

THE
SOUTHERN PLANTER,

A MONTHLY PERIODICAL

DEVOTED TO

AGRICULTURE, HORTICULTURE,

208271
AND THE

HOUSEHOLD ARTS.



RUFFIN & AUGUST, PROPRIETORS.
FRANK: G. RUFFIN, EDITOR.

VOL. SEVENTEEN.

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OUR NEW ISSUE.

The table of contents will shew what we have endeavored to do for our readers. We hope they will be pleased, and that we shall be encouraged to make the *experiment* the rule. But if not, let it be remembered that we will cheerfully fall back on the original dimensions of the Southern Planter. *Some persons have "discontinued" on the supposition that the paper would be enlarged any how. This is a mistake: it will not be, unless we have reason to believe, according to our proposition, that the change will meet the views of the majority.*

We hope our friends will not forget to use their efforts to enlarge the subscription list to meet the expected deficit from the change, should it be made. At all events we shall be obliged to them for such efforts as they choose to make in our behalf. We have a calculation which shews that if every subscriber would get only one additional one, *in less than four years the Planter would be in every country residence in Virginia.* Some few have promised this sort of aid. Some have given it. To each class we are much indebted, but especially, (and naturally so), to those who have sent us the names.

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.*

FRANK. G. RUFFIN, EDITOR.

F. G. RUFFIN & N. AUGUST, PROP'RS.

VOL. XVII.

RICHMOND, VA., JANUARY, 1857.

No. 1

[From the Working Farmer]

HOME DEPARTMENT.

It will be seen, by an article in our present number, that a Bureau of Agriculture is again being talked of at Washington; and we are sorry to find some of our contemporaries approving of this attempted apology at supplying the wants of the farmer. The greatest interest of our country should demand and receive an organization somewhat adequate to its wants. A department of agriculture, with a secretary, who should be a cabinet officer, holding even rank with the Secretary of State, Secretary of the Treasury, Secretary of War, etc., is demanded by the farmers, and they should not accept of a sub-organization. At the early formation of our government, its founders were anxious to organize a home department; and, as the records will show, it was then laid aside, simply because a proper incumbent could not at that time be found as its Secretary; and the meaning of this department was then distinctly understood to be a department for the improvement and protection of agriculture and other industrial arts. Gen. Washington afterwards recommended such an organization, and called it a Home Department of Agriculture. Since that time our farmers, who compose the great body of voters, have sent representatives to Congress, and have generally selected them from among lawyers, or men of leisure and fortune.

The requirements of the new country for a time occupied the energies of Congress; and when the habit of selecting such a class of rep-

resentatives confirmed those in office, and secured the reelection of themselves, or, by their influence, men of similar employment or occupation; and these Congressmen, forgetting that more than four-fifths of their constituents were too much engaged in agricultural pursuits to busy themselves with the affairs of government, and preferring to leave their interests in the hands of their representatives, have caused the great interests of the majority to be entirely neglected. Every other country in Christendom has such a department; and for want of such government countenance, the farmers have not advanced in knowledge proportionably with those engaged in other interests. For want of such a department the farmers have been amused rather than instructed, and the whole nation has remained divided into two classes. The poetry of equal rights has been trumpeted to our hearts' content, while the reality has been kept beyond our reach. To silence the feeling which was evident among farmers, a Home Department was created; but in what part of that department do we find the agricultural interests represented? The Commissioner of Patents and his bureau are under the charge of the Secretary of this department, and in a cellar room of the Patent Office, for a time, we find a clerk having charge of the agricultural portion of the Patent Office, whose business seemed to be to get up a volume, each year, made up of extracts from agricultural papers, and the special views of this clerk on a few prominent points in agriculture, or such at least as he conceived to be prominent. Indeed,

this Home Department, so far as it related to agriculture, would remind one of a theatrical performance which occurred in England some years ago. The play of Hamlet was announced, but the principal actor being sick, it was stated that the part of Hamlet would by particular desire be omitted.

We have schools for the army and navy; we send commissioners abroad to examine the tactics of other countries; and every collateral branch connected with military engineering, is fostered by government patronage. The pupils at our military schools are taught many branches of simple and ornamental character, the more completely to fit them as soldiers and gentlemen; and so it should be. Nor do farmers complain of this, although they are the payers of four-fifths of the expense. But when has a commission existed under our government for collecting information, either at home or abroad, for the use of the agriculturists? What adequate organization has ever been made, to diffuse information on this most important subject? In what bureau at Washington do we find an account of the organization of the agricultural colleges of Europe? What proportion of the public purse (four-fifths of which is furnished by farmers,) has been expended for their benefit? What part of the ten millions which has been appropriated by Congress for experiments with various scientific and mechanical devices, has been devoted to improvements in the construction of agricultural implements or improved modes of culture? Where are our agricultural colleges, and what other civilized country is without them?

Thousands of dollars have been appropriated for improvements in the telescope, yet not one dollar for improvements in the plough. Is the surface of the moon of more consequence to those who support the government of the United States, than the surface of the earth? Why cannot part of the public domain be given to the States for the purpose of endowing agricultural colleges? Why could not our foreign consuls, ministers, etc., be made agents for the purchase of foreign seeds of superior kinds, which might be distributed through members of Congress to their constituents? And why, instead of this, is a miserable appropriation made by Congress for the purchase of seeds from some favorite seed-dealer, and there distributed where duplicates of home-growth are plenty? How many farmers are there in the United States, who never saw a globe artichoke or a cauliflower? There are many hundred kinds of pears raised in Europe, suited to this climate, which have never been heard of by the majority of our farmers. How long has the iron ploughshare been introduced into our country? and how long since its general adoption? Has not its use increased the amount of agricultural product fifty per cent.? and has any other invention, or any other twelve inventions of modern times, equalled one per cent. in the increase of pro-

duct from its use, that can fairly be attributed to the plough? Does not England, by under-draining and sub-soiling, produce of many crops double the amount per acre of the average of this country? and yet have one-third of the farmers of the United States ever seen a drain-tile or sub-soil plough? Could England at this time sustain her present population, without the introduction of these improvements? Would not a properly organized Home Department be able to suggest to Congress methods for remedying these evils?

Suppose that one-tenth of the amount which has been paid by Congress as premiums on new inventions connected with fire-arms, or one-tenth of the amount which has been given to mechanical inventors to enable them to perfect experiments connected with steam-engines, steam-boilers, locomotives, etc., had been offered as premiums for improvements in the construction of the plough, what would have been the result? Would not the ingenuity of our mechanics have been applied to this and other agricultural implements? and would not the depth of ploughing have thus been increased? Who does not know that an increase of one inch in the depth of ploughing through the United States, would increase the amount of our agricultural products more in value than the total present receipts of our government? Who does not know that the general introduction of sub-soil ploughs would produce a similar result? And who is ignorant of the fact, that at every ploughing match it is clearly proved, that even slight differences in the figure of the plough enable the same team to drag it when inserted at an increased depth? Who knows the true figure of a plough so that the least amount of force may produce the greatest of disturbance in the soil? Would not trials made under the surveillance of a department in whose organization the farmers had confidence, soon settle this and every other truth in agriculture? The very amount paid by the manufacturers of the various ploughs to scribblers for puffing each, would be more than sufficient, in the hands of a Home Department of agriculture, to settle every vexed question, and give the farmers the benefit of the results. Who doubts that a premium of ten thousand dollars for the best plough would call out the best ingenuity of the land, and that the improved results of a single season would pay this amount many times, beside leaving its use for future years, as the permanent property of the nation? Would not such an increase of product lead to an increase of mercantile activity, and this to national wealth?

Apart from monetary considerations, we live under a government of written law, and we call upon our citizens to obey that law. We know that, with the exception of such States and districts as have improved the modes of agriculture, the plodding farmer cannot afford to educate his children; and that until he is

enabled to advantage by the improved processes of more fortunate localities, he cannot do so. The few States where education is easily obtained, must not forget that a number nearly or quite equal to one quarter of our whole population, cannot read the very law they are called on to obey. It has been said, and with truth, that "a prosperous agricultural district is never without patriots to defend it." Let our whole country be in this position, and a small but experienced standing army, with four times the usual number of officers, would supply us with officers in cases of emergency, while an educated agricultural community would find apt recruits who would be good soldiers, if so officered, in one month. The bald excuse, therefore, continually made in Congress, that every appropriation made for experiments in the mechanical arts, and procured by the influence of rich operators, is for the defence of the country in time of need, will as rightly apply to such an organization as will assist in educating the farmers and rendering them patriots. None other will ever make soldiers; at least such soldiers as a free government can depend upon.

We do not believe in the doctrine that farmers should be contented with a bureau of agriculture, and await the necessity for any other organization. The necessity is now, and has been always apparent to those who have understood the best interest of the country: The Father of his Country, WASHINGTON, was not mistaken when he recommended such a department as part of the original plan of our government, and for the purpose of calling into action the best talent; advantaging from all the eclat that belongs to a department as compared with a bureau, and from having an officer whose duty is to make known to our government the wants of the agricultural interests, it should be a department that its secretary may be heard in the cabinet, and not, as with a bureau, with a commissioner at its head, whose recommendation in favor of agriculture may be stricken out by the secretary of the department to which he is attached, before it reaches the legislative halls. Why put off for a single day that which is known to be required? We hope in the discussion before Congress, on the proposed bill for an agricultural organization, we shall not hear the haccneyed phrases that "Agriculture is a noble art," that "farmers are the bone and sinew of the country." These are truths trite to every schoolboy; and farmers will not be contented with a repetition of such compliments and no further action.

Let us demand, not ask, a department of agriculture, and not be contented with being told that we are noble fellows, and we had better go home and vote again for our representatives at the next election. The present condition of the agricultural interest, and its neglect by government, remind us of a lieutenant in the

British army, stationed in Canada. He lacked promotion, and knew he was entitled to it both by age and services. He wrote to the commander-in-chief, and stated that he was the oldest lieutenant in his regiment; next, that he was the oldest in the brigade; next, oldest in Canada; next, oldest in the British army; to all of which he received no reply. He then wrote that he was the oldest lieutenant in the world, and he believed his excellency meant to keep him so as a curiosity.

Indeed, farmers' claims are like the position of the beggar to the London alderman on his way to the turtle feast. "I have not eaten in four days," said the beggar. "I wish I had your appetite," says the alderman.

The farmer, however, will not, and need not, be as silent as the beggar. They furnish the supplies, and are entitled to a portion of the disbursements. In England, where the government has no excess of public funds, millions of pounds sterling are loaned to farmers, under the surveillance of the commissioners of drainage, for under-draining the land; and these mortgages are only active after a fixed value has been placed upon the farm before its under-drainage, and still not one dollar has ever been lost by that government from such loans. The increased production has always enabled the farmer to meet the required payments, and thus, after a short time, the country at large is benefited equal to the amount of increase in production. It has been said, and with truth, that were it not for the introduction of under-drains and sub-soil ploughs, England could not at this time sustain her population. This is no experiment, but a settled truth; and why should not the surplus funds in our government be so invested? It could be done with us without the creation of a national debt; and the example would soon be followed by capitalists, as it has been in England.

Who doubts that by adopting a proper mode of tillage, the Indian corn or wheat crops of the United States would be doubled? In what county can instances not be found where individual farmers raise crops double in quantity per acre as compared with those of their neighbors? Why should these processes not be colated and made known to all?

We hope some Cincinnati will be found among our members of Congress who will have a fellow-feeling for his craft. We hope the good sense of the present Congress will prevent their offering any compromise for the wants of the farmer, and that they will at once give us a department of agriculture, and not a sub-organization in the form of a bureau or agricultural clerkship. If they do not, they may rest assured that the farmers will eventually rise in their strength and represent themselves in the legislative hall with special reference to this question.

Those who use agriculture as a hobby-horse

for political preferment, must prove that they are sincere, or they will receive the curses of an offended country, worse than the anathemas of the Church of Rome!

In the above it will be seen that a claim is set up for an Agricultural Department at Washington, comprising a seat in the Cabinet. Other agricultural editors, agreeing with Prof. Mapes, have urged the same thing time and again; some of them have shed a good deal of ink on the subject, and vented some complaints against Congress, which has heretofore failed to listen to their suggestions, and has omitted to act upon one or two bills which the appropriate committees have reported on this subject.

Differing with these editors, we feel it our duty to return our special thanks to Congress for their good sense and forbearance to inflict a grievous burthen on the people.

"The greatest interest of our country," it is said, "should demand and receive an organization somewhat adequate to its wants." This assumes that these wants should be relieved by the direct action of the general government; and thereby raises a question of constitutional construction at once. The advocates of "the Home Department" of course rely on the disputed "general welfare" clause; its opponents, on the 8th Act, of Section VIII, which allows Congress "to promote the progress of science and useful arts, by securing, for limited times, to authors and inventors the exclusive right to their respective writings and discoveries." We do not say on which side of this construction we are to be found; but we say that here arises at once an issue which makes agriculture a part of politics. The evil of this is, that questions not connected in principle with doctrines of free government, come to depend not on their merits, nor the unbiased judgment of people, but on the success of great state questions, and on events which modify or control the action of party. Under the authority "to lay and collect taxes, duties, imports and excises, and to regulate commerce with foreign nations and among the several States, the question of protection to domestic products has been the most fiercely debated of any that ever distracted the people of the United States. This Department created, and we are drawn again into a similar

contest with a wider battle ground, and more numerous weapons.

The Canada Reciprocity treaty, about which farmers differ as they are free traders or restrictionists, and on which the cotton and tobacco interest, as a class, would side against the western wheat growers; the guano duties; the sugar and wool duties; these and hundreds of other questions afford ground for contest and strife. It was but a few days since, at the annual meeting of the Ohio Agricultural Society, that Mr. N. B. Gates of Elyria, offered the following: "Resolved, That the State Board of Agriculture be requested to petition our Senators and Representatives in Congress so to amend our present tariff as to admit sugars duty free;" on the ground "that we had paid since the institution of the tariff on sugars, more duty on that article alone than the whole State of Louisiana was worth." And in some forty minutes thereafter he offered another set of resolutions in these words:

Resolved, That this Convention, believing the repeal or reduction of the present Tariff upon foreign wools would be highly detrimental, if not totally destructive to the wool-growing interest of the U. S., and especially to the State of Ohio, we look with unqualified disapprobation upon all efforts to effect such repeal or reduction.

Resolved, That our Senators and Representatives in Congress, are requested to use all Constitutional means to oppose and prevent such repeal or modification.

Resolved, That the Secretary of the State Board of Agriculture of Ohio be directed to furnish each of our Senators and Representatives with a copy of these resolutions.

It is easy to see that if this, or some patriot of similar disinterestedness, should have a seat in the Cabinet, that there would be some party, as well as some sectional feeling engendered in "the greatest interest of our country;" and that this interest, split up into factions, would engage in bitter strife about this seat in the Cabinet.

Is it true that "the great interests of the majority are entirely neglected?" If so, what has enabled our commercial marine to rival England's and to excel every other? How can we compete, in spite of our abundant style of living, with every other producer in the grain markets of the world? How does our cotton manage to supplant all others? How does our tobacco flourish in the face of the highest

duties that any commodity endures? How is our maize substituting the cheaper food of laboring Europe? How is the provision market sustained? The answer is obvious. The indirect action of Congress in extending our commerce as our expanding enterprise requires, has aided us more than its direct action could have done, and proves that no measure of important bearing on agriculture is ever determined without considering its effects on that interest. It may not be that wisest course is always adopted; it is sufficient for the argument if it is attempted.

If the assumed paramount importance of agriculture is to seat it in the Cabinet, what is to become of other things of still more moment? Religion is as far above agriculture as heaven is above earth; and education surpasses it as mind does matter. Shall these also be represented? And why not, if minor interests shall be?

"Four-fifths," says Prof. Mapes, at a venture, "of the public purse is furnished by farmers." If this were true, "four-fifths of the people" says the same authority, "are farmers;" and, as, according to our theory of imposts, all pay in proportion to consumption, which is the measure of ability, we are taxed justly, and have no reason to complain, but rather to rejoice in our superior wealth.

But it is not true that the proportion is as he states it. According to the compendium of the 7th census,—to which we shall several times refer and here make acknowledgment, once for all,—there were, in 1850, in each thousand of our population only 148 persons in the free States, and 131 in the slave States employed in agriculture, and 217 and 17 respectively in other occupations. Now if a minority is to have such special distinction as a separate organization in the government, what shall be meted out to a majority?

It may be contended that the preponderating value of agricultural products entitles it to this pre-eminence. But the total value of these in 1850 was \$1,299,197,682; of manufacturing, mining, and mechanical products \$1,013,336,463; of commerce \$1,500,000,000. So that they are a fraction less than commercial, and but a fraction more than mechanical products. Does it not look presumptuous, in view of such facts, to claim this exclusive "organization?"

The wants of agriculture, according to Prof. Mapes, are, the general diffusion of education among farmers; agricultural colleges; a commission to collect and circulate agricultural information; expenditures for experiments in the construction of agricultural implements; purchase of seeds to be bought by our consuls and distributed through members of Congress; loans to farmers from "the surplus revenue" to drain their lands.

The population of the seven principal cities of the U. S., in 1850, was, in round numbers, a million and a half; the cost of tuition of pupils,—generally under fifteen years old,—about two millions. At this rate, supposed to be cheaper than in rural districts, and therefore fair to be here assumed, the whole expenditure for the confederation cannot be less than thirty millions. Now the proportion of farming to other pursuits is as 279 to 234—about equal,—and 60 per cent. of the whole population being under twenty years old, gives the farmers about one-half of this number, of whom again one-half, say 3½ millions, are males, to be educated, according to the above rate, at 7½ millions per annum. But as the grade of education is to be high, and in some sort professional, it may be safely set down at 10 millions per annum.

How much is to be devoted to experiments we cannot say; but as "10 millions have been appropriated by Congress for experiments with various scientific and mechanical devices," and 10 thousand dollars are to be offered as a premium for the plough alone, we suppose that not less than a million per annum will be needed for this purpose.

Next comes the expense of the commission to collect and diffuse agricultural information. For this purpose a body of officials will be annually required, since, says Mr. Mason, Commissioner of Patents, "it would not at all reach the point in view to have this information given only every five or ten years." For how then could "the producers and dealers in pork" for instance, "learn, with any reasonable certainty, how much was slaughtered last year." We say officials will be required because the voluntary or "circular" system has failed utterly though tried for many years. Now the census of 1850 cost \$1,362,500; and the complaint is that the pay of the enumerators, though deemed adequate by Mr. De Bow,

failed to command the proper talent for the purpose. But as the duties of this Agricultural Commission and its assistants will be of a somewhat professional nature, and will require a good deal more than mere ability to collect statistical information which, after the schedules are arranged, is a mere matter of clerical detail, we must allow at least as much annual expenditure under this head as the census costs every ten years. But we must also take into account that much of this information is to be obtained "abroad;" and that the whole of it, illustrated with steel plates, wood cuts and coloured engravings is to be printed for diffusion among the farmers. As there are 2,363,958 people of this class, each of whom must have a volume that cannot cost less than \$1 00, we may safely charge the whole expenditure under this head at four millions; whilst the official force will increase, by not less than 10 per cent., the grave evils of patronage.

Another want of agriculture is thorough draining, or under draining, the land. To accomplish this it is proposed that our government shall follow the example of Great Britain, and establish out of its surplus revenue, which, of course, is to be hoarded for that purpose, a fund from which each farmer shall borrow what his draining wants may require. It is true that this is the policy of England: under the pressure of a redundant population she has been driven to the measure. It seems to act well with her. Very much, but not altogether, is she indebted to drainage for an increase of crops which has sustained her farmers under a partial repeal of the corn laws. The money the government advanced for drainage creates no great burthen on the finances and no inconvenience in collections: titles are well established; responsibility is easily secured among the thirty thousand proprietors who own all the lands in her comparatively small and compact domain; and entails, which almost invariably rule the course of descents, give assurance that the debt can be retained on the land without distress to the proprietor, or risk to the State. At the same time the high state of cultivation, the uniformity of climate, and the duties which still exist on imports of grain, ensure them a comparative certainty of crop and price which will jus-

tify both borrower and lender in a protracted loan. In the United States, on the contrary, the immense amount of territory, and the subdivision of farms would make it in all cases a question whether it would be safe to lend the money. Land titles would have to be investigated from the remotest points; the distribution of estates would interfere with the collection of the debt; estates would be encumbered; the transfer of the property checked, and enterprise impeded.

In England, where under-draining can be done at three cents a yard for a ditch four feet deep, cut, tiled, and filled up again, it is estimated to cost from fifteen to twenty-five dollars per acre to drain land in this mode. In this country it would cost a great deal more. According to the experiment of B. F. Nourse Orrington, Maine, lately reported in the *Maine Farmer*, it costs here from \$67 50 to \$40 50—average \$54 per acre, or about five times as much as the average value of our lands.

The farms of the United States comprize, of improved land, 113,032,614 acres. If one-third shall not require thorough draining, it will leave 75,688,413 acres, about three times as much as the whole of England, to be drained at twice the cost, requiring an aggregate expenditure six times as great as she encounters. It is hardly worth while to say that the "surplus funds" in our government, if "so invested," would hardly supply the required sum. It took Mr. John Johnston, of Geneva, New York, about twenty years to drain the whole of his land. At the above rate and in the same time, supposing no increase of land to be improved, it would require an advance to the farmers of four thousand millions, or about four hundred times the amount of our present federal revenue. We know the answer that will be attempted to this, if any is; and we are ready for it; but we shall not encumber this argument with it in anticipation.

One other want of agriculture is suggested by Mr. D. J. Browne, the present superintendent of the Agricultural part of the Patent Office: it refers to the improvement of the breeds of horses of the United States. As the suggestion is original, we give it pretty much in his own words. It seems that in France, "the administration for the breeding of horses has erected twenty-four depots for stallions," be-

sides other arrangements for the improvement of the breed. The statistics of these establishments have been investigated by Mr. Browne, "and," he says, "naturally lead to the suggestion of adopting a similar system in the United States for the improvement of the horses of our army, as well as for other purposes. If a depot for stallions of approved breed were established by the government in each State and territory of the Union for public use, *free of charge*, incalculable benefit would doubtless accrue to the society, and, in less than ten years the improvement and increased value of the horses would be immense." How many are to be obtained is not stated, but as every farmer will be anxious to get a season to a stallion of approved breed when he can get it "free of charge," there must be enough for all. If half the horses of the United States are mares, then there will be upwards of two million to be sent to these "Haras," as the French call them; and at the rate of forty mares to each stallion, which is the proper proportion, we shall have fifty thousand stallions at a price, as they are to be of "approved breed," of some five hundred dollars each, or twenty-five million to begin with. Doubtless this new scheme of internal improvement will be found to work so well, that in a few years Congress will kindly furnish Parish Bulls—we hope they may be better than Mr. Shandy's—and may ultimately condescend to Rams and Boars. Whether Jackasses are to be added is a question which time must determine, and which may depend on the electoral vote of Kentucky. But one can well imagine, if they shall be, what a concord of sweet sounds one may hear at these delectable "Depots."

This completes the catalogue of wants and remedies so far as we are apprized of them. We contend that it is impossible to satisfy them by any action of the General Government; that any effort to do so must not only fail from clashing interests, diversity of pursuit, excessive taxation, and the very vastness, of the undertaking, but also from the amount of patronage involved, which, of itself, ought to swamp any government in the world.

We have not stopped, in presenting the naked facts and figures of this scheme, to suggest its other improprieties; and have no time for it now. We expect to return to them hereafter, if there shall be occasion.

That agriculture has wants we do not pretend to deny; but we believe she has a remedy for all them, much more attainable in practice, and much more unexceptionable in policy than the Home Department scheme.

Apart from government legislation on particular branches, which as political ground we cannot touch, and which is indifferently thought to benefit or injure particular interests, the whole of these wants may be resolved into the one great one—want of intelligence. Let farmers cultivate their minds, and they will learn to cultivate their lands, and to enforce the verdict of enlightened opinion upon our domestic law givers. We do not say let them trudge around the narrow routine which an agricultural college would impose, but let them be instructed, as for any other learned profession, in all the branches of a liberal education, and they will find a light reflected from each department which will illuminate the darkness of the way they tread.

We do not aspire to see all thus educated, because it is unattainable; nor do we believe it necessary. We would as soon expect to see every man a general who knows the manual exercise, as to see every labourer—on his own or another's land—a good farmer, or a man of sense even, because he can read and write. A few master minds to guide and direct the many is all we ever hope to see. And this we shall see.

Meanwhile the press is now doing much in this business both directly and indirectly. It is curious to hear persons speaking of the condition of agriculture, as beyond the reach of ordinary remedies, and holding up the successes of other classes, when we reflect that commerce has but few special presses, and only three periodicals in the United States; that the manufacturing and mechanical interests have no more, if so many; whilst agriculture has something like sixty, reaching the most secluded of our farmers, and dispensing a light that no where else beams on agriculture. When we contemplate the general intelligence of our whole population, its energy, resources, wealth, in one word its opportunities, and its advantages over the rest of the world, one would think that very shame would forbid the admission that agriculture requires the support of a paternal government, and an amount of fostering care that no

class in any country either receives or requires.

Let the press do its duty, and all will yet be well. But do not let it attempt to form public opinion, or to arouse the demon of caste. There is no call among the farmers for a "Home Department," and they will not "rise in their strength and represent themselves in the legislative halls with special reference to this question." Party ties, thank heaven, are stronger than caste, patriotism than tillage; human rights are more regarded than vegetable development; instincts cannot be misled by cant; and farmers will never believe that they have claims to a protection which would overshadow all other pursuits. But if they should, and should attempt to form a farmers' party, and wage war on all who will not join it, the true majority of the country, which shall consist of all classes, would soon convince them of their error.

One word as to the Agricultural Department of the Patent office, the entering wedge to the Home Department. Not denying that it may have done some good, and has groped along most benevolently in the dark, we are yet compelled to think it a nuisance where it is not a nothing. Its annual report is a mere scrap-book, made up of a few flourishing essays from its superintendent; of a "condensed correspondence," which gives as much idea of the true state of agriculture in the United States, as a Japan pea does of the Japanese Empire; of borrowed statistics, and of such items of agricultural information as any and every periodical can and does give in much greater profusion. Three merits it has: it is a book with which members of Congress can flatter their friends of the rural districts; it can uselessly increase the patronage of the government; and it can afford a fat job to the Public Printer. Perhaps it may be added as a fourth, that it distributes, as a *rarity*, the seed of the Oregon pea, dispenses the Chinese potato in competition with Mr. Prince, and keeps down the price of the Chinese sugar cane. Away with it.

CHINESE SUGAR CANE.

A friend from the county of Louisa, Mr. N. W. Harris, kindly sent us last fall a specimen of the stalks and seeds of the *Chinese sugar cane*. It was accompanied by an article from the National Intelligencer on the merits of this new product.

Instead of that article, we publish a better. A distinguished and enterprising *farmer* as well as planter of Georgia, Mr. Richard Peters of Atlanta,—grandson, by the way, of Judge Peters of Philadelphia, himself an enthusiastic farmer,—has prepared an account of his experiments with this cane for the public. The accuracy of his statements is confirmed in all material points by a report read before the *Beech Island Farmers' Club*, by Ex-Gov. Hammond of South Carolina.

Other statements, not necessary now to be given, prove its value as a soiling or forage plant for stock of all sorts, and especially for hogs. In this latter particular, we think its chief value to Virginia will be found. We favor a diversity of products on the farm; but the diversity ought only to embrace those staples products which can be raised on a large scale; and the cultivation of things either auxiliary to them, or entering largely into domestic consumption. But here in Virginia, the quantity of sugar and molasses consumed by each family is so small, that it seems to us not to come properly within either of the above classes. Most men can buy their sugar, as they buy their coffee, cheaper than they can make it. The day has gone by when a man thought it his duty to "make everything within himself;" and though a few require the daily task, of three cents' worth of carding and spinning in order to employ negro women, yet that class of managers is nearly extinct. We think the proposition to make one's own molasses among us, would be of that kind of management, and a retrograde movement. In the more Southern States it may be different.

As a staple product here it can hardly answer. In the first place, the quantity of sugar and molasses used in the world, is small relative to a great many other articles of food and luxury, such as are found adapted to our latitude; and if this cane shall be found well adapted to all the maize bearing zone, as is contended, it would be easy in a very short time to glut the market for sugar.

In the next place, if it be suitable to our climate it would seem to be still better adapted to the warmer countries in which sugar is now made; and if this be so they could make it more cheaply than we could: and they might make two crops in a year.

The price of sugar and molasses now is not relatively higher, at least not much so, than are our own leading staples. Those who get \$12 a 15 for tobacco, 80 a 90 cents for corn, \$1 50 for wheat, and 8 a 10 cents per pound for beef and mutton, can very well afford to pay what the former articles now command.

We are persuaded that the failure of the cane in Louisiana is a mere temporary thing: we cannot believe that the hard cropping to which the Mississippi low grounds are subjected has reduced their fertility so soon, especially when we reflect that the cane never ripens its seeds there, and that its product is an organic compound. But if it were otherwise, we should hesitate some time before advising the farmers of Virginia to embark in sugar-making. For miles along the Mississippi "coast," we have seen the process in full operation in all its departments, and know it to be a most laborious and expensive one.—Not only are the sugar lands very high priced, and a large force required to work them to advantage; but a very large capital is required to erect and repair the necessary buildings, and to operate the machinery. It is not an uncommon thing for a sugar house with its fixtures and machinery to cost \$20,000. Even then with the advantage of an ad valorem tariff of 30 per ct. in its favor, sugar-making rarely pays high profits, though 6 or 7 per ct. on such large investments makes a good round sum of money.

But the Chinese sugar cane is well worth trial with us as a feed for stock, especially for hogs, to whom it will prove a godsend. For this purpose we recommend its extensive introduction:

CHINESE SUGAR CANE AND GEORGIA SYRUP.

MR. EDITOR:—I feel it my duty to make known to the Southern public the result my Syrup making from the Chinese Sugar Millet, in hopes that others who have sown this valuable variety of the Millet, may be induced to work it up into syrup this season.

I send a few joints of the cane and a sample of the syrup, of which I have made several barrels.

I obtained my start of seed during the spring of 1855, from D. Redmond, Esq. of the *Southern Cultivator*. I considered it a "humbug" from its close resemblance in seed and growth, to the "Guinea Corn," until my children towards fall made the dis-

covery of its being to their taste equal to the true sugar cane.

This year I planted one patch April 15th, another May 18th, near Calhoun, Gordon county, on land that would produce, during a "seasonable" year, forty bushels of corn per acre, and this year not over twenty bushels.

Seed sown carelessly in drills, three feet apart, covered with a one-horse plow; intending to "chop out" to a stand of one stalk six inches apart in the row, but failed to get a good stand, as the seed came up badly from the deep and irregular covering. Worked out same as for corn, plowing twice and hoeing once.

By suggestion of Gov. Hammond, of South Carolina, I determined to give the syrup-making a fair trial; consequently ordered from the Messrs. Winship, of Atlanta, a very complete Horse Power Mill, with vertical iron rollers, that has worked admirably, crushed out juice for eight gallon of syrup per hour, worked by two mules, with one hand to put in the cane, and a boy to drive.

On the 13th of this month, finding the seed fully ripe, I had the fodder pulled, and the seed heads cut.

Yield of fodder per acre 1100 to 1300 pounds.

Yield of seed per acre 25 bushels of 36 pounds to the bushel.

First trial of Mill, 70 average canes gave 20 quarts of juice.

606 average canes passed once through the rollers gave 38 gallons 1 quart juice, passed a second time through, gave two gallons of juice, the 40 gallons 1 quart gave 8 gallons thick syrup.

I carefully measured an 8th of an acre, having the best cane and the best stand, another 8th having the poorest canes and the poorest stand. The result I give below, the canes passed once through the rollers.

BEST EIGHTH OF AN ACRE.

