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THE
Canadian Agriculturist.

VOL. VIII.]

TORONTO, MARCH, 1856.

[No. 3

AGRICULTURE—PAST AND PRESENT.

A LECTURE DELIVERED BY PROF. BUCKLAND BEFORE THE TORONTO MECHANICS INSTITUTE, DEC. 21ST, 1855.—CONCLUDED FROM OUR LAST.

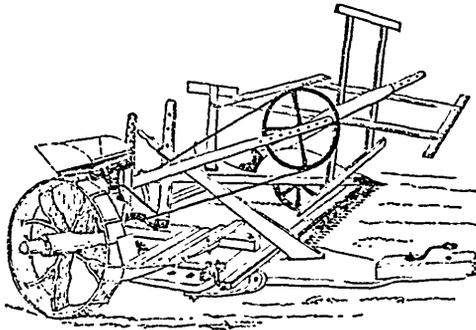
A new feature among Agriculturists of modern times which has already been so fruitful in good results, and which holds out such high hopes for the future, consists not merely in invoking physical science in order to explain the why and the wherefore of agricultural phenomena, but also in *the habit of association*, for the diffusion of sound knowledge, affecting both theory and practice. In the commencement of the last century a small body of Scotch land-owners formed themselves into a "*Society of Improvers in the Knowledge of Agriculture*," which eventually led to the establishment of the present Highland and Agricultural Society of Scotland—the parent of all similar institutions, not only in the British Empire but throughout the world. I need not dwell on the many and great advantages which have flowed from this and its sister institutions, both in England and Ireland and several of the colonies, as well as in many countries of Europe, and among our neighbours of the United States. Our own Provincial Associations of Upper and Lower Canada; our Bureau and Boards of Agriculture; the provisions which are made for imparting a knowledge of the science and principles of this noble art in our Normal and Common Schools, as well as in our Colleges and Universities; and last, but by no means least, the county and township Agricultural Societies, which cover the settled portions of the Province like a network; these various instrumentalities, under the fostering care of the Government, are, in connection with the intelligence and industry of our people, fast placing Canada among the foremost ranks of agricultural countries. The rising generation of our farmers inherit great advantages. Let us hope that while they emulate the persevering and industrious habits of their fathers—the brave pioneers of the wilderness—that they will not lag behind the intellectual progress of the age, but qualify themselves by character and talent, like those we hear spoken of in ancient Rome, for the highest and most honourable offices in the State.

In conclusion, let none of us overlook the moral as well as physical force which is contained in the subject which I have so imperfectly brought before you. The vocation of the farmer, when intelligently pursued, is of all employments, perhaps, the most favourable to health of body and purity of mind. Surrounded by the beauties and wonders of nature, he becomes, in the performance of his daily duties, a co-operator with God. For if the physical sciences, as we call them, if these familiar names of Geology, Chemistry, Botany, Physiology, and the whole string of kindred studies, each in a greater or less degree, connected with the labours and research of the Agriculturist, be indeed but the multiplied title which we have given to the various but correlative parts of one great machine - if their separate investigation be after all found concentric to the same end and object - the knowledge of His works and mode of action, who has made nothing in vain, nothing deficient, nothing superfluous, may they not begin to assume to our understanding something beyond what we are accustomed by habit to associate with the name of 'physical?' Have they no ultimate purpose or leaving; no mission to mankind beyond the analysis of a soil, the cultivation of a plant, or the filling of a granary or a museum, as 'be-all and the end-all' of human knowledge? Then were the creation that surrounds us but a mockery to the self-conscious mind, that recognizing in these objects the mere pabulum of a material and intellectual lip, is sensible of an existence and an aim, to which these are still the subsidiary faculties.

"We look around and find ourselves amidst a great and harmonious system, whose laws are ever pressing around us; more and more clearly the knowledge breaks upon us, that we are a constituted and essential part of that system, in which, under the guidance of unerring wisdom, the humblest even of the material parts have each their appointed purpose and connection with the rest, and as the subjects of human labour and intelligence become pregnant with results which carry on, far beyond our own ephemeral plans and purposes. It is at this point of view that the material and moral world begin to blend together in one mind and reasoning. Causes and effects which we once regarded as purely physical and temporary, begin to assume a wider aspect, a permanence and moral fixity of purpose, which, when regarded by themselves, we had never attached to them. The sustenance, the comforts, the conveniences of life achieved by art and science, are no longer the mere utilitarian objects of human ingenuity, nor the matter from which they are struck out, nor the minds that struck them out, things to contemplate independently, or for their own sake alone. Physical things, and the sciences which relate to them, begin to be invested with a garment of meaning and of purpose altogether new. The drained morass, the fresh-turned fallow, the waving corn-field, the meadow, with its herbage interspersed with flowers, no longer stand separately before us as things of mere labour, utility, or beauty, our relation to them the accident of a day. 'Day unto day uttereth speech, and night unto night giveth knowledge,' - but that speech and knowledge are not the mere 'profane history' of nature. A higher ordinance and appointment, enveloped within their teaching, becomes gradually but irresistibly revealed, binding and disposing all to work together to the greatest ends, not of the undivided only, but of the whole family of man; not of his physical necessities or intellectual pursuits alone, but of his whole relation to that highest wisdom, whose evidences and attributes are engraven upon the fabric of nature, in characters not of power or knowledge only, but of universal and inexhaustible beneficence."

THE ALPHABET.—Which are the most industrious letters?—The Bees. What are the most extensive letters?—The Seas. Which are the most fond of comfort?—The Ease. Which are the most egotistical letters?—The Is. Which are the noisiest letters?—The J's. Which are the longest letters?—The Ells. Which are the poorest letters?—The O's. Which are the leguminous letters?—The Peas. Which are the greatest bores?—The Teas. Which are the sensible letters?—The Wise.

RELIEVE misfortune quickly. A man is like an egg, the longer he is kept in hot water, the harder he is when he is taken out.



MANNY'S REAPER AND MOWER.

The cut represents this celebrated machine as lately improved by Messrs. Walton & Co., manufacturers, at Holland Landing. Manny's machine proved itself in the trials at Paris, superior to *all* others in some points, and to *most* of its competitors, in all points. It can be changed from a Reaper to a Mower in a moment, and having been used one last season, we do not hesitate to say, that as a mower it is quite equal to Ketchum's. Messrs. Massey & Co., of Newcastle, manufactured several of these machines last year, and though defective in some points,—which no doubt will be remedied hereafter they proved themselves well adapted to the wants of the Canadian farmer.

We refer the reader to the advertisement of Messrs. Walton & Co. for particulars, but we understand that one of the improvements - and if real, it is an important one—renders more easy the discharge of the grain at the side of the platform. The gearing is shortened and rendered more compact, and the small platform wheel is attached in a more substantial manner. If made of good materials, and by experienced workmen, we believe this machine will become a general favourite.

A STRATUM OF SALT UNDER NIAGARA FALLS.—E. Merriam, of Brooklyn, who has examined the rocks underlying the limestone bed of the Niagara River, states that he found a saline stratum under them. This stratum is the foundation of the great limestone walls which form the great cataract of Niagara, a frail structure it is, and it is in this stratum that the Niagara has the whole of its bed below the Falls, and being soft, the water which falls over the Horse Shoe and over the American, north of Goat Island, has had no difficulty in sinking chasms of vast depth, into which the broken rock of the limestone walls, which compose the cataract, falls. This stratum extends over a large tract of country, watered by the great lakes, which seem to have a subterranean communication with the volcanoes of Hecla, in Iceland, and those of the southern part of the European continent, as the disturbance caused by the earthquake at Lisbon, in 1775, caused the agitation of the waters of Lake Ontario. He says that an immense volume of gas arises from the chasm into which Niagara plunges from the lofty precipices which form the Horse Shoe on the American fall, and might with proper apparatus be ignited—and when on fire would exceed in beauty the flames of the gas ascending from the deep ravines of the salines of Kanhawa, which give a column of flame of seventy feet in height. His conclusion, from all his observation, is, that the great falls do not date beyond the universal deluge.

NOBILITY and gentleness go hand in hand, and when I see a young man kind to his mother, and gentle and forbearing to his mother and sisters, I think he has a noble heart.—*Selected.*

AGRICULTURE IN NEW BRUNSWICK.

Restigouche Ag. Society.—We have to thank D. Stewart, Esq., Secretary, for a copy of the 18th Annual Report of the above Society. We are always willing to note improvements among our fellow-colonists in the Lower Provinces, and should be glad to publish an occasional communication from some of our subscribers in New Brunswick, Nova Scotia, &c.

From the Report before us we learn that agriculture in New Brunswick is advancing. The crop of last season was an average one, but from the absence of snow for a long period during the present winter, fears are expressed for the next crop. The Society has imported seeds, &c, and cattle, from the Old Country, to a considerable extent, and the Report speaks favourably of the result. The Ayrshires are highly prized, and the West Highland cattle, though disliked by the farmers at first, are now in much favour. "Our farmers," says the Report, "are now convinced by experience, that they are the best adapted to our climate and pasture, crossing advantageously with our best milchers, producing profitable dairy cows and superior working oxen, that are unequalled for *wading through deep snow.*" Such oxen would have been prized in Canada this winter, for we have had *deeper* snow, and for a *longer* period than we can recollect in many years. The "Normandy Horse" is a favourite in New Brunswick, and another importation is to be made by the Society. There is one feature of the Prize List of this Society that we admire: a volume of the *Agriculturist* is given as a third, or fourth prize, as the case may be. It is not because our journal is chosen that we admire the plan, but that other objects beside *money* are recognized as capable of exciting emulation among competitors. The Report contains the following notice of the *Agriculturist*, and we assure the Society that we appreciate their good opinion:—"Forty copies of the *Canadian Agriculturist* are again ordered for distribution. This publication is becoming more and more interesting and useful, &c."

VEGETABLE CUTTER.

To the Editor of the Agriculturist.

DEAR SIR,—I notice in your February number a cut of a Vegetable Cutter. I bought one last year with which I am quite disgusted, and people say there are no good ones made in the country. Now could you recommend the one of which you give a cut? If so I should be very thankful by your informing me in your next number where they are manufactured.

Your obedient Servant,

Beachville, C. W., Feb. 1856.

