by pasturing. We shall be happy to hear from any of our agricultural correspondents on these matters.]—EDITOR.

### VILLAGE LECTURES.—No. 3.

*The Soil and the Air Continued.*—Let me furnish other proofs of the fact that most of the bulky part of our plants is derived from the air. I have already proved it by showing that there is no other source except the air from which a plant can get its combustible part, and there are two other ways in which I can prove it—I can show you that the air is heavy enough to render it very likely that it contains enough of substance to grow plants of, and I can show you that it actually does contain the very things on which plants feed.

Why has the soil always been supposed to furnish the substance of plants? Is it because there is enough of it—good heavy stuff, that you might suppose able to build up heavy substantial plants and trees? Why the air surrounding the earth is at least twenty times as heavy as all the surface soil surrounding the earth—even supposing it to be on the average twelve inches deep? Though it is so easily moved through, the air is heavy enough, I can tell you. There are 15 pounds' weight of it resting on every square inch of ground. The whole atmosphere of the globe weighs as much as a ball of lead would weigh, though it were sixty miles in diameter. You can judge in some measure of the weight of the air by the way in which it will stretch a piece of rubber India extended over an open jar fitted to the plate of an air pump. If it were held at the four corners, and weights piled upon it, they would stretch it, and if heavy enough they would break it; but if it rested on a stool they could not.—Just so the air above it cannot stretch it now, because it rests on the air beneath; but remove the stool and the weights will stretch it; remove the air beneath, as can be done by this pump,

and the air above will stretch it and burst through it.

But we can actually weigh the air. Take a bent tube, three feet long, filled with quicksilver, and invert it. Why does the liquid metal stand 50 inches higher in one leg than in the other.—If the air were pressing on both ends alike, it would stand at a common level in both branches of the tube; the reason why it is standing so high here must be because there is something pressing on the surface which is not pressing on the other—the reason why it is standing so high in the one side is because the air is pressing only the other. The fact must be that the weight of the air pressing on the surface of the metal in the one leg of the tube is just the same as the weight of quicksilver above that level in the other. The air is supposed to be forty-five miles high, and I say that supposing this tube extended forty-five miles high to the outside of the atmosphere, this leg would contain the same weight of stuff in it as that, or else the balance would not be maintained. This is in fact a balance, weighing whatever is put into one leg of the tube by the height to which it will raise the quicksilver in the other; the air pressing here raises the quicksilver there to a height of 30 inches; that is, the weight of air pressing on every square inch of the earth's surface is the same as if 30 inches deep of quicksilver rested on every square inch. Now, 15 pounds' weight of the quicksilver would rest on every square inch, if it were covered 30 inches deep with it; therefore, 15 pounds of air rest on every square inch of the earth's surface. If I let the air in on this end again, you will see that the quicksilver, (now bearing an equal weight of air on both sides,) will regain the same level in each side; so that this is in fact a measure of the weight of the air.

When made in a more portable and elegant form, it is called a *barometer*, from two Greek words which signify a measure of weight; and the height of the quicksilver in the tube indicates the weight of the air, which presses it up; and as dry air weighs heavier than damp air, when the quicksilver sinks in the tube we anticipate wet weather, and so this tube becomes a weather glass, and when furnished with a float on the surface of the quicksilver, it pulls round an index figure on a dial plate, and points to rain, fair, stormy, and so on; and this is the principle on which your weather glasses act. Well then we have just the same weight of air around the globe as if the surface of it were covered thirty inches deep with quicksilver, and that is as heavy as twelve to twenty feet of soil would be; and if you were never astonished at the eight or ten inches of soil being able to grow repeated crops

of grass or corn or trees without wasting under the process, surely you ought not to be astonished at the air, which is twelve or twenty times as heavy, being able to do the same thing. The leaves of the tree do not indeed stretch through the whole air in search of food, as their roots do through the soil; but when the winds are continually mixing the particles of air up and bringing fresh ones to be fed upon by the foliage of the plants and the trees, so that ought to be no hindrance in the way of our believing what is really the truth, namely, that plants get everything in them which will burn up from the air, and only their incombustible part—their ashes, which will not burn away from the soil.

But now I will prove to you that the air really does contain, in the midst of it, the very particles of which wood is composed. I have here a piece of wood dried at a red heat, under circumstances which hindered it from taking fire; it is a piece of charcoal in fact, which is nearly all that remains of the wood after the water is driven out of it. Now, I say that the tree got this charcoal from the air; first, because it could not get it from the soil, which has not anything near enough of the stuff in it, and the air is the only other thing which the plant could get at to obtain it from.

The argument merely proves that all the carbon in vegetables came *originally* from the air. It does not determine what portion of any particular plant came from the air, nor what from the soil. In the early stages of its growth, the plant derives a good deal of its substance from the soil, and some of even the carbonic acid of the air it may absorb through its roots. To supply the land with organic matter, in the art of cultivation, it is necessary, not merely the mechanical effort thus exerted on its texture, but for its use as food in supplying the plant with a portion of its organic part.

Secondly, because the air is heavy enough—has matter enough in it to supply many such trees or whole forests, if they were wanted, from it—for it is many times heavier than the soil from which people generally think that such trees and plants do come. And, thirdly, I believe the tree gets its charcoal from the air, because the air is not only enough, but it contains the right things, too; it contains the charcoally particles of this black substance present in it, as I shall prove in my next lecture.

WASHING FLUID.—A friend gives us the following receipt for Washing fluid, assuring us it is good. Our lady readers can try it:—3-4 lb unslacked lime; 2 lbs soda; and 3 qts. water.



## PROFESSORSHIP OF AGRICULTURE.

The following is the statute just passed in the University Senate, relative to the Chair of Agriculture, and the establishment of an experimental farm:—

“Whereas it is desirable for extending agricultural education, and rendering the University more useful to the largest class of the people of this province, that immediate steps be taken for filling the chair of Agriculture.”

“And, whereas the efficiency and usefulness of the said chair would be greatly promoted by the establishment of an experimental farm in connexion with it.”

“And, whereas it is desirable to set apart a portion of the University grounds within the city of Toronto for a limited period, for the experimental farm aforesaid.”

“Be it therefore enacted by the Senate of the University of Toronto, that the Caput shall be directed, and they are hereby directed to make known within two weeks from the adopting of this Statute, by Public Advertisement in the *Canada Gazette* that the chair of Agriculture is vacant, together with the duties, salary, and emoluments belonging to same as provided by the Statute—in pursuance of the 34th clause of the Act of Parliament 12 Vic. chap. 82 and to take and adopt all necessary proceedings for the filling of the said chair.”

II. That it shall be the duty of the Professor of Agriculture to give instruction in the science of Agriculture by Lectures or by practical teaching, on an experimental farm, or by both methods, as may be deemed most advisable—also to manage the experimental farm in connexion with the Board of Agriculture, and to take charge and superintendence of the remaining portion of the University grounds under the immediate orders and directions from time to time of the Board of Endowment.

III. That a portion of the University grounds, not less than fifty acres, shall be selected and set apart forthwith for the experimental farm aforesaid by a committee of the Senate—and such committee to consist of the Vice-Chancellor, the President, Professors Gwynne, Nichol, J. C. Morrison, Esq., J. McMurriel, Esq., Dr. Hayes, J. Cameron, Esq., provided that not less than 6 acres shall be appropriated to a Botanical Garden.

IV. That so soon as the said Chair shall be filled and the said Committee shall select and set apart such portion of the said grounds as aforesaid and shall have reported the same as to the Senate and the Endowment Board,—that part of the said grounds so reported as selected and set apart as aforesaid shall be placed at the disposal of the Board of Agriculture for Upper Canada, free of rent, for the purpose of establishing on the same an experimental farm for a term of not less than ten years, in connexion with the said Chair of Agriculture.

V. That after the expiration of said term of years of the said University, and the said Board of A. shall not agree for a further term of years—the University shall pay for any brick or stone buildings that may have been erected on the said grounds, by the said Board of Agriculture—with the consent of the Senate of the said University, testified by a resolution of the same, the value of such buildings if not otherwise agreed upon to be ascertained by arbitrators, one to be appointed by each of the parties—umpire to be chosen by the arbitrators, all the wooden buildings to be removed by the Board of Agriculture.

VI. That the Solicitor shall prepare and see execu-

ted an agreement on the part of the said Board of Agriculture and the University in accordance with the provisions of this statute.

## CULTIVATION AND PREPARATION OF FLAX.

*From the London Morning Chronicle.*

We have been favored with a copy of a letter, received by Thos. Price, Esq., from the Board of Trade, in answer to the application made on behalf of several noblemen and gentlemen, for a charter of incorporation to enable a company to carry out, upon an extensive scale, the preparation of flax upon the unsteeped process, and also to give encouragement to its increased cultivation in Ireland. In the application for the charter, the parties engage to purchase as large a quantity of flax, in the stalk, as can be grown upon at least 100,000 acres of land in Ireland, at a price of £12 per acre, exclusive of the seed, a price which cannot fail to render that crop highly remunerative to the grower.—From the “Prize Essay on the Cultivation of Flax in Ireland,” by James MacAdam, Esq., Secretary to the Royal Society for promoting the growth of flax, it appears that the profit to the grower upon an acre of flax grown and prepared upon the present system is £10. Out of this sum, however, the grower has to pay—for steeping, taking from steep, spreading, turning, lifting, and scrubbing—a sum of nearly £4. The parties now applying for a charter propose to take the flax in its raw state, exclusive of the seed, at the price of £12 per acre, the grower being thus saved the whole expense attendant upon the steeping process. On the other hand, if the grower possess the facilities of preparing the flax, he will be at liberty to dress it upon the patented mode, upon taking a license from the association and will be enabled to bring it into a state fit for the market, without the expense and risk incurred by the steeped process. The subjects of an extended cultivation and improved preparation of flax are now occupying the attention of most of the Governments of Europe, as well as of the United States. The offer made by the Government of Holland for the purchase of an invention, connected with the preparation of the fibre, to which we have already referred, shews, in the most convincing manner, the importance which is attached to it by that Government. The subject has also occupied the attention of the French Government, and, a short time since, M. Payen, the celebrated French chemist, was deputed by that Government to visit Ireland, in order to inspect and report upon the mode of cultivation and the preparation of the fibre in that country. In his report to the Government, that gentleman described the present movement in favor of and extension of the growth of flax, and the probable substitution of linen for cotton as an “industrial revolution which was fast maturing itself.” The President, in his message to the Legislature Assembly, on Tuesday last, under the head of “Agriculture and Commerce,” alluded to the inquiries which had been thus set on foot, and announced the intention of the Government, in accordance with the recommendation of the report of M. Payen, to submit to the Legislature a bill calculated to extend and facilitate the growth of flax in France. The portion of the President’s address referring to this subject is as follows:—

“The remarkable methods for cultivating, cleaning, and preparing flax, which have just been introduced into England, Ireland, and Belgium, could not but attract the attention of the Government. It has had the subject thoroughly inquired into, and the results of its examination will be submitted to you in the *exposé des*

measures of a bill which will be submitted to you for the purpose of freeing from all entrance duty flax seed coming from Riga."

