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THE ONTARIO FARMER,

A MONTHLY JOURNAL OF

Agriculture, Horticulture, Country Life, Emigration, and the Mechanic Arts.

VOL. III.

HAMILTON, APRIL, 1871.

No. 4.

The Farm.

HINTS FOR THE MONTH.

The tug of farm work begins this month. First comes the care of the fences. These should be kept in thorough order, that there may be no danger of unruly cattle breaking in upon the growing crops. It is a good plan to renew a portion of the fencing of a farm year by year, so that it may all undergo a constant process of renovation. Every rod of it should answer to the quaint but forcible description of a good farm fence, "man high, bull strong, and pig tight." A common evil in early spring is letting cattle and horses upon meadows and pastures, while the ground is wet and springy. Avoid this by all means. It injures the roots of grass, and while there is but little feed, only tantalizes the stock, and makes dry fodder distasteful. As soon as the meadows are tolerably dry, loose and projecting stones should be picked off, and the land rolled. In these days of moving machines, it is desirable to get meadows as clean and smooth as possible. Stumps should be got rid of, brush exterminated, and small hillocks levelled down. Let bare spots be re-seeded, and the whole top dressed with fine well-rotted manure, unless indeed this was done last fall,—the preferable plan. Put in force Old Richard's advice this month: "Plough deep while sluggards sleep" Of all operations on the farm, ploughing most needs to be done well. Eschew all slovenly, skim-surface work, and be thorough about it. Let teams be well cared for, as to feed, grooming and attention generally. They should be gradually brought to hard work, so as to harden to it. Horses are very apt to get collar and harness galls in the spring; guard against this. A Dutch collar is often very useful, to change the bearing and prevent wounds.

Clover may still be sown, either alone or on winter grain. Give it a dressing of plaster. Various crops as oats, barley, potatoes, are much affected by the time at which the seed is got into the ground. Sow as early as the state of the land will permit. Pull out red root and cockle from among wheat. New milch cows and their calves will require attention. To rear calves they must be kept clean and

comfortable, fed regularly with nutritious diet, and sudden changes of food avoided. They do best if weaned early. Lambs must be cared for, and all needless exposure guarded against. The yearling ewes must not be neglected; they frequently require extra looking after. Manure heaps should be turned over, compost arrangement made, and any well-rotted dung that may be on hand, carted out. Orchard and shade trees may be planted as soon as the weather and land are favourable. Trees heeled in last fall may be delayed longer than trees left in the ground till the buds are swollen. Rainy days this month should be improved in cleaning out cellars, putting tools in order, greasing waggons, oiling harness, preparing seed, squaring up accounts, and reviewing plans for the busy season. In the garden, as well as on the farm, there will be enough to do this month. Early potatoes and peas should be planted so soon as the ground is free from frost. Rake off the coarse litter from asparagus beds, fork in fine manure, and give a dressing of salt. The beginning of April is early enough to start the hot-bed for family gardens in this climate. Cold frames and hand glasses will be found useful in starting and protecting tender plants. Remove the covering from strawberries, raspberries, grapes, and plant out cuttings of currants, gooseberries, &c. Early in spring is the best time for setting out strawberries. If properly done they will bear a little the same season. Draining, manuring, path-making, pruning, and transplanting, should all be attended to as early as possible. In the garden as well as on the farm, it is wisdom to take time by the forelock, and never put off until to-morrow what can be done to-day. The poultry-yard should present a lively scene this month. Egg-production should be in full blast, and the noisy cackle of the hen resound through the farmstead. Judicious coupling and early hatching are necessary to secure fine fall chickens. In the apiary also, everything will now be astir, especially if the weather should be, as it sometimes is, prematurely sultry. Observe the directions given in the last number about successful bee-keeping. Provide for any stocks that may be queenless. Watch against robbing. Build up stocks and get them strong by the working season, that there may be myriads of busy foragers to collect honey, while the short harvest lasts.

CHOICE NEW VARIETIES OF POTATO.

To the Editor of THE ONTARIO FARMER.

DEAR SIR: On perusing Best's very interesting and instructive book on the potato and its experimental culture, the thought has struck me that a notice of it, with a few extracts therefrom might possibly be acceptable and advantageous to your readers. I myself deem it next to impossible to estimate sufficiently the great good that has been conferred on the civilized world by the introduction of these new and early varieties of potatoes—more especially so on the decline of many of the old and valued varieties—combining, as they do, earliness, fineness of quality and flavor, and enormous yield, with increased strength of constitution that enables them to resist the maladies which the potato has of late been subject to. What more, let me ask, does a potato-grower or consumer want? How, then, can we sufficiently express our appreciation of the crowning results of the persevering and energetic labor of the intelligent men of the Goodrich school, if I may so express myself, for the invaluable treasures that are now within our reach? In my humble opinion, it is quite impossible to duly value the gift and its importance. To the working, or more humble class of our fellow-beings, in particular, will the boon, in other parts of the world, prove an inestimable blessing—indeed, a perfect God-send, I may say with all due reverence, for it is nothing less to those who are compelled almost entirely to subsist on the potato. To the late Rev. Mr. Goodrich, then, who may justly be termed the pioneer and patriarch of the new potato movement, who was so successful with the "Early Goodrich," "Harrison," etc., and who devoted a third of his lifetime to the culture and improvement of that valuable esculent; and to Messrs. Bresee, Conover, Heffron, Best, and other gentlemen, following in his footsteps, too much praise and thankfulness cannot be given. As to the "Early Rose," of which so much has been said and written, and its value duly appreciated, raised by Mr. Bresee, and so well known to the community at large, no eulogy from me is required as to its merits: it has spoken for itself. But as Mr. Bresee has, by his untiring zeal and skill, been so fortunate as to produce other potatoes which are some days earlier than the "Rose," with other properties at least equal if not superior, I have thought it may be as well to make a passing notice of them, as also of two or three other kinds spoken of in that valuable potato book by Mr. Best, of Utica, N. Y., the perusal of which I would urgently recommend to every farmer and gardener, or amateur, growing potatoes either for sale or private use. I think it, however, very pertinent to my present subject, to remark that the great yield produced from these new varieties

has partially been the result of good and high culture; but is not that, let me ask, what every crop we grow ought to receive, if we wish or expect the crop to be a remunerative one?

I will now proceed to give a few curtailed extracts from Mr. Best's valuable book, concerning the late new varieties, and will commence with "Bresee's King of the Earlys, or seedling No. 4"—the "Fifty Dollar Potato," as Rev. Mr. Beecher pertinently calls it in his essay on "the potato mania," a very amusing and clever production:—

"This potato was raised in 1862 by Mr. Albert Bresee, of Hubbardton, Vermont, from a seed ball of the Garnet Chili. Vines quite dwarf; bears no seed balls; leaves large; tubers large and handsome; eyes small, and somewhat pinkish; flesh white and floury; cooks well, and is of the best quality for the table. It has thus far proved very hardy, perfectly free from disease, and the earliest in cultivation. It is pronounced by many experienced practical men who have grown it, to be ten days earlier than the Early Rose, and equally productive. The vines being of so dwarf a habit, it can be planted so much nearer together, thereby giving a much larger yield to the acre. So great was the anxiety among potato-growers to procure this variety last Spring (1869), that quite a number were sold at fifty dollars each! A silver medal was awarded to Mr. Bresee for his seedlings by the Massachusetts Horticultural Society in the fall of 1868."

"BRESEE'S PROLIFIC, OR No. 2.—This variety originated with Mr. Bresee in 1861, and is from the same seed-ball as the Early Rose—both seedlings of the Garnet Chili. Vines of medium height, quite bushy, and have produced no seed balls; tubers large and regular in shape, and very smooth; eyes slightly pinkish; flesh white; cooks quickly; is very mealy and of excellent quality; yield very large, often exceeding one hundred fold; matures about three weeks later than the Early Rose, and will prove a most valuable variety for field culture. This variety has been thoroughly disseminated throughout the country the past season, and we are continually receiving the most flattering reports of its extraordinary productiveness and quality."

Then comes—

"BRESEE'S PEERLESS, OR No. 6.—The latest and best of all Mr. Bresee's seedlings for the Main crop. This originated from the same seed-ball as the Early Rose. Eyes shallow, oblong; flesh white, mealy; grows to a large size, often weighing from one to two pounds, and enormously productive. At a trial by a committee of the Massachusetts Horticultural Society, in September last, this variety obtained more votes as to quality than any other of Mr. Bresee's seedlings, and was awarded the silver medal."

The next is—

"THE EARLY MOHAWK.—This potato was sent to all sections of the country last Spring for trial, and having been most thoroughly tested, I have no hesitation in offering it to the public, as being the earliest of the early, of large yield and superior quality. From the large number of testimonials received from disinterested and well-known agriculturists from all sections of the country, I claim that it is without an equal in all the new varieties

offered to the public, all of which will be sustained by circular, sent by mail on application, with about thirty names attached for reference.

"S. B. CONOVER, New York."

The next in order, and the last to be particularised, is—

"THE CLIMAX—A seedling of the Early Goodrich, and originated with Mr. D. S. Heffron, in 1864. Tuber about medium size; ves shallow, but strongly defined, flesh entirely white; solid, heavy, brittle, and never hollow; boils through quickly, with no hard core at centre; is mealy, of floury whiteness, and of superior table quality. It is equally productive with the Early Rose, but a few days later; earlier than the Early Goodrich; while its keeping qualities are as good as the Peachblow, and is very strongly recommended."

There are other varieties spoken of in Mr. Best's book, and apparently of great promise, but I believe those I have enumerated claim the greatest merit, and are enough, in all conscience, for any man to choose from. Trusting that the information here given respecting so valuable a root may prove advantageous to some of your readers, and that you will curtail in any way this letter, if too long, I will subscribe myself,

Respectfully and truly yours,

LEICESTERENSIS.

GUELPH TOWNSHIP, 28th March, 1871.

P. S.—Since writing the above I find, in looking over the Messrs. Sharpe's Seed Catalogue of this year, just come to hand, that that enterprising firm have for sale all the potatoes alluded to in this letter as well as many other kinds. They have also, I see, some extraordinary yielding oats and peas which the farming community will do well to look after! No one, scarcely, duly estimates the importance of a change of seed!

NOTE BY ED. O. F.—Most of our seedsmen have the above potatoes, &c., for sale this season, as well as the enterprising Guelph firm named by our correspondent.

HIGH FARMING vs. LOW FARMING.

There is a vast amount of farming and gardening which is spoken of, written up and published in our hebdomadal journals as *high farming*, which, in reality, is nothing more or less than the lowest kind of *low farming*. The notions of the American people touching what really constitutes high farming and low farming, are exceedingly vague and heterodox: and such notions have been promulgated through the press by writers who have held up the man that has spent the most money on the farm, and made the most attractive "spread," as the tiller of the soil who are setting an illustrious example in high farming; when, really, their respective systems of farm management lead with rapid steps to pauperism and the County House. On the contrary, that kind of tillage which is in deed and in truth high farming, is sneeringly ignored.

What is high farming? It is a system of tillage and farm management and is *self-sustaining*—a system that takes nothing but the bare land, the domestic animals, the farm implements machinery,

and cultivates the soil, sustains the family and the animals, pays the animals taxes, defrays the expenses incident to the improvements that must be made on the farm, conceals the annual interest on the money invested in the land, eventually pays for the land all from the products of the soil cultivated; and after one, two or three decades of years, leaves every acre in a far better state of fertility than the soil was at the beginning. This is high farming. There are untold numbers of quiet, unobstructive tillers of the soil in many of our States, who have commenced precisely as we have indicated, *without one dollar of cash capital*; who have had no revenue whatever besides the natural resources of their cultivated fields, and who have by hard work and judicious management, sustained their families, paid for their land, erected all their buildings, paid for all their valuable improvements, and at the same time, have brought their land up to that state of productiveness by their judicious management, that every acre now yields from two to three tons of hay were only one was originally gathered, and they harvest nearly two bushels,—in many instances more than two,—of cereal grain, where the product was but one bushel. *That is high farming.* Yet, such a system of husbandry is usually sneered at, simply because the proprietor knew how to save his money to defray the expenses of improvements, rather than spend three times more than he made.

A wealthy broker purchased an excellent farm of about 250 acres, one hour's ride from the city of New York, where he settled an ambitious son, who had almost a passion for high farming or for what he understood to signify high farming. Any good tiller of the soil, at that distance from the city, could easily have cleared \$5,000 per year, on that farm. For a number of years, the young man was required to draw on the city treasury of his father, for \$2,000 per year, to defray his (economical?) expenses. After eight years, the drafts continued to augment annually, until it required \$10,000 per annum in addition to the income of the large farm, to defray the expenses incident to carrying on the agricultural operations. The farm was all paid for at the outset. After such a long trial the father said to the son, "Hadn't thee better give up farming? For the first few years, thee managed to get along with \$2,000 besides the income of thy farm. But now, it requires \$10,000. My judgment is that thee had better give it up."

How is that for high? Yet, this farmer sustains a world wide reputation for being an excellent tiller of the soil, while quiet men are sneered at as "not much of a farmer." How is that for low farming?—*New York Observer.*

TURNIP CULTURE.

The following paper on this subject was read by Mr. John Weir, Jr., of Flamborough, before the Ancaster Farmers' Club:—

To cultivate turnips successfully, a good deal of labour and attention are indispensable, and perhaps, were we possessed of a thorough practical knowledge of their culture, and that proper mode of treatment exactly suited to the requirements of our climate, we should not so often hear of a want of success.

The most desirable soil for the cultivation of this root is a sandy loam free from stagnant water—one easily worked to a considerable depth, notwithstanding that a heavier crop may occasionally be obtained from a clay loam.

Early in the fall the land intended for turnips should receive a heavy coating of farmyard manure, and be deeply ploughed; cross-ploughed in the spring about the end of May or beginning of June, harrowed and rolled until a fine tilth is secured. Getting the soil into a finely divided state is a matter of the highest importance, especially in our country, for at the planting season the sun will have become very powerful, and we have frequently hot drying winds, which, unless the land be harrowed immediately after the plough, will penetrate to nearly the full depth of the furrow.

It is a well established fact that all soils have the power of absorbing and retaining to a greater or less degree a certain amount of moisture, and the more finely divided and thoroughly pulverized the land, the greater amount of moisture will it absorb and retain.

By thus treating the land two or three weeks before sowing, the seeds of foul weeds will be afforded an opportunity to sprout, and may, by the use of the cultivator, be easily destroyed previous to drilling.

Among the several kinds of artificial manure which may be used with advantage upon the turnip crop are bones, superphosphates, and guano. One of the chief benefits derived from an application of those manures is caused by the fact that they possess in an easily soluble form, nearly all the constituents required by the plant, and thereby cause a vigorous growth and carry it quickly into the rough leaved state, at which stage it is free from the attacks of the fly.

It would be very difficult to state absolutely when is the best time to sow, inasmuch as soils and seasons vary. On clay or clay loam perhaps the most desirable time is from the 5th to the 15th of June, and on sandy loams from the 10th to the 20th of that month. The quantity of seed required per acre will also vary with the weather. In damp weather on sandy soils 2 lbs is ample, and on clay loam and in weather ordinarily dry it will be well to sow 3 lbs or even more.

The depth of the seed should be from 1 to 1½ inches below the surface.

It is better for plants to come up thickly, for they grow faster than when thin, and are more apt to escape the ravages of the fly; and moreover, they require immediate attention as soon as they are large enough to thin.

Sowing upon drills is altogether preferable to sowing on the level; not only can a much larger crop be produced, but the weeds are far more easily destroyed.

The distance between the drills should be from 26 to 30 inches, and the plants should be left, by thinning, 12 to 15 inches apart.

When a good braird has been secured, the great secret of success is in stirring the soil frequently when dry, and keeping the ground perfectly free from noxious weeds.

THE ADULTERATION OF SEEDS.

The *Scottish Farmer* says that the proverbial feat of driving a coach and six through an Act of Par-

liament seems in a fair way of being exemplified in regard to the "Adulteration of Seeds Act," passed by the British Legislature in 1869. Farmers must look sharp when purchasing seeds, especially clover.

The only systems of adulteration contemplated and provided against by the provisions of this Act, are the mixing with "old killed, or dyed seeds." It seemed not to have occurred to the framers of the Bill, that other modes of adulteration were practised by experts in the art, although *sanded* samples and clever imitations in paste were previously in the market.

The adulteration of seeds with sand is now largely, ingeniously, and increasingly practised, admits of no doubt. Some samples of white clover seed from Germany are mixed to the extent of from ten to fifteen per cent. with prepared or "doctored" sand, and colored sand for mixing with clover is now an article of commerce in that country.

Samples of colored sand have been recently received from Germany, by an extensive seedsman in Scotland, accompanied by a letter, of which the following is a copy:

"Gentlemen:—I beg to offer you, as per inclosed pattern, about 300 cwt., of sand used for mixing clover seed, at the very low price of 10s. 6d. per cwt., bag included, f. o. b. here, cash by handing bill, of lading.

"I make a large business in England, and as I suppose you want it also, I shall be glad to receive your kind orders.

"Delivery could be effected about four or five weeks after ordering. You can receive the sand also in colors for white or red seed. Waiting your answer, I am Gentlemen yours respectfully."

The *Scottish Farmer* says that a good test for discovering the proportion of sand in a sample is to stir or shake the seed in a vessel of water, when the quartz or sand will be seen to fall to the bottom, and a few repetitions of the operation, if dexterously performed, will leave the sand alone, as the seeds, being lighter, are poured off with the water. Trying to chew a few seeds is also a ready mode of ascertaining whether they are mixed with sand or not as all know the disagreeable sensation sand produces when caught between the teeth.