C. PLACE.

REMARKS.—The Vegetable Cutter, of which we gave a description in the last number, is made in this City, and also at Albany, Rochester, and no doubt other large towns on the other side of the line. Messrs, McIntosh & Walton, of this City, can, we believe, supply one at any time. As to recommending it, we can only say, that it is made on a *good principle*, and those who have used them hereabouts, speak well of them. We have not, personally, used it, but if we were about to purchase, we should choose it in preference to any with which we are acquainted, and this is all we can say on the subject.

NOTES ON CLOVER.

Editor of the Agriculturist.

SIR:—

Of this valuable plant there are several varieties, generally distinguished as medium, large, and tall clover. There is another variety called green clover, though it may be the same as the tall clover, being slower in vegetation, of greater strength, and bearing more and larger green leaves than the medium. It flowers later but it produces much woody fibre useless to stock.

The best soil for clover is clay loam, though by careful cultivation and moist summers it succeeds well on sandy soils. As it sends its roots deep into the earth, it does not readily suffer from dry weather.

To cultivate clover we find it judicious to protect the young plant by sowing the seed with some other plant which is soon to come off the ground. Thus we sow it with advantage as early as possible in the spring on our wheat fields, and it gains strength and vigor by the time of harvest; it is equally successful when sown with flax or buckwheat.

It should always be sown early so as to establish a good plant and root before winter, as frost and ice often destroy the young plants. Early sowing insures early vegetation, and thus the young plant escapes the injury of dry summers, and the oft unheeded attacks of the aphides, a pest but little suspected by our farmers, and yet one of their worst enemies. The seed must never be buried under a layer of earth, but it is sufficient to roll it, the pressure giving it abundant contact with the earth without injuring the wheat. It is important that the seed be evenly sown, to effect which we may first sow one half length-wise of the field, and the other half across it.

Not less than eight pounds of seed should be sown per acre. Even with this quantity a field may appear thin at first, but will soon cover. I think ten pounds per acre is the least quantity proper.

Clover is often destroyed by winter, especially on wet soils; it is raised by the frost and the roots broken. Drainage will correct this evil, and so will deep cultivation or sub-soiling. We must not always despair of our clover when it does not readily show itself after frost, for the root sometimes retains a hold of the earth, and will shoot vigorously; if however the root draws easily from the ground, there is but little chance of recovery.

The analysis of clover shows a large amount of sulphuric acid and lime, and this accounts for the very striking benefit derived from Plaster of Paris. Never fail therefore to dress your clover with one bushel of plaster per acre in the spring, when it has put forth its first leaves. I would harrow the field before sowing the plaster, and before the clover shoots forth; a practice which will abundantly repay the labor.

The proper time for cutting clover for hay is when the field is purple with the blossom or flower. If we let it stand longer, the stems become woody, and do not furnish nutritive matter to cattle, and the next crop is enfeebled.

As clover is a 'perennial plant, it dies in the third or fourth year. Its greatest yield is generally the next season after sowing, the next crop is less plentiful, and the third is small. The third crop makes valuable manure for the field if ploughed in as preparatory to wheat.

From the first or second crop we obtain a supply of seed, in which case we cut early for hay; the clover then blooms strongly in time to cut and house it before autumn, and yields a full supply of seed. A bushel of seed weighs from sixty to sixty four pounds. It is wrong to feed off a clover lot by cattle either the first or second year. As a general rule it is advisable to sow timothy seed with clover when we intend to continue a field in grass, for when the clover ceases the timothy will be in full vigor, and together, they make most excellent hay.

Toronto, 11th Feb. 1856.

AGRICOLA.

* The common red clover is a biennial. It comes into use in the *second* year of its existence. It then dies. There is a variety known as *Trifolium pratense perenne*, perennial red, but the seed is costly, and Stephens says,—“It is questionable that its permanency should counterbalance the greater cost of seed.”—[Ed.]

SHARPENING EDGE TOOLS.

Messrs. Editors :—A German scientific journal has the following, which has been translated for the benefit of those whom it concerns.

“It has long been known, that the simplest method of sharpening a razor is to put it for half an hour in water to which has been added one-twentieth of its weight of muriatic or sulphuric acid, then lightly wipe it off, and after a few hours set it on a hone. The acid here supplies the place of a whetstone by corroding the whole surface uniformly, so that nothing further but a smooth polish is necessary. The process never injures good blades, while badly hardened ones are improved by it, although the cause of such an improvement remains unexplained. Of late, this process has been applied to many other cutting implements. The workman, at the beginning of his noon spell, or when he leaves off in the evening, moistens the blades of his tools with water acidified as above, the cost of which is almost nothing. This saves the consumption of time and labour in whetting, which more-over speedily wears out the blades.”

In reply to the suggestion contained in the last paragraph, I would say, it has been the practice from time immemorial, perhaps, for mowers in France, to keep their whetstones—the blue, or rag-stones—steeped in vinegar and water contained in a bullock's horn strapped at the back around the loins, fastened with a buckle in front; the acetous, answering, no doubt, the same purpose as the muriatic or sulphuric acid. The scythes used in France are the German, with long, straight handles, and blades that are sharpened by *hammering* instead of *grinding* the edge; so that, in all probability, when the German scythe came into use the mode of keeping the whetstone in acidulated water accompanied it. The German scythe is a most formidable weapon; I have seen a French mower carry a swathe in a heavy crop of grass full ten feet wide, and make the most perfect work, but it is herculean labor, and could not, one would suppose, be continued for any great length of time; and if used in competition with the American scythe, with its peculiarly-curved short snath and fixings, would, I guess, be found wanting in every thing but length.

L. N.

A PHRENOLOGIST POSED.—A travelling phrenologist stopped at a farm-house, the proprietor of which was busily engaged in threshing. “Sir,” said the traveller, “I am a phrenologist. Would you like me to examine the heads of your children? I will do it cheap.” “Well,” said the farmer, pausing between two strokes, “I rather guess they don't need it. The old woman combs 'em with a fine-tooth comb once a week!”

HAY CAPS.

We are indebted to G. W. Baker, Esq., of Ottawa, for the following letter on Hay Caps:—

ROUND HILL, NORTHAMPTON, MASS. }
June 25th, 1855. }

To the Editor of the Hampshire Gazette.

Sir,—

Permit me through your respectable journal, to advise my brother farmers to supply themselves with a most useful and economical article of covers to protect their hay against rain, which I have fully tested for the last five years to my entire satisfaction. They are made in the following manner, — viz: stout unbleached cotton sheeting should be purchased — (such as is made by the Lyman Mills Co. at Holyoke) from 36 to 40 inches wide — the latter is best — which should be cut in lengths of 40 to 45 inch. the latter is more useful. To make 50 of them, (and no extensive farmer should have less than 100.) would require about a gallon of linseed oil, which should be simmered with 4 pounds of beeswax and a quart of japan added after it is taken from the fire; — when cold the mixture should be about the thickness of lard in summer, if not more oil or wax should be added. The cloth should then be passed over, (to use a sea expression.) with the hand on one side only, and then dried in the sun.

When dry the females of the family will in a very short time sew into each corner a stone of the weight of about 5 to 6 ounces which completes the affair. I do not think I am extravagant in saying they will pay their cost in one season, and will last ten years if taken good care of. Large covers made in the same manner, to cover the whole of a load of hay, with heavier weights of course would be an admirable protection against sudden showers, but as I have not often made hay at a distance from home I have never required them. I keep three horses one is about thirty, one about eighteen, and one about fourteen years old. I have never known either of them to be sick for one hour. The heaves are unknown in my stable, which may fairly be attributed to the fact, that no musty hay ever enters my barn; and it is possible that the milk of cows may be as unwholesome if they are fed on badly cured hay, as if they were fed on what is called swill in the cities.

Since I wrote the above (now 2d July.) we have had one entire rainy day, when my neighbors hay was thoroughly soaked, while mine was as safely covered as if it had been packed away in the barn. My manager thinks that one third of the cost of some new covers just made, was paid for on that day. One word more on the subject of hay making, and I have done. It is always my practice to commence mowing when my grass is ready, without stopping "to count the clouds," and even if it sprinkled, if my men choose to take their scythes into the field I make no objection. The result has been after long experience, that I have had more than my share of good luck in this critical branch of business. It is said that our ancestors considered it a good rule to take an umbrella or great coat on their horseback journeys if the weather was fair, but if it was cloudy or rainy, they might do as the pleased.

Respectfully yours,
EDWARD CLARKE.

The Hon'ble Amasa Walker of the county of Worcester in this State thinks that twenty thousand dollars would have been saved during the late wet weather, to the farmers in that county alone, had they have been supplied with the hay caps referred to; Mr. Clarke is also of opinion, that the saving to the farmers in the west during the wet weather would have been incalculable, had they have had them to cover their wheat stacks.

A NEW FOOD.

SUBSTITUTE FOR THE POTATOE.

Two correspondents have sent us accounts of the Chinese Yam or Japan potatoe, an esculent lately introduced into France, and also within the last year or two, into the United States. We believe a gentleman of this city imported a few roots last season, but whether he received them in time, or succeeded in reproducing them here, we have not learned. The following is furnished by a city subscriber, extracted we believe, from the *Anglo-Saxon*.

THE CHINESE YAM.

Attention, as all men know, has of late years been anxiously turned towards the discovery of a plant capable, in whole or in part, of forming a substitute for the precarious potatoe crop. Many have been suggested. The tuberous oxalis, the arracacha, the lesser calendric, and many more, have from time to time been brought into notice; but each in turn, when weighed in the balance of practical agriculture, has been found wanting.

The star of hope to which the eye of hungry Europe is now directed is an oriental yam, which the combined labors of the "allies" have suddenly brought forth from an inglorious obscurity of 6,000 years. Like the East and West Indian yams already known, it belongs to the genus *Dioscorea*—but is very different from these in its specific character. Mr. Decaisne's experiments lead to the conclusion that it would speedily become a plant of real agricultural importance in France; and professor Lindley sees no reason, judging from its geographical distribution, and its affinity to our hedge bryony, which it much resembles—why it should not suit our climate.

The plant has large perennial rhizomes or roots, the top end of which are as thick as the fist, and which taper downwards to the thickness of the finger, descending perpendicularly to the depth of a yard, if the soil is loose enough to allow them. The haulm is annual, as thick as a goose quill, cylindrical, entwining from right to left, two yards in height, of a violet color, with small whitish specks; and when not artificially supported it trails on the ground, rooting freely at the joints. In China, this plant has long been in extensive cultivation under the name of *Sain-In*; and Mr. Montigny through whom it was introduced from Shanghai to Paris, reports it to be highly productive, and consumed as largely by Chinese as the potatoe is by Europeans.

