

THE SOUTHERN PLANTER;

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.
Xenophon.

Tillage and Pasturage are the two breasts of the State.—*Sully.*

C. T. BOTTS, Editor.

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No. 11.

ON PLANK ROADS IN CANADA.

Lord Sydenham, during his long sojourn in Russia, travelled on several of them, and found them well adapted to the circumstances and the climate; and, as both were very similar to those in Canada, he was strongly of the opinion that their introduction there would greatly conduce to the public interest. A few miles of road in the neighborhood of Toronto was first laid with plank by the local commissioners who had the management of it. The cost of stone and the great expense they had been at in macadamizing a portion of the same road, as well as the heavy annual repairs, had induced them to try the experiment in that province of laying a planked surface on the road. A gentleman describing it, says: "The few miles nearest the city, and over which very considerable traffic existed, were planked; and, upon inspection, it was found the top surface of the timber was worn in the centre for the breadth of seven feet, and to the depth of $\frac{3}{4}$ of an inch; the ends being to the full dimensions as the plank came from the saw. The bottom or under side of the planks, was found throughout perfectly sound. In two or three places, where a small cavity was left by the foot of a horse or other animal, there was found a slight pinkish tinge corresponding with the cavity, and indicating the commencement of fungus. The sleepers appeared perfectly sound." The facts elicited by examination of the portion of the road laid down but one season, were the same as the foregoing, except that but $\frac{2}{3}$ of abrasion had taken place. From the foregoing, it will be seen—

1st. That the wear and tear of the plank road, even near a populous town, is confined to the 7 feet in width of the centre.

2d. That, for the preservation of the planks from decay underneath, it is indispensable that every portion of it be solidly imbedded in the formation.

3d. That considerably more than half the wear and tear which occurs in seven years' use of the road, takes place the first year; which is easily accounted for, by the natural stripping off while the plank is fresh, of those fibres which were cross-cut by the saw; and from the fact of the dung of the cattle getting bound with the raised fibre of the wood and thus forming a tough elastic covering, which saves the

plank in a great measure, from the effects of the horse's shoes, and the tire of the wheels. On this road the plank is 16 feet long, 3 inches thick, laid crossways at cross angles to the road, on 5 sleepers of pine 5×3 laid on edge, and in the line of the road; and this was considered the best mode of laying a plank road, except that on a country road plank 8 or 10 feet long will be found quite sufficient. On the Chambly road (plank) the planks are 12 feet long, but laid diagonally, so as to make the road but 8 feet wide. This was opposed by some, and very justly; for, as apprehended, the weight of half the vehicle and load coming suddenly on one end of the plank, and the other end not being kept down at the same time, the traffic constantly tends to disrupt the road, and the planks are loose, and spring from end to end. Another principle connected with the laying of this road, (which was opposed) is that of having the sleepers of much larger scantling than on the Toronto road. It was remarked that, as all earth formation under a road of this nature will more or less subside and shrink, the giving to the sleepers too much area would enable them to bear up the plank, leaving the earth to settle from them, thereby causing springing in the plank, which tends greatly to their being cut away; (in fact, they quickly become rounded from the edges;) and, also, that fungus and decay of the plank would be brought on, in consequence of the confined air below. These apprehensions are realized. At Québec, part of the road has been planked, the plank being laid lengthwise of the road. It was considered that the planks would stand better the friction, and, when necessary, could be more easily taken up, and the road repaired. One strong objection to this mode of laying the plank is found to be, that the horses cannot keep their feet when much weighted, and are much exposed to falling, in consequence. Under all the circumstances, most have approved the manner in which the planks are laid on the Toronto road. Those now being planked under the department in the western section of the province are so laid, except that the planks are spiked with a 5½ inch spike—one in each end. With respect to plank roads generally, I wish none to suppose that I am an advocate for their adoption, except in those sections of the country where nature has afforded no better material, and where funds

can be obtained for a better structure. There are stretches of 30 and 40 miles, in parts of the west, where the soil is a deep rich vegetable mould, and without stone or gravel of any description; in such cases you must be content to wade through the mud, or adopt the plank roads. When the traffic or intercourse of a section of country requires that good roads should be afforded for it, the adoption of plank or stone roads should be governed simply by a comparison of the first cost of each, in conjunction with the probable annual expense of repairs; and if this comparison is based on the plank lasting twelve years, (or some say ten years,) a safe conclusion will be arrived at. In some cases in Canada, the adoption of plank instead of stone would have made such a saving as would have replanked the road every five years, if necessary. There are many sections in the west, where timber abounds, especially in Ohio, Indiana and Kentucky, where such roads might be introduced with great advantage.

The article above is extracted from the last of Commissioner Ellsworth's reports, and we have inserted it under the impression that there were many of the forests of Virginia that could be traversed cheaper and better by such a road than any other. We are much inclined to think, indeed we have long thought, that where timber was as plenty and convenient as it is to most of the thoroughfares in this country, that, every thing considered, the *cheapest* road that could be made would be one constructed of wood. With a locomotive engine and saw-mill made after the most improved construction, to traverse the road and cut the timber from point to point, we believe the expense in ten years would be less than that of a McAdamised road; whilst the evenness of surface would render the facility of transportation infinitely greater than the best stone road could afford. We should like to see a comparative estimate from some one acquainted with the subject.

APPLES AS FOOD FOR ANIMALS.

Apples, when ripe, afford more or less nutriment to animals. Sweet apples are generally supposed to be most nutritious, though we are not certain that this supposition is correct. Our fathers and grandfathers held that sweet apples would fatten hogs; but in latter years, it has been proved that hogs will fatten on apples that are not sweet.

A hog is naturally an epicure—(we don't say an epicure is a *hog*)—and when left to himself is a pretty good judge of what is best. Observe, then, what are his natural habits. Put

him in an orchard where there are various kinds of apples, and see how he will work, or rather how he will eat. He will always select the most *palatable* apples—he will not confine himself to one kind, nor to sweet apples alone; but will go over the orchard and pick out the choicest fruit, always choosing that which is in such a state of ripeness that its qualities are nearest perfection. Like the boys, his regular haunts are the "*best trees*," whether the apples are sweet or pleasantly sour; but he never eats a real *crabbed* apple, or an unripe one, unless forced by hunger. We should, therefore, infer from the natural habits of the hog, that if we wish to obtain the greatest thrift from him when feeding on apples, it is best to feed him partly with those which are sweet, and partly with those which may be called sub-acid.

When hogs or cattle are being fed principally on grain, their appetite, health and thrift, will be found much improved by a small allowance of raw apples, occasionally. As a regular food for hogs, the value of apples is undoubtedly much improved by cooking, either by steaming or boiling. If they are to be fed by themselves, steaming is probably best. But it is believed that the most judicious way is to boil or stew them thoroughly, and mix with them while hot, a portion of meal. This checks the laxative nature of the apple, imparts additional value, and causes the food to be retained in the stomach and intestines a sufficient length of time for the whole nutriment to be extracted. The meal may be made from Indian corn, rye, barley, buckwheat or oats and peas. We think we have never seen hogs fatten faster, than when fed on the following kinds and proportions of food, viz: a bushel of potatoes and a bushel of apples boiled together, and when sufficiently soft, a peck of oat and pea meal stirred into them, having the mixture when cold, about the consistency of good stiff mush, or "hasty pudding." The pork was solid, sweet and good. Some experiments made several years since by Payne Wingate, Esq. of Hallowell, Maine, a very close and accurate observer, showed that apples were worth more than potatoes for fattening hogs, especially when both were cooked and mixed with an equal portion of meal. Apples are also excellent for cattle. We have repeatedly witnessed their effects in the thrift and smoothness of the coats of cattle to which they were fed at the rate of about a peck per day, during the winter. Fed regularly, in this quantity, they increase the quantity and richness of the milk of cows, while the condition of the animal is likewise improved.

It is the opinion of some very judicious farmers, that a given quantity of ground will afford more nutriment for any kind of stock, when appropriated to apple trees, than when devoted to any other crop. Our own experience inclines

us to favor this conclusion, and we think our friends, who for the promotion of temperance, have cut down their orchards, have shown a "zeal not according to knowledge." They seemed not to be aware that the same substances which produced the deleterious effects that they desired to avoid, might be converted into wholesome and substantial articles of human sustenance.—*Cultivator*.

Standing in the portico of a hotel in Providence once, we were struck with the extraordinary thrift and apparent grooming of a pair of black horses driven to the door by a gentleman in a light wagon. When he dismounted we took the liberty of making some inquiries about the beautiful team that had attracted our attention—a true horseman always excuses such liberties: we were informed that the high flesh and glossy coats that excited our admiration were wholly attributable to the food on which they lived; this for three months preceding had been nothing but apples stewed with hay; and for light work their owner considered the best and cheapest food he had ever tried.

From the Farmers' Cabinet.

TOBACCO AROUND PEACH TREES.

Mr. Editor,—I have read with interest in different numbers of the Cabinet, articles respecting the depredations of the insect *Ageria Exitiosa*, upon the peach tree; and have seen various remedies proposed. I, too, am induced to offer one, as simple as I believe it is effectual, viz: an application of tobacco in the following manner: In the latter part of spring or early part of summer, scrape the earth from around the body of the tree, to the depth of one to three inches, being particularly careful not to injure the crown of the roots; fill the cup thus formed with trash tobacco from the shops, and envelop the boll of the tree to the height of three or four inches, with the stems or leaves. I do not offer this as a means to renovate a diseased tree, but as a preventive, the efficiency of which has been tested for nineteen years by Samuel Wood, one of the most approved nurserymen and extensive fruit growers, in this section of country; and also by other practical farmers with unfeigned success. The efficacy of the ill weed, when applied in this manner, appears to result in its universal *nauseousness*. The place which this insect selects for depositing its eggs is the junction of the boll of the tree with the surface of the ground, and finding there a substance which is loathsome to it, it chooses rather to wing its way to the orchard of a less provident neighbor, than consign its eggs, and consequently to trust

the reproduction of its species to a tree so fortified against its attacks: I am aware that some may be prejudiced against this remedy on account of its simplicity; but it may be well to remember, that simple inventions, and simple remedies are often the most valuable, and are besides, not always those that are soonest discovered. Be not discouraged then, but give it a fair trial, and if you are not richly rewarded with an abundant supply of one of the most delicious gifts of Pomona, then I am a deceived

BUCKEYE FARMER.

Smithfield, Ohio, 2d mo. 27th, 1844.

COAL TAR.

We observe many recommendations of coal tar as a paint. It is very cheap, costing only two dollars and fifty cents a barrel, and is said to constitute an excellent pigment. We recollect recommending it once before and receiving a communication from an intelligent correspondent whose experience lead him to condemn it in the most unequivocal terms. It is possible he got hold of an inferior article, or they may have been particular circumstances attending the experiment. We are extremely anxious to see the dingy weatherboarding of our houses covered with something, and the funereal black of coal tar would be better than the gloomy poverty of its present appearance.

NEW BUTTER CHURN.

Application has been made, says the Boston Cultivator, for a patent for a butter churn on an entirely new principle, which, if report speaks true, is to do away with every other mode. The plan is to blow a current of air, contained in a tin, or other vessel, after the manner of boiling by means of steam, the air being raised by a machine to be worked by hand in the simplest and easiest manner. By this means the butter is said not only to come in a short space of time but always regularly, adding about one half to the quality. An equal temperature is to be kept up by blowing cold air in the summer and hot air in the winter. Truly we live in an age of improvement.—*Connecticut Farmers' Gazette*.

NEW YORK STATE FAIR AND AGRICULTURAL CLUBS.