The Government of this country, in considering the application for a charter to encourage the growth of flax in Ireland, has very properly decided upon relaxing the rule by which they are governed in the case of granting charters under ordinary circumstances; and the Board of Trade has announced that, as soon as the Company, proposed to be established in Ireland, shall have been so far matured as to give a reasonable assurance that its objects will be fully and adequately carried into effect, "My Lords will, on the matter being referred to them, in the usual mode, be prepared to recommend that a charter of incorporation should be granted." Had the Government refused, upon any more technical grounds, to grant to the enterprising promoters the necessary means for carrying out this great undertaking, its conduct so doing would have deserved the severest condemnation. We are gratified, however, in seeing that they are so far impressed with the importance, in the present circumstances of Ireland, "of encouraging, by every means, the cultivation of flax in that county," as to depart from their usual rule, in order to afford an opportunity for the development, upon a grand scale, of one of the most important and valuable of its industrial resources.

#### IMPROVEMENT IN FARMING.

When shall we see improvement in farming? We do not entirely despair, when we look over our country and see a great improvement in some individuals' farming. In our region of country, these kind of farmers are pretty scarce, but where they are, we find that they realise two fold in quantity and quality of grain, and have a great deal more pleasure and satisfaction while they are at it. But, ask the farmer "what are the improvements desired?" We, in answer, will name a few. First, see what kind of soil you have and what kind of manure is best adapted to it. You will have to exercise a sound judgment, connected with experience, to determine this, as some kinds of manure will not do for some kinds of soil.—If grain be your dependence, see what kind of grain best suits your land. See if draining is necessary; here let me say, that draining is oftentimes more necessary than farmers suppose. If needed do it with as little delay as possible. Do not put it off until you have more time; for it is getting worse every year, and you are incurring more and more labor on it. As the land gets worse, it is harder to till, and you receive less profit; if you were to spend only a few days, perhaps, in draining, your labor would grow less and without doubt your crop would be increased from one quarter to one half. Select your manure judiciously and apply it to the crops that need the variety.—Would not this add much to your crops? Who does not know that to apply fresh manure directly to wheat will often ruin it; when, if it had been preceded by a crop of corn, or roots, it would have been of great value, and have been enough for the wheat.

Keep your land thoroughly subdivided, and let not the weeds grow. It costs no more to raise corn than weeds, and which is of the most value? This mowing weeds is a great improvement in farming, and one that will well pay the farmer for his trouble.—Try it. Try manuring. Try draining. Try weeding. Combine the three, and a dozen other improvements that you think of, and you will get pay. But, says one, "if we do all this we cannot attend cur-

thirty acres of corn to hand." Well, can't you see that fifteen hundred bushels of corn off of twenty acres, is as good as the same off of thirty acres? We hope the day may come, when farmers may attend more to the improvement of their lands, in the place of trying how many acres of grain they can manage to the hand. When we see the above rules adhered to, with many others, then shall we find an answer to the question that commenced our article.—*Dollar Newspaper.*

**EVE'S APPLE-TREE.**—In an interesting volume, entitled "Recollections of Ceylon," it is asserted that Eve's apple-tree—(*kaduragha*), is there a common tree. It is of medium size, its leaves nine inches in length by three in width, with twenty or more strong fibres branching off from each side of the central one. Its fruits are attached to a stalk of considerable length and are produced in pairs. The appearance presented by this fruit is said to be very peculiar, having the form of an apple of the common kind, with about one third bitten out. It is not edible, and is regarded as a most deadly poison.—When punctured, it exudes a juice or milk so acid, that a single drop falling on the skin, immediately raises a blister. "The outside," says the author, "is of a bright yellow color, and the inside a deep crimson. It contains a large quantity of black seeds, like the pips of an apple, embedded in a quantity of scarlet colored pulp. I have counted fifty-eight of these seeds in a single fruit. When ripe, the fruit bursts and the seeds fall out; the skin adhering to the stalk for a considerable time."

**LONGEVITY OF ANIMALS.**—A neurological table of statistics, exhibitory of the relative length of life enjoyed by different animals, presents the following interesting facts:—

"The average length of the life of the Lion, the Tiger and the Panther, in the Menagerie at Paris, is six or seven years.—The male lion, however, has lived to the age of twenty-nine, and the female to the age of seventeen years. Those lions which are carried about for exhibition, from place to place, generally live much longer—often from seventeen to twenty and upwards.—The Siberian Bear lives only to three or four years of age; the Black Bear being of a more robust constitution, from seven to eight. The family of bears known by the appellation of *Maitin-moutle a-l'abe* lives from seventeen to twenty, and behold a long series of generations. The Hyena lives only four or five years; Dromedaries and Camels, thirty or forty; the Elephant, which, when free, reaches the age of a century, only attains a quarter of that space of time; the Giraffe, which is now in the *Jardin de Plantes*, has been there seventeen years, and still enjoys excellent health. Monkeys only survive four or five years, any it is mentioned as a great phenomenon that one lived in Gibraltar for seventeen years."

**TO YOUNG MEN.**—How, after the duties of the day are over, do you employ your evenings? This is a question of importance. If you have no regular employment, no fixed pursuits to engross your attention and operate as a stimulus to the mind when unemployed, you must of necessity, have many leisure and unoccupied hours—intervals when time will hang heavily on your hands, and suggest the necessity of some means to relieve it of its weight. The very time which is dissipated in idleness would, if devoted to study, enable many a young man to obtain eminence and distinction in some useful art.

## General Science and Miscellany.

### THE FAVORITE POISON OF AMERICA.

We take the following article from a recent number of that excellent periodical, the *Horticulturist*. It is from the pen of Mr. Downing, the talented Editor; who on his late return from a professional tour in Europe, was deeply impressed with the pale and emaciated appearance of his own countrywomen, compared with the rosy cheeks and robust constitutions which he had observed on the other side of the Atlantic. A large portion of the male sex might be included; especially such as have not employment or exercise in the open air. An Old Countryman standing at Boston or New York, must be painfully struck with the generally unhealthy appearance of the people, and it takes sometime before his eye becomes accustomed to the difference. The phenomenon is to be accounted for in the different habits of living; atmospheric changes in regard to temperature, moisture, &c., and as the writer very correctly insists, in the overheated and ill-ventilated apartments in which females, in particular, spend the greater part of their existence during the winter months. The parching heats of summer render out of door exercise much less agreeable and invigorating than under the cloudier and cooler skies of the British Isles. The reason and will of man, however, when properly exercised in discovering and obeying the general laws of health, will do much in raising him above the disadvantages of natural climate. Draining the swamps, moderation in diet, thorough ventilation in dwellings, and the sustaining of animal heat, by taking wholesome food and exercise in the open air, rather than by the over artificial heating of apartments;—these constitute the essential conditions under which sound health is to be obtained and enjoyed.—With the scientific explanations of the writer, in one or two instances, we do not altogether agree; but considering the immense importance of the subject, as applying

to the health and happiness of the people, throughout the northern section of this immense Continent, and the attractive and convincing manner in which it is treated, we think that we shall be doing a service to our readers, by laying the article before them, without abridgment.

“One of the most complete and salutary reforms ever, perhaps, made in any country, is the temperance reform of the last fifteen years in the United States. Everybody, familiar with our manners and customs fifteen or twenty years ago, very well knows that though our people were never positively intemperate, yet ardent spirits were, at that time, in almost as constant daily use, both in public and private life, as tea and coffee are now; while, at the present moment, they are seldom or never offered as a means of civility or refreshment—at least in the older states. The result of this higher civilization or temperance, as one may please to call it, is that a large amount of vice and crime have disappeared from amidst the laboring classes, while the physical as well as moral condition of those who labor too little to be able to bear intoxicating drinks, is very much improved.

“We have taken this consolatory glance at this great and salutary reform of the habits of a whole country, because we need something to fortify our faith in the possibility of new reforms; for our countrymen have, within the last ten years, discovered a new poison, which is used wholesale, both in public and private, all over the country, till the national health and constitution are absolutely impaired by it.

“A national poison? Do you mean slavery, socialism, abolition, mormonism? Nothing of the sort. ‘Then, perhaps, tobacco, patent medicines, or coffee?’ Worse than these. It is a foe more insidious than these; for, at least, one very well knows what one is about when he takes copious draughts of such things. Whatever his own convictions may be, he knows that some of his fellow-creatures consider them deleterious.

“But the national poison is not thought dangerous. Far from it. On the contrary, it is made almost synonymous with domestic comfort. Old and young, rich and poor, drink it in with avidity, and without shame. The most tender and delicate women and children are fondest of it, and become so accustomed to it, that they gradually abandon the delights of bright sunshine and the pure air of heaven, to take it in large draughts. What matter if their cheeks become as pale as the ghosts of Ossian; if their spirits forsake them, and they become listless and languid! Are they not well housed and *comfort-*

able? Are not their lives virtuous, and their affairs prosperous? Alas, yes! But they are not the less guilty of poisoning themselves daily, though perhaps unconscious of it all the time.

"The national poison that we allude to, is nothing less than the vitiated air of *close stoves*, and the unventilated apartments which accompany them!

"'STOVES'—exclaim a thousand readers in the same breath—'stoves poisonous? Non-sense! They are perfectly healthy, as well as the most economical, convenient, labor-saving, useful and indispensable things in the world. Besides, are they not real Yankee inventions? In what country but this is there such an endless variety of stoves—cooking stoves, hall stoves, parlor stoves, airtight stoves, cylinders, salamanders, etc.? Why, it is absolutely the national invention—this stove—the most useful result of universal Yankee ingenuity.'

"We grant it all, good friends and readers; but must also have our opinion—our calmly considered and carefully matured opinion—which is nothing more nor less than this, that stoves—as now used—are the national curse; the secret poisoners of that blessed air, bestowed by kind Providence as an elixir of life,—giving us new vigor and fresh energy at every inspiration; and we, ungrateful beings, as if the pure breath of heaven were not fit for us, we reject it, and breathe instead—what?—the air which passes over a surface of hot iron, and becomes loaded with all the vapor of arsenic and sulphur, which that metal, highly heated, constantly gives off!

"If in the heart of large cities—where there is a large population crowded together, with scanty means of subsistence—one saw a few persons driven by necessity into warming their small apartments by little close stoves of iron, liable to be heated red-hot, and thereby to absolutely destroy the purity of the air, one would not be so much astonished at the result, because it is so difficult to preserve the poorest class from suffering, in some way or other, in great cities. But it is by no means only in the houses of those who have slender means of subsistence that this is the case. It is safe to say that nine-tenths of all the houses in the northern states, whether belonging to rich or poor, are entirely unventilated, and heated at the present moment by close stoves!

It is absolutely a matter of *preference* on the part of thousands, with whom the trifling difference between one mode of heating and another is of no account. Even in the midst of the country, where there is still wood in abundance, the farmer will sell that wood and buy coal, so

that he may have a little *demon*—alias a black, cheerless, close stove—in the place of that genuine hospitable, wholesome *friend* and comforter, an open wood fire-place.

"And in order not to leave one unconverted soul in the wilderness, the stove inventors have lately brought out "a new article," for forest countries, where coal is not to be had either for love or barter—an "air-tight stove for burning wood." The seductive, convenient, monstrous thing! "It consumes one-fifth of the fuel which was needed by the open chimney—is so neat and clean, makes no dust, and gives no trouble" All quite true, dear considerate housewife—all quite true; but that very stove causes your husband to pay twice its savings to the family doctor before two winters are past, and gives you thrice as much trouble in nursing the sick in your family as you formerly spent in taking care of the fire in your chimney corner,—besides depriving you of the most delightful of all household occupations.