CULTIVATION OF BARLEY.

Of late years, the breadth of land over which barley has been sown has steadily increased in Canada, until its area has encroached greatly upon the old fall wheat crop. The principal varieties of barley are the two-rowed and six-rowed, the former cultivated largely in Europe, but little in this country. It is also both a winter and spring grain, but is sown only at the latter season in Canada.

To secure a good crop of barley a judicious choice of seed is essential. In choosing our seed, we cannot do better than follow the advice of Loudon, who says:—"The best is that which is free from blackness at the tail, and is of a pale lively yellow, intermixed with a bright whitish cast, and if the rind be a little shrivelled, so much the better, as it indicates thin skin." Barley may be sown upon a grass or clover ley, if such be cleaned plowed in the fall, or after roots. Thorough pulverization of the soil is an essential element in the successful culti-

vation of barley. For this reason every farmer should use his utmost endeavors to have his barley land for the succeeding year fall plowed, as our Canadian frost is the most thorough disintegrator that we can employ. It is well to sow barley early, but at the same time it were better to be too late than to sow before the land be thoroughly warmed, for no crop succeeds well that is checked in its earliest growth.

Barley does not require a deep seed-bed, but that seed-bed must be thoroughly worked. If we cross-plow, let us do it shallow. I believe the gang-plow to be the best implement for the plowing of land in spring. One of the crops of barley that I have seen in Canada was sown upon the bare winter fallow, covered with the gang plow, and crossed with the harrows. A most important point, too often overlooked, is the use of the roller. It should be used *after* the plants are well through the ground; it presses the soil round the roots, and destroys many insects. I have often seen fields of young barley which looked yellow and sickly, restored to perfect greenness by the pressure of the roller.

From two to three bushels to the acre is the usual allowance of seed.—*Cor. Globe.*

RAVAGES ON THE WHEAT MIDGE IN 1870.

On a former occasion we took the trouble to compile from the crop returns, contained in the Annual Report of the Commissioners of Agriculture, a table of the ravages of the wheat midge during the previous year, in the various counties of Ontario. We have now done the same for the year 1870, and we have much gratification in stating that this pestilent insect has now almost ceased to be a terror in the land, and that its ravages are no longer, as we stated in 1869, "something frightful to contemplate."

In the following countries it is stated that there has been no midge during the past year, viz., Lincoln, Stormont, North and South Victoria, and Welland.

No reference at all is made to the midge in the returns from the following Electoral Divisions, and, therefore, we may infer that it has either inflicted no damage, or that the injury has been inappreciable in those parts of the country, viz., South Brant, East and West Hastings, East and West Middlesex, Niagara, North Norfolk, South Ontario, North Simcoe, West Wellington, and North York.

In the following divisions it is stated that "but little damage has been done by the midge":—Bothwell, East and West Durham, Dundas, East Elgin, Essex, Haldimand, North Hastings, South Huron, Kent, Lambton, South Lanark, South Leeds, North Oxford, Peel, South Renfrew, South Waterloo, North and South Wentworth, South Wellington and East York.

We now come to a few Electoral Divisions where some little damage is reported.

In North Bruce "the midge caused some injury, but very little." In South Bruce "the midge affected a few places, but, on the whole, not seriously." In Cardwell "the midge damaged but little, except late-sown spring varieties." In Glengarry "the midge has been disappearing for the last few years." In West Northumberland "the damage by midge was very partial."

In only five divisions do we find that any serious loss has been occasioned by this insect. In Addington "perhaps a fourth of the wheat crop was effected by the midge." In Cornwall "the midge may have injured the wheat crop one third." In Frontenac "the damage by the midge was considerable." In South Grey "the early spring wheat was greatly damaged by the midge." In Halton "the Deihl and Soules', and some spring wheat are damaged by the midge."

To recapitulate, we find that in *thirty-seven* Electoral divisions there has either been no wheat midge during the season of 1870, or, what probably amounts to the same thing, the returns make mention of none. In *five* some little damage has been done; and in *five* the injury has been considerable, amounting in one instance to, it is thought, as much as a third of the crop.

On the whole, the Report is most cheering, and we feel sure that every farmer in the land, every one, in fact, who cares at all for the welfare of his country, will join with us in the acknowledgment of our most humble and heartfelt thankfulness to the Almighty Giver of all good gifts, for the mercy which He has shown us in sparing to us the fruits of our increase, and ridding us, to so great an extent, of this most destructive insect.—*Globe.*

PERUVIAN GUANO.

In the opinion of a large majority of farmers, this is the most valuable of all manures available in a portable form. We all know that the views held by many excellent farmers when guano was first introduced in this country, was not favourable to its merits. Repeated trials, however, proved that its fertilizing qualities were greatly superior to anything that had been seen in the same compass before; and year by year Peruvian guano grew in reputation. Scientific men noticed that by the chemical moisture of certain ingredients, as good results might flow at a cost as cheap to the farmer, and many manufactures succeeding in producing fertilizers that in experiments and general practice proves as satisfactory. Still we believe we are correct in saying that Peruvian guano held its own against all other commodities designed to produce great crops for the tillers of the soil, and that others manufactured at home were not held in the same repute.

Of late it has been frequently declared, on the strength of the chemical analysis, that Peruvian guano was decreasing in its manurial value, that the percentage of ammonia and its freedom from extraneous substances, was not so great as in former years. Better material, it is alleged, can be produced in our own country, so that no fear need be apprehended—even if the Chincha Islands should become exhausted—that the earth shall not have sufficient food put into her to cause her to yield her increase. These are the sentiments of those who think that Peruvian guano has attained too high a price; and from the analyses of late years we cannot say that we disagree with them. But the question is this, Is the inferiority of Peruvian guano due to falling off in quality at the Chinchas, or the adulteration after it is imported from thence? We cannot answer, but perhaps some of our correspondents can. We shall be glad, as this is one of the most

important agricultural questions of the day, and also one of the most reasonable, if any one of them will give us his experience to publish for the benefit of the rest.—*Scottish Farmer*.

WOMEN AND FARM WORK.

President Abbot of the Michigan Agricultural College states that the experiment of admitting women to the institution has proved in the highest degree successful. "They study," he says, "botany chemistry, horticulture, surveying, and other branches. Their progress in study is exceptionally rapid. Their work so far has been to prepare seed for the ground, to transplant the lighter plants, prune shrubbery," etc. Here is a career for all grades of women which has common-sense to commend it. There is no reason why girls should not be taught scientific agriculture as well as boys, and made fit to transact the head-work of the farm. Notwithstanding the inertness of the Southern women, it has long been no uncommon thing to find them intelligent and skillful planters. Some of the largest estates in Virginia before the war were under the management of women; and in Kentucky, among the most successful stock-raisers who amassed large fortunes by sales to the government, were some half-dozen of the fair sex. These women obtained their knowledge insensibly by home-training; but it is certainly as easily acquired by study as that of medicine or theology, and is surely a more wholesome and safer work.

The very lowest grades of farm-work ought to be open to women. There is a sort of chivalric horror in this country of a woman's doing field-work, whereas the fact is that half of the stout Irish and German women who come here have been used to it at home, and, with our negro field-hands, are among the few healthy women in the country.

The soil is light; the instruments for lightening labor are in general use. If half the women starving in New York to-day over needle and wash-tub were put at out-door work in the Spring, they would find themselves better paid for less actually exhausting labor, and in stronger health than ever before in their lives.—*N. Y. Tribune*.

DECOMPOSED BONES WITH ASHES.

A correspondent in Indiana, living in a wooded locality, desires information how to utilize bones at the least cost, and render them soonest available as manure. The process is a very simple one. In many parts of the State of Indiana, wood is chiefly used for fuel, and the value of the ashes for fertilizing purposes is very well understood. The lye stand takes considerable quantities, and after they do duty there, they go to the kitchen garden or the orchard, or some particular place where they are thought to be most needed. But there is a considerable surplus over the demand of the lye leach, and this surplus may be employed with perfect success in reducing bones to the condition of food for plants.

Bones should be saved, and if the prudent housewives throughout the country properly understood their value as a fertilizer, and how easily it is to reduce them to the proper condition, they would not permit them to be thrown away and lost. The

kitchen garden may be rendered much more productive by their use. They are worth twice as much as ashes for manure when reduced, and ashes will reduce them

The method of doing this is to put ashes and bones into barrels or boxes under a shed, or ash-house, or cellar, in about equal quantities, and then keep them constantly moist with soap suds; if hot, so much the better. The water should not be applied in such quantities as to leach the ashes, as that would carry off much of the alkaline matter necessary to reduce the bones. Thus in a few months the bones will be entirely disintegrated, and the entire mass may be taken out and thoroughly mixed, ready for spreading and incorporating into the soil, and making a most excellent fertilizer for the kitchen garden, orchard, or field.—*Western Rural*.

FARM GLEANINGS.

Lucerne is highly recommended as a soiling crop. It is ready to cut in the Spring before red clover, and continues to yield heavy cuttings on ordinary soil throughout the Summer, no matter how hot or how dry.

It has been found possible by English chemists so to purify liquid sewage that after the process the water can be drunk without repugnance, fishes can live in it and it is without any tendency to putrify or emit any disagreeable odor.

Mr. Mehan, in the *Weekly Press*, says that botanists have no better reason for saying that Indian corn is indigenous to this country, than that it was found here when the country was discovered by the white man. Assuming that America was known to the Chinese long before, he thinks that it is to them that we are indebted for our corn, as it has certainly been known in China for a thousand years.

They have in China what is known as the grease tree. Large forests grow there, and the oleaginous product has become an article of traffic. The grease forms an excellent tallow, burning with a clear, brilliant, and—what is infinitely more to the purpose—white light, and at the same time emitting not a trace of any unpleasant odor, or of the ordinary disagreeable accompaniment of combustion—smoke.

The *Boston Journal of Chemistry* states that manure is never so valuable as when it is fresh. It then holds an association not only all the fixed soluble substances natural to the solid excrement, but much that is of great value found only in the liquid. It is in a condition to undergo quickly chemical change, and the gaseous, ammoniacal products secured are double these resulting from that which has been weathered in a heap out of doors for several months.

The report of the United States Department of Agriculture comes to the startling conclusion that such is the wholesale destruction of American forests, there will be an actual famine for wood in the country within thirty years, unless immediate measures are taken to supply their places by new plantation. It is estimated that from 1850 to 1860, 20,000,000 acres of timber land was brought under cultivation, and that in the present decade no less than a hundred millions will be so reclaimed. We

ge but one remedy for this:—Let the government offer large premiums for the cultivation of forests.

Those who take pleasure in comparing the condition of different countries may be interested by the following statement of the number of farms throughout the United States, taken from the returns of the late census. Beginning with the smallest, there are 52,642 farms of three acres, and under ten acres; 157,810 of ten acres, and under twenty acres; 612,245 of twenty acres, and under fifty acres; 609,668 of fifty acres, and under one hundred acres; 486,249 of one hundred acres and under five hundred acres, and under one thousand acres, and 5,348 of one thousand acres and upward. The total number of farms is 1,942,241.

A correspondent of the *Country Gentleman* says that there can hardly be a greater sign of prosperity in a community than a disposition to help one another to a little lift when a neighbour's wheel gets stuck in the mud. An instance in point is where a man's barn and all his winter stores of hay and grain were consumed in a night; his neighbours all turned out, built him a new barn at once, and offered to assist him in wintering his stock, taking a head or two apiece, and retaining them in the spring. Thus his loss was greatly reduced, and he was assured of the more durable riches of brotherly love and neighbourly good will. No one can compute in money the value of one such example of a noble liberality in a community, especially in its influence upon the young. Where this spirit prevails there is sure to be progress in a place even if all improvements are in their infancy. People will like to come and settle in a place which bears such a good name.

The cultivation of forest trees is a regular business in the Hart Mountains of Germany. To walk through the mountains is said to be like passing through a pine garden. The sowing of the pine seed is done in inclosures, carefully prepared for the purpose, which are surrounded by hurdles to keep out the game. Such a forest garden as it is called, after a while presents an appearance similar to a corn-field the early summer. After two years the young shoots are transplanted into the mountains where the trees have either been hewn or blown down. Five years later, they are called a thicket, because the branches are then so closely interlaced that the hunter cannot get through them, and they afford excellent shelter for game. Ten years later the foresters thin them out, leaving the best stems for future growth. The growth of the tree is slow, the average age of a full-grown tree being 120 years. The sowing, transplanting, thinning, and felling go on as systematically as the seed-time and harvest of the farmer, the only difference being that of time, for which a farmer may reap half a century of harvests, but few foresters live to see their trees grown, and none see them become giants.

Prof. Bolander stated before the last meeting of the California Academy of Sciences, that he had collected 140 specimens of grass on the coast since 1861. Only fourteen had before been observed, owing probably to the rapidity with which observers went over the ground. Among the total number he included several specimens which were cultivated. He had recently found a peculiar grass, distinguished by a remarkable green color, the *Teuca gracillima* or Slander Escare grass, which he believes to be identical with that found by Dr.

Hooker in the straits of Magellan. It grows abundantly from Cisco to the summit, it is highly prized by stock-raisers, and is to be recommended for lawns. It is also found in Chili. The Professor remarked on the number of grasses common to Chili and this coast. In his remarks, he stated that the structure of "bunch grass" is probably due to the climatic conditions; such grasses being compelled to aggregate so as to concentrate the moisture and guard against dryness.

A Missouri correspondent of the *Country Gentleman* says: In regard to "Meadow Fescue" as a standard grass, I can say that I have made it my leading mowing and grazing grass for the last twenty years, and am yearly increasing its culture. It is well adapted to all localities where *Poa pratensis* succeeds, and will succeed in soils too sandy for the latter; it has a fibrous root, and is propagated from seeds, and I think never thickens from creeping roots as Kentucky blue grass always does. As hay, it has no superior, especially for horses and mules, greatly superior to Timothy, never bind the bowels as Timothy is inclined to do. The seed weighs 25 pounds per bushel, and requires about 15 pounds per acre; sown in this latitude in any of the spring months with any of the small grains, it fills the earth immediately with a dense mass of strong deep fibrous roots; and I consider it the best renovator of all the grasses, not even excepting the clover. Such has been my experience after a twenty year's trial, and why is it not generally introduced is strange to me.

The Live Stock.

THE SELECTION OF BREEDING STOCK.

It is somewhat singular that while the country abounds with well-bred animals of every kind, horses, cattle, sheep, and swine there is yet a superabundance of wretched breeds to be met with in every direction. To a certain extent bad land accounts for a portion of this, inducing weakness, even in animals of good blood, and whose form under more favorable conditions would be all that could be desired; the proof being that when removed to kindlier pastures, if done before they become stunted, they rapidly fill up and become useful stock, healthier and hardier, perhaps, than others reared under far more favorable conditions. Those who farm poor land are also more or less indifferent to the necessity of procuring good blood, believing that the common breeds are hardier, and as in the case of milk cows give a greater return on poor pastures, than better bred animals could possibly do. Bad land does not, however, account for all the poor stock to be met with; on the contrary, a considerable proportion of it comes from land of average quality and which is quite capable of carrying animals of much greater height and value than many of those which are found on it.

The great natural law that "like begets like" seems in such cases to be entirely overlooked, animals of both sexes continuing to be bred from stock which are entirely unfit for breeding purposes. A farmer doing this betrays a want of attention and indifference to the furtherance of his own interests, highly reprehensible, and if his stock is extensive, he must, in the long run, suffer severely. Using male animals of mixed blood is a most prolific

source of injury, and, of course, actual pecuniary loss, whether in the herd or flock. Deterioration may not be immediately noticeable, but when a certain point has been reached, improvement must stop; and in the progeny of cross bred animals, there must and always will be found a number of weaklings not worth the trouble of rearing.

Whatever the class of character of the dams, the continued use of sires of a distinct breed, capable of transmitting a family likeness, should constantly be persisted in; the man who does so, finding his stock of various breeds of animals yearly increasing in value, the receipts correspondingly raised, and the occupants of his pastures, stables, or stalls, wonderfully improved in appearance. Whether they attend to it or not, we find most men admitting the influence of a well bred sire on the character and quality of the future offspring; but strange to say, comparatively little stress is laid upon the influence for good which is exerted by the dame on her young, when she herself is of good quality and well descended. When both parents are good, progress is rapid, and by holding over for breeders only the young and the best animals, much time is saved, and the required amount of perfection is reached in a very limited number of years. Once looked to, this point will ever after be considered one of the most vital importance, and will on no account whatever be neglected or overlooked.

To any one conversant with stock in large numbers, the influence of the mother is strikingly apparent in certain members of each class, their produce year after year exceeding in value that of every other animal of the same kind, and when sold, brings proportionately more money. Thus, for instance, a cow will sometimes breed calves for a succession of years, exactly the same color, form, and general character, no matter if the sire is changed every year; and her progeny again will transmit to their offspring the same characteristics, but in an improved degree, if the necessary measures have been attended to with this view. Families are thus founded, and men intelligent enough to profit by improving a good strain which has come in their way—it may be quite accidental in the first instance—have gained for themselves a name, and acquired fortunes. To breed from females which have proved themselves indifferent nurses, and whose progeny, however handsome they themselves may be, are ever among the culls of the flock, is very short sighted policy, and detracts very materially from the prosperity of those who will not take the trouble of marking all such animals, and getting rid of them on the first favorable opportunity.—*Mark Lane Express.*

TEACHING A HORSE TO STOP.

