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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 & L. M. BURFOOT, Editors.

VOL. II.

RICHMOND, DECEMBER, 1842.

No. 12.

PRINCE GEORGE COUNTY.

SANDY SOILS.

Some months since, we published replies of Dr. Harrison to the inquiries of the Virginia Board of Agriculture, and we are indebted to our friend of the American Farmer for the following comments upon them. There is a large portion of our country, to which they are equally applicable:

“PRODUCT OF CORN IN PRINCE GEORGE COUNTY, VA.—In the reply of Robert Harrison, Esq. to ‘some of the queries of the Board of Agriculture, for the State of Virginia, so far as the county of Prince George is concerned,’ we find the following paragraph:

“‘CORN.—The average product per acre in that section of the county that has received an application of calcareous manures, we consider equal to *four barrels*, and the remaining portion of the county is considered not to exceed *two barrels* per acre. And we believe it more frequently falls below, than exceeds this estimate.’

“In the same paper, the estimated average product of *wheat* on marled land is stated at *ten bushels*, and that on lands *not marled* at *five bushels* per acre. Now it must be evident to every calculating mind, that neither of these yields can be said to be *remunerating*, and it must be equally evident that, notwithstanding, by the operation of marling, the product has been increased one hundred per cent. something remains to be done to bring the land of Prince George up to a proper state of fertility. What that something is, shall be the purpose of this paragraph, and we enter upon the inquiry under great feelings of delicacy, because we know that in that region of Virginia, there are numerous gentlemen of first rate intelligence and great practical skill in agriculture, infinitely more competent than ourselves to suggest a remedy. So great indeed is our embarrassment, that if we were not encouraged by the saying of Sir Walter Scott, that he had never conversed with a man from whom he had not been able to learn something, we should not make the suggestions we are about to advance.

“It would appear from the paper of Mr. Harrison, that *clover* has only been introduced into the course of rotation pursued upon the marled lands, and that upon those which have not been

marled, ‘the process of rotation is corn, oats, sometimes rest, but most frequently pasturage’—a course of rotation unfortunately too well calculated to continue the infertility of the soil. It is possible, that *clover* could not be grown,—certainly not advantageously—upon lands averaging but *ten* bushels of corn, or *five* of wheat to the acre, but even as impoverished as such lands must necessarily be, the fact of the melioration produced by the application of marl, shows, that it is susceptible of being improved, and wherever lime in that form is not attainable, we think that plaster of Paris, if sown over the fields while in a state of ‘*rest*,’ or pasturage,’ would tend to increase its fertility, and that, if instead of devoting it to either of these purposes, successive crops of buckwheat were ploughed in, each crop receiving, previously to being ploughed in, a bushel of plaster to the acre, that in the course of a few years, those lands might be brought up to a state of profitable fertility, and that if in addition to the buckwheat and plaster, marl or lime were applied, that its ratio of improvement would be greatly accelerated. In the part of Virginia of which we are speaking, three crops of buckwheat might be grown and turned in in a single season, and when it is considered that this plant, from the construction and size of its leaves, extracts a very considerable portion of its food from the elements, there will but few be found, we think, to doubt that it would act as a fertilizer of the soil. It is a received maxim among agriculturists, that any lands which *will grow clover*, may, by the application of *lime*, be brought up to a state of fertility, equal, if not superior, to its virgin condition, provided a judicious rotation of crops be adopted and pursued—and that the lands of Prince George could be so brought up, we do not entertain the scintillation of a doubt—their susceptibility to improvement is most amply illustrated by the change for the better already wrought upon those portions of them where marl has been applied. The *increase* already effected of from *two* to *four* barrels of corn, and from *five* to *ten* bushels of wheat, shows, that the addition of the marl has supplied one of the ingredients of which the soil had been robbed by improvident culture, and would indicate that, in addition to the calcareous principle furnished, nothing is wanted now, but *nutritive manures*, to render the work of melioration complete.

"If the farmers in that region had ample supplies of barn-yard and stable manures, wherewith to give *short* periodical dressings to their fields, no one will doubt but that they could grow good crops; but however necessary animal and vegetable manures may be—and we freely admit that they are—still *lime*, in some of its forms, must be superadded to impart any thing like permanency to any improvements to be effected, as it is just as essential to the soil, as condiments are in the preparation of dishes for the human appetite."

In the American Agriculturist we find another system of renovating poor sandy soils, which consists in rolling and turning in clover. That turning in crops of clover, buckwheat, or Kentucky blue grass, will improve the land on which they grow, there can be no manner of doubt; and this process is like the rolling of a snow ball, the progress slow and difficult in the beginning, but gaining power in geometrical proportion with its increase. Any addition of lime, plaster or manure, that can be afforded, will of course hasten the result. Nor is there any end to this operation. The process may be continued until the land becomes gorged with its own products. But this is equally true of clay, as of sand, in fact of any soil. Some may be the better for an addition of lime; where there is too much sand, a little clay may be added, and vice versa. But this is no new discovery—Adam undoubtedly knew that he would improve his garden more by turning in his peas and beans, than by gathering and consuming them. The misfortune is, that although the cultivators of these poor lands know this as well as Adam or the Editor of the American Farmer, they generally find the crop barely sufficient to fill their own stomachs, as our friend may surmise from Dr. Harrison's statements. If the Editor's advice had been accompanied with instructions for living a year or two without eating, it would have been much more practical.

But if circumstances will justify the return of the crop to the land, what crop shall be used, the buckwheat of the American Farmer, the clover of the agriculturist, or the blue grass of our friend Gen. Steinbergen? We declare for the latter, where the soil and climate suits, next, we believe the clover returns more in proportion to what it draws from the soil, although we are inclined to think, that the buckwheat will grow when neither of the other two will start.

Mr. Allen says that in New England, where

he made his observations upon the renovation of sandy soils by means of clover, great credit was given to the frequent use of the roller; this corresponds exactly with General Steinbergen's idea of the value of the trampling of cattle on such land. See *PLANTER*, Vol. 2d, p. 1.

TO MAKE GOOD SHINING BLACK INK.

Take two ounces of nut-galls in coarse powder; one ounce of log-wood in thin chips; one ounce of sulphate of iron; three-fourths of an ounce of loaf sugar. Boil the galls and log-wood together in three pints of water till the quantity is reduced to one-half. Then the liquor must be strained through a flannel into a proper vessel, and the remainder of the ingredients added to it. The mixture is then to be stirred till the whole is dissolved; after which it must be left at rest twenty-four hours. The ink may then be decanted from the gross sediment, and must be preserved in a glass bottle well corked.

For the Southern Planter.

GREEN SAND AND WORM FENCE.

Messrs. Editors,—I have just returned to the house from ascertaining the result of an experiment, made to determine the value of green sand applied to corn, which I suppose may not be unworthy a place in your paper. To you, Messrs. Editors, or the bulk of your readers, I need not describe this manure; so much having been written about it in the "*Cultivator*," under the name of "*Jersey marl*," and in the "*Farmers' Register*," under the names of green sand, gypseous earth, &c.—though I dare say you will be surprised to hear of it so high up the country.

From Professor Rogers' description of this earth, published in the same pamphlet with Mr. Ruffin's *Essay on Calcareous Manures*, and his suggestion that it probably might be found in Virginia at some considerable distance above tide water, I was led to a discovery of it on my farm in 1835, an account of which was published in the *Farmers' Register* in October or November, 1836.

Mr. Ruffin's low estimate of its value, my own want of energy, &c. have for six years prevented even an experiment until the one hereinafter noticed, of the results of which your readers must judge for themselves; as for myself, I feel resolved to pay more attention to it for the future, in the confident assurance that I shall be amply repaid for any judicious application to the soil, a small quantity, in its worst possible state for application, having caused so considerable an increase of crop.

The experiment was this. Last spring, while the planting of corn was going forward, I carted

out several loads of green sand in a wet and sobbed state, and dropped a handful on each hill of corn for five successive rows, then drove down stakes to mark out these rows, then five rows were left without any green sand, and so on, alternately. The land was of course equal, and was cultivated alike. During the summer the marled part looked most flourishing, and upon being gathered to-day, weighed as follows:

1st. 5 rows with green sand applied, weighed	103 lbs.
1st. 5 rows without any, do.	85
Gain caused,	18
2d. 5 rows with the green sand, weighed	110
2d. 5 rows without any, do.	75
Gain caused by sand,	35
3d. 5 rows with sand, weighed	92
3d. 5 rows without any, do.	55
Gain,	37
4th. 5 rows with sand, weighed	50
4th. 5 rows without, do.	58
Loss,	8
5th. 5 rows with sand, weighed	28
5th. 5 rows without, do.	14
Gain,	14

Thus you see that there was a marked improvement caused by the green sand: I say *marked*, considering the small quantity applied, and the state in which it was when applied, being wet and clammy, and not resembling gunpowder, as it becomes upon being exposed to the air and frosts. The loss in the fourth instance, was evidently caused by the deprecation of some animal on the five marled rows.

Upon averaging the five different experiments, as they may be called, I find, by calculation, that the gain caused was upwards of forty per cent.—an increase, had it only been general as it might have been, of no small consequence in these hard times.

I have thus, Messrs. Editors, given you an account of a small experiment, in the hope, that it may elicit the publication of others, made with the same substance; that the public generally, and we the owners of such deposits, in particular, may come to right conclusions in the premises.

SHARPE CARTER.

N. B.—My sheet not being filled, I would recommend to my brother farmers to place a stone under the corners of their fencing, which saves some labor and a vast deal of timber. This is done in the best and most expeditious manner by having stones of the proper size carted and thrown along where the fence is to run, two or three yards apart; the person laying the worm

can put one under the end of each rail as he lays it down, and get along almost as fast as without this little hindrance. He who will try it once, I am persuaded, will never lay rails on the ground again.

S. C.

Barren Hill, Nottoway, Nov. 3, 1842.

SWAMP LANDS.