"Our countrymen generally have a vast deal of national pride, and national sensitiveness, and we honor them for it. It is the warp and woof, out of which the stuff of national improvement is woven. When a nation becomes quite indifferent as to what it has done, or can do, then there is nothing left but for its prophets to utter lamentations over it.

"Now there is a curious but indisputable fact, (somebody *must* say it,) touching our present condition and appearance, as a nation of men, women and children, in which we Americans compare most unfavorably with the people of northern Europe—England and France, for example. It is neither in religion or morality, law or liberty. In these great essentials every American feels that his country is the birthplace of a larger number of robust and healthy souls than any other. But in the bodily condition, the *signs of physical health*, and all that constitutes the outward aspect of the men and women of the United States, our countrymen, and especially countrywomen, compare most unfavorably with all but the absolutely starving classes on the other side of the Atlantic. So completely is this the fact, that though we are unconscious of it at home, the first thing (especially of late years) which strikes an American, returning from abroad, is the pale and sickly countenances of his friends, acquaintances, and almost every one he meets in the streets of large towns,—every other man looking as if he had lately recovered from a fit of illness. The men look so pale, and the women so delicate, that his eye, accustomed to the higher

lues of health, and the more vigorous physical condition of transatlantic men and women, scarcely credits the assertion of old acquaintances, when they assure him that they were "never better in their lives."

"With this sort of impression weighing disagreeably on our mind, on returning from Europe lately, we fancied it worth our while to plunge 200 or 300 miles into the interior of the state of New-York. It would be pleasant, we thought, to see not only the rich forest scenery opened by the new railroad to Lake Erie, but also, (for we felt confident they were there.) some good, hearty, fresh looking lads and lasses among the farmers' sons and daughters.

"We were for the most part disappointed. Certainly the men, especially the young men, who live mostly in the open air, are healthy and robust. But the daughters of the farmers—they are as delicate and pale as lilies of the valley, or fine ladies of the Fifth Avenue. If one catches a glimpse of a rose in their cheeks, it is the pale rose of the hot-house, and not the fresh glow of the garden damask. Alas, we soon discovered the reason. They, too, live for seven months of the year in unventilated rooms, heated by close stoves! The fire-places are closed up, and ruddy complexions have vanished with them. Occasionally, indeed, one meets with an exception; some bright-eyed, young, rustic Hebe, whose rosy cheeks and round, elastic figure would make you believe that the world has not all grown "delicate;" and if you inquire, you will learn probably that she is one of those whose natural spirits force them out continually in the open air, so that she has as yet in that way escaped any considerable doses of the national poison.

"Now that we are fairly afloat on this dangerous sea, we must unburthen our heart sufficiently to say that neither in England nor France does one meet with so much beauty—certainly not, so far as charming eyes and expressive faces go towards constituting beauty—as in America. But alas, on the other hand, as compared with the elastic figures and healthful frames abroad, American beauty is as evanescent as a dissolving view, contrasted with a real and living landscape. What is with us a sweet dream, from sixteen to twenty-five, is there a permanent reality till forty-five or fifty.

"We should think it might be a matter of *climate*, were it not that we saw, as the most common thing, even finer complexions in France—yes, in the heart of Paris, and especially among the peasantry, who are almost wholly in the open air—than in England."

(Concluded in our next.)

OBSERVATIONS AND REMARKS ON THE METEOROLOGY AND CLIMATE OF UPPER AND OF LOWER CANADA; by WILLIAM WINDER, Esquire, M. D., Librarian to the Honorable the Legislative Assembly of Canada.

Amongst those who have studied the subject of Meteorology and the climate of Canada, the idea has been entertained, that the mean temperature of the two Provinces is nearly equal on an average of years. The accompanying tables, though not perhaps perfectly exact, have been compiled with the view of obtaining something like an approximation to the truth of the above statement. They comprise a period of thirty-four months, from 1847 to 1849, inclusive, being the only years to which the compiler had access, with reference to both sections of the country, and are deficient in the months of January, 1847, and February, 1849, of which no record could be found. The month of January, 1847, for Lower Canada, was indeed available; but the corresponding one for Upper Canada, necessary for comparison, could not be procured. The whole of the observations are taken from a register of the weather kept at Montreal, and from those furnished at the Royal Magnetic Observatory at Toronto, by Captain Lefroy. The fruits, plants, and trees of a country are said to form a good criterion of its climate, and this opinion would seem to be correct with respect to the temperature of Canada. As one proof of this, it may be remarked that in June of the present year, the Hon. L. J. Papineau made an excursion to the Falls of Niagara, and botanizing in the woods surrounding them, found only two plants which do not grow on the mountain of Montreal, viz:—the black walnut, and the Persimmon, *Diospyros Virginiana*, sex. syst., *Diacia Octadria*; natural order, *Ebenacia*: a native of the warm climate of the Southern States of the American Union. From hence he inferred, and it appears justly, that the temperature of the atmosphere in and about Montreal and the Falls, must be nearly the same; and on examining the tables above mentioned, we find the result of the average to be a difference, for the thirty-four months compared, of only 1.46°. A further examination also shews that the mean temperature of Montreal is 46.4°, and that of Toronto 45.50°, whilst the means of the two added together give the medium temperature of the two Provinces as 45.77°. The eminent French philosopher Arago, states the mean temperature of Europe to be 56.6°, and that of the centre of England is said by Dr. Craigie to be 50. It is impossible to ascertain, with any degree of precision, the portion of

heat felt in any part of America, merely by measuring its distance from the equator. The maxims which are founded upon experience in the old hemisphere, will not apply to the new, where the cold maintains a manifest preponderance. Various causes contribute to render the climate of America different from that of the old continent. America advances much nearer to the pole, than either Europe or Asia. Both these have large seas to the north which are open during part of the year, and even when covered with ice, the wind that blows over them is less intensely cold than that which passes over land in the same high latitudes; but in America the land stretches from the St. Lawrence towards the pole, and spreads immensely to the west. The wind in passing over enormous mountains, covered with snow and ice, becomes so impregnated with cold, that it acquires a piercing keenness, so that over the whole of North America, a north-west wind and cold are synonymous terms. This difference in heat is supposed to be equal to twelve degrees, but Dr. Mitchell contends that it amounts to fourteen or fifteen degrees.

It is an undoubted fact, that in the same degrees of latitude, the winters are colder and the summers warmer in North America than in Europe. This general observation is very important with respect to agriculture, commerce and navigation. The following facts are interesting as proving the foregoing assertion:—Hudson's Bay, in the same latitude as the Baltic Sea, is even in summer encumbered with ice. In New York, in the latitude of Madrid and Naples, the winter accompanied with ice, lasts, on an average, 16½ days; and the Delaware is frozen over five or six weeks. New York has the summer of Rome and the winter of Copenhagen; Quebec the summer of Paris and the winter of St. Petersburg. In America it must then be recollected, that the climate by no means depends altogether on the degrees of latitude but is influenced, more or less, by the winds, the lakes, the great tracts of land in the north, the ocean and the gulf stream. In the northern part of the United States the medium temperature amounts to about 45, and in the southern to 68. Fahrenheit, whilst the foregoing tables shew the mean temperature of the Canadas to be 45.77 °.—

Winter. Summer.

The medium temperature of Lake			
		Superior, is	21.
do	do	Lake Ontario	30.
do	do	New Orleans	59.
do	do	Key West	70.
			81.

In Quebec, the thermometer sinks to 30. below zero, and rises in summer to 95. above ze-

ro. In Baltimore, the thermometer rose twice in the course of eight years to 98., and sank four times below zero; whilst in Montreal and Hamilton (at the head of Lake Ontario) it has been noted as high as 103. of Fahrenheit in the shade.

Humboldt reckons the mean temperature of the air, overland, nearly on a level with the sea, at the equator, at 81.5°. The mean temperature of latitude 45°. At the pole, judging from the observations of Capt. Parry, the mean temperature cannot be taken to exceed 13 below zero.

In the immense valley of the Mississippi, to the west of the Alleghanies, the mean temperatures are nearly the same as in the corresponding latitudes on the Atlantic; but, as in Upper Canada, compared with the Lower Province, the winters are not so cold, nor the summers so hot. The mean temperature of the west coast of America appear to correspond with the mean temperatures of the western parts of Europe.

The preceding remarks apply only to the temperature of those parts of the earth that are nearly as low as the surface of the sea; but as we ascend into the atmosphere the temperature constantly diminishes, so that even in the torrid zone, at a certain elevation, we come to the region of perpetual congelation. The cause of this diminution of temperature is the expansion of the air in proportion to its elevation, which occasions an increase in its capacity for heat, and a consequent lowering of its temperature. This diminution is partly counteracted by large masses of earth which communicate heat to the air. This is probably the reason why the temperature of Mexico and Peru diminishes, according to the observation of Humboldt, only one degree of Fahrenheit for every 495 feet of elevation; while in Scotland, Dr. Hutton, of Edinburgh, states the diminution to amount to one degree for about 268 feet of elevation. He kept a thermometer on the top of Arthur's Seat, and another at Leith, near the level of the sea, for three years. The mean difference between the two was 3., and the height of Arthur's Seat, above the level of the sea, is very nearly 803 feet.

M. Arago has demonstrated that during the last 2,000 years the temperature of the earth has not varied so much as one-fifth of a degree, as otherwise the length of the day would have altered, which is not the case.

When we dig to a certain depth below the surface of the ground, we come at last to a situation in which, if the bulb of a thermometer be put, it remains unaltered during the whole year. The heat at this depth is considered as represent-

ing the mean heat of the place at the surface of the ground. The bottom of the cavern, under the Observatory at Paris, is about ninety feet below the surface of the earth; a thermometer placed in it varies only about one-fifty-fifth of a degree during the whole year, from 52., which is the exact mean temperature of Paris.

It therefore appears, from the preceding observations, that at a certain depth below the surface of the earth, which does not seem much to exceed thirty feet, the thermometer remains unaltered during the whole year, and exhibits the mean temperature of the surface in that locality. Hence the mean temperature of a place may be determined by that of springs flowing from a certain depth (not less than thirty feet) under ground. The wells at New York vary from 32 to 50 feet in depth, and, according to Dr. Nooth, the mean annual variation of their temperature is 2., namely, from 54. to 56.; this would make the mean annual temperature of New York 55. . Dr. J. Hunter states that the temperature of the wells at Brighton, in Sussex, vary from 50. to 52., which would make the mean temperature of the air in that part of England, close to the sea, 51.; whilst the mineral spring at Tunbridge Wells, a short distance from Brighton, is always of the temperature of 50., as appears from observation made in winter and summer. Thus it would seem, that at a certain depth below the surface of the earth, a thermometer indicates the mean temperature on the surface, that this depth is not much more than 30 feet; and that, probably, no great increase of temperature could be found at the depth of sixty feet. When, however, we penetrate to a greater depth below the surface, the temperature becomes higher than the mean of the place, and the elevation of the thermometer increases as the depth augments.