We are much indebted to our friend H. O. REILLY, Esq. of Albany, for an account of the fourth fair and exhibition of the New York Agricultural Society, held at Poughkeepsie on the 17th of September. It was undoubtedly a

most brilliant affair, and all we can say is, we wish we had "been there to see."

To the friend of agriculture no sight can be more interesting than the display which the means and opportunities of this Society enable them to afford at one of their annual exhibitions. All other attempts of the kind sink into utter insignificance when compared with it. We have never advocated the system of exhibitions in our own State, because, beyond the vicinity of the city of Richmond, we feel assured that any such attempt will probably prove a failure. We infinitely prefer to see substituted for it neighborhood clubs, which we are pleased to find are becoming as popular as they are useful. To get up any thing like an attractive exhibition, requires a great deal of movable material, in the first place, and a great deal of trouble, in the second. Stock and domestic manufactures are the subjects to which agricultural exhibitions are indebted for all their interest and all their eclat. To both of these departments we pay too little attention in Virginia to enable us to furnish out an agricultural exhibition. But there is no reason why we should not institute, what are infinitely more useful, neighborhood clubs, where friends may meet and talk over the projects, plans, and theories that are afloat in the agricultural world; where we may compare notes, laugh at each other's hobbies, gather a lesson from the folly or wisdom of our neighbors, and go home with our social and *tilling* faculties highly improved.

As a proof of the value of agricultural clubs, we lately heard a distinguished farmer in the lower part of Albemarle living upon the river, say, that ten years ago land was fifteen per cent. higher in his neighborhood than in the vicinity of Charlottesville, and that such had been the improvement effected by the Hole and Corner Club of Albemarle, that the positions of the two portions of the county had been exactly reversed; there lands were now estimated fifteen or twenty per cent. higher than those below.—We do not hesitate to say that this is the general effect; the formation of a club increases the value of land in the neighborhood ten or fifteen per cent. We are largely engaged in an agency for buying and selling lands in the State of Virginia, and we are frequently asked by persons looking for farms, if the one recommended to them lies within the circle of a neighborhood club.

LIMING LAND.

In the application of lime to land, it seems to me that one great object is generally overlooked. All the lime intended to be applied in one season is generally spread at once, thus leaving it in a kind of stratum, instead of being, as it ought to be, thoroughly mixed with the soil. Would it not be better to proceed as follows: Suppose you intend to apply sixty bushels to the acre. First spread twenty bushels carefully over the acre of ground; then turn the soil with the heaviest, or rather deepest operating plough you have. Then spread twenty bushels more in the same way, and turn that in with a medium plough passing across the previous furrow. Then spread the remaining twenty bushels, and harrow that in, or turn it under with a light seed plough. This would effectually mingle the lime through the whole depth of the soil. Any one can see the reason of the thing and the advantages of it; the only objection to it being the labor; but that is not more than is requisite to bring the soil into the proper condition for seeding. If wheat or any small grain be intended, then the third application can be made at the time the seed is sown. I do not much like the usual plan of applying thirty bushels one year, and three or five years thereafter thirty bushels more, and so on, unless deficiency of means prevents the whole being applied the same year. The idea generally is, that, like manure, the first application is exhausted or nearly so in three or five years, and that then another application is necessary. I do not think the lime is exhausted, but the small quantity applied having been diffused through the whole of the soil by successive ploughings, the soil is not sufficiently calcareous. Now if we apply the whole quantity as suggested above, the soil to its entire depth will have become charged with it; and, if enough is applied I do not believe it will be exhausted in twenty years, if then.—*Cultivator*.

THE HAW OR HOOKS.

We had supposed that the absurd and cruel practice of cutting out the haw from the eye of the horse for the purpose of relieving a fancied disease called the hooks, had ceased amongst even the most ignorant of veterinary practitioners; but a gentleman assured us that the plan was frequently resorted to still in the country by those who should know better.

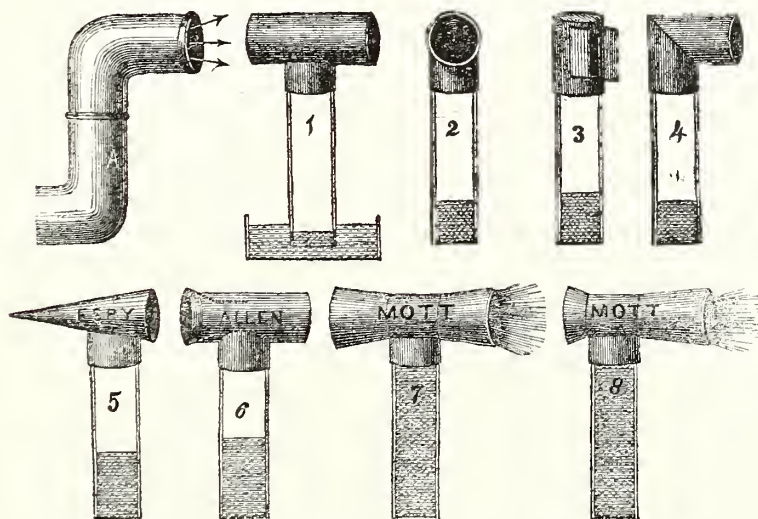
The haw is an expansive membrane with which nature has provided the eye of the horse for the purpose of removing the dust and other impurities that may chance to fall upon that delicate organ, and to cut it off under any circumstances, is not less cruel than ridiculous.—

This membrane, sympathizing with other diseased parts of the eye, frequently becomes inflamed and swollen, and then it is, that, instead of bathing it with cooling solutions, it is called the *hook*, and is cut out by ignorant quacks; and thus the horse is deprived of this natural appendage, and is subjected to all the pain and misery that the introduction of foreign substances is calculated to inflict upon that sensitive organ, the eye. We would condemn the man guilty of this barbarity to stand thirty minutes with a

gnat in his eye, his pocket handkerchief stolen, and his hands tied; he would be then able to comprehend the extent of the misery he had inflicted upon an animal oftentimes nobler than himself.

It is true that the bleeding that follows the cutting, sometimes reduces the inflammation and gives some apparent countenance to this barbarous practice—but surely blood letting can be effected under such circumstances upon better terms than the loss of this valuable appendage.

V E N T I L A T O R S .



Some time since we furnished our readers with a cut and description of Dr. Espy's remedy for a smokey chimney. At the time we suggested that the Doctor's invention was not altogether novel, and now we are authorized to say that it is not the best form of using the apparatus.—Some experiments have been instituted by Mr. Mott, of New York, which, to use his own words, have resulted as follows. To those who have suffered from the evil of a smokey chimney we need not apologize for introducing the article.

"To test the relative value of the various chimney caps and ventilators in use, I have made, during the past twelve months, many experiments, assisted by Thomas Ewbank, Esq. of this city. Many caps were sent to me for trial by others. The experiments were wit-

nessed by members of the American and Mechanics' Institutes, and several other scientific gentlemen, who were much interested, and expressed their surprise at the results.

"Trials were made in the following manner: A glass tube, of one inch bore, and eighteen inches long, was provided; on the top of this tube the various caps were placed; the lower end of the tube was immersed in a vessel of water, the upper end with the cap, each in turn, was placed in the blast produced by a blowing apparatus driven by a six-horse steam engine, used for melting iron in my foundry at Morrisania. The blast was through a six inch pipe contracted to three inches, the caps being placed about twelve inches from the pipe, so that the wind could have free action on the outside as well as inside of those caps that were hollow.

"More than one hundred caps were tried, consisting of the various kinds in use in this country and in Europe. The experiments were re-

peated several times with the same results. The mode of experimenting is here illustrated.

"The results with the better kinds in use were as follows: (the dark part of the tube showing the height the water was raised:)

"No. 1 is a common T, with the cross-pipe of a continuous diameter. When the blast was directly through the cross-pipe, it had a tendency to depress the water in the glass tube.

"No. 2 is the same cap turned at a right angle to the wind, when the water rose from 1½ to 2 inches.

"No. 3 is a well known and common cap.—With this the water rose from 2 to 2½ inches.

"No. 4 is a common elbow, with the blind side to the blast. The water rose from 1½ to 2 inches.

"No. 5 is the conical ventilator, with the point to the wind. The water rose 3½ inches. This cap was tried with the side forming a right angle with the blast; in that position the water rose 5 inches.

"No. 6 is a cap much used and highly prized in Boston, and other places in the Eastern States. It has a small tube in the end the next blast, opening in the large cross cap, as shown by the cut. With this the water was raised 4½ inches, which was higher than any other (except with the cone, when placed with its side to the wind,) previous to the trials with 7 and 8.

"No. 7, it will be seen, is two conical frustums, joined at their smaller ends to a centre cross-pipe. With this cap, either end to the wind, the water rose to the full length of the glass tube, 18 inches, and was blown out the opposite end. Trial was made again and again with this cap, at a right and other angles to the blast, and in every instance the water was raised from 7 inches upwards. A board was placed behind, on the side, and in every mode, to break or deflect the blast, yet the water rose in the tube. This is a very simple cap, easy of construction, and not likely to get out of order, as it differs from most others in being *stationary*.

"No. 8 is a single conical frustum, with the smaller end to the wind; the effect was the same as in No. 7. With the open end to the blast, the water was raised the length of the tube, and blown out the opposite end."

GUANO.

Messrs. Dunlop, Moncure & Co. of this city, called our attention to an assignment of guano they have lately received from a house in Baltimore, which they are offering to sell at three dollars the cwt.

Guano is, we will not say the prominent humbug, but the prominent subject of the day. For the last forty years it has been known in Europe

that a deposit of extraordinary fertilizing properties, believed to be the excrements of birds, was to be found upon the Pacific coast of South America. But it is only within the last five years that it has begun to form a subject of commerce; now it is estimated that upwards of eight hundred vessels are engaged in the British trade alone.

We know that the excrement of different animals possesses different fertilizing qualities, and the strength of bird dung is proverbial. The superiority of this manure over the dung of pigeons, fowls, &c. is supposed to be derived from the animal food which the birds on the sea coast draw from the depths of the ocean. Guano, then, is nothing more than the strongest kind of bird dung. Although this deposit is made every where upon the sea coast, being extremely soluble, it is only in those countries where rain seldom or never falls, that it retains its virtues. From the coast of Africa it has been lately imported, but upon analysis the African has been found, it is said, to be different in composition and inferior in fertilizing properties to that brought from South America. As to the quantity to be had, recent examinations prove it to be almost inexhaustible; the deposit is measured in miles, and the depth seldom falls short of thirty or forty feet.

The question is, what is guano worth to the farmer, and what can the merchant afford it at. The price in this country until lately has ranged from five to ten cents a pound; but the African product has already been offered in Scotland for about two cents, and it is contended that it can be profitably imported at a cent, or a cent and a half. Dr. Gardner, in an essay read before the New York Agricultural Institute, asserts, that an artificial composition can be formed equal to the best guano, for two cents a pound. The effects of this manure, exaggerated as they undoubtedly are, have been frequently almost magical. We have many marvellous reports of experiments made in Europe, but Dr. Gardner, who does not seem to be a very partial investigator, says that the result of the best conducted and most authentic seem to prove, that when applied to roots, as turnips, &c., 100 lbs. of guano is about equal to 8 tons of stable manure—on grass 100 lbs. equals 6 tons, and on wheat 100 lbs. guano is equal to only 4 tons of stable manure. He thinks the finest effect would probably be produced on TOBACCO.