There are thousands of acres of uncultivated swamp lands in the South, which, if properly managed, we believe to be worth ten times the price of reclaiming them. We are well aware that to drain these lands and bring them into cultivation, is a heavy, and, as it is frequently conducted, a bootless work. We also know that there are a few of them irreclaimable, or if to be reclaimed at all, only at a price greater than the value of the land. Renovating poor high land is an expensive and tedious operation, and to bring it to the fertility of some of our wet swampy lands, will cost ten times as much as to reclaim the latter, especially if they can be freed from overflowing without the use of banks. But to reclaim a swamp, great judgment and skill are frequently required, for the want of which, thousands are sometimes expended without returning hundreds to the injudicious operator. Upon this subject, we give our readers the experience of that capital farmer, Mr. E. Phinney, of Massachusetts, as detailed in "Colman's Fourth Agricultural Report."

"I consider my peat grounds by far the most valuable part of my farm. They are more valuable than my wood lots for fuel, more than double the value of an equal number of acres of upland for the purposes of cultivation, and in addition to these, they furnish an inexhaustible supply of the most essential ingredient for the compost heap. Some years since, I occasionally sold to my neighbors, a few rods of my peat land, annually, to be cut out for fuel, at \$3 per rod square, being at the rate of \$480 per acre, but finding this sum to be less than its value for cultivation, especially when laid to grass, I have declined making further sales at that price. I have raised upon my reclaimed meadows, seventy-five bushels of corn, five hundred bushels of potatoes, and from four to five tons of the best hay at the first and second cutting, to the acre, at a less expense of labor and manure than would be required to produce half this crop upon my uplands.

"To render these lands productive, they should be thoroughly drained, by cutting a ditch around the margin of the meadow, so as to cut off the springs and receive the water that is continually

flowing in from the surrounding uplands. If the meadow be wide, a ditch through the centre may be necessary, but this will be of no use without the border ditches. This being thoroughly done and the surplus water all drawn off, the next step is to exterminate the wild grasses and herbage of every kind that grow upon the surface. To effect this, the method heretofore, and now by some pursued, is to cover with sand or gravel from three to six inches deep, top-dress with manure, sow the grass seed, and rake or bush it over. This, for the first year or two, will give a good crop of hay. But after this, I have invariably found that the more hardy and coarse kinds of wild grass would work their way through the sand or gravel, and completely supplant the cultivated grasses, when the whole must have another covering and another top-dressing, or be abandoned as worthless. If to be planted with corn or any of the root crops, my course has been to turn over the turf or sward, with a plough having a wrought-iron share and coulter, both ground to a sharp edge, in the driest season, say in the month of September, roll down as hard as possible, carry on the following winter a sufficient top-dressing of compost, about twenty cart loads to the acre, and in the spring spread the same, and plant with corn or roots, without disturbing the sod. When the corn or root crop is taken off, the surface is made smooth with the cultivator or hoe and harrow, and late in November, or just before the severe frosts set in, sow with herds and red-top seed, half a bushel of the former and a bushel of the latter, to the acre; the field is then rolled, which completes the process. If the plough does not turn the sward entirely over, it will be necessary to follow with the bog-hoe, to level the uneven places. By keeping the sod undisturbed during the cultivation, a more firm and compact surface is formed, upon which oxen or horses may walk, generally, without danger of miring. If the ground be intended for grass without the intervention of a hoed crop, the turf is turned over as before stated, in August or September, or as early in the season as the surface becomes dry enough to admit the oxen or horses upon it, then follow with the hoe and roller, and make such parts smooth as may be left uneven by the plough, and late in November cart and spread on not less than twenty cart loads of compost to the acre, made of equal parts of loam or vegetable mould and stable dung, then sow the grass seed and bush and roll down.

"If, after all requisite draining, the land still remains so wet and miry as to render the use of the plough impracticable, the bog-hoe must be resorted to, and the whole turned over by hand, the top-dressing carried on in the winter and the grass seed sowed in the spring, and if done before the frost is all out, it may be bushed and

rolled down, otherwise it must be raked in by hand. The cost of turning over with the hoe will not exceed twenty dollars per acre at the usual prices of labor.

"This mode of culture completely subdues the natural grasses and wild herbage, and gives a compact, rich surface of vegetable mould, which will give an abundance of crop of the best hay for four or five years without the aid of more manure. If the sod be disturbed and attempted to be pulverized in the course of the cultivation, the surface when laid to grass will be loose and spongy, an extra top-dressing of compost will be required, and after all, the surface will never become so compact, nor the produce by any means so great.

"Should meadows be found too soft and miry to admit of being ploughed in the summer or autumn, and the expense of turning with the hoe be thought too great, I would recommend ploughing in the spring, when the frost is out to the depth of three or four inches, carting on the manure and then sowing or planting at a convenient and proper season.

"The most important part of the business in reclaiming these meadows, consist in taking off all the surplus water by judicious draining, and in thoroughly exterminating the natural herbage and grass. This being effected, we have our rich bottoms equally as productive as the deep alluvials of the West, and obtained at a cost and sacrifice very much less."

STONE FOR BUILDING.

In the Journal of Commerce, we find some very judicious remarks upon the use of stone in building, to the effect, that too many are indifferent to the properties of the stone they use, provided it be hard. Some stone is so porous and of such an absorbent nature, as to make the walls *givy* or damp, whilst other kinds, as those of a limestone character, are entirely free from this defect, so that buildings and cellar walls erected of such, afford apartments perfectly dry.

For the Southern Planter.

Some time ago, at the request of two of my most respected farming friends publicly expressed, I undertook to give some account of my mode of farming. Among other things the call embraced such a rotation of crops as I was in the habit of practising. This call, thus publicly made, and respectfully expressed, I did not feel at liberty to decline. Accordingly I commenced a series of articles which appeared successively in the Farmers' Register. At length, in prosecution of my plan, and in response to the call,

I took up the hackneyed subject of rotations, in which I attacked no one's theory, but simply gave the result of my own observations and practice. To this there speedily appeared a reply signed William M. Peyton, of Big Lick, Roanoke County. This reply was soon after, transferred, "by particular request," from the Register to the Southern Planter.

Now to all this, thus far, I have not the slightest objection. But I do object to the *ex parte* manner in which this thing has been done. That a reply should appear to a certain article, whilst that article is carefully suppressed, is to say the least, a little out of the common line of doing such business. If the Planter chose to become a party in the above controversy, fair dealing requires, as it seems to me, that the whole transaction should be presented just in the order in which it occurred—first the article replied to, and then the reply. But the order here employed,—to use a homely but expressive phrase,—“is to put the cart before the horse.” But it seems that the reply was inserted by “particular request.” Now who made this particular request, the motives why it was made, and the want of fairness in not extending the request to the article as well as to the reply—are matters that I have never taken the trouble to inquire into. But as this little matter of etiquette in fair dealing, seems to have been entirely forgotten in the present instance, it seems to me, that the Editors ought to have supplied it.

This reply furthermore, is ushered in by some editorial remarks, in which, as I think, an attempt has been made to *prejudge* the case. The Editors say, “We have not been unobservant spectators of the contest between these distinguished gentlemen, and we have failed to give our readers heretofore the benefit of Mr. Peyton's handsome and able defence of the established doctrine, simply, because it afforded so complete a refutation of Parson Turner's views. A novel idea had been advanced, and, in our opinion, clearly refuted.” A little further on, those “views” of mine are figuratively pronounced to be “poison.” Now these are broad assertions, and if they are intended merely to express the opinion of the Editors as *individuals*, I have no objections to them. But then the Editors will allow me to say, that they in common, with the other members of their fraternity, occupy a conspicuous station, and that therefore any opinions expressed by them are calculated to have a commanding influence. Here then it is asserted and that too by the highest authority, that my “views” are “poison” and that Mr. Peyton has ably and handsomely refuted them; and yet all these views are carefully concealed? In other words, we have the Editors' opinion prejudging the case, and warning their readers against these poisonous views.

But my object is not to have this obnoxious article published in the Planter. If any are anxious to see it, they may find it in one of the late numbers of the Farmers' Register. But I request, as a matter of mere justice, that my rejoinder to this reply, may appear in the Planter, and with this, so far as at present advised, I shall be content. I will simply add, that this request would have been presented at an earlier date, but for the fact that the Editors have been absent and I did not wish to agitate this thing before their return.

J. H. TURNER.

In the first place, we return our thanks to Parson Turner for his forbearance to “*agitate* this thing” for such a length of time, knowing the inconvenience his self-denial must have occasioned him.

We are gravely accused of two crimes, to which it becomes us to respond; first of “carefully suppressing” an article of Parson Turner's, published in the Farmers' Register, and secondly, of “prejudging” a controversy then going on between the Parson and Mr. Peyton.

To the first charge we plead *guilty*, and if it be a crime to carefully suppress, by failing to reprint, all we see that we think little calculated to interest or instruct our readers, we have much to answer for.

As to the charge of “prejudging,” if Mr. Turner means that we ought not to have expressed an opinion until he was done writing upon the subject, we have only to declare our conviction that such a rule would amount to a total suppression of our opinions—for knowing as we do the Parson's “bottom” and the “wind” of his adversary, we hardly hope to live to see the end of this controversy.

But Mr. Turner says, “if they are intended merely to express the opinion of the Editors, as individuals, I have no objection to them.” We are glad to hear it; our remarks were assuredly intended only to express our *individual* opinions; although we might have been aware of the opinions of others, we certainly did not mean to express *them*. If our position, as Editors, renders us such *remarkable* individuals, as Mr. Turner would flatter us to believe, it would be hard, if our elevation should deprive us of the right, which, it seems, we might exercise in an humble capacity.

The truth is, we were requested to publish this correspondence, and under the influence of that request, we did what we did not mean to

do before, culled from it what we thought worthy of publication; in doing so, we expressed our opinion decidedly, but most respectfully, of the merits of the controversy, as it then stood. In this opinion, we may have erred, but it was an error of the head, and liable as we may be to such errors, we are and must be the sole and absolute judges of what shall fill our columns; Parson Turner has only the right, which we are happy to say he enjoys in common with thousands of others, to give his *advice* as a friend and patron of the paper.