As yet the applicability of the plant to Britain has not been practically demonstrated, but the French horticulturists, who have been at much pains to inquire into its merits, have arrived at the following conclusions:—1. That in the point of flavor and nutritive properties, it is equal to the potatoe, and in the opinion of Professor Ducaisne superior. 2. That the yield is greater, whilst its freedom from disease renders the crop more certain.—3. That it will grow upon sandy, and what are usually considered barren soils; and this affords an excellent means of turning waste land to profit.—4. That it can be propagated with facility.—5. That it may remain in the ground several years without degenerating, but on the contrary, it increases in size, weight, and nutriment, "furnishing at all seasons of the year an aliment within the reach of every one."—6. That when harvested it may be preserved in cellars or sheds, without vegetating, for many months after the potatoe has become useless for food.—7. It requires a shorter time for cooking than the potatoe, ten minutes boiling being sufficient.

Mr. Decaisne, in detailing his experiments, observes: "If a new plant is to have a chance of becoming useful in rural economy, it must fulfil certain conditions, in the

absence of which its cultivation cannot be profitable. . . . Now, the Chinese yam satisfies every one of these conditions. It has been domesticated from time immemorial; it is perfectly hardy in the climate of France; its root is bulky, rich in nutritive matter, eatable when raw, easily cooked either by boiling or roasting, and then having no other taste than that of flour (*fecule*). It is as much a ready-made bread as the potatoe, and is better than the batatas or sweet potatoe."

The system of cultivation recommended by Professor Lindley for Britain is the following, viz:—For propagation, the smallest roots are set apart, and pitted to keep them from frost. In the spring, they are taken out and planted in furrows, pretty near each other, in well prepared ground. They soon sprout and form prostrate stems, which are made into cuttings as soon as they are six feet long. As soon as the cuttings are ready, a field is worked into ridges, along each of which is formed a small furrow in which the pieces of the stem are laid down and covered with a little earth, the leaves being left bare. If rainy weather follows, the cuttings strike immediately; if dry, they must be watered until they do strike. In fifteen or twenty days, the roots begin to form, and at the same time lateral branches appear, which are carefully removed from time to time, to facilitate the swelling of the roots. In general one plant produces two or three tubers (rhizomes) which are of a coffee color externally, but consist internally of a white, apaline, very friable, slightly milky, cellular mass, filled with flour, which softens and dries in cooking till it acquires the taste and quality of a potatoe, "for which it might be mistaken"—possibly in taste, certainly not in appearance."

The account given below is from D. A. Ross, Esq., of Quebec, who condensed it from an American Journal. We should be glad to hear from any of our readers who have attempted to cultivate this plant. The continued liability of the potatoe to disease, makes the question of a substitute interesting to all:—

THE CHINESE OR JAPAN POTATOE.

This most important esculent (*Dioscorea Batatas*, *Dioscorea Japonica* or *Ignam de la Chine*) was first introduced into Europe in 1850, it having been sent to France by Monsieur de Montigny, French Consul at Shanghai, in northern China. It is in no case subject to decay, whether in the ground or out of it, and is of so hardy a character as to withstand the severest winter uninjured. It is superior in farinaceous properties to both the known species of potatoe. The "Mark Lane Express" acknowledges that it is a substitute more valuable than the ordinary potatoe.

Roots of this plant have been produced in middle and northern France, weighing from two to two and a half pounds, from tubers planted in April and dug in October. One great point of superiority possessed by it is that it may remain in the ground two or three years, always enlarging in size and equally nutritious and excellent in flavor. Experiments have proved that when the roots are left for eighteen months in the ground, the yield is more than treble that of roots left but for one summer, and it is also considered that the roots are improved in quality.

In the spring of 1853 the largest plantation in France contained but 700 roots.—Yet such is the ease and rapidity of its propagation, and increase that it is already becoming most remarkably disseminated. Its growth is very rapid and it seems suited to any climate and to any soil although a sandy loam or sandy soil has been deemed preferable in Europe where the sun heat is so much less powerful than with us. It has been tested in America, in sandy and in stiff loam and grew vigorously in both, and from analogy it is more than probable that it will do well in humid soils.

Its roots run perpendicularly into the earth, thereby greatly enlarging its capacity to produce the greatest possible crops from a given space of ground. It has been calculated in the French Publications, from the experiments there made, that an acre will in six months produce 36,000 pounds, and in eighteen months, 120,000 lbs.

The roots, when placed in a cellar, remain firm and perfect, as well as free from sprouts, and they can be kept out of the ground a year without injury or deterioration of their alimentary qualities. This property renders them invaluable for use in long sea voyages and as preventatives of scurvy. This plant is better adapted to cold than to hot climates. The root is from 15 to 25 inches long and two inches in diameter, tapering from the head, the outward appearance similar to the white variety of the sweet potatoe—skin thin, readily peeling off when cooked; flesh snow white, delicately farinaceous, with a slight almond flavor, exceedingly grateful when used in the same manner as the ordinary potatoe and deemed both richer in nutrition and superior in quality. It can be cooked by water or steam, or roasted, and in appearance and taste is like the finest mealy varieties of the common potatoe. It requires but ten minutes boiling—the ordinary potatoe requires twenty. It produces a fine, pure, white flour which will compare advantageously with any wheat flour.

This plant combines the advantages of immense product, diminished comparative labor, and adaptation to the soil where scarcely any other root will grow, and will remain in the ground during winter and for a period of three or more years furnishing throughout all seasons a fresh, wholesome and nutritious aliment for all classes at the cheapest rate. The acquisition of this esculent constitutes an era in Agriculture.—Small sections or eyes of the root (the same as potatoe sets) may be planted at the first opening of spring at a depth of about three inches.

Information may be obtained on the subject of this valuable esculent from "The United States Patent Office Report" just issued "La Revue Horticole" and "Boa Jardinier" of France, and "The Mark Lane Express," and from William R. Prince, Esq., of Flushing, Long Island, N. Y. the author of an interesting letter on the subject which appeared in the columns of "The New York Tribune," on the 29th December, 1855, under the caption of "The new Esculent Root," "The Chinese or Japan Potatoe" and from which the foregoing particulars have been abridged.

MULCHING FRUIT TREES.—A correspondent of the Horticulturist planted 150 trees in very good but rather dry soil. All were planted with equal care, but a third of them were *mulched*, or the surface of the ground when planted, covered with six inches of litter. Those thus treated all lived; but fifteen of those not mulched died in the hot, dry weather of midsummer. It is not stated that the soil was kept clean and mellow around them; which will often save the life of trees, when they would die of neglect.

GREAT THOUGHTS.—No productiveness of the highest kind, no remarkable discovery, no great thought which bears fruit and has results, is in the power of any one; such things are elevated above all earthly control. Man must consider them as an unexpected gift from above, as pure children of God, which he must receive and venerate with joyful thanks. . . . In such cases, man may often be considered as an instrument in a higher government of the world, as a vessel found worthy for the reception of a Divine influence. I say this whilst I consider how often a single thought has given a different form to whole centuries, and how individual men have, by their expressions, imprinted a stamp upon the age.—*Goethe.*

GENERAL DIRECTIONS FOR FEEDING AND FATTENING OF PIGS.

Regular hours of feeding rank among the first of the rules which ought to be observed; the pigs will soon learn to expect their meals at certain times, and the stomach will be ready for it; irregularity will, therefore, irritate the digestive powers, and prevent so much benefit being derived from the meal when it does come.

Small meals, and many of them, are preferable to few and large ones, for swine are very apt to gorge and over-eat themselves, or if any be left in the trough, to return to it by fits and starts until it is all gone; in both cases the digestive functions are impaired, and the process is not fully and beneficially performed. The best remedy for indigestion is to let the animal fast for four-and-twenty hours, and then to give them a small quantity of dry food, as barley or peas, whole and salted, and let them fast four or five hours more before resuming their usual food.

Pigs always eat more when first put up to fatten than they do afterwards; therefore the most nutritious food should be reserved until they are getting pretty fat. And at that period the food must be varied, for the appetite being diminished, it becomes necessary to excite it by variety; and, besides, the same aliment constantly given palls upon the stomach, and is incapable of supplying in itself all the various kinds of nutriment required by the increased and altered state of the body.

It will be found advantageous occasionally to mingle a little sulphur or powdered antimony with the food of swine put up to fatten; about half an ounce once in ten days will usually be sufficient. These medicines tend to purify the blood, facilitate digestion, and maintain the appetite.

An American writer states that he has found gall-nuts, bruised and mingled with charcoal, to act most beneficially on the health of swine while being fattened; and also recommends that they should always be allowed to root in the earth of a small yard attached to the sty each day, and, if they will, eat some of the earth, which will be good for them. An intelligent writer in the *Quarterly Journal of Agriculture* states, that on the Duke of Montrose's estate, the pigs have ashes and cinders given them occasionally to correct the acidity of the stomach; and that they are frequently turned out to a piece of ground sprinkled with lime, which they root in and eat; or else, if this is not possible on account of the weather, a little magnesia is now and then mingled in the milk. These simple precautions are always more or less necessary to animals that are highly fed and have little or no exercise, and we should recommend them to the attention of all owners of pigs.

Cleanliness is another *sine qua non*. There is no idea so utterly without foundation as the common one "that pigs love dirt," and that these animals thrive best in the midst of filth. We will quote one anecdote out of the many which have come to our knowledge, in refutation to this absurd opinion:—"A gentleman in Norfolk put up six pigs of almost exactly equal weight, and all in equal health to fatten; treated them, with one exception, all exactly the same, and fed them on similar food, given in equal quantities to each, for seven weeks. Three of these pigs were left to shift for themselves so far as cleanliness went, and the other three were carefully curried, brushed and washed. These latter consumed in the seven weeks less food by five bushels than the other three, and yet, when killed, weighed more by 2 stones 4 lbs. on the average."

It should be the duty of some one person to keep the skins of the pigs put up to fatten—indeed, we would rather say, of all the pigs kept—perfectly free from mud, dust, or filth of any kind; and this will best be done by taking care that they always have clear water to bathe in within their reach, clean litter to lie upon, are occasionally combed and brushed, and that the sty is always kept free from filth. Nothing is so likely to engender lice and disease of the skin as for it to be suffered to remain in a dirty state. It is true that the maintenance of cleanliness will cost some trouble and expense, but every owner of pigs will best consult his own interests by attention to this point.