Yield of juice from 3315 canes,	-	253 gals.
Yield of syrup from 253 gallons		
juice,	-	53½ gals.
Rates of syrup per acre,	-	468 gals.

POOREST EIGHTH OF AN ACRE.

Yield of juice from 2550 canes,	-	179 gals.
" Syrup from 179 gals. juice,		
Rate per acre, of syrup,	-	346 gals.
Weight of 30 selected canes,	-	49½ lbs.
" Juice pressed out,	-	25¼ lbs.
" Crushed cane,	-	23 lbs.
Loss in crushing,	-	¾ lbs.
Weight of crushed cane dried in		
sun,	-	9½ lbs.

Obtaining such unlooked for success with the Chinese Sugar Cane, I concluded to try our common corn.

From a "new ground" planted 3 by 3, one stalk to a hill, a week beyond the roasting-ear stage, I selected 30 stalks.

Weight of 30 stalks, - - -	35 $\frac{3}{4}$	lbs.
“ “ Juice, - - -	15 $\frac{1}{4}$	lbs.
“ “ Crushed stalks, - - -	19 $\frac{3}{4}$	lbs.
Loss in crushing, - - -	$\frac{1}{2}$	lb.
Yield of syrup, - - -	1 $\frac{1}{2}$	pts.

The syrup of corn is of a peculiar disagreeable taste, entirely unfit for table use.

The following tests were made at the mill by Dr. Robert Battey, of Rome, Ga., a graduate of Philadelphia College of Pharmacy:

Specific gravity of Chinese Sugar Cane juice, - - -	1,085
Specific gravity of syrup, - - -	1,335
“ “ N. O. syrup, - - -	1,321
Thermometer applied to syrup, - - -	77 deg.
“ “ Juice, - - -	70 deg.
Saccharometer “ Juice, - - -	25 $\frac{1}{2}$ deg.

The juice should be placed in the boilers immediately on being pressed out, then boiled slowly until the green scum ceases to rise; then stir in a tea-spoonful of air-slacked lime to five gallons of juice; continue skimming and boiling until the syrup thickens and hangs down in flakes on the rim of the dipper.

I have made the clearest syrup by simple boiling and skimming, without lime or other clarifiers.

The lime is requisite to neutralize a portion of the acid in the juice—the true proportion must be determined by well-conducted experiments.

The cost of making the syrup in upper Georgia, in my opinion, will not exceed ten to fifteen cents per gallon. This I shall be able to test another season, by planting and working up 50 acres of the cane.

I am satisfied that this plant will enable every farmer and planter in the Southern States, to make, at home, all the syrup required for family use, and I believe that our chemists will soon teach us how to convert the syrup into sugar for export, as one of the staples of our favored clime.

RICHARD PETERS.

Atlanta, Ga., Sept. 20th, 1856.

PRINCESS ALICE MAUD STRAWBERRIES.

We have to thank our friend Guest for some fine plants of this very delicious Strawberry, which we had an opportunity of tasting last year. No doubt he has a plenty of them for sale.

AYLESBURY DUCKS.

Our friend Jno. G. Turpin, of Chesterfield, near Petersburg, has sent us a pair of beautiful Aylesbury Ducks. These fowls are milk white, and the most beautiful and admired of the domesticated duck. Mr. Turpin is well known as a successful breeder, not only of

ducks and all sorts of fowls, but also of hogs, of which he has some very fine ones of various varieties. He is also an agent for the purchase of stock generally.

KOSSUTH.

See Mr. Smith's advertisement of this fine stallion. As the best trotting stallion in the South, if not in the United States, and the recipient of the highest honors at all our State Fairs, there can be no harm in calling attention to him.

NEW BOOKS.

MORGAN HORSES: A premium essay on the origin, history, and characteristics of this remarkable American breed of horses; tracing the pedigree from the original Justin Morgan, through the most noted of his progeny down to the present time; with numerous portraits. To which are added hints for breeding, breaking, and general use and management of horses, with practical directions for training them for exhibition at agricultural fairs. By D. C. Linsey, Middlebury, Vermont. Published by Saxton & Co., N. Y. Price \$1 25.

We are indebted to Woodhouse & Co. for a copy of the above work, which took the first premium on Essays at the Vermont State Agricultural Society.

We have read it, and think highly of it. It is well written, plainly and without pretension, fairly and honestly setting forth the peculiarities of this invaluable breed of "big little" horses.

Being advocates for horses of that size, as every man who uses mules must be, provided he can get in a horse the best qualities of the mule without his unsightliness and his vices, we are glad to see a systematic work introducing and tending to perpetuate this breed. We are persuaded that they will make a good substitute for the mule, when the breed becomes established.

From J. W. Randolph we have received a copy of THE PHYSICIAN'S TABULATED DIARY, designed to facilitate the study of disease at the bedside. By a Physician of Virginia.

According to the preface, "This Diary is intended to embrace not only the ordinary business memoranda of each day, but observations of disease, recorded, if practicable, at

the bedside. The chief ends attained are—

1. Prompt entry of charges.
2. Whatever is decided upon at the bedside as worthy to be remembered, is entered on the spot in writing with not more than *three minutes'* delay.
3. It encourages careful enquiry into facts, with fuller consideration and study afterwards.
4. Notes are to be made of all cases, however trivial at first, so that if they become grave, their early history may be accessible. And a note once made, ought, in honour, never to be changed without acknowledgement.
5. Practitioners are enabled to refer to written records of all their experience, after days, months, or years have elapsed.
6. If used even by a few observers in different sections of the country, materials will be accumulated for analysis and generalization, which may, in time, render the auspices of "medical associations," greatly elucidate questions of medical topography, etiology, therapeutics, and pathology.
7. The appendix is intended for certain records which are required but once for each patient, or which could not be entered in the Diary."

We do not know that we could have done more than simply notice the reception of this little book from Mr. Randolph, if it were not that we knew the author, and esteem him as an able physician, and a gentleman of eminently philanthropic turn of mind. He is also endowed by the commendation of two of the medical Professors of the University of Virginia, whom we honor as men of science in their profession.

This is the first effort made in the South that we know of, to collect the facts of disease in such a form that they may become generalized, and authorize that sort of induction which constitutes science. In fact it is the first effort to acquire, with a view to future generalization, any class of facts whatever; and we feel bound, in just tribute to sound philosophy, to do what little we can to advance the cause.

It may lead to a tabulated Diary of farm operations. As that would be a record of many thousands of obscured *facts*, it is needless to say how much it would do to advance the practice of agriculture, and lay the foundations of its science deep in the basis of experience.

The habit of that system will do as much

for the individual farmer, as for the science of husbandry. The examples of Von Thaer and Bousingavet will not there be a reproach to their collaborators in the same great field.

As to the particular book we speak of, The Tabulated Diary, we cannot expect the old physicians to take it up, as a general rule: "It is hard to learn an old dog new tricks." But it will be a shame if the younger members of the profession neglect this ready-made opportunity to advance science and improve themselves.

We have also received from Mr. Randolph, an enlarged and improved edition of STÖCKHARDT'S CHEMICAL FIELD LECTURES. We have read the greater part of the first edition, and looked into this one sufficiently to see that it is an improvement. It is well worth reading.

SOIL OF THE SOUTH AND AMERICAN COTTON PLANTER.

We observe that these two valuable and meritorious Southern Agricultural journals have been consolidated. Dr. Cloud and Mr. Chas. A. Peabody, editors. We wish them success, and we know that they deserve it.

PEABODY'S NEW SEEDLING STRAWBERRY.

Mr. Charles A. Peabody of Columbus, Georgia, has originated a new variety of the Haut-boy Strawberry. His success in raising strawberries has been very remarkable, and he proposes to introduce this new variety extensively by selling the plants on the following terms: to get one thousand subscriptions at \$5 00 per dozen plants throughout the whole country; subscribers, who forward their names and address and the number of plants they want, will be at once furnished with a beautiful coloured plate of the vine and fruit drawn from nature. When the list is made up the plants to be sent by mail, put up in moss and enveloped in oil silk, in which way they will go with safety and certainty.

A copy of the coloured plate, with a description of the fruit, is now at our office, where it may be seen by all who will call on us.

We have no personal knowledge of this strawberry, but if the engraving is a correct likeness, it is a most desirable fruit.

TO SUBSCRIBERS.

We earnestly request that you will read our "Terms" at least *once a year*, and *always* before writing us upon any subject connected with your paper. We frequently receive letters containing remittances, and others requesting discontinuances or directing a change to other post-offices when the office to which the paper is sent is not named. Such omissions occasion us a great deal of trouble, and it not unfrequently happens that your wishes cannot be attended to in consequence of your neglect to conform to this *standing request*.

REMEMBER *always* to name your post office when writing about your paper.

GENERAL NOTICE.

In accordance with the notice given in a previous number of this paper, we commenced with the July number to drop from our list, all subscribers who are in arrears for three years or more, and shall continue to do so until the first of January next, at which time we intend to drop all who are then in arrears for two years and upwards. But in doing so we do not intend to relinquish our right to collect our dues from such delinquents, but shall send out their accounts regularly or place them in the hands of Agents for collection. We do not design to adopt *strictly* the *cash system*, but we desire to approach as near to it as possible, and wish our "Terms," which are printed conspicuously in every paper to be understood by all our subscribers.

WANTED

January and September numbers of the Planter. Subscribers who do not preserve their papers for binding, and who have either or both of the above numbers will confer a great favor upon us by forwarding them to this office.

INQUIRIES ABOUT AMMONIA.

Water and charcoal *absorb* ammonia. Clay and Gypsum do not *absorb*, in the strict meaning of the term, but enter into chemical combination with ammonia. One hundred pounds of pure gypsum is capa-

ble of holding 25 lbs. of ammonia. The sulphuric acid of the gypsum (sulphate of lime.) enters into chemical combination with the ammonia, forming a definite compound, sulphate of ammonia. The capacity, then, of gypsum to absorb ammonia, is in proportion to the sulphuric acid it contains. It must be borne in mind, however, that gypsum does not combine with ammonia under all circumstances. We have passed a stream of ammonia through dry and moist gypsum, burnt and unburnt, for several weeks, but no sulphate of ammonia was formed—at least none that could be detected. This is a result that might have been anticipated; few, if any chemists, claim that pure ammonia will decompose gypsum. It is essential that the ammonia be united with carbonic acid. When carbonate of ammonia and gypsum *in solution*, are mixed together, a precipitate of carbonate of lime is immediately obtained, sulphate of ammonia remaining in solution. This is a common laboratory experiment; and it is not to be wondered at that mere "laboratory chemists" recommend that "every farmer should use a wagon load of gypsum each year," for the purpose of "fixing" the ammonia of dung heaps, &c. It will do this effectually if in solution; but in the dry or moist state, it certainly has little or no effect. PHILIP PUSEY, the late lamented editor of the *Journal of the Royal Ag. Society*, made some experiments to test the power of gypsum as a "fixer" of ammonia, but found that it did not come up to the recommendations of the chemists. We give the results of some of these trials in his own words:

"Ammonia," he says, "was escaping largely from the litter of a barn-yard, as could be perceived by the common test of holding near the surface, paper dipped in spirits of salt, which turns the invisible fugitive into a white opaque steam of sal-ammonia. A whole bushel of gypsum was strewed over a few square feet of the yard. *The test showed that the escape of ammonia was uncured.* We have been also advised to strew the pavement of stalls with white gypsum to sweeten our stables. The remedy was applied in my own, *but the stables not sweetened.*"

We have made several experiments during the past year, in order to deter-

mine if dry or moist gypsum will decompose carbonate of ammonia. The question is surrounded with difficulties, and we are unable to satisfy ourselves on the point. One thing is certain, a *stream of carbonate of ammonia will pass through several inches of dry plaster*. It is equally certain that if dry or moist plaster possess the power of decomposing carbonate of ammonia, it is in a very slight degree only; so slight as to be of little practical use in composting manures, &c. If it could be used in solution, (it requires to dissolve it about 500 times its own weight in water,) it would prove effectual; and when a bushel or so is sown on an acre, it will be more or less dissolved by the rains, dews, and moisture of the soil; and in this state it will convert the carbonate into a sulphate of ammonia. Whether this is desirable or not, depends on circumstances which we cannot now examine. One thing is certain, plaster benefits clover more than it does wheat, while, it is equally certain that wheat requires more ammonia than clover.

The action of gypsum is at present involved in much mystery.

In regard to the power which clay soils possess of absorbing ammonia from the atmosphere, Prof. Way remarks—

“Hitherto we have spoken of the power of the double silicates to unite with ammonia, and separate it from *solution*. More important, if possible, is the faculty which some of these soils possess, of abstracting ammonia from the air. It has long been known that soils acquire fertility by exposure to the influence of the atmosphere—hence one of the uses of fallows. It has also been generally understood that clay possessed a power of absorbing ammonia from the air, but only through the influence of rain or dews, to bring down the volatile carbonate. This latter condition, however, is not at all necessary. I find that clay is so greedy of ammonia, that if air charged with carbonate of ammonia, so as to be highly pungent, is passed through a tube filled with small fragments of dry clay, every particle of the gas is arrested. In the same way, if into a bottle filled with air similarly impregnated, a little ordinary soil is thrown, and the bottle is then shaken once or twice, all ammoniacal smell is destroyed. The double silicate of alumina and lime is in

these cases also the cause of absorption. If, instead of clay, sand be placed in the tube, no obstacle is presented to the passage of the gas; but by mixing with the sand a few grains of the lime silicate, we can immediately arrest it. The avidity of this silicate of lime and alumina for carbonate of ammonia is most marked. A few grains of the salt were spread upon a piece of paper, and covered with a glass bell jar; in a few hours the silicate was found to have absorbed between two and three per cent of ammonia, and the action will go on till the salt is entirely saturated. The chemical change in this case is very simple—the carbonic acid of the carbonate of ammonia attacks the lime, whilst at the same time the double silicate of alumina and ammonia is produced. It is remarkable that the corresponding soda silicate does not absorb carbonate of ammonia; or, at all events, if it does so in an atmosphere highly impregnated with the volatile alkali, it gives it off again as soon as it is exposed to the air; in ordinary circumstances, therefore, it does not absorb ammonia from the air.”

Prof. WAY thinks these facts may account for the difference in natural fertility of different soils, and the power of conferring increased fertility on land by abundant cultivation. It is well known that some soils are benefited to a great degree by a good fallow, while others receive little or no benefit. We know that ammonia exists in the air, in small quantity indeed, but when taken as a whole in abundance, materially to affect the growth of plants. The double silicate of alumina and lime which exists in clay, has the power of abstracting carbonate of ammonia from the air, and retaining it for the purposes of vegetation.

“As there is good reason to believe,” says Prof. Way, “that different soils may contain unlike quantities of this double silicate, so they will, other things being the same, possess unlike degrees of natural fertility. In this circumstance, we may probably find an explanation of the singular fertility of some soils, of which it is recorded that they have been cropped year after year, with wheat, for a very extended period, without any apparent diminution in their power of yielding it. Upon examination, nothing extraordinary has been found in the composition of such

soils to account for such a degree of fertility; but it is extremely likely that a further inquiry, with the aid of the light now thrown upon the subject, will show that the superiority of such soils is dependent upon their possession of a greater power of acquiring manure from the air may be judged of from the following experiment, which we take from many others giving similar results. (See Journal of the Royal Ag. Society for 1855, page 491.) One thousand grains of soil, containing 0.085 grains of ammonia in its natural state, was exposed to the vapor of ammonia; after which it was found to contain 3.286 grains of ammonia. It follows from this that an acre of soil, ten inches deep, would absorb 7000 lbs. of ammonia, equal to 700 tons of barn-yard manure. Prof. WAX well observes:

“As a matter of course, such results as those now given can never occur in practice, because centuries probably would be required for a soil to absorb from the atmosphere containing only traces of ammonia, the same quantity of the alkali which it acquires in a few hours from air highly charged with it. Still, as a measure of a power which is always in operation, and which is only limited by the extent of the subdivision of the soil, and the frequency with which the air in its pores is changed, these numbers are very interesting. They afford at once an encouragement to abundant tillage of the land, and an explanation of the fertility which almost invariably follows it.

We feel that we have not satisfactorily answered the inquiries of our esteemed correspondent—indeed we believe it is, in the present state of agricultural chemistry, impossible to give definite answers to the questions he has propounded—but we have collected a few facts which may not prove uninteresting. We trust some of our correspondents will give their views on the subject.

J. H.

Country Gentleman.

STRYCHNINE.

In Ceylon and several districts of India grows a moderate sized tree, with thick, shining leaves, and a short crooked stem. In the fruit season it is readily recognized by its rich, orange colored berries, about as large as golden pippins; the rind is hard and smooth, and covers

a white, soft pulp, the favorite food of many kinds of birds, within which are flat, round seeds, not an inch in diameter, ash-gray in color, and covered with very minute silky hairs. The tree is the *Strychnos Nux Vomica*, and the seed is the deadly poison nut.

Powdered nux vomica, which is one of the forms in which the drug is preserved, has an extremely bitter taste, and smells like licoric. As a medicine it acts, in very small doses, as a tonic; and in rather large quantities it is given as a stimulant to the nervous system. Its very peculiar and extraordinary energetic effects, when taken in a poisonous quantity, have excited the interest of physiologists; and hecatombs of cats, and dogs, and mice, and guinea pigs have been sacrificed in their researches. In 1809, MAJENDIE and DELILLE read a paper before the French Institution on the result of their experiments on animals. Ten grains taken internally killed a dog in forty-five minutes, and a grain and a half thrust into a wound killed another in seven minutes. The symptoms were, in every case, of the usual character. The animal, a few minutes after the introduction of the poison, becomes agitated and tumbles; in a short time is seized with stiffness and starting of the limbs, which increases until a general spasm ensues, in which the head is bent back, the limbs are extended and rigid, the spine stiffened, and respiration ceases.

QUERY ABOUT SEWING MACHINES.

A Valley farmer, with thirty in family, wishes to know if any of the patrons of the Planter can recommend, from actual use, a good sewing machine. If they can, they will greatly oblige many Virginia wives by giving the manufacturer's name, and the cost of the machine. The same information is wanted in relation to a good knitting machine.

If sewing and knitting machines, adapted to the use of families, were offered for sale in Richmond and Alexandria, hundreds could be sold per year. A few have been purchased in the Northern cities by Virginians, but have all failed to answer the purpose.

A CLARKE COUNTY SUBSCRIBER.

TESTING GUANO.

The previous analyses show, a guano may be perfectly genuine and yet miserably bad; how great then must be the danger of deception, when intentional adulterations, which render a good guano comparatively worthless and a bad guano still worse, are superadded! Under these circumstances, it cannot be too strenuously recommended to the farmer, that, unless he wishes to run the risk of throwing away his money, he should buy guano from such sources only as are known to be undoubtedly trustworthy, or after a previous chemical examination. If he is not afraid of a little time and trouble, he can institute a trial for himself very easily. Tests are now possessed of such simplicity as to require scarcely more dexterity and attention than roasting or boiling coffee, and yet sufficiently accurate to serve in doubtful cases as reliable guides.

1. *Test by drying and subsequently washing with water.*—If the guano, as is generally the case with those kinds that are brought from Peru and Chili, is a uniform powder, weigh out two ounces, spread it upon paper, and let it lie for two days in a moderately warm place, in summer in a dry and airy situation, in winter in a warm room or chamber, in order that the air may dry it. What it may then have lost in weight must be esteemed superfluous water. Many sorts of guano are so moist as to lose by this gentle drying from three to four drachms (20 to 24 per cent.) in their weight.

If the guano, like the Patagonian and African, is not of uniform character, then, in order to obtain a mixture as equable as possible, the lumps, which have frequently an altogether different composition from that of the powdery portions, must be broken in pieces and pulverized, before weighing off and drying a given quantity. In like manner care must be taken to distribute stones, feathers, &c., when they are present, equably throughout the mass. As the stones are often so firmly stuck over with the guano that they can only be freed from the latter by tedious scraping, it is advisable to pour hot water over a distinct portion in some convenient vessel, and to let it soften by standing for a night, upon which stones and sand will remain behind after agitation and washing with water.

2. *Test by combustion.*—Pour half an ounce of the guano to be examined into an iron spoon, and place it upon red-hot coals until a white or grayish ash is left, which must be weighed after cooling. *The less ash is left behind, the better is the guano.* The best sorts of Peruvian guano yield, from half an ounce, somewhat more than one drachm of ashes (30 to 33 per cent.); whereas the inferior guanos that are now so often offered for sale (for example, Patagonian, African, Saldanha Bay, and Chili guanos) leave a residue of from 2½ to 3 drachms (60 to 80 per cent.), and those intentionally adulterated a

greater quantity of ashes. Of genuine guano, the bad as well as the good, the ash is always white or gray; a yellow or reddish colour indicates an adulteration with loam, sand, earth, &c.

The test is very simple, and at the same time very trustworthy; it rests upon the fact, that the nitrogenous combinations existing in guano, and forming, as has been demonstrated in a preceding section, its most valuable ingredients, undergo combustion and volatilization when subjected to heat. Here, too, the difference of odour during the combustion is characteristic. The vapours from the better specimens have a pungent smell, like spirits of hartshorn, with a peculiar piquancy, almost like old Limbourg cheese (decayed); whilst those rising from inferior varieties smell like singed horn-shavings or hair.

The combustion may be undertaken on any hearth or in any parlour stove, without fear in the latter case that a disagreeable odour will be diffused throughout the room. A brick should be firmly thrust down into the fire, and the spoon laid upon it in such a way that the handle rests upon the brick, and the bowl with the guano projects free over the fire. A cork should be fixed on to the extremity of the handle, in order that the hand may not be burnt when brought in contact with the heated spoon.

3. *Lime test.*—Put a teaspoonful of each kind of guano to be examined into a wineglass, and upon this a teaspoonful of slacked lime; then add a few teaspoonfuls of water and agitate the mixture briskly. Lime liberates the ammonia from the ammoniacal salts contained in the guano, in just the same manner as from rotten muck and putrid drainings (page 82); and this escapes; *the more excellent, therefore, a guano is, the stronger will be the pungent ammoniacal odour which escapes from this guano paste.* This test does not indeed possess the accuracy of the preceding, but is still in many cases very convenient on account of its simplicity, and more particularly where it is desirable to pass a general and approximative opinion upon the quality of different kinds of guano. Under present circumstances, especially, its utility appears the greater, because guano of intermediate quality is now of very infrequent occurrence, and commerce presents us for the most part with remarkably good or remarkably bad qualities, in examining which the lime test can be advantageously used, inasmuch as the difference in the strength of the odour is really so remarkable, that it cannot escape the detection of the most unpractised nose.

In order to be able to apply this test at any moment, it is judicious to keep a portion of slaked lime constantly on hand. But that this may not lose its effect, it must be carefully excluded from the air, and should, therefore, be preserved in a dry and well-corked bottle.

4. *Test with hot water.*—Make a filter of blotting-paper, folded together into the shape of a cone, and put this into a tin-funnel or wire tri-

angle. Let half an ounce of the air-dried guano be placed in this, and over it pour hot, best boiling water, as long as it passes through of a yellowish colour. If the paper with the moist guano is laid, when no more liquid drops from it, in a warm place, and the residue weighed when it has become completely dry, the deficiency from half an ounce will show the weight of those elements which have been dissolved by the water. As a general rule it may be held, *the larger the quantity of a guano that is dissolved in water, the more ammoniacal salts does it contain, and the better it is.* Hence that guano must be preferred, as in the test by combustion, which, upon being so treated with water, leaves behind the smallest residue. In the best or Peruvian guanos, the residue from half an ounce that is insoluble in water amounts to about 2 drachms (from 50 to 55 per cent.); on the other hand, in the comparatively worthless guanos from 3 to 3½ drachms (80 to 90 per cent.).

Exceptions to this rule may, however, occur, namely when a guano contains many soluble mineral salts. Specimens have been met with in commerce which consisted to the extent of one-half or two thirds of sea-salt and Glauber salt; such guanos, upon being treated with hot water, would only leave a residue of from one to two drachms of insoluble substances, yet must, nevertheless, be regarded as anything but good merchandise. In such a case most complete security is afforded against an erroneous decision, by the use of the combustion test described above (p. 134); for then it would be found that a guano of the kind in question yielded three drachms and more of ashes, and must accordingly be admitted as an inferior variety.

5. *Vinegar test.*—Pour strong vinegar, or, better still, some muriatic acid, over the guano to be examined; if a strong effervescence ensues, an intentional adulteration of guano with lime may be inferred. This substance may also be recognized by the combustion test, since lime remains behind in combustion and augments the quantity of ashes.—*Stockhardt's Chemical Field Lectures.*

DWARF PEAR CONTROVERSY.

The Country Gentleman publishes a very sensible article on the subject of the cultivation of the dwarf pear, which we transfer to our columns with pleasure. The remarks coincide with our own experience on the subject. It is all important that the proper stock should be used. The Angiers quince is the only variety fit for working. The other varieties are generally of slow growth and short-lived. We would by no means advise the planting of dwarfs instead of standards where *time* and *space* are not material considerations.

“Our readers know that a difference of opinion has existed for many years in relation to the value of dwarf pears. More than ten years ago, a distinguished western pomologist predicted that in ten years dwarf pears would be among the things that *had been*. At the same time they had many strong advocates, and the trees had been widely disseminated and planted. With a large number, dwarfs have succeeded, and with probably a still larger number, they have proved at best partial failures. There still remains a great difference of opinion in relation to them, and the controversy has of late rather increased than diminished. The inquiries, consequently, are repeatedly coming from all quarters, “Do you regard dwarf pears a humbug?”—Why do so many fail with them?”—What is the reason that doctors disagree so much in regard to their merits?”

The answer to these questions are not difficult. One great reason that dwarf pears fail with so many, is founded in a general and erroneous opinion that fruit trees of all sorts, young and old, *will take care of themselves*. They alone, of all cultivated garden or farm crops, are expected to flourish without attention. First of all, perhaps, they are planted in a grass soil.

The farmer who would deliberately plant a crop of corn or potatoes among grass, would be looked upon as an idiot. The gardener who would set out his cabbage plants, or sow a crop of beets in the tough sod of a green meadow, might be sent to the lunatic asylum. Yet young fruit trees are often set in the turf of door yards, or in weedy, uncultivated places, although their first cost is fifty times as great as the value of the seed for the farm crop or cabbage plantation. We have seen plowmen destroy valuable young trees, worth a dollar each, by running over them, so as to avoid an adjacent hill of corn or potatoes, worth about seven mills currency. Trees generally have the last of all chances—they stand at the fag end of the list of all objects for cultivation. This is the feeling entertained towards them by most planters. A Rhode Island Greening, a Roxbury Russet apple tree, or a Kentish or Black Heart cherry tree, will withstand a great deal of abuse or neglect, and hence, with all this bad treatment, they succeed tolerably well. But with most other kinds

of fruit, such treatment will end in failure, or at least afford a poor return. Until planters come to regard fruit trees as worth at least as much attention as they always expect to bestow upon their fields of corn, we shall hear sad stories about humbugs, and of the hazardous business of attempting to cultivate the finer sorts of fruits. It appears to us really astonishing that some very sagacious and well informed men on almost everything else, should not see at once that this is the great leading cause why we hear so often that dwarf pears are a failure. Every skillful fruit-raiser knows that nothing is easier than to raise good strawberries; yet men may be found by the hundred, who, having planted beds of the most productive sorts, and then wholly neglected them, gravely announce their opinion, that "There is no use in trying to raise strawberries—we never had any luck with them." A bed of beets or parsnips, similarly treated, would unquestionably lead them to the conclusion, that "beets and parsnips are very tender, difficult and uncertain to raise,"—for they will not grow under thick weeds a foot high, and if treated as fruit trees are, will certainly prove failures.

There is another reason why dwarf pears have in many instances not met the expectations of planters. There is only a comparatively small number of sorts which appear to be perfectly at home on the quince stock, and to which dwarfs should always be confined, unless for experiment. Other sorts make, but feeble growth, and do not live long after the first heavy crops, and those should be avoided. This subject has, however, been often before our readers, and we need not enlarge upon it here.

Some *localities* appear unfavorable to the successful growth of dwarfs, and we have known instances where the occupants of such localities, having not succeeded, have coolly decided for all other localities from these limited experiments.

Every thing should be kept in its proper place. Nothing should be claimed for any fruit, or any mode of growing fruit, which does not properly belong to it. A strawberry will always be a *strawberry*—needing certain management, and affording certain results—and nothing else can be made of it. It needs *garden culture*—yet this garden culture may be extended over

large fields. The same remark will apply to the dwarf pear. Hundred-acre orchards may be planted with it, provided it receives its proper treatment. The man who would set out fifty acres with strawberries, who had not previously become well acquainted with the peculiarities of their management on a smaller scale, might find it a costly experiment: The same result might take place in planting largely of dwarfs. We have known some who have done so, knowing little of their peculiar requirements, and with the supposition that they would grow without care. They of course found ultimately that dwarfs were a "humbug." The same summary decision would no doubt have been made by one who attempted for the first time, and with no previous knowledge whatever, to raise watermelons or cabbage. It was a hundred years after the introduction of the potatoe into England, before its cultivation, uses and value were well understood, and it was well that it was not hastily rejected.

We have never yet witnessed the failure of a dwarf peach orchard, where these three requisites had been combined, namely, 1. Good cultivation, or as good as squashes and pumpkins receive in order to flourish well. 2. Selections of those sorts which have proved best for this purpose. 3. A previous trial on a small scale, to prove their adaptedness to the particular soil and locality where planted. One of the best and largest orchards of dwarfs we ever saw, with large thrifty trees, and affording an average of some hundreds of dollars per acre annually, had indeed good enriching treatment; but after all, the cultivation and amount of manure applied did not exceed that given to good corn-fields by our best farmers.

We have sometimes had a strong hope that the introduction and culture of dwarf pears might be the means of a reformation in the treatment of fruit trees, and that by actually *driving* cultivators to give proper attention to the one, from absolute necessity in the case, they might acquire an improved habit in managing trees generally. The good result has undoubtedly taken place already to a considerable extent, and there is no question that the diffusion of intelligence on this subject will extend the improvement already commenced. The discussion and controversy now existing

must as a matter of course, result in important benefit, by eliciting facts, and developing new truths, and those are what we all earnestly look for and desire.

It is sometimes intimated that self-interest alone prompts the recommendation of dwarf pears. So far as the writer of these remarks is concerned, this cannot be the case, as his self-interest leads in an exactly opposite direction, but the desire of arriving at the truth, irrespective of any selfish motives, to place these trees precisely where they belong, and to avoid those extremes in deciding questions which many are always prone to fall into, have been alone the suggesting motives for these remarks.

RANDOM THOUGHTS ON THE FEET OF HORSES, AND SHOEING.

Great diversity of opinion exists among men as regards the best method of shoeing; but the reader may consider, as a universal principle, that the best system is the one which preserves the natural position and tread of the foot, and adapts that kind of shoe best calculated to preserve the parts, and bring the frog in contact with the ground.

On the other hand, no specific rules can apply to the general art of shoeing, because horses feet differ, both in health and disease, that a certain form of shoe adapted for one horse would be unsuitable for another. Therefore, as the *feet* differ, so also must the *shoes*.

We take it for granted that the hoof is elastic—that it expands in downward and backward directions. If any persons doubt the expansibility of the hoof in those directions, we would remark, that this must have been the intention of nature, for the hoof is left open at the heel, between which is interposed a soft elastic substance, termed the frog, which favors the motions alluded to. Had the intentions been otherwise, the hoof would probably have presented itself in the form of a hollow cylinder. This compound expansion takes place when the foot, with its superincumbent weight of body is planked fairly on the ground, and is *regulated* by the force of the effort it has to sustain.

The parts within the hoof, possessing also the properties of contraction and expansion, or rather articulation, change their

form *also* under the influence of pressure, acting conjointly to lessen the shock of concussion.