*Concluded in our next.*

QUEENSTON SUSPENSION BRIDGE.—A correspondent of the *Guelph Advertiser* gives the following account:—“The towers are built on each side, and most of the cables are stretched across. When finished, it will be, it is said, the largest suspension bridge in this planet (what they have in other planets of course I cannot say.) It is 1043 feet from tower to tower, and it seems quite fitting that this great work should tie together with non cables the great dominions of the two greatest nations in the world; for the people on the other side admit, that, excepting themselves, we are the greatest nation on the globe; and we in turn admit, that, excepting ourselves, they are the greatest nation! so that putting together the estimation of ourselves and of each other, it certainly comes to this that we are the two greatest nations in the world. But the suspension bridge

is truly a magnificent work! It is expected to be completed this winter. There are to be ten cables in all, each cable made of 250 wires; each wire warranted, I am told, to bear 15,000 lbs.—The wires are not twisted, but lie together straight, and are kept together by a strong wire that is wound around them, the same as you would wind a thread about a bonnet wire. The cables are firmly anchored in the work, and pass over two stone towers some 14 feet high. On the top of these towers are solid iron plates, and rollers on these, upon which are other plates with groovings for each of the cables, so that there is no horizontal strain upon the towers, but all the pressure is perpendicular on the same principal with the pressure on the bridge under the strings of a violin. The cables when extended, have the shape of a rainbow turned upside down, and to the uninitiated, it would seem that a bridge built on these cables would give a merry run down to the centre and then be up the hill to the opposite side. But instead of the planking and pathway being over the cables it is under them, and is to be perfectly level. The centre of the bridge will nearly touch the centre of the cables, whilst at either end, it will be some 60 or 70 feet below them, and the work to be sustained by iron rods suspended from the cables. A road has been cut along the side of the mountain to either terminus of the bridge, where solid walls of masonry have been built. The planking is to be twenty feet wide, intended at present for teams; but the towers and iron plates are constructed, so that extra cables can be run over them so soon as the iron horse may be ready with his train of cars, and judging from the interest at present taken in the subject of railroads, “in each of the two greatest nations,” this time is not far distant.

#### CAPE OF GOOD HOPE.

#### DISCOVERIES IN SOUTHERN AFRICA—THE NATIVES, PRODUCTIONS, &c.

The news from the interior shows that there is considerable turbulence prevailing among the different native sovereignties or tribes, and that this fact was causing injury to the settlement in various ways. One of the frontier papers states that somewhere about two hundred lives were lost last year, by the collision of different savage tribes, and that similar results will follow in successive years, if the impetuosity of the barbarian people be not restrained.

Discoveries are daily making in regions beyond what was denominated the frontier. Among others, travellers have arrived from the Zulu country. In some places it was fertile and beautiful, with luxuriant vegetation; in others the land was barren, and not a tree to be seen for miles. The chief food of the inhabitants is milk, rice, and sweet potatoes. In one place a party of travellers came to the kraal of one of the principal Zulu chiefs, styled by the natives En Corzin. Here they were hospitably entertained four days. Corzin, the chief, rejoiced in the possession

ion of twenty wives, all of whom were daily dismissed to the labors of the field, except one favorite dark beauty, who seemed exempt from this unfeminine occupation. A cup-bearer, too, figured at the festive board, reminding the travellers of Pharaoh and the kings of ancient times—a tall, stalworth native, whose head was bound in a large blue shawl in oriental style. The natives use black earthenware cups. These cups were so beautifully glazed, and of such curious workmanship, that the travellers were surprised to find that they were manufactured by the natives. The kraal, or hut, of the chief was surrounded for miles with those of his relatives. About one hundred of these vassals were summoned upon one occasion, and despatched to hunt buffaloes. Large crops of sweet potatoes, and Caffre corn were seen, as well as immense quantities of sugar cane. An expedition of about 40 volunteers, headed by the English crown prosecutor, had under plea of stopping the incursions of the "Bushmen," invading the territory of an old chief, the ally of the English, seized 800 of his cattle and several of the Bushmen boys as captives, and required him to cede all his unoccupied territory to the British, all because he had not prevented the incursions of the Bushmen. The vassals of the old chief, discontented at these proceedings, have fled in terror over the frontier.

Discoveries of considerable magnitude have, according to the Cape Town "Mail," been shed over the geography of the interior of Africa. The substance of it is, that the great lake before reported, discovered in South Africa, although receiving the waters of several rivers, has no outlet to the ocean. About seven days' journey to the north of this lake, a ridge of very high mountains crosses the continent, and beyond it a new "river system" commences, the streams all flowing to the north, and ultimately to the ocean. It on one of these streams, say the accounts, that Mozalekatske and his tribe have made a temporary resting place. This chief, some twenty-five years ago, was in subjection to a Zulu tyrant named Chaka, residing near the eastern coast, south of the latitude of 28 degrees. Escaping from the dominion of his merciless master, he fled with a large body of adherents over the mountains to the north-west, spreading devastation around him as he passed. He was driven still further northwest by the Boers, who, in their turn, have been pushed forward by the advancing civilization of the English. Thus, Mozalekatske, with his ferocious legions, have been remaining continually towards the equator, leaving behind them a deserted country, swept of inhabitants by his destroying march. He has now traversed at least a thousand miles from the point at which his wanderings commenced, at least a quarter of a century ago. Still his indefatigable pursuers dog the steps of the retreating lion, and have already begun to rout him from his latest lair in the centre of the continent. The Cape Town "Mail" hazards the prediction that before another quarter of a century shall have elapsed, the whole interior of South Africa, to the Equator,

will be occupied by civilized communities of the European race, and probably under the dominion of Great Britain. Among the discoveries in the new land of promise are ivory in considerable quantities, and many other articles of commercial value.

The Anglican, Independent, and Baptist clergy, have published a declaration protesting against the control assumed by the States in the government of the churches.—*Boston Traveller*, January 18th.

#### THE HUMANIZING INFLUENCE OF CLEANLINESS.

—A neat, clean, fresh-aired, sweet, cheerful, well-arranged and well-situated house exercises a moral as well as a physical influence over its inmates, and makes the members of a family peaceable and considerate of the feelings and happiness of each other; the connection is obvious between the state of mind thus produced and habits of respect for others, and for those duties and obligations which no law can enforce. On the contrary, a filthy, squalid, noxious dwelling, rendered still more wretched by its noisome site, and in which none of the decencies of life can be observed, contributes to make its unfortunate inhabitants selfish, sensual, regardless of the feelings of each other; the constant indulgence of such passions renders them reckless and brutal, and the transition is natural to propensities and habits incompatible with respect for the property of others or for the laws.

THE BIBLE.—The Bible itself (as Professor Maclagan has said) is a standing and an astonishing miracle. Written fragment by fragment throughout the course of fifteen centuries, under different states of society and in different languages, by persons of the most opposite tempers, talents, and conditions, learned and unlearned, prince and peasant, bond and free; cast into every form of instructive composition and good writing—history, prophecy, poetry, allegory, emblematic representation, judicious interpretation, liberal statement, precept, example, proverbs, disquisition, epistle, sermon, prayer—in short, all rational shapes of human discourse, and treating, moreover, of subjects not obvious, but most difficult—its authors are not found, like other writers, contradicting each other upon the most ordinary fact and opinion, but are at harmony upon the whole of their sublime and momentous scheme.

A SQUIRREL sitting on a hickory tree, was once observed to weigh the nuts he got in each paw, to find out which were good and which were bad. The light ones he invariably threw away, retaining only those which were heavier. It was found, on examining those he had thrown away that he had not made a mistake in a single instance. They were all bad nuts.—*Woodworth's Stories*.

THE SABLE.—This animal resembles the marten, and is found in great numbers in Siberia and Kamtschatka. Its fur is very valuable, and the Russian government derives considerable revenue from its sale.



## LECTURE ON BURMAH.

BY THE REV. HOWARD MALCOLM, AT PHILADELPHIA.

Burma, as is well known, lies on the east side of the Bay of Bengal, and extends as far as China. The population of Burma is about six millions. It is seven hundred miles long, and four hundred wide. Burma is decidedly the most influential portion of India. The government is an absolute monarchy; but the laws are good, and generally well executed. As you approach the seat of government, the country is in a good state of cultivation, while the more remote parts are much neglected. In fact, everything pertaining to the country, whether in the cultivation of land, or in the administration of laws, receives better attention in the immediate neighborhood of the seat of government, than in the remoter parts. In this respect, the conduct of the people is much like that of our slaves at the South. At the extremities of the country, every extortion is practiced. For example—if the King sends out a chief to get up a company of soldiers, that chief will draft those whom he thinks will be the least likely to go, and then lets them off only on condition that they pay a large sum, which the chief puts in his own coffers. Their armies are brave and well disciplined—so much so, that the British feared them more than any other army of India. Their navy is very poor, and is a more apology for one. They are a highly civilized people. They have good roads, canals, and commerce. A foreigner is very apt to judge of things by the rules to which he has been accustomed, and, in this way, forms a wrong estimate of their real condition.

Their is a peculiar feature in the division of their property. Occupation is possession. So long as a man keeps a good fence around his land, it is his, and he loses it as soon as he neglects this. Their land is not taxed; but the inhabitants are. They are not destitute of a literature. Books are numerous, and some of them very ancient. They are said to extend back many thousands of years; but we may be safe in saying that they date back as far as 600 years before Christ. They have a good system of common school education, and it may be safely said that there is not a man in the kingdom who cannot read and write.—The priests are compelled to teach the boys of an early age. The girls are neglected, and those only are educated, whose parents are able to defray the expenses of their education. There appear to be no restrictions imposed on the intercourse between the men and the women, as there is in many of the eastern countries, by degrading the women. There is a peculiarity, however, which would seem to place the women even higher than in this country—that is, that they always carry the purse. It would be considered a disgrace for a man to carry it. The result is, that, in that country, there are no bankrupts.

Their timber is of a very durable nature. The speaker had sailed in a vessel upwards of 90 years old. They export a great quantity of lumber. Their ivory is also of an excellent quality, and is an important article in their commerce. They raise the finest cotton in the world. Bird's nests are here used for making soup. The birds build them much in the same manner as the swallows in this country—attached to the side of some support. They make these nests out of their own bosoms; and so great is the demand for this savory dish, that these nests bring their weight in gold. Sharks' fins are also used for the same purpose. Both of these articles are the sources of great revenue to the King. The Chinese, being great epicures, create a demand for both dishes. In commerce, they charge their

taxes in kind, so that this prevents any discussion in regard to tariff. Every tenth is taken as a tax. Silver and lead constitute the principal part of their currency. The silver is run into cakes, and change is made by cutting off small portions. After it has been run over a few times, it becomes deteriorated—and, when the price of an article is asked the venders will request that the silver be shown; and so good judges are they, that they will immediately tell the amount of alloy, and will raise the price on their merchandise.

The buildings of this country are very slight, and poorly fitted to keep out the thief; but stealing is not very common here. Bamboos and mats are their building materials. The buildings for worship are the most substantial they have. These are pagodas, and are constructed of solid stone or brick.

The Pyramids of Egypt are pagodas, in my opinion. Nothing but religion could ever have influenced man to have erected such huge buildings. When a man makes a vow, he erects as large a pagoda as his means will allow. His son after him, perhaps, builds a larger one over his, and thus one succeeds another, until it becomes an immense building. This appears to be the way the Egyptian pyramids attained such a size.