The best period for fattening pigs is autumn; then almost every kind of food is to be had in plenty, as well as in perfection; the weather is neither too hot nor too cold; and the humidity generally prevalent at this season acts beneficially upon the skin and tissues, and as it were lubricates the whole animal economy. Besides, they are ready to be slaughtered at the period when this can be done with most advantage; when the lowness of the temperature allows more time, and consequently enables the owner to turn the flesh to the greatest advantage; whereas in hot weather the meat must be salted or pickled, eaten or disposed of immediately, or it turns off and is spoiled. In the immediate neighbourhood of large towns alone will it be found advantageous to fatten pigs so as to have them ready to kill in the summer; there the prices which can often be obtained may compensate the dealer for the difficulty and risk he undergoes; but even the facilities afforded by railways will hardly do this to those who reside in remote localities, as here the expense of the transit has to be added to the other items, and the risk is increased by close packing.

The best kinds of food for fattening pigs are:—

Milk or whey mixed with barley, oat, corn, or pea-meal, or with boiled and mashed potatoes.

Potatoes and rice; potatoes and meal of any of the above kinds, or mashed potatoes and whole grain.

Peas given whole, or crushed, or in the form of soup, and either alone or mixed with barley meal or potatoes.

Carrots and parsnips; and especially boiled carrots, which some persons consider to be the most nutritious and fattening food that can be given to swine.

Pasturage or clover, lucerne, or sainfoin, or a run in the stubble of corn-fields immediately after the crop has been cut and got in.

Beet-root and ruta-baga are good; but should only be given when other roots cannot be easily obtained.

And lastly, grain itself, as corn, barley, and oats, but not rye.

An American correspondent gives the following recipe for "an exceedingly nutritious food for hogs;" but it is one which circumstances will not often permit us to make use of:—"Boil Irish potatoes, pumpkins, and apples until they are soft; mash them all together, taking care thoroughly to mix and incorporate them, and add a little salt to the compound; swine will be found to relish this food highly, and thrive uncommonly well upon it."

A small portion of salt should always be mingled in whatever food is given, as it tends to stimulate the appetite as well as the digestive functions; and an ample supply of good water for drinking be kept within the reach of every animal.

Indian corn, buckwheat, rice, and maize, may doubtless be given with advantage, and are in themselves highly nutritious; but they cannot be reckoned as among the kinds of food generally in use, as, unless under peculiar circumstances, they are too expensive, and not always to be obtained at all.

Turnips, cabbage, lettuce, and beans, are not so much adapted for fattening as the kinds of food above enumerated, although these matters often form valuable additions to the keep of store pigs.—*YOUART, on the Pig.*

THOUGHTS AND WORKS.—It is much easier to think right without doing right, than to do right without thinking right. Just thoughts may, and wofully often do fail of producing just deeds; but just deeds are sure to beget just thoughts. For when the heart is pure and straight, there is hardly anything which can mislead the understanding in matters of immediate personal concernment. But the clearest understanding can do little in purifying an impure heart, the strongest little in straightening a crooked one. You cannot reason or talk an Augean stable into cleanliness. A single day's work would make more progress in such a task than a century's words.—*Hare.*

POTATOES AS BIG AS A BARREL.

Not that they have been produced yet, but are going to be. The following is the process, and as it is not patented, every body can try the same experiment.

To the Editor of the N. Y. Tribune.

SIR: About a year ago I conceived the idea of producing the mammoth size of the petrified remains of plants, which we meet with in the study of geology, by means of an excess in supply of carbonic acid. I constructed an iron vessel, in which I generated carbonic acid gas by means of drenching limestone with vinegar. This I infused into the soil in a flower-pot in which I had planted a potatoe. I did this daily; also I put the flower-pot into an iron vessel filled with the carbonic acid and covered to prevent diffusion. At the end of about six months the plant reached the height of four feet, and bore a pale blossom. In a week more the pot was split. I took out the plant, and a single potato (beside the remains of that I planted) of about eight inches in diameter, was at the root. By planting this and treating it in the same manner, I hope to obtain potatoes of the size of a barrel.

I remain, very truly yours,

DR. A. AINSWORTH.

P. S.—Until now I never ventured to lay this matter before the public, but I am now fully convinced the soil may be rendered very prolific by manuring with limestone soaked with an acid.

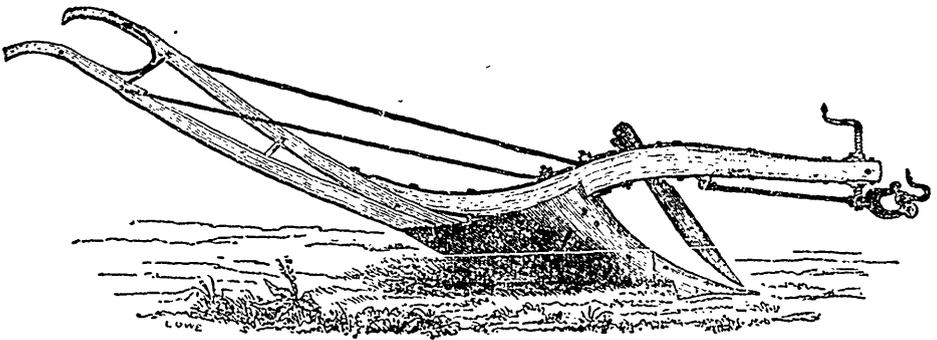
A. R.

Haverford Penn., Nov. 23, 1855.

A FRENCH LADY INSTRUCTING BRITISH CAVALRY.

On Wednesday, Mademoiselle Isabelle, a French lady, who has effected a revolution in the system of riding and horse-breaking in the Government cavalry schools of France arrived at the Maidstone cavalry depot. A general order had been issued by Lord Hardinge, desiring that every attention and obedience should be shown her, and under the sanction of this she commenced demonstrating her system at the riding-school.—Two young horses, two recruits, and two trained horses were placed at her disposal; and so far as she has yet proceeded with her instruction, it would appear that her plan is to affix to a horse's back a kind of break, from which proceed two reins on each side, which are affixed at different heights on the break, in addition to the usual bridoon rein and bit, and then, the horse's head being in position, she, with a whip, makes the animal go through certain initiatory movements, which are always practised in our service with a mounted man. She then teaches a recruit to effect this object in the same way, and afterwards mounts him on a trained horse, and instructs him how to achieve the same result. There is another difference in her method; many portions of the exercise which she teaches a recruit at once, in the English schools have not been thought proper for a man to do until he has been for some time under training. It is thought there will be no difference in the end between her method and that now in practice, but the result will be arrived at by a different and, perhaps, shorter method. She is pronounced "clever" by many of the old soldiers of the depot; and she, on the other hand, is understood to have highly praised the method pursued at Maidstone.

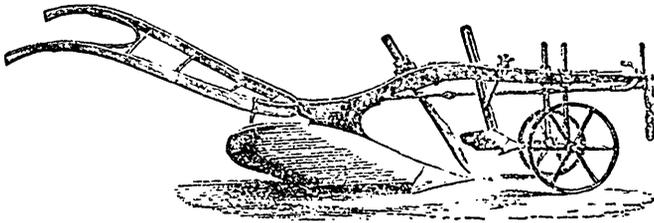
"THE MOTHER'S BREATH is a blessing to a house," is said to be an Irish proverb. It is certainly a beautiful mode of expressing a great truth.



THE BINGHAM PLOUGH.

We have thought it would be satisfactory to many of our readers to get a view, even on paper, of the ploughs which attracted so much attention, and worked so admirably at the recent trials in France. We therefore procured engravings of two of them,—“The Bingham Plough,” of which the above is a good representation, and the “Howard Plough,” a cut of which, copied from the *Mark Lane Express*, is given opposite. We should have been glad to present an illustration of the “Morse plough,” which was selected by the Canadian Commissioners to represent Canada at one of the trials at Trappes, and for its excellent performance, was awarded a gold medal. But we are not acquainted with the manufacturer, and have received no communication from him. We are therefore unable to place his plough before the public at present. Mr. Bingham has sent us one of his ploughs for trial in the spring, and we are glad to learn that a neighbor of the writer, J. Becket, Esq. imported last year, one of Howard’s prize ploughs from England, and we shall therefore have an opportunity of testing this plough on Canadian soil, in competition with those of our own manufacture.

Mr. Bingham’s plough is manufactured at Norwichville, C. W., and as we learn from a number of farmers who have used it, is much approved. This plough, as the reader will guess from its appearance, is adapted to sward or sod-ploughing, though it will on many soils answer equally well for breaking up fallow ground, &c. The proprietors have now in press a small work on the subject of ploughs and ploughing, with a full description of the principles and peculiarities of their plough, from which we may quote a few passages when it makes its appearance. We have brought this implement under the notice of the Canadian public not because we believe it to be superior to *all* its predecessors, either in form, workmanship, or cost, but because it is a home-made article—a circumstance which, other things being equal, will always command our preference—because it behaved well and attracted notice in competition with the most celebrated implements of the old world, and because it appears to us to combine all the best points of a good plough suited to this country with something peculiar to itself.—As we said in a previous number, after we have tried it in the field we shall speak more confidently.



HOWARD'S PRIZE PLOUGH (ENGLISH.)

The above is a representation of the plough which as we understand the awards, received the highest prize at the late World's Fair in Paris. The official awards are not yet published in detail, but from the various statements that have appeared from time to time, we gather that the "Howard plough" was considered superior to all others in one point, viz: *lightness of draught*, and equal to the best in the execution of its work. As we have remarked in reference to other implements, the decisions on such occasions will not be accepted by practical farmers as "final and conclusive" in regard to the general merit, or even the comparative merit of any agricultural implement or machine. There are so many elements, so many conditions to be considered in all questions of this kind, that an absolute judgment in favor of any particular form or combination is of little weight.

We have no doubt that the Howard plough upon English soil, and under the conditions which must there be met, is a good implement,—probably superior to any that has preceded it. We confess that so far as one can judge from an engraving, it differs very little from the prize plough of Ransome & Sims, an implement that stands high in England. The Howard plough imported by Mr. Becket, is a very heavy implement, and whatever may be its merits for lightness of draught in stiff soils, we much doubt that it will satisfactorily answer the conditions that must be encountered on ninety-nine out of every one hundred farms in this country. The price alone will be a serious obstacle. It is sold in England for £4 10s. sterling—but probably could not be made here for less than \$35 or \$40. As in the other case, however, we shall be better able to speak of its merits or defects after a trial in the field.