It has been ascertained that guano measurably fails in a drought, and that it should be applied during or preceding showery weather. Its chief virtue is derived from the urate of ammonia which it contained. When brought in contact with lime the ammonia is liberated in a gaseous form, and is lost in the air. No such result ensues from a union with plaster; indeed it is recommended by some to mix plaster or charcoal with it. Perhaps as good a mode as any other is to mix the guano with two or three times its own bulk of fine loam, and sow it evenly over the land. As to the quantity required, from two to four hundred weight should be applied to grass lands—for turnips and upon poor land, to produce a permanent effect, from five to seven hundred weight should be applied. The guano should never be permitted to come in contact with the seed: it is too exciting, and burns the tender germ—it is best to divide it, and sow at different times—first, when the plant is fairly started, and then about the period of flowering. At periods, says Dr. Gardner, when the attacks of injurious insects are apprehended, (rust would probably come under the same category,) a new application may do much good, by giving the plants sufficient growth to resist the injuries. When applied, says the same authority, to corn or tobacco, it should be well worked into the land. On tobacco, it may be added when transplanted and at the topping season. We will add, that it would undoubtedly prove a great auxiliary to the plant bed.

One of the greatest difficulties the farmer will have to encounter in the use of guano, is the liability to imposition as to the purity and quality of the article. In the first place, there are different varieties differing very much in their composition and qualities—secondly, exposure to air and moisture lessens materially the value of the article, and thirdly, it is liable to be dishonestly adulterated. For a test of purity we quote again from Dr. Gardner's essay:

1st. Provide a balance sufficiently delicate to turn with a seed—that used for prescriptions will answer if exact.

2d. Reduce about a tea-spoonful of guano to fine powder.

3d. Weigh ten grains of the powder, freed from any adventitious leaves, feathers, or other impurities; spread on a piece of paper, and expose to the sun upon a stove or other warm place, not exceeding two hundred and twelve

degrees Fahrenheit, until perfectly dry. Re-weigh, to estimate the loss of water, which should not exceed twenty-five per cent.

4th. Place the dried powder on a strip of platinum, and heat over a spirit flame to a full red heat. As the guano warms, it begins to exhale the smell of ammonia, turns black, and if *oxalate of ammonia* be present to any extent, throws up a dense white smoke of *oxamide*, which is a certain sign of the *oxalate*. The heat must be continued until the blackness is entirely gone. Upon cooling, the remainder is weighed and the loss marks the amount of volatile matter. A good specimen should yield forty per cent. By this means all the ammonia is driven off, with oxalic, uric and humic acids, as well as carbonic and muriatic acids, in combination with ammonia. The only objection to the process arises from vegetable and animal impurities, which must always be separated before-hand by reducing the guano into a very fine dust, and picking or sifting out every particle which is not easily crushed. The method is applicable to every variety of guano, and knowing the peculiarities given, leads us to correct estimates of the value of a specimen.

The manure is partly in the state of a dark powder, and partly in lumps. The latter are less decayed than the powder, and are, therefore, a test of the goodness of a specimen, which should be very coarse and full of lumps.

CURING GREEN CORN-STALKS.

The difficulty which has sometimes attended the curing of corn-fodder, has been considered quite a drawback to the advantages of sowing corn for winter feed. In curing hay from grass, we prefer the *sweating* mode, as it is called, having practiced it with success. We have never tried this mode for green corn, but a writer (F. M. Butler) in the *New York Farmer and Mechanic* says he has practiced it with corn to as good advantage as with grass. He recommends to cut the green corn and let it lay in the swarth to dry off the dews or moisture and to become a little heated. As soon as this is done, put it up in large cocks or rather into shocks, trample it down close; let it remain in the shocks until it wilts and sweats or ripens, then dry off the sweat and remove the fodder to your barn. He says, "I remember a lot of green corn which for ten days baffled the skill of the farmer to cure it, and which was finally landed over to my care as being incurable. Feeling a firm reliance in the principles that should govern the curing of succulent vegetation for fodder, I

proceeded to dry off the dews, and as soon as this was done formed the green corn into large coeks, trampling it down close, although a fine warm sun was pouring down its heat upon the field. The coeks became heated, the corn-stalks wilted, but were suffered to remain until the next day, when towards afternoon the sky becoming clear, and a fine breeze blowing, the heaps were thrown open, the stalks dried and taken into the barn perfectly cured. It kept well, and in the winter the cattle preferred it to hay."—*Cultivator*.

ECONOMICAL MODE OF MANURING.

We laughed a little while ago to see some account of a German's pretending to make a crop in the most barren soil by manuring the seeds before they are planted; but we find that very grave pretensions are put forth to the merit of this process, and it has actually formed the subject of a pamphlet, in which there is something more of reason than we would have been induced to expect from the apparent absurdity of the proposition. The author's name is Viator and the principle upon which he proceeds is that the actual consumption of the cultivated plants constitutes a very small proportion of the food that is given to the field in the ordinary way of manuring; very little of it comes in contact with the rootlets or mouths of the plant; that in fact very little is necessary, and that by using a concentrated fertilizing article made into a paste, enough may be made to adhere to the seed to support the plant through the whole period of its growth. The mixtures that he uses for this purpose are the following as we find it in the *Farmers' Cabinet*:

1. *Blood*, in the liquid state, is mixed with one-eightieth of its weight of glauber salts, dissolved in a little water; when thus mixed, it may be kept for a long time in a cool place without congealing or undergoing decomposition; or clotted blood may be dried either alone or mixed with a little earth or powdered clay, and then reduced to fine powder.

2. Wool, hair, parings of leather, horns, hoofs, and bones, are charred in close vessels, until they are capable of being reduced to powder.

3. The dung of all animals is dried and reduced to powder.

4. Fats and oils of all kinds are mixed with so much earth, clay, or rye-meal, as will enable the whole to be reduced to powder. Oil-cakes are also powdered for use.

Mode of using them.—He makes up a semi-fluid mixture with which he mixes the seeds,

and then he dries up the whole by the addition of the powdered manures already prepared. His semi-fluid mixture is thus prepared. For a bushel of wheat or other grain, take

20 to 30 lbs. of clay in fine powder.
1½ lbs. of pounded sal ammoniac, or 3 lbs. of common salt.

3 to 5 quarts of whale, rape, or other cheap oil.

15 to 20 quarts of fresh blood, or blood kept in a fluid state by means of glauber salts, or, in the absence of blood as much water.

3 to 5 lbs. of linseed meal or pounded oil-cake.

These are mixed together intimately, and water added, if necessary to make a half-fluid mass. The seed is then to be poured in and stirred about till every seed is completely enveloped by the mixture. A layer of one of the following dry mixtures is then spread on the floor, over it the manured seed, and then another layer of the dry powder. The whole is then stirred together and left to dry.

Dry Mixtures.—Of these drying mixtures he describes several, consisting chiefly of powdered clay, mixed with one or other of the dry powders already mentioned. Thus he recommends mixtures of

1. 75 of powdered clay, 8 horn shavings, and 17 of bone dust.

2. 85 of clay, with 15 of fluid, or 5 of dried blood.

3. 85 of clay, 5 of charred hair, and 10 of oil-cake.

4. 60 of clay and 40 of powdered dung.

5. 70 of clay, 25 of charred leather, and 5 of bone dust.

6. 80 of clay, 1 of fat, tallow, or oil, and 2 of powdered dung.

These are all to be finely powdered and intimately mixed. The principal alleged use of the clay is, to make the other substances cohere together, and to attach them more strongly to the grain.

When the mixture of grain and manure is dry, it is broken up with the hand and thrown upon a fine sieve, which allows the loose powder to pass through and the uncovered grains, and then upon a coarser sieve, through which the dressed seeds pass, leaving the lumps, in which two or three seeds may be present, and which are to be carefully broken up. He prescribes further, that much caution is to be used in completing the operation so quickly that the grain may not be permitted to sprout, and thus become liable to injury during the succeeding operations.

When it is wished to grow corn after corn in fields manured in the usual way, Viator recommends mixing, for each bushel of seed, two to three pounds of sal ammoniac, or four to six pounds of common salt with ten to fifteen of rye-meal, adding a little water, stirring the seed well among it, and drying the whole in a stove.

For the Southern Planter.

ECONOMY OF FARM LABOR.

There is no subject of greater importance to the farmer than the judicious application of his farm labor, and there is none that receives so little of his attention. False economy often induces men to use an old worn-out tool when, for want of a good one, they lose more every hour than would pay for two. A wood-cutter with an old stumpy axe labors hard all day and is dispirited because he has nothing to show for his labor; he is scolded probably for what is entirely the fault of the tool: with a good tool he is active and cheerful, because he feels that his day's work will speak for itself. Some men use wooden pitchforks for hay; the time lost in hunting for a proper stick and in cutting it, would often secure as much hay as would pay for two steel ones; and then to see a man make five or six ineffectual efforts to stick the fork into a pile of hay, and at last take up about one-third of what he might with a good one, and having one-half of that falling back into his face, is enough to disgust any body in the world who loves to see work done as it ought to be. It is the same thing with dung forks. Give an ordinary hand a good steel fork and he will load a cart in less time than the best hand will with an inferior one—but to observe the indifference of our farmers to such things is to me, who have been used to different things, a matter of astonishment.

RAKING UP HAY.

As I observed in your paper once before, one man with a horse rake is as good as four and I believe six with the ordinary hand implements. Pine beards for compost should be collected whilst the ground is wet; then a portion of earth is taken up with them, which keeps them compact, and a cart carries in the same bulk double the weight. The size of the manure heap depends upon the facility with which it is accumulated; what we obtain easily we use bountifully. As to the

APPLICATION OF MANURE.

Suppose a farmer has twenty head of cattle; he pens them in his farm-yard and hauls in trash to litter it with. In this way he may make eight hundred loads of manure, which it will take him eighty days, at ten loads a day, to haul out upon his fields. Of this probably five hundred were litter, which it has taken him fifty days to haul in. Here is one hundred and thirty days employed in hauling. Suppose, instead of this, he pens his cattle upon his ground previously broken up, on a quarter acre at a time, and hauls the five hundred loads of litter directly to these pens of ploughed land, is it not evident that he gets the same amount of manure with fifty days hauling, instead of one hundred

and thirty? If this process is followed, and lime added where the soil is deficient in it, the loss from evaporation and washing is less than by any other means that I know of, and certainly the saving in labor is very great.

HOURS AND WEATHER FOR WORK.

It is bad economy to rouse your hands, as some do, by starlight, keep them at work for several hours on an empty stomach, make them guzzle down their meals, and off again to work as long as they can see, and then depend upon their feeding in the dark. Some think a little rain wont hurt, and drive on through a drizzle; the body hot from work and the skin cool from rain, induces cold, and lays the foundation oftentimes of the very worst diseases. The loss of time, and sometimes of life, from such causes, together with the doctor's bill, doubles the amount of gain that can ever accrue from such means.

The following is my plan of

WORKING CORN.

Lay off the corn rows deep with a two-horse plough; plant in the bottom with the usual covering; then when high enough to work, put in the cultivator so that the right hand tooth will split the edge of the furrow on each side, and the corn will be wed, and hilled a little, and the ground left light and fine, *without hoeing*. Now be not deceived here; deep *planting* is not deep *covering*. Plant deep down, but cover light, and when well rooted below, work as above directed, and your corn will bear working close to the stalk, and will, in my opinion, when the dry weather comes, bear working at least ten days longer.

I could enumerate many other points affording a fair scope for the exercise of economy in labor, but it is probable that he who will not take the hint from what has been already said, would hardly be profited by a more detailed view of the subject. I will close this communication by a single other remark upon tools in general, and one of my own in particular. It may be asked, shall we throw away our old tools and buy new ones? I answer, if your good fork is worn too short for a strong man to make a good day's work, give it to a boy, or keep it for work that may injure a new one; but never expect a full day's work from a good hand with an inferior tool.