As to the words "poison" and "antidote," to which Mr. Turner seems to take some exceptions, it is evident, they were only figurative expressions for error and refutation, and, as such, were perfectly respectful. It gratifies us, as it always does to oblige Mr. Turner, to present to our readers the selection he himself has made from his rejoinder to Mr. Peyton's reply:

"Having settled these preliminaries, I will at once proceed to the matter in controversy. And what is it? Mr. Peyton and the Editor seem both to have fallen into a mistake on this point. This makes it necessary that I should more particularly 'define my position.' Both of these gentlemen go upon the supposition that I am opposed to rotations of *every kind*, and under *every circumstance*. This I plainly and positively deny; nor is this inference fairly deducible from any part of my published piece. I hesitate not to avow that I am opposed to rotations for the common, and, as I think, *universal* purposes for which they are resorted to. And what are these? To *increase* a fertility which already exists, or at least to maintain it, or in other words, to make the subsequent crop *greater* than the preceding, or at least equal to it. Hence it is, that in nearly or quite all the treatises I have seen on this subject, of which there have been a great many in the Farmers' Register, the writer almost invariably concludes in language to this effect—that 'under this system, my land is constantly improving.' Indeed, I can conceive of no valuable purpose which can possibly be answered by a rotation, unless it be one or the other of those stated above. Now the position which I take at this time, and which I took in my published piece, is that all crops, grain, grass, and of every other kind, *when removed from the soil*, are exhausters, some to a greater and others to a less extent, but generally in proportion to the amount removed. This position I regard as almost self-evident. If there be any axiom in agriculture, I think this ought to be one. For what is it that has wasted away the fertility of our lands, until in many instances it is almost totally destroyed? Is it not that

constant and injudicious *cropping* to which they have been subjected—taking off every thing that we could lay hands on, and supplying nothing in return? Here, then, is an evil inflicted upon the land, and it is *cropping* that has done it. Now can it be conceived that *subsequent* cropping will repair the injury of *previous* cropping? I will believe this when I can prevail on myself to think that the right way to repair a theft is to go and steal more. Or, as in this present controversy, Mr. Peyton gives me a drubbing, and, by way of soothing my pains, and thus repairing the injury, the Editor steps forward and gives me a more severe one. '*Noli me tangere*'—here is Latin, but I will translate it—'hands off, if you please.' This, then, is one respect in which I am utterly opposed to all rotations; and I must remain in the same mind until the ingenuity of these or other shrewd farmers can convince me that one injury can be repaired by another. '*Judeus Apella credit, non ego*.' This Latin is a little harder than the other; I therefore leave it to Mr. Peyton to translate. I am also utterly opposed to rotations on the score that there are in the soil certain ingredients which may be so taken up by any one crop as to leave the soil in a state unfit to reproduce that same crop. If there be any exception to this, it is perhaps a crop of flax. But Mr. Peyton tells us 'that a single swallow does not make a summer.' Here then is proof *positive*, that absolute reliance cannot be placed upon a single exception; or if this proof is not already strong enough, 'my Lord Coke' will help it out. But when I speak of a soil, I of course mean a *fertile* one; for a poor exhausted soil will produce no crop of any kind. This, if I understand him, is the main ground on which Mr. Peyton relies in his plea for rotations. In support of it, he states it as a notorious fact, that lands in his section of country, when so exhausted that they will not produce *grain* enough to pay for the cultivation, will nevertheless produce large crops of *clover*. Old tobacco lots also are restored in the same way. Liebig also helps him out with a case in which some one near Göttingen, (a great way off,) by raising a crop of wormwood, so exhausted the soil of its potash, that 'it refused to bear grass for many years.' Now, here is a hard case, Mr. Peyton, Liebig, the Göttingen farmer, and, what is much harder still, *facts* against me. And what shall I do with it? I will try to dispose of the *facts*, and if I succeed in this, I will leave Mr. Peyton, Liebig and the Göttingen man to dispose of themselves.

"The first fact is that lands near the Big Lick, in Roanoke county, (mark the position,) when they refuse to produce grain, having, as I suppose, parted from all the peculiar ingredients fitted for that crop, will nevertheless produce large crops of *clover*. Now, although my pre-

sent location is so near a city that I snuff the smoke of it every time the wind sets strong from that quarter, yet I happened to be born and reared to a large youth in a county adjoining the one which numbers Mr. Peyton among its citizens, and therefore I know 'a thing or two' about these very lands. It is true that I do not know the *particular farm* which Mr. Peyton occupies; nor have I the pleasure of knowing that gentleman himself, but I speak of the general character of the lands in that neighborhood; and I do know that they were originally exuberantly rich. They are a part of those 'valley lands,' which have a limestone foundation for their substratum; lands, as is proved in Kentucky and Pennsylvania, peculiarly adapted to the grasses, and to the growth of clover in particular. I have even seen clover growing luxuriantly in the woods on those lands. Indeed clover, although one of the artificial grasses, seems almost indigenous to that soil. It really seems almost as natural for clover to grow *there*, as for crab-grass to grow *here*. Now, in a soil naturally rich, and at the same time naturally disposed to produce clover, I am not surprised that it should grow, and grow vigorously, on a soil which refuses to produce an article to which it is not so congenial. The old worn-out tobacco lots are recruited, I presume, in the same way, and on the same principle. And as to Liebig's Göttingen farm, (I wish it was near enough for me to visit it,) it proves just nothing at all, or, if possible, *less* than nothing. It seems that a man, in his eagerness 'to obtain potash, planted his whole farm with wormwood.' Whether he got a crop or not, we are not told, and we are not told a great many other things which, in a matter of authority, I should like to know; but I presume he did get one, for he so ruined his land that it refused to bear grass for several years. Refused to bear *what*? We are told *grass*. But grass was not the last crop that it produced! When I came to this, I thought that Mr. Peyton must have made a mistake in his quotation, or that the *printer* must have made one. But no! All is right. Liebig says that, after producing the wormwood, the land refused to bear *grass*. Now why a rotationist should refer to this as authority, I cannot conceive.—*Wormwood*, surely, is not the same thing as *grass*. In *appearance* they are very different, and in *taste* still more so. Why, then, should the *wormwood* incapacitate the land to bear *grass*, a thing so different from itself? But it seems that the potash was so taken up by the wormwood, that none was left for the grass. Potash, then, cannot be one of the *peculiar* ingredients which is necessary to one crop and not to another. Here it was necessary to at least *two* crops, and for aught I know, equally necessary to twenty crops besides. And so it falls in with my theory, that the same ingredient, which I

have taken the liberty of calling *fertility*, is just as necessary to one crop as to another. With this statement, I am at no loss to account for the failure in the man's grass crops. The wormwood exhausted the lands not only of their potash, but of their *fertility*, a thing which in my estimation is of much more importance. If the man, instead of puzzling his brains about the deficiency of potash, had only gone to Liebig and got some of his ammonia, and applied it pretty liberally, I doubt not his farm would have produced heavier and better crops of grass than they ever did before. Give me, therefore, this one peculiar ingredient, *fertility*, and I care not a fig for all the other peculiar ingredients put together.

"But I have a little more to say about this Göttingen farmer, so much relied upon as authority by your correspondent, Mr. Peyton.—According to Liebig's account of him—and this is all I know—I suspect that he was but a very poor farmer after all. He risked the productions of a whole year upon a *single* crop! Now I never knew even a *gambler*, rash and fool-hardy as gamblers commonly are, to risk his whole stake upon the cast of a single die. I wish the man had tried wormwood a second time, when he failed in grass. But I suppose that Liebig had drilled him too well in the doctrines of rotation, for this.

"There is another reason why I am opposed to this peculiar ingredient system; and that is, that, in my present circumstances, I should find it too expensive and too troublesome to practise upon. On this plan, as I am not a chemist, I should have to employ one; and as Liebig stands higher in authority than any other man, I think I should prefer him. I could get Macaire, Princep, or De Candolle, or some other Frenchman, perhaps, a little cheaper; but still, for certain reasons, I think I should prefer Liebig. Now, although, as I have had occasion to state elsewhere, the income of my farm is pretty considerable, still I fear that the increased income would not pay his salary. This, then, would be but a bad bargain. In fact, I doubt if the *whole* income of many farms would be sufficient to pay him. *What* then should I, and others situated as I am, do for our chemist? I am aware that this objection does not lie as it respects Mr. Peyton; for I see from his communication that *he* is a chemist, and therefore need not employ one. But I, and perhaps more than nineteen-twentieths of the other farmers of Virginia, would each have to employ one, or at least one for every neighborhood. And the reason is simply this, that before I could venture with any prudence to plant my corn or sow my wheat in any field, I must first ascertain if that field contained the peculiar ingredient, and in that peculiar quantity, which are necessary to insure a crop. See how much Liebig's Göttingen

gen farmer lost by not employing his chemist—his whole crops of grass 'for many years!'—Why this would ruin *me*, body and estate. But, jesting aside, it would really gratify me to see this visionary scheme carried into actual operation. And if Mr. Peyton will establish a farm on this principle—and, being a chemist, he is the fittest person that I know of to do so—I will leave my smoky atmosphere, and, with his permission, visit it. Such a thing appears very well on paper; I wish to see how it looks in practice. In fact, I have been a dyspeptic for nearly the last twelve months, and should be glad of an apology to visit the salubrious mountain region that he inhabits. How delightful, then, on such an excursion, to visit a field cultivated on this scientific plan—corn here, potatoes there, wheat, rye, oats, beans, pumpkins, turnips, not forgetting wormwood, every thing arranged in scientific order, according as the peculiar ingredients can be found, which are suited to each particular crop!

"Now *my* theory on this whole subject is so simple and plain, that I am rid of all this vexatious trouble and expense. There is no chemist, except the cook, on the place, and yet we get along pretty well. Grass, it is known, is my main crop, and as I plant no wormwood to exhaust the potash, I have had, with the exception of one unusually dry year, very fair crops. I go upon the simple principle, that every crop of every description which I take off, and appropriate to my own use, is injurious to the land. If I see any field, or any part of a field, beginning to fail—and this I see much more frequently than I wish—I never send for a chemist to tell me what is wanting. I already know that it wants *fertility*, and this want I endeavor to supply by *manure*. And in the applications of manure I never trouble myself to inquire what *special* ingredients it contains—whether humus, or geine, or ammonia, or silicate of potash, or phosphate of lime, or 'a thousand and one' other hard names infinitely more familiar with Liebig and Mr. Peyton than they are with me. It is enough for me to know that these manures impart to my land *fertility*—'the one thing needful' to every crop.