Now, in order to favor this expansion, so salutary as it must prove to the foot, the nails must not be inserted any nearer the heels than the safety of the shoe requires: for we shall readily perceive that if the shoe be nailed all round, the hoof is then fettered at its base, and of course cannot admit of the least motion. Two nails on the in, and three on the outside, are all we need to secure the shoe: provided, however, the nails be countersunk and well riveted or clinched. If they are not, the shoe soon becomes loose, in consequence of the nails being driven home by repeated blows on their heads, while the horse is travelling on hard roads.

The shoe must be applied with an understanding, that whatever be the nature of the road, the frog must come in contact with it. In England, many of the roads are macadamized—their surface being strewn with flint stones, their edges almost as sharp as a razor; yet this does not deter the smith who has studied the anatomy of the foot, from letting the frog come in contact with the same. No; he is aware that nature is ever ready to adapt every part of the system to circumstances.

We all know that the soles of the feet of children, who are accustomed to go barefoot, soon becomes callous—almost insensible—just so with the frog; the nature of the ground over which the horse travels determines its form, character and endurance. Examine the frog of the colt; we shall find that it is well developed, full, prominent, and callous. This is the result of the stimulus and hard knocks it receives in travelling over all sorts of road. Look at the same animal's foot after he has been submitted to the popular evils of domestication and shoeing, and we often find it wasted and almost obliterated—a mere apology for a good frog.

The blacksmiths, however, are not at all times accountable for this, for in the winter season *caulks* seem to be necessary, and then it is impossible to bring the frog in contact with the ground; so that during this period its function may deteriorate. And disease of the foot also alters the structure and size of the frog. A deep-rooted prejudice exists in favor of cutting away the superfluous frog; but so

soon as its function shall be understood, the error will cease.

There are many reasons why the frog should never be mutilated, and we shall mention two or three. In the healthy frog there is a solid wedge-like portion of horn extending from the cleft to the point of the toe. It lies directly under that small, yet very important bone, called navicular. The bone itself and its associate tissues, are often the seat of a very painful disease, known as navicularthritis; and we think it often arises in consequence of removing this bulbous prolongation, termed the anterior point and bulb of the frog. Its principal use is to protect this very important bone, and shield it in this direction from the violence it must occasionally meet with on rough ground.

A very distinguished surgeon asserts that, when once this bulbous enlargement is shaved off it can never be reproduced, and that is the reason why we cannot find it in many shod horses. It not only protects the navicular bone, but to a certain extent the coffin point. Yet there is no part of the frog with which greater liberties are taken, than with this. In fact, it generally undergoes a pretty essential whittling every time the horse gets an introduction to the man of knife and butte-ris. The bulb of the toe once removed, nature causes augmented secretion of horny surface to supply the deficiency. The secretion is very abundant, but nature is no match against edged tools—the faster it goes, the better chance is there, by those who feel disposed, to whittle at every subsequent shoeing. Such extraordinary efforts at reproduction soon impairs the secretory function, and we then have a hard brittle substance, destitute of elasticity, which almost defies the knife of the shoer.

Then consider the frog itself—that well-defined promontory—that cushion-like substance, which, by coming in contact with the ground, prevents jar and concussion, not only to the sensitive tissues within the hoof, but to the joints above—in fact, it lessens body concussion. It is a part which develops itself in the same ratio with the hoof and sole, establishing a bond of union between the sensitive tissues and the insensible. A part, therefore, which serves, as the basis of the animal structure, cannot be removed with impunity.

Cut away the frog, and we take away

the solar support, and prevent that sole coming in contact with the ground. Now put on a shoe having no bearing but against the hoof, and we shall readily perceive that the horse's weight is borne by the hoof—so great a weight having no opposing resistance, except that furnished by the inside of the hoof, must naturally lead to strain of the laminae and descent of sole.

Descent of sole, implies laminal dislocation; the horse is then in a partly ruined condition. We contend, therefore, that the frog should seldom, if ever, be interfered with. We may remove the rough and loose portions, about as much as the animal without shoes would naturally wear off; and this is not always good policy, for the ragged, uneven parts often serve as a protection to the new formations above. The part looks better for paring, we grant, but health does not consist of beauty alone: we have seen some very handsome horses, yet having the finger of death on them. You may get a very handsome hoof by *rasping* or scraping it with glass; but we will defy any man to make a healthy one by the same process.

The time *has been*, when the cutting away of the frog was recommended by some very eminent men—so that the *smiths* who now practice it in *good* faith, are no more to be blamed than the former. One author has tried to smooth over the affair, by observing, that “the frog offers so little resistance to the knife, and presents such an even surface—so clean, nice, and smooth, that it requires more philosophy than smiths generally possess, to resist the temptation to slice it away, despite a knowledge that it would be far wiser to let it alone.”

If the opinion of veterinary surgeons is of any value, the reader must confess that the error of paring the frog is injurious. One of the best authors on the subject, says that he never allows a knife to approach the frog, because experiment has shown that the frog possesses less power of reproducing horn than other parts; and the same individual has had horses in his possession five years, whose frogs never made the acquaintance of a knife.

Examine the structure of a frog, and you will find that it is covered with a thin, delicate envelope—a texture once removed is sparingly reproduced. Cut it off, and the parts beneath are unprotected—unfit-

ted to grapple with hard ground or exposure to atmospheric changes they contract in consequence of violence or exposure, and we get an inferior frog.

But the reader may ask, how is the frog to disencumber itself of its apparently rugged and superfluous surfaces. We answer, nature has provided a means; a casting off of the frog surfaces, now and then, takes place. But we shall find that when this does occur, a new horny covering has formed beneath—a smaller frog appears, still an entire one, capable of repeating the same process over and over again. Therefore, let us try and let the frog alone.

An idea has generally prevailed, that the hoof should be circular. This is a great mistake; for if you examine the *colt's* foot, you will find the toe and outer quarter describing a circle, but the inner approaches the heels with less curve. By this arrangement, there is less liability to strike one foot against the other limb. Therefore, any attempts by knife and rasp to make the hoof describe a circle, is contrary to the intentions of nature, and injurious to the horse's foot.

FATTENING HOGS.

As to the matter of economy, there are so many circumstances that govern the management of stock, different in different sections of the country, that in this, as in almost every other point of good management, much must depend upon the good judgment of the farmer. After obtaining all the information and advice within his reach, he must then decide his course by his own judgment. In the Southwest, where the "hog crop" is an important interest, and when in *most* years, stock hogs cost little or nothing to keep them through the winter, it is true economy, no doubt, to allow them to provide for themselves until they are twelve to sixteen months old, when they are either turned into standing corn and allowed to gather it at their leisure, or put up into pens and fed all the corn they will eat for three or four months, during which time they become generally very fat and in fine condition for butchering.

In other portions of the country, where they must be fed during their whole life on comparatively expensive food, true economy requires that this food should be prepared, even at some expense, so as to make it good as far as possible in forming fat; hence, in those sections, corn is ground and mixed with other food, steamed, boiled, and fermented, &c., in various ways, which, with us, owing to the expense and labor, would be scarcely found to pay. It is of

great importance also, in those sections to shorten the period of feeding as much as possible, otherwise with all the economy used it will be found that the pork has cost, like the Indian's gun, more than it comes to.

In those sections it will not pay to winter hogs, hence the great desideratum is to obtain a breed of hogs that will at eight or ten months old make good pork, so that they may be wintered in the pork barrel. Of late years, such advances have been made that it is not uncommon to read of hogs at those ages weighing from 300 to 400 lbs. This method of forcing forward the young hogs by extra feed and careful housing might not be profitable in this section of the country, yet some useful hints may be obtained from the practice, as well as much advantage gained by introducing those improved breeds of hogs which have shown a disposition to this early maturity.

Heretofore, it is not likely that these comparatively delicate breeds would have met with much favor in the eye of an experienced Southwestern breeder, because of their want of stamina to enable them to undergo the fatigues of a long march before they arrived at the point of their final destination; but now, from the facilities of transportation, the hog has been spared those long pilgrimages on foot to the packing-house, and rides in comfortable cars; therefore the more hardy, large-boned animals heretofore in favor may well give place to the more delicate races of rapid maturity in some sections. Yet it must be a matter of calculation with each individual whether even with hogs that will do to pack at ten months by high feeding, it will be true economy or not to winter them and keep them on clover in a good thriving condition till the regular fattening time.

There are many farmers so situated that they can give their hogs extensive forest ranges in winter and fine clover pastures in summer; of course in *most* seasons no person not similarly situated can compete with them in making pork.

Mr. N. Hunt, a very intelligent farmer of Ohio, furnishes a correspondent of the Country Gentleman, in Cincinnati, with the following estimate of the cost of raising pork in Ohio. He estimates the cost of pigs at 2 months old (for keep of sow &c.) as equal to 2½ bushels of corn; the next 4 months at pasture as equal to 2 bushels; the next 6 months—the first winter—as equal to 3 bushels; the next 6 months at pasture as equal to 6 bushels, and the cost of fattening as equal to 16 bushels. Thus the hog at about 21 months old and ready for the knife has cost equal to the value of 29½ bushels of corn. He further estimates that, under the mode of feeding, the hog will weigh 275 to 300 lbs. net.

It is important to keep hogs in a fine thriving condition at every stage of their growth, so that when put up to fatten they may be in

such health as to be enabled to fully digest the largest possible amount of nourishing food and convert it into fat.

It is doubtful if there is true economy in forcing them forward in any period of their lives previous to putting them into the fattening pen.

Mr. Phinney, a farmer of much experience in Massachusetts, says: "If pigs are to be killed at the end of 9 months, I would advise them to be kept as fat as possible all the time; but if intended for killing at the age of 15 or 18 months they should not be full fed for the first ten or twelve months. To satisfy myself of this course, I took 6 of my best pigs 8 months old, all of the same litter, and shut them in two pens, three in each. Three of these I fed very high and kept them as fat all the time as they could be made. The other three were fed sparingly upon coarse food, but kept within a healthy growing condition until within 4 or 5 months of the time of killing; when they were fed as high as the others. They were all slaughtered at the same time, being then sixteen months old. At the age of 9 months the full fed pigs were much the heaviest, but at the time of killing, the pigs fed sparingly for 10 or 12 months weighed, upon an average, 50 lbs. each more than the others."

Although it looks like a wasteful practice to turn a drove of hogs into a field of standing corn to help themselves, there is no doubt that this method is true economy in many places. The corn is in a condition in which it is easily and perfectly masticated and easily digested and the hogs get a great deal of saccharine matter in the juice of the stalk; then the effect upon the soil is not as exhausting as if the grain were ripened and removed, and, if the land is broken up as soon as the corn is eaten, much manure is saved.

In feeding corn to fattening hogs in the field it is better to withdraw them before they have eaten it clean, as they are compelled to walk too much when the corn becomes scarce. The stock hogs may be allowed to finish the work. Fattening hogs require some exercise to keep their digestive organs in healthy action. The smallest quantity of exercise that will keep them healthy is most suited to fattening and the practice of putting them into very confined pens is no doubt a disadvantage. An experienced stock grazer remarked that both hogs and cattle fattened faster when allowed a liberal range in a pen, than they did when confined to very small ones. All fattening animals should be kept quiet, and have a warm, clean, dry place to sleep. Hogs are liable to all the symptoms of dyspepsia, and when they have it they cannot fatten rapidly. They should be allowed a few pieces of charcoal occasionally or rotten wood, which is the remedy they generally use for flatulency. A little ashes or lime will frequently be eaten by

them with much benefit. It may be given to them in salt.

There is no doubt, much may be saved in fattening hogs by grinding, boiling, and fermenting their food, when the farmer is prepared to do so without too much labor or cost. Mr. Phinney, before referred to, says he believes, from frequent experiment, that two dollar's worth of cooked food will do hogs as much good as three dollar's worth raw. As to fermenting or souring, which is so frequently recommended in preparing food for hogs, we think there can be no possible advantage gained by allowing it to become *sour*, but if allowed to ferment so far as the saccharine or sweet state, it may be easier digested, and therefore more fattening. Another advantage of grinding and boiling is that several kinds of food may be mixed together, and the compound may be changed occasionally, and thus is less apt to clog. Yet in feeding hogs in a close pen on very concentrated food, corn meal mixed with water and boiled, for instance, they are very liable to be surfeited, and instead of fattening they begin to fall off. We have seen a lot of hogs, nearly ready for the knife, begin to fall off in condition when their allowance of boiled shrill was increased so as to allow them all they would eat. They never recovered so as to take on fat rapidly, and were slowly at much extra cost got into killing condition. It will be necessary, therefore, to use more judgment in feeding ground corn to hogs than in feeding it in the ear.

Cleanliness is a matter of much importance in fattening hogs, notwithstanding their proverbial lack of it in their habits while at large. A gentleman in Norfolk took six pigs of nearly equal size and put them upon the same food and litter for seven weeks. Three of them were left to shift for themselves as to cleanliness; the other three were kept as clean as possible by a man, employed for the purpose, with a curry-comb and brush. The last three consumed in seven weeks five bushels less feed than the other three, yet, when killed, weighed 32 pounds each upon an average more than the others. Hence the practice of keeping hogs in close, muddy pens, without any s elter, is bad economy, even if the weather should not be cold, but much worse if cold, as in that case much of the nourishment of the food is required to keep up the natural temperature of the animal.

The principle conditions to be observed in managing hogs to the best advantage seem to be—

1st. To keep them in a healthy growing condition, never fat, nor ever in a low condition, till they are put up to fatten; or if found most economical, push them from the first till they are nine or ten months old, and then kill them.
2d. To grind and cook the corn, when the amount saved will pay for the extra amount of labor and expense.
3d. To keep them at all

times healthy and capable of digesting the largest quantity of nourishment, by proper attention to cleanliness and bodily comfort, by providing comfortable, dry sleeping places, well littered with leaves. 4th. To commence fattening so early in the season as to be ready to kill as soon as the weather will permit, as hogs take on fat much faster in warm weather than in cold.—*Louisville Journal.*

WINTER MANAGEMENT OF SHEEP.

Mr. George Campbell, of Vermont, the well-known sheep grower, furnishes to the Patent Office Report for 1854, the following article on the "Winter Management of Sheep:"

"Much of the success of the wool-grower depends upon the winter management of his flock. Sheep are animals which pay their owners better for good care and keeping than any other stock usually kept on a farm; but if fed with a stingy hand, or neglected, if suitable conveniences are wanting, they pay perhaps as poorly as any. The annual loss to the United States, resulting from a want of suitable sheds and other conveniences for the winter accommodation of sheep, is immense. The promptings of self-interest would seem sufficient to induce our farmers to adopt a better system of management. No intelligent farmer of this day will attempt to deny the principle that warm enclosures are equivalent, to a certain extent, for food; a variety of well-conducted experiments have conclusively demonstrated the fact. A large proportion of food consumed in winter is required for keeping up the animal heat, and consequently, in proportion as the apartments are warm, within certain limits, the less amount of food will be required. The other extreme, too close apartments, would be objectionable from the impurity of the air, and should be avoided. Sheep have very little reason to fear injury from this cause. The majority of those in our State suffer for the want of shelter and a suitable quantity and variety in their winter food. Many flocks are brought to their winter quarters in fair condition, but are fed so sparingly that the growth of their wool is almost wholly arrested during the winter season, the fodder given them being only sufficient to sustain the vital functions. Under such circumstances the food consumed by them is in fact nearly lost. The owner has received no return in the increase of wool nor in bodily weight; and he will suffer further from a large per cent. of actual deaths before the time of shearing.

With such a course of management the profits of wool-growing will necessarily be small. If neither self-interest nor the feelings of humanity will induce the farmer to provide properly for his dependent flock, he will find it for his advantage to keep some other domestic animal, and I know of nothing more suitable for such men than a hardy goat. While I protest

against the starving system, it would seem hardly necessary to caution farmers against the opposite extreme, too high feeding, which is also detrimental to the health and long life of the animal. While preparing sheep for the butcher, high feeding is necessary and proper, but for store sheep and breeding ewes, an over amount of fat, produced by high feeding, is decidedly injurious; and, aside from the attending expense to produce this state of things, it has a tendency to shorten the lives of the sheep and enfeeble the offspring. The forcing system of feeding brings animals to maturity early, but is productive of premature death.

The proper and the most profitable mode of feeding, for breeding and store sheep, is that which will develop in them the highest degree of bodily vigor. Sheep fed in this manner would endure the fatigue of a long journey, while those high fed would fail, from excess of fat, and the scanty fed from muscular debility. Every wool-grower will find it for his interest to provide warm, capacious, and well ventilated sheds for his flocks, with a convenient access to pure water. The feeding racks should be made with good tight bottoms, in order that the chaff and seed, the most valuable part of the hay, may not be lost. Such racks will also answer for feeding out roots and grain and will avoid the necessity of having an extra lot of troughs for that purpose.

The different ages and classes of sheep should be properly assorted. This classification, however, must be left to the judgment of the breeder. The size of his flock, and his conveniences for keeping, will determine the extent of the classification. It will be necessary, in all flocks of considerable size, to place the strong and feeble in separate flocks. The breeding ewes should constitute another division, and so on with the lambs, keeping each class, and age by themselves.

In regard to the question, how often should sheep be fed? a difference of opinion among good managers exists. While one believes that twice a day is sufficient, another thinks it desirable to feed three or four times; but the most important point, I apprehend, is to feed regularly, whether twice, three or four times a day. The writer feeds, at present, hay twice, one day: the next, hay in the morning and straw at night, and so on, giving hay and straw alternately, instead of hay; and beside, a feed of roots and grain is allowed at mid-day, allowing a half bushel of corn and cob, or oatmeal, mixed with two bushels of roots, to the one hundred head. As sheep are fond of a variety of food, it is desirable to make as many changes as practicable. If allowed constant access to pine or hemlock boughs through the winter, it will be conducive to their health. Salt is equally essential in winter as in summer, and should be kept constantly by them—Rock-salt which is imported in large lumps, weighing from twenty to fifty pounds each, is

the cheapest and best. Sheep are not liable to eat it in sufficient quantities as to ever injure them, as they can only get it by licking."—*Progressive Farmer.*

VALUE OF RACE HORSES.

The price fetched by the 200 blood yearlings which are usually brought to the hammer in England, averaged during the racing seasons of 1854-55, about \$635. The average price at the royal sale of 1854, was \$2,205 for 14, many of which were of the Orlando blood, which fetches a higher price than any other in England. No doubt, in all studs, great loss is sustained by a certain proportion of the young stock, which promise to be small and not worth training; but here breeders are often deceived. For example, the late Lord Grosvenor sent *Meteora*, the best mare in England, of her day, to Chester Fair, when two years old, to be sold for \$80, because she was considered as too small; and he also suffered *Violante*, the best four mile racer of her day, to be sold, untried, for \$250 but purchased her again. The great prices, however, occasionally paid to breeders for some horses—\$20,000, for example, to the Earl of Jersey, for *Mameluke*, and \$17,500 for *Bay Middleton*—make up for the loss inseparable from such as by mishaps, diminutive size and casualties, are culled out and sold for what they will bring, which seldom amounts to much. Twenty-five thousand dollars were refused for *Plenipo*; and the greatest price ever given for a race-horse was \$32,300 for the two-year old *Hobbie Noble*, in 1851. One may, however, cease to wonder at such prices, when we find that the *Flying Dutchman* won his owner nearly \$100,000 in stakes alone; and that the winnings of himself and his half brother, *Van Tromp*, who belonged to the same owner, amounted to 170,000. *Cotherstone* won, at three years old, \$63,825; *West Australian*, \$54,875; and *Surplice*, \$51,875.

ON PARTURIENT FEVER IN EWES, "GIDDINESS ACCOMPANYING PARTURITION."

BY ISAAC SEAMAN.

(*Prize Essay.*)

The following admirable article on a disease in sheep which has cost many of our farmers some of their finest sheep, was commended to our attention last winter by a distinguished sheep-breeder of our State. He had practised on its suggestions and saved some valuable animals. We then made two efforts to get it in and in both cases were foiled by the printer.

Parturient fever in ewes ("giddiness accompanying parturition") forms a very interesting and important subject for investigation, with the true nature of which the shepherd and flock-master cannot be too well acquainted.

The term "giddiness" signifies stupor, sleepiness, delirium; and is universally applied by shepherds and flock-masters to sheep suffering from hydaties, or water in the brain. Now that we may distinguish this so-called giddiness accompanying parturition in ewes from other diseases bearing the same name, I propose to call it parturient fever; "for in calling different ailments by the same name," as observed by an eminent writer on influenza in horses, "our description of diseases becomes involved in obscurity; we never agree as to the treatment, and investigation into their character becomes more difficult than nature intended." I call it parturient fever, because fever it really is, as the appearances before and after death will show; and it does not affect the ewe at any other time than shortly before and after lambing (parturition.)

Parturient fever is an affection of common occurrence, and was attended with much fatality amongst the flocks in the counties of Cambridgeshire and Essex during the lambing seasons of 1852-53. It is remarkable for the suddenness of its attack, the rapidity with which it runs through its different stages, and its general mortality to those affected by it. It is so violent in its attack, and rapid in its progress, that it may prove fatal in twenty-four hours, if not arrested by the most decisive means. It affects most commonly ewes of a delicate constitution, such as the *Sussex Downs*: the more hardy *Lincoln* and *Norfolk* ewes are comparatively exempt from the disease. It manifests a more severe form in aged ewes and ewes bearing twin lambs.

CAUSES.—Any circumstance or agency which depresses the power of the system, insufficient or improper food, close folding, exposure to fatigue, to cold, and moisture, may be considered causes of the affection. I have repeatedly noticed where ewes about a month before lambing have been removed from a sufficiency of wholesome food to other possessing less nutritive qualities, they have suffered greatly from parturient fever. The practice of fattening sheep and ewes, being fed on the same piece of turnips (the best parts of which are consumed by the former, whilst the roots and other inferior parts are consumed by the latter), ought to be abandoned; a small fold, too—a circumstance so essential to the development of fat in the one, whilst highly injurious to the pregnant ewe, to whom exercise is of the greatest importance for the maintenance of health. Moist and warm seasons, vegetables growing luxuriantly, and the non-supply of dry farinaceous food, are alike productive of the affection. Fat condition is thought to be a grand cause of the disease. I certainly have noticed the *Sussex Downs* (a breed most disposed to collect fat) suffer most, and, as I before stated, a delicate sheep: but losses have been sustained, from the fact that the breeder, thinking them too fat, a short time before the full period of gestation

lessens the supply of food which is plentiful and nutritious, and substitutes that of a poorer nature. I well recollect the circumstances of an extensive breeder unknowingly feeding a number of pregnant ewes for the butcher, who did not discover his ignorance until after sixteen weeks' gestation: the ewes at this time were fat enough for slaughtering. Alarmed with the fear of losing them in lambing, he disposed of them to an experienced sheep-dealer; the dealer did not think there was any particular danger in lambing such ewes, and continued to feed them upon the most nutritious diet, such as linseed-cake, oats, hay, and turnips. He had not a case of parturient fever, and his losses otherwise were not more than two per cent.

SYMPTOMS.—The most early symptom that marks the commencement of this disease: first the ewe suddenly leaves her food, twitches both hind legs and ears, and returns again to her food; during the next two or three days she eats but little, appears dull and stupid: after this time there is a degree of general weakness, loss of appetite, and giddiness, and a discharge of dark colour from the vagina; whilst the flock is driven from fold to fold, the affected sheep loiters behind and staggers in her gait, the head is carried downward, and the eyelids partly closed. If parturition takes place during this stage of the disease, and the animal is kept warm and carefully nursed, recovery will frequently take place in two or three days; if, on the contrary, no relief is afforded, symptoms of a typhoid character present themselves, the animal is found in one corner of the fold, the head down and extremely uneasy, the body is frequently struck with the hind feet, a dark-coloured fetid discharge continues to flow from the vagina, and there is great prostration of strength. A pair of lambs are now often expelled in a high state of putrefaction, and the ewe down, and unable to rise; the head is crouching upon the ground, and there is extreme insensibility; the skin may be punctured, and the finger placed under the eyelids without giving any evidence of pain. The animal now rapidly sinks, and dies often in three or four days from the commencement of the attack. Ewes that recover suffer afterwards for some time great weakness, and many parts of the body become denuded of wool.

TREATMENT.—The ewe immediately noticed ill should be removed from the flock to a warm fold apart from all other sheep, and be fed with oatmeal gruel, bruised oats, and cut hay, with a little linseed-cake. If in two or three days the patient continues ill, is dull and weak, a dark-coloured fetid discharge from the vagina, and apparently uneasy, an attempt to move the lambs should be made. The lambs in a great majority of cases at this period are dead, and their decomposition (that is, giving off putrid matter) is a frequent cause of giddiness and stupor in the ewe. If the os uteri (the entrance

into the uterus) is not sufficiently dilated to admit of the hand of the operator, the vaginal cavity and os uteri should be smeared every three hours with the extract of belladonna, and medicine, as follows, given:—

Calomel,	-	-	-	8 grains.
Extract hyoseyamus,	-	-	-	1 drachm.
Oatmeal gruel,	-	-	-	8 ounces.

Mix, and give two table-spoonfuls twice a day.

Epsom salts,	-	-	-	8 ounces.
Nitre,	-	-	-	$\frac{1}{2}$ ounce.
Carbonate of soda,	-	-	-	2 ounces.
Water,	-	-	-	1 pint.

Mix and give two wine-glasses full at the same time the former mixture is given. Let both mixtures be kept in separate bottles, and well shaken before given. The bowels being operated upon, omit both former prescriptions, and give the following:—

Nitre,	-	-	-	$\frac{1}{2}$ ounce.
Carbonate of soda,	-	-	-	1 ounce.
Camphor,	-	-	-	1 drachm.
Water,	-	-	-	8 ounces.

A wine-glass full to be given twice a day.

Feed the ewe principally upon gruel and milk or linseed porridge. Parturition having taken place, the uterus should be injected with a solution of chloride of lime, in the proportion of a drachm to a pint of warm water, and repeated twice a day whilst any fetid discharge from the vagina remains.—*Journal of the Royal Agricultural Society of England.*

BLOOD AS A FERTILIZER.

We are glad to see, by the following articles which we extract from the Pennsylvania Farm Journal, that blood is about to be put to a good purpose. We cannot see why the butchers in Richmond and Baltimore cannot form companies for the manufacture of a valuable manure from their slaughter houses.

The addition of bones we should not consider material. And, as it would give opportunities for fraud, which would be suspected, and so far discredit the article, and as it would also add to the cost with no corresponding benefit, we would rather, for our use, that it should be omitted altogether.

A great many persons in the country, by some simple contrivance, might catch in saw-dust or charcoal, all the blood of

everything they kill. What they save in this way would be that much guano, to say nothing of cleanliness.—Ed. So. PL.

It is now an admitted fact that Guano, until some substitute is found for it, is an essential element in good and profitable farming.

The price to which Peruvian Guano has advanced, with the certainty of a still further rise, has directed the attention of all reflecting minds to the important question of how they can render themselves independent of this costly manure. *A solution to that question has been found, and a complete remedy for the evil.*

We possess within ourselves all the elements for the formation of a far more powerful fertilizer than the best Peruvian Guano.

The proof of this assertion is as follows:

The only component parts of Guano really valuable to the soil, consist in its Phosphate of Lime, and that remnant of animal matter, which time has left in it, capable of forming ammonia.

A large portion of its whole weight consists in useless, nonavailable matter: now it is clear to the common sense of any man, that if a compound be formed wholly composed of pure Phosphate of Lime, and the richest nitrogenous matter in that chemical state best adapted to the formation of ammonia, when placed in contact with the soil, and without any of the extraneous matters contained in guano, a far more potent and more valuable fertilizer is obtained.

The attention of the first agricultural chemists in England was directed to this object, and some four years ago it was successfully achieved by the following means: The blood of animals being collected in large quantities, the water it contained amounting to some seventy-five per cent. being removed, the solid portions were so chemically treated, as to produce a highly concentrated nitrogenous matter, in which all the elements of fermentation or decomposition were temporarily arrested, but which was in the most favorable condition possible for the creation of ammonia; when by contact with the element of the soil and air, its fermentation and decomposition commenced. The substance so prepared was mixed only with pure Phosphate of Lime, and *thus was ob-*

tained an unadulterated compound of those pure elements which alone nourish the growing crop to its fullest maturity and permanently enriches the soil.

So valuable is this discovery considered in England, that a company was formed, presided over by the most wealthy and enlightened Agriculturalists in that country. The gentleman selected for their chairman is Mr. Jonas Webb, whose reputation as the largest and most scientific sheep-breeder in the world, is as well known in this country as in England. The high standing and reputation of these gentlemen were a sufficient guarantee to all who wished to use this manure; and the rapidly increasing success of the undertaking up to the present time has been unparalleled. Mr. Webb himself, who annually grows five hundred acres of sweet turnips for his own stock, uses no other manure, and is unrivalled in his crops.

The same discovery secured by Letter's Patent in this country is now offered to the Agriculturalists of Pennsylvania.

A powerful and influential company has been formed in Boston for the manufacture of this manure; and it is proposed to form a similar one in the city of Philadelphia, with a capital of one hundred thousand dollars, in a thousand shares of one hundred dollars each. A chemist of high reputation will preside over its manufacture, thus securing to the consumer the unvarying quality of the manure made. Its constituent parts have been submitted to several of the most distinguished chemists in our country, and in every instance they have given it their warmest approbation.

The formation of such a company would be beneficial in more respects than one.—Many thousands of tons of blood and offal can be collected annually in Philadelphia and vicinity, which now only serves to breed pestilence and disease, and which, if properly prepared, would add very materially to the fertilizers of which the farmer stands so greatly in need. As a sanitary measure alone, it is deserving of the warmest support, while its value as a manure can scarcely be estimated. The immense amount of fertilizing matter annually wasted, would be brought into profitable use, and all parties benefited.

The increasing demand for fertilizing material in a form better adapted to trans-

portation than farm-yard manure, renders information upon points connected with this important subject, not only interesting, but valuable. The following article is more full than anything we have seen, and as such, is commended to the attention of the reader :

“As a manure, the efficiency of blood has been frequently tested in practice.—Owing to the circumstance of its being seldom within reach of the farmer in quantity sufficient to make it an object of importance, as well as the inconvenience attending its carriage, and its liability to speedy decomposition, it rarely forms one of those substances which are used as fertilizers in general farm practice. But as an accidental auxiliary manure, its usefulness is frequently exhibited. In the gardens, allotment patches, adjoining towns, and in the lanes in the occupation of butchers, it is frequently used with the high degree of success which its composition predicates.

Too frequently, however, it forms an ingredient in those heterogeneous masses of filth and rubbish which, instead of being made the instrument of producing, in the shape of vegetable and animal food, fresh supplies of sinew and strength for the laborer, offend the senses, engender disease, and perpetuate wretchedness among the crowded population of our cities.

For the reasons stated above, we have but few published experiments with blood which afford us precise data as to its comparative efficiency as a fertilizer for farm crops. In many of the very extensive series of experiments which have been published in the Transactions of a Highland and Agricultural Society, of Scotland, very productive results have been developed, by the use of substances such as sugar-refiners' waste, &c., which contain blood; and Professor Johnston mentions instances in which the absence of the ingredient was followed by less successful results from the application of the mixture as a manure. The experiments of Hermbstadt, however, furnish us with results which exhibit, in a striking manner, the positive potency of the manure, and, at the same time, confirm the estimate of its relative efficacy when compared with other manures, which chemical analysis warrants.

Thus, from the analysis of Playfair,

blood appears to be extremely rich in nitrogen—an element which, when it exists in a manure, never fails to produce visible evidence of its fertilizing influence; and in a series of trials made by Hermbstadt, the results obtained from the use of blood are only equalled by those from one other application—concentrated urine; which, it is worthy of remark, is, with one or two exceptions, the only manure that exceeds blood in the amount of nitrogen in its composition. Subjoined is an abstract of the result of these trials, and of the relative quantities of nitrogen in blood and other manuring substances, according to the analysis of Payen and Boussingault; from which it will be seen that blood holds, as nearly as may be, the same position in practice that it does in theory, if we estimate by the nitrogen it contains:

Experiment by Professor Hermbstadt.