I would mention an implement of my own invention for cutting down and picking up corn; it is the circular part of an old reap hook, with a shank bent to it, which is a little turned and driven into a short handle; with it when ground keen, a man can cut with the right hand and heap with the left as fast as one can cut and another heap in the ordinary way.

My aim in this communication is to encourage those who are without means to be their

own means, and to work out their own independence by the shortest route; but do not think for a moment that your implements are complete without having some agricultural work coming constantly to you with the latest news, that you may profit by the advice and experience of others.

J. H. D. LOWNES.

EAU DE COLOGNE.

The sweetest lady in the world recommended to us the following recipe for making cologne:

Mix 120 drops oil of bergamot;
120 drops oil of lavender;
240 drops oil of lemon;
60 grains of musk, and
1 pint of purest alcohol.

From the American Agriculturist.

TO DESTROY RATS.

The following recipe for the destruction of rats, has been communicated by Dr. Ure to the council of the English Agricultural Society, and is highly recommended as the best known means of getting rid of these most obnoxious and destructive vermin. It has been tried by several intelligent persons, and found perfectly effectual.

"Melt hog's lard in a bottle plunged in water heated to about 150° Fahrenheit; introduce into it half an ounce of phosphorus for every pound of lard, then add a pint of proof-spirit of whiskey; cork the bottle firmly after its contents have been heated to 150°, taking it at the same time out of the water-bath, and agitate smartly till the phosphorus becomes uniformly diffused, forming a milky-looking liquid. This mixture being cooled, with occasional agitation at first, will afford a white compound of phosphorus and lard, from which the spirit spontaneously separates, and may be poured off to be used again, for none of it enters into the combination, but it merely serves to comminute the phosphorus, and to diffuse it in very fine particles through the lard. This fatty compound, on being warmed very gently, may be poured out into a mixture of wheat flour and sugar incorporated therewith, and then flavored with oil of rhodium, or not, at pleasure. The flavor may be varied with oil of aniseed, &c. This dough being made into pellets, is to be laid in rat holes. By its luminousness in the dark, it attracts their notice, and being agreeable to their palates and noses, it is readily eaten, and proves certainly fatal. They soon are seen issuing from their lurking places to seek for water to quench their burning thirst and bowels; and they commonly die near the water. They continue to eat it as long as it is offered to them, without being deterred by the fate of their fellows, as is known to be the case

with arsenical doses. It may be an easy guide for those who are desirous of following Dr. Ure's prescription, and may not have a thermometer at hand, to know that a temperature of 150° of Fahrenheit is equivalent to a degree of heat midway between that at which white of egg coagulates and white wax melts."

NEW YORK AGRICULTURAL INSTITUTE.

We observe that under the auspices of Dr. Gardner, formerly of Hampden Sidney, an Agricultural College has been established in New York.

We do not know how much of practical farming is to be learned in the city of New York, nor are we altogether sure that enough of the *science* of agriculture is yet known to justify any body in talking about teaching it any where; but this we do know, that a most shameful ignorance of the *art*, by which we mean an ignorance of the principles and use of the implements they use, exists amongst the farmers of Virginia. A school in which the aspirant to agricultural profits might be taught how a plough is to be fashioned and used, when it is out of order and how it should be repaired, would be a consummation devoutly to be wished. What it is proposed to teach in the new college may be learned from the following extract from the Doctor's card:

The studies of the Institute are agriculture, chemistry, analysis, and physiology; and measures have been taken to introduce a course of instruction in agricultural mechanics and rural architecture. These are distinct classes, so that students can attend any separately.

In *Agriculture* will be taught all facts in chemistry, geology, and botany, useful to the farmer—the drainage and preparation of soils—the collection, storage, and preservation of provender and fruits—the feeding and improvement of stock—management of orchards, vineyards, &c.; the preparation and *economy* of manures, both organic and mineral, with their action and causes of success or failure. In short, all the topics embraced in the courses given by Professors of Agriculture in European colleges, will be discussed.

Chemistry, as an abstract science, is taught by Professor Draper in the University.

Anatomy and *Physiology* by Professor Pattison. This course is directed more especially to an examination of the structure and functions of the human body, and may be attended with great profit to the student.

Analysis of Soils, the ashes of plants, and

manures, will be conducted by the students under the direction of the subscriber, with such assistance as may be required.

The city of New York offers numerous advantages in carrying out the objects of the Institute—the facility of access—the high cultivation of many farms, nurseries, &c., in the vicinity—the conservatories and market gardens—the large collections of farming implements—the choice seeds obtainable—the numerous artificial and mineral manures that can be examined—constitute it the best locality in the United States. Good board and lodging near the University can be had for from \$2 50 to \$3 00 per week.

The *Institute* is situated in the University of New York. It opens the first Monday of November, and continues in session until the 1st of March. This period has been chosen for the accommodation of those engaged in farming. Fees for the course on Agriculture, \$20; for Analysis, \$30; for both, \$40. The courses on Agriculture and Analysis are conducted by

D. P. GARDNER, M. D.,

Formerly Professor of Chemistry, &c., in Hampden Sidney College, Virginia.

For further information address, post-paid, Dr. Gardner, 412 Fourth street, New York.

HINTS WORTH KNOWING.

Fractured or Dislocated Leg.—Let the sufferer be kept on the ground until a couch, door, or gate, can be procured; for in raising him up he may die from faintness or loss of blood. When a gate, hurdle, or board is procured, place it alongside him; cover it with a bed of straw, and pillows, and let men convey him home or to a neighboring house. Send a discreet person to his surgeon and to his home. On no account put him into a vehicle; let him be borne home by men, for the motion of a carriage might cause splintered bones to fatally wound blood vessels in contact with them.

Fits.—If a person falls in a fit, let him remain on the ground, provided his face be pale; should it be fainting, or temporary suspension of the heart's action, you may cause death by rising him upright, or bleeding, but if the face be red or dark-colored, raise him on his seat, throw cold water on his head immediately, send for a surgeon and get a vein opened, or fatal pressure on the brain may ensue.

Hanging or Drowning.—Expose the chest as quickly as possible, and throw the coldest water you can procure plentifully over it, whilst the body is kept in a sitting position.

Children in Convulsions.—Deluge the head with cold water, and put the feet into warm water, till medical assistance can be procured.

By a proper application of these simple rules,

life might often be saved, whilst it is well known to medical gentlemen, that what is kindly though injudiciously done hastens death.—*Selected.*

SALTING HAY.

In the last number of the *American Agriculturist* we find some remarks of the Editor upon the management of Mr. Pell, whose farm in Ulster county, New York, he had lately visited. Amongst other things he says,

"In putting up his hay, Mr. Pell uses the extraordinary quantity of one bushel of salt per ton. The advantages of such high salting are thus stated:

"1st. It can be put up without injury in a much greener state than when less salted—sometimes within a few hours after cutting, and always the same day unless caught in a shower. The saving of time, therefore, in handling the grass in curing is considerable, in addition to lessening its exposure to rain.

"2d. Thus highly salted, it will weigh much heavier when sold, probably at least one-quarter, and it is calculated that this gain is more than equivalent to the cost of the salt, when cheap, at least five times over.

"3d. It is preserved sweeter and greener than when cured in the ordinary method. We believe the greater the quantity of the natural juice or moisture of the grass that can be retained in the curing process, the more valuable the hay will be found; for this juice, if not the most substantial part of the fodder, is certainly the most palatable, as it sweetens the food of the stock, and makes it more agreeable to them; they consequently eat more, and thrive better upon it. In this opinion, we beg leave to add, that we are fully sustained by every intelligent farmer with whom we have conversed upon the subject, either in this country or in Europe.

"4th. It brings a higher price than other hay in the New York market.

"5th. Stock relish it as well as any other hay whatever, thrive uncommonly well on it, and ton for ton, it seems to go further with them; nor has it been noticed that they drink much more when fed on this than on hay scarcely salted at all. It is well known that persons living on salt meat drink very little more than when eating fresh. It must be recollected that hay put up so green has much more moisture in it than when drier; it can consequently absorb more salt; moreover, it is believed that the grass can only take up and dissolve a certain quantity of salt, however much may be put upon it. We know that this is the case with meat when pickled in barrels; it absorbing such quantity of salt only as is sufficient to preserve it, and whatever more has been added is left un-

dissolved. We wish, however, to be understood, as neither recommending nor disapproving so much as one bushel of salt per ton to hay; all that we ask of our readers is, to settle the matter for themselves by carefully experimenting with four quarts per ton up to thirty-two; we shall then know which is best."

It has been asserted that the use of salt in curing hay was injurious to the animals fed upon it, and it has been as stoutly denied. The question is an important one; for the salted hay is cured with much greater facility, security, and ease, than any other method affords. Moreover, there is no other plan that preserves as well the juices of the straw, as is evidenced by its green and succulent appearance. In short, as far as the mere curing is concerned, the salt is a most important and valuable auxiliary. Nor do we believe that a moderate quantity of salt, sufficient to secure its preservation, is at all injurious, but we confess except for the purpose of increasing the weight in market when it was to be fed to other people's stock we should be a little distrustful of using a bushel to a ton.

For the Southern Planter.

SMALL FARMS AND THOROUGH CULTIVATION.

The anecdote of the boy carrying a stone in one end of his bag, to balance the corn in the opposite end, because his father had done so, shows in some degree the force of education and habit. This stone-carrying system is of broader application than may be at first imagined. To exemplify. A father has a field of one hundred acres of land which he cultivates because he has laborers and team to do so; perhaps fifty acres of this yield something like two bushels per acre, a little more than enough to feed the laborers and team whilst engaged in the cultivation; the son inherits it, and forsooth, because his father had done so, he continues the practice, until he finds it expedient to remove to some new country. To arrest a course like this, so destructive to lands and fortunes, I propose a few remarks. All who have noticed any thing about farming operations in Eastern Virginia, cannot fail to have observed the thirst for extensive cultivation, irrespective of the quality of land and its productiveness, and those engaged in it have found at harvest time that their crops have mostly been gathered from a few patches of land in tolerable heart, whilst the greater portion of the field required oxen in pretty good keep to collect a load of ears, more resembling awl handles than corn. In view of this fact, and in view of the immense products of the

small northern farms highly improved, it is passing strange the course should be persisted in. I suggest the following one to remedy this evil: Say a man has a field of one hundred acres of land, half of which is nearly unproductive, which will require eight hands to cultivate it; let him take three of his hands from his field, and commence early in the year to haul from his woods, leaves, mould, swamp mud, walls of ditches cut through his swamp land, and any vegetable matter he may have, and apply it to the unproductive part of his field so far as it will go; and I will venture to affirm that the product of the part of the field in cultivation, will far exceed the product of the whole field in any previous year, seasons and cultivation being alike. When these sources of improvement are exhausted, let the hands above employed in improvement, remove the ground works of fences that have been standing for years, and take the soil from under them and apply it as manure, as it really is, and the product of this process will astonish any one who has not experimented in this way, and will leave your fences cleared of shrubs and briers, which yearly consume much time and labor in clearing, and so much injure fences by obstructing the wind and sun from them. This source of manure having been exhausted, if you have light or sandy land, take from your adhesive clay subsoils, clay to cover it, say about twenty-five or thirty loads to the acre, scatter the same so soon as it is deposited, so that it may have the frosts and freezes of the winter to pulverize it, and turn it under in the spring preparatory to planting corn. This will give tenacity and fertility to this kind of soil, and one experiment of the kind will embolden you to a continuance of the practice. As respects manuring, from repeated experiments, I am fully persuaded a surface application is the most beneficial on sward or fallow. I would prefer applying it on the sward in August for the ensuing year's crop of corn. When there is great scarcity of manure, a quart of stable manure, or a pint of ashes dropped on the corn hill after planting, will produce a result in the crop, that no one would anticipate who had not thus experimented, and I incline to the opinion, that it will be the most speedy way to cover over a large surface, and make a good crop at the same time. It is true that this application at first is too limited for a small grain crop, nevertheless, you have applied the quantity of manure over double or treble the surface you would have done, if it had have been applied broadcast; you will have obtained double the quantity of corn you would have made from a broadcast application of the same, and I believe you will make as much small grain from this extended surface. On the second cultivation of a corn crop, with the beds reversed, and a like application of manure, it will have diffused itself

more generally over the surface than could be imagined. All I ask of the skeptical on this subject is, to make one experiment. I have frequently applied it in this way, and invariably have derived benefit from it, exceeding my expectation.