"But Mr. Peyton states another strong case upon the authority of Macaire, Princep, and 'alluded to by Liebig, in which *leguminosa* (beans, reader) are represented as having so filled the water in which they grew with their excretions, that a second crop would not grow in the same, whilst corn plants grew vigorously in the liquid;' and he calls upon me by name to account for this strange phenomenon. This case, I frankly confess, is too hard for me. I have planted beans, it is true, and I have a very flourishing crop of them in my garden at this time, but I never plant them in a *liquid*. I always plant them in the *soil*, just as I plant corn

or potatoes, or any thing else; and if the soil is a fertile one, and I cultivate it well, I never have any trouble about their growth. I beg leave, therefore, to refer this strange affair, and all others of a similar character, to Liebig, or Macaire, Princep, or some other of the chemical fraternity. Mr. Peyton tells me that the 'genius of De Candolle revived and illustrated' this very thing. Liebig afterwards 'modified it,' in some slight degree; but I suppose the gentleman is not satisfied with the modification, and therefore calls on me to modify it still further. Really, sir, I would like to gratify you, but this whole affair is too *refined* for me. I never plant beans in the way these gentlemen speak of, and therefore know nothing about it. But if you must have a further modification, I think it more than probable that the very next writer on chemical agriculture will *modify the whole away*, and then at least *one* of us will be gratified.

"And here, I will take occasion to say, is the foundation of all the objection that I have to scientific agriculture, or to farming on scientific principles. A chemist takes a vessel from his laboratory, in it he pours water, and in the water he puts some beans, just as I have seen my wife (she is a great florist) place her bulbous roots in flower vases, containing nothing but water and perhaps a little cotton to support the roots. In a little while the beans vegetate and show some disposition to grow. After a while the water becomes discolored. The first beans are now taken out, and others are put in the same liquid. These latter will not grow, but corn plants grow vigorously! And what can be the cause of it? *Some* cause *must* be assigned, and, for a better, here it is. The first beans so poisoned the water with their excrements, that the latter positively refused to grow. And this *one, solitary* experiment, tried, not in the field, but in the chemist's laboratory, and tried, too, in an element foreign to the growth of the article, is made the foundation of an extensive principle, which is to give a new aspect to the whole science of vegetable physiology! From the time of the first farmer, down to the time that this experiment was made in a chemist's shop, it was a matter of universal notoriety that, *provided* there was sufficient fertility in the soil, a *second* crop *would* succeed a first; but now it is found that the first crop so poisons the land by its excrements that the second will not grow.—And so all the previous facts, which were so well established, must be made to yield to this one solitary instance. It is to *fooleries* of this character that I am utterly opposed; but to sound science, brought to the test of practical utility, and found pure, I am as decidedly a friend as can be found in America or Europe either.

"But I am losing sight of my subject. Having now shown that I am no rotationist, either

on the *peculiar ingredient* system, or for the sake of increasing, or even maintaining, a present fertility, which, by the bye, as I still think, fairly covers the whole ground, I will proceed to state, that I advocate a change of crops, whenever I can make a greater profit by so doing. The *profit*, then, is the leading idea, by which I am governed in this thing. In illustration of this, I will suppose that there is a piece of ground just recovered from the forest. I will not sow grass, or wheat, or any other broadcast crop there, because it is certain that with the soil unbroken, and the large quantities of litter on the ground, the seeds would not vegetate, and therefore a crop could not be reared. But I will plant corn, or tobacco, or some other crop there, which I can cultivate on the plan of drill husbandry, and in this manner may ultimately so cleanse and pulverize the land as to make it more profitable in a broadcast crop. Or, there is a field which has borne several crops of grass: this field is now so filthy that it does not yield a profitable crop; at least the crop in something else would be *more* profitable, paying me at the same time for the labor of changing the crop. As a matter of good management, then, I would root up the grass, and substitute its place with that other crop. But this is not rotation. It is merely a change of the crop, not to effect any of the purposes of a rotation, but to make the land with its cropping as profitable as possible. If the field would yield a fairer profit in grass than in any other crop, I would continue it in grass for ever, and so of other crops.

"And now I hope I have fully 'defined my position' on the subject of rotations, and here, perhaps, I ought to drop Mr. Peyton. But there is another little matter to which I must call his attention. And, first, I am pleased that he had the courtesy to append his own proper name to his strictures. I have read these strictures with no unkind or even indignant feelings. The whole style of his piece shows that he is a scholar and a gentleman. I am not *certain*, but I suspect that my unknown antagonist is a *young* man. I like to see ardor and boldness in youth, but the gentleman will excuse me for saying that these qualities usually give place, in after age, to caution and modesty. With these remarks, I will call Mr. Peyton's attention to two sentences, in which I think he has done me injustice. I will not quote the objectionable sentences entire, but simply call his attention to them. He says, 'Mr. Turner sets out rather ominously, in the midst of a strange confusion of technical terms,' &c. Now I am utterly at a loss to conceive what can be Mr. Peyton's meaning in this and what follows. When I first read this, I thought I must have been betrayed into some incautious expression. I therefore carefully looked over the piece again; but still I cannot conceive on what this assertion is

founded. If Mr. Peyton will have the goodness to point out that 'strange confusion of technical terms,' I will in disgust and mortification blot it from my manuscript. A little further on, he charges me with an attempt to 'varnish,' &c. Now all my positions are so plain, and all my illustrations are so simple, that I need no varnishes to cover their defects.

"The other objectionable sentence occurs near the beginning of the strictures. It is there said, that from my 'successful farming and well written communications,' &c. and then it is more than insinuated, that I am trying to pervert my influence to the injury of my brethren. To this grave charge, I again plead 'not guilty.' But even if guilty, I am consoled with the fact, that there is such an *able* opponent to make the antidote commensurate with the bane. With these remarks, and with the kindest feelings, I take leave of Mr. Peyton."

THE NEW WORLD.

We are again indebted to the liberal and talented Editor of this excellent newspaper for *extra* copies of his work. As the nature and style of our publication forbid our making him that return which he has a right to expect from his exchanges in general, viz: an advertisement of his prospectus, we will endeavor to relieve ourselves, in part, from the burden of his kindness by recommending the publication in general to the readers of light literature, and by especially bringing to the notice of the agricultural community his full and complete edition of Liebig's Organic Chemistry, furnished in an extra copy of the New World, for twenty-five cents.

Furthermore, if the publishers please to send to our office a few copies of the work, we will endeavor to dispose of them to our agricultural friends, without charging the one or the other a cent of commission.

THE FARMERS' REGISTER.

We are pleased to see that this valuable periodical, which in the hands of Mr. RUFFIN has been not less an honor than a benefit to the State of Virginia, will be continued under the superintendence of Mr. Thomas S. Pleasants, a gentleman, as represented to us, worthy the honor of the post to which he succeeds.

Although, from unknown causes, we have not received from Mr. Ruffin those little professional courtesies to which we considered ourselves entitled, yet, as our professional relations have ceased, any little asperities that they may

have engendered, sleep with them. From the merits of the work we have never withheld the expression of our most unqualified admiration. We venture the assertion, that within the last ten years, the wealth, the standing, and the comfort of the agricultural class in Eastern Virginia, have been increased in a fourfold degree, and much of this great good is to be attributed to EDMUND RUFFIN and the FARMERS' REGISTER.

THE SOUTHERN PLANTER.

When we returned home we found on our exchange list the imposing name that heads this article. What, we exclaimed, "another RICHMOND in the field!" Oh no, says the clerk, with great earnestness, the paper is published at NATCHEZ. The queerness of this reply half diverted the vexation we began to feel from this infringement upon our rights, and we asked to see this new born brother, who had not yet been introduced to our acquaintance. Accordingly, we were shown a very imposing pamphlet of 16 quarto pages, marked S. P. Natchez, Miss., \$3 per annum. In its showy cover, its gaudy trappings, its extensive pages, and its assuming price, we perceived no family likeness to our own cheap, unassuming, modest, meritorious, dear little work, and we set the fellow down as an impostor.

How does this Editor justify this vile robbery? Because that love sick, foolish, girl of Shakspeare's, declares, there is nothing in a name, does he think he may steal one at pleasure? Rather, should he have remembered what that sharp, cute, fellow, Iago, says upon the subject. He declares that a robber on the highway, we quote from memory, is more of a gentleman than such a fellow as this, and that he who steals a *good name* is worse than the taker of a purse. Now our name is as good as Iago's, and we will warrant our purse as poor, consequently, what he says of himself and the name stealer, is equally applicable to us and this Mississippian.

The circumstances would justify us, we are aware, in inditing a very severe article against the perpetrator of this robbery; but, like good Christians, we have written him a private letter, pointing out the enormity of his crime, and persuading him to surrender what he has so foully taken. If this letter exercises its due influence, we have determined not to mention the subject in public, and in that event, we beg all those who may happen to see this, to say nothing about it.

NOTE.—Is it possible that this man can have lived in such obscurity as not to have known of our existence?

From the Boston Cultivator.

ECONOMY OF FUEL.

COMPARATIVE VALUE OF GREEN AND DRY WOOD.

A very important consideration to be attended to in the saving of fuel, is the manner, or *modus operandi* of cutting it. A farmer who is the owner of a good wood lot, should make it a standing rule to cut smooth as far as he goes. This running helter skelter through a valuable growth, felling one tree here, and another there, is bad management, and should ever be avoided by those who desire to preserve their wood in a healthy and growing state. Where the growth is thick, it must be obvious that large trees cannot be cut without effecting a very material and decided injury to the surrounding growth. Some will be broken, others torn up by the roots, and of those that escape immediate ruin, many will be so lacerated as greatly to retard their growth. The French, from whom we may borrow many important lessons in the great science of DOMESTIC ECONOMY, generally cut *all smooth*; and this plan, which we have seen practiced in this country, in several instances, appears to us to be the only one worthy of being pursued. We have now growing a piece of oak wood on a hill that twenty years ago this autumn, was cut over and burnt. The growth is now quite large and thrifty, most of the trees being from four to six inches in diameter, and very thick; much more so indeed than a proper regard to their rapid increase would probably permit.