When I get a new horse, and that is not very often, I make it my first business to teach that horse to stop suddenly, when I first say whoa; by gentl. jerking on the lines the horse soon begins to understand you. He should be first taught to stop while walking; then stopped on a gentle trot, and when finally driven rapidly. There isn't a horse in the world that cannot be taught in a day's time to stop, by a short sharp whoa, without drawing on the lines. And they should learn to do this, just as quick as they can. Presently, no matter how badly frightened the horse is, he will stop

when he hears the word. Many horses become unmanageable when they get their tails over the lines; so if anything touches their heels, away they go. To a horse properly taught, the word of the driver should be as potent as the strongest lines.

Let me illustrate the value of my suggestions, by relating what I have saved in this way. Not long since, I purchased a spirited young horse, and the first lesson I gave him was to stop when I spoke to him. Soon after, I hitched him into the buggy, and got into it with all my family. I care not say how many of us there were, lest some of your readers should envy me. Enough, that with what I had at my side, and on my lap, I could scarcely see the horse.

An unlucky whisk of the horse's tail brought the line under it, and quicker than I can tell you, the horse made two sudden bounds, and would have run away, but my timely "whoa" brought everything up standing; and I found the line as fast under the tail as though it were in a vice. The united strength of my whole family could hardly have pulled it out. After standing a moment it came out itself. Then the whole family breathed easier, and the reporters of the daily press lost a good item.

One day my horse and buggy were standing in front of my office, and a heedless expressman drove up with a top wagon, and fairly ran on my establishment. The fluttering of the expressman's curtains, and the rattling of his rickety wagon frightened my horse so badly, that he flew back, tore the bits out of his mouth, broke his hitching strap and started on a run.

Looking out of the window I saw with most indignant eyes the whole transaction. I sprang to the door and spoke a loud sharp "whoa." And though I was some five or six rods from the horse, he stopped as though he had met a stone wall in his road. I breathed easier again, for I had saved fifty dollars or seventy-five, the amount of the threatened smash-up.

Another day, my horse standing hitched, and kicking flies, got his feet entangled and fell down. While struggling to rise, the rump strap broke, and feeling himself loose, he sprang to his feet and started on a lively run with the buggy in the rear. An old farmer gentleman just passing instinctively cried out "Whoa!" "My gracious, mister," said he, "I never saw the like of that: why if I had hit that horse over the head with a club, he wouldn't have stopped any quicker. Fine horse, well broken; been one of my horses, sir, your wife would have plenty of kindling wood. Never stopped a horse that way before."—*Cor. Ohio Farmer.*

POINTS OF A GOOD CART HORSE.

The following were set forth at a meeting of an English Farmers Club, as the points of a good Suffolk horse, by Mr. Henry Crose:—

A well-shaped head, rather large, a long clean ear, full eye, neck rather long, but not too much arched, strong withers lying well forward to catch the collar at the proper angle for draught, and broad shoulders well spread into the back; back straight, ribs long and well rounded, hind legs bent at the hock, forelegs forward, hind-quarters somewhat round, but not sufficiently so to make them look

short; the mane and tail of strong but not coarse hair, and with a fetlock about 2 inches long, broad knees, long hocks, short shanks and hard ankles or fetlock joints, and round hoofs, well opened behind; and the nearer you can approach this description, the nearer the horse will be to perfection.

Till the steam plow takes the place of those now used, the plow will always be the work which will wear out the farmer's horse more than any other. Observe your plow-horses on a hard headland, and you will see the horse with very sloping shoulders swerve from his work, where a horse with moderately upright shoulders will lay to his work, and walk straight. I am aware that in these remarks I am touching upon tender ground, for I find the fashion of the present day is greatly in favor of very sloping shoulders. My experience is certainly not in their favor, and Professor Youatt, in describing the farmer's horse, writes that the shoulder should not be too much sloped, as workmen often find fault that a horse jibs when the fault is more in the shape of his shoulder than in his temper, for when he lays to his work the collar catches his windpipe, making him throw up his head and fall back; and when a horse is required to start a heavy load, or take a dead pull, it will be necessary to have horses that will lay to their work, for it is a mathematical certainty that a draught horse must pull from an angle at the shoulder, and if that angle is too sloping, the collar will catch the windpipe, and, if too upright, will press upon the withers. To exemplify the necessity for a staunch horse, allow me to relate an instance I saw a few months since. A wagon was stopped at the bottom of the hill in the parish of Great Finborough, and when the driver wanted to start his load, three out of the four horses refused the dead pull, and had he not had one with a pair of upright shoulders, he might have stayed some time. On looking round I saw the three were of a favorite breed, and very smart animals, and I also noticed that all three had on collars thickest at the top. This, to me, had a very ugly appearance.

A word or two as to breeding. One point I have found too much overlooked in breeding—viz., hereditary weakness and disease. My advice is, never breed from an unsound animal; particularly do not breed from one unsound about the feet and legs, for I have frequently been able to trace pedigree by brittle hoofs, and bad ankles or fetlock, for several generations, when acting as judge, and have found too many of our public favorites so very deficient, that even when old enough to put to work, their legs looked half worn out.

DOMINIQUE AND GAMES.

The Dominique and Game, or either of them crossed on other breeds, make the best fowls for all domestic purposes. We have had the Black Spanish, Poland, Shanghai, Brahma, Gray Dorking, Game, Dominique and other varieties. The Black Spanish were too small and tender, though good layers. The Polands we got rid of as soon as possible. The Shanghai ran "to legs and consumption."

The Light Brahma is a fine fowl, with considerable action, and is a very fair egg producer, but not a first class hatcher. The Dark Brahma is a perfect fowl. Twenty-five Dark Brahma cocks would, if fed all they could eat, consume in one year one hundred bushels of corn. We have some now that eat fully as much as our turkeys.

In order to try the capacity of one of these foreigners, we weighed him when his crop was empty, then fed him and weighed him again, and found that he had consumed almost a half pound of corn. In five hours he was ready for another feed.

The Gray Dorking, crossed on the Dominique, made the most docile and egg-producing fowl we have ever had, and their flesh is unsurpassed. They are large enough, yet not clumsy. We have a rooster now of this cross that weighs nine and a half pounds. The hens dress nearly four pounds each, are plump and short legged. We have games crossed on Black Spanish that are fine layers and make the best of mothers, though rather small for the table. We keep them, however, to hatch and rear chickens.

The Dominique is almost equally good, if kept in its purity, but crossed with the Game stands No. 1 as a brood hen, but any other cross diminishes its value in this respect. A dash of Game blood we consider as being essential in producing extra setters and mothers, for none can compare with the Game for activity and industry in providing food for the chicks; and we be the youngster that attempts to strangle the little ones. The battle is always "short, sharp and decisive."

In conclusion we would say that, for farmers living north of the 40th parallel of latitude, we know that the Dominique and Game are the best fowls to keep, *i. e.*, for all purposes. If we lived in Maryland and especially on the "eastern shore," we would keep the Spanish for its eggs alone. When turkeys are difficult to rear, the Dark Brahma ought to be introduced on account of its size; for Christmas dinners it is a fair substitute for the former. We have one that at five months weighed eight pounds; and then they possess this advantage that they cannot fly four feet to roost until they are fully grown.—*Cor. Germantown Telegraph.*

RULES FOR THE CARE OF SHEEP.

The following suggestions about sheep are copied from a circular issued by F. C. D. McKay, the General Agent of the Emigrant Company.

1. Keep sheep dry under foot with litter. This is even more necessary than roofing them. Never let them stand or lie in mud or snow.
2. Take up lamb bucks early in the summer, and keep them up until December 1, following, when they may be turned out.
3. Drop or take out the lowest bars as the sheep enter or leave a yard, thus saving broken limbs.
4. Count every day.
5. Begin graining with the greatest care, and use the smallest quantity at first.
6. If a ewe loses her lamb, milk her daily for a few days, and mix a little alum with her salt.
7. Let no hogs eat with the sheep, by any means, in the spring.
8. Give the lambs a little mill feed in time of weaning.
9. Never frighten sheep if possible to avoid it.
10. Sow rye for weak ones in cold weather, if you can.
11. Separate all weak, or thin, or sick from those strong, in the fall, and give them special care.
12. If any sheep is hurt, catch it at once and if it is fly time, apply spirits of turpentine daily,

and always wash with something healing. If a limb is broken bind it with splinters tightly, loosening as the limb swells.

13. Keep a number of good bells on the sheep.
14. Do not let the sheep spoil wool with chaff or burrs.
15. Cut tag-locks in early spring.
16. For scours, give pulverized alum in wheat bran; prevent by taking great care in changing dry for green feed.
17. If one is lame, examine the foot, clean out between the hoofs, bare the hoof if unsound, and apply tobacco, with blue vitriol boiled in a little water.
18. Shear at once any sheep commencing to shed its wool, unless the weather is too severe, and save carefully the pelt of any sheep that dies.
19. Have, at least, some good work by to refer to. This will be money in your pocket.

SOILING CATTLE.

The advantages of soiling over pasturing cattle are thus concisely summed up by Josiah Quincy;—

1. The saving of land.
2. The saving of fences.
3. The economizing of food.
4. The better condition and greater comfort of the cattle.
5. The greater product of milk.
6. The attainment of a greater quantity of manure of improved quality.

In regard to the crops best adapted for the purpose, their succession, and the time of sowing, the same authority gives the following directions as suitable for the latitude of Boston and any similar climate.—

1. As early in April as the state of the land will permit, which is usually between the 5th and the 10th, on properly prepared land, oats at the rate of four bushels to the acre.
2. About the 20th of the same month, sow either oats or barley, at the same rate per acre.
3. Early in May sow in like manner either of the above grains.
4. Between the 10th and 15th of May sow Indian corn, the flat Southern being the best, in drills, three bushels to the acre.
5. About the 25th of May, sow corn again in like proportions.
6. About the 5th of June, repeat the sowing of corn.
7. After the above mentioned sowing, barley should be sown on the 15th and 25th of June and early in July, barley being the best qualified to resist the early frosts.

The first sown will be in a state to be used about the first of July, until which time grass cut and brought to the stable is the reliance.

As soon as the first sowing is fed off, Mr. Quincy recommends that the land be well manured and ploughed, and again sown with seed, pursuing this practice with all the land from which fodder has been removed in time for a new crop to be grown which can only be in cases of early sowing.

As to the quantity of land to be cultivated, it is stated that a square rod of loam in grass, oats, barley, or Indian corn, is enough to support one cow a day, if cut and fed to her in the barn. But this practice

has been to cultivate one and a half square rods for each head, as the season may not be favourable. If there should be a greater growth than is consumed in the green state, it would not be lost, as it may be cured for winter use?

MANAGEMENT OF YOUNG LAMBS.

A correspondent of the *Country Gentleman* communicates the following suggestions on the above subject:

If, by any accident, a lamb is dropped in some cold bleak fence corner, or in a snow bank, and is still breathing although it may be so stiff that the joints cannot be bent, take it to a warm room, put it in a tub in which the water is about three inches deep, and as hot as can be borne by the hands, with one hand hold the lamb's head out of the water, and with the other rub him all over, briskly and pretty hard. As soon as the water feels only warm to the hand you are rubbing with, pour more hot water in, making it feel hot again. Continue the rubbing and pouring in the water until the lamb puts out his tongue like a heated ox; then take him out and rub him dry with a towel. In nearly every case he will stand on his feet by this time, and if so put him to the mother and let him suck. If not lay him in a warm place for an hour or two, rubbing him occasionally.

I have never failed to save a chilled lamb when treated in this manner, even if he was stiff and dead to all appearance, except in occasional slight breathing.

The next thing is to make the ewe own her lamb. All she knows about her lamb is the smell, and washing him is apt to make the sheep disown him. Some old, tame yews will own any lamb you bring to them at such a time, but they are the exception. Young ewes, also, when they first drop a lamb, will often go away and leave him, and if put in a pen with the lamb will not pay the least attention to him, except to knock him over if he attempts to suck.

Take a dish and give the ewe a handful of corn meal. While she is eating it put the lamb into a barrel or box in which there is some corn meal; rub him well all over with the meal, then take him out and rub him with salt from the top of the head along the back to the tail. Now take the dish of meal away from the ewe and put the lamb under her nose. She will hardly ever fail to taste the salt and if she tastes she will usually lick the lamb. Then leave her to herself for half an hour, or while she is licking him. I have never known a ewe to disown a lamb if she has once licked him. I have in this way made ewes own lambs not their own, after they had become accustomed to even the voice of their own lambs.

QUERIES ABOUT BEES AND BEE-HIVES.

"An Interested Bee-keeper" sends half-a-dozen enquiries on the above topics to Mr. J. H. Thomas, of Brooklin, who replies to them in the agricultural department of the *Gleaner*. We publish the questions and answers for the information of other interested bee-keepers:—

"1. Can I sell a colony of bees in the Thomas hive to a person who has not a right to manufacture and use the hive? If not—

2. Can I sell to one who has?

3. Can I move a colony of bees out of one set of frames into another? If so—

4. What is the best method?

5. Which is the best season, before honey harvest or after?

6. It is held by parties in this neighborhood that the outward appearance of the Thomas hive is not covered by patent, and because they use a different kind of frame, do not use revolving bands nor robber stop, though the cover and outward appearance of their hive in other respects is the same as that of the Thomas hive, they hold that they are not infringing on the Thomas patent. Is this correct?

REPLY.

1 and 2. You can sell a colony of bees in the Thomas Hive to any person. If the party who purchases has no "right," he can use only the hive or hives he buys with the bees in; if he desire to make any hives he must buy the right of Thomas or his agent.

3, 4 and 5. A colony of bees may be moved from one set of frames to another at any time by simply taking out the frames and shaking the bees off, or brushing them off with a strong feather or wing, on to the frames of another hive; but if this is done in the breeding season there will be a large quantity of larva and young brood in the comb that would perish. Hence it is better to do it in the Spring early, or late in the Fall, when there is but little brood in the hive.

6 The mere outward appearance of the Thomas hive is not patented, but rather the peculiar construction.

WHITE LEGHORNS.

To our American cousins is due the credit of having introduced certain admirable breeds of poultry. The Brahmans are undoubtedly second to none as useful fowls, being unsurpassed for size, hardihood and fertility amongst the incubating breeds. Another race which is equally popular in the United States, as being at once most useful and ornamental, is that known as the white Leghorn. These fowls are hardly, if at all, known in this country; but having tested their merits for two seasons, I can report most favourable of them, and fully endorse all that has been said in their favour on the other side of the Atlantic.

White Leghorns are birds of the Spanish type, but with white in place of black plumage. Their legs are bright yellow, and perfectly free from feathering on the shanks, the faces are red, the ear lobes only being white. The comb in the cock is thin, erect, and evenly serrated. In the hen it falls over like that of a Spanish hen. The tail in the cock is exceedingly well furnished with side sickle feathers, and in both sexes is carried particularly erect. The birds are active, good foragers, and have a sprightly and handsome carriage.

I find them to be abundant layers of full-sized eggs, the hens rarely showing any inclination to sit, but laying the whole year round, except during the time of the annual moult. The chickens are very hardy. I have not lost one by death this season.

Unlike those of the Spanish, they feather quickly, and mature rapidly.

I regard these fowls as an exceedingly useful as well as ornamental addition to our stock of poultry. Whatever competitive shows may have done for other breeds, they have certainly materially lessened the value of Spanish as useful fowls. In the place of the large prolific hardy breed which was formerly known under that name, we have a smaller race, very leggy, and feathering with such slowness that chickens are very often seen in prize pens that have not produced their tail feathers. In fact the useful qualities of the race have been neglected in breeding for face and ear lobe.

The Leghorn possesses the advantages of the Spanish without their drawbacks, and I have no doubt they will become as great favourites in this country as they are in America.—*W. B. Tegetmeier, in London Field.*

THE AYRSHIRES AS MILKERS.

Howard S. Collins, of Collinsville, Conn., furnishes the *Practical Farmer* an interesting account as to how he came to select the Ayrshires as milkers. In 1856 he commenced farming on a poor, neglected hillside farm, of 150 acres, that, at the time, supported six head of stock. He began by keeping six head, soiling them in Summer, and steaming food for them in Winter, and every year taking up some poor land to be thoroughly cleared, manured and seeded down again. The editor of the *Duchess Farmer* states that he has visited his farm, and though beautifully situated, has rarely seen a more unpromising field for testing the merits of high farming. There are few men who have studied agriculture more thoroughly than Mr. Collins, or who have carried to the task of renovating, we might almost say creating, a farm, greater skill, system, energy, perseverance, and science, and he deserves his success. On this farm he now keeps fifty head of cattle and three horses. He has tried the "Natives," grade Devons, grade Ayrshires, and has finally decided that for his purpose, (selling milk the year round), properly selected, thorough-bred Ayrshires are the most profitable for him to keep. Mr. Collins is a very careful and systematic man, keeping an exact account of the produce of every cow on the farm, and his statement is of great weight.

A YOUNG BEE-KEEPER.

"On the 12th of August, 1869, I gave my little boy (8 years old) a swarm of Italian bees, on condition that he would study and learn how to manage them: the proceeds to be kept together till he became twenty-one years old. Last year they gave him a good swarm and ninety pounds of box honey, which would readily bring \$33 00."