Their pagodas and monasteries all are gilded over, and present a splendid appearance when the sun shines upon them. The people are very strict in regard to rank. This is indicated by the number of roofs on their houses, covers on their umbrellas, and followers that attend them. These attendants are all engaged in carrying something. One has the tobacco box, another the pen, a third the ink, and a fourth an umbrella.

The lecturer found a great deal of refinement among the ladies. They make holes in their ears and the size is in proportion to their rank. He had seen some as large as a silver dollar piece. The dress of both men and women is very becoming. They have neither seamstress nor tailors; but use the cloth as it comes from the loom. They wrap it about them and let it hang in large festoons.

They consider it a great disgrace to have white teeth, and they have a preparation for the purpose of coloring them black. The great aim among the ladies is to be fat, and to be lean they think is sure evidence that they are not well fed. They weave silk very beautifully and ingeniously. The Burmans have the power of smelting metals. They even transcend the Russians in the making of bells. He saw one that weighed eighty-five thousand pounds. It was twenty feet in diameter and one foot thick. He was told that there was in another part, two bells that weighed three hundred and thirty thousand pounds. They have very fine jewelry. Their music is poor and chiefly set in the minor key. They make their canoes even better than our Indians, and some of them are seven by sixty feet long. A great deal of their commerce is carried on by caravans. They have regularly educated doctors, which, with their free schools ought to give them in a great deal of notoriety. They have two schools of medicine, and they are respectively termed the diet and medicine schools. English walnut shells ground up fine, enters very extensively into the prescriptions of the latter. One of these doctors told the speaker that there were sixty-five diseases in the human body, and he had a remedy for all. Just acquaint him with the disease, and then he could cure it. Sometimes it was very difficult to ascertain which it was, and in such cases he compounded all these cures and gave a dose of the mixture. They cure rheumatism by kneading their patients like women do bread. They do first with the soft palm of their hands, and then with their knuckles,

The white men in this country seem to have a perpetual struggle to keep the life in them. They rise in the morning and drive until the sun is about half an hour high, and then return and go to bed till ten o'clock, when they rise and take breakfast, after which they disperse until half an hour before sunset, when they take their second drive, and on their return take dinner, at which they sit for three, four, or five hours. Every drive is truly magnificent. At Madras you may see a thousand carriages out in the evening. These are the most delicious moments of a man's life-time to this country.

**NEWLY-INVENTED STEAM ENGINE.**—We witnessed, a day or two ago, the trial of a newly-invented engine, which, we should say is destined to supersede that class of engines now in general use. The inventor is Mr. John Dodd, of West Flamboro' who has devoted much time to the study of mechanics. Were we at full liberty, we should hardly know how to describe it, so as to convey a correct idea of its simplicity and completeness. It differs, however, entirely from the common steam engine, both in principle and construction. The model we saw is estimated at one horse power, yet it seemed to us to accomplish with perfect ease what the common engines of double or treble the power are often engaged in; such, for instance, as diving a circular saw. Attached to the shaft was one of these, fifteen inches in diameter, and a piece of hard-wood plank was sawed into strips with the most perfect ease. Afterwards a much thicker piece of plank was placed on the platform, and we could perceive no difference in the velocity of the saw. The entire engine may be put in a box about the size of a common candle box, and is perfect within itself, requiring no other fitting than being to a common steam boiler. We understand that the inventor intends to have his engine patented both here and in the United States and in England; to which latter place he will proceed with a model for exhibition at the World's Fair in May next.—*Dundas Warder.*

**IMPORTANT IMPROVEMENTS IN THE SCREW-PROPELLER.**—The *Morning Herald* says:—"Messrs. Maudesley have fitted a new kind of screw propeller, to the *Bosphorus* the ship destined to be the precursor of the regular steam communication between England and the Cape of Good Hope; and the ship having been completed, was taken yesterday on a trial trip down the Thames as far as the measured mile in Long Reach, several of the parties interested being on board. At the measured mile the mean speed of 9½ knots, or 10 2-3 statute miles, with an easiness of steering that was very remarkable, established most conclusively the triumph of the new principle. This improvement on the old propeller is termed Maudesley's patent self-acting feathering screw, which of itself assumes such a position that, when the ship is under canvas only the least possible amount of impediment is offered to its being drawn easily through the water; and when the ship is under steam-power, it again takes, spontaneously on the engine being put in motion, the right angle for propelling. In fact, to all intents and purposes, in form and reality, with this new screw, the vessel at the will of the navigator, is either the perfect sailing-ship or the auxiliary steam-ship, for the screw is so fitted, that when not required to propel the ship, it may be said to form a portion of the lines of the after portion of it. The important advantages of the new plan are almost self-evident, and when it is stated that it is constructed in competent parts, the improved facilities it affords for

for stowage or repairing will at once be seen and acknowledged, and we venture to predict, will be generally adopted in all services in preference to those at present in use."

A Discovery of another property of chloroform has just been announced by two French gentlemen who simultaneously, and without any consultation with each other, found that chloroform is an *antiseptic* of marvellous virtue, preventing animal decomposition after death, or promptly checking it if already commenced. Muscular flesh and all animal tissues when subjected to its action, become fixed for a long period of time in the precise form and condition in which they may happen to be at the moment of application, and natural colors, even to the slightest and most delicate shades, are preserved without the slightest change. The French Academy of Science, about to make some further investigations to verify this remarkable discovery.

**ASSAFETIDA.**—This article is obtained from a large umbelliferous plant growing in Persia. The root resembles a large parsnip externally, of a black color: on cutting it transversely, the as-afoetida exudes in form of a white thick juice, like cream, which, from exposure to the air, becomes yellow and at last of dark brown color. It is very apt to run into putrefaction; and hence those who collect it carefully defend it from the sun. The fresh juice has an excessively strong smell, and grows weaker and weaker upon keeping; a single drachm of the fresh fluid smells more than a hundred pounds of the dry assafetida brought to us. The Persians are commonly obliged to hire ships on purpose for its carriage, as scarcely any one will receive it along with other commodities, its stench infecting every thing that comes near it.—*Sci. American.*

#### THE WORLD—ITS POPULATION.

The *Tribune* closes a long article on the subject of Population with the following reflections:—

The point which it would be wise both in Europeans and Americans to note, however, is that precisely the same causes are operating on our side of the globe, as on the other, to overburden the land with population and to inaugurate extreme poverty and starvation as the permanent condition of society, unless the true issue of the dilemma is sought out. It is especially to be understood that this whole trouble is not the mere return of an old event, such as mankind is accustomed to, but that it is the occurrence of a new and untried contingency. During the early ages of human society causes were in existence of various kinds, among which the constant prevalence of wars was a prominent one to keep down the increase of population.

Peace, comparative prosperity, in a commercial and agricultural point of view, such as results from the enlargement of empire and the habits of civilization, and prior to the period of the general refinement and development of the race, furnish the conditions of a rapid multiplication of the human family. It is precisely in that condition that the world generally, now finds itself for the first time. Ireland during a period of 56 years, from 1785 to 1841, increased in population from 2,845,932, to 8,466,000. France has increased since 1831 from 27,000,000 to 35,000,000. The United States has increased from 1790 to 1850 from 3,729,328 to 27,000,000 or more. The average of these ratios is equal to the ratio of increase in China during the past 150 years.

The problem of the true solution of over-population is forcing itself upon us. Let those who dare, take the responsibility of deferring it by staying off in this age, under any pretext, religious moral, or political, the most profound and radical investigation of the whole social question.

**THE RAILWAYS OF THE WORLD.**—One of the most surprising circumstances attending the creation of railways, is the amount of capital which, within a limited period, has been expended in their construction and equipment. According to the calculations supplied in the work before us, there were in operation at the commencement of 1849, in different parts of the globe, a total length of 18,696 miles of railway, on which a capital of £368,567,000 had been actually expended. Besides this, it is estimated that there were at the same epoch, in progress of construction, a further extent of 7,829 miles, the cost of which when completed, would be £146,750,000! Thus when these latter lines shall have been brought into operation, the population of Europe and the United States (for it is there only that railways have made any progress) will have completed, within the period of less than a quarter of a century, 29,485 miles of railway; that is to say, a greater length than would completely surround the globe, at a cost of above five hundred millions sterling! To accomplish this stupendous work, human industry must have appropriated out of its annual savings twenty millions sterling for twenty five successive years! Of this prodigious investment the small spot of the globe which we inhabit has had a share, which will form not the least striking fact in her history. Of the total length of railway in actual operation in all parts of the globe, twenty-seven miles in every hundred, are in the United Kingdom! But the proportion of the entire amount of railway capital contributed by British industry is even more remarkable. It appears that, of the entire amount of capital expended on the railways of the world, fifty-four pounds in every hundred; and of the capital to be expended on those in progress, sixty-eight pounds in every hundred, are appropriated to British railways!—*Dublin University Magazine.*

**NATIONAL MUSIC.**—The Russians and Danes are rich in possession of an original and most touching national music; Ireland, Scotland, and Wales, are alike favoured with the most exquisite native melodies, probably in the world. France, though more barren in the wealth of sweet sounds, has a few old airs, that redeem her from the charge of utter sterility. Austria, Bohemia, and Switzerland, each claim a thousand beautiful and characteristic mountain songs. Italy is the very palace of music; Germany its temple. Spain resounds with wild and martial strains; and the thick groves of Portugal with native music of a softer and sadder kind. All the nations of Europe—I presume those of all the world—possess some kind of national music, and are blessed by Heaven with some measure of perception as to the loveliness of harmonious sounds. England alone, England, and her descendent, America, seem to have been denied a sense, to want a capacity, to have been stunted of a faculty, to the possession of which she vainly aspires. The rich spirit of Italian music, the solemn sound of German melody, the wild free Euterpe of the Cantons, have in vain been summoned in turns to teach her how to listen; tis all in vain—she does listen painfully, she has learnt by dint of time, and much endurance, the technicalities of musical science; she pays regally her instructors in the divine pleasure; but all in vain: the spirit of mel-

ody is not in her, and spite of hosts of foreign musicians, in spite of the King's Theatre, in spite of singing and playing young ladies, and criticising young gentlemen, England, to the last day of her life, will be a dunce in music, for she hath it not in her; neither—or I am much mistaken—hath her daughter.—*Fanny Kemble.*

**A NEW LIGHT.**—The Scientific American has a letter from George Cadwallader Blaney, Fort Washita, Arkansas, stating that he has discovered, and applied for patents, in this country and Europe, for a mode of making a cheap brilliant gas, produced upon a new and scientific principle, which can be obtained at a cost less than one cent per thousand feet. Mr. Blaney says the process will far surpass every other means of producing gas extant; neither will the material raise in value on account of an increased demand. During the process, another article, more valuable than the gas itself, is produced. Neither is there required, during the operation, a single particle of wood, coal, water, or vegetable matter, and the material can be obtained in any climate or place, however remote from civilization.

**A NATURAL FOUNTAIN OR SPOUTING SPRING.**—A California correspondent of the Family Visitor gives some interesting sketches of scenery and incidents of his travels from St. Joseph across the plains to California. Among other things, he mentions a spouting spring.