SONG OF THE AUTUMN ROBIN.—It is worthy of remark, that none of the *old* robins resume their songs until the spring. All the music we are treated to from November to Christmas, is improvised by the young birds of the present year. Its freshness, joyousness, richness, and purity are inexpressibly delightful. Our little friends are honest. All we hear is genuine. They are happy; and they take care to let us know it, and feel it. Just now, it does one good to listen to "the autumn bird in russet coat." The little fellow seems to consider it his "mission" to attend us wherever we go; and to lighten our cares by joyously singing them away. In the garden, in the field, in the lanes, in the wood, in the farm-yard, in the barn, on the old shed—there he is, looking out for us! And how merrily does master Bob greet us! His salutation—how frank! I wonder what he would say to those formalists and "fashionables" amongst us, who exhibit two flabby fingers as conventional tokens of recognition and affection to visitors and friends!—*Kidd's Treatise on the Robin.*

CARE OF CHINA AND GLASS

The most important thing to do is to "season" either glass or China to sudden change of temperature, so that it will remain sound after exposure to sudden heat and cold.— Now, this is best done by placing the articles in cold water, which must gradually be brought to the boiling point, and then allowed to cool very slowly, taking a whole day or more to do it. The commoner the materials the more care in this respect is required. The very best glass and China is always well seasoned, "annealed," as the manufacturers say, before it is sold. If the wares are properly seasoned in this way, they may be "washed up" in boiling water without fear of fracture, except to frosty weather, when, even with best annealed wares, care must be taken not to place them suddenly in too hot water. All China that has any gilding upon it must on no account be rubbed with a cloth of any kind, but merely rinsed, first in hot, and afterwards in cold water, and then left to drain till dry. If the gilding is very dull, and requires polishing, it may now and then be rubbed with a soft wash-leather and a little dry whiting; but, remember, this operation must not be repeated more than once a year, otherwise the gold will most certainly be rubbed off, and the China spoilt. When the plates, etc., are put away in the China closet, a piece of paper should be placed between each to prevent scratches. Whenever they "clatter," the glaze or painting is sustaining some injury, as the bottom of all ware has its particles of sand adhering to it, picked up from the oven where it was glazed. The China closet should be in a dry situation, as a damp closet will soon tarnish the gilding of the best crockery.

In a common dinner service it is a great evil to make the plates "too hot," as it invariably crack the glass on the surface, if not the plate itself. We all know the result—it comes apart; "nobody broke it," "it was cracked before," or "cracked a long time ago." The fact is, that when the glaze is injured, every time the "things" are washed the water goes to the interior, swells the porous clay, and makes the whole fabric rotten. In this condition they will absorb grease; and being made too hot again, the grease makes the dishes brown and discolored. If an old, ill-used dish be made very hot indeed, a teaspoonful of fat will be seen to exude from the minute fissures upon its surface. The latter remarks apply more particularly to common wares.

In a general way, warm water and a soft cloth is all that is required to keep glass in a good condition; but water bottles and the decanters, in order to keep them bright, must be rinsed out with a little muriatic acid, which is the only substance which will remove the fur which collects in them; and this acid is far better than ashes, sand, or shot; for the ashes and sand scratch the glass, and if any shot is left in by accident, the lead is poisonous.

Richly cut glass must be cleaned and polished with a brush like plate, occasionally rubbed with chalk; by this means the luster and brilliancy are preserved.

RECENT ENGLISH PATENTS.

IMPROVEMENTS IN THE MANUFACTURE OF VARNISH.—This invention is intended to produce a superior quality of copal varnish. It is based upon the discovery that copal gum consists of two constitutive parts or ingredients, one of which is entirely soluble in oil and in essence of turpentine, and the other of which is quite insoluble in the substances employed in making varnish. It is this latter portion of ingredient which deteriorates the pellucidity and whiteness of the varnish, especially by taking a brown tinge, by boiling in a copper or other vessel, on an open fire, as the manufacture of var-

nish is usually carried on. Hence, the object of the present invention is to purify the gum copal, by extracting from it the insoluble part, either by means of ordinary distillation, or by means of a hot-water bath, or else by means of over-heated steam, by applying either of which, the insoluble part is volatilized and condensed in a suitable receiving vessel. The quantity of insoluble matter, viz., from fifteen to thirty per cent, of the gum copal acted upon, having thus been expelled, the remaining portion is left to cool or solidify, and is then ready for use, being perfectly soluble in both warm and cold oil, turpentine, and similar matters, with which it will produce a quality of varnish superior to that which is manufactured in the present way.

IMPROVEMENTS IN THE MANUFACTURE OF SOAP.—This invention consists in peroxidizing any oxide of iron that may be present in fatty materials, acid or not acid, undergoing the process of saponification by the injection of air or oxygen,—removing the peroxidized iron by means of any vegetable or other acid or principle (such as tannic or gallic acid) capable of combining with it, so as to form an ink or inky solution, and afterwards making soap with the fatty materials thus purified or bleached.

The manner of carrying out this invention is as follows: By means of a force pump or other suitable agent, air or oxygen, in a heated or cold state, is injected into the mass through a perforated coil of pipe in the body of the vessel, which should be made of wood, or lined with sheet-lead; and this injection of air or oxygen is continued so long as may be considered necessary; the time varies according to the degree of oxidation already existing, and can only be ascertained by taking samples and by practice. An infusion or solution of sumach, gall-nuts, or other material capable of combining with the peroxidized iron existing in the materials under operation, is then added to the mass, and the whole is well stirred together; after which the inky solution is drawn off from the vessel, and the materials are boiled, for about two hours, with a like quantity of pure water, which is afterwards drawn off, and with it any of the inky solution that may have remained in the materials. The soap-making is then proceeded with, and the process completed in the ordinary manner.

The purified soap produced by this invention will be found suitable for dyers, scourers and others who require a soap free from iron,—the presence of which is, in many cases, highly injurious to many descriptions of colors.

CONSTRUCTION OF THE PLOUGH.

The Implement Committee of the N. Y. State Fair, from whose report we have made extracts in our last, make the following sensible remarks in reference to the principles on which ploughs should be constructed:—

“Every agricultural improvement should be adapted in form and construction, to the purposes for which it is intended. The plow ranks foremost in use and importance with the farmer, and it differs materially with his labors whether it be illy or appropriately adjusted.

“The ground should be plowed to a sufficient depth, varying with the nature of the soil; the furrow should be well turned—it should be straight; and in the performance of its work, the plow should be so constructed as to be of light draft, of steady, even motion, requiring the least possible labor to the plowman and team.

“We have no doubt but that some improvements, in the construction of the plow, are as yet unattained, which are important to the desirable performance of this portion of agricultural labor. A defect of some plows is palpable in too abrupt wedge, formed by the share and mold board, by means of which much power is lost, and the motion

rendered unequal. In all cases the plow should be so arranged as to stand and work level; the rise from its point to the heel of the mould board, should be gradual, so as to cut and lift the furrow slice by an easy progress, and its course through the soil should be a steady level, and of easy guidance and draft. For this end the plow should be constructed with proportionate length from the point to the heel of the mould board with the width of the wing of the share, so as to avoid too great friction, and handles (horizontal measure) of sufficient length to ensure easy holding and guidance. The ease and steady motion of the plow is also secured by observing the "line of the draught;" this depends upon the adjustment of the beam, the clevis and chain or traces, so that the plow is caused to run even and steady, and to press equally all along its base. The wedge of the plow ought to be more blunt or gradual as it is intended for pulverizing the soil or for turning over the heavy sod; and the discriminating mechanic will adjust the implement for the particular use for which it is designed—while those who never discriminate will continue to vend such as we have in too common use, and with which we labor hard with very unsatisfactory results."

GROUND AND UNGROUND—COOKED AND UNCOOKED FOOD.

In a communication from the Society of Shakers, at Lebanon, New York, in the Patent Office Report, we find the following upon the relative value of ground and unground, cooked and uncooked corn for feeding and fattening cattle, &c.

"The experience of more than 30 years leads us to estimate *ground corn* at one-third higher than unground as food for cattle, and especially for fattening pork; hence it has been the practice of our society for more than a quarter of a century to grind all our provender.

"The same experience induces us to put a higher value upon cooked than upon raw meal; and for fattening animals, swine particularly, we consider 3 of cooked equal to 4 bushels of raw meal.

"Until within the last three or four years our society fattened annually for 30 years from 40,000 to 50,000 pounds of pork, exclusive of lard and offal fat; and it is the constant practice to cook the meal, for which purpose 6 or 7 potash kettles are used."

The Shakers are a close-observing, calculating people, and go in for the practical realities of life and therefore, in the economy of food, must be presumed to be good judges.

BRINE A POISON.—M. Reynal of the Veterinary School at Ajort, France, communicated to the Imperial Academy of Medicine in May last, the result of investigations upon the poisonous properties acquired by brine, after a considerable length of time, in which pork or other meats had been salted or pickled. Although the nature of the poison is involved in considerable obscurity, its existence is clearly demonstrated. The poisonous properties are acquired in two or three months after the preparation of the brine, and its use then, mixed with food for any length of time, even although in small quantities, may produce death. A simple solution of salt in water, after the same length of time, does not produce the same effect. The poison acts as a local irritant, exciting violent intestinal congestion and inflammation: it likewise increases the secretion of the skin and kidneys, and exerts a direct effect upon the nervous system, giving rise to trembling, loss of sensation, convulsions, &c. Experiments were tried with it, in the veterinary school, upon horses, dogs, and pigs. As brine is sometimes used a second time for pickling, and for other purposes, these facts should be remembered.

THE REWARDS AND DEATH OF THE AUTHOR OF "HUDIBRAS."