We give the above extract, from a private letter, with a hope that other bee-keepers may be induced to follow our friend's example and thus excite an intelligent interest in the subject in the minds of their children. This boy will have a snug little property when he is of age—and better still, he will acquire habits of thought and investigation, that will be invaluable to him whatever occupation in life he may choose.—*Iowa Homestead.*

LIVE STOCK GLEANINGS.

In Missouri they have a new hog disease, known as the "black tooth," the cure is to remove the black teeth as soon as the hogs show symptoms of languor or pain.

A number of Percheron and Norman horses have recently been taken to California. The *Willamette Farmer* thinks this breed a valuable one for California farmers.

A gentleman of leisure who devoted a shining hour to watching "the little busy bee," states that during that time she visited no less than 582 clover heads.

It is reported that the hog cholera is making sad havoc among the porcines of Clark county, Iowa. Asa Fleming has lost thirty, Captain Carter about forty, William Padgett about eighty, and others a less number.

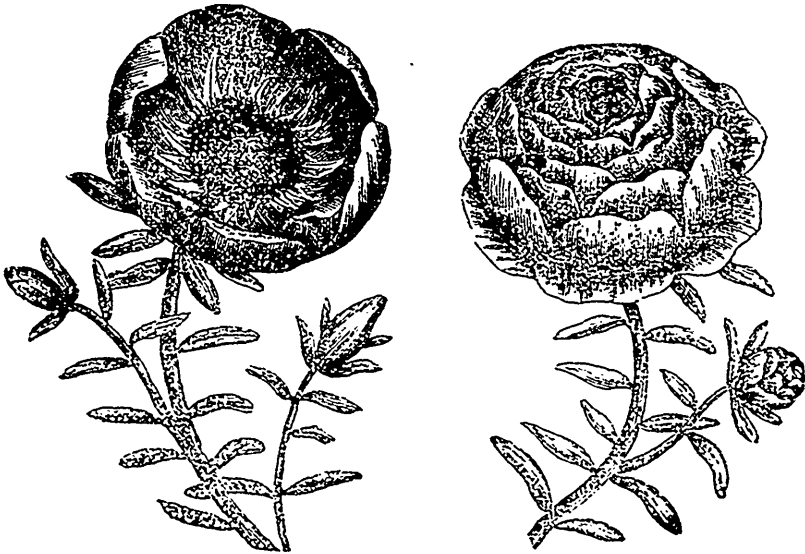
Mr. Wallcott, a prominent New York breeder of cattle, maintains that breeding from young stock is a prolific source of abortion in cows; and that a yearling bull is unfit for breeding, and should be discarded altogether.

A Kentucky paper says:— There were 21,016 sheep killed by dogs in this State, valued at \$59,-

352. Sheep killed in 1870, 20,714, valued at \$57,-855; Shelby being the heaviest loser in 1869, having lost 1,027 by this means, and 583 in 1870.

Senator Zachariah Chandler of Michigan, has purchased of a gentleman in Maryland the celebrated imported Percheron stallion, "Mark Antony." He is said to be the best draft stallion in America. He is sixteen hands high; weighs 1,800 pounds; color dapple gray. It is claimed that this horse can walk five miles an hour with a load of two tons. He sired 120 colts the past year, every one of which was the color of the sire, the best evidence of purity of blood. He is to be kept on the farm of Senator Chandler, just north of Lansing.

The Cattle Commissioners of New York and several of the New England States recently met in Albany to consider what measures should be adopted to prevent the spread of the cattle disease, which has broken out in various sections. A disinfecting solution, composed of ten pounds of copperas, sixty gallons of water, and one half-gallon of thirty per cent carbolic acid, was recommended for use daily in cattle yards. The Legislatures are memorialized to authorize the Commissioners to take prompt and efficient measures to prevent the spread of all such diseases; and farmers' clubs, &c., were asked to aid in carrying out preventive movements.



The Garden.

THE PORTULACCA.

Among the hardy annuals, there is perhaps no more general favorite than the *Portulacca*. Only single when first grown. It is now both single and double. The blooms are large, brilliant, salver-shaped, and of various colors, e. g., purple, crimson, yellow, white, striped, &c. This plant is perfectly hardy, and will reproduce itself

from self-sown seed. It delights in a warm situation and sandy soil. Few low-growing plants can be compared with this for abundance of blossoms and showiness of colours. The *Portulacca* is excellent for a bed on the lawn which should be full and rounding toward the centre. It is also very beautiful in ribbon beds. The seed should be sown either in the hot bed, or early in the open ground, so as to get a long continuance of blooms.

BRINCKLE'S ORANGE RASPBERRY:

—
This is to our taste, the best of all the raspberries in point of flavour, but it is rather tender, and in our experience of it a shy bearer. The berry is of large size;

it in Canada the canes must be bent down and protected with some sort of covering. It is, however, well worth any extra trouble it may require, as every one will admit, who has had a dish of the berries, fresh and ripe, in their season.



form conical—sometimes ovate; colour, deep, rich orange; grains medium; flesh, rich, juicy, and delicious; canes, light, grey; leaf, irregular and conugated. In a more temperate clime than this, it is a prolific bearer. To succeed at all with

HOW TO HAVE EARLY TOMATOES.

—
D. A. Compton, of Hawley, Penn., writes to the American Institute Farmers' Club as follows: "Do not forget to tell your agricultural friends that tomatoes on heavy soil may be obtained from four to five

weeks earlier than usual, by setting the plants on the tops of sharp hills. The hills should be about fifteen inches high and three feet diameter at the base. Water the plants only when first set, and dust the plant and whole hill frequently with plaster. The tomato coming from a hot and dry country, will endure a drouth that would prove fatal to less hardy plants. What it needs most is heat, and this is secured by planting on steep hills, on which the sun's rays strike less obliquely than on flat surfaces. Land should not be over rich for the tomato, very fertile soils producing too great a growth of vine. The vines should be "punched in" and the blossoms removed after the first settings have attained the size of marbles; but in any case the vines should be permitted to fall directly on the ground, that the fruit may have the full benefit of the heat of the sun and the warmth refracted from the earth. By saving the first well-formed ripe tomato for seed, for several successive years, a variety may be obtained that for earliness, will be far superior to the original stock.

PLANTING FRUIT TREES.

The sale of fruit trees at the nurseries commenced at least two weeks earlier this year than last, and a large trade is expected. The sooner the trees are got into the ground the better, provided the soil has been well prepared. When trees are planted early, the roots have time to take hold of the soil and get a good stand before the drouth of Summersets in. Trees of medium size are much better for planting out than very large or very small ones. The roots extend about as far as the branches, and in taking up large trees, the roots are generally very much mutilated, and the trees receive very severe check. Small or medium sized trees may be taken up without much damage to the roots. The ground for an orchard should be deeply tilled and thoroughly drained. Holes for fruit trees should be wide, but not very deep, they should be filled up with rich soil to within six inches of the ground-level, the soil being packed to prevent it from settling too much. The trees should be planted not much deeper than they stood in the nursery. The roots should be spread out evenly and covered with rich mellow soil. The best varieties should be selected. If the trees are purchased at a respectable nursery,

they will be true to name. If they are procured from transient, irresponsible peddlers, they cannot be relied on, although there may be exceptions to this rule. Manures specially adapted for fruit trees should be applied to the soil at the time of planting.

WORK IN THE GARDEN.

If the soil of the garden was spaded or plowed in the Fall, and has been lying in fallow during the Winter, it is now mellow and friable, and will be easily prepared for the seed. It is not advisable to put seeds into the ground too early in the Spring, before the soil is warm enough to promote vegetation. The soil should not be stirred by the plow, cultivator, harrow, roller, spade, hoe, rake, or any other implement, while it is wet. When frost has disappeared, and the weather is mild and open, the seeds of early vegetables may be sown. Vegetables which bear transplanting should be raised in hot-beds, and allowed to grow strong and stocky before they are set out in the open ground. If plants are too much crowded in hot-beds, they will grow weak and spindling, and unfit for use. In order to prevent this, the strongest plants should be set out in the open ground as soon as the soil is prepared, and the weather favorable for transplanting. If the soil is wet and cold, and the weather unfavorable, the beds may be thinned by "pricking out" the plants into cold frames. Pruning of all sorts of fruit trees, bushes, canes, ornamental shrubs, etc., should now be completed; cions and cuttings procured; grapevines, roses, etc., tied on their trellises or arbors; bean-poles, flower-stakes, and pea-brush provided; borders of every kind trimmed. Grass-plots and borders may be made at any time during the month.

ADVICE OF A GARDENER TO HIS SON.

Always cultivate with your eyes turned toward the nearest market. This ought to be the first rule for a farmer, for, without conveniences to sell your products at fair prices, and get your manures easily and cheap, farming will not pay well, if it pays at all.

"Rise early in the morning," and have your eye on everything. A good start is worth many an hour of labor through the day.

Be your own overseer and foreman. You are no longer an independent man as soon as there is an *indispensable* individual upon your farm. Be ready to part with the best, and to take his place. That will do away with exactions and impertinence.

Be kind, just, and fair, in dealing with your hands; but "keep up your hedges." In other words, don't let others interfere with your authority.

Let order be the farm's first law. Disorder and neglect are very expensive.

Have your cattle gently treated; you will save many a valuable animal, and prevent many a sad accident.

Take care of all the tools, and have the best ones; they are the cheapest after all.

Don't neglect good advice, but do not accept it readily from every one; and, chiefly, do not consult your helps; you are sure to spoil them. Keep up your authority, anyhow.

Keep a ledger of expense and profits; and, again, "*rise early in the morning.*"—*Horticulturist.*

DIRECTIONS FOR SUCCESS WITH FLOWER SEEDS.

If the following simple rules are attended to, success is almost certain in growing flowers from seeds. But if neglected, failure is almost equally certain.

1st. The seed should not be sown until about the time of planting cucumbers and putting out tomatoes. If sown too early, the frost will destroy the choicest varieties.

2nd. Cover the seed with very fine dirt; and only about one quarter of an inch deep as a general rule. Large seeds may be covered a half-inch.

3rd. Shade the bed with a board, or in some other way. Sprinkle on water every day, unless it rains, and keep the surface of the bed constantly moist until the plants come up. Then remove the shade and give them the sun. But still continue to sprinkle the bed every evening or early in the morning, until the plants get a little strength of root.

4th. In very dry weather, during the Summer, until they blossom, give them a showering occasionally. This should be done just before evening, or the sun will dry out the moisture too soon, and cause the ground to bake hard.

Failure is not because the seed is bad, as a general thing; but is caused, in most

cases, either by covering the little seeds so deep that the germ cannot reach the surface, or by the ground becoming dried below the point where the seeds are located; in which case the plant, with its roots, is destroyed. By following the above directions, these difficulties are avoided; and beautiful flowers will amply compensate for the care and labor bestowed.—*Charles D. Copeland, Lima, N. Y., in Western Rural.*

BEANS.

These grow best in warm, rich, mellow soil. The bush beans are planted in drills, about two inches deep, and two inches apart in the row. The drills may be from one foot to eighteen inches apart. When the plants are three or four inches high, the earth should be drawn up to the stems, and just before they begin to blossom they should be again earthed up with loose mellow soil. They require to be frequently hoed while growing, that the ground may be kept loose and free from all weeds.

The hardiest variety is the Early Mohawk. Frosts that often quite kill other varieties, do not injure this. It is a good bearer, with long pods.

The Early Valentine is a favorite sort. It is a great bearer, and continues in use for a considerable time. It has been the chief reliance of the market gardener.

The Wax or Butter Bean has become a prominent sort in our markets within the past few years. The pods are thick, solid, and tender, of a light waxy yellow color, and almost transparent. The ripe beans are black.

Pole or running beans are planted in hills, two by three feet apart, five or six beans to the hill, and covered about a couple of inches deep. It is of no use to plant until the soil has become warm. These beans need the support of a pole or rod, thrust deep enough into the ground to sustain the weight of the vines, usually about eighteen inches, and standing eight or nine feet high. Three healthy plants will be enough to grow in each hill.

The Speckled Cranberry is an excellent variety, and can be used either green or dry. It is productive and sufficiently hardy to grow and ripen well in our climate.

The Large Lima is the most delicious and buttery of them all, but requires a long season and dry, warm soil. It can be

grown only in the more favored parts of our Province.

Our farmers who grow Indian corn will find that they can grow the Speckled Cranberry without trouble by planting a few beans in each hill at the time of their first hoeing. The cornstalks will make poles for the beans to run on, and the crop will pay for the labor of hoeing the corn. And for family use they will find these beans more nutritive than potatoes, and in these days of potato rot, more certain.—*Globe*.

THE PRESIDENT WILDER STRAWBERRY.

In the March number of *Tilton's Journal of Horticulture*, Mr. Geo. W. Campbell, of Delaware, Ohio, says of this variety: "I set a few plants in the fall of 1869, also a few more in the spring of 1870. They occupy three different positions in my garden; one in clay, one in sandy soil, and the other in black loam. I think I did not lose a plant of these set out, and although the past season has been one of unusual heat and drought, I must say I never grew any variety of strawberry, which was more perfectly free from sunburn, than the President Wilder. Indeed, its habits of growth has been, so far, all I could desire. I had a few berries, the flavor of which was excellent, having a good deal the character of *La Constantine*. I noticed particularly the bright, lively color, fine size and great firmness of the berries, and formed the opinion that they would bear carriage fully as well as *Jucunda* or even *Wilson*. Should it prove, upon trial to be sufficiently productive, I venture to predict for this variety, great popularity and real value, worthy of the honored name it bears. I will add that I have taken some pains to enquire of my brother horticulturists of Ohio, both north and south, as to the performance of the President Wilder, and with a single exception, their experience accorded perfectly with my own."

CARROTS.

Those who have light loam or sandy soil may enjoy the comfort and luxury of this vegetable. It is not only wholesome in itself and nutritious, but an excellent promoter of digestion.

To grow the carrot in perfection, the soil should be well worked and thoroughly pulverized, and well supplied with perfectly

rotten manure. The seed should be sown about an inch deep, in drills one foot apart, as early as the ground can be nicely worked. An ounce of seed is enough for one hundred feet of drill. After the plants appear they will require thinning out to about four inches apart. They will grow better if frequently hoed, and the weeds never allowed to appear.

The Early French Short Horn is the best variety by far for table use. It comes to maturity early, and is sweeter than any other sort. The root terminates abruptly, not tapering to a point as the ordinary long carrots, and on this account can be grown in more shallow soil. It will keep also all the winter, if taken up in a dry day, the tops cut off about an inch from the crown, and the roots packed in earth or sand in the cellar or root-house.

The Altringham is the next in quality to the Early French Short Horn. It is shaped like the ordinary long-rooted kinds, and requires a deep soil.

If any of our readers have not been in the habit of supplying their table with carrots, we earnestly recommend them to try the kinds first mentioned. Boiled with meat or cooked in soup, it is a most excellent vegetable.—*H*.

MANURE FOR ORCHARD & GARDEN.

By a liberal allowance of suitable manure a comparatively small piece of ground may be made to produce much larger crops of fruit or vegetables than a great quantity of land to which manure has not been applied. Orchards are sometimes greatly impoverished by the sowing of cereal crops. Manured crops of corn or vegetables are beneficial to a young orchard, if the ground is kept free from weeds by careful after-culture. When the trees have become large, and the roots and branches widely extended, no crops of any kind should be grown in the orchard, and manures specially adapted for supplying the increased wants of the trees should be supplied annually. Bone dust, wood ashes, muck, barn-yard manure, soot, lime, plaster, guano, and common salt, contain the principal part of the ingredients necessary for building up the wood, bark, foliage, and fruit of trees, bushes, canes, and vines. For the vegetable and flower gardens, and pleasure grounds, well-decomposed barn-yard manure is the most suitable. For flour pots, boxes, etc., a supply of leaf-mould should always be available.

THE GRAPE VINE IN APRIL.

Grape Vines which have been laid down and protected by a covering should be uncovered as soon as settled, mild weather makes it safe to do so. Pruning should be completed, trellises and arbors repaired if necessary, and new ones built if needed. The vine border should be kept free from weeds, and enriched with suitable manure. The ripening of grapes is sometimes much retarded by the branches of deciduous trees shading them from the sun. Mildew is often caused by the want of a free circulation of air; and on this account every obstruction to perfect ventilation should be removed. It has been ascertained that grapes ripen better on high trellises than on low ones, and are also less liable to mildew when trained high. The want of thorough drainage to the soil is often a great hindrance to successful grape culture, it is certain that land cannot be too dry for this purpose. Cuttings which have been taken off in the fall and kept in the cellar or green house, should be examined and the soil moistened around them, to keep them in a growing state.

THE ORCHARD.

The soil for a new orchard ought to be thoroughly prepared before the trees are planted. If the land has been drained and deepened in the fall, it will be ready to receive the trees early in the spring. Sandy loam soils are best suited for an orchard; for being situated on a porous sub-soil, they are naturally drained. In stiff, retentive soils, draining is indispensable. Drains in orchards are liable to be obstructed by the fibrous roots of the trees entering the joints of the tiles, and filling the bore. Some drainers seal up the joints with cement, and hold that by this means roots will be kept out of the drains, but that water will percolate through the tiles. Large tiles are better adapted for draining orchards than small ones, as they are less liable to be obstructed by roots. Six inches in depth of gravel over the tiles will be found an effective means of keeping roots out of the drains.

THE ROYAL OAK.