One more remark and I shall have done. It is generally contended that so far as mere economy, or the saving of fuel is involved, *green wood* is far more profitable than *dry*. This is another fatal mistake. To say nothing of the superior comfort of having dry wood, in winter, there are many advantages to be gained from it on the score of expense.

There are some kinds of green wood which contain not less than forty-two per cent. of water—a sufficient quantity, as every one will perceive, to absorb a very large proportion of the heat or caloric produced by the combustion of the wood, for in the deflagration of one hundred pounds of wood, it is necessary, in the first place to convert the forty-two pounds of water or aqueous vapor, into steam, and this act alone must, as a natural consequence, require a very considerable proportion of all the heat produced by the conflagration of the wood.

It has been ascertained by actual experiments, that of Newcastle coal, one pound avoidupois, is required to convert six pounds of water into steam, and that two pounds of common wood

will generally impart about the same quantity of heat as one of coal. It will hence be seen, that to convert forty-two pounds of water into steam the heat produced by seventeen pounds of wood will be required. Now, by deducting the forty-two pounds of water from one hundred pounds of wood, we have left but fifty-eight pounds of dry wood. Hence, no less than sixty per cent. of the gross weight of green wood is entirely thrown away. The steam in the act of evolution, emits no heat, as it ascends directly with the smoke and thus causes actual loss of more than one-half the wood consumed. This is a startling calculation, but one upon the accuracy and correctness of which we may safely rely with the fullest confidence, and no one, it is presumed, who will take the trouble candidly to reflect, will find cause to deny its truth. Every farmer, therefore, should endeavor to burn dry wood. To cut and split, in the spring season, a sufficiency of fuel to supply his winter wants, is but a small job compared with that of getting it up during the inclemency of winter.

GUINEA GRASS.

Along with some grass roots, for which we are indebted to the public spirit and politeness of Mr. Garnett, we received the following note:

Messrs. BORTS & BURFOOT:

Gentlemen,—I now send you the Guinea grass roots which your North Carolina friend requested you to procure for him; and with your permission, I will avail myself of this occasion to publish once more, what I think of this grass, as I find that some of my good friends have attributed to me opinions which I never entertained. Not that I consider these opinions at all important to any of my brother farmers. But having once published them, and perceiving that some persons have thereby been induced to make a trial of the Guinea grass, I owe it both to them, and to myself to guard them, if I can, from forming any erroneous opinion on the subject.

The good friends to whom I allude, have called it "my favorite grass," preferring this, I presume, to the somewhat ruder term—"hobby," although it means pretty much the same thing. But the truth is, that if I must have a hobby—like most of my brethren—it shall neither be of grass, nor straw; and as to the grasses, I have been content to rank them as those have done who have most experience in their culture.—What I formerly said of the Guinea grass I still think; and it is, that it will produce a greater weight of green food—counting the four cuttings which it will certainly bear, at an average height of between two and three feet, in high, dry land, of ordinary quality, than any grass of which I have any knowledge. I infer

from this, that it would yield a greater quantity of such food, on high, dry land, of any quality. I have also said, that it will stand drought better than our other grasses, that horses and cattle eat it very freely, for I have seen them do it. How it would compare with other grasses in nutritive properties I do not know, as none of them, I believe, have yet been analyzed in this country. It is certainly a coarse grass, if suffered to reach a greater height before cutting, than I have mentioned, and therefore less suitable for hay than the grasses commonly used for that purpose. It is also hard to extirpate, but not more so than the red top, which is generally preferred to all others, for very wet land. From all these facts, then, which I have noticed for four years, I deem myself authorised to say of the Guinea grass, that in all high, dry, and even sandy soils of ordinary quality, such as are unfit for either clover, orchard grass, timothy, red top, or meadow oat, it will produce a much greater weight of green food than any of them; that it will stand drought much better, and that horses and cattle eat it freely. But in all situations where the climate and soil are well adapted to clover, orchard grass and timothy, it might content any farmer to cultivate no other kinds. Still, the knowledge of their excellence should not prevent small experiments with other grasses; for our maxim should be, that there is no stopping place for those who wish to acquire a thorough knowledge of husbandry, in all its branches. Let your friend then, proceed to make a small experiment with the Guinea grass roots, which I now send you for him. They should be buried in the earth until the ground ceases to freeze in the spring. Then cut the roots into pieces two or three inches long, and plant them in well prepared land, between two and three inches deep. Let the rows be twelve inches apart, and place the cuttings in each row, at the distance of eight or nine inches. The plants will require working the first year; but after that they will occupy the ground to the exclusion of any other growth, and will bear cutting at least four times a year. In one season I cut it five times. With sincere wishes for the success of your paper,

I remain, gentlemen,

Your obedient servant,

JAMES M. GARNETT.

CEMENT FOR PORCELAIN, GLASS AND STONE.

This cement is a natural product, which without being abundant, is in sufficient quantities for ordinary purposes. The large snails which are found in gardens and woods, and which sometimes have been used for food, have a vesicle, at the extremities of their bodies, which contains a whitish substance, having a greasy and gelatinous appearance. If it is applied between two

surfaces, whatever be their hardness and compactness, and the surfaces be brought together throughout, so strong an adhesion is ultimately formed, that if violent means be resorted to, they frequently break elsewhere, than at the juncture. All that is necessary, in order to give the cement its full power, is to allow it time to dry.

MR. RIVES' SPEECH.

From the excellent address delivered by the Hon. William C. Rives, before the Agricultural Society of Albemarle, we extract the following remarks on the use of

LIME.

"Being somewhat of a pioneer in the lime husbandry in this portion of the State, I feel myself called on, gentlemen, to give you the results of my experience. I have used about 12,000 bushels of it, (slacked measure,) from a quarry opened for the purpose on my own land, which has been spread over about 150 acres, at an average, therefore, of 80 bushels to the acre. Some accounts which I had read of its effects elsewhere, not expressed with the accuracy and discrimination so much to be desired in such communications, had led me to expect a decided effect from it upon the *growing* crop—by which I mean the crop, of either corn or wheat, immediately succeeding the application of the lime. In this, I was disappointed; but the discrepancy is probably accounted for by the fact that I have not hitherto used lime in combination with putrescent manures from the farm-yard or the stable, while others have most probably done so, though that circumstance was not noted in the communications to which I refer. My first disappointment, however, in regard to the effects on the growing crop, was more than compensated by the marked, unequivocal, and decided effect I have never failed to perceive from the lime *alone* in the *clover* succeeding the wheat crop—with which it has been my general practice to apply the lime at the time of seeding, harrowing in the lime and wheat at one and the same operation. The increased luxuriance of the clover has furnished, of course, conclusive evidence of the improvement of the land from the application of the lime, and has in its turn, enured to the still further amelioration of the soil. All my observations in regard to lime would lead me to the opinion that it is the most *permanent* of all manures, and to concur in the conclusion so forcibly stated by Dr. James Anderson, one of the most copious and able of all the British writers on agriculture, who, in his most valuable 'Essay on Lime' says, '*that its effects on the soil will be felt, perhaps as long as the soil exists;*' and this conclusion he justifies by the mode of its action altering the nature

and constitution of the soil itself, and enduing it with capacities and affinities which it never before possessed. My applications of lime have been almost entirely on a close gravelly loam, of a brownish or gray color; and the result of a single experiment on land of a different description would lead me to believe that it is not adapted to the red ferruginous clay soils of the sides and base of our south-west mountains. It is a proverb in England and Scotland that

"'He that marls sand
Will soon buy land;
But he that marls clay
Throws all away.'

"The reason that Dr. Anderson suggests for the comparative inefficiency of marl on clay soils is, that clay forms a large proportion of marl, and the addition of clay to clay, therefore, cannot be expected to produce so good an effect. The same reasoning would furnish a solution of the supposed want of adaptation of lime to the red clay soils of the south-west mountains *proper*, and of its unquestionable efficacy on the adjacent gray loams, as a chemical analysis of the two soils has, I understand, disclosed the existence already of two per cent. of lime in the former, and of hardly any sensible quantity whatever in the latter."

Mr. Rives, with great propriety, states that his impressions as to the effect of lime upon clay soils are grounded upon a *single* experiment, and we will add, that we hope the result will not deter him from making others. It is by no means uncommon to find clay soils deficient in lime, where, of course, the application must be beneficial. It is very possible however, that the clayey portion of Mr. Rives' estate may abound in this necessary ingredient, whilst the gravelly parts may be deficient in it. Nor should either the Scotch proverb, or Dr. Anderson's suggestion, close the door to the application of lime to clay soils. In both instances, the term *marl* is used instead of *lime*; and in both cases, English marl is referred to. Now, although the term, as used in England, is a little indefinite, and is frequently, we believe, applied to pure clays, it is never used except to express a strong admixture of clay. But in the first place, an inhibition of clay to clay, does not include an application of *lime* to clay, and in the second place, the organic remains, that *we* term marl, are frequently found in connection with an unctuous sand, that has proved extremely beneficial to a close clay soil.

We do not conceive, that the fact of the pre-

sence of two per cent. of lime in a soil, should preclude a further application.

A little farther on, Mr. Rives makes the following judicious remarks upon the subject of

IMPROVEMENT.

"For myself, I will only say that I have always found the best application I could make of money derived from the land, was to return it back to the land in the shape of improvement. There is no investment of capital which can be more safe, and in ninety-nine out of a hundred cases, none half so profitable. If by laying out five dollars in manure on an acre of land you make it produce you twenty bushels of wheat worth a dollar a bushel, when it produced but five bushels before, and this product is renewed to you every four years in an ordinary rotation of crops, have you not secured an interest of one hundred per cent. on the outlay you have made, and at the same time, increased the value of your land four hundred per cent. ! And yet results such as these, extravagant as they may seem, and though we may be unconscious of them ourselves, are often achieved by a liberal and spirited system of improvement. The *passion* of us Virginia farmers is to acquire more land—not to make the land we already possess more productive. If a farmer should add yearly to his possessions a hundred acres of land, he would doubtless consider himself getting along very prosperously in the world. But if at no greater expense he can make a hundred acres of land twice or thrice as productive as they were before, is he not doing much better, with the great advantage of having a more compact surface on which to concentrate his labor and care.