Chilled by the hollowness of patronage, even the applause of the public did not inspire him with a sufficient motive to literary exertion; and it may be concluded from his long silence that he laid aside his work in disgust. How he was occupied between 1663 and 1678, when he published the third part, does not appear. Aubrey, who is copied by Wood, says that he was Secretary to the Duke of Cambridge, and that he might have had better employment, but that his expectations were too ambitious; and so, at last, he had no employment at all. How far this account is likely to be true, may be in some degree conjectured from the following anecdote, related by Major Packe: "Mr. Wycherly had always laid hold of any opportunity which offered of representing to the Duke of Buckingham how well Mr. Butler had deserved of the Royal Family by writing his inimitable 'Hudibras;' and that it was a reproach to the Court, that a person of his loyalty and wit should suffer in obscurity, and under the wants he did. The Duke seemed always to hearken to him with attention enough; and after some time undertook to recommend his pretensions to his Majesty. Mr. Wycherly, in hope to keep him steady to his word, obtained of his Grace to name a day when he might introduce that modest and unfortunate poet to his new patron. At last an appointment was made, and the place of meeting was agreed to be the Roebuck. Mr. Butler and his friend attended accordingly: the Duke joined them; but as the — would have it, the door of the room where they sat was open, and his Grace, who had seated himself near it, observing a pimp of his acquaintance (the creature too was a knight) trip up with a brace of ladies, immediately quitted his engagement to follow another kind of business, at which he was more ready than in doing good offices to those of desert, though no one was better qualified than he was, both in regard to his fortune and understanding, to protect them; and, from that time to the day of his death, poor Butler never found the least effect of his promise." This highly characteristic anecdote is much more probable than the vague report of Aubrey; and the character drawn by Butler of the Duke of Buckingham is conclusive of the fact that he could never have received any favours at his hands. It is impossible to conceive that, if Butler had been Secretary to the Duke, or had been under any kind of obligations to him, he would have singled him out for special reprobation, in the only direct personal satire he is known to have written. The portrait transcends in severity the well-known lines on the same subject by Dryden and Pope. There is reason to believe that Butler at one period, visited France; nor is it improbable that he may have also gone into Holland; a supposition, however, which rests on no better evidence than his satirical description of the country. In 1678, he published the Third Part of "Hudibras," and the next notice of him closes the struggle of his life. He died on the 25th September, 1680, in Rose-street, Covent Garden. There are different accounts of the immediate cause of his death: but they all agree in the fact of his poverty. Chambers says, that he starved owing to his pride; Aubrey tells us that he was much troubled with gout, particularly the year before, not stirring out of his chamber from October to Easter, and that he died of consumption; and Oldham speaks of the fever that terminated his sufferings. The expenses of his interment were defrayed by his friend, Mr. Longueville, who had in vain endeavoured to obtain a subscription to deposit his remains in Westminster Abbey. He was buried in the churchyard of St. Paul's, Covent Garden, the service being read by Dr. Simon Patrick, at that time Rector of the parish, and afterwards Bishop of Ely. The spot had been selected by Butler himself, in the north part, next the church, at the east end. "His feet," says Aubrey, "touch the wall; his grave, two yards distant from the plaster of the door (by his desire), six foot deep. About twenty-five of his old acquaintances at his funeral; I myself being one."—*Bell's Memoirs of Butler in the Annotated Edition of the Poets.*

When Philip Henry, the father of the great commentator on the Bible, sought the hand of the only daughter of Mrs. Mathews in marriage, an objection was made by her father, who admitted that he was a gentleman, a scholar, and an excellent preacher, but he was a stranger. "True," said the daughter, who had well weighed the excellent qualities and graces of the stranger, "but I know where he is going, and I should like to go with him,"—and they walked life's pilgrimage together.

ON THE FEEDING OF CATTLE.

Cattle cannot be properly fattened for the market without proper materials. In the first place, it would be folly to attempt any system of feeding with cattle of an inferior breed; for all the care and management possible would not make them fat at an early age. Animals intended for feeding should be of a good breed, fine bone, good points, handling well, and possessing aptitude to fatten early. Short-horns or fine crosses can be made sufficiently fat for any market, at two years old, without any extra food or pampering. Calves, for the first two or three weeks, should have daily about a gallon and a-half of new milk from the cow; for the next following three or four weeks the quantity should be increased to two gallons; and from that period until three months old, two and a-half gallons should be the daily allowance. At two months they will learn to eat a few sliced Swedish turnips, or a little fine clover hay. They should be kept clean and dry, and not too close; and if early calved, should be placed in a loose house. As the season advances, a little yard, and shed well sheltered, with a southern exposure, should be provided. About the beginning or middle of May, according to the state of the weather, they should be turned into a field, with plenty of grass, and a temporary shed to protect them from cold or wet. They should be weaned at twelve weeks old, and the oldest calves separated, but not mixed with cows or other cattle. If kept in a calf park, cut clover must be given them in racks, as soon as ready. They cannot be too soon put on clover foggage, or clover stubble. When turnips are ready, the animals should be brought to eat them on the fields, and afterwards put into yards on a full allowance, say in October. The white globe variety is the best to commence with. The tops and tails should be taken off, and the bulbs cut, and given to the animals in boxes. They will do well on white turnips till January, when yellows should be substituted, finishing the winter with swedish, all cut throughout. A little hay or oil-cake would be beneficial; but they will be in fit condition to turn to grass if fed and attended to as pointed out. In order to make cattle sufficiently fat and rich at two years old, they should either be fed on new grass, well planted with red and white clover, particularly the former, or placed on old rich pastures. New grass is to be preferred for year-olds, which may be put to grass about the first of May, or sooner, if the season is early. A quantity of white early globe, or tankard turnips, should be sown about the end of May, which will be ready for eating about the middle of September, or sooner; when ready, a few to be given in the pastures, and if they get clover forage so much the better. Early in October the animals should be put into the yard on white turnips for a month, and afterwards yellows till January; when Swedes and plenty of fine oat straw should be supplied. The turnips must always be cut. With this treatment continued to April, short-horns will be sufficiently fat.

As to the different modes of feeding in yards, box-feeding, and tying up, there is much diversity of opinion. Tying up, or house feeding, is not recommended, particularly for young cattle. Box-feeding, no doubt, must be a good practice; but short-horns, and other quiet tempered cattle, feed as well in yards as anywhere, due care being taken that too many are not put together. Small yards, with two animals only in each, always do well. A serious objection to box-feeding is, that one beast never lies so contented and quiet as when supplied with a companion. These little sheds ought to be deep and not high in the roof, but well ventilated. A small yard should be attached, with troughs for the turnips, which must be given three or four times a day, fresh cut from the pits. Frosted turnips should never be given. Troughs or feeding-boxes must also be provided inside, in case of very hard stormy weather. Fine oat straw will be required at least twice a-day. Fattening animals should be well bedded with clean dry straw. If hay can be spared for eating in place of straw so much the better. Plain and careful feeding, with such high-bred animals as short-horns, or right crosses, is the best paying system; but if beans or other grain are low in price, it will pay to use such

food with oil-cake, which produces both finer quality, extra weight, and more tallow. This must, however, be left to the discretion of feeders. This system of feeding short-horns, and judicious crosses, is given to show that, by proper breeding, attention to suckling the calves, and regular feeding throughout, this object can be attained, with the right kind of cattle, on plain and substantial food. The animals may be fattened quicker by giving calves oil-cake & grain, when they would be fit for the butcher at twenty or twenty-one months old, or even at eighteen months, if oil-cake, is supplied immediately after being weaned, and continued with grain till eighteen months. Boiled beans, or even bean-meal, which is cheaper feeding than oil-cake, might be substituted, with equally successful results. With high feeding, short-horns can be easily made fifty stones imperial and upwards at eighteen months old.

Breeders who feed their own stock will thus see the advantages of good breeding, and also the profits; for if cattle of the improved breeds can be fattened at two years old, and weigh as heavily as the old coarse breeds at three and four years old, it is surely their object to cultivate only those kinds, which are the most remunerative, and give the quickest return, and greatest profit. Although the feeding of cattle at two years old is not yet so general as it ought to be, it is gradually increasing, and in time will become general. Several new systems now pursued in feeding cattle might here be pointed out; but as the art of feeding is so well understood, any further remarks on this point will be superfluous.—*Breeding and Economy of Live Stock, by James Dickson.*

GALVANIZED WIRE CORD, FOR DRYING LINES.

Sir,—In your paper of 29th ult., a correspondent asks if galvanized wire would do as a substitute for cord for drying lines, and you reply it would require to be painted; therefore, gutta percha would be preferable.

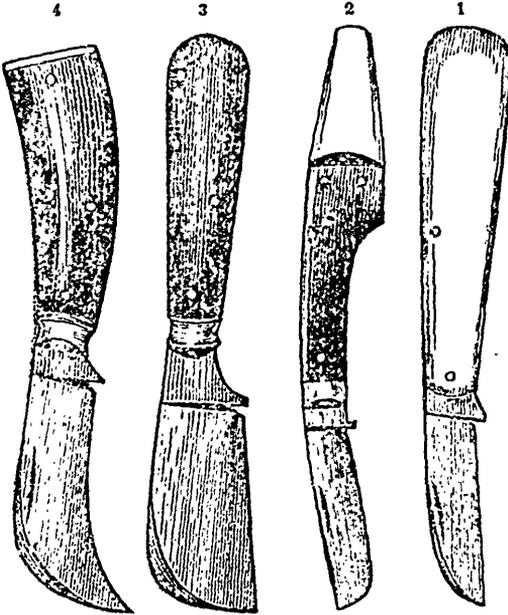
From our use of gutta percha for various purposes, we should say it is much too liable to break to admit of its use for drying wires; but be this as it may, we are able to state that your correspondent may use the galvanized wire cord manufactured by us without the necessity of painting it.

This galvanized cord will stand much longer, and prove much cheaper, than any thing else he can adopt as drying line. Yours, &c., F. MORRIS & Co., Liverpool, 4th January.

[It appears to us to be a well established fact that the acid in the air dissolves and corrodes the zinc by which iron is galvanized, and, therefore, in process of time, the iron is exposed to oxidation, to prevent which the galvanized wire should be and usually is painted, which preserves it from the action of the atmosphere, and thus both are preserved. We know from the above cause structures covered with galvanized iron soon become perforated, when not timeously painted, and cannot suppose an exception in the case of galvanized wire cord.—*Irish Far. Gazette.*

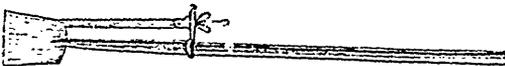
APPLE TREES FROM CUTTINGS.—I have noticed that every once in a while some old notion is brought out as something new, and goes the rounds of the papers as if it had not been heard of before, although it may have been tried and found wanting.—Such a thing I noticed lately in the statement that some French Horticulturist had found that trees might be propagated by inserting the end of a scion into a potato and burying it several inches deep, so that only the top of the shoot should appear above the ground. I saw the same statement some four and twenty years ago, and tried the experiment repeatedly without success in a single instance, except in the case of those trees that may really in any case be propagated by layers. With apple and pear trees the failure was invariable. Others have met with the same result, yet I think it was with regard to fruit trees of this kind that this mode of procedure was recommended. Such fallacies ought to have an end.—[*S. W., in Granite Farmer.*

PRUNING AND BUDDING KNIVES.