A few words in relation to the varieties of corn; in these I have experimented largely, and the result is decidedly in favor of the largest kind. Poor land will not bring large or small, and rich will produce much more of the large than the small. Of one of the small varieties I once obtained eleven ears well matured from one stalk. The appearance was very imposing, but lo! when I came to test the product of this variety with a larger one, I found one large ear to yield one-eighth of a gill more than the eleven. When the gathering of the ten additional ears, the shucking and housing, and the deficiency in yield are taken in the estimate, I think no one will hesitate in awarding a preference to the large kind.

REXBURG.

IMPROVING LAND BY GREEN MANURES.

It is believed by some, that the best kind of vegetable growth for turning in, in the form of green manures, is Indian corn sown broadcast. If it be intended to apply lime to the land, it would be well to do so the fall before. Then as early in the spring as circumstances will permit sow corn broadcast, say three or four bushels to the acre, and as soon as it has grown as high as it can be conveniently turned under with a deep working plough, turn it under, and immediately sow another crop in the same way, turning that under as before, but with a medium plough run crossways of the previous furrow. In the middle and southern States, three crops can thus be turned under in one season. It is believed that no system of manuring or renovation, except the heaviest application of stable manure, can compare with this plan in its results. If the land be very poor the first crop will be very light, but light as it may be it will yet add a considerable portion of the elements of vegetable nutrition to the soil; and thus the second crop will be greatly improved, and the third will be all that can be desired. It is believed that in this way four times as much improvement will be effected in one season, as can be by means of clover in three or four years. For this purpose farmers in the north should use the tall kinds of southern corn, as being of more rapid growth and furnishing vastly more matter for the soil.

Cultivator.

MECHANICAL AGRICULTURE.

The day will come, is fast approaching, when labor-saving machinery will enter much more largely than it does at present into the economy

of southern agriculture. Such is the degree of competition now that the whole world has turned its attention to the peaceful arts of agriculture, that the question is who shall produce cheapest. The natural advantages of a virgin and fertile soil in one portion of the world must be offsetted by superior skill and industry in another; and we of the South can only hope to compete with the wheat growers and tobacco makers of the West, by resorting to the use of labor-saving machinery wherever it is applicable to agriculture. The ingenuity which produced the cotton gin and spinning jenny, is awaiting the orders of the agriculturist. But as a general rule, labor-saving machinery requires the superintendence of a mechanic, and that the Virginia farmer is not; and yet to that must he, to a certain extent, come at last. There is no greater bar to agricultural improvement at the South than the entire ignorance of our farmers and planters of the simplest mechanical details. The cost of the farmer's operations depends, in a great measure, upon the perfection of the implements with which he labors, but to furnish nine-tenths of them with any thing beyond a chopping axe or a grubbing hoe, is like casting pearls before swine, and yet the day will come, we venture to predict, when the *steam engine* will perform a large portion of the work of the farm. The threshing machine has already expelled the flail, and every day new drafts are made upon the mechanical skill of the farmer. We say, therefore, that the first thing a young farmer should be taught (we despair of the old ones) is a thorough practical knowledge of the implements and machines he will require in his vocation.— This already begins to be understood in England, and our readers would be astounded at the complication and perfection of many of their agricultural implements. Some idea of the expense incurred, and the nature of the means adopted to save labor, may be formed from the following extract from a correspondent of the *American Agriculturist*. It is descriptive of a farm in Scotland called SWANSTON, about three miles from Edinburgh:

"The attention of our party was first turned to the farm buildings. These are of stone and form an extensive quadrangle. Here are stables for the horses, of which sixteen are employed upon the farm; also stalls for about twenty-five cows; but these are principally occupied by fattening cattle, as Mr. Finnie keeps merely enough cows to supply his own family. The horses are

fed upon fodder, cut by one of them connected with the cutter, by a simple contrivance. There are appropriate shelters for carts and implements, convenient store-rooms, &c. In the centre is a small steam engine of six-horse power, which drives the threshing apparatus in the outside building. The grain falls from the threshing machine directly into a fanning-mill, which separates the awns and light seeds; by a set of small iron buckets revolving upon a leather band, it is then raised and delivered into a second, and finally a third winnowing machine, from which it comes forth beautifully clean. Another set of deliverers take the chaff to the room above, where the unthreshed grain is first introduced, to pass once more through and thus prevent all loss. All of this machinery is worked by the engine, and much ingenuity is shown in dispensing with manual labor. The steam also cooks and steams the food for the stock. Mr. F. estimates its fuel to cost about £5 a year. A large walled space in the centre of the quadrangle is devoted to the reception of manure from the stables, piggeries, &c. The stock-yard still presents a goodly show of last year's products. The frames upon which the stacks stand are all numbered, to the amount of seventy-five. This must be very convenient, especially with crops, the results of experiment."

From the same article we extract the following:

"**MANURE.**—Every possible means for the collection of manure is adopted. A portion of the grass land is let to some persons from Edinburgh, in order that they may keep a dairy of twenty-four cows thereon. Their manure carefully preserved, adds materially to the supply. In addition to this, and all the manure from his own stables and compost heaps, Mr. Finnie told me that he annually paid about £250 for manure from Edinburgh, giving from three to four pounds for the manure of a single cow. As much more is paid for the portable manures, such as guano, nitrate of soda, bone-dust, &c., making a total of about \$2,500 per annum; this too by a *tenant farmer*, one who has his rent, and a high one, to pay. Nothing can be more conclusive as to the *profit* as well as the benefit of liberal manuring."

PRUNING PEACH TREES.

The Editors of the *Cultivator* lately visited the celebrated nursery grounds of the Messrs. Downing at Newburgh, in New York; amongst other things they remark,

"Messrs. Downing practice a new mode of pruning peach trees; at least, it is new to us. It is cutting off half to two-thirds the new wood

of the limbs, every autumn. The advantages are that the wood hardens better—the soft and tender twigs, not sufficiently matured to stand the winter, and which are besides most likely to be injured by the aphid or other insects, are taken away, by which the sap and wood of the remainder, are rendered more sound and healthy. The number of fruit buds for the succeeding year are increased, and there are plenty of leaves, by which the sap is more perfectly elaborated and the fruit made larger and higher flavored.

"The soil of the nursery grounds, is mostly a gravelly or stony loam, rather moist. Neither the worm or curculio does much damage here. The solidity of the earth, makes it difficult for the insects to enter it for the purpose of undergoing transformation."

From the *Cultivator*.

BEST TIME FOR CUTTING WHEAT.

The following experiments just performed by the writer, to determine the best time for cutting wheat, may possibly be interesting to some:

1844, 6 mo. 29.—A few heads of wheat were cut from the field, when perfectly green, the grains hardly having attained full size, and being "in milk" or quite liquid within. After drying several weeks, a hundred seeds were carefully weighed and found to weigh only twenty grains. They were almost shrunk to chaff.

7 mo. 4.—Other heads were cut in the same way—they had just begun to assume a perceptible shade of yellow. One hundred seeds weighed when well dried, 35 grains, or nearly double the first.

7 mo. 11.—Other heads were cut—they had changed about one-third in color—the grains in the dough state. One hundred seeds weighed 46 grains, and would be regarded as a fair specimen of ordinary wheat.

7 mo. 15.—Mostly become yellow—a few streaks of decided green near the tips of the chaff—heads quite erect. After cutting in this state, and drying some weeks, the seeds were very plump and fine looking, 100 weighing 55 grains.

7 mo. 29.—Heads dead ripe and curved downwards. 100 seeds weighed 53 grains, being two grains lighter than the last, which would be a loss of about one bushel of wheat in every twenty-seven, by cutting, if dead ripe, instead of two weeks earlier as in the above instance—besides the loss by shelling, and the inferiority of the straw. J. J. THOMAS.

SELECTION OF SEEDS.

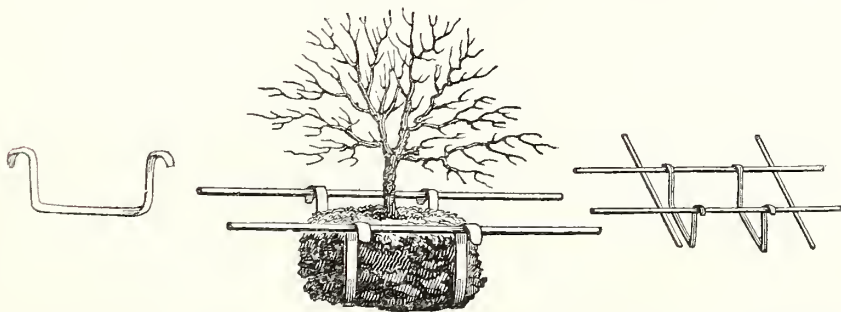
In a letter to the Editor of the *Cultivator* Mr. S. W. Jewett says,

"In Albany, I met Mr. Robert S. Wilson, a

planter from Baltimore county, Maryland, with whose conversation I was highly entertained.— He is a practical agriculturist, and among the many experiments which he has been making, he mentioned one on Indian corn, which I think worthy of note. He has for three consecutive years planted seed corn taken from within an inch of the butt end of the ear, and the result has been he has obtained a mature crop of corn, some two or three weeks earlier. I have never tried the experiment myself, but I am confident the corn crop can be forwarded in this way, from the fact and for the same reason that beans taken for seed from the lower part of the vine which mature first, have been found on trial to ripen some time sooner than those taken from the upper parts

which mature later. Mr. Wilson informed me that great improvements were making in the agriculture of his State, particularly by some enterprising individuals who had emigrated from the eastern States, and he thought that those who chose to settle there, with help brought from the east, would find themselves able to invest money very profitably in lands and agricultural operations; that lands were now at their *minimum* price, and would in a few years advance in value a hundred per cent. He said that he himself raised last year a crop of corn from a piece of 'worn out land,' as the lands exhausted by long cultivation are there called, which yielded 70 bushels to the acre; and that his crop now growing, promised him an average of 100."

TRANSPLANTING TREES.