Soil without manure, yielded 3 times the seed sown.				
Soil dressed with old herbage, grass, leaves, &c.,	“ 5	“	“	“
Cow dung, - - - - -	“ 7	“	“	“
Pigeons' dung, - - - - -	“ 9	“	“	“
Horse dung, - - - - -	“ 10	“	“	“
Human urine, - - - - -	“ 12	“	“	“
Sheep's dung, - - - - -	“ 12	“	“	“
Human manure, - - - - -	“ 14	“	“	“
Bullocks' blood, - - - - -	“ 14	“	“	“

Table of the relative amounts of nitrogen in blood and other fertilizing substances.

	Water	Nitrogen in Manure.		Relative values
		Wet.	Dry.	
Farm yard manure, 100 parts, contain, - - -	79	41	1 95	100
Solid horse dung, - - -	75 3	55	2 21	—
Human urine, - - - - -	79 1	2 61	12 50	—
Urine of public vats, - -	96 0	16 88	17 56	—
Solid dried blood, - - -	21 4	12 18	15 50	3015
Liquid blood, - - - - -	81 0	2 95	—	736
Blood concol'd & press'd	73 5	4 51	17 00	—
Guano, - - - - -	19 6	5 00	6 20	1247
Graves, - - - - -	9	11 88	12 93	—
Woolen rugs, - - - - -	11 3	17 98	20 26	—
Bones, - - - - -	8 0	6 22	—	1554

A comparison of the results obtained in the above trials, with the relative amount of nitrogen contained by the several substances, would almost lead us to take the amount of nitrogen in a substance as the sole measure or standard of its excellence. In many cases this rule has been adopted, but it is one that leads to much error. For example, at least fifty per cent. of the weight of bones is earthy matter, devoid of nitrogen, and this of itself has been found to have a fertilizing effect, greater than that which arises from

the nitrogen contained in the animal matter of the bone. It would, therefore, be palpably unfair to take the six per cent. of nitrogen in bones as the sole measure of their utility in comparison with other substances. And, similarly, farm-yard manure has many useful inorganic elements which should be taken into account, in estimating its comparative efficacy as a manure; and in an application of twenty tons of farm-yard, the quantity of mineral matter applied is too considerable an item to be overlooked.

The value of blood as a manure cannot, for these reasons, be correctly estimated, in comparison with farm-yard manure.—The foregoing table shows that one ton of liquid blood is equivalent to seven tons of farm yard manure, and one ton of dry blood to thirty tons of farm-yard manure, so far as the nitrogen contained in each is concerned. Because one ton of farm manure is worth 5s. it does not, however, follow that a ton of blood is worth precisely 35s., or a ton of dry blood £7 17s. An application of thirty tons of farm-yard manure would contain three cwt. of nitrogen, and at least twelve cwt. of the *mineral elements of crops*, to which some beneficial effects must be attributed; but in one ton of *dry blood*, in addition to the fifteen per cent., or three cwt. of nitrogen, we should only supply the soil with 4.42 per cent., or seven stones of mineral manure. Thus, as we have said, the relative value of the two manures cannot be correctly ascertained by reference to the nitrogen alone which they generally contain.

The quantity of blood which is, under present circumstances, available for farm purposes, is comparatively small even though we take into account all the sources of supply which are open to us; supposing a proper estimate of its value were entertained, and suitable arrangements made for its collection.

The population of Great Britain, at the present moment, is about twenty millions, and if we take 75 lbs. as the average amount of flesh meat consumed by each person, we have 1,500,000,000 lbs. as the total animal food used in one year. And as the blood may be taken to represent at least one-fourteenth of the net weight of an animal, the total weight of the blood of animals slaughtered for food

in England will be about 100,000,000 lbs. or 45,000 tons.

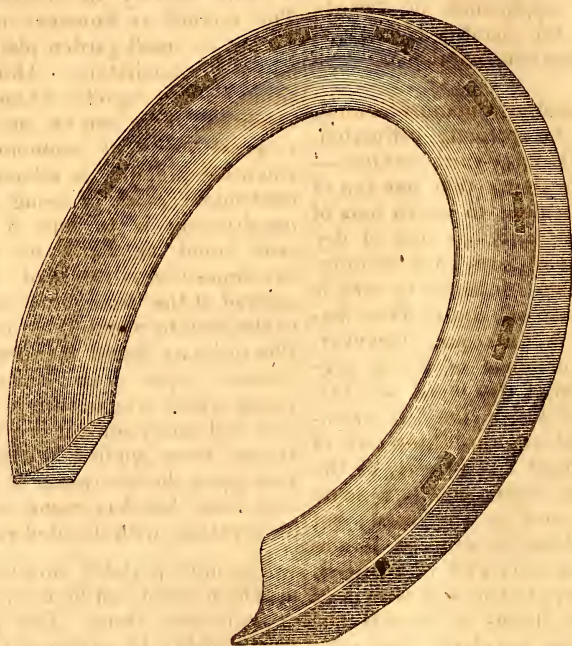
Blood may be applied to farm crops in several modes, viz: as a liquid, in its dried state, and in compost with other substances. In its *liquid state*, before it coagulates, great care must be adopted in its application, as if it be applied liberally, it will destroy or retard vegetation.—The method is, however, rarely adopted, except on small garden plats, where it can be used immediately. And as decomposition ensues rapidly, when it is in this condition, there can be no doubt but that a great waste of ammonia takes place when the practice is adopted. The most convenient mode of using it as a liquid top-dressing is to mix it liberally with tank liquid, or water, by which process decomposition is retarded; and it may be applied at the time most convenient, and to the crop to which it is best adapted.—The ordinary liquid manure cart will distribute it upon grass lands, or upon the young wheat crop in spring, for which upon thin and sandy soils, it is especially suited. It has been applied during the present year upon the aftermath of meadow grass, in a case that has come under our own observation, with decided success.

The most portable and convenient form in which blood can be used is in the dried or desiccated state. The preparation is very simple: by exposure to heat it coagulates, after which it is broken down and dried on the stove. With the addition of a small quantity of charcoal, gypsum, or ashes of peat, sods of wood, it forms a pulverulent mixture, admirably adapted for drilling alone, or with bones, guano, or rape dust. As an application for turnips, which require the manure to be put along with the seed for immediate use, this mode is far more convenient than that of liquid top-dressing; and it might be carried out to an extent that would enable us to make use of the immense supplies which at present is unavailable for the purpose of fertilization. In France, a manure, of which blood in this condition is the basis, has been prepared to some extent. The immense diminution in bulk of the manure from the evaporation of sixty per cent. of water, economizes the application by diminishing the expense of carriage and distribution; one ton of dried

blood is equivalent to four in the liquid state.

If this method were put into practice, the immense quantities of blood contained in the flocks and herds constantly exported from the turnip lands and pastures of England—and which from day to day are wasted through the sewers of our town—

might, like the skeleton portion of the animal, the bones, be returned to the most distant fields, and assist in producing an increase of vegetable productions that would in turn enable us to multiply our flocks, and augment the future supply of human food.



NEW HORSE SHOE FOR ICE.

We saw the accompanying cut of a horse shoe last winter in the Boston Cultivator, and were so struck with it that we purchased it for the Planter. We have withheld it until the present time that those disposed to try it might not forget it.

The bottom is drawn to an edge all around—a sharp, cutting edge as the plate shews. This is much better than *rough* nails, which either break off or wear smooth in a very short time.

We have one of the shoes in our office for inspection. It takes a good blacksmith to make it, but it is worth trial—a horse well shod in this manner, can't slip on ice, nor is he liable to tip, stumble, or fall, as rough shod horses always are.

[Ed. So. Planter.]

From De Bow's Review.

BREADSTUFFS.—EXPORTS, Etc.

The return from the wheat harvest of the United States are now complete, and it is settled that the crop is of most excellent quality, and if not the largest ever gathered since the settlement of the country, is at least above the average, and will yield a large surplus beyond the supply of our domestic wants. With the certainty of such abundance, the probable reliance to be placed upon an active export demand is a subject of much importance, and deserving serious attention. Our imports of foreign goods and merchandise for the eight months of the current year, are larger than for any similar period in our history, the total being upwards of \$150,000,000; and although much of this increase has been in conse-

quence of large exports of domestic produce to this date, yet if these exports are to cease with the in-gathering of the present harvest in Europe, it might take a larger portion of the receipts of gold than we could conveniently spare, to balance the account. Great Britain has always been the best customer for our surplus breadstuffs. To most other countries which take breadstuffs of us, our shipments of flour have been comparatively uniform, whether the crop was large or small, but to British ports the shipments have varied with the quantity we have had to spare, although averaging nearly half the total clearances for all foreign ports.

Brazil and the West Indies are regular customers for our flour, as they purchase about the same quantity every year, and after Great Britain, take the largest quantity in a series of years; but a large portion of our shipments of grain (with wheat and corn) go to British ports. Thus of 18,483,151 bushels of wheat shipped to all

ports from July 1, 1849, to June 30, 1855, 14,061,212 were sent to Great Britain; and of 43,757,597 bushels of corn exported to all ports within the same period, 36,563,951 bushels had the same destination. We annex a tabular statement showing the exports from all ports of the United States to all foreign ports, of wheat, wheat flour, and Indian corn, both in quantity and value, from 1849 to 1855, inclusive, with a comparison of the quantity of each sent to Great Britain. The totals are all taken from official documents, and may be relied upon as authentic, although it must be noted that of many direct clearances to Great Britain for orders, there are sometimes considerable quantities directed from thence to Continental ports. The 'famine' of 1847, led to large shipments of breadstuffs, and to the inauguration of free trade in England, and we commence therefore with 1848-9, when the business had become settled under this system.— The periods noted are the fiscal years, ending June 30:

Exports from the United States, of Wheat, Wheat Flour and Indian Corn, from 1849 to 1855, inclusive, for the year ending June 30.

	To Great Britain. Quantity.	To all For. Ports. Quantity.	Value.
1849.			
Wheat, bush.	1,072,780	1,527,534	\$1,756,848
Flour, bbls.	953,815	2,108,013	11,280,582
Corn, bush.	12,396,242	13,257,309	7,966,369
1850.			
Wheat, bush.	316,926	608,661	643,745
Flour, bbls.	370,777	1,385,448	7,098,570
Corn, bush.	5,957,206	6,595,092	3,892,193
1851.			
Wheat, bush.	592,583	1,026,725	1,025,732
Flour, bbls.	1,004,783	2,292,335	10,524,331
Corn, bush.	2,760,329	3,426,811	1,762,549
1852.			
Wheat, bush.	2,049,557	2,694,540	2,555,209
Flour, bbls.	1,532,094	2,799,339	11,869,143
Corn, bush.	1,894,700	2,627,075	1,540,225
1853.			
Wheat, bush.	3,574,248	3,890,141	4,354,403
Flour, bbls.	1,388,065	2,920,918	14,783,394
Corn, bush.	1,653,840	2,274,909	1,374,077
1854.			
Wheat, bush.	6,058,903	8,036,665	12,420,172
Flour, bbls.	2,026,121	4,022,386	27,701,444
Corn, bush.	5,965,850	7,768,816	6,074,277
1855.			
Wheat, bush.	396,215	798,884	1,329,246
Flour, bbls.	189,712	1,204,540	10,896,908
Corn, bush.	5,935,284	7,807,585	6,961,571

The ordinary shipments in the past have not included any thing direct from France. In the first year named above (1849) there were no exports of flour to French ports, and only 108 bushels of wheat; in 1852, the total includes 2700 bbls. of flour, and in 1853 only 8784 bbls.; but in the year ending June 30, 1854, there were shipped direct to France, 1,041,086, bushels of wheat, 728,279 bbls. of flour, and 39,400 bushels of Indian corn. In the following fiscal year (1854-5) the shipments of flour to the same ports had dwindled down to 8557 bbls., and there was no shipment of wheat, but the exports of corn increased to 312,740 bushels. During the year 1855 the partial failure of the crops on the continent of Europe, led to large direct shipments, and the total exports to France for 1855-6, not yet officially compiled, have been larger than ever before recorded to the same ports. As soon as the threshing of wheat commenced in the west and north of France in 1855, its bad quality and light weight created a general panic, and prices continued to advance up to the first of January. The abundance caused by the large receipts from this country, Spain, and other sources of supply, caused a downward tendency in prices throughout January, 1856, and every thing was promising for the next harvest until the inundations in May. These choked the decline without wholly arresting it, but as the harvest approached, the hopes of an average crop became less sanguine, and it is now generally admitted that the supply will be deficient from five to ten millions hectolitres, that is, from fourteen to twenty-eight millions of bushels.

The quantity of arable land in France, is set down at 56,810,000 acres, of which fourteen millions hectares, or 34,580,000 acres are devoted to the culture of grain. The average annual product is 495,000,000 bushels of wheat, oats, rye, maize, and meslin—of which about one-fourth are oats, and two-fifths, or 198,000,000 bushels, are wheat. With an average crop, France has heretofore been able, not only to supply her own wants, but to furnish about 5,500,000 bushels of wheat (or its equivalent in flour) for the consumption of Great Britain. It is evident that this export trade must be cut off or greatly reduced during the current year, as the crop in France is below the wants of her own

people. Indeed, the total exports to Great Britain from all French ports, for the year 1855, amounted to an equivalent of only 880,000 bushels, or about fifteen per cent. of the usual shipments, and this was all foreign produce, shipped from bond.

In Great Britain, the crop this year is very good, but it is never sufficient to supply the wants of the people. The total imports of breadstuffs into the United Kingdom for the last three years, (reckoning flour, &c., at its equivalent in grain,) are as follows:

Calendar Year.	Equal to bushels wheat.
1853,	84,419,632
1854,	63,267,240
1855,	50,227,608

The high prices have contributed to reduce the imports into the United Kingdom during the last two years to the lowest possible point; but for the first six months of the current year the total imports amounted 1,859,000 quarters, showing an increase of 161,000 quarters, or 1,248,000 bushels, and must continue at about this rate throughout the remainder of the year. Even with a good harvest, the kingdom must need at least 40,000,000 bushels grain, or its equivalent in flour, for its own consumption. Of this amount, Russia, (northern and southern ports,) whose supplies were cut off during the war, can now furnish 10,000,000 bushels; Prussia (whose harvest is this year below the average,) 10,000,000 bushels; all other countries, 5,000,000; leaving 15,000,000 to come from the United States. If prices rule at a comparatively low rate, the consumption will be increased and the quota from this country may reach twenty or twenty-five millions of bushels. Spain and Portugal have hitherto exported to both France and England, the shipments to the latter, last year, being upwards of 4,000,000 bushels. This year, the harvests are there so poor that the export is prohibited, and supplies for consumption in the Peninsula are going forward from this port.

We see, therefore, that in addition to the demand for the breadstuffs from regular customers, we are likely to have an increased export trade to Europe, making the aggregate probably more than 40,000,000 bushels wheat and corn, or its equivalent in flour.

It is difficult to ascertain the exact pro-

duction of the United States. The total arable land under actual cultivation is given in the census of 1850 at 113,032,614 acres, of which 51,700,000 acres were producing breadstuffs. The following was the total production of grain as given in census returns for 1840 and 1850 :

	1840.	1850.
Wheat, bushels,	84,823,272	100,485,944
Rye,	18,645,567	14,188,813
Oats,	123,071,341	146,584,179
Corn,	377,531,875	592,071,104
Barley,	4,161,504	5,167,015
Buckwheat,	7,291,743	8,956,912
Total bushels,	615,525,302	867,453,967

A very large amount of arable land has been brought under cultivation since 1850, and those most conversant with the West and its increased resources, think that the product of wheat has increased at least 50 per cent. since the date last given, while other grain has increased 20 to 25 per cent. The total yield of wheat being computed at 150,000,000 bushels, it is easy to see that the export demand can be filled without creating any extraordinary excitement throughout the country. Last year the farmers anticipated such high

rates, that many of them refused to sell in time, and thus, to their great chagrin were obliged to dispose of their stock at the close of the season far below the average price. This year early sales promise to be the best but there appears to be a liquit below which foreign orders would rapidly diminish any home accumulation. At present good white wheat is worth here about \$1 60, and good red about \$1 50. We scarcely expect to see a decline of twenty cents from these rates during the current season, but within that range an active foreign business may be expected. The prospects for Indian corn cannot be given until nearer the close of the harvest.—Flour will fluctuate more than wheat in price; sales have been made to arrive in England at a price which would nett here about \$5 00 for standard superfine, but this is generally thought to be an inside price. We have compiled from the official records a statement of the average export price of flour in each year since 1800.—The highest was \$14 75 per barrel, at which all the shipments averaged in the year 1817. The lowest was \$4 24, which was the average of 1852. The following is the average of the total shipments to all ports in each year for the last twenty years :

Yearly average price of the Exports of Wheat Flour from the United States to Foreign Ports from 1836 to 1855.

Year.	Price.	Year.	Price.	Year.	Price.	Year.	Price.
1836 . .	\$7 50	1841 . .	\$5 20	1846 . .	\$5 18	1851 . .	\$4 77
1837 . .	10 25	1842 . .	6 00	1847 . .	5 95	1852 . .	4 24
1838 . .	9 50	1843 . .	4 50	1848 . .	6 22	1853 . .	5 60
1839 . .	6 73	1844 . .	4 75	1849 . .	5 35	1854 . .	7 88
1840 . .	5 37	1845 . .	4 50	1850 . .	5 00	1855 . .	10 10

The periods above noted are the Government fiscal years, ending June 30. The average for 1856 is not yet made up, but will be considerably below that of 1855. If any think we have over-estimated the present production of wheat in this country, we have only to remind them, that the cultivation of this grain for export received but little stimulus until the repeal

of the English Corn Laws in 1847, and that the export trade has since rapidly grown into importance. This trade has contributed more to the importance of New York, as a commercial emporium, than is generally acknowledged, and is likely to increase in magnitude for many years to come.

SOWING LIME BY HAND—TOBACCO PLANT BEDS.

Inglewood, Albemarle, Dec. 17, 1856.

Friend RUFFIN:—In our short interview, you spoke of an effort you were about making to drain* some of your wet lands, either by a new plan of your own or some English mode; the plan and result of which I trust you will treat your subscribers to in the next or the succeeding number of your Planter; and also as to the advantage of your tin dipper† for sowing lime upon your wheat, of which I think you promised me an account; and I also promised you an account of my experiment with lime upon my last crop of wheat, which I will now give you, hoping it will remind you of your promise to me. I have used lime upon my last two crops of wheat, applied by hand, I think to a good account, as they were the very best crops of my life. Of the mode and time of using the lime upon the crop before the last, I wrote you an account, which was published in the Planter, (the number I have forgotten, as no index was sent me for that volume, and I can't find it,) in which arti-

* The very wet weather we have had, succeeded by a cold spell has prevented, so far, the experiment of under draining alluded to. When it is made we will give results.

† The "tin dippers" are merely small "tea scoops," as they are called by the grocers, being of the shape of sugar scoops, but much smaller, made to hold a double handful. With this, a man with his whole face, and nostrils, and his hands well greased and kept so, can sow, with but little inconvenience, two bushels of lime per acre.

We made an application at that rate of oyster shell lime upon twelve acres of wheat—early red purple straw—sowed on the 23rd and 25th of September and badly hurt by the fly at the time of the application—the latter part of November. Whether it is due to the lime or not we cannot say, but certain it is that a week ago from this, the 25th of December, when we last examined the wheat, it had rallied surprisingly, and far beyond what was expected.

This practice was in pursuance of the plan recommended by the late James A. Cochran of Augusta, and at a still earlier date by the late Wm. M. Tate of the same county—uncle of the present gentleman of that name—through the columns of the Farmer's Register.

The advantage of the tin tea scoops is not so much to protect the hand—the grease does that—as to measure and gauge accurately the quantity of lime sowed.

cle I promised a more thorough trial upon the last crop and an account of its result to be sent to the Planter, which I was prevented from making by one of the hardest winters I ever saw. I could not get the lime burnt, and if it had been burnt, it could not have been carried to my farm; and if it had been in place, it could not have been used. So I could not get the lime in place earlier than the 8th of April. I see by my notes, on the 8th of April I commenced sowing lime by hand on my wheat and finished on the 19th of April, having used on the seeding of 76½ bushels of wheat 262 bushels of lime. This 76½ bushels of wheat was seeded from the 10th of October to the 2d of November, with six tons of Peruvian guano, upon a tobacco lot of sixty thousand hills, (upon which lot a ton of guano had been used in the spring for tobacco,) and upon rough highland which had been part in corn two years and a part in corn one year, followed by a crop of oats.—This was the worst washed field I ever had, all of it being in corn the year before I purchased it, and the corn rows seem to have been run more for gullying than for cropping; and they did their work, I assure you. Some of the gullies, my friends told me I could not stop in many a year. I did stop them, and not a vestige of them remains. Upon this highland portion of the field 57½ of the 76½ bushels was seeded, from which, by the help of lime, I got the following results:

76½ bush. seed wheat,	Per bush.	
	\$1 85	\$141 52½
6 tons guano,	Per ton.	303 00
	\$50 50	
	Total,	\$444 52½
	Per bush.	
Yield of crop, 966 bush. 50 lbs.	\$1 50	\$1450 25
From which deduct the seed wheat and guano,*		444 52½
	Profit,	\$1032 50

Four hundred and twenty-two bushels of this crop was sold for seed; and all might have been so disposed of, if its quality had been known in time. This is the very best crop I have ever made, averaging me about 12 bushels and 33

* The value of lime is not estimated by Mr. Gilmer, probably because he burned it from his own quarry.

pounds to each bushel seeded; the buck-eye-land crop yielding about 16 bushels and 3 pecks; for all of which I hold myself, in a very great degree, justly indebted to the small application of lime, made, too, at the late period of the 8th to the 19th of April. This yield may appear quite small to some, but when I remember the crops before I used lime the results are indeed very cheering. I have now all my lime under shelter at home, and shall in a few days begin to apply it, and wish to give it a dose this winter followed in the spring by another dose.

I last fall seeded 122½ bushels of wheat with ten tons of Peruvian guano, a ton of bone dust, and a ton of Deburg's Super Phos. of lime, all used to itself, on a part of which I had intended using saltpetre, as advised by my unknown friend; but the saltpetre was miscarried or lost until I finished seeding.

How will it do to grind it fine and mix it with plaster—a pound of saltpetre to a bushel of plaster, and sow it upon an acre of the growing wheat? I'll try it and let you know its result, as also of the bone dust and Deburg's Sup. Phos. of lime. I tried a ton of each upon my last spring's tobacco crop, and can't say that I was benefited by either a single nippence. I have always been greatly benefited by the use of Peruvian guano in the drill for tobacco, which is the only way I use it for tobacco, never making a hill. I, this fall, doubled all my beds from 18 feet to 36 feet; and after running a No. 6. Livingston plough as deep as I could in the furrows after seeding my wheat, I then run a two horse coulter three times in the furrow as deep as it could be drawn, then re-opened the furrows with the plough put to its greatest depth, which did the work for more effectually than I ever saw it done before, and much more rapidly than I had supposed. All who have seen my field of wheat say it is done more effectually than any they had ever seen before. The result you shall know when delivered.

PLANT BEDS.—After finishing with a bed of 800 square yards last spring, I had it nicely prepared by hoeing and raking, then permitted it to remain until a rain; then prepared it again, and after another rain prepared it again; then covered it with the trash tobacco and stalks of tobacco kept dry in the house for the purpose;

then covered this over with the straw used for bulking my crop, which will remain so until February; then rake off guano and prepare by raking and sow without burning; from which I hope a plenty of plants in due time. This will be the third year.

Accept my best wishes for your double size Planter, and twice double times the benefit to those who will read it.

Yours, truly,
GEO. C. GILMER.

IRON AND ITS CHEMICAL CHANGES AND COMBINATIONS,

AS EXHIBITED IN SOME SOILS OF LOWER VIRGINIA.

Westwood, Hanover, Nov. 17th, 1856.

MY DEAR SIR,—During my visit to your house early in October last, while riding over the farm, you may remember having picked up from the road side certain little dark nodules of earth of a metallic appearance and weight—requesting that I would take them home, analyze them at my leisure, and give you the result.

In the first place, I must tell you that the constituents of these nodules can easily be detected by simple mechanical trituration in a mortar, by which the mixture of *clay sand* and the *Protoxide of Iron* can be seen. If chemical proof be required, a solution of the powdered earth in Sulphuric acid gives, by the addition of a solution of Tannic acid, a black inky precipitate, which is the characteristic test of the presence of the Protoxide. Now this mechanical mixture of clay silex, and the Protoxide of Iron is universally diffused through our section of Virginia, and though I am a very poor geologist, (and it becomes me to write with great modesty, whenever I touch on anything connected with the science,) I may venture to say, arises from the disintegration of the Iron sandstone, also very common near the surface throughout the same region. This Protoxide of Iron, when simple and uncombined with water, as it is found on ridges and other high and dry places, is of a brownish black color. On the contrary, when it is found on the level surface of a close, stiff, and badly drained soil, the Protoxide has been chemically combined with water and is a "Hydrated Protoxide of Iron,"

and of a *white, livery color*, which it imparts to soils of the kind. Hereby hangs an interesting and simple explanation of a fact which every farmer of ordinary intelligence has observed, viz.: that stiff lands (for example our whortleberry lands,) which when first cleared and cultivated, present this cheerless, livery, white appearance, after one or two years of judicious ploughing and careful surface drainage, gradually assume a more healthful appearance, changing from a white to a yellow or brown shade.

The ploughing and drainage render the soil more accessible to the atmosphere, which yields more oxygen to the "Hydrated Protoxide," converting it into the "Hydrated Sesqui-Oxide of Iron." This last is of a yellow color, and hence the gradual change in the soil from the white color mentioned to the yellowish hue.

A further explanation of the different shades which such improved soils assume, may be referred to the fact, that when this "Hydrated Sesqui-Oxide of Iron," is deprived of the water with which it is chemically combined, it becomes a simple Sesqui-oxide of Iron, which has a brownish red color. We may assume that this last change from peculiar causes takes place in some portions of a cultivated field and not in others, hence the brown tinge in some spots and the yellowish in others. You drew my attention to this manifest change of color on your field at Summer Hill, now in wheat, and it is doubtless to be ascribed to the excellent ploughing and surface drainage there practised. A more cheering sign of the good effects of improved tillage cannot be shewn, than the change of color alluded to. With such ploughing and drainage, and the addition of lime, this kind of land, presenting at first the least encouraging aspect, may be made the most profitable in Eastern Virginia. By the way, an interesting, familiar illustration of this change of color in soils, may be observed in the burning of a brick kiln—the *unburned* bricks, have the yellowish tinge imparted by the Hydrated Sesqui-Oxide of Iron: after being burned, the water is driven off, and the bricks have the characteristic color of the "Anhydrous Sesqui-Oxide," which, as I before said, is a brownish red.

It may readily be conceived that this

change of the soil from the cold and inert "Hydrated Protoxide of Iron" to the "Sesqui-Oxide" is something more than in *color*, for the latter is known to combine very kindly with organic acids and may thus act, to a limited extent, in lieu of lime; it has also a strong affinity for nitric acid and may be the means of abstracting it slowly from the atmosphere. In any event the improved ploughing and drainage, changes the worthless "protoxide" into a soluble "Sesqui-Oxide" and renders it fit for the uses of plants, as one of their inorganic ingredients. We may then *infer* that the extra labor expended in the more careful ploughing and water furrowing of such lands, is not altogether *thrown away*.

I remain, very truly,

Your friend,

WM. S. R. BROCKENBROUGH.

WYANDOT CORN.

ISLE OF WIGHT CO., DEC. 12, 1856,

Editors of the Southern Planter.

GENTLEMEN,—When last in your city I stated to one of you, that I thought of trying a new variety of corn, the Wyandot Prolific, and now I propose giving you my success. Early last spring I obtained from Mr. Thompson, of Staten Island, N. Y. (who is agent for Mr. Thomas of Illinois, who raises this corn for sale,) a small quantity, which I planted on a little over half an acre of land (common) but on which I had scattered one bag of Peruvian Guano, 150 pounds, and well fallowed previous to planting. My corn came up very badly indeed, only about 70 grains vegetating promiscuously over the lot; those stalks grew off finely, and the parent stalk very soon threw out from the root some 5, 6, and sometimes 7 other stalks,—all grew up finely and sizeable, each stalk silking and earing, from 4 to 6 ears to each stalk, ears varying from 4 to 12 inches in length, of good size; and but for the great drought (which cut our corn crops short at least three quarters,) would have filled well, and notwithstanding the very dry weather I gathered near two flour barrels full, and shall have some 60 or 70 quarts of nice seed of this variety for sale—and as has been said of this corn, it is the wonder of the age. Not only this, but it is certainly the most prolific I have ever raised, yielding double as much

as I had any idea of obtaining from so few hills: this corn is of a white, flinty variety somewhat; and will, I think, make meal as white as flour, and for stock feeding, I think can't be surpassed by any other variety. Should you, gentlemen, deem this worthy of notice in your valuable work, you can give it a passing notice, as in all probability you may want contributors to the January No. of the Southern Planter, as you design increasing it in size.

Your friend, &c,
A. G. MOODY.

TOBACCO—THE PLANT BED.

We commend to all tobacco growers the following essay on preparing plant beds, by a gentleman who would not agree to give more than two thirds of his name. It is in our judgment the best article we have ever seen on the subject, and we wish our friend's modesty had not withheld the weight of his personal character from his very lucid and satisfactory statement.

We hope in a short time to be able to present the balance of his views—which are only so many items of his successful practice—on tobacco growing.

We regret that the present essay came too late for the December number of the Planter. To those who have not burnt their plant beds, all its suggestions are timely; and those who have, can still apply many of them.

*Poplar Hill, Prince Edward, }
November 21st, 1856. }*

EDITOR SOUTHERN PLANTER.

Dear Sir,—Your favour covering an extract from a Lecture by Prof. Agassiz on the relations which leaves occupy to each other and to their parent stem, came duly to hand.

When a season for working in Tobacco occurs, I will examine into this principle as applicable to this plant and report to you the result of these observations. In the mean time as you desire to have the mode of raising Tobacco plants, as practised in this portion of the State, I can only undertake to give you my own views

and practices. As regards this branch of planting, as well as the others, there are "many men of many minds." Doubtless each planter thinks his own peculiar mode just the best that can be possibly devised. At the risk then of being esteemed radically wrong by others, who are wiser and more experienced, I am prompted to give you my own mode of raising Tobacco plants.

Then to begin. In the selection of scites for plant beds, I always prefer getting a South-Eastern or Southern exposure of land of fine texture—gray—with a good subsoil. I care not how poor the surface soil may be by nature, provided it has these requisites. Many commit a fatal mistake in the selection of their beds. More depends on the character of the soil than on any other feature. If the subsoil is too porous or too close and *panny*, your patch will either become dry as the *winter's sap* leaves the earth in early spring, or it will be sobbed all winter and in spring dry out as hard as a road. If such requisites cannot be had on hill sides, the only alternative is to rely on branch flats for your beds. This however is hazardous, unless you can arrange the water so as to irrigate the patch when water is required. In this region most of our flats are too alluvial in their formation and have too much undecomposed vegetable matter in their composition, to be relied on in dry seasons, unless water is convenient to irrigate when necessary. Some of the very best plant lands we have, are to be found on the top of our ridges—being post oak lands, with a very thin surface soil. But enough on this point.

In burning, I prefer using old field pine, cut down during some spare time, either the spring before or early summer. I prefer it because it is very plentiful on almost every farm—burns easily, requiring no kindling after making the fires—makes a hot fire, and its ashes are not very caustic and do not interfere as much as the ashes of green wood in the future management of the patch. I prefer burning either the latter part of November, or as soon after as the weather will permit. I burn hard, turning the top of the earth a dark brown or red color.