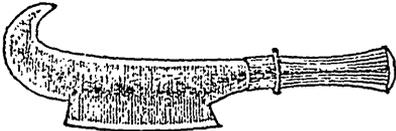
As the season for garden operations is not many weeks distant, we give cuts of some of the tools that are found very convenient, and are now sold at a reasonable price. Nos 1. 3. and 4. are a good and convenient form for pruning young trees and are made strong and heavy for that purpose. No. 2, represents the best and most approved form for budding. The edge of the blade is rounded at the point, and will shut up as a pocket knife. At the other end is fixed permanently a thin flat ivory lifter, with which the bark is loosened and raised, after being cut to receive the bud.

PRUNING CHISEL.



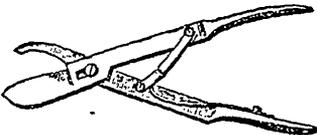
The blade of the saw is about 12 inches long, attached to the blade of the chisel at one end, and to the socket of the chisel handle at the other end. The chisel is 3 inches wide by 4 inches long, made thin and of the best cast steel. A wooden handle of convenient length is inserted in the socket handle, enabling a person to stand on the ground and thin his trees at his convenience.

BILL HOOK.



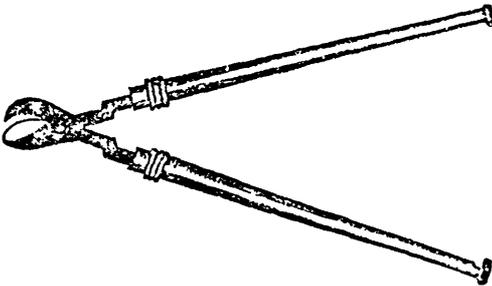
This is a good kind of Bill Hook for cutting small bushes, brambles, &c., and is used with one hand.

SLIDING PRUNING SHEARS.



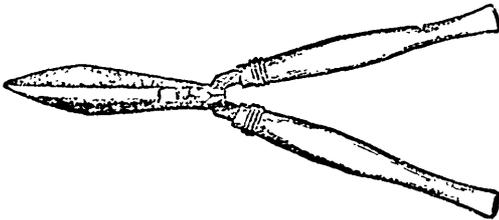
The cut represents a small, light Sliding Shears, very useful for trimming box-trees and bushes, as well as for other purposes.

BRANCH SHEARS.



These are very strong, and having long wooden handles, may be used for cutting large branches from trees, shrubbery, hedges, &c.

GARDEN OR HEDGE SHEARS.



This is another variety. It has the pruning notch, which is of considerable advantage when used in trimming hedges, &c.

From the *New England Farmer*.

HOW TO GET FRUIT TREES TO YOUR LIKING.

MR. EDITOR:—In the fall, October or November, take a branch of an apple or pear tree, such as suits your taste, take off down to the third year's growth, cut it smooth and rub it on a red-hot iron so as to scorch and shut the pores of the wood thoroughly; then bury in the ground all but the last year's growth. If placed in good ground, and well taken care of, you will have fruit in five or six years. I have sometimes dipped the lower end in melted rosin, but think burning preferable. I have a tree before my door that is nine feet high and well proportioned, that I took from a graft four years ago; to this rosin was applied, and whatever sprouts sprung up the next summer were bent down and became roots. We can get fruit considerably quicker this way than from seeds, and we know what we have growing, and when grown the whole tree is of the same kind, and whatever sprouts come from the roots in after years can be transplanted without grafting. In case of a drought the first year they should be watered.

ALTERNATE CROPS.—The greatest quantity of grain produced in a rotation, is not *alone* a proof of its being the best system; a *large* quantity of meadow would yield *much* hay. It is a sin against good husbandry to sell off the hay from a farm, unless it be with great caution, where the farm is near a large town, from whence, or otherwise, it can be plentifully supplied with manure. Numbers of cattle well-fed and well-littered, give the manure, in addition to other manures, requisite for invigorating the soil; but numbers of cattle cannot be kept in good condition throughout the year, unless clover and grass, as well as hay and straw, abound. The summer and winter food must have a due proportion to each other, and the fields of grain are not to exceed the fields of meliorating crops,—*these* preserve the soil, as well as produce crops; but grain *reduces* the soil in producing the crops. Aim at income from *live stock*, which *improves*, rather than from *grain*, which *impoverishes* your land.

COOKERY—EFFECTS OF HEAT UPON MEAT.

A well-cooked piece of meat should be full of its own juice or natural gravy. In roasting, therefore, it should be exposed to a quick fire, that the external surface may be made to contract at once, and the albumen to coagulate, before the juice had time to escape from within. And so in boiling. When a piece of meat or mutton is plunged into boiling water, the outer part contracts, the albumen which is near the surface coagulates, and the internal juice is prevented either from escaping into the water by which it is surrounded, or from being diluted or weakened by the admission of water among it. When cut up, therefore, the meat yields much gravy, and is rich in flavour. Hence a beefsteak or a mutton-chop is done quickly, and over a quick fire, that the natural juices may be retained. On the other hand, if the meat be exposed to a slow fire, its pores remain open, the juice continues to flow from within, as it has dried from the surface, and the flesh pines, and becomes dry, hard, and unsavory. Or if it be put into cold or tepid water which is afterwards gradually brought to a boil, much of the albumen is extracted before it coagulates, the natural juices for the most part flow out, and the meat is served in a nearly tasteless state. Hence to prepare good boiled meat, it should be put at once into water already brought to a boil. But to make beef-tea, mutton-broth, and other meat soups, the flesh should be put into cold water, and this afterwards very slowly warmed, and finally boiled. The advantage derived from simmering—a term not unfrequent in cookery books, depends very much upon the effects of slow boiling as above explained.—*Professor Johnston's Chemistry of Common Life.*

From the Horticulturist.

TREATMENT OF THE HEMLOCK.

In a former number we promised to give the results of some experience in treating that most beautiful of our native evergreens, the hemlock. Its value and importance is attracting much attention, both as a single tree, a screen, a hedge, or a shrub, and we know nothing more deserving attention from American planters.

It is a difficult tree to procure in many neighbourhoods, (though it will be seen several extensive nurserymen advertise it) and where that is the case it may be grown from the seed, which is procurable from dealers in this vicinity. These are to be mixed with sand, if you cannot plant them immediately. As soon as the spring opens, make a bed on the north side of a fence, where it will be shaded the greater part of the day; the bed should be composed of one-third sand, one-third good loam, and one-third light leaf-mould, well incorporated and sifted. Plant the seeds in drills, and cover the bed with a little old spent tan, or more leaf mould, to keep it light and moist; water it regularly every evening in dry summer weather to prevent the young seedlings from dying off. The young plants may be moved as soon as they have vigor enough to take the positions they are designed for.

If they can be obtained from the woods, about eighteen inches in height, time will be saved, but in this case it will be useless to remove them without a covering of earth for the roots brought with them; with a little care there is no difficulty in this; to make the removal certain, sprinkle water from the rose of a watering-pot upon the roots after you have got them into your vehicle. The operation should be accomplished about the time they are first putting forth their beautiful young growth, and on a cloudy day. In planting them, use the same soil as recommended above for the seeds, and mulch the roots for a foot or two round with stones; these are to be raised every year, and a little additional leaf mould put on, and the stones replaced, till the plant has made a growth of several years.

The best examples of hedges of hemlock that have anywhere come under our notice, are those of Moses Brown, Esq., of School-house lane, Germantown, Philadelphia. They have been a labour of love, and the result of careful culture for many successive years; here may

be seen hedges of various ages and modes of planting. At first the double row, and plants one foot apart, was adopted; this plan has produced handsome thick-set hedges, but it consumes a great number of plants, and a *single row, two feet and a half apart*, has been found by actual repeated experiment, to serve the purpose equally well, and to possess the advantage of exhausting the soil much less. Mr. Brown brings his trees from their native habitat near by, and subjects them to the shears at once to give them a trim look, and to induce a close habit. They make a little progress for the first two years, but after that their beauty becomes apparent, and they rapidly assume character and importance. Mr. Brown mulches all his hemlock hedges with stone, and feeds them annually with leaf mould. He does not trim them more than once a year, and that in the spring, preferring the luxuriant full appearance which nature produces; but where a set hedge or solid-looking wall is desired, we should recommend, as heretofore, a close cutting in September.

As a single shrub, regularly kept down by the shears, the hemlock is extremely beautiful, as it also is as a screen without much use of the shears; as a single tree, nothing need be more ornamental, and standing alone their habit of growth is highly picturesque. A visit to Mr. Brown's premises in the morning, when the dew is on the trees, or rather a shower of rain, when the sun shines through the branches of these beauties of nature, is highly gratifying; so fond is he of the hemlock, that his place is a fairy show, embracing the perfect large tree and all the various forms it is capable of assuming. When once established, the hemlock, though not quite so rapid in growth as the Norway Fir, is by no means to be classed with the slow-growing evergreens, and remember it is green and perfectly hardy.

GUANO: ITS HISTORY.—Guano, as most people understand, is imported from the islands of the Pacific—mostly of the Chincha group off the coast of Peru, and under the dominion of that government. Its sale is made a monopoly, and the avails, to a great extent, go to pay the British holders of Peruvian government bonds, giving them, to all interests and purposes, a lien upon the profits of a treasure intrinsically more valuable than the gold mines of California. There are deposits of this unsurpassed fertilizer in some places to the depth of sixty or seventy feet, and over large extents of surface. These guano fields are generally conceded to be the excrements of aquatic fowls which live and nestle in great numbers around the islands. They seem designed by nature to rescue, at least in part, that untold amount of fertilizing material which every river and brooklet is rolling into the sea. The wash of alluvial soils, the floating refuse of the field and forest, and, above all, the wasted materials of great cities, are constantly being carried by the tidal currents out to sea. These to a certain extent, at least, go to nourish, directly or indirectly, submarine vegetable and animal life, which in turn goes to feed the birds whose excrements at our day are brought away by the ship-load from the Chincha islands. The bird is a beautifully-arranged chemical laboratory, fitted up to perform a single operation, viz.—to take the fish as food, burn out the carbon by means of its respiratory functions, and deposit the remainder in the shape of an incomparable fertilizer. But how many ages have these depositions of seventy feet in thickness been accumulating? There are at the present day countless numbers of the birds resting upon the islands at night; but, according to Baron Humboldt, the excrements of the birds for the space of three centuries would not form a stratum over one-third of an inch in thickness. By an easy mathematical calculation, it will be seen that at this rate of deposition, it would take seven thousand five hundred and sixty centuries, or seven hundred and fifty-six thousand years, to form the deepest guano bed! Such a calculation carries us back well on towards a former geological period, and proves one, and perhaps both, of two things—first, that in past ages an infinitely greater number of these birds hovered over the islands; and secondly, that the material world existed at a period long anterior to its fitness as the abode of man. The length of man's existence is infinitesimal, compared with such a cycle of years; and the facts recorded on every leaf of the material universe ought, if it does not, to teach us humility. That a little bird, whose individual existence is as nothing, should in its united action, produce the means of bringing back to an active fertility whole provinces of waste and barren lands, is one of a thousand facts to show how apparently insignificant agencies in the economy of nature produce momentous results.