Nothing tends more to the elegance of a country residence than a proper disposition of the trees about the homestead. The waiting for the growth of switches is a slow and discouraging business; but although we have often endeavored to transfer the noble tenants of our forests to the yard, the only plan with which we have ever succeeded in removing trees of a respectable size, is the following, taken from Jessie's Gleanings:

"I have adopted a method of transplanting trees, which I consider more generally to be depended upon, and much cheaper, than that invented by Sir H. Stewart. On an experiment upon a large scale, and under many disadvantages, I have not lost a single tree out of many hundreds, some of which were of large size, and showing their blossom at the time of their removal. The plan I adopted was as follows:— In the first place, the earth must be excavated at some distance from the tree, leaving all the principal fibres and the earth adhering to them, in a compact ball, undermining it as much as

possible, and taking care not to shake or injure the ball by twisting the stem of the tree, or using it as a lever to loosen the tap-roots; when this has been done, and a corresponding hole made at the place to which the tree is intended to be removed, the following method of taking it up and conveying it, is to be used:

"Two pieces of iron must be previously formed, of the breadth and thickness of a common cart-wheel tire, three or four inches wide, and rather more than half an inch in thickness, and about six feet long, bent in the form shown at A, which will reduce it to three feet across. This size will do for trees requiring from two to four men to lift them; but a size, larger and stronger in proportion, will be wanted for trees which will require from eight to ten or more men to carry them. Put these irons under the ball of the earth as near the centre as possible, leaving a space between them of about two feet, and for larger trees a little more; then run two strong poles, about eight or ten feet long or more, stout in proportion, and smaller at each end, and apply them as shown at B, to each side, passing them through the bends of the

iron, so as to form a complete hand-barrow; then the tree may be lifted easily. Cross levers may be used for larger trees which require more men, as at C, so that as many as are wanted can apply their strength, without being in each other's way. The whole is fixed and unfixed without any loss of time, and requires no tying; nor is there any danger of slipping off. One of the chief advantages of this method is, that the tree is supported on the ball of earth instead of the earth being supported by the fibres of the roots, as is usual in most cases; for even in moving large trees with trucks, sledges, &c., most of the mischief is done in loading and unloading, and adjusting the tree to a proper position: all which can be done by the above method, without in the least injuring the fibres, &c. The roots which extend beyond the ball of earth must be cut off at the *outer* side of the trench, and be left projecting; and in taking up, it is advisable to go much wider with the spade from it, than the ball of earth is intended to be; the ball being afterwards reduced, if need be, by a pick, so that a single root need not be injured by it. In removing very large trees, the tap-roots which cannot easily be got at, may be separated readily, by a long chisel applied under the ball of earth and driven by a mallet; but in moderate sized trees this will not be found necessary. This mode of transplanting trees is much cheaper and more successful than that of Sir H. Stewart; more generally applicable to every description of tree and shrub, particularly to many whose fibrous roots cannot be exposed without destruction to the tree; by taking them up in the manner above described, and when in leaf and even blossom, they do not appear to feel the removal; and again, trees thus removed do not require support from stakes, as the hole dug for their reception might be made to fit exactly the bottom of the large ball of earth, which will then be found to steady them very sufficiently."

A NEW FASHIONED MATTRESS.

We sojourned lately at the house of a country friend where we were treated to the most comfortable mattress it has ever been our good fortune to encounter. At first we thought it was fatigue which had converted an ordinary couch into a "thrice driven bed of down;" but we soon found that there was a most comfortable peculiarity about the bed itself, and upon inquiry we found that we had been lying upon a mattress consisting of eight or ten blankets quilted together and encased in a linen cover; this mattress rested upon an ordinary feather bed. This hybrid between a feather bed and a mattress, secures all the softness of the one and

all the levelness of the other. Moreover, it is an excellent mode of disposing of the blankets during the summer. We warrant he who tries it, never buys another hair mattress.

From the Cultivator.

RYE INJURIOUS TO ORCHARDS.

Messrs. Editors.—In 1839, I ploughed in a twenty acre field of rye for manure, when it was about developing the tassel, with good success. I would not have it understood that the grain was sowed for that purpose, as there are many substances less expensive, that might be used to greater advantage, but to save a young orchard, growing in the same lot, from *destruction*. During my absence, my man through mistake, sowed rye instead of wheat; and on my return, I was obliged to turn it under, having once injured an orchard so materially by cropping it one year with rye, that it did not bear fruit in five years after, and still feels the effect of the injury.

R. L. PELL.

Pelham, Ulster Co., Feb. 19, 1844.

TRIAL OF PLOUGHS.

In a late number of the Cultivator, we mentioned that Mr. Colman had presented to the Council of the Royal Agricultural Society, two American ploughs—one of which was the Centre Draught plough from Prouty & Mears, and the other the Eagle plough from Ruggles, Nouse & Mason. These ploughs were tried in connection with several English ploughs at the late show at Southampton. In reference to the trial, the Editor of the Farmers' Magazine says—"The contrast between the working of these trans-atlantic ploughs and the English ones was most striking, and was the most perfect practical refutation to the self-congratulatory remarks of Daniel Webster, who, on his return from England, stated that he had not seen any implement in England worthy of comparison with those of America. We particularly examined the work of these ploughs, and compared with the level and accurate furrows made by the English plough, which appeared as though cut out by a plane, were coarse, rough, and irregular. The work of the competing ploughs, with the two exceptions we have alluded to, was generally good, especially so, considering the state of the soil."—*Cultivator*.

We imagine that the opinion expressed by the Editor of the Farmers' Magazine is in a measure at least the result of national prejudice. At any rate, a very intelligent Scotch farmer brought to our office, last summer, a plough which he had brought from home, with a request

that we would, if possible, dispose of it for him; as he found the ploughs here cheaper and better than any he had ever seen in the old country. We offered the plough to Mr. Grieve, the celebrated Scotch ploughman, who preferred going into the trial in which he was a successful competitor with an American plough.

From the South Western Farmer.

CURING PEA VINES.

Your correspondent C. M., in calling the attention of your readers to the curing of the pea vine, deserves at their hands, thanks. It is an important means of keeping stock, which, if well cured, will do better than any other species of forage we have. I have seen it cured for twenty years, and as the mode is different from his, I beg to give it you—leaving to your choice to dispose of as will suit you. After you have either cut the vines near the ground, or pulled them up, leave them in a swarth, until they have wilted—not taking longer than half a day. Then, with forks, throw them up into hand-cocks, small at the base, and as high as will not press together, only by their own weight; after remaining thus for a couple of days, open out for an hour or two in sun and haul up. Having provided a rail pen, with surplus rails, and boards to cover—then put rails in for floor a few inches above the ground—a foot or so apart, on which throw in some two to three feet thick the vine; put on another floor of rails and fill again two or three feet, continue thus until pen is ten or twelve feet high and cover. Many persons fork in a layer of straw of any kind, oats, rye or wheat, with every layer of the vine; many use salt, in both ways, and no question, but what it is a saving in the end.

Now for the reason. If the vine is cured as "fodder or other hay," you will lose every leaf, much of the stem, and one entirely unacquainted with the vine, would lose nearly all—for they would let it remain until dry. Lucern, clover and pea vine require the same treatment, there being so much sap in the stalk, that you would lose all the smaller parts before the stems, or thick part, was cured—but by merely wilting, the leaf and leaf stalk is retained in a degree, and by throwing into cocks, the air passes through—the moderate heating it receives, has a tendency to ripen the juices, making sweeter for stock, and toughens the vine—and very little exposure will cool it off. Some persons pull and put in pens as above, and the use of salt will protect—it may mould a little, but try the mouldy part, to even a well fed mule. Those who are saving to their land all they can, will not pull up the vine but cut off with a grass knife, saying the top root is a benefit, and ought not to be taken

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from the land. One thing, I press on those who have no experience—rather run the risk of losing, by having put up too green, than too dry—I have seen them in a house fourteen by eighteen and twelve feet high, when two to three feet from the wall they were very hot—yet stock ate them very greedily. I thought they were lost.

Yours,

A. J. N.

ASPARAGUS.

A medical correspondent, on whose statement we can most implicitly rely, informs us that the advantages of this plant are not sufficiently estimated by those who suffer from rheumatism and gout. Slight cases of rheumatism are cured in a few days by feeding on this delicious esculent: and more chronic cases are much relieved, especially if the patient carefully avoid all acids, whether in food or beverage.—*York (England) Courant.*

MILKING.

We are fully satisfied from our own experience that the quantity of milk afforded by a cow depends, in a great degree, upon the art of the milker, and that no cow would be a good one under the management of a majority of the milkwomen of Virginia. The following useful but simple directions are taken from the *Boston Cultivator*:

"Let no small children enter the yard at time of milking. Let not the cows be disturbed at night, but approach them with kind words. If you scold them or whip them you may be cheated of half your milk. After you have brushed the dirt from the udder and seated yourself on the right side of the cow, grasp the teats one in each hand near the extremity.—Squeeze gently at first, or the cow may be pained and start away; after a few squeezes you may venture all your strength. In about half a minute, if the cow has been well bred, the milk will flow as fast as you can possibly draw it from the teats. Now let nothing interrupt your labor. Squeeze the teat and draw it down at the same moment, and at every relaxation of your hand for more milk in the teat, press up your hand against the bag and this will have a tendency to bring all the milk out of the udder; it is an imitation of the butting of the calf against the bag.

"You must not stop to speak or be spoken to until the cow is finished. If one speaks to you, the milk streaming into your pail make so much noise you stop in order to hear; then the milk which began to flow so freely, goes back again into the ducts that supply the udder, and you lose your opportunity. Like the sap of the

maple, you must take it when it flows, or its juices go to enlarge the tree; so a cow half milked will gain more flesh, at the cost of your milk and cream. Move the udder at the close of milking, in every direction, to be sure you have all the milk, but do not spend a long while in stripping, lest you get the cow into a lazy habit of eking out the richest portion of her bounty.

"In the morning the cows should be driven gently two or three times round the yard before milking, they will yield more for the exercise and they will be less likely to scatter manure in the way to pasture. We have seldom hired a good milker. Females are better than men—they have more patience. A good milker will obtain at least one quarter more than one that milks slowly. We have often proved this: we hired one summer a man from New Hampshire who had managed a farm for several years.—He was clever, but extremely moderate; we then had four cows in milk, and discovered our slow milker was *fast* drying up our cows; we concluded to give him our aid, and let him milk only two; on the first trial he obtained the same quantity that we did. In one week we obtained one quart more than he at a milking; he said his cows were not equal to ours; we then shifted and obtained, within nine days, more milk from his cows than he did from ours. This was wholly to be ascribed to his moderate milking, for he left none in the udder.

"We have forbidden children, and cats, and dogs, and talkers of all description to enter the yard in the milking season—for all should be quiet if you would get all the best of the cream; but if children enter not, how will they learn to milk? If you have an old cow that you intend to dry soon, let your freshman—or freshwoman, as they are styled at female colleges—make a first trial on her. Teach him to sit *close* to the cow, for the nearer he sits, the less will he be hurt by a kick. He should sit so far back as to front the side of the udder, and his left arm should constantly rest against the cow's right leg—then if she raises her foot, his arm will keep it off the pail; she cannot kick him for two reasons—her limbs are so formed that she must either strike forward or back—and if she could kick out directly towards him, he would receive no blow while his arm rests firmly against her leg—the most she could accomplish would be to push him away.

"The child should grasp the teat close to its extremity, and the milk will be easier drawn.

"Sometimes, in cases of malicious kicking, the cow should be whipped with a birch, but this should instantly follow the offence, or she will not well understand why she is punished—still it is better to flatter them into their duty as the cunning schoolmaster did his scholars, for you must expect no full pail at the time of using compulsory measures.

"Well bred cows seldom kick; but they often raise up a foot to brush the flies off or to give you a hint that you do not hold the teats right, and that you give them pain. When there is the least doubt in your mind whether a malicious kick was intended, by all means put the most favorable construction on her conduct, and treat her accordingly—as real gentlemen always do on the conduct of females of all descriptions."

POTATOES A LA MAITRE D'HOTEL.