The English Royal Oak thrives admirably in our climate, grows rapidly, and soon becomes a noble, ornamental and use-

ful tree. It thrives in a rather heavy, moist soil, than in one that is light and dry. It is not to be expected that it will ever be so extensively cultivated here as our native species, but a few specimens might be planted here and there about our grounds, even if for no other purpose than to refresh our memory, and bring to mind many events in English history which no one using the language should ever wish to forget. The young trees of this oak can be obtained of most of our nurserymen. —*Rural New Yorker.*

DOUBLE-FLOWERED TIGER LILY.

The *Florist and Pomologist* for February is graced with a handsome coloured plate of new and double variety of the well known Tiger Lily. The plant has the habit of our common variety, the stalk attaining to the height of about three feet, thinly covered with a cobweb of white hairs, and clothed with scattered leaves, having the miniature bulbs in the axils. The flowers are about four inches in diameter, with six series of petals, of a bright orange colour, densely spotted with blackish purple spots. This lily was exhibited at the August meeting of the Royal Horticultural Society, when it was awarded a first class certificate.

NEW DOUBLE WISTARIA.

Mr. Francis Parkman of Jamaica Plains, Mass., received a small plant of *Wistaria* from Japan, several years since, which bloomed last summer, when it was discovered to be a new and valuable variety, with double purple flowers. The plant is perfectly hardy, resembling the old *Wistaria sinensis* so well known as one of the most beautiful of all our climbing plants. It is to be hoped that Mr. Parkman will be successful in propagating this new and charming sort, for the more varieties we have of this beautiful genus the better.— There are quite a number of distinct sorts to be found in the larger nurseries. Among the best, we will name *Wistaria sinensis*, with deep bluish flowers and very long trusses; *W. S. alba*, flowers pure white and trusses nearly a foot in length; *W. frutescens*, a native species, with small, compact clusters of purplish flowers. The plant is a vigorous grower and usually blooms twice in a season. The *W. frutescens alba*

is a charming sort, with white flowers, excellent for forcing under glass, as the plant is rather a stocky grower and not inclined to elime as much as other sorts. The *W. magnifica*, with pale blue flowers, is also a handsome sort, and one of the most vigorous of growers. The *W. brocypoda* resembles the *frutescens*, the flowers smaller and deeper purple.—*Rural New Yorker*.

GARDEN GLEANINGS.

Harwich, Mass., raised last year 4,084 bushels cranberries, which sold for \$46,000.

In reply to a query about a remedy for white worms in plant pots, a correspondent of the *New England Farmer* says that lime water will kill them, or a little slacked lime sprinkled on the surface of the earth, and in the saucer of the pot. Lime water can be made easily by slacking a large piece of lime in a pail of cold water, letting settle and then bottling for use. Give each pot a tablespoonful twice a week.

The Philadelphia raspberry, thus far, is the most profitable fruit for us to grow. No variety we have met with equals it in productiveness on our light soil. It certainly is good when brought on the table, nicely powdered with sugar, and the spaces filled with cream, and few of our guests refuse to be helped the second time.—Isaac Hicks, in *Gardeners' Monthly*.

Hood in his *Comic Annual* for 1830, communicated the following from a contributor: "Sur, my wyl had a tom cat that dyd. Being a torture shell and a grate faverit, we had him burried in the gardian, and for the sake of enrichment of the sile, I had the carkis lade under the roots of a guzberry bush. The frute being up till then of the smooth kibd. But the next seson's frute after the cat was burried the guzberries was all hairy, and more remarkable, the catipilers of the same bush all of the same hairy description."

The able editor of the *Gardeners' Magazine* expresses the opinion that the best new grape of 1870 is the Ferdinand de Lesseps, possessing "a new and exquisite flavour, combined with a most powerful and refreshing perfume. The fruit small both in bunch and berry, the colour a fine deep amber, the flesh highly perfumed and of the most luscious flavour. The vine grows freely and bears freely."

The editor of the *Journal of Horticulture* says: "The largest pear we have ever seen

is a specimen of the Uvedalis St. Germain, or Pound, known also as Belle Angevine, exhibited at the rooms of the Massachusetts Horticultural Society, by Hon. Marshall P. Wilder. It was grown in the orchard of A. P. Smith, Esq., at Sacramento, Cal., and weighed four pounds and nine ounces, measuring twenty-one inches around the stem and eye, and eighteen inches transversely. It has been preserved in alcohol.

John H. Klippart, Secretary of the Ohio State Board of Agriculture, writes to *Hearth and Home* in favor of transplanting plants at night. He says the plants he transplants at night live and grow as a rule, seldom wilting or withering, while almost all of those transplanted in sun-light wither, and many of them die. As an illustration, he says he transplanted 1,000 strawberry plants at night; their growth was apparently uninterrupted.

Fruit trees, shade trees, and ornamental shrubs, are sometimes broken by cattle and other kinds of live stock, and also by high wind. In many cases the damage may be repaired by setting the broken limbs or trunks, matching the parts nicely together, and then binding on mud mixed with cow dung to keep it from cracking. A correspondent of the *Cincinnati Gazette* said he had a very nice May cherry tree in his yard. A horse got in and broke the top off a little above the first limb. There was a splinter of wood and a little bark on one side. He set it up and matched the broken parts as well as he could, bandaged the fracture, and tied the tree to a stake, spreading on grafting wax as far as the bark was broken. The tree grew as well as ever.

"I have always believed that the happiness of mankind might be increased by encouraging that love of a garden, that love of the beautiful, which is innate in us all. Get a man out of the dram and beer shops into the fresh pure air; interest him in the marvellous works of his God, instead of in the deformities of vice; give him an occupation which will add to his health and the comforts of his family, instead of destroying both; then build Revealed upon Natural Religion, and hope to see that man a Christian. From this love of flowers may be learned the road to the inner heart—the key to tastes dearer than beer-swilling—the secret which, if rightly applied, may do much directly to elevate and indirectly to Christianize."—*Hole's Book about Roses*.

Editorial.

THE LATE SANDFORD HOWARD.

American agriculture has lost an intelligent and zealous labourer, and a multitude of sorrowing survivors a true friend, in the rather sudden decease, of Sandford Howard, the able Secretary of the Michigan State Board of Agriculture. This lamentable event took place at Lansing, and was caused by paralysis. We had the pleasure of being acquainted with Mr. Howard, and feel a mournful satisfaction in putting on record our high esteem for him, personally and our admiration of his abilities and attainments. Genial and affable in a high degree, his company was most agreeable. Well-informed on general subjects, and thoroughly posted in all agricultural matters, he had a ready conversational power which made him a valuable companion, from whom you could not fail to derive many useful hints and much important information. He was an excellent judge of cattle, and knew the points of the various breeds perfectly, so as to be able to give a critical opinion of any specimen presented to his view. Hence he was often employed in a judicial capacity at Fairs, and his decisions commanded very general respect. Mr. Howard has rendered great services to the agriculturists of his native country in various ways. He laboured editorially for several years in connection first with the *Country Gentleman* and afterwards with the *Boston Cultivator*. He continued to contribute occasionally to the journals first named, and to others of their class, after his acceptance of the important office which he filled at the time of his decease. Our last interview with him was on the occasion of our visiting the Michigan Agricultural College, which is located at Lansing, and in the promotion of which Mr. Howard took the liveliest interest. We received much kind attention and help in our investigations, into the course of study pursued at that institution, which is one of the most flourishing of the kind in the United States, and whose efficiency has been very greatly promoted by Mr. Howard's exertions in its behalf. The deceased gentleman has left behind him not a few permanent evidences of his high capabili-

ties, industry, and perseverance, more especially in the State Agricultural Reports which emanated from his pen, and which contain some very valuable contributions to the course of scientific agriculture.

We find in the last number of the Massachusetts *Ploughman*, the following biographical sketch of the late Sanford Howard:

Mr. Howard was born in Easton, Bristol county, Mass., on the 7th of August, 1805. The only advantage of early education which he enjoyed were those of the common school. This knowledge of rudiments was the basis which, with observation, and the study of text-books, made him second to none in the sphere he finally chose for a life profession. He remained on his father's farm in Easton until 1830, when he married and removed to Hallowell, Maine, to manage a farm for himself. He early began to contribute to the *Maine Farmer*, his attention being directed especially to the improvement of stock, and this may be said to have been his leading specialty through life. In 1837, he removed to Zanesville Ohio, where he remained till 1843, devoting himself to agricultural pursuits, both with the hand and the pen, and was more than once selected by prominent breeders, to visit New York and other Eastern States, to select, cattle of various kinds for the benefit of that section of the country.

In 1843, he became associated with Luther Tucker, in the editorial management of the *Albany Cultivator*, a position which he retained till 1852, when he removed to this city, to take charge of the *Boston Cultivator* published by Otis Brewer, Esq. While engaged in this work, he was selected, in 1857, by the Massachusetts Society for promoting Agriculture, to go to Europe to select the best specimens of Ayrshire stock. This gave him an opportunity to extend his observations to the various breeds of cattle on their native soil, in England, Scotland, Ireland, and France, and to buy stock on private orders from individuals in various parts of the country. He went again the next year to select a herd of Ayrshire stock for Mr. Henry H. Peters, of Kerry cattle for Arthur W. Austin, of West Roxbury.

Mr. Howard continued his editorial labors till 1864 when he accepted an invitation to become Secretary of the Michigan State Board of Agriculture and removed to Lansing, the capital of that State, where he has since resided.

In his official position he prepared the reports of the State Board of Agriculture, and many of his papers have been widely quoted, particularly those relating to stock. He also acted as agricultural editor of the *Lansing Republican*, and contributed extensively to other journals, a course to which he was compelled, probably like many others in similar positions, by the inadequacy, of his salary. We are glad to learn that he had a life insurance policy of two thousand dollars for the benefit of his family.

The Legislature of Michigan, as a mark of respect for his memory, adjourned and offered the use of the Hall of the House of Representatives for the funeral services which were held on Saturday, the 11th inst., when President Abbott of the State Agricultural College pronounced an oration to a large concourse of people. Speaker Woodman of the House, and Senator Begole Professor Wiley and Fairchild, of the agricultural college acted as pall bearers.

The discourse of President Abbott is spoken of a fitting tribute to the moral and mental qualities of the deceased, a man of purity of soul and purpose, and of high-toned religious faith and trust, a man whose aim had been to raise the standard of agriculture, and to disseminate truth and knowledge. He gave the prime and strength of his manhood to this great cause. Like most other brain workers he has fallen suddenly by the way, and his place will not easily be filled. His bereaved family will have the heartfelt sympathy of a large circle of the friends of Mr. Howard, in this vicinity.

PROPOSED ILLINOIS DOG LAW.

The State Senate of Illinois are entitled to the thanks of every sheep owner in the country, for promptness and thoroughness in handling the dog question. The bill which has passed the Senate, and is pending in the House, was prepared and introduced by Senator Whiting, of Bureau county, himself a farmer and a stock-grower. The bill, after citing the recognized fact that the multiplicity of dogs is greatly detrimental to sheep husbandry, increases the danger to human life from hydrophobia, and is otherwise against the public interest, make it the duty of each supervisor, before the 1st of August, 1871,

to provide a sufficient number of collars (of metal, or with metal attached) for the dogs of his town, and numbered consecutively from one upward. Every owner of a dog shall, on or before the 1st of September following, procure from the clerk of his town a collar for each dog he shall keep, "and cause the dog to wear the same," to be considered as owned and licensed; the clerk to keep in a book the name of the owner, the number of the collar, and the sex, and a brief description of the dog, for which he is to receive a fee of one dollar. Any person coming into possession of a dog after the 1st of September, 1871, may collar and register the same.

Any dog not wearing a collar and registered, is to be deemed and taken as an abandoned dog, having no claimant; and it shall be lawful for any person to slay such a dog as he would a wild animal; and in case such unclaimed dogs are not otherwise destroyed, the supervisor is required to issue a warrant to some one or more constables of the town to destroy them wherever found. The constable is to receive for every dog so killed and properly disposed of, the sum of \$1. Whoever keeps or harbors a dog, not lawfully collared, after the 1st of September, is to forfeit the sum of \$10. Pups less than four months old are not to be considered as dogs.

The township assessor shall procure from the clerk a list of the registered dogs, and in making his annual assessment, shall see if the said list is correct. He shall note the number and sex of registered dogs kept by each person, and shall diligently inquire concerning abandoned dogs, and return to the superior a list of the persons harboring them. A penalty of \$10 is inflicted upon any person who shall refuse to give true answers relating to the ownership of dogs, or shall cause or allow his dog to wear a counterfeit collar.

The county clerk shall charge on the collector's book, against each person returned as the keeper of a dog, \$1 for each male dog, and \$2 for each female dog, to be collected at the same time and in the same manner as taxes upon property, and be paid to the supervisor. If any person refuses or evades the payment of the tax, he shall be liable to a fine of \$5, and his dog shall therefore be considered in the class of abandoned dogs, and the owner or keeper shall become liable for the harboring the same.

The town clerk is to charge himself with all collars received at the rate of \$1 each,

and is to pay the money received for them to the supervisor, crediting himself therefor. The town auditors are to audit his account and balance it by giving him credit for all collars on hand. He is to receive for his services twenty-five cents for each dog registered. The supervisor is to be allowed expenses incurred in executing the law, and to be charged with all sums received from the collector or clerk, and from fines, commutations, and other sources under the law; and is to be made a detailed report at the annual town meeting, of all the operations under the law. The moneys arising under the law are first to be applied to the payment of expenses incurred in its execution; the balance to go into the school-fund.

The law is to be applied to counties not under township organization, by charging the county court with the power and duty of its execution.

The owner or keeper of a dog is made liable to any person injured by it, for the full amount of damage sustained, either in person or property, to be recovered in an action of debt. Any person may kill a dog that shall suddenly assault him without the inclosure of its owner or keeper; and any person may kill a dog found outside the inclosure or immediate care of its keeper worrying, wounding, or killing any domestic animal. If any person assaulted or finding a dog strolling out of the inclosure or care of its keeper, shall within forty-eight hours after such act, make oath before a justice of the town or city where the keeper resides, that he suspects the dog to be dangerous or mischievous, and shall give notice to the keeper by delivering a certificate of such oath properly authenticated, the said keeper shall forthwith kill or confine his dog, and for neglect to do so for twenty-four hours, he shall forfeit \$10. If after such notice, the dog is again found running at large, any person may kill it.

Whoever wrongfully removes a collar from, or steals a collared dog shall be punished by fine not exceeding \$50; and whoever wrongfully kills, maims, or entices away such a dog shall be liable to its owner in action of debt. Whoever disturbs or exposes poison with the intent to kill any dog, shall be punished by a fine of not over \$50 nor less than \$10. All fines and damages are to be collected by suit in the name of the town or county, before any justice having jurisdiction, and all general laws now in force concerning dogs to be repealed.

Such a law as is shadowed above is now

pending before the Illinois Legislature. It has passed the Senate, and now lies on the table of the House. That it will soon pass there can be little doubt, and faithfully enforced as no doubt it will be, it will go very far toward abating the dog nuisance.

REV. L. L. LANGSTROTH.

As our readers have been already made aware, through the report recently given in our columns of the Bee-Keeper's Convention at Cincinnati, a movement was initiated with a view of getting up a testimonial to the Rev. L. L. Langstroth, it being understood that now in his declining years his circumstances are straitened and his means limited. To an appeal of this kind rightly put forth, there would have been, we have no doubt, a right hearty response, but it was understood by many, ourselves among the number, that if this eminent apiarian had his just rights he would be entirely independent of such aid as was proposed to be rendered. We ventured to give expression to this view of things in the Convention, and thereby stirred up a hornet's nest among the bee-men. The result has been, however, that Mr. Langstroth has determined to appeal to the United States Courts, and test the question whether his patents are or are not infringed by certain makers of bee-hives. With a natural and manly independence, he prefers to depend on what is due him on the score of justice, if he can obtain it, to being an object of charity. Quite irrespective of the success or failure of the suits which are shortly to be tried, we see no reason why purely as a token of respect, the bee-keepers of America should not get up some sort of testimonial, in view of their great indebtedness to this distinguished apiculturist, and for ourselves, we should warmly second any appeal of the kind, which leaving eleemosynary considerations aside, should have as its object, the manifestation of respect and gratitude toward Mr. Langstroth.

AGRICULTURAL IMPLEMENT DEPOT.

We are glad to learn that Mr. William Rennie has opened an agricultural warehouse in the city of Toronto, with a view to keeping on exhibition samples of all the

machines and implements for farm use made by the various manufacturers of Ontario. Such an establishment is needed, not only in Toronto but in all our more important centres, and we feel persuaded that such a business rightly managed would confer important benefits both upon the makers and users of agricultural tools. Farmers have neither the time nor the means to travel here and there in quest of implements. What is likely to be needed by them should be brought, like their sugar and tea, to their doors. There are not a few improved implements that farmers would buy if they saw them, and many a time an awkward or worn-out thing would be exchanged for something better, if the better article were at hand to tempt purchase. We beg to suggest that samples of tools and implements made by manufacturers in the United States should also be kept on hand. Our neighbors across the lines are very skilful in getting up labour-saving contrivances, and whatever lessens hand-labour tends to make farming a better business. We wish Mr. Rennie success in the business he has undertaken, and hope his establishment, though the first of the kind in our Province, will not long be the only one.

IMPORTANT SEED SUIT.