DUTIES in general, like debts, give more trouble the longer they remain unpaid.

ART OF MILKING.

The art of milking well is not taught in a hurry. It requires long practice to milk properly, and therefore all the young people on a farm ought to be shown how the labor should be done. It is quite important that this branch of the dairy should be particularly attended to, for a good milker obtains at least a quart more from the same cow than a poor milker.

The first lesson to be taught to young people is gentleness and kindness to the cows. They never need be treated harshly, in case the business is properly commenced. Cows that have been caressed and uniformly well treated are fond of having the milk drawn from the udder at the regular time of milking, for it gives them relief from the distention of the milk ducts.

Let young people be put to milking the farrow cows first, or such as are to be soon dried, and then the loss from bad milking will be less injurious; the hand should extend to the extremity of the teats, for the milk is then drawn easier. They should be taught to milk as fast as possible. More milk is always obtained by a rapid milker than by a slow one. They should therefore be taught to think of nothing else while milking, and no conversation must be permitted in the milk-yard. They should sit up close to the cow and rest the left arm gently against her flank. Then if she raises her foot on account of pain occasioned by soariness of the teats, the nearer the milker sits to her, and the harder he presses his left arm against her leg, the less risk will be run of being injured.

Cows may be taught to give down their milk at once—and they may be taught to hold it a long while, and to be stripped indefinitely. The best way is to milk quick and not use the cow to a long stripping or an after stripping.

WINTER SHELTER FOR ANIMALS.

Solomon says—"A righteous man regardeth the life of his beast." It is remarkable that on a very large majority of our farms, far less attention is paid to the comfort of our domestic animals during the long period of their confinement during the winter months, than the well known humanity of our farmers in other matters, would seem to insure. Liebig, the distinguished German chemist says that our clothing is an equivalent for food; and every discerning and reflecting person must have received a very striking and impressive corroboration of the truth of the observation in the plain fact that an animal comfortably sheltered, and provided with litter and bedding, consumes, during winter, less food by nearly one half than an animal of the same size and kind will require if uncared for and exposed. We have frequently been surprised and shocked by what appears an unmerciful regardlessness of the comfort and health of their domestic animals, particularly their young stock.

Every correct farmer will study the comfort of every animal under his care—not only from a common principle of humanity, which is, or should be, instilled into him by the gentle and humanizing character of his pursuits, but from a healthy and laudable regard for his own interest. A facetious writer once said, "misery never yet fattened any one," and cold and hunger are miserable bed-fellows. Good barns, comfortable sheds, "cotes," for sheep and swine to go to when they please, are among the most elegant embellishments of which a homestead, in a rural district can possibly boast.—[*New England Farmer*.

It is asserted that in the English language proper, apart from technical and scientific terms, there are 20,500 nouns, 40 pronouns, 9,200 adjectives, 8,000 verbs, 2,600 adverbs, 68 interjections, and two articles, in all alone, 40,000 words. According to Webster's dictionary there are one hundred thousand words.

EDITORIAL MISCELLANY.

DRAIN TILE MANUFACTORY.—We are glad to learn that Wm. Lee, Esq., an enterprising farmer near this city, has made arrangements with Mr. Brown, a practical potter, &c., of Bowmanville, to establish a Tillery on Mr. Lee's farm next spring. Mr. Brown has one of Scragg's Tile machines in efficient working order, and we believe it is expected, they will be able to supply pipe drain tiles of 1½ inch to 2 inch bore, for about £3 per thousand. We trust they will find the demand sufficient to warrant a reduction of price to about \$10, in which case every farmer whose land needs underdrains, would be justified in incurring the expense. This is about the price such tiles are sold for at Albany, Waterloo, &c., in the adjoining State.

Mr. Brown's Tiles and earthenware received the first prize at the last Provincial Fair.

AGRICULTURAL AND HORTICULTURAL CENTRAL CLUB.—We are glad to announce the formation, under favorable auspices, in this city, of a Farmer's and Gardener's Club with the above title. The want of such an organization, at this central point, has long been felt. There are in the neighborhood of this city some of the best practical gardeners in the country, as well as numerous amateurs whose productions do great credit to their skill and energy. There are also many intelligent agriculturists in and near Toronto, who are able to discuss many practical questions with ability, and can, no doubt, communicate facts that will be listened to, and when reported by the Press, be read with interest in all parts of the province.—There are also gentlemen of high scientific attainments in this city, whose co-operation will be most desirable in the meetings of such a club. It is expected that enterprising farmers at a distance, now that railway communication is established in various directions, will become members and attend, and

take part in the discussions. It is in contemplation to establish a Library and Museum. We presume, however, that the Library and Museum which the Board of Agriculture are authorized by law to establish at Toronto, will be made available for both bodies. The condition of membership is payment of \$1 on or before October next.

The officers are:—*President*, G. W. Allan, Esq.; *1st Vice*, E. W. Thompson, Esq.; *2nd do.*, James Fleming, Esq.; *Secretary and Treasurer*, Prof. Buckland.

The Executive Committee is composed of thirteen gentlemen, most of whom are practical farmers or gardeners.

The first regular meeting will be held on Tuesday, 4th March in the Court House Toronto. The subject for consideration is the best mode of *Fencing* adapted to the present wants of this country. Mr. William McDougall, at the request of the Club, consented to open the discussion.

FAIRS.—An Agricultural Society in the County of Simcoe, asks us how a "Selling Fair" may be legally established. We believe the granting of charters for such a purpose is one of the prerogatives of the Crown, and therefore, we presume, the proper course will be to petition the Governor General. The petition should set forth the necessity for such an "institution" in the vicinity, &c., and a Royal Proclamation, after due enquiry, will, no doubt, issue.

The writer drafted a clause in the Agricultural Act of 1852, by which Municipal Councils were authorized to establish such Fairs in each township; but the Legislative "wisdom" thought the present clumsy plan preferable.

HEDGES, &c.—We have received two or three letters on the subject of the Osage Orange and other Hedge-plants, which will appear in the next number. As the subject of "*Fencing*" is to be discussed in a few days,

by the Farmers' and Gardeners' Club, recently established in this city, we thought it better to present the subject to our readers in connection with the report of the discussion.

AGRICULTURAL AND HORTICULTURAL SEEDS.—

As the season of sowing will soon arrive, we can confidently recommend to the notice of our readers Mr. Fleming's advertisement in the present number. We hear many complaints in different part of the country that seeds purchased at some of the stores were either untrue or would not properly vegetate. As root-culture and gardening are every year advancing in Canada, and the former being of essential importance to the improving farmer in the sustentation of his stock, the selection of pure and sound seed is a matter of the greatest consequence. Mr. Fleming, we know, imports largely from the most respectable houses in London and Edinburgh; besides growing a considerable quantity of some kinds himself, or under his own immediate direction. We believe he carefully tests the vitality of all seeds which he offers for sale. A concluding hint to our readers, not always sufficiently understood, or at least, attended to:—After you have procured true and sound seed, be careful to see that the indispensable conditions, of good culture and manuring are so far complied with as not merely to ensure the *generation* of the seed, but a *profitable crop*. It has long been a maxim among practical men, that in *root culture* especially, the *highest farming pays the best*.

BACK NUMBERS.—In answer to the enquiries of several correspondents, we beg to state that we have still on hand a quantity of the January and February numbers, and will be happy to supply all the Subscribers they may send from the commencement of the year.

SUBSCRIBERS are coming forward rapidly, and we are grateful to many kind friends for their efforts. The *Agriculturist* should be laid in every Farmer's house, and we hope all who take an interest in the promotion of intelligent Agriculture, will aid in accomplishing this object.

We direct the attention of our readers to the advertisement of Mr. S. Bates, Bellingham, Mass., with reference to Cranberry culture.

TORONTO MARKETS.

February 26.

Business on the Toronto Market since our last issue has been very dull, and no trading, except to supply immediate wants, has been going on. The peace rumours now so prevalent have had a great effect on the breadstuffs and stock markets, and will, before long, lower the prices of other articles. Dealers are very cautious about buying, and nothing of any importance will be done until the question of "Peace or War" is definitely settled.

WHEAT has come in at the rate of about ten loads per day. The price during the early part of the month ranged from 7s. to 8s. 6d. Later, however, prices have fallen, and 5s. 9d. to 6s. 3d. are the ruling figures. Very little is coming forward, and farmers as well as dealers appear to be desirous of awaiting the issue of peace negotiations.

FLOUR.—Wholesale dealers in flour have stopped operating altogether, although there is a good deal offering. Millers who have purchased wheat at 8s. 9d. to 10s. are rather alarmed at the heavy fall in prices.—We have heard of several thousand barrels of No. 1 superfine offering at \$5½ to \$5¾ per bbl. Very little farmer's flour has been offering.—At the depots sales are made by retail at \$7 to \$8 per barrel.

OLDS have been plenty, at 2s. 6d. to 2s. 8d. per bushel.

HAY has been selling at from \$20 to \$30 per ton; the qualities being various, no definite price can be fixed.

PORK has been in demand for city consumption.—Several large importations all the way from Chicago have been made. Prime hogs sell at \$6 a \$7½ per 100 lb. Packing for export has entirely ceased.

POTATOES have been scarce, and have sold at 3s. 9d. a 5s per bushel. It is probable that importations to a considerable extent will be made on the opening of navigation. Last spring several thousand bushels were exported from Toronto to Buffalo and Cleveland.

BUTTER has been scarce, and sales of fresh rolls are readily made at 1s. 7d, a 2s. 1d.—Tub Butter brings 1s. 2d. a 1s. 4d. per lb.

In other articles there is no change to note.