Every Englishman who goes to the Continent, eats potatoes *a la maitre d'Hotel*. On his return he is desirous of having them at his own table, a thing that can seldom be accomplished, though the process of preparing them is very simple. It is as follows: Boil the potatoes and let them become cold. Then cut them in rather thick slices. Put a lump of fresh butter into a stew pan, and add a little flour, about a teaspoonful for a middling-sized dish. When the flour has boiled a little while in the butter, add, by degrees, a cupful of broth or water. When this has boiled up, put in the potatoes, with chopped parsley, pepper, and salt. Let the potatoes stew a few minutes, then take them from the fire, and when quite off the boil, add the yolk of an egg beat up with a little lemon juice and a table-spoonful of cold water. As soon as the sauce has set, the potatoes may be dished up and sent to table.—*Magazine of Domestic Economy.*

HENRICO AGRICULTURAL SOCIETY.

This Society held its annual meeting on Wednesday, the 16th ult. It was intended to have been accompanied by a horticultural and mechanical exhibition; but the committee to whom this arrangement, was submitted, soon found that the excited state of the political world had banished, for this fall at least, any feeling of interest in agriculture from the minds of our countrymen. The doors were, therefore, thrown open and the meagre assortment offered for premiums, was exhibited to the public without charge.—There were some handsome specimens of manufacture and of domestic industry, but nothing of very peculiar interest either to the mechanic or the farmer; the whole exhibition, however, was better than was expected, under the circumstances.

We were much pleased to witness the reviving zeal which seemed to animate the members in the meeting of the Society, and were glad to hear that the prospects for a grand exhibition next fall were better than they had ever been

before. It would be a shame indeed if the metropolis of such an agricultural State as ours, should fail to sustain an association which has done so much for the cause of agriculture as this.

To us the most interesting occurrence of the day was the following report from the farm committee, which it gives us great pleasure to transfer to our columns, coming as it does from the pen of one of the most zealous farmers and public spirited gentlemen in Virginia :

REPORT OF THE FARM COMMITTEE TO THE GENERAL MEETING OF THE HENRICO AGRICULTURAL SOCIETY.

The Committee appointed to make an agricultural tour of inspection through the county and to report generally and specially upon the state of agriculture within the bounds of the Society, as also upon other matters set forth in the resolution of appointment, respectfully report,

That from various causes, among which may be mentioned the general ill health of the country for some time past, the duties assigned to them, though in part performed, are yet not so far completed as to enable them to present such a report as would meet the views of the Society in their appointment. The survey of the lower part of the county, comprising probably the finest agricultural district in it, was made during the last of May and first of June, and afforded the highest gratification. Various written inquiries designed to elicit important agricultural information, were addressed to many apparently successful farmers and to the managers of several large estates under highly improved cultivation, and replies in full were promised, but have not been received; most, if not all those to whom they were addressed, having, as we suppose, been disabled by sickness.

Partial examinations in the vicinity of Richmond have also been made, exhibiting evidences in many cases of a fine spirit of improvement; but the extensive and important district bounding on the Chickahominy, and the upper end of the county bordering in part on James River, the Committee has been unable to visit, or to procure the assistance of a sub-committee to examine.

The Committee regret the more that they could not complete the tour of inspection, not only because the Society had a right to expect it of them, but because at every step in the progress of the examination they were enabled to make, the practical importance of this plan was more and more manifest.

In addition to improved cultivation upon a large scale aided by the application of lime, several new cases of individual industry and enterprise fell under our observation. But as we

are not prepared to report in full upon the duties assigned us, we forbear at present to mention particular cases, hoping and expecting that it will be the pleasure of the Society to continue a similar committee for the next year, and that then it will be practicable to carry out the plan of a general survey.

Upon one point, however, that of diffusing information and improving and encouraging the cultivators of small farms, the Committee will take the liberty of offering some suggestions.—The paramount importance of an agricultural school is almost universally admitted, and if the pecuniary means of the Society were equal to the undertaking, we should have no hesitation in urging that, as the first and most effective means for attaining the most desirable and truly patriotic purpose which this Society from the first has constantly kept in view. But this being impracticable at present, we entertain the opinion that the establishment of farmers clubs in every neighborhood would be highly advantageous—not however composed exclusively of the class of larger farmers, and meeting alternately at houses where an elaborate entertainment can be served up to them without much trouble. This plan necessarily excludes a numerous class of our most industrious and meritorious cultivators, who will not participate in entertainments which they cannot return—and who in truth, are seldom thought of in associations of that character. Every honest, industrious and temperate man, whether he enjoys the luxury of a coach or drives his own cart and plough, should, especially among farmers, occupy the same ground of consideration and respect. The adventitious advantage of wealth, greater or less, interposes an imaginary barrier to free and social intercourse, which, at least so far as the improvement of the poorer is involved, it should be the object of the richer to remove. The farmer who is not obliged to labor himself, possesses facilities for improvement and the acquisition of agricultural skill, which are not accessible to the laboring class, but which might be made available to them with little trouble on the part of the more fortunate. Yet so far as this Committee is informed, no such effort has been made, but by a single individual, (Mr. Wm. Miller,) nor has it seemed to have presented itself to the mind of any other with whom we have conversed. Once suggested, however, and some readily accede to it, and if judiciously carried out, it might become the means of great and extensive improvement.

The true principle for the establishment of farmers clubs, or that at least which appears to us the most equal and liberal, would be to select in each neighborhood some central place (not a private house if it can be avoided) for the meeting of the club—let each member bring with him whatever refreshment he may require, or

each contribute according to his ability to a joint entertainment, substantial though frugal in its character. Let the farms of the members be examined in succession by the club at an early hour of the day of each meeting. Bring into these clubs every respectable and industrious farmer within reach, how humble soever his circumstances may be—encourage them by every means to come in. Let each member communicate whatever information he possesses, either from practical experience or otherwise—and conduct these meetings chiefly for the benefit of those who most need improvement.

There is probably not a tiller of the soil in the whole county so poor that he cannot afford a dollar for an agricultural paper, and yet if the list of subscribers to the Southern Planter were referred to, it is much to be apprehended that comparatively few, even of the most independent farmers would appear to have given it their support. We would respectfully but earnestly appeal to those who have it in their power, to interest themselves for those who are compelled to labor—to visit them at seasons of leisure—to offer them in a spirit of kindness, suggestions for their improvement—to endeavor to reform habits of defective cultivation and management where such are observed—in a word, to do what they can for the improvement of those around them. Let this be done everywhere, and we cannot doubt that it would be attended with the happiest effects. Yet though this would occasion but little trouble if all would apply themselves to the work—indeed would seem to be rather a pleasure than otherwise—few, if any, of those who have it in their power, have, so far as we are informed, made the attempt. The truth is, and it is too manifest to be denied, that the great mass of our farmers want awakening to a sense of their own true interests, and to more active and extensive usefulness. The list of our Society discloses the startling fact that not more than a third or a fourth of its members are farmers, and without the generous and liberal support of the citizens of Richmond it could not be sustained. It is certainly true that the city is benefited by the success of the Society, but it is also true that no such calculation influences the noble liberality which has built up and sustained it. And when the names of the mechanic, the merchant, the professional man, and even of some of the reverend clergy, are found upon our list, every farmer of the county whose name is *not* there should hide his head in shame.

There is undoubtedly an increasing spirit of improvement amongst our farmers, but it is too circumscribed in its character; each seeming to look only to his own concerns and attempting nothing, even where it is obviously easy, for the benefit of others. Selfishness is not a characteristic of our people—but they require stimu-

lating to more exertion and activity—and if all would come promptly forward to the aid of the Society and of papers devoted to the interests of the farmer, we verily believe that complaints of hard times and bad crops would soon cease to be heard among them.

The Committee again beg leave to express their deep regret that they have unavoidably fallen short of the service to which they were appointed, and they hope that the imperfect suggestions here presented will, under the circumstances, be accepted by the Society with its usual indulgence.

WM. H. RICHARDSON, *Chairman.*

From the Farmers' Cabinet.

DEEP PLOUGHING.

The impression among unreflecting farmers is almost universal, that the value of deep ploughing consists in the increased amount of soil in which the roots may vegetate. Whatever advantage the greater amount of loose soil may be, it is by no means the most important one.—We all know, that growing grain suffers from extremes of heat and cold, wet and drought.—Late in the fall, when we always have rain, the six inches of vegetable soil are soon filled with water, and perhaps the cold of the succeeding night freezes it, and thus are the roots of your wheat embedded in ice, to suffer during the approaching winter. But if the land had previously undergone the operation of a "*Prouty & Mears*," nine inches deep, followed by a *sub-soil plough*, nine inches more, the rain had scarcely ceased to fall until it had sunk beneath that surface which the roots occupy. In a soil six inches deep, with a hard limestone subsoil, rain has no place to go; but in eighteen inches or less, its own weight sinks it below the possibility of doing harm. And while you thus have your wheat secured for the winter, in a comparatively dry soil, clear of ice and its evil consequences, in the spring you have a vigorous plant, free from the sallow sickness of an icy bed, prepared to take advantage of the first genial sun which the spring brings with it. And now, from this period until harvest, the hopes and fears of the farmer are controlled by the season: too much wet drowns his wheat; too much heat blasts it with mildew, and drought prevents it from filling. Deep ploughing obviates all these contingencies. Wheat is drowned out, because its roots are in the water; mildew blasts it, because the hot sun beats upon a surface saturated with water, and produces a sudden flow of sap in the plant, which is unnatural; and it is the more destructive, because the constitution of the plant has previously suffered from one of the extremes of cold, wet or drought: your wheat does not fill, because, perhaps there is not moisture enough

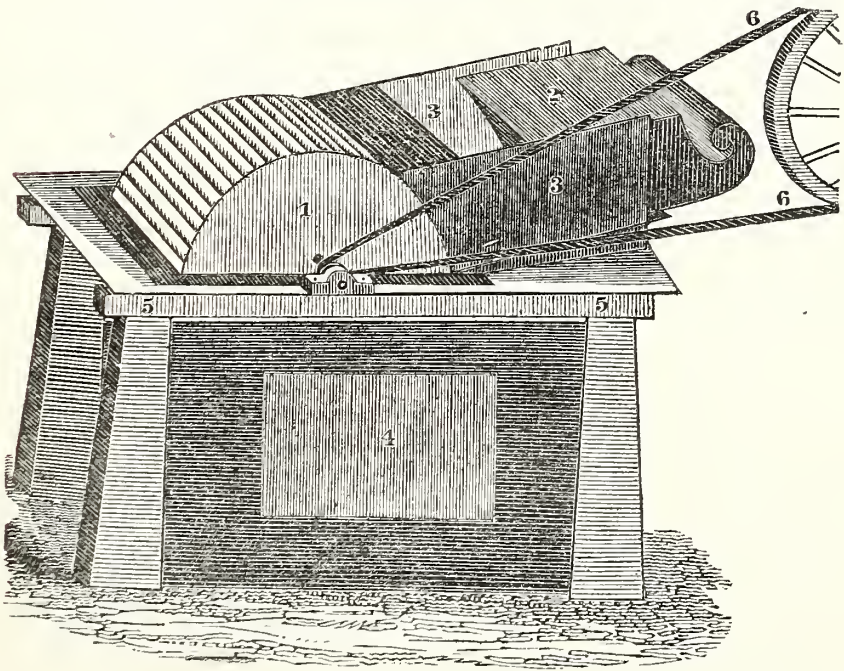
in the earth to replenish the plant; but if your loose soil be deep enough, no matter how much or how long it rains it will have scarcely ceased until the roots are relieved. Pour a bucket of water upon a sponge, and you have but just quit pouring until the upper surface is comparatively dry; so it is with the spongy earth, the water's own weight takes it immediately below the place where harm is done, not to be lost, but to remain there as a reservoir, to replenish the thirsty plant through that season when drought so often does its destructive work. In our limestone land, a rain may fill the six inches of ve-

getable soil, and when full, so hard and impervious is the subsoil, that the residue runs into the hollows, and its place of escape among the sink-holes and crevices of the rocks: the heat of a week's sun dries this up, and the wheat requires more rain, and it suffers. But if you have twelve inches of water in your reservoir below, there it remains to answer the drafts of a six or eight weeks sun, with that regularity of moisture which the plant requires, and which brings you through all the contingencies of heat and cold, wet and dry.