"The misfortune of our Virginia agriculture is that we have already too much land for the labor we can bring to cultivate it. As we are not likely to make a voluntary curtailment of the extent of our farms, the greatest practical reform that can be introduced into their management is to curtail the arable surface on each, and to lay down a larger portion of our lands to grass. Instead of wasting the energies of our soil by annually spreading over a wide surface a superficial, negligent, and teasing cultivation, yielding comparatively nothing, how much better would it be to cultivate one-half or one-third of the space we now do, to concentrate upon that all our resources of labor and improvement, and to leave the rest to recruit itself by the healing processes of nature. Liebig has explained in a very ingenious and philosophical manner the process by which lands laid down to grass are constantly renewing and improving themselves, and has thus confirmed the deductions of our own observation by the demonstrations of science. Should any one doubt whether

we should derive from the reduced surface, better cultivated, a product equal to that of the whole under inadequate culture, let him recollect the instructive story told by old Columella, in his *De re rustica*, of a Roman vine-dresser, who had a vineyard and two daughters; when his eldest daughter was married, he gave her a third of the vineyard for a portion, and yet he had the same quantity of fruit as before; when his second daughter was married, he gave her the half of what remained, and still the produce of his vineyard was undiminished.

"This anecdote of the Roman agriculturist, gentlemen, points the full force of its moral against that fatal mania for emigration which has hitherto carried off so large and valuable a portion of our population to seek wider domains for themselves and their families in the prairies of the West. It is not more land that we need. We have enough, and more than enough already, if properly cultivated and improved, for ourselves and our children after us. It is industry, improvement, good husbandry we want, to develop the natural capabilities of our soil, and to make it adequate to every reasonable wish, and even to the fondest dreams of prosperity and wealth. With these, seconding the gifts of Providence by which we are surrounded, we shall have nothing to envy in the untamed abundance of the West, tempting us from the cherished scenes of our childhood and the hallowed tombs of our ancestors. I am happy to believe, gentlemen, that a brighter day is now dawning upon us, and that the eminent natural advantages and superior capabilities of Virginia are beginning to be appreciated, at their true worth, by the citizens of our sister States, as well as to be more and more felt by her own children. While emigration from our borders has, in a great measure, ceased, other States are beginning, in their turn, to send to us tributes of their moral, industrious, and enterprising population, attracted hither by the advantages of our climate, our numerous navigable rivers, our water power, our mineral resources, our favorable geographical position, our kind and improveable soils. Of these welcome swarms from kindred hives, I have recently become acquainted with one of so interesting a character, embracing persons of great respectability, from one of the oldest and most highly improved counties in the State of New York, (the county of Dutchess) that I cannot deny myself the gratification of reading to you a letter I have recently received from an intelligent citizen of the county of Fairfax, in answer to some inquiries I addressed to him, giving me the particulars of their settlement and establishment in that county.

"[Here Mr. Rives read the letter referred to, as follows:]

"I proceed to make the following answers to your inquiries.

"How many citizens of New York have purchased land in your county?"

"Answer. From the best information I can obtain there are about fifty-six families that have purchased land, some of which have not removed, but the greater part of them now reside in the county; these families average from three to five persons, making about two hundred persons in all.

"How much land in all have they purchased?"

"Answer. Thirteen thousand five hundred and thirty-two acres. They have very generally preferred small sized farms, from one hundred and fifty to two hundred acres, but they have been compelled to purchase large farms, or rather large tracts of land, which they are cutting up as fast as they can.

"Have they been sufficiently long established to indicate what their system of farming may be?"

"Answer. I do not think they have. But their system so far as I have observed it, is in favor of the cultivation of grass over that of grain, and thus far they have made rapid improvements in the appearance of their farms, if nothing else. They remark that if clover will grow well, they are satisfied they can make the land rich.

"Have they used lime, and with what effect?"

"Answer. I do not think they have used lime to any extent, so as to know what its effects will be.

"What appears to be the prospect of a farther accession of settlers from that quarter?"

"Answer. The prospect seems to be very good. I have no doubt from the information I have obtained, that they will continue to come amongst us. They seem to be delighted with the climate and generally pleased with our people, and I know of no one who has settled here who is desirous to return to the North. There is now a strong disposition amongst the wealthy farmers of Dutchess county (the richest county in the State) to purchase lands and remove to this county. Much might be done by our legislators to promote this emigration so important to our impoverished and wilderness state, but I forbear to enter upon this topic at the present."

It is the proverbially light sandy soils of the county of Fairfax, probably one of the poorest in the State, that these sharp, cute, Yankees prefer to any thing they can obtain in their own country for the same money. They are right. We sincerely believe that the light, worn-out soil of Eastern Virginia, from the facility with which, under good management, it may be renovated offers the best opportunity of investment to the agriculturist, that can now be found in the Union. There is but one thing that the active, industrious farmer of the Northern States has got to learn, to enable him to lead a life of ease and comfort in Virginia, which he has heretofore known only in his dreams. We allude to the management of slaves, a great art, the

importance of which is not sufficiently considered by the natives of the South, and is totally unknown to the inhabitants of the North.

SPEEDY CURE FOR A FOUNDERED HORSE.

I send you the following prescription, which you may give a place in your useful paper, if you think it will be of any advantage to planters and travellers.

As soon as you find your horse is foundered, bleed him in the neck in proportion to the greatness of the founder. In extreme cases, you may bleed him as long as he can stand up. Then draw his head up, as common in drenching, and with a spoon put far back on his tongue strong salt, until you get him to swallow one pint. Be careful not to let him drink too much. Then anoint around the edges of his hoofs with spirits of turpentine, and your horse will be well in one hour.

A founder pervades every part of the system of a horse. The phlegms arrest it from the blood; the salt arrests it from the stomach and bowels; and the spirits arrest it from the feet and limbs.

I once rode a hired horse 99 miles in two days, returning him at night the second day; and his owner would not have known that he had been foundered if I had not told him, and his founder was one of the deepest kinds.

I once, in a travel of 700 miles, foundered my horse three times, and I do not think that my journey was retarded more than one day by the misfortune, having in all the cases observed and practiced the above prescription. I have known a foundered horse turned in at night on green feed; in the morning he would be well, having been purged by the green feed. All founders must be attended to immediately.

South-western Farmer.

OVERSEERS.

From an address delivered by our former fellow-citizen, John T. Leigh, Esq. before the Union Agricultural Society of North Mississippi, we make the following extract:

"It is the duty of every farmer to give personal attention to his own business. He ought at all times to know the situation of his farm, his servants, his crop, his stock, his tools. This cannot be done without attention.

"Frederic the Great was his own prime minister, his own treasurer, his own commander-in-chief, his own intendant of public works, his own minister of trade, justice, home and foreign affairs, his own master of horse, steward and chamberlain—not that he actually performed all the manual duties of the different offices; but

he examined and saw that they were performed ; *a.l., every one of them.*

"He who was faithful and trust-worthy was retained and rewarded ; whilst he who was not attentive, prompt and honest in the fulfilment of his duties, was discharged ; and, as he had the power, the offender punished.

"What was the consequence ?

"All the affairs of his great empire flourished. Surely, if one man could give his personal attention to the affairs of a whole nation, we planters and farmers may give personal attention to the affairs of our plantations. If we have managers, and they are good, they will be pleased and stimulated to see their employer daily examining into their plans, their work, their labor ; advising with, consulting and directing them in their course. If they are not good, their want of skill or industry will soon be discovered, and, before too late, may be remedied. The good, faithful, honest manager will be rewarded, his character as such raised, the demand for his services will increase his wages. Thus all—all who intend to do right, employer as well as manager—are interested in the planter's looking well and constantly into his own affairs.

"There is a great mistake prevailing among many employed as managers on farms. They think the vigilant eye of the employer is indicative of too much suspicion of their want of management or attention. But it is not so. The employer will always be pleased to find his affairs well managed, and the really good manager will, or ought to be pleased to see his employer examining particularly and minutely into his management. If well done he gets his reward. None then but those who are careless, or lazy, or not trust-worthy will or ought to object to a rigid review of their management. But object or not, it is the duty of the employer to do it—and no planter can thrive who shrinks from his known duty.

"In the State of Virginia from whence I lately removed, there was a considerable spirit of improvement prevailing in every class of society among the farmers and their managers (overseers as they are called) many of whom were paying great attention to reading agricultural works and gaining information in any way in their power. Some of the overseers read and improved and *profited by it* much more than their employers. Many are ages ahead of the old fashioned planter."

A farmer may read all the books that have ever been written, and become as profoundly versed in the science of agriculture as Liebig himself, but if he does not give his constant, vigilant, personal, superintendence to every department of his business, he will never meet

with the success, that crowned the labors of the Prussian monarch.

FOOD FOR CHICKENS.

A correspondent informs us that raw dough, made of fine meal is injurious to chickens, yet this is the principal food given to young chickens, and we have no doubt that it has occasioned the death of many thousands. We were aware of the injurious effects of this food before we received the information and had discontinued its use. We copy from our intelligent correspondent as follows :

"It makes little difference what chickens eat after they are nearly as large as quails, four or five weeks old say, but to stuff a young brood as soon as they are out of the shell, and the first two or three weeks with dough made of fine meal, you will do better than I can if you save one half. I know it is the common food for young chickens, and I suppose because it is easiest got, but the consequence is, eight times out of ten you will find a dead chicken about every morning in or about the coop. They commence dying off from one to two weeks old. Now the true way is simply this—if your hen can run at large don't feed them at all, unless you should have a great number about your premises ; if to be cooped up, locate them on a dry, sandy spot exposed to the sun in the morning, and out of the way of cold winds by all means. Let them fill up with dirt, (which they will do as soon as they are put to the ground.)