The next operation is the preparation of the bed for the seed—and in this there is a great difference of opinion among plant-

ers. I differ with the many and deem it highly important to sweep the ashes and coal clean from the patch. From some experience and observation I am satisfied that more failures of plants occur from an excess of ashes in the soil than from every other cause combined—especially on those patches that are burnt during the latter part of winter. If lands are burnt early, before Christmas, the winter's rains and snows may leach these ashes in a measure and render them comparatively harmless. But then even, they are in excess, and it is "wilful waste" not to put them where they are more needed. If planters have never measured the amount they have on a patch, after burning, they will be much surprised at the quantity. When it is well burnt, the quantity for every 100 square yards of patch will heavily manure more than ten times as much poor old field, so as to grow large tobacco. A neighbour of mine, last spring, top-dressed eight acres of clover, so as to produce a fine crop with the ashes from a plant bed not exceeding 1000 square yards. I have seen the experiment fairly tried of sweeping the ashes from one half of a patch, and permitting them to remain on the other half, with results that would convince the most skeptical. I have also often seen the plants come up in a patch on which there was an excess of ashes left, look yellow and sickly, and finally disappear, and the fly get the credit of destroying the patch, when if you will examine ever so closely you will find neither fly nor plant. I am satisfied that the excess of lime from the ashes causes such patches to fail.

With me there is another reason for cleaning off the ashes, and it is this :

After breaking the land the full length of a grub-hoe, without turning the soil, and taking out all roots that may present themselves, I then apply guano at the rate of about 1000 lbs. per acre broadcast over the surface, to be chopped in at the next howing. As guano and ashes have no affinity for each other, but quite the reverse, I want them never to come in contact, and hence my patches are swept of the latter. The quantity of guano above stated may appear extravagant in the eyes of my more economical, saving friends, but the cost in dollars is nothing to the certainty of having plants early and plen-

tiful. I have tried less, and found my plants were proportionably inferior.

But to the preparation. After applying the guano, I chop, rake and pick the patch until it is reduced to a perfect tilth and all the small fibrous roots and turf are thrown out. This latter operation I deem important, as they serve only to keep the earth loose and porous, and more easily died out in spring.

Next the seed is sown at the rate of two even table-spoonfuls for 100 square yards. Then the patch is trampled over to press the earth down and fix the seed in their proper places, and the patch is covered over with well rotted stable manure, about an inch thick. I prefer top-dressing with manure to chopping it in the soil, for the same reason that all the fibrous matter is taken out, viz. that it renders the soil too open and puffy and much more liable to dry out in spring. This manure is prepared the spring before, by putting tobacco-stalks in my stables and feeding my stock on oats, fodder and green clover. It is then taken out before the seeds of the various grasses mature sufficiently to germinate, and heaped under a shed having plaster freely sprinkled through the bulk and kept dry. This covering of manure I deem most important. Although it may seem a heavy one when you apply it, and you may conclude that the little young plants can never come up through it, still in the spring you will find it almost entirely changed into mould, leaving only a light top-dressing of fibrous matter, which serves a good purpose to keep the top of the soil moist, protect the young plants from sudden changes of weather, and, as an absorbent of the rays of the sun to cause the seed to germinate. Patches having had such a top-dressing, will always be *moist* on the surface of the soil, while others are dry from the March winds. Having said so much, I must close both my subject and my patch.

And this is done by setting up poles on forks about three feet high all around, and making a close wall or barricade with pine brush, about four feet long and placed very thick. This I consider one of the most important things connected with the whole operation. It answers a good purpose for several reasons ; it keeps out leaves, stock, harsh winds, and last of all, the *fly*. Some may be incredulous as to this last asser-

tion. But just try it. The fly that infests tobacco plants is a small *skipper*, (if I may use that expression,) that never rises more than two or three feet from the earth. It is not a *native* of the plant patch, but moves or migrates by the wind. In early spring it is found all over our fields and woods feeding on the young grass and always ready to pounce on any unprotected plant bed. Until I adopted this mode of enclosing my patches, I was every spring more or less injured by these little marauders, but have never seen any injury done on beds thus treated. In further confirmation of this opinion, last spring on one side of a patch thus protected, the brush was blown down about one-third of the length. The wind continued blowing from the same point for a week or more. The fly entered through this opening and swept the patch nearly across, just the width of the gateway. I could mention other facts in proof of this assertion but I must close.

At a future time, I may tell you something about our mode of stripping—handling—ordering and greasing tobacco, and at the proper season give you some inklings about “suckering and worming two rows at a time,” and catching the giants while the pigmies nibble at the leaf,” and a few other topics hinted at during your late visit to us. You are right in supposing that I am “*slightly*” attached to the weed. But more anon.

FRANK PEYTON.

CAKED UDDER.

A gentleman of this neighborhood gave us, a few days since, a statement in regard to the cure of one of his cows which is well worthy of record. He said, that the cow came from the pasture with her bag swollen and very hard. In such severe pain that she would not only not allow any one to touch it, but gave every evidence of being in the most excruciating agony. She was held and her udder bathed with cold water for some time without producing any effect, and other usual applications were resorted to; finally, knowing the effect of tincture of *arnica* in allaying pain with the human subject, he brought some and applied a little of it to the bag. The cow ceased struggling and almost immediately gave evident manifestation of pleasure, allowing the swollen and hard mass to be rub-

bed and kneaded. After another application of the *arnica* and rubbing, a complete cure was effected. In a few days she regained her milk, and is now in as good case as before.

The use of *arnica*, if its virtues were known, would become much more general; we know of nothing that so soon removes the tenderness of a bruise or other injury. It relieves pain and soreness of the skin and muscles both in man and animals without the disagreeable accompaniments of many other applications. This tincture is the best form for external application.—*The Homestead*.

FATTENING TURKEY.

The alimentary properties of charcoal are very great; indeed, it has been asserted that domestic fowls may be fattened on it without any other food, and that, too, in a shorter time than on the most nutritious grains. In an experiment made to test the value of the article, four turkeys were taken and confined in a pen, and fed on meal, boiled potatoes and oats. Four others of the same brood were also confined at the same time, in another pen, and fed daily on the same articles, but with one pint of very fine pulverized charcoal mixed with their meal and potatoes; they had also a plentiful supply of broken charcoal in their pen. The eight were killed on the same day, and there was a difference of one and a half pounds each in favor of the fowls which had been supplied with the charcoal, they being much the fatter, and the meat greatly superior in point of tenderness and flavor. This would appear to establish, beyond a doubt, the benefit of charcoal for fattening purposes.

CATTLE KILLED BY CHEWING CORNSTALKS THAT HOGS HAVE BEEN FED ON.

Dear Sir,—To communicate a fact which may protect farmers from loss is the object of this note. In the month of October six of my best cattle died, four cows and two oxen; four died while I was from home, and from the overseer's report of their condition and symptoms while sick, Murrain was the disease to which I attributed their deaths. The first case I saw did not alter my opinion, but a post-mortem examination convinced me either that the books are erroneous, or else that Murrain has no uniform Pathology. The second case that

I saw presented the same symptoms and condition of the viscera as the first, and after this my mind was satisfied that Murrain could not be the cause of death, although the etymology of that word suits the cases better than any other, as all the sick died. The cause of death was in both these cases complete obstruction of the manyplies. No purgative, and I gave the most active in the materia medica, dislodged the packing from the third stomach. The stomachs, but particularly the third stomach, in these cases were engorged with the partially masticated stalks of corn, which had been fed green to hogs in the same field where the cattle ran. The hogs chew the stalk and partially extract the sugar, leaving them much as if they had been mashed in a sugar mill, which residuum the cattle eat with avidity. Not being able or disposed to ruminate the cortical part of the stalk, when swallowed the second time the mass lodges in the third stomach and arrests digestion. Let it be generally known that it is hazardous to feed hogs on soft corn, on the stalk, in a field where cattle run. To give this warning I write.

Very sincerely yours,

JNO. ROY BAYLOR.

New Market, Caroline Co., Nov. 1856.

F. G. Ruffin, Esq.

P. S.—The removal of my stock to another field checked the disease.

The warning that our friend, Dr. Baylor, gives from his own experience, we have several times given our readers through the Planter.

In some parts of the State it is a very common practice, and a most commendable one, to feed hogs on the corn cut up and given to them, stalk and all, as soon as it gets into 'roasting ear;' or as soon as the hogs have gleaned the wheat and rye fields. When the pasture in which they are fed is an abundant one, there is not much danger in letting cattle run in the same field, though it is a simple and safe precaution to enclose a lot for the hogs, which will admit them by a slip gap, but exclude the cattle.

Mr. Hugh Minor of Albemarle, who feeds his hogs in this way, heard, when he first commenced the plan, that cattle would eat the dry and masticated stalks, (which hogs always reject after chewing

and swallowing the juice) concluded to try the experiment and turned a yearling into the hog pasture: it soon died under just such symptoms as Dr. Baylor details. Mr. Nelson Barksdale, of the same county, had precisely the same experience in an experiment which he accidentally or intentionally made.

In Skinner's edition of Clater's "Cattle Doctor" will be found a letter from Gov. Vance of Ohio, in which he ascribes the disease commonly known as *mad itch* to the same cause. In this he is right in so far as it is undoubtedly one cause of the disease. But there may be others, most generally of the same nature. It is in fact a disease of the manyplus, which becomes gorged with an undigested fibrous mass not easily detracted from the folds into which it is crammed; and as the disease progresses, "and often at an early period, there is evident determination of blood to the head, evinced not only by a staggering gait, but by a degree of unconsciousness," "and the winding up of the disease is by a species of apoplexy," which is in this country commonly denominated *mad itch*.

But no one should be deterred from feeding corn-stalks to hogs at the proper time for fear of this disease, when all risk of it may be easily and certainly avoided.

[ED. SO. PLANT.]

[From the Valley Farmer.]

COOKED FOOD FOR HOGS AND CATTLE.

Why cooked food should be so much more nutritious for man or animals, than that which is uncooked, has furnished matter for some enquiry among the observers of nature. That it is so, every intelligent farmer, we believe, is willing to admit.—From a number of accurately conducted experiments it has been ascertained that a given quantity of corn meal made into pudding or mush, of a proper consistence, will make nearly as much pork as twice the same quantity of meal fed uncooked. In some countries of Europe where food for man and animals is scarce, food not only for hogs is cooked, but even the meal that is fed to work horses and oxen is made into bread, and is broken up and fed with hay and straw.

It has long been known to those who feed cattle or horses, that ground food will

go further than that which is unground; for this reason we see that wheat bran and shorts are readily bought up at the flouring mills at prices far exceeding their relative value, by analysis, when compared with oats or corn. With the present improvement in flouring mills the "offal" is left with but a very small per centage of the more nutritive portions of the grain in it, yet what it does contain is so readily available that it is digested with comparatively little loss, and the animals fed on it appear to thrive so well, renders it in great demand. A knowledge of these facts has led many of the most intelligent farmers to supply themselves with suitable mills for grinding the grain they feed to their stock.

The introduction of the iron corn and cob mills, which require no expensive machinery to run them, has brought them within the reach of every farmer, and into very general use; and although they only crush, or but imperfectly grind the corn, for a certain class of stock there is evidently great economy in their use; yet if the same corn was ground to the fineness of common meal, the advantage derived from it no doubt, would be double that from the corn which is only crushed.

Why is it that the crushed corn for stock is better than that which is whole? We answer—because, while it is minutely divided it is *more readily and effectually acted upon* by the digestive fluid of the stomach, a larger portion of it is rendered available for nutrition; and the finer the meal is ground, the more of it will be digested and assimilated and converted into flesh. Yet even corn when ground into fine meal and fed *uncooked* to healthy animals is not all digested, but a large portion of it passes off and is lost.

The fact is clearly proven, and the cause illustrated why cooked food is so much more valuable than that which is uncooked by the researches of Detrouchet, Dumas, and more lately by Raspail, who has devoted much time, aided by the best microscopical instruments, to the discovery of the original nutritive particles in food and the change they undergo in the process of preparation for nutrition.

According to this philosopher, the nutritive matter in grain or roots, is composed of, or rather is contained in minute,

smooth white globules, differing in size in the different grains or roots. Thus, in wheat they are 2-1000 parts of an inch; in the potato double this size—while in buckwheat they are only 1-10,000 part of an inch in diameter. Pure flour or starch would seem to be but a mass of these globules in their natural state. Raspail ascertained that these minute globules consist of an envelope and an inclosed kernel, constituting the nutritive matter. These globules are *insoluble or unalterable in cold water, but require a heat of 122° to expand the kernel and burst the envelope*, yet at this degree of heat the substance is not decomposed. It is these coating envelopes that constitute the starch of the laundry. The investigations of these philosophers seem to have established the following facts as stated by Raspail:

"1st. That the globules contain flour, meal, or starch, whether contained in grain or roots, are *incapable of affording any nourishment as animal food until they are broken*.

"2d. That *no mechanical method of breaking is more than partially efficient*.

"3d. That the most efficient mode of breaking the globules are by heat, by fermentation, or by chemical agency of acids or alkalies.

"4th. That the *dextrine*, (the nutrient part) which is the kernel, as it were, of *each globule, is alone soluble, and therefore alone nutritive*.

"5th. That the envelope or shells of the globules, when reduced to fragments by mechanism or heat, are *insoluble, and therefore not nutritive*.

"6th. That though the fragments of these shells are not nutritive they are indispensable to digestion, either from their distending the stomach or bowels, or from some other cause not understood, it having been proved by experiment that concentrated nourishment, such as cane sugar, essence of beef, or osmazome, cannot long sustain life without some mixture of coarser and less nutritive food.

"7th. That the economical preparation of all food containing globules of fecula, consists in perfectly breaking the shells, and rendering the kernel or dextrine contained in them soluble and digestible, while the fragments of the shells, are a

the same time rendering more bulky, so as the more readily to fill the stomach"*

That great advantages are derived from cooking meal for stock, we think these facts and hundreds of experiments that have been made, clearly demonstrate: and the only question that presents itself for consideration is, whether the saving in grain by cooking is equal to the labor and expense of the operation. Two points must determine this question; first—the market value of grain, and second—the perfection of the apparatus for cooking and feeding. At the present price of corn, (and we have no reason to suppose that it will ever permanently be less,) we believe it will be found that there will be a saving of at least *twenty-five* per cent in cooking the grain fed to hogs.

Steam will be found the most convenient and economical agent for this purpose. The process is simple and comparatively cheap. A vat or steam box, and an ordinary steam boiler supplied with gauge cocks and safety valve will constitute the apparatus for cooking. These in capacity, must be in proportion to the number of animals to be fed. Meal sufficient to feed two hundred hogs, for a day, can easily be cooked at one time. The boiler should be arranged so that it can be readily supplied with water. The vat can be made of plank and secured firmly together with frames around each end, and keyed up so as always to be tight; it should be so situated that the slop could be drawn off into cooling vats, and from these directly into the feeding troughs. The steam is conveyed from the boiler into the vat through an iron pipe, one inch in diameter, this should pass into the box at the bottom and make several turns, each running nearly the whole length of the bottom; the end of the pipe should be closed, and in the top of the pipe that is within the vat, small holes should be drilled three inches apart for the discharge of the steam.

* We would respectfully call the attention of Mr. Bolmer, of the "Working Man," and of the "Indian Journal," and of the editor of the "Western Farm Journal," to these facts as illustrated by these philosophers. Mr. B has more than once misrepresented us in his remarks upon our articles on "Preparing Food for Farm Stock," and the editor of the Farm Journal, in his allusion to the same subject, in an article which appeared sometime since in the Louisville Commercial Review, displays a want of knowledge upon the subject he attempts to discuss that may call from us at a future time some remarks.

Portable steam engines are now coming into use to considerable extent among the larger farmers, taking the place of the horse powers for threshing, and are also employed for grinding corn, cutting hay and straw, breaking hemp, sawing wood, &c. On any considerable farm they will be found cheaper than horse power for any of these uses. One of these engines may be employed to the best advantage in steaming food, when the steam is not required to run the engine. Under this arrangement, the whole fixtures for all the power required for performing these various offices, as well as the cooking, may be secured at comparatively low rates.

When we began this article, it was our design to give the whole plan and dimensions in detail of the apparatus, but this is unnecessary, because any mechanic who is competent to do the work can plan it. We will, however, remark, that the greater the capacity of the steam vat, with a boiler in proportion, the less fuel will be required to cook a given quantity of food.

CORN MADE INTO WHISKEY.

An article, says the Richmond Whig, is going the rounds of the press, copied from the Cincinnati Gazette, containing certain statistics respecting the manufacture of whisky in the vicinity of Cincinnati, which will surprise many readers, Cincinnati, it is claimed, is the greatest whisky market in the world, and the valley of the Ohio the greatest whisky producing region on the face of the earth. The writer of the article says that in no branch of business have inventive genius and modern improvements been so largely drawn upon as in the distillation of liquors. Steam is made to perform almost all the labor necessary for the production of whisky. Selecting one distillery among many for description the writer says:

A railroad connects the distillery with the Miami canal, whence the supplies of corn are obtained. The latter is transferred from canal boats into large boxes set upon cars, and thus conveyed to a huge bin where stocks are kept. This bin is also connected by railroad with the distil-

lery, and the corn, upon being conveyed from the former to the latter, is thrown into the hopper of a large corn sheller, which separates the grain from the cobs with great rapidity. The corn being shelled, is carried by elevators to the second story of the building, and emptied into the noppers of mills, by which it is ground and the meal deposited in the first story. The cobs are taken by machinery from the sheller and thrown in the vicinity of the boilers, where they are used for fuel.

The meal as it is ground is carried by elevators into the upper part of the building, and thence it is conveyed to the back part of the establishment, and deposited in large tanks on the first floor. Here the distillers make what they call mash. The 'cooking' is performed entirely by steam. From these tanks the mash is drawn off into other tanks of equal dimensions, situated on either side, where it goes through the cooling process, and receives the yeast. In the latter tanks the mash remains two or three days, until it becomes thoroughly worked by the yeast. Here it frequently spoils in consequence of bad yeast or unfavorable weather; but when no accident of this kind happens, it is drawn off and run into the still. The latter is about thirty feet high, and five or six feet in diameter. The mash is boiled in the lower part of this still, and the steam escapes through a pipe connecting the upper end of the still with the worm. The latter is set in a large cistern filled with cold water, and here the steam is condensed, and from this worm the whisky is drawn in the lower story, and thence it is run into a cistern in the 'whisk-house,' where it is barreled and made ready for market.

What remains in the still after extracting the whisky is called stillslop. This is drawn off into a tank which stands out of doors, and it is upon this that distillery hogs are led.

The average time required to convert the corn into whisky is four days. In the one distillery mentioned about one thousand bushels of corn are daily converted into whisky, producing about four thousand gallons of whisky, giving for that single establishment an annual *destruction* of the three hundred and twelve thousand bushels of corn and an annual production of

one million two hundred and forty-eight thousand gallons of whisky. There are other distilleries in the neighborhood the capacities of which are severally two or three times greater. The quantity of whisky sold during the year in the Cincinnati markets alone is estimated at *nine millions* of gallons. This is probably not more than one half the production of Ohio and Indiana alone. Presuming that the production is eighteen million gallons, the consumption of corn must be four and a half million bushels, to produce which requires a million and a quarter acres good land. It is probable the production of whisky in the Ohio Valley is *fifty millions* of gallons per annum, involving a consumption of twelve and a half million bushels corn, the average value of which is \$5,000,000.

To this the *New York Times* replies:

We copied an article from a Cincinnati paper, a day or two since, on the whisky business of the Ohio Valley, in which it was claimed that Cincinnati was the greatest mart for whisky in the world, the quantity sold in that market amounting to 220,000 barrels, or nine millions of gallons, annually.

But our Cincinnati contemporary claimed rather too much for the Queen City of the West. New York is ahead of her out and out, not only as a manufacturer, but as a dealer in whisky. There are in this city and its immediate suburbs twelve whisky distilleries, which convert daily in bad liquor 13,100 bushels of good corn, making annually, 15,376,125 gallons. But this is only the production of New York, which is all sold here as a matter of course. The receipts of country whisky amount to about fifteen millions of gallons annually, being more than three times the quantity sold in Cincinnati.

New York may fairly claim, we think, to be called the greatest whisky mart of the world. Of this intolerable quantity of whisky which flows through our city as though it were a canal, about one third is made into alcohol and used in manufacturing operations of various kinds, and one quarter is exported to foreign countries. A very small portion of that which remains is drank as whisky, while the larger part passes through the hands of the rectifiers, and is retailed to an innocent

and confiding public under the various names of Cognac, dark and pale; Holland gin, Jamaica rum, St. Croix, apple-jack, London gin, Irish whisky, Glenlivet, and all other possible liquids which drinking men like to lacerate their vitals with. Nearly all the whisky that goes to France, and there is no small quantity of it, comes back to us in the shape of brandy, though some of it returns blushinglly labelled, Chateau Margaux, or some of the other *Chateaux en Espagne*, which abound in the claret manufacturing imaginations of Frenchmen.

It is estimated that the annual production of whisky in Indiana and Ohio amounts to about eighteen millions of gallons, which requires the produce of a million and a quarter acres of good land, in the shape of corn. There are, in New York, or its immediate neighborhood, twelve distilleries, the most extensive of which consumes 2500 bushels of corn daily, and the smallest 400. This is a sad comment on the prohibitory liquor law, which required so many years of agitation to force through our legislature.

At the above rate of production, New York alone consumes 4,779,500 bushels of corn, taking not less than an equal quantity of land, so that the whiskey products of those two sections alone amounts to upwards of nine and a quarter million bushels, or very nearly two million of barrels of corn.

When this cheap whiskey forces itself into Europe the quantity made will be still greater. ED. SO. PLAN.

CORN IN PORK vs. CORN IN THE CRIB.

It is estimated from an experiment made by S. B. Anderson, that 100 bushels of corn will produce 1000 lbs. of gross increase in the weight of hogs. One hundred thrifty hogs were weighed and put into a pen. They were fed 100 days on as much corn as they could eat. The average gross increase per hog for the 100 days was 176 lbs., or at the rate of 1-3-4 lbs. per day. It thus appears that one bushel of corn will produce a gross increase of 10 1-2 lbs. Throwing off one-fifth to come at the net weight, gives 8 2-5

lbs. of pork are made by one bushel, or 56 lbs. of corn, 1 lb. of pork is the produce of 5 3-4 lbs. of corn.

From an experiment made by Samuel Linn with 58 hogs, as reported in the Patent Office Report for 1849, 6 1-2 lbs. of corn produced one lb. of pork.

From the experiment of Hon. H. L. Ellsworth, reported in the Patent Office Report for 1847, it appears that 3 4-5 lbs. of cooked meal made 1 lb. of pork. This experiment was on a small scale.

Assuming that it required 6 2-3 lbs. of corn to make 1 lb. of pork, the cost of its production will be seen from the following table. The labor of feeding and taking care of the hogs is not included in the estimate:—When corn costs 12 1-2 cents per bushel, pork costs 1 1-2 cents per pound. When corn costs 17 cents per bu., pork costs 3c. per lb. When corn costs 35c. per bu., pork costs 4c. per lb. When corn costs 42c. per bu., pork costs 5c. per lb.

The following table shows what the farmer realizes for his corn sold in the form of pork: When pork sells for 3c. per lb. it brings 25c. per bu. for corn. When pork sells for 4c. per lb. it brings 33c. per bu. for corn. When pork sells for 5c. per lb. it brings 42c. per bu. for corn. When pork sells for 6c. per lb. it brings 50c. per bu. for corn.

The question is one that every farmer can, by observation and experience, settle for himself. If he possesses the requisite knowledge it will give him an opportunity to dispose of his corn in such a manner as will be most remunerative. There are certain circumstances which will, more or less, affect the general issue, such, for instance, as capabilities for fattening, mode of treatment, care and attention bestowed, &c. The item in reference to the experiment of Hon. H. L. Ellsworth, in the use of corn ground and cooked is worthy of the special attention of those engaged in this department of farm economy. [Hunt's Merchant's Magazine.

The above, we believe, is under the mark as to the cost of raising pork as it is generally managed. What comfort those, whose short crops or "bad management" may compel to buy bacon, can derive from it will be increased by the following

statement from a correspondent of the Farmville Journal.

PROFITS ON PIGS AND POULTRY.

Messrs. Editors:—During the nine years that I have pursued farming, I have kept accounts with the products of the farm, and find it beneficial in many respects.

I herewith send you my accounts with poultry and swine for the past nine years. My poultry I charge with their worth at the commencement of the year, and with the food they consume during the year, and the mischief they do about the premises, and credit the eggs they lay, and the worth of those killed during the year, with the worth of those I have at the close of the year.

Abstract of account with hens :

Year	No.	Cost.	Worth.	Profit.
1847	—	\$17.25	\$25.68	\$8.43
1848	—	26.64	36.87	10.23
1849	—	23.11	45.59	22.48
1850	—	27.80	41.64	14.84
1851	34	36.05	53.10	17.05
1852	60	57.76	89.69	30.03
1853	67	69.45	91.57	22.12
1854	78	58.19	86.09	28.50
1855	70	74.09	82.67	6.58

Gain in nine years, \$162 26

I have no record of the number of hens for the first four years.

I charge the swine their cost when I buy them, what grain they consume, and five or six dollars for the skim milk from each cow I keep, and credit their market worth when slaughtered, allowing their manure as an offset to care and attention while fattening. My loss on swine I attribute in part to not keeping sufficiently well in the summer season, and consequently not slaughtering early enough in the winter, and partly in not paying sufficient attention in selecting pigs. Generally have taken spring pigs and killed in the winter.

Abstract account with swine :

Year.	No.	Cost.	Worth.	Profit.	Loss.
1847	3	\$30.97	\$43.79	\$12.82	
1848	4	60.00	46.47		\$12.60
1849	5	93.47	76.75		16.82
1850	12	131.92	104.46		27.46
1851	4	56.90	53.00		3.99
1852	4	107.07	98.22		8.84
1853	4	115.64	101.04		14.60
1854	3	66.74	55.63		11.06
1855	3	58.55	65.00	6.45	
				\$19.27	\$96.26

Loss on the nine years, \$77.

Here you see is a wide difference in the result in keeping two descriptions of farm stock: and without facts and figures, how can the farmer know whether he is gaining or losing from year to year in his farm operations?

MILNER CASE.

Avon, Ct.

SAVING SEED CORN.

Messrs. TUCKER & SON.—As it is not too late to select and cure corn for seed, permit me to suggest to your readers a few thoughts. Perhaps no farm crop more than corn is susceptible of improvement by a judicious selection of seed; yet it is, in my opinion, a subject of much regret that the selection of corn for seed is made in such a manner as to defeat in a measure the object aimed at. Every one knows that the prevailing practice is to save for seed the largest years, well filled at the end, these being the only qualities sought in a standard ear, both of which may be liable to criticism. If the largest ears are selected, they will usually be from stalks bearing but one ear, whereas ears for seed should be from stalks bearing two or more, if such can be found; if not, the whole should be condemned, and seed obtained from some better source, because at harvest if a stalk in every hill, or every other hill, is found bearing two good ears, it will make a vast difference in the yield of a corn-field, and the only way to obtain such stalks is to plant seeds taken from similar ones. The ears should of course be large, but not the largest in the field unless couplets are so, which are not usually the case.

Again, should the ear be perfectly filled at the tip? I should say, unless it be a very long one. What is the language of the cob projecting from the end of the ear? for it certainly speaks if we question it, and that very plainly, and says—"if the soil had been better, or the season, this ear might have been a good deal longer. I have furnished room on the cob; put on the kernels, and see which will hold out the longest." That is, the disposition of the corn is to make a much longer ear, had every circumstance been favorable, but in the case of the one perfectly filled there was no more cob room, and by selecting such ears year after year,

the ears will tend to grow shorter each year, because this peculiarity results from deficiency in length of cob, which, like any other peculiarity, soon becomes a hereditary type, and in this case a defect. If this reasoning is correct, the longest ears with a moderate length of unfilled cob at the tip, should be selected if we would increase the length of the ear in the future crop.

There are several other qualities deserving attention in selecting seed corn. Among them, a cob small in proportion to the size of the kernel, and the surest indication of this without actually breaking the ear in two, which is hardly desirable, is a small butt on an ear with nearly a uniform size its whole length. This, too, is easily rendered hereditary by repeated selections, and has the advantage of being much easier to husk than when the ear has a large, strong butt. I will add, as the result of my observation, that ears perfectly filled at the tip, more commonly have a large butt than those not so filled out. Is it because there is no more room for extending the growth upwards, and its exuberance is developed in an opposite direction? Nor would I select a seed ear if it grew on a long stem and lopped downwards from the stalk, because such ears are never quite in the right place when you are cutting up or husking the corn.

Then, to sum up the attributes necessary to constitute an ear desirable for seed, I would name the following: The stalk should be of a strong and upright growth, with few or no suckers, bearing at least two ears, and the more the better. The ears should be long for the kind; stand erect on moderately short stems, be of a uniform size from the bottom to the top, with a short unfilled tip or snout, as the boys call it, and of an unmixed yellow or white variety, as the case may be.

In a field of four acres, which I have to-day been cutting, these qualities may be found as well combined perhaps as in most fields, and notwithstanding the unfavorable season for corn, the piece will average very nearly a doublet to every hill, and by actual counting will produce over five good ears to a hill, the hills being planted three and a half feet apart. This has been produced by careful selection of seed for a number of years, ten at least, commenced by the late Mr. Dix, an intel-

ligent farmer of Vernon, Oneida Co., and for the last five years conducted under my own supervision. It has not been unusual in ordinary seasons to find stalks bearing three and even four well filled ears, but this year I find none with more than two. I am satisfied that by persevering in a selection of seed, following substantially the formula above, every farmer may in a few years add a large per cent. to the product of his corn crop. Mine is the medium size, eight-rowed variety. There is no doubt but the failure of seed so universal this year, is the result of bad management in curing it during the cool, damp weather of last autumn. Half that I planted failed, while that planted directly joining it, obtained of Francis Wilcox, of Oneida Co. (the improved variety,) came perfectly. This was tied two and two by the husks, and hung to dry over poles in the barn loft.

Corn in this region is beyond the reach of frost which has not visited us yet in much severity, but the crop is on the whole a light one. Rye, which with us was widely harvested, was a good crop. Wheat, the midge injured considerably. Buckwheat is light but well filled. Potatoes and root crops are badly injured by the drought. GURDON EVANS. *Glen Mary, near Owego, Tioga Co., N. Y.—Country Gentleman.*

THE KITCHEN GARDEN.

MUSHROOM GROWING.

A correspondent has reminded us of our promise to give an article on mushroom-growing, and asks if he can grow them in his cellar, which is cool and seldom freezes.

To the latter, we answer yes. There is no better place for the purpose, and with care they will continue in bearing in such a place for a long time; in fact, by having two beds, one made now and another about November, this much-prized esculent can be had the winter through. If in the coldest weather the temperature is likely to get low in the cellar, the beds should be covered with a few inches of coarse hay. This will not in the least prevent the growth of the mushrooms, only requiring a little caution in lifting the hay, in case some of them should be grown up partially through it.

If the droppings were saved as recommended in a former paper, the task will be light, merely requiring to be thrown together; if dry, watered just sufficient to moisten the whole, and allowed to get into a heat, and it is ready for building.

If the manure has still to be got, select that which has laid sufficiently loose not to have exhausted itself already. Throw it into a heap, rejecting the very long straw, in sufficient quantities to build a bed the size required. When in a proper state, i. e. when nicely heated through the whole mass, get the bed made after the following manner: set up a board a foot or fifteen inches deep, and six feet from one of the outer walls, any length desired. Take the prepared manure and spread, shaking it well to pieces, evenly over the whole surface; tread down quite firm, and then add another six inches, and so on until the manure is as high as the board, with a rise of an inch or two towards the back. Before finishing it must be made quite firm; it is then left for a few days for the fermentation, if any, to take place. If rightly managed, so thin a bed will seldom be too warm for spawning. Break up the spawn into pieces an inch square or thereabouts, and insert in the manure by means of a blunt-pointed dibble; stick six inches apart and one below the surface, over the whole bed. Then lay on, when well pressed down, soil not less than two inches thick. If the soil is not made quite firm and solid, the mushrooms will seldom amount to much. If the soil is not inclined to bind down sufficiently firm, add a little water with a very fine rose pot, and then use the back of the spade directly after, and it will not fail to bind down close. But little air is necessary at any time, as it tends only to dry the bed, and the more it can be kept uniformly moist without artificial waterings the better. It matters not how dark the place is where they are grown on.