After describing what are known as the Soda Springs, he says: Two miles further on, at the left of the road, ("Bear river,") are the Steamboat Springs, so called from the puffing, hissing noise, accompanying the discharge of the water. The principal spring is situated in the centre of a circular flat rock, about eight feet in diameter. The rock is elevated but a little above the surface of the river, which runs in a circular form about two-thirds around the rock. The water spouts up through an orifice in the rock, about three inches in diameter. It spouts up, as it were, by regular pulsations, in the form of a milk white foam to the height of about eighteen inches, like water boiling violently over a very hot fire. It also emits steam, and at every pulsation produces a hissing noise.

The water is hot and impregnated with soda like the water of the soda springs. A white man, living among the Shoshone Indians, whose lodge is three-fourths of a mile from Steamboat spring, informed us that the hissing or puffing sound varies in loudness with the height of the surrounding water. He said that when the water is highest, he could distinctly hear it at his lodge.

**TO PREVENT THE ATTACK OF THE "ONION GRUB."**—The growth of the onion is frequently prevented and the plant sometimes destroyed by a worm which attacks it as soon as it appears above ground. A correspondent of the *Gardener's Chronicle* states that he has applied nitrate of soda with good effects in preventing the ravages of this insect. He used half a pound of the salt to a gallon of water, and applied eight gallons to a bed of ten yards in length. He states that it checked the progress of the worms, and the crop turned out well.

**FRIED POTATOES.**—The French method of cooking potatoes affords a most agreeable dish. The potatoes are peeled, piped, and cut into thin slices, then thrown into a frying pan containing an abundance of hot lard. As soon as they become brown and crispy they are thrown into a colander to drain, then sprinkled with salt, and served up as hot as possible.

## HOW TO MISMANAGE A GARDEN.

From a series of chapters in London Agricultural Gazette, on the above named subject, we select the following sarcastic directions as adopted by the mismanager in the use and application of water:—

Water is not an uncommon source of profit to the mismanager. It is quite astonishing, indeed, how easily this element may be made to assist in spoiling a garden.

Foolish people say that it is a part of the food by which plants exist, and it requires to be administered with care, skill, and discretion. But your gemuses are not to be bamboozled by fine names, or what the world believes to be authority. They know better. How, indeed, can anything be fed on water? Can a man, or a horse, or a sheep? Even a gosse on a common won't live on water, but must have grass. How, then, should a plant? The opinion of the mismanager is decidedly that water is of no other use than to moisten the soil, and therefore, he keeps his soil as wet as he can.

He has also his own ways of applying it. When he waters the plants in his borders, he gives them "just a sprinkle," by holding the watering can high, and allowing the drops to dash on the ground "quite natural like." By repeating this operation once a-day, he will by degrees bring his ground to a nice hard surface, so as to keep in the heat, and be easily raked. It is true that hard, hot ground is not favorable to the admission of water; but, then, it has the advantage of looking well; and besides, if water is poured on it, somewhere or other it must go, and it will be sure to find its way to the roots—if it does not find its way to the gravel walks or a neighboring ditch.

In like manner, if plants are in pots, they should be deluged overhead, from a coarse-rossed watering can. When you see the water running out of the hole in the bottom of the pot, you can be under no mistake that plants have had enough. It is true a good deal of soil and other matters run out of the pot along with the water; but that is of no consequence; there is the more room in the pot for a further supply of water. It is true that little or no water remains in the pot, the ball of earth being too hard to receive it; but that is also of no importance, because it is so easy to water it again.

Some people, on the other hand, soak their potted plants very gently, and when the ball of earth has taken all it can, they then remove it carefully from the water. But that is troublesome, takes up a great deal of time, slops a man's legs, and is merely a fancy of folks who pretend to be wiser than their neighbors.

Another method to be particularly recommended, is, to water trees in the open ground, by pouring down water at the foot of the stem. The man who has genius for mismanagement knows the advantage of that.—Water is to moisten roots; the biggest roots at the foot of the stem; therefore water should be applied to the foot of the stem. It must be owned that the advantage of the practice is not apparent, unless a heavy storm of rain should fall immediately afterwards; but as the reasoning is correct the practice must be right.

It will be evident that the plans of the mismanager are far more judicious than those of the man who contrives to irrigate his beds by turning a gentle stream over them. If it were only because so much labor is saved by irrigation, such a Frenchified way ought never to be adopted. It is just as absurd as that plan of warming water in tanks artificially heated or exposed to the sun, before using it. Who would drink luke-

warm flat water, if he could get fresh and cold from a deep well; and why should a plant like it? As to warming it by hot-water pipes, that is about the silliest scheme of the modern pretenders to a knowledge of gardening. A laboring man might as soon think of washing his face and hands in warm water. Besides, plants cannot feel. If you ask our friend, the genius, whether he does not think that warm water would agree better than cold with a laborer in a violent perspiration, or who had been stewing all day in a hot-house, he triumphantly enquires whether a plant is a man. It may be true that tropical plants come from countries where cold water is unknown; perhaps they do; perhaps they don't. At any rate the mismanager will teach them how to bear it; and it cannot be denied that to harden plants is an object with all real gardeners.

Never have a syringe? It only throws water on leaves; but where is the advantage of moistening leaves. Even if plants did feed on water, they would not feed by their leaves. You might as well put a man's roast beef under his arm pit and expect him to fatten by it. Still more repugnant to all the mismanager's ideas is the foolish habit of syringing the walls and brick paths of a greenhouse. What is the use of that? What good can it do a plant to throw water on a brick wall not within a yard of it? No, no; keep the footpaths dry and nice to walk upon; keep the walls dry too—if you do not they are very likely to be covered with "green," and then you will make things comfortable. If you do employ a syringe be sure to use it most when vines are in flower, and afterwards when they are in fruit; and in the greenhouse, first when the flowers are opening, and next when the wood is ripening. When they are making their growth it is of no consequence.

**BONES AS MANURE.**—The use of bones as manure was commenced in England, about 1776. It was then common to apply from 60 to 70 and even 100 bushels to the acre—they being coarsely broken by hammers. Experience has proved, however, that so large a quantity does not produce effects in proportion, and 10 to 12 bushels are now thought to be sufficient in most cases. The annual value of bones used in England for manure, is estimated at £880,000 or \$4,400,000.

**PHOSPHATE OF LIME.**—We learn from Dr. E. EMMONS that an inexhaustible supply of this article has been discovered on the west shore of Lake Champlain, at Crown Point. A considerable quantity of it was quarried last autumn, some of which has been examined by Dr. E., and also by Prof. NORTON, and has been found to contain from four to five per cent of phosphate. It may be prepared for use as manure, either by being ground in a mill, after the manner of grinding plaster, or it may be burnt, like lime. It is harder than plaster, and would require more force in pulverizing. When burnt, it readily falls to powder.

It will be recollected that the use of phosphate of lime has been attended with highly favorable results in some parts of Europe, particularly on old pasture grounds, and such as have been much devoted to grain crops, which have been exhausted of their phosphates. We trust that accurate trials of this article will be made the coming season, in comparison with bones and other manures, for various crops and on various soils, and that the results will be given to the public. Farmers will then have some criterion by which they may determine its relative value, and the expediency of purchasing it as a manure.—*Cultivator*.

**AVERAGE PRODUCTS OF AN ENGLISH FARM.**—The following are the averages of some of the products of a farm of 740 acres near Brighton, England, occupied by Wm. RIDGEN. He has 250 acres of wheat, averaging 26 bushels per acre; 40 of barley, 40 bushels; 60 in oats, 60 to 80 bushels; 240 acres in clover and grasses, two tons hay. He keeps 350 South Down ewes, which average yearly about 400 lambs; average quantity of wool yielded by the flock, four pounds per fleece, and it sells at 25 cents per lb. He keeps 21 cows, which yield on an average ten quarts of milk per day, the year round.

**HEIGHT OF LIGHTNING RODS.**—It has been laid down as a rule, derived from experiments made in France, on the conducting power of lightning-rods, that a rod will protect a circle whose radius is equal to twice the height of the rod. Prof. LOOMIS, of New-Haven, states that he has heard of a case where a pile of shavings were set on fire by lightning, at the distance of one hundred feet from a lightning rod of fifty-nine feet in height. From this case Prof. L. concludes that it is unsafe to rely upon a rod to protect a circle whose radius is more than once and a half the height of the rod.

**STANDARD FOR THE SHAPE OF FOWLS.**—At the late exhibition of poultry at Boston, a well known gentleman, who had carefully examined the different kinds of fowls, observed: These long-legged, thin breasted chickens will never answer for the table. I speak from forty years' practice in *carving*. I have formerly had them, sometimes, on my table, but have grown wise by experience, and will have no more of them. To say nothing of the poor quality of their flesh, their shape is not right. For instance, if I have a pair of such chickens, and there are half a dozen ladies at table, each chooses a piece of the breast, and there cannot be enough cut from that part to serve round; but if I have a pair of partridges (ruffed grouse,) though they may not weigh more than half as much as the chickens, I can readily take a slice from the breast for each guest. The partridge, then, should be the standard for the shape of fowls; and besides the advantage alluded to, it will be found in general, that the nearer this form is approached, the better will be the flesh, and the greater the quantity in proportion to the bone.—*Cultivator*.

**TRANSPORTING SEEDS.**—The Chinese method of packing seeds for distant transportation, is to put them in small bottles, with the ashes of rice chaff. They allege that if this be omitted, small maggots are hatched during the voyage which destroy the seed. This ash or another, if not too strong, we presume acts in two ways; 1st, as an absorber for any moisture which may be present, and 2nd, as an alkali to destroy the latent eggs or larvæ of any insects.

**A NEW BUILDING MATERIAL** has lately been introduced into Pottsville, Pennsylvania. It is a brick fifteen by thirty inches, so made as to promise almost equal durability of stone, at one third the cost.

**GRAPE CUTTINGS** should never be planted in an upright position as they are not one tenth part so likely to grow, as when laid horizontally.

**VALUE OF VANITY.**—Franklin says—"Most people dislike vanity in others, whatever share they have of themselves, but I give it fair quarter wherever I meet with it, being persuaded that it is often productive of good to the possessor, and to others who are within his sphere of action; and therefore, in many cases, it would not be altogether absurd if man were to thank God for his *vanity*, among the other comforts of life."

**METHOD OF CURING PRIZE HAMS.**—The hams of Maryland and Virginia have long enjoyed a wide celebrity. At the last exhibition of the Maryland State Agricultural Society, four premiums were awarded for hams. We are informed by those who had the opportunity of examining them, that they were of first rate quality. The following are the recipes by which the hams were cured:

**T. E. HAMBLETON'S RECIPE.**—1st premium. To every 100 lbs. pork, take 8 lbs of G. A. salt, 2 oz. saltpetre, 2 lbs. brown sugar, 14 oz. of potash and 4 gallons of water. Mix the above, and pour the brine over the meat, after it has laid in the tub some two days. Let the ham remain six weeks to brine, and then dried several days before making. I have generally had the meat rubbed with fine salt when it is packed down. The meat should be perfectly cool before packing.