"After that (though don't be afraid they will starve, nor be in too great a hurry in taking them from their nest) the first feedings, say two or three, should be cooked fresh meat, eggs boiled hard and cut fine, shells and all, or curd, if you have it, then dough made of samp, that is yellow corn ground coarse and suffered to stand awhile to swell, and boiled potatoes either mixed with the dough or plain occasionally, is proper food, if given sparingly. Chickens are always over-fed when very young. The old hen must have hearty food of course, give her corn. Since I have adopted this way of starting them at first I rarely lose a chicken by sickness, and if the cats and rats will let them alone I can raise about all that come out."

Cracked corn that may generally be had in cities and other large places of business, is about the same as the samp above recommended.—Chickens like other animals want variety in food. They are very fond of rice raw or boiled as may be convenient in supplying them. This will not be expensive, as one cent's worth to each chicken will answer till he is five or six weeks old, when it is not of so much importance about their food. They will eat whole grains of rice when two or three days old.

If it be not convenient to get other food than

Indian meal, mix one-fourth part Indian bran with the meal, and then pour on hot water and make a dough; we have succeeded well with this as a principal food. A little brown bread occasionally for a change is good.

Farmers' Journal.

THE BEARING-REIN.

The following article, from the London Farmers' Magazine, upon the abuse of the bearing-rein, which has been frequently published of late, attracted our attention some months ago. We were much struck then with the excellent style of the article and the clearness and perspicuity with which the author enforced his views; but so novel were these views, and so much did they militate against preconceived prejudices, that we determined to scan them narrowly before passing an opinion upon them. We have now applied and tested them thoroughly, and the result is, that we have come to consider the bearing-rein the most useless, cruel, and tasteless fetter to which the horse has ever been subjected. We can perceive no possible use in this rein, except to restrain a horse from kicking up, by preventing him from throwing down his head; for any other purpose, it would be just as reasonable to apply it to the riding as the draft horse.

Like all new converts, we have become very zealous in the cause, and, running from one extreme to the other, instead of admiring a "high head," we hope the day will come, when the man, who ties up his horse's head, will be classed in the same category with him who beats his wife.

With all our predilections for condensing, we have not been able to abate one jot or tittle of this capital article. In addition to the cogent arguments of the writer, we would merely hint to the lazy driver of a sulkey in the South, where the streams that cross the road afford the only opportunities of watering, the superlative pleasure of being released from the eternal tedium of getting down to unhook the rein.

"There is much mismanagement and consequent misery inflicted on horses through the force and continuance of custom, habit, and prejudice; particularly evinced by the use of the bearing-rein.

"The Editor is impelled by a wish to do good, prompted by attachment to the horse, and compassion for that much abused and most cru-

elly treated animal; influenced too, as he hopes, by a sincere desire to serve and benefit the owners. It is his object, by what he trusts will be found sound reasoning, to bring into disrepute, and (as soon as may be) into disuse, that tormenting part of the harness, the fixed bridle or bearing-rein.

"It is a principle in mechanics, that whenever agent or instrument suffers the least resistance from restraint, friction, or other wear or tear, it will do its office with the most care, with the greatest economy of time, and with the least expenditure of strength and money; and this whether the agent or instrument be an animal or a machine. Hence, to ensure the full exercise of an animal's power in the safest and most easy way to itself, we should be careful not permanently to disturb its natural posture. The question to be decided is, whether or not it is most judicious and proper to give a horse the free use of his head, or prevent him from having that use.

"It must be admitted that whenever a horse trips or stumbles, nature prompts him to try to save himself, and he instantly extends his neck and head for the purpose as a man would his arms: this natural effort increases the animal's danger if his head be at all confined by the bearing-rein, because the tug which he gives with his mouth is communicated to the harness upon his back to which the rein is hooked, and the effect is the same as if a man were with both his hands to lay hold of the collar of his coat to save himself. To render the bearing-rein or bridle of any utility in saving an animal from falling, it should be of great strength and substance, and fastened behind and above, or it will be useless.

"The dorsal muscles or sinews of the back in all quadrupeds run longitudinally or horizontally from the head and tail, and those extremities are main working powers—what the arms are to a walker or laborer, the head and tail are to the animal; tie a man's arms to his side, and even a gentle push or trip will throw him down. This is the effect produced by the bearing-rein. The horse's head being fixed, he is unable to use it as nature intended, and therefore if he trips or slides his head is of no use. When horses stumble, they often break the bearing-rein, and thus getting the head free are enabled to save themselves. We all know that when a horse is down, the first thing done is to 'give him his head' that he may get up. We do not mean to say that a horse will never stumble if worked without a bearing-rein, because we know that they sometimes fall whilst loose in the field; but we assert without fear of contradiction, that the surest way to keep a horse on his legs is at all times to give him free use of his head. The more he is crippled the more he needs his head. The bearing-rein may probably be of some use

in 'breaking* a colt,' and may, perhaps, help to 'get up his head' until he has been 'taught his paces,' but afterwards it can answer no end, except souring his temper, making him jib, deadening his mouth, wasting his strength, hurting his wind, injuring his sight, lessening his speed, abridging his services, shortening his days, throwing him down, and breaking his knees: all these, it is fearlessly asserted, proceed daily from the use of this cruel appendage.

"When running loose, the horse's neck is usually extended as straight as his back; in this manner horses would generally work. It is the natural position, and the nearer we approach to it the better for the animal, for he is then at ease; and (though little remembered) his pulmonary action, or breathing unimpeded. It is absurd to make a bend or an angle, (if at all acute or sharp) in a water-pipe, or hose; so it is absurd and cruel too to bend back out of its natural line the wind-pipe of the horse by the use of the bearing-rein. In the former case a full volume of water cannot be obtained; in the latter the free breathing of the animal (so essential to its comfort, and even to its life) is hindered.† *Denied* this may be; *disproved* it cannot. The effect of restraining a horse by the bearing-rein, is to prevent him from getting up to the collar. If the bit is in the least degree affected by the bearing-rein; in other words, if it is not entirely loose in the mouth, the horse is checked, and besides being kept from the full free exercise of his strength, he is prevented from leaning the weight of his body into the collar.

"We are aware that many who admit that bearing-reins are not safe, use them because *they like to see a horse look well, like to see him hold his head up, &c.*; but a kind and humane man would not have such foolish desires; the care and comfort of his horse would be his only object. The mischievous effects before stated are often *overlooked* by many to whom the use of the bearing-rein is as natural as the saddle or any part of the harness. The Editor has often found very kind and respectable men, wholly ignorant of the pain and agony which their horses have endured.

"There is one infallible proof constantly to be obtained of the cruelty of the use of the bearing-rein, and of its injurious effects, though we believe very few persons are aware of it.—Whenever a horse has been worked with a tight bearing-rein, the corners of his mouth become *raw, inflame, fester, and eventually the mouth be-*

comes enlarged on each side; in some cases to the extent of *two inches*. Even before the bit has produced these visible effects, if the corner of the mouth, under the bit, be touched, the animal will flinch as if from hot iron. Let this be the sign with every master and servant.

"To what are these enlargements attributable; what causes them? Nothing but the friction of the bit in the efforts of the horse to get up to his work. How dreadful to see a horse heavily laden; his neck bent into a perfect curve; his mouth open; his eyes ready to start out of their sockets. The ignorant, though perhaps not cruelly disposed driver, looks on with admiration to see how 'handsome' his horse appears, and imagines that the tossing head, open mouth, and gnashing teeth are signs of game and strength, whilst on the contrary, they are the most unequivocal evidence of distress and agony. Let any one test the truth of this by loosening the bearing-rein, and he will immediately find the horse go faster, keep his mouth shut, and his head in one steady horizontal position.* A short time since the Editor stopped a wagon to look at the mouth of the shaft horse—he found the mouth actually cut open by the bit at least two inches on each side: the wagoner said 'he know'd it sure, 'twas the fair wear of the ir'n!' The man was open to conviction, and upon the cause of this dreadful punishment being shown he altered the rein.

"The propensity to jib, if not actually caused, is much increased by the bearing-rein. In ascending a hill the freest horse may be compelled to stop and refuse to exert himself, knowing that he can put no more strength till the head is loose. A short time since, in Southampton-street, Covent Garden, the Editor of this pamphlet saw a crowd collected looking at a scavenger's cart, fully loaded, drawn by an immense horse. The street is a moderate ascent, and the horse had stopped just below the top of the hill: the driver turned the horse round down the hill, then up, and with his help-mate very humanely assisted by pushing. The horse, without being flogged or spoken to, went on steadily with his very heavy load to about the place he before stopped at, and again 'gave up:' he was sweating much, and appeared to be a game good horse. The Editor went up to the driver and advised him to unhook the bearing-rein; the man said, 'it's nau use, I have turned him around three times.' The Editor said, 'he must be a good horse to take to the load three times,' and

* It would be well if there were more colt benders—the tempers of horses are not studied by the generality of colt breakers; horses' tempers vary as much as men's.

† It is the opinion of many eminent veterinary surgeons, that "roaring and blindness are produced in carriage-horses and wagon-horses, by the bearing-reins."

* The dray horses in London exhibit the most painful examples of the cruelty of using a tight bearing-rein. Whether at work or standing they will be found in continual torment—tossing their heads, or resting the weight of them on the bit, and so drawing back the corners of their mouths, as nearly to outsplit the ligatures;—at work, instead of going on steadily, they "bob" their heads, feeling the check at every step they take.

pressed him to unhook the rein; the man replied, 'the ause 'ill fall down.' The Editor coaxed him to try; the rein was unhooked, and immediately the horse took the load from the spot where he stood: the man said, 'he never saud it done afore.' It is not uncommon for considerate drivers to unbear their horses at the foot of a hill, which is a very strong proof of the folly of using the rein at all. It has been and may again be advanced as a plea for its retention, that a horse after having been used to the rein will miss it, and so be liable to fall if he trips after it is taken off. A trial will prove that this is not the result.