The late bed would be better, made away from the wall, nearly triangular in shape, with a base of four feet, to be spawned and soiled on all its sides. This tends to prolong the heat in the bed, which is desirable in the depth of winter.

We have seen capital mushrooms grown in beds under the green-house stage in winter. In fact, the place is no object, the main requisites being horse manure in

the proper state, a uniform medium temperature, and the beds at all times moist without being sodden with wet.—EDGAR SAUNDERS.

Country Gentleman.

“BIG HEAD,” (OSSEOUS DISEASE OF THE HOSE.)

Dr. Thomas W. Gordon of Georgetown, Ohio, wrote us a letter, in the latter part of January, on the same subject. We immediately forwarded the same to Arthur S. Copeman, a practising veterinary surgeon, of Utica, N. Y., who has kindly furnished the following interesting communication:—

DR. COPEMAN'S ANSWER TO LETTER ON “BIG HEAD.”

Utica, March 3, 1856.

G. H. DADD, Esq.—Dear Sir: I cheerfully offer my humble opinion on the disease so well described by Dr. Gordon. This affection is what most English writers describe as *mollities ossium*, *Osteo*, *Sarcoma*, &c.

After careful examination of the bones, anatomically, chemically, and by the aid of the microscope, I am inclined to view this disease as a true “fatty degeneration.”

We find every cavity in the substance of the bone filled with oily matter, resembling boiled marrow. The bones may be fractured by slight force, and in their dried state are light and very greasy, and sometimes so soft that you may crush any part of them with the fingers. Here it is evident the formation of fat takes place in an excessive manner, as they cast off the osseous structure. All the bones are liable to fatty degeneration; but it has been more frequently observed in the bones of the face, viz: the upper and lower jaw bones. The disease commences at the base of the bone, and the soft parts are secondarily afflicted. Generally the first indication of the disease is a swelling, of a hard, unyielding character. The tumor develops itself more or less rapidly. Pressure does not lessen its size nor cause much pain; the soft parts are in their natural state. When the disease has made considerable progress, the osseous texture disappears more or less completely and a homogeneous gray or yellow lard-like substance, is found. In the last stages of this disease, the surrounding parts undergo a similar change.

The prognosis of this disease must always be unfavorable, for scarcely any reliance is to be placed on any known remedy or plan of treatment, when the disease is once fairly established. In the *jaw bones*, excision of the diseased part, or their complete destruction by strong caustics, are sometimes the means of arresting the progress of the disease, probably by setting up "new actions" in the surrounding tissues. I must admit that in my hands both caustics and excisions have only enlarged the original boundaries of the mischief. It is often said—"to know the cause of a disease is half its cure." I am of opinion this is not in all cases sound logic.

The causes of fatty degeneration are recognized by all observers as those which lower the vital energies. Defect of activity in the various excreting organs must cause an accumulation of oily matter in the blood. The same will occur if by means of the food an excess of fatty matter is introduced into the circulation. So long, however, as the organic life of the tissues persists, they will nourish themselves healthily out of this oil-laden blood; but when that begins to decay the oily matter settles down into situations from whence the organizing force before excluded it. No doubt the excessive use of hydro-carbonaceous (fat forming) articles of food are apt to give rise to special fatty degeneration. Still we must admit that something more than a general tendency to form fat or a general excess of fat in the blood is necessary to produce a local fatty degeneration. The general conditions are favorable but not essential to this form of disease.

Having taken some pains to learn the history of several cases of this disease, I am fully convinced that it belongs to that class of diseases known as hereditary, such as ringbone, spavin, cancer, &c.

Now, as we have no means of curing this disease when fully developed, it behoves us to look well to the "breeds" known to be "predisposed to it." The subject of "hereditary disease" is almost "universally understood" by breeders. In conclusion, I shall be most happy to examine any specimens of bones affected with his disease—"big head."

A transverse or longitudinal section of

the bone, as thick as a *cent* piece, and half an inch square, is all I should need, which can be sent by mail in a letter.

Please excuse these desultory remarks, and believe me,

Yours most respectfully,
ARTHUR S. COPEMAN.

GUANO—DURABILITY OF.

MR. PEARSON has a high opinion of guano, but like most good farmers, and in accordance with the general opinion of the members of the Club, alternates the application of guano with barnyard manure. This retains the land in the best condition, whereas few believe that this can be done by the exclusive use of guano. He also believes in the effects of guano for at least the second year. He has repeatedly tested it. The last trial was in this wise: In a field of eleven acres of corn, he applied it to one-half, at the rate of four hundred pounds per acre, while the other half had a good coating of barnyard manure. There was no perceptible difference in the crop when harvested. Next season the same field was put in oats, without, of course, any manure, and again no difference could be seen between the two portions. As to the relative cost of the two manures, Mr. P. stated that with respect to the *ruta baga* crop, the expense of hauling the barn-yard manure to the field, its spreading in the furrows, and the cost of the extra plowing *were equal to the whole cost of the guano*. This is about the strongest testimony in favor of the partial use of this concentrated manure by farmers in general, that we have yet seen; and it appeared to be coincided in by all the members of the Club present—one of them, a most successful farmer, said it agreed with his own experience and practice.

Germantown Telegraph.

RYE AMONG RUTA BAGAS.

HARVESTING THE CROP.

On the land occupied by the *ruta bagas* there was a fine-looking crop of rye growing, and Mr. P, a farmer near Philadelphia, informed the Club that the *ruta bagas* in no degree interfered with the yield of the crop. The tops scattered over the grain was a protection to it, and helped to enrich the ground.—*Germantown Telegraph.*

[What time was the rye sowed among the *ruta bagas*?—*Ed. So. Planter.*]

From the Richmond Whig.
**PRESENT STOCKS OF TOBACCO IN
 THE UNITED STATES.**

According to Messrs. T. & H. Messenger's Tobacco Circular, 2d inst., the stock of leaf tobacco in New York, on 1st December, amounted to 6310 hhds., consisting of 6123 hhds. Ky.; 181 Va. and N. C.; and 2 Ohio. The stock of manufactured was 36,221 packages, against 29,081 for the corresponding period of 1855.—The sales of November last, amounted to 10,295 packages; in November 1855, to 10,651 packages. The exports of last month were 225,028, nearly one-half of which was sent to Australia. We make the following extracts from the Circular :

LEAF.—In our last we suppose prices had reached their culminating point, but subsequent sales seem to warrant a range of rather higher figures, particularly for low grades, which at present are in light supply. The market closes firmly. The sales for the month were 870 hhds. Kentucky, 50 do Virginia, 37 do Maryland.

MANUFACTURED.—Compared with the last month, the sales have been light, but prices have ruled firm for all grades manufactured from old leaf; while that made from new trash and primings, is slightly lower, the supply being rather in excess of the demand. The present scale of prices precludes all operations of a speculative nature, therefore the sales, as noted also in our last are for consumption. The stock, it will be seen, is appreciating while the season for activity may be deemed about closed.

NEW ORLEANS—The continued light arrivals and meagre stocks, necessarily limit transactions; increased receipts would doubtless lead to enlarged operations, as there exists a fair inquiry with corresponding sales. Holders apparently dictate their own terms, and prices are again slightly in the ascendant, say from $\frac{1}{2}$ to $\frac{1}{2}$ cents. Choice heavy Clarksville has changed hands to the extreme price of 15 $\frac{1}{2}$ c.

RICHMOND.—The inspection of old leaf for November at this market has been trifling, not exceeding 200 hhds. and re-inspection about the same quantity. The demand was brisk, at prices ranging for leaf from 18a19 cts., and for lugs from 11a12 $\frac{1}{2}$ cents. No really fine leaf

was offered; in fact there is but little remaining unsold.

The receipts of new crop, chiefly delivered in loose parcels, are increasing, and the daily receipts average from 20,000 to 30,000 lbs. The quantity is inferior and in sappy condition; notwithstanding, the competition is spirited, and prices range for inferior lugs from 6a7c.: for fair to middling, from 7 $\frac{1}{2}$ a8 $\frac{1}{2}$ c.; and for leaf, from 9 $\frac{1}{2}$ a13 $\frac{3}{4}$. The specimens of the new crop so far exhibited, evidence much irregularity in color, size and maturity, a portion of the leaf being of fair size, and tolerable ripe, while the majority is thin, unripe, and of dingy color.

BALTIMORE.—The receipts of Maryland are fair for the season, and with a continued good inquiry very good prices are demanded and obtained. Ohio comes in sparingly, and finds ready buyers at extreme quotations. We continue last month's table of prices.

From the Richmond Dispatch.

TOBACCO IN ALGERIA.

The correspondent of Wilmer and Smith's Liverpool Times, from whom we have recently quoted with reference to the "French products in Algeria," has the following about the Tobacco culture in the French Colony, which will interest many of our readers :

The produce which promises to assume most importance, and over which the government are able to exercise most control is that of Tobacco. Algiers is at present the great Tobacco province. Some is grown in Oran, and a few poctares in Constantine; but the bulk is brought to the great government warehouse in Algiers. This is probably the largest building in Africa. It contains three-fifths of a mile of warehouses, and I passed a morning when at Algiers, in going over it. Until quite recently, the government brought up the whole of the Tobacco produced in the colony, and if they had not nobody else would. It was remarkably like hay, and they could only use it by mixing it in France with the produce of the plantations of Hungary and America. This the monopoly of regie enabled them to do. By judicious prices and classifications as to quality, they have now, however, very much improved the quality of

the produce; and by liberality in price, they have rendered it a popular article of culture in the European garden patches. Now, however, the government do not undertake to buy every leaf of tobacco grown in Africa. They are anxious to push it into general commerce, and some little finds its way, at cheap rates, into private hands. It is used to adulterate American. At the *Magasin* the government bought during the last year 3,000,000 of kilos, at an average of 90f. the 100 kilos. Of this about one-third was produced by the natives, and the other two-thirds by the colonists. At present the best is very indifferent, and one of the penalties paid by the French for the conquest of Africa is being compelled to smoke rather worse cigars than they formerly had. This, however, is of no great consequence, for no Frenchman has the least idea of fragrance or flavor in Tobacco.—The *regime* has educated him to consider anything a good cigar, so that it will burn and give forth a strong, rank smoke.

ON THE LOWER PART OF THE VALLEY; EFFECT OF SUBSOILING.

Owing to very dry falls and springs, we, the farmers, of the lower part of the Valley of Virginia, have made, for the past three summers, very inferior crops of wheat, but I am much gratified to be able to say, that there is now the best prospect for a good crop I ever saw in the month of November, from the appearance of the wheat is in advance of the best to be seen the 1st of May last. Farmers generally have taken more pains in seeding than I ever knew them before. Some few have discontinued the use of guano and other fertilizers, but others who have not heretofore had faith have purchased *guano*, *phosphate of lime*, or *bone dust*.

I have seeded this fall, on my father's estate, (known as Guilford, which I have leased for a term of years,) 205 acres in wheat, 130 acres of which was drilled in, after being rolled after harrowing it down. On 100 acres of the 130 I used six tons of phosphate of lime, and four and a half tons of bone dust,—making nine and a half tons. The thinnest portions of the remaining thirty acres have been manured with home-made manure, from stable

yard, cow yard, hen house, turkey house, &c. I have 75 acres of corn land seeded, 35 of which is flat black land, 40 acres upland. On this forty acres I have put, since seeding, upwards of 400 bushels of compost, viz: 100 bushels of stone lime, 30 sacks of salt,—which cost me \$1 40 at Happy Creek depot, on Manassa R. R., within eight miles of me,—three tons of ground plaster, and 25 bushels of ashes. All of which was mixed, dampened, and sifted, and then spread with a two-horse broadcasting machine, at the rate of ten or twelve bushels per acre.

I will mention that 25 acres of this 40 acres were plowed and subsoiled last spring for corn, and every hill of corn was well sprinkled with the same sort of compost, and the result is, my corn crop will nearly double, in number of bbls. per acre, any crop I have seen this year. I planted the subsoiled land three feet each way, and left two stalks in each hill. The portion not subsoiled was planted four feet each way, and two stalks left in each hill. The difference in favour of the subsoiled land was very great in every respect. I am now shucking it, and it surpasses my expectations at the time of cutting it up before seeding; the upland, not subsoiled, was fully equal to that subsoiled, and the corn was composted on the hill at the same time the subsoiling corn was. I shall continue subsoiling for corn, and will continue to report my success.

It is my opinion that the Valley farmers will be forced, by the frequency of dry summers, to subsoil their lands; and when they once see the improvement in the corn crop, and in the difference in the *taking* and *standing* of clover, and other grasses, and the increased effect of plaster, and all sorts of manure, the face of this great Valley will be doubled in its beauty; and I do not think I would be much out of it, if I were to say it would soon double in bbls. of corn, bushels of wheat, and tons of hay for market.

I observed from the papers, that George Watt, of Richmond, took the premium for the best subsoil plow this fall. My plow took the premium last fall over three or four he had on the ground. I am anxious to see his, if it is better than my plow. I want two; I am determined to use the best, it matters not by whom they

are invented. I will mention that I have yet to see the subsoil plow that compares with my plow in clay land. Mr. Watt may have advantages that I have not thought of.

I will send you a circular giving the success of the Manny Reaper before long. My two boys—one 14, and the other 11—can cut all the wheat I can raise in twelve days.

In haste, Yours, &c.

GEORGE WASHINGTON'S VIEWS OF PLANTATION WORK.

At a meeting of the Executive Committee of the Virginia Historical and Philosophical Society, held on the 2nd day of June 1856, there was presented from Maurice H. Burr of Racine, Wisconsin, a manuscript of seven pages, containing "George Washington's views of the work to be done at his several plantations in the year 1789, and his general directions for the execution of it." It is dated Mount Vernon, Jan. 1st, 1789, and has the genuine signature of "G. Washington." The following is a copy of the manuscript.

A view of the work at the several plantations in the year 1789, and general directions for the execution of it.

From the plans of the Plantations—from the courses of the crops which are annexed to these plans, and from the mode of managing them as there prescribed, may be derived a full and comprehensive view of my designs, after the rotation is once perfectly established, in the succession proposed. But as this cannot, at all the plantations, be adopted this year, every thing in the meantime must be made to tend to it against the next, as far as circumstances will admit.

FOR MUDDY HOLE.

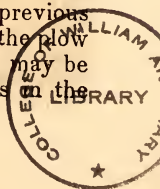
The plows belonging to this plantation, together with those from Dogue Run are to continue without intermission or delay, (when not prevented by frost or rain) to break up field No. 5, for Indian Corn, and when that is accomplished, next to break up No. 4 for Buckwheat, which is to be sowed in April and plowed in before harvest, as a manure for the crop of wheat which is to be sowed therein in the month of August next, after these plowings are

performed. Then, as there is no field at this plantation which can with convenience be appropriated for spring grain or for the crop of sundries this year, and as the plows at Dogue Run (especially if the winter should prove hard and unfavorable) will not be able of themselves to break up fields No. 4 and 6 at their own plantation, and at the same time prepare those of No. 3 for barley and oats, and of No. 7 for Indian corn in season; the whole may go to Dogue Run (till the corn at Muddy Hole shall want them), and work at No. 6, if the condition of it is such as to admit thereof; or in No. 4 at the same place if it is not; for the respective crops which are assigned for them.

The fence on the Ferry Road, from the division between the fields 4 and 5 to the lane on the mill road, must be repaired with new rails, but from thence to the gate leading to the barn from the overseer's house should be made tolerably secure with rails, which may be taken from the opposite side, round field No. 7. But this last mentioned fence must not be stripped so bare as to render it altogether unfit for pasture by becoming a common.

As the days are short, walking bad, and the different kinds of stock will require careful attendance, it may perhaps be best to relinquish the idea of the people of this place having anything further to do with the new ground at the mansion, and when not employed (in open weather) with their fencing, to be thrashing out grain. But there is a work of great importance, if the weather and other circumstances concur for the execution of it in season—I mean that of getting up rich mud from the most convenient part of the creek and laying it in small heaps (for amelioration) to be carried over the poor parts of No. 5, which will be in corn. If this last mentioned work can be accomplished (and it must be done soon, if any effect is expected from it this year, in order that the frost may have time to operate) the carts may be employed in hauling it to the ground.

Another piece of work to be done here (as I propose to make a small quantity of tobacco at this as well as at my other plantations) is to hill the ground, that is marked off for it, in time. But previous to hilling, it must be laid off with the plow into 3 feet squares, that the hills may be made directly on the cross; so as



early stages of the growth of the tobacco, it may be tended with a plow each way.

If these several kinds of work should not afford sufficient employment for the hoe people with the cultivation of the ground which will be marked out for potatoes and carrots, and which ought to be plowed up immediately, they may be preparing field No. 6 on the creek for corn in 1790. In the execution of this work, the cedar trees are not to be cut down, but trimmed only; and other trees left here and there for shades. The brush and rubbish of all sorts are to be thrown into the gullies, and covered over so as to admit the plows to pass.

Both parts of field No. 1 should, from this time, be withheld from stock of all kinds, that there may be, in the spring, food for the ewes, and lambs, and calves.

The field No. 3 now in wheat and rye must be sowed with clover and timothy on the first snow that falls—6 pints of the first and two of the latter per acre.

FOR DOGUE RUN.

The plows belonging to this plantation, when they have performed what has already been directed for them at Muddy Hole, together with those of the latter, are to begin, if the ground will admit of it, to break up No. 6 for buckwheat, to be sown in April. But if this, on account of the levelness of the field and the water which may stand on it, cannot be done—then to plow No. 4 for the crop of sundries. But as it is of essential importance that the oats and barley should be sown early, and the working of the fields for Indian corn not so much delayed as to endanger the prospect of that crop—the plowings of both 6 and 4 must be delayed, at least till the oats and barley are in—if they cannot be broke up in season for the above purposes. The oats ought to be sown in February, near the post and rail fences: and the barley as soon after as possible, in the other side adjoining the corn. With both, clover and timothy in the proportions already mentioned are to be sown.

After the above work is accomplished, it will be time to plow and sow such parts of No. 4 as is intended for carrots, and that is to be done in drills, four feet asunder, and, if the ground is dry enough, in the month of March; and for flax which should be sown in April.

By the time these are done, possibly before it, the fields for corn will want listing. This corn in the south part of the field (next the woods) may be planted at five feet, each way, with two stalks in a hill, and in the north part, next Colonel Mason's, at four feet each way, with one stalk in a hill. The plowings and harrowings necessary for which, without going into details, with respect to manner and times must be given when wanted. The sowing of buckwheat (in April) for manure seems to be the next thing which calls for the plows—because it ought to be in the ground as soon as all danger of frost is over, that it may be in the proper state (full bloom) for plowing in before harvest.

After buckwheat, peas will come next: and the ground for these, as for tobacco, must be laid off in squares for hilling, that they may, before they begin to run and spread, be plowed each way. These ought to be planted in May.

Pumpkins, potatoes, turnips and buckwheat for a crop in the order they are mentioned, will next claim the assistance of the plows. The first should be planted in May, in hills eight feet apart, and to be well manured. The second in June, in drills, four feet apart and one foot asunder in the rows, with a large handful of dung on each potatoe, which let be uncut and of the largest sort. The third, that is turnips, to be sown partly in June and partly in July. And the 4th (buckwheat) as near as may be about the 10th of July. This field of sundries may be thus apportioned.

Carrots,	-	-	5	acres,
Potatoes,	-	-	5	"
Pumpkins,	-	-	1	"
Turnips,	-	-	1	"
Peas,	-	-	15	"
Flax,	-	-	3	"
Tobacco,	-	-	5	"

Buckwheat being the remainder.

That it may be ascertained, by repeated experiments, whether carrots, or potatoes is the most productive and valuable root, I would have the 10 acres allotted for them in one square, and the rows for each alternate through the whole square, and each to have the same quantity of dung allowed to it.

The work which has been enumerated for the plows, together with the plowing in of the buckwheat before harvest, the wheat after harvest and the workings of

the several species of crops during their growth, is all the employment that can be recollected at present for this part of the force of the plantation until the autumn plowing for the next year's crop commences. But as these, till the system is brought more into practice and the preceding crop is a better preparation of the ground for the succeeding one than is the case at present, will require much exertion and an addition of plows, one may be added to the number at Dogue Run, which will make five there, and another to Muddy Hole, which will make five there.

Much fencing is necessary at this plantation, before it can be said to be advantageously laid off and in good order.

Those which require to be first done are the one which divides field No. 4 from the meadow, but as the rails which are about the stacks will be most convenient for this work, it may be delayed till they can be spared. In the meantime, no heavy stock must run in that field, to trample and poach the meadow.

The next that requires doing is the line from the head of the meadow to the new road (which is to be laid off) thence with the road to the Tumbling dam; and then round field No. 7, agreeably to the plowing and the rails which have been laid there.

Next after these, the crop fence between field No. 5 and the woods should be done, and

Then the fence which was begun last year (but not finished) between fields No. 2 and 3. The fence which divides the first of these, that is No. 2, from the great meadow requires doing also.

All these are essential, as it also is to strengthen the post and rail fence which divides No. 1 from 2 and 3; but as this can never be made a good one until the whole is taken down and both posts and rails shortened, it must be postponed till there is time to do this, righting it up in such a manner as to make it answer for the present, being all that can be attempted this year.

Lastly, when time will admit, after the posting and railing from the tumbling dam to the mill is completed, the rails which at present run upon that line may serve to separate the great meadow into three divisions, as will be marked out.

Everything that the hoe people can do in the course of the winter towards getting the old crop off hand, and preparing for the new one, ought to be the first object of consideration and must be closely attended to.

Carrying out dung, when the cart can be spared, and the ground is in order for its reception either for carrots, potatoes, tobacco, &c., is not to be neglected.

Grubbing and filling up gullies in the fields which are to receive the crops this year is also essential.

And if these should not afford sufficient employment, the overplus time may be spent in clearing swamps, or the sides of them so as that they may hereafter, when drained effectually, be tended in tobacco previous to their being laid down in grass.

At this place I propose to plant about thirty thousand tobacco plants in field No. 1, round the houses and stacks, where they will be most convenient to manure and where the ground is not very rich. The ground for this crop ought to be broke up (either with the plows or hoes) early, that the green sward may have time to rot. If thirty thousand can not be got here, that is proper, the deficiency may be made up by the gate that goes into No. 5.

RIVER PLANTATION.

Early and good plowing at this place is indispensably necessary. The field No. 7 intended for spring grain (that is barley and oats) would, was justice done to it, call for a second or crop plowing by the time the plows will begin to break it up—consequently field No. 1, designed for corn, will hardly get more than a listing—and the field No. 4, which ought to have received a crop of sundries must go altogether uncultivated this year.

After field No. 7 is sown, with barley, oats and grass seeds (the latter is the proportion mentioned at other places), if the preparation of No. 1 for corn cannot be postponed without involving injurious consequences to that crop, the plows must go there next, and do all that is necessary for getting it planted in time and in good order.

But as I do not mean to plant potatoes or carrots among corn this year, as was the case last year, inclining to allot separate spots for this purpose—these spots and that which is intended for tobacco,

ought to be immediately plowed that the weeds and grass (where there are any) may have time to rot and the ground be in order to receive manure. The spot which I would principally appropriate for carrots and potatoes, is that whereon the flax grew last year, but if more can conveniently be obtained elsewhere, it ought, as that spot is insufficient. The ground for tobacco, (40,000 plants) I mean to lay off in a long square from the farm pen up to field No. 2, which when plowed and chequered will be ready to receive dung at times when the carts can with convenience carry it out.

All the plowings which are here enumerated being accomplished, the season probably will have arrived when No. 8 will require to be cross plowed and sowed with buckwheat for manure (in April.) This is in all respects to be managed as directed for Dogue Run, and after harvest is to receive wheat (in August) as there mentioned.

These, with the necessary workings of the several species of corn, which must not be neglected, will, it is presumed, give sufficient employment for the plows. If not, there can be no difficulty in finding work for them.

Much fencing is wanting on this plantation before it can be in the order I wish to seed it; but among the most essential of these is the fence which is to enclose field No. 1 for corn.

That which runs from the second gate (going into the plantation) to the creek dividing my land from Col. Mason's, and that which is to form the lane which is to lead from the barn into the lane which now goes to Johnson's, and which must continue the other way, so as to open a communication with fields No. 1, 3 and 4.

As timber is very scarce on this tract, it must in fencing, as well as in other things, be made to go as far as possible, consequently posts and rails (of a good substantial kind) must be substituted instead of the usual kind of worm fences.

To point out all the work for the hoe-people of this plantation is unnecessary. To finish the old and prepare for the new crop—to put up fences—to heap all the dung early, that it may get well and soon rotted—to carry it out and lay it in the furrows intended for carrots and pota-

atoes, and on the ground intended for tobacco. Grubbing and filling up gullies in the fields which are to receive crops this year (with old rails, old stumps, old trees, and such other rubbish as can be had conveniently.) Levelling the bank on which a fence formerly run through field No. 8, will, with the cultivation of the crops that will be planted and sown, and gathering them in, compose the greater part if not all of their labor. But if there should, notwithstanding, be time for other things, I know of nothing in which they could be more advantageously employed than in getting up rich mud from the branches in No. 8 to spread over the poor and washed parts of that field before it is sown in wheat next August.

MANSSION HOUSE.

The ditches, after the post and rail fence which they are now about to the tumbling dam is completed, and a strong one put up across the mill run (as will be marked off) may continue on to the line of stakes which will be set up, but are not to use (for this purpose) those posts which were got by Manley's house, as they will be more convenient for the lane which is to form the new road from the ferry by the mill as authorized by the county. After this work is performed, it will be time enough to point out more.

To say what the other part of the force of this place shall be employed about, is next to impossible, as there is such a variety of jobs for them to attend to besides fishing—hay making and the grain harvest in their respective seasons, which must unavoidably employ them while they last.

But as it is designed to raise tobacco, and to tend that part (at least) of the new ground in front of the house which was cleared last year, in corn, in order that it may be laid down in the fall in wheat and orchard grass, they must prepare for them accordingly, and under the circumstances above mentioned, attempt as much of the first (that is tobacco) as there is a moral certainty of their tending well. The men may be employed in getting posts and rails of a good kind for the purpose of enclosing this tobacco. But it is essential, if any labour is expected from the girls and boys which are about this house, to keep some persons with them who will not only make them work, but who will see that

the work is well executed, and that the idleness, which they appear every day in the practice of, may be avoided, for, at present, to skulk from house to house under some frivolous pretence or another, seems to be the principal employment of most of them.

To require that my people may be at their work as soon as it is light, work till it is dark, and be diligent while they are at it, can hardly be necessary, because the propriety of it must strike every manager who attends to my interest, or regards his own character, and who, on reflection, must be convinced that lost labor can never be regained, the presumption being, that every laborer (male or female) does as much in the 24 hours as their strength, without endangering their health or constitution will allow of; but there is much more in what is called head work—that is in the manner of conducting business, than is generally imagined. For instance, take two managers and give to each the same number of labourers, and let those labourers be equal in all respects—let both those managers rise equally early, go equally late to rest, be equally active, sober and industrious, and yet, in the course of the year, one of them, without pushing the hands which are under him more than the other, shall have performed infinitely more work. To what is this owing? Why simply to contrivance resulting from that forethought and arrangement which will guard against the misapplication of labor and doing it unseasonably; for in the affairs of farming or planting, more perhaps than in any other, it may justly be said there is a time for all things. Because, if a man will do that kind of work in clear and mild weather which can as well be done in frost, snow or rain, when these come he has nothing to do, consequently, during that period there is a total loss of labour. In plowing too, though the field first intended for it, or on which the plow may actually have been at work, should, from its situation be rendered unfit (from rain and other causes) to be worked: and other spots, even though the call for them may not be so urgent, can be plowed, this business ought to go on, because the general operation is promoted by it. So with respect to other things, and particularly carting, when nothing is more common than when loads are to go to a place, and

others to be brought from it, though not equally necessary, at the same moment, to make two trips when one would serve.

These things are only enumerated to show that the manager who takes a comprehensive view of his business will throw no labour away.

For this reason it is, I have endeavored to give a general view of my plans—for the business of the year—that the concerns of the several plantations may go on without application daily for orders, unless it be in particular cases, and where these directions are not clearly understood.

G. WASHINGTON.

Mount Vernon, Jan. 1, 1789.

The above and foregoing is for Mr. John Fairfax.

THE FARMS AND FARMING OF OHIO.

Ohio is, in fact, the first agricultural State of the American Union, and as such occupies a position of great interest and importance. For this reason we have occasionally, in connection with Railroad subjects, considered the products of agriculture, as a basis of commerce and transportation. It is our purpose now to give a general view of the farms and farming of this State. In reference to the annual crops, in the quantities of land, fences and persons given below, we shall make allowance for the six years growth from 1850 to 1856.

1. OF THE NUMBER AND QUALITY OF FARMS.

The number of acres of land in Ohio, and their distribution into cultivated and uncultivated, is as follows:

Acres of surface returned by the Auditor,	24,863,793
Acres of improved land, - - - -	11,429,250
Acres of unimproved land, - - - -	9,357,000

Total of unoccupied farming land, - -	30,786,250
Number of farms, - - - - -	165,077
Average acres in a farm, - - - - -	125

The actual size of farms is exceedingly various. In some parts of the State—especially on the Scioto and its tributaries, within the Virginia Military District—farms are often of very large size—from 500 to 2,000 acres each; but, in the Miami country, and in the Western Reserve, farms are quite small. In two-thirds of the State the farms will average hardly 100 acres. We have in sight of us, at this moment, eight farms, whose aggregate is 655 acres, making an average of 82 acres. On these, nearly 200 acres are unimproved. There is ample room to produce four-fold the annual crops in Ohio, which are at present produced.

2. OF THE VALUE OF FARMS.

The entire assessed value of property in

Ohio is eight hundred and sixty millions of dollars. Of this, about three-fourths is in real estate, and of this again, about three-fourths in farms and lands. As only one-fifth of the State is yet unoccupied as farms, and that cannot be set down at more than half price, we can only deduct one-tenth of the value of lands on that account. We have, then, this result:

Value of farms, - - - - -	\$435,375,000
Number of farms, - - - - -	165,077
Average value, - - - - -	\$2,637 00
Average value per acre, - - - - -	\$21 10

The valuation of land is of course different in different counties—varying chiefly on account of their vicinity to market, and their facilities of transportation. Farms near Cincinnati are worth more than any other Farms on a railroad are worth more than those off.—Farms near a station, where produce can be shipped, are worth more than those more remote.

The following are the average valuations of farm lands in several counties:

Hamilton County, (Cincinnati), - - - - -	\$50 00
Warren, - - - - -	25 00
Ross, (Chillicothe), - - - - -	16 00
Muskingum, (Zanesville), - - - - -	15 00
Montgomery, (Dayton), - - - - -	25 00
Mercer, - - - - -	4 00
Washington, (Marietta), - - - - -	6 00
Morgan, - - - - -	10 00
Cuyahoga, - - - - -	17 00
Huron, - - - - -	13 00
Geauga, - - - - -	10 00
Ashtabula, - - - - -	9 00
Pickaway, - - - - -	19 00
Franklin, (Columbus), - - - - -	18 00

It will be seen that the Miami country is much the most valuable; next the Scioto Valley; next the Western Reserve; and last the Muskingum. As farming lands, these ratios of value are very nearly correct; but had the coal and iron been estimated properly, the valuation of the Muskingum country would have been much higher.