We learn from our American exchanges that the well-known Philadelphia seedsman, Henry A. Dreer, was lately sued by a gardener of that city, on the alleged failure of a warranty of cabbage seed. It appears that though the seed germinated well, the cabbages failed to make good heads, and the purchaser concluded that it was not of the variety for which he bargained. Mr. Dreer proved the genuineness of the variety, and, also, that with other planters the cabbages from the same lot of seed had produced well. He also showed that the bad result in this case was due to early sowing and the highly stimulated condition of the soil. The jury decided in favor of Mr. Dreer and the proceedings cost the plaintiff some two hundred dollars. This case should teach market gardeners and others purchasing seeds, that many of their complaints about bad seed and dishonest dealers are not always just, but that failures are very apt to be due to bad management on doubt their own part. At the same time there are no cases in which from negligence or other causes, dealers in seeds involve their customers in great inconvenience and loss. An instance came to our knowledge last year, in which were seven acres of well prepared ground sown, as it was supposed, to turnips, but the crop turned out rape, involving a serious loss to the proprietor. The rape grew luxuriantly, but had to be

sold to a drover for fall feed. It was eaten off by a large flock of sheep before winter set in, but the amount obtained for the rape, some \$80 was a very poor compensation for the want of the turnips. Too much care cannot be exercised by seedsmen, but in cases like that of Mr. Dreer, the fault was in the culture and not in the seed, and we rather wonder, that under the circumstances the Philadelphia gardener should have laid action, when, one would have supposed a little consultation and advice would have sufficed to have cleared the seedsman of all blame.

AMERICAN STANDARD OF EXCELLENCE IN POULTRY.

Some months ago the New York Poultry Society essayed to set up a standard of excellence for the various breeds of fowls kept by fanciers in the United States. Being a local and not a national society, its efforts in this direction were not appreciated, and from various parts of the country complaints of their presumption in legislating for the whole Union, were heard. The effect of these complaints may be perceived in the following announcement:—

"We are receiving so many protests against adopting the 'Standard of Excellence' as revised by the Poultry Convention of February, last, on the ground of incorrectness in descriptions, the Committee appointed to revise and correct the same, have determined not to take the responsibility of putting it to press, and propose that the Convention meet again to take further action in the matter, and that a general invitation be issued to all societies and breeders throughout North America, and that Wednesday, May 10th, 9 o'clock A. M., at the rooms of the N. Y. S. P. J., 27 Chatham-street, New York, be the time and place of such meeting.—M. C. WELD, WM. SIMPSON, JR., A. M. HALSTEAD.

This is more like the right way to business. If the English Standard of excellence, which has thus far been made the test, is considered faulty in any respect, or our American neighbours feel a national pride in getting up a standard for themselves by all means let them do it, but it should be the work of the whole country, represented in some proper manner, and not the work of a mere section however important and influential it may deem itself to be.

BEEF SUGAR MAKING IN ILLINOIS.

For some time past we have noticed in our exchanges occasional references to the Beet Sugar-making establishments at Chatsworth, Illinois, which did not seem to indicate that it was turning out successful. This it appears has been partly owing to unfavourable circumstances of location &c. which are likely to be overcome. The last issue of the *Prairie Farmer* contains the following paragraph on the subject:—

We are informed that the negotiations between citizens of Freeport, Ill. and the proprietors of the sugar beet factory at Chatsworth, have resulted in an arrangement for the transfer of all the machinery and utensils to Freeport, where an establishment will be erected for the manufacture of sugar from the beet on an extensive scale. Mr. C. R. Rosenthal, of the Executive Committee of the State Agricultural Society, has become largely interested in the enterprise, Mr. Bunn, of Springfield, retaining a large pecuniary interest. Experts in the growing of beets are unanimous in the opinion that the land in the vicinity of Freeport is much better adapted to the growth of this crop, than is that at Chatsworth. Another advantage lies in the fact that Freeport is a large town, and can always afford plenty of labor at times when most needed. The German population is quite considerable there, and it will be an easy matter to get skilled cultivators and manipulators. Thus we see that while the Chatsworth experiment, which has been a very expensive one, had failed of entire success, it has yet given sufficient confidence in the business to induce further investments and a determination to prosecute it. The failure of Chatsworth will, we confidently predict, become the success of Freeport. It is a matter of congratulation that Illinois is yet to be the state to establish the practicability of the culture of the beet for sugar in this country.

CATALOGUES RECEIVED.

STORRS, HARRISON & Co., CHESTNUT CIRCULAR. This pamphlet gives a full description of the sweet chestnut, and urges its merits as a nut-bearing and forest tree. Issued by Storrs, Harrison & Co., of Painesville, Ohio, who make the chestnut a speciality.

SHARPE'S DESCRIPTIVE CATALOGUE.—This is the spring catalogue of the well-known seedsmen who do business at Guelph, and will send a copy of this little publication to all applicants.

R. H. ALLEN'S SEED CATALOGUE FOR 1871.—The Messrs. Allen do a large business both in seeds and implements at 189 and 191 Water Street, New York, and their catalogue this Spring is unusually full, comprehensive, and well-got up.

THE AMERICAN AGRICULTURAL ANNUAL FOR 1871.—Orange, Judd & Co., 245 Broadway, New York. "Good as ever," is praise enough to recommend this well known and valuable serial.

NINTH ANNUAL REPORT OF THE BOARD OF PUBLIC WORKS OF CHICAGO.—This is a very interesting publication of some two hundred pages, affording much evidence of public spirit which is so actively at work in the great city of the west, and is especially attractive from the details and illustrations of the magnificent public parks which, when completed, will make Chicago a "thing of beauty" if not "a joy forever."

BEE JOURNALS.

There are now published in the United States three monthly periodicals devoted to the apianian

interest, and every bee-keeper in Canada should take one or other of them. They are all instructive and practical journals, and no constant reader of either of them, can fail to be kept informed of the progress being made in apiculture. We shall mention these periodicals for the information of our readers without indicating a preference, and will add, that should any persons prefer ordering them through us, they may send their money and P. O. address to us, at Guelph, and we will cheerfully take the trouble and responsibility of ordering for them.

THE AMERICAN BEE JOURNAL; edited by Samuel Wagner, published monthly at Washington, D. C. Price, \$2 per annum.

THE BEE-KEEPER'S JOURNAL AND NATIONAL AGRICULTURIST; edited by H. A. King and Mrs. E. S. Tupper; published monthly; at 240 Broadway, New York, price one dollar per annum in advance. This periodical is not exclusively devoted to bee-keeping, but contains much useful matter pertaining to the farm, garden and household.

THE NATIONAL BEE JOURNAL, N. C. Mitchell, Publisher, Indianapolis, Indiana. One dollar per annum.

Any of the above publishers will send a specimen copy on application.

Agricultural Intelligence.

TOWNSHIP OF HAMILTON FARMERS' CLUB.

PREPARATION FOR SPRING WHEAT.

The following report of a recent meeting of the Hamilton Township Farmers' Club, has been furnished by the Secretary, Mr. W. Riddel:

A meeting of the Club was held in Cobourg on the last Saturday of March; the subject for discussion was "The best method of preparing land for Spring Wheat, and the proper quantity of seed to the acre."

Mr. Francis Aitchison, who had been appointed at the previous meeting to introduce the subject, said—"It would best suit his purpose to consider, first, the mode of treatment with green sod, the pea and barley stubble, and then root or planting ground. With green sod, after pasture or hay, he would give the land a good solid furrow ploughing not less than six inches deep; then roll, harrow and cultivate, but always lengthwise of the furrows. In the State of New York (where he had been) they ploughed their fallows as soon as they had finished their planting; they cultivated and harrowed their land, but did not plough again, but put in their wheat with one ploughing. He would ridge up his land in the fall, and sow in the spring as soon as the land was fit to sow. In preparing pea or barley stubble for spring wheat he would, after harvest, rib the land about four inches deep—that is, he would cut up one half the ground and cover the other half with it, and then plough it up late in the fall. He thought this better than to give the land two ploughings; he thought it rotted as well, took less time, and that the stubble was more out

of the way, and not so apt to choke the plough as it was when the land was twice ploughed. In cultivating, he would always cultivate lengthwise of the furrows, and not across. The same with harrowing—almost always lengthwise. It was necessary sometimes to cross-harrow, when the land was stumpy, or when you could not otherwise cover the seed; but he thought the less cross-harrowing the better. After roots, he would harrow down the drills or hills (as the case might be), then plough up the land in the fall, and cultivate in the spring before sowing. With regard to the quantity of seed, he was rather in favor of thin sowing. He would give his own experience in some years that he had kept an account of. The following tabular statement will show the quantity sown per acre and the result during the last seven years:—

Years.	Bushels sowed per acre.	Yield per acre.
1845.....	14 $\frac{1}{2}$	22
1846.....	13 $\frac{1}{2}$	10
1856.....	2	3
1857.....	12 $\frac{1}{2}$	6
1869, some.....	11 $\frac{1}{2}$	30
1869 ".....	14 $\frac{1}{2}$	24
1870 ".....	12 $\frac{1}{2}$	12

In 1870 one of his neighbors sowed twenty bushels of wheat on ten acres, rather late, and his return was one bushel to the acre. Mr. Aitchison then read a number of extracts on drilling and hoeing wheat, the advantages of thin sowing, and the various methods of preparing land for wheat.

W. D. Burnham said the great trouble was—we did not prepare our land enough for Spring wheat, it was not ploughed and cultivated as much as it ought to be; would approve of sowing in drills; thought it stood out more when sown in drills than when sown broadcast, and was a better crop; would plough in the fall, and cultivate in the spring. Last spring, on one of his fields, he cultivated the east end of the field and sowed the west end without cultivating. He saw a marked difference in the crop; the east end looked better the whole season; the straw was stronger and brighter, and the crop was better every way; the wheat turned out well, and was a better sample. Where it was sown *without cultivating*, he could not cover the seed well; it looked poorly all the summer, and turned out badly when thrashed; though if we could afford the time we should have better crops by drilling and hoeing our spring wheat; thought from a bushel to a bushel and a peck enough of seed for an acre of wheat.

Charles Brown said that if we in Canada were in a situation to drill and hoe our wheat as they do in England, we should have much better crops than we have; but it costs far too much to hoe wheat here. It took less seed to sow with a drill than to sow broadcast; he hardly liked the drills we had here at present, sowing seven or nine inches wide, not enough to hoe between; it left a large space for the weeds to grow up; whereas when sown broadcast, equally over the ground, it had a tendency to smother and choke the weeds; thought about a bushel and a half enough seed for an acre of spring wheat.

Edward Belletry should like to ask a question or two of Mr. Aitchison: Suppose the land was green sod, and a crop of peas taken off it, would he prefer one or two ploughings for wheat?

Mr. Aitchison replied that he would prefer to cut and cover (*ribs*) once, and plough once, to two ploughings.

Mr. Belletry would further ask if he had taken

any notice how the wheat crop was generally in the country in the years he had mentioned, in his experience of thick and thin sowing?

Mr. Aitchison replied that he had not.

Mr. Belletry agreed with all the opening speaker had said about thin sowing; was an advocate of thin sowing; when sowing rather late, would put on a little more seed than if sowing early. Something depended on the time of sowing and also on the variety of wheat sown.

John Pratt said the first part of Mr. Aitchison's remarks he hardly understood; perhaps he meant fall wheat land. He thought one ploughing for fall wheat might do, but not for spring wheat. He did not approve of cultivating lengthwise the furrows; by doing so the ground would not be in a good state for cutting with a machine; besides, land cultivated better, more equally, across the furrows and ridges; thought that land for spring wheat that had been in peas or other crops, should be ploughed as soon after harvest as possible, then harrowed well, and ridged up neatly before winter. He did not approve of "cutting and covering" at all; thought it did not expose the land equally enough to the air; that the seeds would not spring and grew equally, some being covered up too deep for growing; would cultivate across the furrows in the spring before sowing. With regard to the quantity of seed, would be guided somewhat by the state of the land; if the land was rather soft, would put on a little more seed—as the horses, while harrowing, then tramped down some seed too deep for growing. Would sow from a bushel and a half to a bushel and three pecks to the acre; had never tried it, but thought drilling would cover better than broadcast. The seed would cover better with a drill. His experience had been chiefly with Fife wheat.

Alexander McDonald said that in the preparation of land for Spring wheat he differed from Mr. Aitchison altogether. He would take green sod, either pasture land or land that a crop of hay had been taken from; would plough it as *lightly* as possible, say not more than three inches deep, let it lie for ten days or so, then roll lengthwise of the furrows; then, if the weeds came up, he would harrow well, as frequently as he could or as was required to kill the weeds; would ridge up the land well in the fall, and cultivate in the spring across the furrows, and not too deep, as wheat liked a firm surface; would just rise enough of mould to cover the seed nicely; thought the first object in preparing land for wheat was to get it clean, and in good heart, either by manuring or by ploughing down clover, say to plough down the second crop of clover; would not grow wheat after barley in any case; would not sow two grain crops in succession; after peas would plough lightly, as soon as possible after harvest; though the land was drawing nourishment from the air, as soon as it was turned up. Another object was to kill the weeds and the seeds of the weeds; would like to kill at least two crops of weeds in the fall; if he was going to apply manure, would prefer to do so before the first ploughing; would ridge up the land in the fall, and cultivate in the spring; as he said before, he thought the firmer he got the ground the better the crop of wheat. With regard to the quantity of seed, would consider the state of his land; on land in good heart, would sow from a bushel and a quarter to a bushel and a half; would sow less seed on very

rich land and on very poor land than he would on land in medium condition; on rich land wheat stoled out more, and was apt to grow soft in the straw and lie down if thick; and on poor land there was not nourishment for so many plants. On medium soils, club wheat early sown would sow $1\frac{1}{2}$ bushels; of Fife wheat, would sow from $1\frac{3}{4}$ to 2 bushels an acre. On our front land he preferred late sowing—not sooner than the 10th of May. Three years ago he sowed some wheat on the first of April, and thrashed from that five bushels an acre; the same year sowed the rest of his wheat (on no better land) on the 18th of May, and thrashed from that 24 to 30 bushels an acre. His early sown wheat was almost all taken by the weevil.

Mr. President (Peter Sidey) congratulated the members on the interesting discussion that had been elicited. His own opinion on the subject was—that the quantity of seed required depended altogether on the state of the soil and the season. Some years rather thick sowing did best; other years thin sowing. The farmer had just to use his judgment as to the proper quantity of seed for his land. His practice had been to sow two bushel of seed to the acre on all his land. Until within the last few years he could not believe that the better the land the less seed was required, as old farmers, his neighbors had told him; but he had now found it was so. He had found, too, that it did not do well to sow poor land too thick.

THE DOUBLE FURROW PLOUGH.

An important trial of the double-furrow ploughs came off at County Kildare ploughing matches, on Monday, 20th January, near Athy.

In the makers' class, Gray of Uddingston, Howard Mitchell, and Fowler, with their crack ploughmen, competed. To Gray was awarded the first and to Howard the second prize. The work done was excellent. In the farmers' class a lad under twenty years of age, with one of Gray's ploughs, won not only the first prize of his class, but another for the best ploughing under twenty years of age, and also the prize for the second best ploughed lot in the field including single furrows. The work accomplished by this lad was wonderful, considering that he had only practiced a few days with the double-furrow plough, and yet beat the crack ploughmen of the above celebrated makers.

At Londonderry, on Tuesday, the 31st, Gray's ploughs had a great success, being first, second third and fourth.

In Scotland, Gray's ploughs had been equally successful at the following matches: At Dalkeith, on the 17th January—first, second and third. at Biggar, on the 17th, first; at Tilliecoutry, on the 18th, first; at Currie, on the 19th, first, and at West Lothian, on the 20th, first (stubble); second, and fourth (lea).—*Farmer (Scottish)*.

Mr. M. H. Cochrane has sold the short-horn bull calf Duke of Hillhurst, through the agency of John Thornton, London, to Col Kingscott. This calf was dropped May 19th, 1870, got by the 14th Duke of Thorndale, 8031, out of imported Duchess 97th.

Many milch cows and horses are being imported at the present time to the United States from Canada.

During the year 1869, there were sold in Atlanta,

Georgia, 26,659 mules, and 12,249 during 1870; making nearly 40,000 mules in a little over two years.

From experiments made in the Iowa agricultural college during the past year, it appears that the Peachblow, Peerless, and Chili No. 2, potatoes, are less subject to attacks of the Colorado potato beetle than other varieties.

About 29,000 ova was placed in the hatching troughs of Messrs. Brown & Co's Trout Breeding establishment in Galt during the past season, from which over 25 000 spawn have been hatched. The young fry are thriving excellently and are rapidly increasing in size.

American drovers, says the *Morrisburg Courier*, are just now making friendly raids upon our borders. For the past week they have been scouring the country hereabouts in search of horses and cattle. The consequence is that many of our farmers have exchanged some of their stock for greenbacks. The prices paid for horses range from \$80 to \$120, and for milch cows from \$25 to \$30, and even higher.

The farmers of Hillsborough County, N. H., held their last meeting for the season on the 22nd inst. at Milford, and discussed the important question, "How can we make our farms so attractive as to retain our young men and women at home?" It was generally and sensibly agreed upon that the farm residence should be made pleasanter; and much was said of the probable good influence of local libraries, the cultivation of music, with a fair allowance of time for recreation and for escape from daily drudgery. The question is one that deserves attention at the hands of Canadian farmers also. When the young men grow a few years older they will find what they have lost for the sake of standing behind a counter and wearing "store clothes;" but in the meantime they should be attracted to stay at home.