**J. GLENN'S RECIPE.**—2nd premium. To 1000 lbs. of pork, take half a bushel and half a peck of salt, 3 lbs. saltpetre, 3 lbs. sugar, and 2 quarts of molasses. Mix—rub the bacon with it well; keep on for three weeks in all, but at the end of nine days take out the hams, and put those which were at the top, at the bottom.

**R. BROOKE JR.'S RECIPE.**—3d premium. One bushel fine salt, half bushel ground alum salt, one and a half pounds saltpetre to the thousand lbs. pork, left to be in pickle 4 weeks, hung up and smoked with hickory wood until the rind becomes a dark brown.

**C. D. SLINGLUFF'S RECIPE.**—4th premium. To 100 lbs. Green Hams, take 8 lbs. G. A. salt, 2 lbs. brown sugar or molasses equivalent, 2 oz. saltpetre, 2 oz. pearl ashes, 4 gallons water, dissolve well, skimming off the scum arising on the surface. Pack the hams compactly in a tight vessel or cask, rubbing the fleshy part with fine salt—in a day or two pour the above pickle over the meat, taking care to keep it covered with the pickle. In four to six weeks, according to the size and weight of the hams, (that is to say, the longer period for heavy hams,) hang up to smoke, hock up; smoking with green hickory wood. I have put up hams for the last 12 or 15 years by the above recipe with uniform success, equal at all times to the sample now presented.

To the above we add the following, which we, as well as many others, have satisfactorily proved:

For every one hundred pounds of meat, take five pints of good molasses, (or five pounds of brown sugar,) five ounces saltpetre, and eight pounds rock salt—add three gallons of water, and boil the ingredients over a gentle fire, skimming off the froth or scum as it rises. Continue the boiling till the salt, &c. is dissolved.—Have the hams nicely cut and trimmed, packed in casks with the shank end down, as the pickle will thus strike in better. When the pickle, prepared as above, is cooled to blood heat, pour it over the hams. They may lie in pickle from two to six weeks, according to the size of the pieces, or the state of the weather, more time being required in cold, than in warm weather. Beef or mutton hams, intended for smoking and drying, may be cured according to this mode, and will be found excellent.

Much of the goodness of hams depends on smoking. They should be hung at such a distance from the fire, as not to be heated. They should also be hung up with the shank end downward, as this will prevent the escape of their juices by dripping. Small hams, wanted for immediate use, will answer with two weeks' smoking, but larger ones, and those wanted for keeping, should be smoked four weeks or more.

## THE HOME CIRCLE.

We turn again to the pure hearts and the gentle affections that welcome us home. What a contrast? What a change comes over the weary spirit? How the feelings soften in unison with the cheerful scene that greets the eye, and in sympathy with the bright faces that look up to you in joy and gladness? And then the many welcomes that fall upon your ear from innocent lips that never yet have practised guile or flattery! What a contrast, we say again, with the cares, the doubts, the apprehensions you have just closed the door upon?

But we fear it is not always so. The door, it is true, is closed behind us, but, alas! it does not always shut out those evidences of a ruffled temperament which bring sorrow and disappointment to the lovely group within. Nay, it is not always possible for men to shake off all the sober reflections of the day at once, and to appear in the full tide of animation. The incessant claims of business have almost exhausted the mental and physical energies. Labour and anxiety have, indeed, triumphed over all the energies of manhood, but not over all the affections of the heart; and so long as these have been sustained free from entanglements or contamination, those triumphs must necessarily have only a brief duration. The bright faces, the soothing and endearing exclamations, the quiet comforts of home soon dissipate all the clouds that lowered o'er the brow of care. The heart receives a new impulse, which soon glows on the cheek, and sparkles in the eye.—The feelings are at once invigorated, the thoughts and memories of pleasant places, and the hopes and anticipations of youth are all renewed and happily realized. The spirit itself mounts higher, and overflows with gratitude to Heaven for all its blessings. The world and all its cares are shut out; the door is secured and barred against them all, and virtue, love and affection are secure in the enjoyment of a happy home!

Then, let us all be careful how we estimate the joys and the pleasures of the home circle. It is there only that grief is assuaged. There only does sorrow find a true comforter. There only are disappointments incident to a life of business alleviated for there only do we find those cherished sympathies, whose tones are as the melodies that float from the harps of angels.

## SOCIAL CUSTOMS IN HOLSTEIN.

Few American readers probably know much about the duchy of Holstein, beyond what they learn by the frequent allusions in European news to the war which has for some time been carried on between that duchy and Denmark the following brief description of some of the domestic customs of the Holsteiners, which we find among the foreign correspondence of the *New York Independent*, will perhaps tend to increase our interest in this people, and in the contest they are waging with the Danes.

The whole life here has something extremely generous, and almost patriarchal, about it. When we meet in the morning at "morning coffee," we all shake hands as if we had been to a distant country, and wish each other almost solemnly the morning salutations. Every one pays great deference to the father, a simple, dignified old man; and the *Bauer* come up constantly to the house as though they were members of the family, for his advice and assistance. And as I walked over the farm, I could not but be most pleasantly struck with the politeness of all of them to him, and his to them. We meet again about eleven for the breakfast,

a more formal meal. Here, as nearly every where in Germany where thanks are offered at all at a meal, it is done in *silence*. And I must say that it has a much more solemn effect than the hurried, careless form, so prevalent with us. It is very difficult for most persons to preserve the *life* in words so often repeated, or to invent new words for each occasion; but in these few moments of solemn stillness *thoughts* can be breathed which are real prayer.

After this morning meal comes the principal business of the day; and in this family, as in most of the families of Germany, whether in city or country, the ladies do the principal part of the house-work. Again, in the middle of the afternoon, we meet at the great meal of the day, the dinner. This is a long, social meal, with a strange variety of dishes, which I will not venture to enumerate. After it is over we all rise and shake hands, with the words, "Gresnet die Mahlzeit," (blessed be the meal!) in quite a serious manner. In the beginning of the evening again, tea and biscuit; and at the end another hearty supper of meats, &c.

This arrangement of meals, so common in Germany, is rather surprising at first to an American, and quite upsets all his previous theories of dietics. The Germans, however, appear to bear up under it very well.

DOCTOR'S VISITS.—It is not only for the sick man, but the sick man's friends that the doctor comes. His presence is often as good for them as for the patient, and they long for him yet more eagerly. How we have all watched after him! what an emotion the thrill of his carriage wheels in the street, and at length at the door, has made us feel! How we hang upon his words, and what comfort we get from a smile or two, if he can vouchsafe that sunshine to lighten our darkness! Who hasn't seen the mother prying into his face, to know if there is hope for the sick infant that cannot speak, and lies yonder, its little frame battling with fever? Ah, how she looks into his eyes! What thanks if there is light there; what grief and pain if he casts them down, and dares not "hope!" Or is it the house-father who is stricken. The terrified wife looks on, while the physician feels his patient's wrist, smothering her agonies, as the children have been called upon to stay their plays and their talk. Over the patient in the fever, the wife expectant, the children unconscious, the doctor stands as if he were fate, the dispenser of life and death; he *must* let the patient off this time, the woman prays so for his respite! One can fancy how awful the responsibility must be to a conscientious man; how cruel the feeling that he has given the wrong remedy, or that it might have been possible to do better; how harassing the sympathy with survivors, if the case is unfortunate—how immense the delight of victory!—Pendennis.

A HORSE STORY.—The following story is vouched to us by first rate authority as fact. A valuable horse of the Canadian breed, belonging to Josephus Baldwin, Esq., on one of the slippery days last week, had much difficulty of maintaining his *standing* in society, owing to the smoothness of his shoes, and came to some little bodily harm in consequence. When he was unharnessed, the teamster left him to his head, not doubting that he would go directly to the stable, as he always did. Instead of doing so, however, he passed by the stable, and went directly to the blacksmith shop of Vincent & Woodward, where he had been shod some months before. He was found there patiently "waiting his turn," with several horses, as every well bred

horns does. What was that, if it was not tears in ?—*Nashua Telegraph.*

**THE WITCHCRAFT OF WOMAN.**—I want to tell you a secret. The way to make yourself pleasing to others is to show that you care for them. The whole world is like the miller at Mansfields, "who cared for nobody — not he, because nobody cared for him." And the whole world will serve you so, if you give them the same cause. Let every one, therefore, see that you do care for them, by showing them wheat Sterne so happily calls, "the small sweet courtesies of life." Those courtesies in which there is no parade, whose voice is too still to tease, and which manifest themselves by tender and affectionate looks, and little kind acts of attention — giving others the preference in every little enjoyment at the table, in the field, walking, sitting, or standing. This is the spirit that gives to your time of life and to your sex, their sweetest Charm. It constitutes the sum total of all the witchcraft of woman.—Let the world see that your first care is for yourself, and you will spread the solitude of the upas tree around you, in the same way, by the emanation of a poison which kills all the juices of affection in its neighbourhood. Such a girl may be admired for her understanding and accomplishments, but she will never be beloved. The seeds of love can never grow but under the warm and genial influence of kind feelings and affectionate manners. Vivacity goes a great way in young persons. It calls attention to her who displays it; and, if it then be found associated with a generous sensibility, its execution is irresistible. On the contrary, if it be found in alliance with a cold, haughty, selfish heart, it produces no further effect, except an adverse one. Attend to this, my daughter. It flows from a heart that feels for you all the anxiety a parent can feel, and not without the hope which constitutes the parent's highest happiness. May God protect and bless you.—*William Wirt to his Daughter.*

**QUIZZING.**—In conversation avoid a practice, which I am sorry to see now-a-days beginning to gain ground in many circles which assume the title of select. I mean that of quizzing. It is a ridiculous and rude habit; therefore avoid it. You will gain no friends by ever having recourse to it in society for any object, and you are sure to lose many. Nay, I have even known bitter enmity excited thereby. Never become too intimate with a man who is characterised by this fashion. Depend upon it, he can have very little fine or gentlemanly feeling about him.—If you on any occasion happen to be made the object of a quizzical attack, however strong the temptation may be, do not answer the offender in his own strain; but give him a decided token of disapproval, at the same time without losing your temper. If, as has been the case with myself, you have the misfortune to meet with one the gentle sex who prides herself on her quizzing abilities, of course you must not forget yourself so much as to betray your annoyance even by a look. Laugh it off, and think very little of her. That's all you can do.