W.

Carlisle, Aug. 4, 1844.

A R A S P .



The cut above represents a rasp much used in the sugar making districts of France for crushing the beet. It appears to us that it might be advantageously used for cutting up roots for stock or for grinding apples for cider. It may be put in motion by either steam, water, horse or hand power, and if propelled at the rate of eight hundred revolutions, makes sixty-four thousand cuts a minute. It is cheap and simple in its construction, and can be readily understood by means of the following references:

No. 1 is the rasp containing eighty saws, half

an inch apart. These may be made of sheet iron.

No. 2 is the plunger, by which the articles are forced down to the saws and kept there while crushing.

No. 3, the box to contain the articles to be crushed.

No. 4, the opening in the receiving box by which the articles when crushed are taken out by a wooden shovel.

No. 5, the frame or table.

No. 6, the strap by which it is propelled.

A VEGETABLE MAN.

Among the many curious specimens of art and nature exhibited at the State Fair at Poughkeepsie, New York, was a figure which, says a cotemporary, would have made a stoic or a misanthrope split his sides with laughter. Here is his portrait drawn by an eye witness:—"It was a perfect vegetable *man*, or perhaps I should say *woman*, for I believe it was called the 'Hindoo Goddess.' It was composed of vegetables, the *face* only excepted. The *head* was a huge cabbage, large enough to furnish a small family with a winter's supply of sour crout. Then came the *mask face*. The *ear rings* were composed of fine strings of beets; the *arms* were a compound substance, being composed of about equal parts of onions, beets and carrots; around the neck was strung a necklace of peppers; the body was a huge pumpkin, so large and tempting in appearance, that it seemed to say 'come and eat me;' two muskmelons served as thighs, heads of cellery for the knee parts of the legs, and crooked-necked squashes made no mean imitation of a Chinese shoe! This antique and valuable statue was perched upon a pedestal composed of several cargoes of pumpkins and squashes. This curious looking production was the handiwork of the family of Gen. Davies, of Poughkeepsie. One could not blame the ignorant Hindoo for worshipping such a goddess, for the idol, unlike the great mass of its kind, could at least be eaten, and thus contribute of its substance to his bodily support."—*Mass. Ploughman*.

Richmond, Oct. 3, 1844.

To the Editors of the Times:

Gentlemen,—For several years past I have furnished you for publication at this season some statistics of Tobacco Inspections, Foreign Exports, &c.; and supposing it probable that some of your subscribers may desire to have such information the *present year*, I give below the inspections of tobacco in Virginia and at *two* of the inspections in North Carolina—the latter are included, as has heretofore been customary to do so. From both of these places in North Carolina the tobacco is sent into the Virginia markets for re-sale. The total inspections embraced in the statement to 30th ult. is ten thousand eight hundred and sixty-one hogsheads less than at corresponding period in 1843—but still the returns do not accurately exhibit the real deficiency between the productions of 1842 and 1843—in consequence of a larger quantity of tobacco being re-prized and inspected a second time the present year; perhaps fifteen hundred hogsheads at least thus count *twice* in the inspections. At this time the stock of old tobacco held by the planters is very small; relative, therefore, to the crop for inspection in 1845, it

must be mainly confined to the production of 1844—which, in the aggregate, will not exceed forty to forty-five thousand hogsheads—fully half (as has been the fact with the last crop inspected) will be required by the manufacturers. The home demand for tobacco, especially the production of North Carolina and Virginia, is regularly increasing; and well may those planters who succeed in raising *good* crops congratulate themselves that so large a portion of the crop is needed for home consumption—inasmuch as the prices paid by the manufacturers average considerably higher than can be given by foreign shippers. Permit me, therefore, Messrs. Editors, through the medium of your journal, to suggest to the planters in Virginia and North Carolina, who have succeeded the present season in raising tobacco of medium size, and perfectly matured, to take especial pains in curing *thoroughly*, but to do so with as little *firing* as possible, and not to keep the houses *too close* during the process of curing.

Respectfully,

JOHN JONES.

Statistics of Inspections and Stocks to 30th September, 1844.

	Inspected.	Stock.
Richmond,	19,147 hhd.	8,446 hhd.
Petersburg,	10,812 "	714 "
Farmville,	2,714 "	380 "
Clarksville,	1,954 "	24 "
Lynchburg,	10,209 "	4,674 "
*Tyc River,	475 "	50 "
*Milton & Henderson's, N. Carolina, }	575 "	75 "
	45,885	14,363

LIMESTONE.

As lime is attracting more and more the attention of our farmer's quarries of limestone begin to be valued more and more for agricultural purposes. That there is a difference in the value of these quarries is well known to experimenters; some of the stone containing so little carbonate of lime as hardly to repay the expenses of burning. Johnston furnishes the following ready mode for testing the purity of limestone rock:

"Limestones, however, are seldom pure.—They always contain a sensible quantity of other earthy matter, chiefly silica, alumina, and oxide of iron, with a trace of phosphate of lime, sometimes of potash and soda, and often of animal or other organic matter. In limestones of the best quality the foreign earthy matter or impurity does not exceed five per cent. of the

* Not official, conjectured.

whole—while it is often very much less. The chalks and mountain limestones are generally of this kind. In those of inferior quality it may amount to twelve or twenty per cent., while many calcareous beds are met with in which the proportion of lime is so small that they will not burn into agricultural or ordinary building lime—refusing to slake or to fall to powder when moistened with water. Of this kind is the Irish *calp* and the limestone nodules which are burned for the manufacture of hydraulic limes or cements. It is easy to ascertain the quantity of earthy matter in a limestone, by simply introducing a known weight of it into cold diluted muriatic acid and observing or weighing the part which, after twelve hours, refuses to dissolve or to exhibit any effervescence. It is to the presence of these insoluble impurities that limestones in general owe their color, pure carbonate of lime being perfectly white.

“The simplest method of detecting magnesia in a limestone is to dissolve it in diluted muriatic acid, and then to pour clear lime water into the filtered solution. If a light white powder fall, it is magnesia. The relative proportions of two limestones may be estimated pretty nearly by dissolving an equal weight of each, pouring the filtered solutions into bottles which can be corked, and then filling up both with lime water. On subsiding, the relative bulks of the precipitates will indicate the respective richness of the two varieties in magnesia.”

BUTTER.

Our compliments to Mrs. W. S. RYLAND, of King William, to whom we are much indebted for two pats of butter, which make us heartily ashamed of all the abuse we have heaped upon the dairies of Virginia. In richness, in flavor, and in the perfect expression of the buttermilk, this specimen fully equals any we ever saw in the northern markets. Mrs. Ryland will confer a great favor upon the public in general, and upon us in particular, if she will teach others how to make, and how to *dispose of*, their butter.

SUBSTANCES FOR ABSORBING URINE.

Dr. Jackson's direction in the New England Farmer is, “Take twenty measures of dry peat and one of ground gypsum, and mix them together. Place barrels half full of this mixture in places where urine may be collected, and it will be found that the salts and ammonia of many barrels of urine will be consolidated in this mixture, without giving the slightest odor, or being in any way offensive, for the salts are taken up, and the carbonate of ammonia, formed by decomposing urea, is immediately absorbed.

This method of getting rid of a nuisance and of consolidating a valuable liquid manure, full of the most useful salts, ought to receive attention. A mixture of peat or swamp muck and gypsum (plaster of Paris) will also serve to absorb all the disagreeable gases of vaults, which will be converted into fertilizing compounds with the sulphuric acid of the gypsum and the organic vegetable acids of the peat.”

OLD CLOTHES “UNDONE.”

The Philadelphia Ledger, says, that a machine of English invention has lately been introduced into this country, which is likely to effect important results upon the wool business, the old clothes trade, and the home manufacture of cloth. It is a simple and very complete contrivance for re-converting old clothes, blankets, petticoats, stockings, &c. &c., into wool. Any old woollen fabric may be passed through the machine and reduced into wool with a speed that almost surpasses belief.

VALUE OF A HEN IN A GARDEN.

At an agricultural meeting lately held in New York, Mr. Smythe, the projector of the Atlantic Steam Navigation Company, said that he had in England trained two hens to destroy the insects in the garden with great success. He would let the hens into the garden early in the morning, and as soon as they had finished their work, call them off to feed them, and then keep them away until next morning, when they would be hungry. He was now in this country training a regiment of hens to destroy the insects in a field of corn belonging to his nephew.—*New York Mechanic.*

CURE FOR THE STRETCHES.

Sheep sometimes stretch their noses out on the ground and around by their side, as if in severe pain. This is frequently occasioned by an involution of a part of the intestine within another, called, when occurring in the human subject, *intorsusceptio*. Immediate relief is afforded, when this last is the case, by lifting the animal by the hind legs, and shaking it a few times, when the pain disappears.—*American Agriculturist.*

GOOD FARMING.

A correspondent of the Agricultural Gazette says, “Good productive farming does not depend upon these things, so much as upon draining, deep and frequent ploughing, clearing the land from all other plants but those you desire to grow, early seeding, and last, but not least,

preserving every decayed vegetable matter that can be found, either on or off the farm, and mixing it judiciously with the excrement of a well selected stock of animals adapted to the character of the soil, preserving the mixtures in properly constructed yards and tanks."

TO EXTRACT THE ESSENTIAL OIL FROM ANY FLOWER.

Take any flowers you like, which stratify with common sea-salt in a clean earthen glazed pot. When thus filled to the top, cover it well and carry it to the cellar. Forty days afterwards, put a crape over a pan, and empty the whole to strain the essence from the flowers by pressure. Bottle that essence, and expose it four or five weeks to the sun and evening dews to purify. One single drop of that essence is enough to scent a whole quart of water.—*Selected.*

From the London Gardener's Chronicle.

CUCUMBERS.

For two years past I have entirely discarded the old method of growing cucumbers on dung hot-beds, or of allowing them to grow on the surface of the soil at any time. I find that by training them to trellises I have not half the trouble with them that is required by the old plan, and that the plants continue much longer in bearing when so treated.

HARROWING MEADOWS.

Meadows that have been long under the scythe are very apt to become turf-bound, mossy, and exhausted of good grasses. A dressing of fine manure, or ashes, will be a great benefit; but a thorough harrowing, with a sharp, fine-toothed harrow, will be found to materially aid such dressing, and give a sweeter and better herbage. Previous to the harrowing, grass seed of the best kind should be sown, which will be covered by the process, and a new, healthy crop will be the result.—*American Traveller.*

EXPERIMENT.

A Scotch paper says that the Rev. Mr. Ramsay, of Arbroath, commenced digging early potatoes on the 28th of June; after removing the crop, he immediately replanted the stems; and although the first crop was considered good, the second from the stems, was superior, more numerous, larger, and of a better quality. The experiment is worthy of further trial.

TO MAKE CORKS FOR BOTTLES.

Take wax, hog's lard, and turpentine, equal

quantities, or thereabouts. Melt all together, and stop your bottles with it.—*Selected.*

LIME.

We are much obliged to our correspondent J. S. S. for Dr. Darlington's communication on the subject of Lime, and regret that it was not received in time for insertion in this paper. It will constitute the "leader" for the December number.

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