CHANGE IN CROPS IN GREAT BRITAIN.

The *Mark Lane Express* in its remarks upon the returns of 1870 says: "The growth of the manold is gradually but certainly increasing both in England and Ireland, as Kohl-rabi is also coming more into use; while the cabbage is still but an exceptional crop on the farm, making but little way saving in certain districts, or more properly perhaps with a few individual growers. Beet root, of which Professor Voelcker has of late become so great an advocate, gains but slowly on the agricultural mind, and the whole country last year gave up but four thousand acres or so to its cultivation. If, however, they can manufacture from it as good brandy as that sent out as a sample from Buscot, it would surely pay to do more in this direction. So far, real British brandy has had but a bad name, but if we can succeed in making sugar we might hope to do something also with spirit. The report states that "the exact acreage under sugar beet is not known," although an approximate estimate must be very easily arrived at.

"Curiously enough another fancy crop, that of flax, is going out of cultivation in Ireland, the returns showing a falling away of 34,00 acres between 1869 and 1870. Nevertheless from time to time we see the most encouraging accounts in the Irish papers, and Irish landlords, if we remember aright, have been very recently speaking to the profit with

which flax may be grown and sold. And flax, says Mr. Foulque, "is a more important crop in Ireland than in England;" as here, indeed at its best, we have in all but little over 29,000 acres in crop. The breaking up of permanent pasture would seem to have been one of the especial features of our agricultural history in 1870, as more than 600,000 acres of such land were put to other uses, but the returns for meadow hay and artificial grasses have not been so distinguished, and the information in this respect is scarcely so satisfactory."

THE STOCK YARD OF AMERICA.

Dr. Latham contributes to the *Omaha Herald*, an article on cattle raising in Texas, from which we make extracts as follows: Texas is truly the cattle hive of America. While New York, with her 4,000,000 inhabitants and her settlements two and a half centuries old, has 748,000 oxen and stock; while Pennsylvania, with more than 3,000,000 people, has 721,000 cattle; while Ohio, with 3,000,000 people, has 749,000 cattle; while Illinois, with 2,800,000 people, has 867,000 cattle; and while Iowa, with 1,200,000 people, has 686,000, cattle; Texas, not forty years of age, and with her 50,000 people had 2,000,000 head of oxen and other cattle, exclusive of cows, in 1867, as shown by the return of the county assessors. In 1870, allowing for the difference between the actual number of cattle owned and the number returned for taxation, there must be fully 3,000,000 head of beeves and stock cattle. This is exclusive of cows, which, at the same time, are reported at 600,000 head. In 1872 they must number 800,000, making a grand total of 3,800,000 head of cattle in Texas. One-fourth of these are beeves, one-fourth are cows, and the other two-fourth are yearlings and two-years-olds. There would, therefore, be 950,000 beeves, 950,000 cows, and 1,900,000 young cattle. There are annually raised and branded 750,000 calves. These cattle are raised on the great plains of Texas, which contain 152,000,000 acres.

SWINE EXHIBITION.

It is now definitely announced that the grand exhibition of swine, under the auspices of the Illinois Swine Breeders' Association, is to be held in Chicago on the 19th of September and two following days. The premiums are to be on a liberal scale, ranging from \$100 to \$20 in special classes, while the following general sweepstakes crowns the list:—

Best display of Breeding hogs, one breed, not less than 10 or over 20, 1st premium	\$750 00
Ditto, second premium	500 00
Ditto, third premium	250 00
Best ten pigs, any one breed, under six months	200 00
Best Boar and 3 sows, any age or breed, 1st prem	200 00
Best boar and three sows, any age or breed, 2nd premium	100 00

The competition we believe is open to all. Communications on the subject should be addressed to Charles Suoad, Joliet, Illinois.

SHORT-HORN SALES IN BRITAIN.—We have accounts of several important sales of Short-horns in England. Col. Kingscott's sale came off on the 8th of March. There were 43 lots of cows and heifers. The highest price reached was 200 guineas for the cow Dora; the next 165 guineas for the heifer Doraline.

The total amounted to 2002 guineas, giving an average of about £48 15 each. Among the bulls the highest figures reached were 330 guineas for Oxford Beau, and 200 guineas for Duke of Fussbox. There were nineteen altogether, nearly all calved in 1869 or 1870, which realized a total of £1,311, or an average of about £69 each. Lord Fitzharding's sale followed on the next day, but realized only moderate prices.

CHEESE FACTORIES IN SCOTLAND.—A meeting was held at the Town Hall, Ayr, January 13th, to consider the property of establishing cheese factories in the district, similar to those in operation in the district in America and in some parts of England. The meeting was largely attended by the leading farmers and dairymen of the district. The chairman made a valuable address, presenting a strong argument in favor of the movement; and in the following discussion, a speaker who had visited the factories established last year in England, stated that all his doubts and objections had been removed by what he had seen. A committee was appointed to obtain further information and report to another meeting.

COW IN THE HARDWARE BUSINESS.—The *Corvallis* (Oregon) *Gazette* says a cow was recently killed in that place for beef, and as the maw was thrown away, a dull jingle was heard, as that of nails. It was opened, and found to contain two pounds of nails, some of them over two inches long, a jack-knife, a chunk of lead, a rock the size of a hen's egg, a piece of a gold watch fob, a five cent piece, and seven or eight large coat buttons. The stomach where these articles were deposited had almost worn through.

THOROUGH-BRED STOCK.—Major Greig, of Beachville, Ontario, seems determined to take a foremost place in the ranks of short-horn breeders. Within a recent period he has made successive valuable purchases from Mr. McMillan, of Xenia, Ohio, and Mr. Cochrane, of Compton, and other prominent stockmen, and has now made the crowning addition to his herd by the acquisition of perhaps one of the best short-horn bulls on the continent, King of the Ocean, 8465, got by King Richard (26523), out of Fair Maid of Hope. The dame was imported in 1869; she was the first-prize cow in her class at the New York State Fair in 1860. King Richard the sire, was got by Commander in Chief, (21451), out of Lady Grateful, imported in 1870 by Mr. Cochrane, at a cost of 1,500 guineas. With such a pedigree, this bull cannot fail in the hands of a judicious breeder, to raise the herd into which he is introduced to the very highest pitch of excellence.

The *Southern Farmer* says:—"Usually speaking, our brethren of the farm think no land is fit for grass, for meadow, or for pasture but the rich, low ground. We, solitary and alone, would now enter a disclaimer. Somewhere about 1843 we saw red top (herd's grass) on the upland in Holme's county, Mississippi, that stood full three feet high. One thing is certain, grass grown upon upland, thoroughly drained, is sweeter, richer in butter, flesh and fat, than that upon lowland. We believe the difference in value would pay to enrich and subsoil fifteen to eighteen inches deep, and thus insure a full crop yearly. Nothing will so certainly lift our country from the 'slough of despond,' as making good grass lots, good meadows, large grain fields and raising good cattle, and sheep, and hogs."

Mr John Snell, Edmonton, Canada, has sold his premium Berkshire boar, Tippecanoe, to W. E. Greenlaw, of Spring Hill, Tennessee. This hog won the 1st prize in his class, and the triple prize for the best imported boar under one year, at the late Provincial fair at Toronto, and has been used with marked success as a breeder by Mr. Snell. Mr. Snell has also sold to John A. Howerton, of Paris, Kentucky, the 10-months Berkshire sow, Lady Young, by Oxford Chief, and out of Dominion Belle. Lady Young is in pig to Tippecanoe.

Miss Macey Martin Middlebrook, a young Maryland girl, raised over 5,000 cabbages, and as the papers of that State mention with pride, she only weighs 120 lbs. Christmas eve she sold in Baltimore, over 500 pounds of turkey, of her own raising, at 20 cents per pound; and since the 15th day of October last, has knitted over three dozen pair of socks.

Mr Ashworth, of Belmont, Ottawa, has sold the bull, the Baron of Belmont, by Sweetmeat (20924) out of the Queen of Belmont, to the Hon. Donald Macdonald of Toronto.

Our Country.

IMMIGRATION.

In another column will be found an interesting letter from the Rev. Styleman Herring, of St. Paul's, Clerkenwell, upon the subject, to which we would direct the attention of our readers. It will be gratifying to Canadians to know that in the person of the reverend writer they have a faithful, earnest and able advocate of the claims of Canada as a country, willing to furnish the means of bettering the condition of the redundant population of the British Isles. It will also be gratifying to know that there are prospects of a large number of emigrants coming from England to Canada this season. The lack of information and other drawbacks, of which Mr. Herring complains, are very much to be regretted. It is not too late for the Canadian authorities to remedy the first, and the others will find their own remedy in a very short time.

Canada needs settlers, and the vast extent of arable lands in the several provinces comprising this country offer homes to all the emigrants England can send us. We have not here such a redundancy of population that we are obliged to find outlets for it to other less fortunate countries; on the contrary there are sections of the country in the Dominion where one can travel for days without being made happy by the sight of a settler's home, so sparsely are they peopled—there are thousands, millions of square miles of land waiting for people to settle upon them, and in many places free to all who will ask for and are willing to comply with the easy terms upon which they can have them.

In the race after national wealth, greatness and

power, which is just now absorbing the attention and enlisting the energies of the great nations of the world, Canada has shown a disposition to become a competitor for the prize which is to be the reward of the successful. How well she succeeds will depend in a great measure upon the efforts which she makes and the steps which she takes to secure the development of those resources with which she has been so richly endowed by nature. Those vast tracts of land to the north and north-west of us which yet remain unsettled are so many mines of wealth, so many sources of greatness to the country owning them, yet what benefit can that country expect to derive from them so long as they remain undeveloped? As well might they be covered by the sands of a Sahara, or lie hidden at the bottom of the Atlantic as remain unknown to the world and unsettled by those who are both able and willing, while finding happy homes in them, to develop their resources. So long as these lands remain unsettled they form a source of weakness to the country; the moment they are settled and yielding to the productive industries of the husbandman and artisan, they add to its power and greatness.

Canada has done much to develop the vast resources which as yet lie comparatively hidden within her borders; more remains to be done. She has done much to encourage the settlement of those extensive tracts of fertile land which she possesses; more can be done. She has done much in the way of inducements to immigrants arriving within her boundaries to remain and swell her population; more needs to be done. She has made great efforts to secure the settlement of her unoccupied territory by encouragement and assistance to settlers, by opening up the roads between the old and the new settlements, by offering free grants of land in certain sections, by enacting judicious laws regarding settlers on these lands, by scattering broadcast throughout Europe information concerning the advantages she was prepared to offer immigrants coming to, and willing to remain in, her country; but the work is not finished. Greater advantages have to be offered, better inducements have to be held out, to intending emigrants from other countries to come to Canada and take up lands. The ungranted lands have to be made free, or such liberal terms have to be offered with them as will claim the attention of all who wish farms and homes; for let it not be forgotten that though every acre of public land was made free to public settlers, that land almost immediately after its settlement becomes productive of revenue to the country and contributes to the general wealth to many times the price which might be obtained for it if sold. True, if sold to the settler instead of given to him it would doubtless produce the same revenue, but the probabilities are that under such

conditions, it would remain longer unsettled and consequently unproductive. The policy which should guide Canada in disposing of ungranted public lands ought to be such that, while offering every possible encouragement to productive immigration, would secure a revenue from these lands at the earliest possible date. This object we believe, can be secured by extending the free grant system as much as possible. And Canada must let the people of Europe know what the advantages are that she offers to those that are willing to immigrate hither in search of new homes. Mr. Herring, in his letter, complains that there is a lack of this information. If Canada wishes to become the great and powerful nation which nature has evidently designed her to be, she must have a productive population, and in seeking this population among the people of other lands she must be prepared to give such definite information concerning the advantages and inducements she offers to those willing to accept them as will enable them to arrive at correct conclusions in the premises. The lack of such information in the past has been the cause of much injury to Canada; let it not be so in the future.

EMIGRATION TO CANADA.

To the Editor.

Sir: The season is fast advancing for the renewal of this, to Canada at least, important matter. As far as I can judge the applicants, though not so numerous as during the past two years, are considerable, and of good type. Work in the Old Country is fair, but many of the friends of late settlers are striving manfully to join them. Emigration clubs and societies have greatly increased. From some cause, no Governor or Provincial pamphlets have reached your indefatigable Commissioner, Mr. Dixon; this lack of information is greatly felt, and will lead to a diminution of emigrants. If Allans had not issued 100,000 pamphlets, matters would have been much worse. The million sterling our enterprising countrymen have voluntarily subscribed towards the sick, wounded and famished French, has seriously interfered with the funds of Emigration Societies. I expect this will retard, though not interfere with emigrants being helped out. After our emigration conference at Ottawa, and that too during the earthquake. I had hoped a system of "Passage Warrants" would have resulted; by these a settler might have got out his relatives and friends at a cheaper rate; but I trust this is only deferred until a more convenient time. Canada greatly wants population. The late settlers speak very highly of their present position and future prospects. The school system, the closing of grog shops on Sundays, and the free grants are greatly approved. Most sincerely do I hope every encouragement and sympathy will be shown to the newly arrived. They require it. I have given and illustrated lecture in different parts of England this season, and hope to

have awakened fresh interest towards Canada, which, indeed, has been a blessed place for many. I shall always look back with feelings of unmixed happiness for the very kind reception, hospitality and encouragement I received during my late visit among you. Praying God will abundantly bless and prosper Canada I remain, yours,

A. STYLEMAN HERRING.

St. Pauls, Clerkenwell,
London England.

REPORT OF MINISTER OF AGRICULTURE.

From the report of the Dominion Minister of Agriculture the following interesting facts are obtained. In 1870 there were 11,442 letters received by the department against 9,919 in 1869. The number of letters sent was 20,276, against 13,634 in the previous year. The number of trade marks, patents, &c., issued was 1,110 against 965 in 1869. The number of immigrants who arrived last year and were attended to by the Department was 69,019. Of these 44,475 arrived by the St. Lawrence route, which is the largest number ever known since the year 1854. The number who arrived by the Suspension Bridge was considerable less than last year, being 23,857 against 30,326 in 1869, 437 immigrants at Halifax; 29 at St. John, N. B., and 31 at Miramichi. By far the largest number came in steamships. Out of the 44,475 who landed at Quebec, 35,074 were from the United Kingdom, and 31,714 came by steamships. The total amount expended for immigration purposes was \$73,440. Of this sum \$16,892 were for Quarantine establishments, &c. The cost of the European agencies was \$13,564. The amount paid out to immigrants direct by Dominion Government, included in the sum above, was \$26,932. In addition to this the Ontario Government paid \$24,382, and the Quebec Government \$6,375 for immigration purposes. The amount of the Dominion capitation tax on the immigrants was \$42,000. The number of immigrants who passed through the Dominion of the United States last year was 44,107. The number of those who declared their intention of remaining in Canada was 24,019. The number of laborers required by Ontario this year is 25,000, while Quebec wants 5,000. Of course there is room for a large additional number of settlers.

The report from Grosse Isle show that last year was the healthiest season ever known. There were 1474 patients admitted to the marine and immigration Hospital at Quebec, the morality among whom was three and three sevenths per cent.

Arts and Manufactures.

ANOTHER MONSTER STEAMSHIP:

The largest vessel ever built on the bank of the Mersey was launched February 9th. The Liverpool Courier says that with the exception of the Great Eastern, no larger craft floats in any waters. The new ship is the screw steamer Egypt, built for the service of the National Steamship Company

between Liverpool and New York. All the vessels of the company's fleet are of great size, but this latest addition is more immense than any of the others. The *Egypt* is in length over all 440 feet, on the load line 435 feet, beam 44 feet, depth of hold 39 feet, gross measurement 5,150 tons. This enormous vessel, which has been built at the yard of the Liverpool ship-building Company, Limited, Sefton street, will be propelled by engines of nominally 600 horse-power, but capable of working up to 2,500 horse-power. They are on the compound principle of high and low pressure, and will be supplied with steam from six boilers, arranged in sets of three each. The boilers will be fired at each end, and will carry a pressure of 75 pounds per square inch. The engines have been made by the Victoria foundry, Liverpool, and they are expected, from the fine lines and great length of the vessel, to drive her at from twelve to thirteen knots an hour during her voyage of ordinary weather. The great length to which ships have reached since the general adoption of iron for building them, has made the straight stem a necessity on account of the difficulty of turning very long vessels in dock, and the *Egypt* is an instance of the new fashion. The *Egypt* will be fitted for 190 first-class and 1,400 steerage passengers, for whose comfort and safety during the Atlantic voyage every provision will be made.

The principal cabins will be fitted with every adjunct to ease and luxury. Having to encounter the severe Winter storms of the Atlantic, while loaded with heavy cargoes, the *Egypt* has been constructed with regard to strength and safety. She is a complete four decker. The upper deck is a flush spar fore and aft, with no obstructions to the cabin entrance and sky lights. This and the deck below are strongly plated with steel, and planked with pine. The two lower decks are plated with iron amidships, where the strain of the machinery comes, and are also decked over the same as the upper deck. The saloons, state-rooms, and officers' rooms will be heated with steam piping, which is found more effective, and is far less dangerous in a heavy seaway, than stoves.