#### A SCIENTIFIC HATCHING MACHINE.

A Hatching Machine has been invented in France, by Mr. Vallee, which is described by the Paris correspondent of the *Intelligencer*. A drum enclosing a warming cylinder forms the basis of his system. He introduces warm air into the drum in which the eggs are deposited, and by circular openings gives access to currents of cold air. It is by the distribution and vigorously

rational combination of warm and cold air that he obtains that dampish temperature in which lies the secret of incubation, from which results the development of the embryo in the egg. By this instrument artificial hatching is successfully carried on in every state of the atmosphere and at all seasons. But after the burst of the shell, a mother must be provided for the young. M. Vallee's ingenuity thus provides for this emergency. A lamb skin is fastened by one extremity to a plank, and made to open at the other like a pair of bellows. This affords a cover for the little ones and keeps them warm as would a veritable mother hen. The result of M. Vallee's experience touching the period of incubation necessary for the various species of eggs is curious and worthy of record. Here it is—Chickens, 21 days; partridges, 24 do.; pheasants, 25 do.; guinea hen, 25 do.; common duck, 28 do.; peafowls, 28 do.; barbury ducks, 30 do.; geese, 30 do. The degree of heat required is from 40 to 50 degrees French or Centigrade scale, equal to from 104 to 122 Fahrenheit. A small lamp of the Locatelli system suffices to raise the temperature of the apparatus to the proper elevation.—With such a machine every farmer could have a fine supply of fowls.—*Scientific American.*

#### GOOD PROPERTIES AND VIRTUES OF MILK.

An experienced physiologist and chemist declares milk to be a most perfect diet. There is probably nothing better adapted to our sustenance: containing curd casein, which is necessary for the development and formation of muscle—butter for the production of an adequate supply of fat—sugar to feed the respiration, and thereby add warmth to the body, the phosphates of lime and magnesia, the peroxide of iron, the chlorides of potassium and soda, with the free soda, required to give solidity and strength to the bone—together with the saline particles so essentially necessary for other parts of the body. It contains lactic acid, or the acid of milk, which chemists inform us is the acid of gastric juice, so requisite for the proper dissolving of our food in the stomach. It is therefore, obvious that milk should be chemically correct in all its constituent and that its beneficial effects on the constitution should not be neutralized by adulteration. It is, Dr. Prout properly says, the true type of all food. How necessary, therefore, it is that it should be pure; otherwise, this wonderful and wise provision of Providence will be a curse rather than a blessing.—*Ex.*

**TO FATTEN FOWLS.**—The best food for fattening fowls is potatoes mixed with meal. Boil the potatoes and mash them fine while they are hot, and mix the meal with them just before it is to be presented. They fatten on this diet in less than half the time ordinarily required to bring them to the same condition of excellence on corn, or even meal itself.

**HORSEBACK RIDING IN MADEIRA.**—The Hon. John A. Dix, in his recent work, "A Winter in Madeira," gives an amusing account of horseback riding at Funchal. For thirty cents an hour a fine horse can be hired at any livery stable, together with a man as attendant, who follows on foot; and when you desire to ride fast, he catches hold of your horse's tail and is drawn along. In this way he prevents you from running away from him. Mr. Dix says that the horses soon become accustomed to the human appendages, and that the fellows have a way of making the horses go fast or slow, as they desire, in spite of the rider.—Mr. Dix says that for ladies this association of horse and driver is a great convenience. They need no other attendant. He is always ready to render any assistance; if the horse loses a shoe, he has a hammer and nails in his pocket to replace it. It is not easy to fancy a more ludicrous spectacle than a lady riding through the city at full gallop, with a man hanging to the tail of her horse; but such scenes are of hourly occurrence in Funchal, and the eye soon becomes accustomed to them.

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

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

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

**THOMAS A BECKET, Archbishop of Canterbury,** was murdered before the altar of his own cathedral, 1171. He was made chancellor to Henry II. in 1158, and soon after elevated to the see of Canterbury; but he quarrelled with the king, was impeached, and his haughtiness and obstinacy finally led to his murder by four of the royal courtiers, though without their master's knowledge. The assassins fled, and to expiate their crimes, made a pilgrimage to Jerusalem, where they died. The news of Becket's death alarmed the king, who not only expulcated himself before the pope, but performed penance at the shrine of the murdered priest, and not only passed the night on the cold pavement in penitence and prayer, but suffered himself to be scourged by the monks. The spot was visited by thousands with religious awe, and the shrine of Becket was adorned with whatever was most costly and rich in the kingdom. Becket was canonized by the Pope in 1172.

**TIME IS MONEY.**—When we change a dollar, the dimes and half dimes escape as things of small account;

when we break a day by idleness in the morning, the rest of the hours lose their importance in our eyes. As time recedes, eternity advances. It is solemn the thought, how prudent the advice:—Improve time, and prepare for eternity!

**BEST ROOMS.**—Among all the follies prevalent in the middle classes, that of sacrificing family comfort and convenience to the absurd desire of having a best room is one of the most ridiculous. Let it not be inferred that we consider good furniture, elegant curtains, and handsome carpets, as superfluous luxuries for people in plebeian state—far from it. Consistent taste and prudent display are to be as much admired in the house of a commoner as in the saloons of a nobleman; but when a room is set apart in a small domicile as the mere receptacle of company, and all in that room held sacred to tight ceremony and ostentatious pretensions, when chairs are cased in Holland jackets, and the carpet puts on its pinafore of the same material for months together, when the apartment is literally shut up,—indicating that family comfort lies dead within it,—then may the best rooms be condemned as worse than useless. For our own part, we think there is something perfectly terrifying in being asked into a stately drawing-room—the polished bars shining with unnatural brightness—the fire-irons arranged in stiff angles, evidently never appropriated to their purpose—the table most geometrically studded with glossy unread volumes of rubbish, and the bed silked and tabasselled sofas looking as if they were intended for anything but sitting on. We give an involuntary shudder as we are left to gaze on costly chimney ornaments and japanned screens, while the lady of the house is, most probably, making a rush to execute the metamorphosis of dress and cap. We would much rather have been introduced to the common parlor, where we should have beheld some signs of vitality, and thawed ourselves into a good-humored cheerfulness; but then and there we might have beheld a basket of stockings and socks undergoing the process of repair, the young ones might have been lugging the chairs about, and left a tailless horse and a wheelless cart in the foreground; we might have formed suspicions that bloaters have been among the matin condiments; and oh, most dire of all! we might have found the mistress in a somewhat rumpled morning wrapper, and a "fright of a cap." Still we should greatly prefer the risks of breaking our neck over Noah's ark, sitting down on a heap of undarrated hose, and encountering a fifth rate head gear, to the petrifying, spirit-damping fifteen minutes we are sentenced to sit in the "best room." The children, if there happen to be such humanizing things in the establishment, look on the walls with a sort of religious awe. They never "play" in the "best room," they never dream of clutching at the splendid bell-rope; they never have the most remote idea of making Lord Mayors' coaches of the embroidered foot-stools, and never think of playing at "bo-peep" behind the richly fringed damask drapery; they never dare to speculate as to whether, with a stout pin, they could pick out the eyes of the queer little man on the Indian card box; mischief and mischief are thoroughly mesmerized, and the little darlings sit or stand as though their life-tide had been suddenly manufactured into the "best starch."—And let us confess, that we experience no inconsiderable sense of misery ourselves in such a situation. It may be that a trace of gipsy blood is in our veins, or that some natural disqualification for "gentility," equally ignoble, marks us, but we are certainly never quite comfortable in a room that is only occupied on "grand occasions."—*Eliza Cook.*



## Editor's Notices, &c.

### BOARD OF AGRICULTURE—EXPERIMENTAL FARM, &c.

A printed circular signed by the President of the Provincial Agricultural Association was addressed, the latter end of December, to all the County Agricultural Societies in Upper Canada, relative to the election of the Board of Agriculture. If in any case this circular should have failed in reaching its proper destination, the Secretary requests to be informed of it, that the omissions may be supplied immediately.

The Secretaries of Societies will please to notice that these returns are to be addressed, according to the terms of the Statute, to *The Hon. Jas. Leslie, Provincial Secretary, Toronto.*

We have received several communications from intelligent and influential agriculturists in different parts of the Province, containing hints and useful suggestions, in reference to the proposed Board, Experimental Farm, &c. It is gratifying to observe that this movement is so well received by them, who are the best qualified to judge of its real merits, and to direct it into beneficial channels.

A. M. is informed, that to the best of our information and belief, "*Party Politics,*" will not be allowed to influence, in the least, the election of the Board; or any appointments that may be made in connection with it, and the proposed Experimental farm. These are matters which all people of common sense regard as *neutral ground*; and in their results, the common welfare of all parties is equally affected.

We may embody some of the suggestions and remarks with which we have been favored in an article for our next number, and we could wish our correspondents permission to use their names. With regard to the personal allusions to reference to the professorship of Agriculture, in the University, a sense of delicacy will only permit us to say, that we fully appreciate the worth of their good opinion and wishes.

### GRANTS TO THE AGRICULTURAL ASSOCIATION OF UPPER CANADA.

The Secretary has received official information of the following grants for 1851. County of Middlesex Agricultural Society £25. County of Norfolk Agricultural Society £20. We believe that other Societies will not be backward in following the example, and that our great Provincial Exhibition, to take place this year at Brockville, will be again supported in a creditable and efficient manner.—Our motto must be *onwards.*

### IMPORTANT SALE OF LIVE STOCK.

Mr. Nathaniel Davis, of Yonge Street, near this city, will dispose of a large portion of his well known stock by public Auction, on the 19th of March next. Among the list are to be found the following Entire Horses.—“*Cock of the Rock,*” “*Young Magnum Bonum,*” “*Perfection,*” “*Hercules,*” Colts, &c., with some well bred Durham Cattle, &c., presenting to purchasers an opportunity rarely to be met with.

CANADA; PAST, PRESENT AND FUTURE.—By W. H. Smith, Toronto, Thos. Maclear, 45 Yonge Street.

We have received the 2nd part of this publication and well does it sustain the high and useful character which we felt it to be our duty to pronounce, when noticing the first part. The printing and getting up of the work is highly creditable to our native skill and industry; and affords another pleasing proof that art and literature are fast advancing among us. The present part contains a neatly engraved map of the Counties of Peterborough, Durham and Northumberland and embraces very full information on the Counties of Norfolk, Lincoln, Haldimand and Welland, beside a very useful appendage, the commencement of a business Directory for Canada West. No extracts, for which we have space, could give any but an imperfect idea of the character of the work, as a whole, and all who desire to understand the real condition and capabilities of Upper Canada, should at once procure it. They could not do better, after reading themselves, than to send it to their friends in the old country, who would then possess the latest and most reliable information, relative to the condition and prospects of this important department of England's wide spread dominions. The work possesses the additional recommendation of cheapness when the labor and expense of getting it up are considered, and it can be procured periodically either in single numbers or parts, from any of Mr. Maclear's travelling agents.

### THE FARMER'S GUIDE.

We have received from Mr. Rowsell of this city, the 13th number of this publication, which abounds in solid practical information, for the use of the farmer. The present number contains full details of turnip culture and other root crops; illustrated by very accurate cuts of machines, insects, &c.

RECEIVED.—The 4th and 5th Parts of Morton's Cyclopaedia of Agriculture.

### TORONTO MARKETS.

AGRICULTURIST OFFICE, Feb. 6.

Our Market to-day presented an animated appearance every description of produce coming in freely, and prices rule higher than for the last week. Wheat is in good demand, 3s. 10d. a 4s. being the price for fair samples, while fine parcels are taken up at 4s. 1½d. per bushel of 60lbs. In Oats there is a deficiency of supply and 1s. 3d. a 1s. 5d. is freely paid for all that offer. Good Pork is worth 25s. and inferior qualities are fetching 17s. 6d. a 23s. A large quantity has been taken during the past week at 22s. 6d. Hay is in good supply and the prices have risen to 55s. a 65s. per ton. Potatoes are in good demand and for good sorts 2s. 6d. per bushel is paid, inferior qualities are offering from 1s. 10d. a 2s. Buyers of wheat state that prices will go upwards, or at least hold up to the present figure for some time yet. Flour has not made much advance, Miller's Superfine being sold at 20s. a 21s. 3d. per bbl. of 196 lbs.