The valuation of these sections taken collectively—that is of farming lands exclusively—were:

Miami Valley, - - - - -	\$24 00
Scioto Valley, - - - - -	15 50
Western Reserve, - - - - -	14 00
Muskingum Valley, - - - - -	13 00

3. OF THE PRODUCE OF FARMS.

Taking the average crops of Ohio for several years, and looking to the peculiar characteristics of last year, we should estimate the crops of last year as follows:

Wheat, - - - - bushels, - - - -	20,000,000
Corn, - - - - do - - - -	80,000,000
Oats, - - - - do - - - -	15,000,000
Rye, - - - - do - - - -	500 000
Barley, - - - - do - - - -	400,000
Buckwheat, - - - - do - - - -	700,000
Potatoes, - - - - do - - - -	5,000,000
Hay, - - - - tons, - - - -	1,600,000
Grass seed, - - - bushels, - - - -	150,000
Flax seed, - - - do - - - -	200,000
Beeswax, - - - lbs., - - - -	1,900,000
Butter, - - - do - - - -	35,000,000
Cheese, - - - do - - - -	25,000,000
Wool, - - - do - - - -	12,000,000

The value of these may be ascertained by taking the average value at the nearest market town. Wheat last year may be taken at \$1 30 per bushel; corn at 35c.; oats 30c.; rye \$1; barley 80c.; buckwheat \$2 per bushel; potatoes 50c.; hay \$7; grass seed \$6; flax seed \$3; bees wax 25c.; butter 15c.; cheese 7c.; and wool 40c.

The value of the farm produce in Ohio, then, without looking to the manufactured articles, such as beef, pork, lard, whisky, &c., may be estimated thus:

Wheat crop,	\$26,000,000
Corn crop,	28,000,000
Oats,	4,000,000
Rye,	500,000
Barley,	320,000
Buckwheat,	1,400,000
Potatoes,	2,500,000
Hay,	11,405,000
Grass seed,	900,000
Flax seed,	600,000
Beeswax,	250,000
Butter,	5,250,000
Cheese,	1,750,000
Wool,	4,800,000
Value of Pasturage for 2,000,000 of Cattle and Horses,	6,000,000
Value of Orchard and Garden products,	1,200,000
Value of Wine—400,000 gallons,	300,000

Value of Produce,	\$95,670,000
Aggregate Farm Capital,	\$435,375,000
Gross proceeds,	95,670,000
Gross per cent,	22 per cent

To ascertain the net proceeds of capital thus invested in actual farming, we will suppose the 165,000 farmers to receive \$1 per day each for their labor, and allow \$3,000,000 per annum for seed. Then we have this account:

Labor,	\$30,645,000
Seeds,	3,000,000
Gross proceeds,	\$53,645,000
Net profits,	93,670,000
	\$42,025,000

—Mansfield Railroad Record.

SILESIA MERINOS.

These are of a more recent importation, and are less known to the public than any of the other three varieties. The first importation of this kind reached New York in May, 1851, and was personally selected by the writer, with whom was associated as a partner, William Chamberlain, of New York. Like the other Merinos, originally from Spain they were exported from thence into Germany, in 1811, since which time they have been in the care of a most skillful breeder, who is also a gentleman of high scientific attainments, but ardently devoted to the improvement of his flocks. Unlike most of the German breeders, he has avoided the error of sacrificing all other

considerations to the quality of the staple. The sheep of the German States generally are of the Saxon variety of the Merino, and would not meet with countenance from the wool growers of New England.

The flock in question was bred purely from the Infantado Negreti family, of which fact the gentleman was able to furnish us with undoubted evidence; and it is confidently believed that another pure bred Negreti flock does not exist. They presented to the observer that uniformity of appearance and sameness, which is a *prima facie* evidence of purity of blood and skill of breeding. After satisfactory examination, I am confident in the conclusion that selections from this stock would supply an existing want, and prove acceptable to a large class of wool growers in our own country. Subsequent events have justified the correctness of the conclusion, and additional shipments have been necessary to supply the demand.

The ewes of this variety are nearly faultless in shape; the rams are less perfect in this respect previous to maturity. They are thickly covered with a compact and exceeding fine growth of wool, holding its evenness and thickness over the entire pelt in a remarkable degree: are of a medium size, the ewes weighing at maturity from 80 to 100 pounds, and the rams from 100 to 150 pounds. The weight of fleece is about the same as the best Spanish flocks, but the length of staple is not quite so long, but more compact. The natural oil is sufficiently abundant to give them the desirable dark surfaces, but, unlike some of the Spanish, it is wholly removed by washing in cold water.

The offspring resulting from the union of these rams with the common Spanish ewes have proved more satisfactory to those who have made the cross, the quantity of wool having been considerably increased, and the quality much improved from the original stock.

In concluding this description, the facts will warrant me in saying that, as to purity of blood, they stand pre-eminent. The other two varieties, although of pure Merino blood, are yet the offspring resulting from a union of the sub-varieties before referred to. For the profitable production of the finest grade of wool, the Silesians are unequalled. But, it may be asked, which of these varieties, all things

considered, are the best adapted to the mass of wool growers? The question does not admit of a direct answer. The individual circumstances of each farmer must be taken into the account, and his location, conveniences for keeping a large or small number, and the nature of his pastures must have their due weight in deciding the question. [Geo. Campbell, in Patent Office Report.]

WARRANTY OF HORSES.

"As much time and money is often wasted in law-suits about horses, I shall conclude with a slight notice of the law of warranty, and a summary of what constitutes unsoundness.

The warranty must be given at the actual time of the sale; if given either before or after, it is invalid. The warranty of a servant is binding on the master.

A horse is unsound if lame at the time of sale, no matter whether the cause be removed or not. Corns, cough, any disease interfering with perfect freedom of breathing, crib-biting, curbs, enlarged hocks, ossification of the lateral cartilages, pumiced feet, quittor, ringbone, sandcrack, spavin, and cutting, splint, and contracted feet, when they occasion lameness. All constitute unsoundness.

I cannot, gentlemen, conclude without calling your attention to the splendid building, which with a noble determination to keep pace with the spirit of the times, has been erected by the inhabitants of this district for your accommodation; and to the very marked and satisfactory improvement shown in every department of the exhibition, let us hope that when the Society again holds our great national jubilee in this City, your then President may have equal cause to congratulate you on the advancement which has been made, as I now have, when I compare this with the last show held in this place."—*From the Address of the President of the Provincial Canadian Ag. So.*

Analysis of Soils.—Prof. Nesbit, of Kennington (Eng.) Agricultural and Chemical College, in reply to a question, said—"The analyzation of soils often reminded him of the man, who, having a house to sell, came with a brick in his pocket as a sample of the house. There might be almost fifty kinds of soils in the same field.

PRICES OF WHEAT IN ENGLAND.

Below will be found a table of the annual average prices of wheat in Great Britain for 214 years—that is to say, back to the times of Cromwell. The table presents many curious facts. The average of the past year, says the *Economist*, has been higher than in any year since 1819, and is about the same as in 1796,

when it was higher than it had before been during 147 years, that is to say, back to 1648. A point of interest in the table is the continual fluctuations, showing a gradual rise through several years to a maximum, and a more rapid decline. It is to be remarked that the rise generally continued five years. These periods of rise were as follows:—

	Shillings.	Shillings.	Shillings.	Shillings.	Shllgs.
1654-59	23	29	38	41	57
1666-69	32	32	35	39	—
1706-10	23	25	36	69	—
1732-35	23	25	30	38	—
1750-53	28	34	37	39	—
1761-65	26	34	36	41	48
1869-74	40	43	47	50	51
1779-83	33	35	44	47	52
1787-90	38	41	45	51	54
1791-96	41	43	49	52	75
1798-01	51	69	113	119	—
1807-10	75	81	97	106	—
1814-17	65	78	96	—	—
1822-25	44	53	63	68	—
1835-39	39	48	55	64	70
1845-47	50	54	69	—	—
1851-55	38	41	53	72	74
					75

The exorbitant prices of the periods 1796 and 1810, were those of paper money. It is observable that the rise commenced always after an extreme fall, and continued always four years, with the exception of 1845-47, when the price culminated in the third year. It might be curious to investigate in how far this short period might be due to free trade in corn. Up to the close of the last century not only was England, as a whole, an exporter of wheat, but the interior communication was so difficult as to make prices far from uniform. Indeed, in some counties crops would rot on the ground, while in others famine prevailed, yet transportation was almost impossible. Hence, in the first century of the table, prices were not so regular, but prices touched lower points than in the present century. It is remarkable that 1851 was the lowest average year of the present century, and it was in that year the full effect of the high prices of 1847—followed by the abolition of the corn duties—was felt. The table shows that in the five years, 1847 to 1851, prices fell annually 69s. to 38s. In the five years which have since elapsed, they rose annually 38s. to 74s. This prolonged rise is doubtless due to the influence of war, which

has cut off many of the supplies before depended upon to check an extreme advance. That difficulty has now passed away, and the prolonged high prices must have exercised their usual effect in stimulating production, and, consequently, bringing about that decline in prices which has inevitably, under all circumstances, succeeded a rise. It will be seen, on inspecting the table of annual prices that the most rapid fall has always followed the highest prices, and this result has been more marked as communication has become more prompt and duties have been removed. It follows inevitably from this table of over two centuries of experience that the present is the year of culminating prices, and that the next five years will be of falling prices, in relation to other commodities. The apparent decline will be counteracted by the decline in the value of the gold currency, which must now probably become more marked. When the mines of America were discovered in 1520, there was no apparent effect upon prices until the close of the century. From 1570 to 1640 the depreciation of silver was marked, and it then ceased. The evidence in the price of wheat is as follows:—

	s.	d.		s.	d.
Average 12 years to 1451,	21	3	Average 12 years to 1601,	47	7
“ 1497,	14	0	“ 20 “ 1621,	41	7
“ 1560,	10	6	“ 16 “ 1636,	50	0

Thus the value of wheat, under the influence of enhanced supplies of silver, quadrupled from 1560 to 1640, from which time (as will be seen in the table of annual averages) the effect ceased. It is now highly probable that the ef-

fect of gold will begin to manifest itself, and the prices of wheat will take a higher level, and this will apparently counteract the decline which should result naturally from the high prices that have prevailed, and the stimulus

those prices have given to production. Hence, it follows, that two powerful elements of prosperity are coming into operation, viz:—abundance of gold and relatively cheap food.

Yearly average price of Wheat in Great Britain from 1641 to 1856.

Year.	s.	d.	Year.	s.	d.	Year.	s.	d.	Year.	s.	d.
1641	57	1	1685	41	5	1729	41	7	1773	51	0
1642	60	2	1686	30	2	1730	32	5	1774	52	8
1643	59	10	1687	22	4	1731	29	2	1775	48	4
1644	61	3	1688	40	10	1732	23	8	1776	38	2
1645	51	3	1689	26	8	1733	25	2	1777	45	6
1646	42	8	1690	30	9	1734	30	9	1778	42	0
1647	65	5	1691	30	2	1735	38	2	1779	33	8
1648	75	6	1692	41	5	1736	35	10	1780	35	8
1649	71	1	1693	60	1	1737	33	9	1781	44	8
1650	68	1	1694	56	10	1738	31	6	1782	47	10
1651	65	2	1695	47	1	1739	34	2	1783	52	8
1652.	44	0	1696	63	1	1740	45	1	1784	48	10
1663	31	6	1697	53	4	1741	41	5	1785	51	10
1654	23	1	1698	60	9	1742	30	2	1786	38	10
1655	29	7	1699	56	10	1743	22	1	1787	41	2
1656	38	2	1700	35	6	1744	22	1	1788	45	0
1657	41	5	1701	33	5	1745	24	5	1789	51	2
1658	57	9	1702	26	2	1746	34	8	1790	54	9
1659	58	8	1703	32	0	1747	30	11	1791	41	7
1660	50	2	1704	41	4	1748	32	10	1792	43	0
1661	62	2	1705	26	8	1749	32	10	1793	49	3
1662	65	9	1706	23	1	1750	28	10	1794	52	3
1663	50	8	1707	25	4	1751	34	2	1795	75	2
1664	36	0	1708	36	10	1752	37	2	1796	77	7
1665	43	10	1709	69	9	1753	39	8	1797	53	9
1666	32	0	1710	69	4	1754	39	0	1798	51	10
1667	32	0	1711	48	0	1755	30	1	1799	69	0
1668	35	6	1712	41	2	1756	40	1	1800	113	10
1669	39	5	1713	45	4	1757	53	4	1801	119	6
1670	37	0	1714	44	9	1758	44	5	1802	69	10
1671	37	4	1715	38	2	1759	35	3	1803	58	10
1672	36	5	1716	42	8	1760	32	5	1804	62	3
1673	41	5	1717	40	7	1761	26	9	1805	89	9
1674	61	0	1718	34	6	1762	24	8	1806	79	1
1675	57	5	1719	31	1	1763	36	1	1807	75	4
1676	33	9	1720	32	10	1764	41	5	1808	81	4
1677	37	4	1721	33	4	1765	48	0	1809	97	4
1678	52	5	1722	32	0	1766	43	1	1810	106	5
1679	53	4	1723	30	10	1767	47	4	1811	95	3
1680	40	0	1724	32	10	1768	53	9	1812	126	6
1681	41	5	1725	43	1	1769	40	7	1813	109	9
1682	39	1	1726	40	10	1770	43	6	1814	74	4
1683	35	6	1727	37	4	1771	47	2	1815	65	7
1684	39	1	1728	48	5	1772	50	8			

A MACHINE FOR MILKING COWS.

There is no work about a farm that is so universally considered drudgery, and avoided, and dreaded by all the inmates of the farm-house, as the constantly recurring labor of milking. It is always the first thing to be done in the morning, and the last at night. And after a hard day's work at the washing-tub, or in the hay field, through a long, hot day in July or August,—to be obliged to sit down and milk three or four cows, is certainly no

very trifling or attractive affair. To be able to perform this work easily and rapidly by machinery is therefore one of the most desirable steps to be made in the process of labor-saving inventions, in agricultural improvement. And when it is considered that in the United States alone, there were in 1850, 6,385,000 milch cows, each one to be milked by hand twice every day for about three hundred days in a year; that the amount of the butter and cheese for that year, as shown by the census, was 418,881,000 pounds, in addi-

tion to \$7,000,000 worth of milk sold, we get some idea of the magnitude of the labor to be annually performed in milking.

But it is not a difficult matter to perform all this unpleasant drudgery by machinery. The only wonder is, that so simple a thing had not been discovered and used years ago. Just look at a calf while he is sucking, and consider how rapidly, easily and perfectly he would perform the operation of drawing milk from the cow's udder, *if he had four mouths instead of one.* And every one will see it is no very difficult affair to construct a machine with four mouths, that will do the same thing in the same way, quite as easily, rapidly and perfectly as the calf could do it! drawing all the milk into a pail or vessel, free from every impurity, and with very little exertion.

Acting on this idea, I have been devoting the leisure moments of some two two or three years to experiments, with a view to perfect a machine for milking cows; and I am happy to say that I have succeeded beyond my most sanguine expectations. My application for a patent is now under examination in the Patent Office, and the machine will soon be presented to the public.

It is somewhat difficult to describe even the most simple piece of mechanism, without diagrams or illustrations, so as to make one's self understood; but this little machine is so simple, and its action so easily comprehended, that I will venture to describe it without cuts or figures.

In the first place, I take a large size pail, either of tin or wood, and fit on it a cover so as to make it air tight; then I construct a small pump in some compact form, so as to exhaust a part of the air from the pail. The pump made for my experiments (and which is described in the application for a patent) is a part of the cover to the pail, and being flat and thin, works rapidly and without friction, and does not wear so as to leak. It is only necessary to produce a slight vacuum, such as a calf might make with his mouth; I then connect four small rubber tubes, about eighteen inches long, with the top of the pail; and on the other end of each of these tubes, I fix a little cup of tin, glass, or any other convenient material, about two inches in diameter and three inches deep. Over the top of each of these cups,

is drawn a cap of thin, flexible rubber, having a sack or mouth in the centre, of sufficient size to receive the end of the cow's teat, with a small hole in the bottom for the milk to pass through. The cap fits to the top of the cup, air tight, by its own contraction, and also hangs around the end of the teat, but by its flexibility permits a free flow of the milk into the cup and through the rubber tube into the pail.

Having got the machine in readiness, I slip each of the cows teats into one of the soft, flexible sacks or mouths, which can be done in an instant with the end of the thumb—the rubber clings around the teats and holds the cups in place. I then commence pumping slowly and easily, and the milk flows in a large, steady stream from each teat, through the tubes into the pail. The cow, meantime, is quietly chewing her cud, hardly knowing that anything is going on; so perfectly is the teat sustained by the rubber sack, that the suction hardly affects it at all, and there is no pulling, or flinching, or squeezing in any direction. All the while the milk is flowing at the rate of about two quarts per minute; at any rate, I have milked eight quarts of milk from my cow in four minutes, with a machine by no means perfect; because being the first and only one ever made, and got up only to experiment with, it has suggested improvements which will be embodied hereafter; I am entirely satisfied that a child or a woman can milk with this machine with perfect ease, faster than four milkers, either men or women, can milk by hand.

But the chiefest recommendation of the machine still remains to be mentioned. The common method of milking by hand necessarily exposes the milk to more or less dust, dripping from the hands, and other kinds of filth, which often spoils its taste, and always gives one the idea that he is swallowing a disagreeable amount of unmentionable materials. Even the best and most careful milkers cannot avoid getting something into the pail that should not go there. This is proved by the universal custom of the straining milk immediately after milking, in all cases, and by whomsoever it may have been milked. But straining will not take out the drippings from the hands of careless, filthy milkers; and the result is, a very general complaint among consumers, of the bad

taste of milk, too often attributed to the adulteration or dishonesty of milkmen.

This machine, however, entirely obviates this unpleasant difficulty. The milk is drawn directly from the udder into a covered, air tight pail, where no dust or drippings or filth can fall of itself, or be thrown by carelessness. The Irish girls cannot dip their hands into the pail to moisten the teats, as is the common practice, nor can the cow step into the pail, or kick it over, so as to spill the milk.

In short, I think the milking machine will be a great labor-saving improvement for the agricultural community, and a genuine comfort to both the cows and the consumers. Immediate efforts will be made, after obtaining a patent, to introduce the machine to the notice of the public, and to supply the market demand for them. It is not possible at present to say at what price they can be afforded, but probably they will not cost far from five dollars apiece.

JOHN W. KINGSMAN.
[*New England Farmer.*]

DEATH OF A CELEBRATED HORSE.

The *Spirit of Times* announces the death of the imported horse "Trustee," the sire of the renowned mare "Fashion," and several other remarkable trotters. He had reached the advanced age of 27 years.



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THE SOUTHERN PLANTER having a large circulation in *Virginia and North Carolina* and a very respectable subscription list in the other *Southern and Western States*, offers one of the best mediums to advertisers that the State affords. Those who take it are almost exclusively farmers, substantial men who live in the country; the best customers to every trade, (except the lawyers,) the very class whom advertisers desire to reach. To BOARDING SCHOOLS

AND ACADEMIES, THE HOTEL KEEPER, THE DRUGGIST, THE DENTIST, THE NURSERYMAN, and in short to all who have anything to sell or anything to make known, the "*Southern Planter*" is recommended with confidence not only on account of the high character of those who subscribe to it, but likewise by the fact that it possesses the additional advantage of being printed in *Book form and stitched*, it is therefore more apt to be preserved than an ordinary newspaper, which gives to advertisers a better chance of keeping themselves before the people.

The increased business of this department of the "*Planter*" since it has been undertaken proves that those who have tried it, find it to their interest to encourage the enterprise.

ADVERTISEMENTS

Will be inserted at the following rates:—
For each square of ten lines, first insertion, One Dollar; each continuance Seventy-Five Cents.

Advertisements out of the City must be accompanied with the money to insure their insertion.

FARM FOR SALE.

Macclesfield is situated on James River in Isle of Wight County, distance about 23 miles from Norfolk; a trip to and from which place—in sail boats—is easily made in a day. It contains about 500 acres of land, 75 of which is marsh and fine for grazing. There are about 100 acres of arable land, the soil of which is well suited to the growth of corn, wheat, and particularly the root crops and vegetables. The balance of the land is thickly set with second and original growth pine, a great quantity of which may be spared. The improvements consist of a commodious dwelling (not quite finished) and every necessary out house—all nearly new. For further particulars address

W. P. JORDAN, Smithfield,
Isle of Wight Co., Va.

Jan 1857—It

LYON'S KATHAIRON

Has now become the standard preparation for the HAIR. Its immense sale, nearly 1,000,000 bottles per year, attests its excellence and great superiority over all other articles of the kind. The Ladies universally pronounce the

KATHAIRON

to be, by far, the finest and most agreeable article they ever used. It RESTORES the Hair after it has fallen out; INVIGORATES and BEAUTIFIES it, giving to it a rich glossy appearance, and imparts a *delightful perfume*. Sold by all dealers throughout the United States, Canada, Mexico, Cuba and South America, for 25 cents per bottle.

HEATH, WYNKOOP & Co., Proprietors,
63 Liberty Street, New York.

Manufacturers, also, of Perfumery of all kinds, and in great variety.

Jan 1857—It

THE
SOUTHERN PLANTER,
ADVERTISING SHEET.

No. 1.

RICHMOND, VA.

JANUARY, 1857.

TO BOOK BUYERS.

J. W. RANDOLPH,
RICHMOND, VIRGINIA,

Has just published for free circulation, (those who wish to receive it, post paid, will remit a three cent stamp.) an 8 vo. catalogue of 68 pages, containing 1,258 Works, embracing, 3,000 volumes, with the size, date of publication, binding and price of each.

The whole catalogue is devoted to Books on America, comprising history, travels, statistics, periodicals, &c., both ancient and modern.

This is the largest and most valuable collection ever offered for sale by any other house in the United States.

Also published a catalogue of over 1,000 vols. of new and old Books, on *Politics. Political Economy and Political History.* Also a Catalogue of 2,000 new and standard Law Books, embracing many rare English editions not to be found elsewhere. Most of the works can be sent by mail post paid to those who remit the retail price. Book buyers will find the catalogues very useful, as the size, date of publication, binding, and price of each work are given. New Books received as published, and large additions are made to the stock of rare old works. Libraries bought and sold.

February 1st., will be published a catalogue of rare and valuable miscellaneous books, containing many thousand volumes.

NEW BOOKS

Just published by J. W. Randolph.

Black Acre v. White Acre—A case at Law. Reported by J. G., Esq., a retired Barrister of Lincolnshire, England. Now first printed "from a MS. of the reign of Queen Anne," price 75c. "Here are law, politics and belles letters, all elegantly mingled together in an entertaining romance of Colonial Life in the reign of Queen Anne—the Augustine Age of English Literature. The story is allegorical, and though the manuscript claims to have come down to us from one of the past centuries, the story seems to have a prophetic application to the condition of Northern and Southern society, in our own era. We will have more to say on this rare *morceau* in a short time. Meanwhile we desire the public to become familiar with its contents. Let no educated man fail to procure and read it through to the end—none will regret his pains.—*Richmond Examiner.*"


"It is a Southern work, and abounds with fun, merriment and good hits at the fanatical spirit which governs the abolitionists at the North. The whole work is amusing as well as instructive, and commends itself to all who peruse its pages."—*Charlottesville Jeffersonian.*

Scriptural and Statistical Views in favor of Slavery,

By THORNTON STRINGFELLOW, D. D. Price 50c.

It is a complete exposition of the institution of Slavery, giving Bible evidence to sustain its legality. It is a well written work, and will repay a perusal, and the author deserves the patronage as well as the thanks of the people of the Southern States, for the able defence he has put forth in behalf of their institutions.—*Greenbriar Era.*

"The true use of such a book at this time is to dissipate the doubts of that apologetic class of people in the South, who are in the habit of weakening the cause of the South by a weak defense and illogical support of her vital institution of slavery."—*N. O. Delta.*

 Books sent by mail postpaid to those who remit the retail price.

First Premium Trotting Stallion KOSSUTH.



This justly renowned Trotting Stallion who has received at the Virginia State Agricultural Society the first premium two years in succession (1854 and 1855,) and a certificate of superiority over all trotting stallions on exhibition at the late Fair of 1856, (he being disqualified according to the rules of the Society from receiving any further premium having taken it on two former occasions) and who is now pronounced by judges to be one of the purest bred and fastest trotting stallions in America, will commence his season on the first of March at the stable of the subscriber on the Mechanicsville Turnpike one mile from the City of Richmond. The season will expire the 20th of June.

TERMS.

\$30 the season, if prepaid; or \$35 payable at the close of the season. Insurance \$50. Groom fee, \$1.

Kossuth was foaled in Columbia County, State of New York on the 9th of July 1847, is a beautiful rich dark brown, five feet three inches high, of great muscular power and symmetry of form, docile disposition, and can trot his mile inside of two minutes and forty seconds to a wagon. His colts are remarkably fine and promising, having good action, and every indication of speed. Three of them received first class premiums at the State Fair of 1855, and five at the Fair of 1856, and from \$300 to \$500 a piece has been refused for some of them at one year old.

PEDIGREE.

Kossuth was sired by that world renowned trotting horse New York, out of the well known trotting mare Lady of the Lake. Black Hawk while living was the champion of the turf, and all of his get are trotting horses and command high prices. For further particulars refer to my bills, or the turf register. where it will be seen that Kossuth is not a chance horse, or one of doubtful pedigree, but that he belongs to a trotting family, and that one beyond dispute the very best in America and traces his blood for more than half a century through a line of choice ancestors—all celebrated for speed and great endurance—and goes back to some of the purest Arabian and English Horses. Persons wishing to breed from Kossuth would do well to make early application as he will be limited having a fall engagement.

Mares sent from a distance will be well taken care of at my stable, at forty cents per day.

H. J. SMITH,
near Fairfield Race Course.

Jan 1857—tf

CHINESE SUGAR-CANE SEED.

This new variety of Sugar-Cane Seed which has proved to be fully equal to the best Sugar-Cane, is now offered for sale by the subscribers in packages sufficient to plant a half an acre at the low price of \$1, which quantity with proper cultivation will make from 200 to 300 gallons of syrup equal to the best New Orleans.

ROGERS & BOYERS,
Agt. for R. Peters, Seed and Agricultural
Store, 29 Market St. Phila.

Gardening for the South.

A NEW WORK by W. N. White of Athens, Ga. Containing directions for *cultivating the Kitchen, Fruit Garden, and Orchards*, with valuable lists of *Fruits and Vegetables* adapted to the Southern States, with *Gardening Calendars* for the same. Price \$1.25. Sent by mail post-paid on receipt of price.

C. M. SAXTON & Co.
Agricultural Book-Publishers, 140 Fulton St. N. Y.

DIOSCOREA BATATAS, NEW Chinese Potatoe or Yam.

The experience of another season in the cultivation of this *new esculent*, warrants in confirming all we said in relation to it last year. Wherever it has fallen into the hands of judicious cultivators, and received the care necessary to its full development, the result has been entirely satisfactory in all respects; and it may confidently be reaffirmed that, "of all the esculents proposed as substitutes for the diseased potato, the Dioscorea Batatas is certainly the only important one." We can now supply small roots from 4 to 9 inches in length, carefully packed for transport at \$3 per dozen; and small seed tubers (such as we sold last year) at \$1 per dozen or \$7 per hundred; these latter can be sent by mail. Descriptions and directions for culture furnished with each package. Where practicable parties are invited to examine the roots before purchasing, *as we have them constantly on view*. NEW CHINESE NORTHERN SUGAR CANE. Seed of this celebrated and invaluable plant in packets at 12½ cts. each (prepaid by mail 25 cts.) or 75 cts. a lb.

CHUFAS OR EARTH ALMONDS, \$1 per 100. JAPAN PEAS 50 cts. a quart—NEW ORANGE WATER MELON (true)—CHRISTIANA MUSK MELON—KING PHILIP CORN—SWEET GERMAN TURNIP etc., etc., with the largest and most comprehensive assortment of VEGETABLE, FLOWER and FIELD SEED, to be found in the United States—Catalogues on application.

JAS. M. THORBURN & Co,
Seedsman &c., 15 John St. N. Y.

Jan. 1857—1t

WYANDOT PROLIFIC CORN.

THE GREATEST AGRICULTURAL WONDER of the age. Its discovery worth millions to the country. Yield 150 bushels to the acre, (some say 200.) Plant only one kernel in a hill, each kernel will produce from three to 12 stalks, 10 to 12 feet high, 4 to 20 ears. 8 to 14 inches long, 10 to 16 rows, of beautiful pearl white corn. Seed selected with care, warranted genuine, put in a parcel sufficient to plant an acre. Price \$1 50, delivered in New York City. Money or P. O. stamps must accompany the order, with directions how to send.

Those who order sent by mail, and remit \$4. will receive, post paid, a parcel to plant an acre; \$2, half an acre; \$7 quarter of an acre. Orders for less double the above rates. Circulars showing the result from different parts of the Union, will be sent to all who address to

J. C. THOMPSON,
Tompkinsville, Staten Island, N. Y.

Jan 1857—tf

Wyandot Prolific Corn for Sale.

Having obtained from Mr. J. C. Thompson, Agent, Staten Island, N. Y., a small quantity of the above variety of corn, I succeeded only in vegetating about 70 quarts from which I have raised, and offer for sale about 60 quarts of rice seed at \$2 per quart, which is sufficient to plant one acre one grain to the hill; full particulars for planting and culture, gratis. My address,

A. G. MOODY, Smithfield,
Isle of Wight Co., Va.

Jan—1t

PURE RICHMOND GROUND PLASTER

Packed in barrels or loose. From Lump of Superior quality. Mill, on Canal, adjoining the Danville Depot, Office, No. 11 Pearl Street, Richmond Va.

JOHN H. CLAIBORNE.

Jan 1857—3t.

John S. Reese's "Manipulated" GUANO.

The unprecedented success which has attended the introduction of this *Guano*, and the increasing demand has induced the proprietor to enlarge his facilities for its production, by the construction of ample and costly machinery, hoping thereby to be able to meet the extensive and growing demand of the agricultural public.

Possessing superior advantages for the business the undersigned will give strict attention to the purchase and sale of *Peruvian* and other *Guanos*, assuring their agricultural friends and the public that the utmost reliance may be placed in their *fidelity* in furnishing pure articles, and on terms equally favourable with any house engaged in the trade.

In order to give the closest possible attention to the preparation of their "*Manipulated*" *Guano* and the extended business they propose, the undersigned have associated themselves, in the *Guano* trade and their business will hereafter be conducted under the style of John S. Reese & Co., to whom all orders and letters of enquiry must be addressed,

JOHN S. REESE,
JOHN W. MCCONKY.
Baltimore, Md.

The "*Manipulated*" *Guano* is put up in strong bags of convenient size, each bearing the name of John S. Reese & Co., which must be the guarantee of genuineness.

JOHN S. REESE & CO.,
Office No. 10, Exchange Building.
Baltimore, Md.

J. R. KEININGHAM,
DEALER IN

BOOKS & STATIONERY,

No. 226, Broad Street, Richmond, Va.

BOOKS bound in every variety of style, and Blank Books made out the best material at short notice. Clerks of Courts and others will find their orders thankfully received, and executed well and promptly, at strictly moderate prices.

June 1856—ly*

Something New! Beautiful!! and Meritorious!!!

Eclipsing anything yet attempted in the way of pictures. They give a prominence of relief and softness of tint never before attained. We avoid that sombre look so objectionable in Ambrotypes. As the sitting is but a second it is invaluable for Children. The subscriber has spared neither pains nor expense to introduce this beautiful art in this city. He produces faultless portraits in all weather, and at all hours of the day.

D. BENDANN, 110 Main St., next door above Mitchell & Tyler's.

Oct 1856—1y

FALL STYLES OF DRESS HATS,

Felt Hats, Kerseymere Hats, Servants' Wool Hats, Childrens and Infants' Hats and Caps.