The *Egypt* has five steam winches, and two steam capstans and windlasses of Papier's make, two funnels (fore and aft), and four masts. The forward masts, still called the four and main, will be square rigged, the two after ones, known as the mizzen and jigger, will have a pollacca rig. The lower yards and lower topsail yards—the National boats having adopted the American double-topsail yard principles, are made of steel plates, thus securing strength and lightness. All the lower masts are of iron plates. The vessel will have steering apparatus both amidship and aft, of the most modern approved descriptions. The keel was laid in March, 1870, and in six weeks probably she will be ready for her trial trip. She is considered in many respects the finest piece of naval architecture ever constructed in the Mersey. A sister vessel, but a very few feet shorter, to be called the *Span* is nearly completed sufficiently for floating at Messrs Laird's works at Birkenhead.

HOW VELVET CARPETS ARE MADE.

The material passes from the wash to the combing machines, which separate the long from the short fibers. The long are passed through rollers,

and assume a form called "sliver" which falls into a hollow cylinder set for its reception, while the short fibers vanish in a mysterious-looking box at one side of the room. These slivers are then passed through a drawing-frame, twenty or more of them united and drawn out so as to equalize the thread; eight or ten of these threads are again subjected to the drawing process and reduced to one. This operation is repeated as often as it is necessary to produce uniformity. These long fibers form the warp of the carpets, while the short are used for the "wool" or "filling." In the spinning-room both staples of the wool are placed on the "spinning jacks," which operate with great rapidity. When it leaves the "jacks" it is in the form of coarse yarn tightly rolled on large spools, then wound into skeins, when it is ready for the dye house. By the American system of "folding" part of the yarn skeins are subjected to a parti-colored dyeing. Parti-coloured yarns are used for warp.

Other bundles of yarn are submerged in rolling steaming floods of colored liquids of every hue. Sulphur is used to bleach the portion intended to represent white. From the dye-room the yarn is conveyed to the drying-room and thence to the winding-room. The threads are here wound on large cylinders for the printers, and each filling of the cylinder makes but a single thread in the warp of a pattern. These skeins, after being printed with one hundred or more shades of colors, and placed in boxes on a little railroad car, are shoved into a boiler, where from four to six pounds of pressure of steam is applied. When the colors are thoroughly fixed, the skeins are dried and pressed through setting machines, when the yarn is ready for the Bigelow loom. These have on the end of each of the little wires used to rise the pile of the Brussels carpet, a small knife, which, while it weaves, cuts the pile and makes it velvet. The fabric is next subjected to the process of "shaving," and after that to the rolling machine. The carpets are then rolled, marked with the number of the pattern of each roll, number of yards, etc., and are thus prepared for removal to the warehouse.—*N. Y. Economist.*

HOW THE LONDON TIMES WAS SENT TO PARIS.

The long columns of announcements in the *London Times*, intended for friends in Paris, have for some time been a frequent subject of remark, and people have wondered what chance there was of their ever reaching the eyes for which they were meant. The means adopted for this purpose are explained in the *Times* of Jan. 30th:

Those pages of the paper which contained communications to relatives in Paris were photographed with great care by the London Stereoscopic and Photographic Company on pieces of almost transparent paper, about an inch and a half in length by an inch in width. On these impressions there could be seen by the naked eye only two legible words, *The Times*, and six narrow brown bands, representing the six columns of printed matter forming a page of the newspaper. Under the microscope, however, the brown spaces became legible, and every line of the newspaper was found to have been distinctly copied, and with the greatest clearness. The photographs were sent to Bordeaux, for transmission thence by carrier pigeon to Paris. When

received there they were maxified, by the aid of a magic lantern, to a large size, and thrown upon a screen. A staff of clerks immediately transcribed the messages, and sent them off to the places indicated by the advertisers.

A CHANCE FOR INVENTORS.

The legislature of New York is discussing a bill that in its provisions offers the sum of 50,000 to any inventor that shall succeed in constructing some device by which some kind of motive power other than animal, can be applied to the propelling of boats on the canals of that state, without injury to the canals themselves. All the applications of the steam engine have been found so objectionable from their agitation of the water, and thus causing injury to the banks of the canals, that they have been discarded. The sum offered looks like a large one, but when we compare it with the advantages that would accrue to commence from the success of the invention, it is really insignificant.

Hearth and Home.

"OUR GIRLS."

Dio Lewis has written much that everybody should read. He has written one book that every girl and every woman should read. It is entitled "Our Girls," and is published by Harper & Brothers, of New York.

Hear what he says about ornamenting one's self excessively:

"The trimming mania is frightful. What do you think of one hundred and twenty yards,—three hundred and sixty feet,—four thousand three hundred and sixty inches of ribbon in the trimming of one dress;

"I wish I could command for an hour the pen of Jenkins, and give the names of the various ribbons, and shades of ribbons, of the laces, their origin, styles and value. (Each kind of lace has a history, which is dear to the heart of the devotee of fashion.) I wish I could describe the hundred and one rimps and frills, and things. I wish I could command the pen of one of these amazing writers about woman's dress. I would give you ten pages of it.

"I say again, that the trimming mania has become insufferable. Unless a woman has a dress-maker, she must be the varriest slave.

"Gather in one place all the artists, authoresses, and women of finest and highest culture, and how many of them do you suppose could be bribed to go into the street all rigged out in ribbon, gimp, frills, edgings, ruches, fringes, satins, velvets, buttons, nail-heads, etc., etc., etc.

"I have met many of the women who may be classed as above, and I cannot now recall one who was fashionably trimmed.

"This rage is, in essence, tawdry and vulgar. It is cheap in everything but money.

"What a barbarism to bore a hole in the flesh, and stick in a trinket. I have seen several ears in which the ring had cut its way out, making a slit, and a new hole had been punched in one of the pieces.

"Men have fallen into this vulgar barbarism. American savages offer many instances of men with gold or silver trinkets in the ears. But among lower savages in different parts of the world the custom is quite general, and many of them add an ornament in the nose.

"My own wife, in her girlhood, had her ears pierced, but I have never seen them embellished with trinkets."

HARD BEDS

The idea that the soft side of a plank makes the best couch when one gets used to it, was long ago exploded. People who know "what is what," who read the newspapers and mean to be somebody, don't believe a word of it. Those who have settled down to a Diogenes-in-the-tub life accept the doctrine. It is true that the tired man or woman will sleep soundly on a hard bed, and habit may make the hardness dear to them. It is also true that Napoleon's soldiers slept while on their march homeward from Russia and some of them may have become attached to locomotion and sleep united. Notwithstanding all this, those who have once felt the almost human kindness and warmth of a hair mattress beneath them, cannot go back to straw and husks without a pang.

We do not recommend softness, but elasticity. Feathers, except in very cold weather, are unwholesome, because they retain an excess of warmth about the body, and also because they absorb the perspiration thrown off by the pores, and permit the body to re-absorb the excrementitious matter. A bed of soft, fresh straw, evenly distributed and covered with a thin cotton or wollen mattress, may be a good resting place, and furnish sweet sleep. But how can man or woman rise refreshed, from a couch of straw or shuck mattress, which has been in nightly use without renewal for a series of years? Yet there are portions of this very land of plenty, where travellers are put to sleep upon just such beds as this.

Every man in grazing districts, may own a dozen or two coarse-wooled sheep. These and their increase will in a short time give him wool mattresses, than which none are more pleasant, more wholesome, or durable. The tag-locks washed and carded, should be hoarded by every farmer's wife for this purpose. In cities and villages, and in the more populous parts of our country, those who can afford good sleeping places generally have them.

As a general rule the better care one takes of his or her body, in feeding it with skill, clothing it with discretion, and giving it due and refreshing sleep, the more work he can do, and the higher the quality of his work.—Selected

WASTE PAPER FOR HOUSEHOLD USES.

Few housekeepers have time to black their stoves every day, or even every week. Many wash them in either clear water or dish-water. This keeps them clean, but they look very brown. After a stove has once been thoroughly blacked, it can be kept looking perfectly well for a long time by rubbing it with paper every morning.

If I occasionally find a spot of gray or fruit-juice that the paper will not take off, I rub it with a wet cloth, but do not put on water enough to take

off the blacking. I find that rubbing with paper is a much nicer way of keeping the outside of my teakettle, coffee-pot, and tea-pot bright and clean, than the old way of washing them in suds (The inside of coffee and tea-pots should be rinsed in clear water, and never in the dish water.)

Rubbing with dry paper is also the best way of polishing knives, spoons, and tin-ware after scouring. This saves wetting the knife-handles. If a little flour be held on the paper in rubbing tin-ware and spoons, they shine like new silver. For polishing windows, mirrors, lamp-chimneys, etc., I always use paper in preference to a dry cloth.

Preserves and pickles keep much better if brown paper, instead of a cloth, is tied over the jar. Canned fruit is not so apt to mould, if a piece of writing-paper, cut to fit the can, is laid directly on top of the fruit.

Paper is much better to put under a carpet than straw. It is warmer, thinner, and makes less noise when one walks over it. A fair carpet can be made for a room that is not in constant use by pasting several thicknesses of newspaper on the floor, over them a layer of wall-paper, and giving it a coat of varnish. In cold weather I have often placed newspapers between my bed-quilts, knowing that two thicknesses of paper are as warm as a quilt. If it is necessary to step upon a chair, always lay a paper on it; this saves rubbing the varnish off. Children easily learn the habit of doing so.—*Cor Hearsh and Home.*

VENTILATE YOUR CHILDREN'S ROOMS.

Most parents, before retiring to rest, make it a duty to visit the sleeping room of their children. They do so in order to be satisfied that the lights are extinguished, and that no danger is threatening their little ones. But if they leave the room with closed windows and doors, they shut in as great an enemy as fire, although his ravages may not be so readily detected. Poison is there, but slow and deadly.

Morning after morning do many little children wake weary, fretful, and oppressed. "What can it mean?" "What can it be?" the mother cries. In despair she has recourse to medicine. The constitution becomes enfeebled, and the child gets worse.

The cause, perhaps, is never traced to over-crowded sleeping rooms without proper air, but it is nevertheless the right one. An intelligent mother, having acquainted herself with the principles of ventilation, will not retire to her own room for the night without having provided sufficiency of air for her children, in the same manner that she provides and regulates their night covering, or any other requisite for refreshing slumber. Sometimes by judiciously lowering a window, and at other times by leaving a door wide open, this end may be attained.

In many houses the day and night nurseries communicate. When this is the case, the window of the further room should be left open, and the doors between the rooms likewise open. Even in severe weather children can bear this arrangement if they are not exposed to a direct draught.

BARLEY WATER.—Take nearly an ounce of pearl barley and wash it well. Then pour on a pint of

boiling water, and carefully boil to one-half. Strain the liquor through a towel, and add some sugar and lemon juice. A small piece of orange or lemon-peel dropped in while boiling, make it more acceptable to many persons.

POISONING BY VACCINATION.

It is becoming a serious question among scientific medical men, whether the attempt to ward off small pox by vaccination does not introduce another family of diseases, or certainly aggravate and intensify the old ones, in comparison with which it were much safer to run the risk of the contagion first dreaded. That vaccine matter, the best of it, is impure, all men who know anything about it, are satisfied; and the explicit testimony of distinguished practitioners shows that it scarcely can be employed at all except to contaminate and poison its innocent recipients. Dr. Ricard, in 1865 did not hesitate to declare the reality of such poisonings before the Academy of Paris. Dr. Epps, who vaccinated one hundred and twenty thousand persons during his directorship of Jernier Hospital, in London, has at length declared, after a quarter of a century's practice, that vaccine is a poison; he says "it penetrates as such and affects all organic systems, so that it acts repressively on the small pox; it paralyzes the expansive powers of the body, and the pox poison is retained in the mucous membranes." Since vaccination came in, it is averred by the highest authorities that new diseases have invaded the internal coating, and aggravated existing diseases, such as cough, since 1810, abdominal typhus, since 1819, cholera, since 1830, and diphtheria since 1854. Children do not, to be sure, die of small pox, but they do die of measles, scarlet fever and similar diseases, which the means for expelling small-pox have made more intense. These allegations certainly challenge the closest investigation.

GOOD BREEDING.

We are all gentlemen and gentlewomen. Any hint to the contrary is a gross insult; yet every day we violate the laws of good breeding. Incivilities abound. There must be a radical wrong somewhere. Our mansions and cottages are not all homes of kind feelings and gracious expression, sending out genial currents throughout the whole social system. Too many sit in dingy fustians, with unkempt and slipshod manners at their firesides, and talk barbarisms at their tables, and then put on velvet robes and paradise feathers will get away on parade, and disclose the coarse habits beneath.

Slang phrases, ridicule, slovliness, vulgar attitude and oaths, are admitted under no system of good breeding, and the thoroughbred can, by no possibility be surprised into them. Avoid them all.—*Ex.*

TO REMOVE STAINS FROM BROAD CLOTH.—Take an ounce of pipe clay which has been ground fine, mix it with twelve drops of alcohol, and the same quantity of spirits of turpentine. Whenever you wish to remove any stains from cloth, moisten a little of this mixture with alcohol, and rub it on the spots. Let it remain till dry, and rub it off with a woollen cloth, and the spots will disappear.

CURE FOR AGUE.

We wish to give a very simple remedy for fever and ague, and wish to emphasize it by saying that it has, to our knowledge, proved very efficacious. It is simply common salt. A tea-spoonful taken in water and a tea-spoonful deposited in each stocking next the foot as the chill is coming on. That's all there is of it; but, knowing that it had been efficacious in "breaking" the chill and perfecting a cure we put it in our editorial columns, where no humbug remedy shall ever find a place, if we know it. —*Cleveland Herald.*

A GOOD INDIAN CAKE.—One pint of cream; one pine sour milk; one egg; four cups Indian meal; two cups flour; one tea-spoonful of saleratus; salt, and bake quickly.

CREAM CAKE.—One egg; one cup of sugar; one cup of sour cream; two cups of flour; and one-half tea-spoonful of saleratus; spice to taste, and bake slowly.

Poetry.

THE FARMER'S SPRING SONG.

The red buds are tinting the soft-maple trees;
The wood-peepers chirp where withered vines cling;
Full laden, to-day, is the breath of the breeze,
With the blackbird's ballad of welcome to spring;
The cowslip is blending her blossoms of gold,
With the violets blue, in shallow and swale,
And peew its are piping good-bye to the cold,
From brook-willow branches that swing in the gale.

Come farmer boys now,
With harrow and plow
Turn the brown turf in good cheer!
Old winter is gone—
There's dew on the lawn—
'Tis time to be sowing the seed of the year.

The rills so long silent 'neath deep forrest leaves,
Are learning to warble their gamut again;
And the purple-winged swallows are searching the caves
To find a retreat from the chilly spring rain;
Unrobed of the snow, earth beareth her breast;
Inviting the toil of the husbandman's hand;
And he that sows early reaps plenty and rest!
His certain reward from the generous land.

So farmer boys now,
With harrow and plow
Turn the brown turf in good cheer!
Old winter is gone—
There's dew on the lawn—
'Tis time to be sowing the seed of the year.

While savage December was lashing his team
Of tempest and snow storm, in turry along,
You stored and sang till rafter and beam
Shook down the light echoes of mirth and of song;
For your larders were loaded—bursting your ribs—
Your graneries glowing with autumn's ripe yield,
But now the new season of labor begins,
And April is calling her plowmen afield.

Ho, farmer boys now,
With harrow and plow
Turn the brown turf in good cheer!
Old winter is gone—
There's dew on the lawn—
'Tis time to be sowing the seed of the year,

SPRING—AN INVOCATION.

Up in the hawthorn in the dale,
The blackbird tells his loving tale,
With voice all blithe and free;
Bright sunshine on the willows gleams,
The perch moves softly in the streams—
Spring! Spring! we call for thee.

The torpid bee, with drooping wing,
Would fain pursue his ministering
In orchard crofts and bowers;
But ah! he waits thy cheering smile,
Whose truth would all his fears beguile,
And yield him pleasant flowers.

The violet half opens its eye,
As if it feared some fate was nigh
To end its early day;
The primrose leaves the mossy beds,
And wavering every petal spreads
With perfume for love's May.

The snow-flakes melt, the ice is gone,
Only the wind sounds drear and lone,
Life trembles in the reed;
Only the wind in forest trees
Awake sad echoes from the leas,
And chill the growing mead.

Only the winds; they seem to stay,
As if their part were meant alway
For recklessness and doom;
Come, fairest Spring, come, bid them cease,
And give the slumbrous earth release
From Winter's freezing gloom.

We call thee from those regions fair,
Where all thy sweet handmaidens are,
Love sighs where suitors weep.
Hark! hark! the notes of Time's old bells
Would charm thee with their wonted spells,
So waken from thy sleep.

—*W. Brathford.*

"BEWARE OF THE WOLF!"

You never need fear, little children, to meet
A wolf in the garden, the wood, or the street;
Red Ridinghood's story is only a fable;
I'll give its moral as well as I'm able:
Bad Temper's the wolf which we meet everywhere—
Beware of this wolf! little children, beware!

I know of a boy, neither gentle nor wise,
If you tell him a fault he gives saucy replies;
If kept from his way, in a fury he flies—
Ah! Passion's the wolf with the *very large eyes*;
'Tis ready to snap and to trample and tear—
Beware of this wolf! little children, beware!

I know of a girl always trying to learn
About things with which she should have no concern;
Such mean Curiosity really appears
To me like the wolf with the *very large ears*,
All pricked up to listen, each secret to share—
Beware of this wolf! little children, beware!

And Greediness, that's like the wolf in the wood
With the *very large mouth*, ever prowling for food,
That eats so much more than for health can be good,
That would clear a whole pastry cook's shop if it could;
That never a dainty to others will spare—
Beware of this wolf! little children, beware!