"It is a common opinion that when a horse trips or stumbles, it is the rider or driver who pulls him up, by the sudden jerk or shortening of his reins, and prevents an actual fall; hence the moment a horse takes a false step, the rider or driver tugs the rein with all his might. We frequently hear it said, 'the horse was going to fall, but I pulled him up!—I kept him on his legs!' As well might a fly resting on a coach-wheel boast of its kicking up a dust; as well might a wagoner seated on the shafts, think to pull up a wagon which had lost its fore wheel. Such expressions are proofs of the ignorance of those who make them, because when they become aware of the fact that the horse has stumbled the danger is over—the animal has recovered itself, and their tug is useless. To help an animal effectually there must be 'where* to stand on,' and both an arm and a rein strong enough. A bearing-rein is fixed to the falling horse and falls with him—it cannot save him; it keeps a horse from seeing and avoiding stones and other impediments, it is a hindrance not a help; an injury, and not a benefit. If he fall with a bearing-rein he must break his knees or the rein, or its hook, or the crupper; if he trips without one, and the driver 'gives him his head,' by instantly slackening the reins (what few inexperienced Englishmen will either do, or believe to be judicious) the creature is set at liberty, and will probably quickly recover himself, unless receiving, as he is almost sure to do, many heavy lashes. It cannot be supposed that a horse stumbles willingly, therefore to punish him for it is unjust, and only adds to his fear.

"It must not, however, be inferred that all who use the bearing-rein approve of it. Servants, when men of humanity, experience, skill, and character, are often found to admit its folly and uselessness, but dare not lay it aside.

"It is said that the ladies powerfully obstruct the removal of this useless and injurious instrument. It is hoped that the few who drive and the many who keep their own horses, will give the best and strongest denial to this scandalous

imputation, by immediately reprobating the use of the rein. Could their poor horses answer the questions—Why do you continually toss your heads when standing in harness? Why do you stretch open your mouths, shake your heads, and gnash your teeth? Why do you turn your heads back towards your sides, as if looking at the carriage? they would answer—all, all this is done to get relief from the agony that we are enduring by having our heads kept erect, and our necks bent by tight bridles.

"To ladies the Editor would appeal with earnestness. His heart has ached when passing the horses of the nobility and others at the doors of houses in London, to see the unceasing motion of the heads of the poor creatures, the coachmen sitting at their ease, perfectly unconcerned, and often doubtless unconscious of the agonizing pain of the muscles and sinews of the neck the horses are enduring. No humane person could knowingly suffer such cruelty to be practised. It is true that to the eyes of ignorant people, horses tortured with the bearing-rein look 'very fine,' but the true connoisseur will never be pleased at such distortions.

"England, where the best horses and the best drivers are to be found, England (it is said) is the only country in which that bane of the horse, the bearing-rein, is used! In France it is not used, and, as the natural consequence, horses in that country seldom fall to the ground; or so as to hurt themselves. At the very instant a horse stumbles the French coachman slackens the rein, that the horse may save himself.

"It is sincerely hoped that the entire removal of this punishing bridle will be speedily effected by the powerful aid of veterinary surgeons, by the owners and drivers of private carriages, noble and gentle, at once abolishing this useless, tormenting appendage; by the society for the prevention of cruelty to animals lending to this object their aid unitedly as a body, and individually as members; by giving circulation in newspapers and periodicals to the experience of the good effects of going without them; by the public patronizing those vehicles in which the servants do not use the bearing-rein; by humane travellers feeling well those coachmen who in this respect obey the dictates of humanity, sound policy, self-interest, and common sense. The Editor is aware that no good coachman would condescend to use bearing-reins, and persons much accustomed to travelling, if they see the horses come out with bearing-reins, immediately conclude the driver is one of the old school, or that he is not 'up to his work;' and they are generally right, for it will be found that he is not able to command his horses so well as the man who drives without them. The least reflection will show this must be so. If the horses have bearing-reins they lean their heads on them, and the coachman's reins may be seen loose and

* Archimedes said, "Give me a place to stand on and I will move the world."

dangling on the horse's back; if on the contrary, he drives without, he has the horses in hand always, and guides them as he pleases. This is more plainly the case with post-chaise drivers and hackney coachmen, whose reins are only used occasionally when they have bearing-bridles, instead of being always tight in their hands.

"The effect of bearing-reins upon coach-horses is shown at every stage when the horses are taken off. If they have bearing-reins they may be seen tossing their heads incessantly, although jaded, panting, and enveloped in steam: surely the poor creatures would not thus exert themselves in a state of great fatigue, if some greater distress were not affecting them. It is the agony of the sinews under the neck and throat, which being restrained so long, ache as if a man's arm were to be kept in a painful position. Horses which have done their stage without the bearing-reins, when taken off, stand with their heads down, breathing freely, and in comparative comfort. How often upon changing horses do we see the kind horse-keeper of a stupid bearing-rein coachman instantly unbear his horses and thus entitle himself from the humane traveller to the fee which the coachman had forfeited. At the time this paper is being published, the Editor has remarked that bearing-reins are more used in Bristol by coachmen and more cruelly tightened by carmen, than in any other place in the west of England; not only by carmen plying for hire, but by the drivers of the splendid dray-horses which are to be seen in that city."

SUBSTITUTE FOR GLUE AND CAULKING.

The remarkable properties of a new cement have lately been tried by the master ship-wrights at Woolwich, England, by advice of the lords of the admiralty. The experiments were highly interesting, and the results very important. Two pieces of African wood, called *teak*, very difficult to join by glue, on account of its oily nature, had a coating of the composition in a boiling state, applied, and shortly afterwards bolts and screws were attached to the end of each piece, and the power of a Bramah's hydraulic engine applied, to the extent of nineteen tons, when the chain broke, without the slightest perceptible strain where the joining had been made. A still larger chain, of one and a half inches, was then applied, which broke with a strain of twenty-one tons, also without effect upon the cement!

Four pieces of hard wood were then joined together, weighing collectively over four thousand four hundred pounds, and carried to the top of the shears in the dock yard, seventy-six feet high, and precipitated upon the hard granite wall below, without the joints yielding in the slightest manner!

A number of oak plank, eight inches thick and sixteen inches square, were then united with the cement, together, eight feet in height and eight feet in length, of the size of a first rate ship of war, without any thing else in the form of a bolt, or security of any kind, and it was set up as a target at the butt, in the masses, in the presence of the officers artillery, &c. Several shots were then made into the cemented planks, the effects of which were wonderful. *They tore the wood to pieces but had no effect upon the cement.* A hole six inches in diameter was then bored in the centre of the target, and a three and a half pound shell inserted and exploded by a slow match, which tore the wood into small splinters, *without in the least separating the composition.*

A valuable property of this composition, in addition to its wonderful tenacity, is said to be its capability of expansion in warm climates, like India rubber, and yet it will not become brittle under the coldest temperature. It is not surprising that it has become a great favorite with naval officers, as it is so clean as to resemble very much the French polish.

The value of the composition on board of vessels at sea may be illustrated by another experiment tried with it. Eight pieces of wood in the form of a mast, were joined together and a strain applied to another mast of an entire piece of wood, when *the latter first gave way!* Ship carpenters will, therefore, find no difficulty in effecting repairs at sea, with this extraordinary cement at hand. Nor is its value confined to the above or naval purposes, but it must become equally great for all purposes of the arts, where, the joining of parts is necessary, as it is *insoluble in water.* Its cost is only about half that of common glue. The great saving, too, by its universal adoption, and the important uses to which it may be applied, are incalculable. A Mr. Jeffrey is the inventor, and the composition consists of *shellac and India rubber, dissolved in naphtha*, in certain proportions.

New York State Mechanic.

We think the above smells strongly of humbug.

NEWSPAPER LAW.

The law is, and so the courts decide, that the person to whom a paper is sent is responsible for the payment, if he receive the paper or make use of it, even though he never subscribed for it. His duty in such a case is not to take the paper from the office or place where it is left, but to notify the publisher that he does not wish for it. If papers are sent to a post office, store, tavern, or other place, and are not taken by the person to whom they are sent, the postmaster, store or tavern-keeper, &c. is responsible for the payment unless he immediately gives notice to

the publisher that they are not taken from the office or place where they are sent.

Extract from the Post Office Regulations, page 50, section 118:—"In every instance in which papers that come to your office are not taken out by the person to whom they are sent, you will give immediate notice of it to the publisher, adding the reasons, if known, why the papers are not taken out."

A bet against time was won by an Arabian horse at Bangalore, in the Presidency of Madras, running 400 miles in the space of four consecutive days. This occurred on the 27th July, 1841.

When the stopper of a glass decanter becomes too tight, a cloth wet with hot water and applied to the neck, will cause the glass to expand, so that the stopper may be easily removed.



OUR NEXT VOLUME.

With this number we complete the second volume of the Planter. The work enjoys what we have labored to procure for it, the reputation of being one of the most *practical* and *useful* periodicals published in the Union. In saying this, we arrogate nothing to ourselves, except the gift of prophecy, for we grounded the work upon the prediction that such would be the effect of drawing out the information of Southern farmers, and we holdly assert that our correspondents have fully verified the prediction. All that *we* have done, has been, to select, arrange, and sometimes, condense, the views of others. Such additions have been lately made to our lists, both of subscribers and correspondents, that we think we may venture to promise our readers that the third volume will not be less entertaining and instructive than the two that have preceded it. Additional arrangements have been made to give effect to the embellishments and mechanical execution of the work.

It is with no little pride and satisfaction that we look back upon the career that we have run. Starting without patrons, we relied upon our

own exertions and the liberality of the agricultural public of the South for support. We were told that the work would be a failure, that there was no patriotism, no love of home in the South. It is a base slander, without the shadow of foundation. The Planter was most generously sustained, through times without a parallel, chiefly, at first, because it was a *Southern* paper, and there is not a people upon the face of the earth, that so fondly cling to their own institutions as those of this Southern country. Notwithstanding the hardness of the times, our list is now of the most satisfactory character; but this matter of dollars and cents, although a very good thing in its way, and, by the bye, very necessary to the support of a paper, is not all we have gained; what has been infinitely more grateful to us, is the meed of approbation bestowed upon our humble labors, and the kindly relations that have been engendered between us and thousands of our fellow-citizens, relations, that we humbly hope, will continue to exist, as long as they have a *dollar* in their pockets.

That we may know what increase to make in our edition, we would be much obliged to such of our friends as intend to remain with us, to renew their subscriptions as soon as it may be convenient.

The reprint of the January number has been delayed until we could ascertain what edition would be required. It will be mailed to those subscribers that have not received it, during the present month.

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NON-CIRCULATING