CLOTH, VELVET, PLUSH, FUR AND GLAZED CAPS; MISSES FLATS;

LADIES FURS, UMBRELLAS AND CANES.

A large new stock of the above Goods to be sold cheap, wholesale and retail, at the Premium Hat Store, 207 Broad Street, Richmond, Va.

Oct 1856—1y RICHARD MOORE.

AGRICULTURAL LIME

Of a superior quality, in any quantity over 1000 bushels, for sale upon reasonable terms by

CHAS. S. H. LAOCHER, & Co.
Balcony Falls,

July 1st—tf ROCKBRIDGE Co., Va.

SCHOOL AT SUMMER HILL.

I want FOUR Boarders for the next and third Session of my School, which will commence on the 15th day of October next, and terminate on the first of August following.

This School is intended to fit my sons for the University, and I wish companions for them. I decline taking boys over fourteen years of age. The place is healthy, and its nearness to Richmond affords access to Churches of every denomination.

TERMS FOR ONE YEAR.—Two hundred dollars, one half on entering School, the balance on the first of March.

FRANK. G. RUFFIN.

July 1—tf

PHILIP RAHM,

EAGLE FOUNDRY, Richmond, Va.

(Cary Street, between Pearl and 15th.)

Manufactures LOCOMOTIVE ENGINES, TENDERS, CARS, and all kinds of Railroad Machinery. Engines of any power, Portable Engines, decided improvements over any others heretofore made, (5 to 40 horse power,) on wheels, adapted to farming, getting lumber &c. with improved Portable Circular Saw Mills attached, of 1st, 2d and 3d class. Also Machinery for Mining, Grist Mills, Tobacco Factory Fixtures, Brass and Iron Castings made to order. Oct '56—ly

English Breeding Stock.

THOMAS BETTS & CO.,

14 Canning Place, Liverpool, England.

Exporters of Thorough Bred Horses, Cattle, and Sheep on commission, and shipped to any sea ports in America. Circulars giving the prices of the best Stock in England and the expenses to America, can be received by applying to their Agent,

J. M. MILLER,
81 Maiden Lane, New York City.

Dec 1856—6 mos

R. H. MEADE.)

Graduate Philadelphia College of Pharmacy.

(T. R. BAKER.)

MEADE & BAKER,

Apotheecaries, Chemists and Pharmacutists.

186, N. W. Corner of Main and 10th Sts.

Diagonally opposite the Farmers and Virginia Banks, and just above the new Custom House;

RICHMOND, VIRGINIA.

Offer to Farmers, Physicians and Families, a new and perfectly fresh stock of Pure Drugs, Chemicals and Medicines; Surgical Instruments; Spices; Imported Cigars; Chewing and Smoking Tobacco; Fancy Articles, Perfumery, Soaps, Brushes, &c., &c; on good terms as any other House in the Country.

7 Sep 1856—1y

Agency for the Purchase and Sale of Improved Stock.

STOCK CATTLE of all the different Breeds, Sheep, Swine, Poultry, &c., will be purchased to order and carefully shipped to any part of the United States, for which a reasonable commission will be charged.

Apply to AARON CLEMENT, Philadelphia. Refer to Gen. Wm. H. Richardson, Richmond, Virginia.

N. B.—All letters (post paid) will be promptly attended to. ap '53.—tf

WESTWOOD SCHOOL.*Near Lynchburg, Va.*

The fourth Session of this School will begin on the first Monday in September, and end on the last Friday of June, 1857. A recess of two weeks will be given at Christmas. The terms are \$200 for every thing; payable one half on the first of September, the other half on the first of February. No deduction made for any cause except protracted sickness.

The subjects taught are the Latin, Greek, French, and Spanish Languages, Mathematics, and Civil Engineering, together with the usual branches of an English education.

In the plan and management of the School, it has been the subscriber's aim to combine the advantages of Home Education with those of a well regulated Academy.

For further information apply to the subscriber at Lynchburg, Va.

JOHN H. WINSTON.

Aug—6t

GEO. WATT. | | P. H. STARKE.

Cuff Brace Plows.

THIS PLOW has been steadily increasing in favor with the Farmers and Planters of this State and several of the Southern States till it may now be considered the best and most popular plow in use. It has been put to the several trials by most of our large river Farmers, and has taken premiums at THREE of our State Fairs, and at the last took the FIRST PREMIUM over all the most popular plows in use. It has also taken the only two premiums ever given by the *Virginia Mechanics Institute*. Manufactured of every size from largest 4 horse to smallest 1 horse by the undersigned at their factory on *Franklin Street, Richmond, Va.*, where we may be had nearly every article used for tilling the earth. ALL MADE IN OUR OWN SHOPS, of best materials.

Aug '56—1y

GEO. WATT & CO.

RIDGWAY SCHOOL.

THE next session of my School will begin on the first Monday in September and end on the last Friday of June, 1857. There will be a vacation of two weeks at Christmas. I charge \$220 for a whole session, or \$25 a month for any period less than a whole session. I furnish my pupils board, lodging, fuel, washing, and make no extra charges for anything except lights. I have three assistant teachers, and am prepared to give instruction in every branch of education proper to fit boys to enter the University of Virginia. For further particulars apply to me at Charlottesville, Va.

FRANKLIN MINOR.

June 1—tf

SAMPSON JONES, Ag't.

(Of the old firm of B. & S. Jones.)

Grocer and Commission Merchant,*Corner of Main and 9th Streets,*

RICHMOND, VA.

Invites the customers of the old firm and all wanting goods in his line, to give him a call. Purchasing and selling for cash, he is enabled to offer great inducements to his friends to buy of him. Consignments of all kinds of Country Produce will be sold at the highest market prices, and prompt returns made.

September 1856—1y

AMELIA ACADEMY.

The 24th Session of this Institution will open on Oct. 1st, 1856, and close August 1st, 1857.

Terms per Session of 10 Months.

Board and Tuition, \$200; \$100 payable Oct 1st, and \$100 March 1st. The course of studies is preparatory for the University of Virginia, and the text books generally the same. The Principal treats his Pupils as members of his family, and aims at their improvement in all respects.

For further particulars see Catalogue of Amelia Academy for 1856.

Direct Lodore P. O., Amelia.

WM. H. HARRISON.

July 1856—1y*

The Great Southern Hat and Cap Manufactory and Depot.

JOHN DOOLEY,*No. 81, Main Street, Richmond Va.*

MANUFACTURER of HATS and CAPS on the largest scale, and in every possible variety, and imports to North American and European FURS, HATS, CAPS, PLUMES, TRIMMINGS, and all other articles belonging to the Trade, is always supplied with a splendid stock of Goods, for Wholesale and Retail, which in quality and quantity cannot be excelled by any other house in the South. His manufacturing arrangements are of the completest kind, and his facilities for supplying country merchants at the shortest notice cannot be surpassed.

July 1856—1y

CRENSHAW & CO.**Commission Merchants and Grocers.***North side of the Basin,*

RICHMOND, VA.

Pay particular attention to the sale of Wheat, Flour, Tobacco, and all descriptions of produce. Keep on hand a large assortment of *Groceries, Genuine Peruvian and Mexican Guano* all of which they will furnish on the best terms.

They continue their Wool Depot for grading and selling Wool to which they invite the attention of the Growers in this State.

June 1, 1856.—tf

**Southern Clothing House,**

AT

RICHMOND, VA.

THE Subscriber keeps constantly on hand a large and Fashionable Assortment of Ready made Clothing, of his own manufacture, of the latest and most approved Styles. Also a large assortment of Gentlemen's furnishing Goods, such as Handk'fs, Cravats, Neck Ties, Shirts, Drawers, Gloves, Suspenders, Collars, Umbrellas, &c., &c.

In addition to which he keeps a large and general assortment of Piece Goods of every Style and Quality, which he is prepared to make to measure at the shortest notice and in the best and most fashionable style.

E. B. SPENCE,

may—1y

No. 120, Corner of Main & 13 sts.

COLEMAN'S FARM MILL.

MANUFACTURED BY
Roger's & Boyers,
Philadelphia.

Coleman's Farm Mill now stands unrivalled for simplicity, efficiency and durability, and it precisely meets the wants of every farm or plantation as it not only grinds Corn and Cob in the ear, but it will grind with rapidity shelled Corn, Rye, Oats or Wheat into fine or coarse meal and super fine flour if required. It is ready to attach to horse, steam or water power, and will grind from 6 to 15 bushels per hour, according to fineness and amount of power applied.

This Mill is constructed on entire new principles, and can be run for years without any perceptible wear. In fact it has proven itself to be the only efficient and durable mill now in use.

This Mill has obtained the highest premium at every Fair, where it has been exhibited in competition with other mills.

Price for No. 3 or two horse power \$50. Price for No. 4 or Water and Steam power \$60. Hand Mill \$10.

We also manufacture Woodbury's Premium Horse Power Thresher and Cleaner—Mowing and Reaping Machines and all the most approved Implements. Manufacturers of Sup. Phosphate of Lime, and dealers in Grass and Field Seeds, Guano, &c.

ROGERS & BOYERS,
29 Market Street, Philadelphia.

Dec 1856—3t

Routt's Premium Corn Planter.
Improved Reversible Double Shovel Plough

With Coultter attachment. And

Reversible Sidewipes, Cultivators, &c.

The Reversible Double Shovel Plow is constructed after the manner of the Gang Plough—one shovel in advance of the other. The peculiarity of its construction consists in a wrought iron beam, branching into two and diverging from a common centre at the point of connection with the forward ends of the handles, running back and curved at irregular distances so as to serve as shafts for the attachment of the hoes or shovels. The shovels are pointed at both ends and with cuffs underneath at the centre, by means of which they are keyed on the shaft, are reversible at the pleasure of the ploughman by the removal of the keys.

A premium was awarded to this implement at the late State Agricultural Fair, also on the Corn Planter and Seed Drill exhibited by the subscriber.

The above articles are manufactured in the best manner by the subscriber at Somerset, Orange County, Va.

A. P. ROUTT, P. M.

Dec 1856—3t

Wanted, 300 Active Young Men,

To act as local and travelling agents in a business easy, useful and honorable, at a salary of \$100 per month. A capital of \$5 only required. No patent medicine or book business. Full particulars given, free, to all who enclose a postage stamp or a three cent piece, and address

A. B. MARTYN, Plaistow, N. H.

Dec 1856—3 mos

Chickering's Celebrated Piano-Fortes.

NAT'L CARUSI, *Sole Agent,*

169 Main Street, Opposite Exchange Bank.

Also Sole Agent for the highly esteemed instruments of BROWN & ALLEN.

Aug 1856—1y

Lunenburg Female School.

THE Second Session of this School will commence on the 1st of February, 1857, under the direction of my daughter, A. M. RAGSDALE, and continue ten months. The design of this School is to prepare young ladies for entrance into the advanced classes of any female college. No pains or expense will be spared to make it equal in every respect to any school designed for a similar purpose.

Competent teachers are engaged for each department.

Terms per Session and Board.....	\$85 00
English Tuition.....	20 00
French and Latin, each.....	10 00
Drawing and Painting in Water Colors.....	10 00
Painting in Oil Colors.....	40 00
Music on Piano, with use of instrument.....	40 00
Ornamental Needle-Work.....	5 00
Contingent Expenses.....	1 00

One-half payable in advance, the balance at the close of the session. Address

JOEL M. RAGSDALE, Macfarland's P. O.
Nov 1856.—tf Lunenburg, Va.

Green Sand Marl of New-Jersey

The New Jersey Fertilizer Company is now prepared to receive orders for this most important Manure. For all lands upon which ashes are beneficial, the MARL is more than a substitute. Professor Cook, in his Annual Report to the Legislature of New Jersey says:

"The value of these MARLS is best seen in the rich and highly cultivated district which has been improved (almost made) by their use. But it may be interesting to examine the causes of their great value in agriculture, and to compare them with other fertilizers. For example: The potash alone may be taken, at an average, as five per cent of the whole weight of the MARL: a bushel, when dry, weighs eighty pounds; and in the proportion mentioned, would contain four pounds of potash. This is nearly as much as there is in a bushel of unleached wood ashes."

And again: "It is probable that the great value of the MARL is to be found in the fact that it contains nearly all the substances necessary to make up the ash of our common cultivated plants."

Price, delivered on board vessels at the wharves of the Company at Portland Heights, Raritan Bay, New Jersey, Seven Cents per Bushel.

For further particulars, see Circular, sent free of postage. Orders for other fertilizers will receive prompt attention. Address either of the undersigned.

CHAS. SEARS, Pres.
Riceville Post-Office, N. J.

TAPPEN TOWNSEND, Treas., Geo. W. ATWOOD, Sec.
82 Nassau St. N. Y. 16 Cedar St. N. Y.
December 1856.

A thorough bred Stallion For Sale.

For sale, at a low price, the thorough bred Horse, John Bell—a sure foal getter. Of him C. F. M. Noland of Arkansas writes: "I raised 'John Bell,' Boston is his sire. The Pedigree of Boston has been published a dozen times in the Register and Spirit. The dam of John Bell was Lilly—she by Eclipse out of Garland by Duroc. Garland was the dam of Port Boy, (the Northern Champion when Bascomb beat him), Fauquier and Suffolk. I run John Bell as one of the very best bred horses in America. Lelly's Pedigree at full length has been published in the Register and Spirit."

This Horse is now ten or eleven years old, and in fine health. He is the getter of large fine colts, and can be bought at a very low price for a horse of his blood.

Address Ed. Southern Planter
July 1st—tf

MORRISON'S REAPER.

Manufactured by William E. Morrison & Moore,
Petersburg, Va.

TESTIMONIALS.

BRUNSWICK, VA., Sept. 30th, 1856.

Editor of the Southern Planter:

DEAR SIR:—In the July number of the Planter you express a wish to hear from the performance of Morrison's Reaper in the wheat field, one of which you had seen, cutting clover-hay, on the farm of Mr. Allen.

Having witnessed a trial of one of these excellent machines in a field of light wheat on the farm of Mr. J. R. Jones of this county, I do not hesitate to say that its performance was every thing desirable in a first class Reaper. Although, on the occasion referred to, it laboured under some disadvantages, yet it was perfectly evident that it was a perfect implement and could not be easily surpassed in the execution of its work, by any other Reaper that has yet been presented to the inspection of the farmers in this region of country. I am not mechanic enough to describe, intelligibly, its different parts, but it struck me as no little advantage to have the blades so constructed as to cut both above and below like a pair of shears; this is a great improvement. Another excellency is, that the wheels are protected by a covering, which secures it against any disadvantages arising from dirt and grit, accumulating on the cogs; and its easy draft is a great recommendation—two horses drawing it with the greatest imaginable ease. All the Reapers that I have seen, seemed to me to be drawn with too great difficulty,—requiring three horses to give them sufficient motion. In Morrison's Machine this difficulty is obviated.

It is built of the best material, in the most substantial manner, and cannot be otherwise than very durable. Its performance in the field is admirable—cutting a clean and wide row with great rapidity. Mr. Morrison, I think, has in this Reaper supplied the wants of the wheat grower in a very essential particular—giving him a machine of rapid and faithful execution, of easy draft and unusual durability, and therefore deserves the thanks and patronage of every one interested in saving a wheat crop. You cannot too highly recommend it.

Very respectfully, Yours, &c.,

D. T. POYNER.

Richmond, Oct. 17th. 1856.

MR. ROBT. J. MORRISON:

Dear Sir:—My father purchased one of your Reaping Machines. He was absent from home during harvest. I witnessed the performance of the machine, and I certify that it worked beautifully in every respect.

Yours, very respectfully,

P. C. WARWICK.

Brunswick Springs, Oct. 4th, 1856.

I had one of Morrison's Reapers in my wheat harvest for a short time last season, and was well pleased with its performance. It was tried on very inferior wheat and on rougher land than I had ever seen any Reaper at work, there being many deep water-furrows, which afforded no serious obstruction to its progress. By comparison with those I had before seen, McCormick's, Hussey's and Burrell's, I think it decidedly superior, from its lighter draught, and adaptation to work on land where these could not operate. I can conceive of nothing more beautiful and effective than the operation of the cutting apparatus of this machine.

J. RAVENSCROFT JONES.

Brunswick Co., Va.

I have witnessed during the present harvest, the operation of Morrison's Reaper, and though under rather unfavourable circumstances, yet it performed its work admirably. I take great pleasure in recommending it to all who are in want of Reaping Machines. Its superiority over all others with which I am acquainted, is its lightness of draught, simplicity, and strength of construction.

JOSEPH B. TRAYLOR.

Brunswick, Sept. 12th, 1856.

This is to certify that I have seen Morrison's Reaper in operation, and that I think the facility with which it operates, and overcomes obstacles, far surpasses any other I have ever seen or heard of.

ROBERT S. POWELL.

Richmond, June 28th, 1856.

I hereby certify that I used Mr. Robt. J. Morrison's Reaper the present year, in cutting a part of my crop of wheat and clover, and that in both cases it performed remarkably well.

WM. C. ALLEN.

Richmond, June 30th, 1856.

I have used Morrison's Reaper the present season. It cut the wheat very cleanly, and I think rapidly. I also saw it used in a field of good clover with entire success.

J. E. JOHNSON.

Brunswick, Sept. 1st, 1856.

I have seen Morrison's Reaper at work—it performs well. I would give it the preference over all that I have tried or seen.

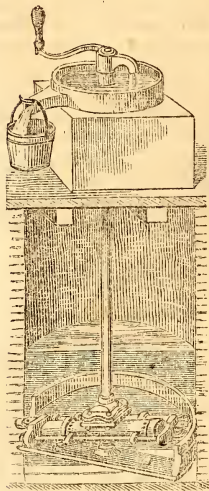
JAMES PERTCHETS.

Petersburg, July 9th, 1856.

This is to certify that I used one of Morrison's Reapers this harvest, and that it worked well, cut cleanly, and with very little labor to the team. I also say, I believe it the best Reaper I ever saw.

GEORGE BAILEY.

LINDSEY'S DOUBLE ACTING Rotary Force and Lift Pump.



This Pump has just been patented in America and England, and far excels any pump heretofore invented; its peculiarities are *simplicity, power and cheapness.*—Its simplicity: there is nothing about it but iron and cast metal, and it can be taken apart and put up by any one, and will last for an age. It has the power to raise water hundreds of feet. This pump is from 24 to 30 inches in diameter and must set in the well or water.—Water rises in it by hand 100 feet per minute! For cheapness: a No. 1 pump (for all ordinary purposes) complete, and fifty feet of pipe, costs but \$30! The handle at the top, turns the pipe and pump, and every revolution fills the cylinder twice, affording an abundant supply of water with the least possible expense and

labor. It is peculiarly adapted to deep wells, railroad stations, mining and manufacturing purposes. This pump does not throw water, and is guarded against freezing and rust. Practical and scientific men pronounce it as without an equal, for all that is here claimed for it. The *Scientific American*, after seeing it in operation, says: "This pump is very simple in construction, not liable to get out of order, durable, easily operated and economical; we regard it as an excellent improvement." Circulars, with an accurate drawing and full description, sent free of charge to all parts of the country No. 1, has a one inch pipe: No. 2, 1½ inches; No. 3, 1¾ inches; and the prices, with 50 feet of pipe, \$30, \$42 and \$54; the No. 2 and 3 are designed for *very deep wells, railroad stations, &c* where much water is required. The subscriber is the general agent for the sale of these pumps to all parts of the world, and exclusive Agent for New York. Orders must be accompanied by the *Cash*, and should be explicit as to the kind of pump wanted, depth of well, shipping address, &c They will meet prompt attention. A pump and pipe weighs about 170 pounds. No charge for shipping or cartage. Wells over fifty feet should have extra gearing, which costs \$3.

JAMES M. EDNEY, *Com. Merchant*,
36 John Street, N. Y.

For sale also by H. LINDSEY, inventor, Asheville,
N. C. August 1856.

THE VIRGINIA FIRE AND MARINE INSURANCE COMPANY.

CAPITAL \$200,000.

Office No. 131 Main St., next East of the Dispatch Newspaper Office, Richmond, Va.

Chartered in the year 1832.

HAS now been in operation about twenty-five years, and has paid over (\$1,000,000) ONE MILLION DOLLARS for losses.

Farmers and others in Town or Country wishing their Dwellings, Barns and other Buildings or their contents insured against *FIRE* or their shipments insured against *WATER RISKS* can be safely protected in this long tried and responsible company on fair terms *without charge for Policy*. All necessary information promptly furnished. Address either of the undersigned. THOS. M. ALFRIEND, *Pres't*.

W. L. COWARDIN, *Sec'y*. Aug '56—1y



AGRICULTURAL WAREHOUSE.

The subscribers are prepared to receive Orders for all kinds of Agricultural Machines and Impletments of the latest and most approved patterns, which will be made of the best materials and of superior workmanship. They ask attention to "Cardwell's Double and Single Geared Horse Powers and Threshers," which have taken a premium at every fair at which they have been exhibited. Also, "Croskill's Clod Crusher;" "Manny's Patent Reaper and Mower," the best in use; "Fawke's Patent Lime and Guano Spreader, highly approved; Whitman's Corn Planter, a superior machine; Rich's Patent Iron beam Plow, of various sizes, &c. They subjoin the opinion of the Hon. Wm. C. Rives of these Plows.

BALDWIN, CARDWELL & CO.

Richmond, Feb. 27th.

Castle Hill, Dec. 15. 1854.

Col. Wm. B. STUGHTON:—Dear Sir: I take pleasure in recording here my impressions of the performance of your Plow (Rich's Iron-beam Patent) at Cobham to day. The work was far more thorough and complete than that of any plow I ever saw in operation before. The furrow opened by it was very generally 13 inches deep and about 20 inches wide in hard close land, and most effectually and perfectly cleaned out, none of the sod earth falling back into it.

The trial of the plow was witnessed by many of my neighbors, among whom I will mention Messrs. Frank K. Nelson, J. H. Genell, J. H. Lewis, C. B. Hopkins, Thomas Watson, of Louisa, &c., all practical men and most excellent judges of agricultural impletments, and there was but one opinion among them as to the superiority and unexceptionable performance of your Plow.

Wishing you equal success elsewhere in making this valuable impletment favorably known to our agricultural brethren, I remain yours, truly,
WM. C. RIVES.

Extract from a letter from a farmer in Amherest County, dated March 14, 1856.

I have this evening made a trial of the Plow you sent me. It meets my highest expectations, too much cannot be said in its praise. Ap ly

JOHN MORTON, Florist,

West end of Grace St., Richmond, Va.

Roses, Camellias, Ornamental Trees, Evergreens, Shrubs, Grape Vines.

Bouquets tastefully arranged.

Sept 1856—1y

VIRGINIA FEMALE INSTITUTE.**STAUNTON, VA.**

RIGHT REV. WM. MEADE, President of the Directors.

" " JOHN JOHNS, Vice do do

Rev. R. H. PHILLIPS, Principal.

Rev. J. C. WHEAT, Vice Principal.

Prof. J. C. ENGELBRECHT, Principal Instructor in Music.

Mr. & Mrs. H. W. SHEFFEY, Heads of the Family.

The next Session of this Institution will commence on Wednesday, the 24th of September. The Officers named above will be aided by an efficient corps of Teachers.

Renewed efforts will be made to sustain the high character the Institute enjoys, and to enlarge the sphere of its usefulness.

The large and commodious additional building now in the course of construction will afford increased facilities for the comfort of the pupils, and the systematic arrangement of the classes, especially in the departments of Music and French.

The institute, situated in one of the healthiest portions of the State, is well established in the confidence of its friends and patrons in Virginia and Maryland. The number of pupils from Louisiana, Alabama, and in the Southern and Western States is steadily increasing.

Pupils from a distance can remain, during vacation in the family of Mr. Sheffey.

The discipline is strict, yet parental. The course of study is comprehensive and thorough, embracing the various branches of an English education, the Ancient and Modern Languages, Music, Drawing, &c.

Additional facilities will be afforded for acquiring a thorough knowledge of the French language.

Terms:—Board and English tuition per Session, \$200; Music, the Languages, Drawing, and Painting extra.

Registers, containing full particulars, will be sent on application to

Rev. R. H. PHILLIPS, or

HUGH W. SHEFFEY,

Sep 1856—6t

Staunton, Va.

JOHN & GEORGE GIBSON,
House Builders and Carpenters,
RICHMOND, VA.

HAVING extensively fitted up their establishment with the latest improved machinery, are prepared to furnish, at short notice and on reasonable terms, all kinds of portable finished Carpenter's work, such as Door and Window Frames, Casings, out and inside finish, &c.

Sash, Blinds and Doors, of all varieties.

Stairs, Handrails, Porches, Verandahs, Balconies.

Cornices, Cornice Mouldings and Brackets of all sizes and patterns. Mouldings of all descriptions.

Wash-boards, Chair-boards, Ceiling-boards, &c.

They will make estimates for work to plans furnished them, and deliver it at their factory at the estimated prices. Orders respectfully solicited.

September 1856—1y

R. O. HASKINS,
Ship Chandler, Grocer and Com-
mission Merchant,

In his large new building, in front of the Steamboat Wharf, ROCKETS, RICHMOND, VA.

Sept 1856—1y

Plans and Detailed Drawings

Prepared, and the construction of all kinds of buildings superintended by

ALBERT L. WEST,**ARCHITECT & MEASURER,**

11th St., between Main and Bank, RICHMOND, VA.

September 1856.

IRON RAILING,

Verandahs, Balconies, of all patterns,

Grates, Fenders, Iron Doors, &c. &c.

Manufactured at 216 Main St., Richmond, Va., by
Sept 1856—1y F. J. BARNES.

Saddles, Harness, &c.

I manufacture a superior
COLLAR

which I warrant not to chafe or gall. I have always on hand a good assortment of all articles in my line, which I will sell, wholesale or retail, as cheap as they can be procured anywhere, North or South.

CHARLES I. BALDWIN,

Sep—1y Franklin St., 2d square above Old Market

GEORGE STARRETT,

MANUFACTURER AND DEALER IN

Stoves, Ranges, Furnaces; Tin, Japanned,
Copper and Iron Ware;

Farmer's Boilers or Agricultural Furnaces,

6 sizes; and 7 sizes of BLOGGETT & SWEET'S

Patent Portable Ovens,

Made of best galvanized Sheet Iron.

Suction, Force and Chain PUMPS.

BATH TUBS, WATER RAMS, LEAD PIPE,
ZINC, SHEET IRON, &c.

146 Main Street, RICHMOND, VA.

Sept 1856—6m

Report on Spermatorrhœa.

JUST PUBLISHED by the HOWARD ASSOCIATION, Philadelphia, a Report on Spermatorrhœa or Seminal Weakness, Impotence, the Vice of Onanism, Masturbation, or Self-Abuse, and other Diseases of the Sexual Organs, with an account of the errors and deceptions of Quacks, and valuable advice to the Afflicted, by GEO. R. CALHOUN, M. D., CONSULTING SURGEON of the ASSOCIATION, a benevolent Institution, established by special endowment, for the relief of the sick and distressed, afflicted with "Virulent and Epidemic Diseases." A copy of this Report will be sent by mail (in a sealed envelope), FREE OF CHARGE, on the receipt of TWO STAMPS for postage. Address, DR. G. R. CALHOUN, No. 2. South NINTH St., Philadelphia, Pa.

July 1856—1y

PIGS OF IMPROVED BREED FOR SALE.

I have for sale, to be delivered at weaning time, a good many pigs of improved breed. I have produced it myself from crosses of the Surry (or Suffolk) genuine Berkshire, (Dr. John R. Woods' stock) Irish Grazer, Chester County, no Bone and Duchess. I think them superior hogs of medium size, and for fourteen years they have not had a bad cross among them. I prefer that purchasers should view my brood sows and my boar on my farm, three miles below Richmond. I will not sell them in pairs, because the in-and-in breeding would depreciate the stock at once and cause dissatisfaction, but I will sell in one lot several of the same sex.

Price \$5 per head for one, and an agreed price for a larger number. They will be delivered on the Basin or any of the Railroad Depots free of charge.

FRANK G. RUFFIN.

Summer Hill, Chesterfield, May, 1856.

HARVEST TOOLS AND MACHINERY FOR 1856.

(CHARLES MCGRUDER,)

(R. W. MCGRUDER.)



To the Farmers and Planters of Virginia and North Carolina.

GENTLEMEN—We have furnished many of you with machinery and implements for the past twelve years, during which time many valuable improvements have been made; and being at the present time probably the largest manufacturers of

FARM IMPLEMENTS

IN THE WORLD, it is unnecessary for us to say that we feel a great interest, and watch closely all the new inventions in our line of business. As not more than one in ten of the new inventions can be called improvement, we shall not offer to you any articles that have not been thoroughly tested and found to be valuable improvements. The machinery and tools we offer you are manufactured at our Factory in Baltimore, and are made of the best materials and in the best manner, and as we have greater facilities for manufacturing than any other house, we are able to sell on as *at least as good terms*. It is unnecessary for us to mention to you the great losses and inconvenience you are likely to suffer by purchasing machinery that is hawked and peddled about the country, and when repairs are needed must be sent to Illinois, New York or Massachusetts at an expense of nearly equal to the original cost.

We think we have for the coming harvest all of the latest improvements in

REAPERS, MOWERS, HORSE-POWER, THRESHERS, &c.

that are really valuable, and we can certainly please any one who will give us a call.

Among our stock will be found

BURRALL'S AND MANNY'S REAPERS, both of which have been very much improved. Also our *Premium Wrought-Iron Railway Horse-Power and Iron Cylinder Thresher,*

which are not equalled for a Two Horse Machine. We have also the latest improvement in Sweep Horse-power, for 4, 6, 8 or 10 horses, and warranted.

For further particulars, see Catalogue for 1856, which will be sent you per mail on application to

E. WHITMAN & CO.,

63 Exchange Place, Baltimore, Md.

July 1, 1856—1y

S. McGruder's Sons. COMMISSION MERCHANTS,

RICHMOND, VA.

Pay particular attention to sales—Corn, Wheat, Flour, Tobacco, &c.
Aug 1856.—1yr

WM B. GREEN, }
Charlotte.

{ FRED. W. HOBSON,
Richmond,

GREEN & HOBSON, PRODUCE COMMISSION MERCHANTS, RICHMOND, VA.

JNO. BOOKER, (late of the firm of Booker & Watkins,) SALESMAN.

Office on Cary street, between 12 and 13,
July 1 1856—1y*

E. D. KEELING. MERCHANT TAILOR.

MANUFACTURER OF

Ready Made Clothing, Shirts, Gloves, Hosiery, Neckties, Scarfs, Collars, &c.

136, Main Street, Richmond, Va.
Aug—tf

OSBORNE'S

Ambrotype and Daguerreotype Gallery.

Our new and unequalled skylight is just completed and we are supplying our patrons with unapproachable likenesses in every style of Art. We have a large stock of Morocco, Velvet, Pearl, Shell, Union, Papier Mache, and Jeweled Cases; also Gold Pins, Locketts, and Frames of every kind for Likenesses.

We furnish materials to country operators at New York prices.
Aug—1y

SUP. PHOS. LIME.

WE have established in this city a manufactory for pure Sup. Phos. Lime, warranted to be made of pure bonedust, not boiled or calcined, the Northern article of bone dust not enter into our composition. Our price will be \$40 per ton cash, contained in from 7 to 8 barrels, according to the weight. Soils also analyzed. Address

DUVAL & NORTON,
Druggists and Manufacturers, Richmond, Va.
June 1856—1y

LIME—LIME—LIME.

To Farmers, Bricklayers and Others.

HAVING made arrangements for a regular supply of Shells, I am prepared to furnish any quantity of well burnt Shell Lime, as low or lower than can be procured elsewhere. It will be delivered to farmers at any of the railroad depots, and to customers in the City wherever they may desire.

Application to be made at my Lime Kilns, opposite Tredegar Iron Works, at Mr. John G. Werth's office, corner 10th Street and Basin Bank, or at Messrs. Smith & Harwood's Hardware Store, Main Street, Richmond.

Jan. 1856.—1y

WM. SMITH.

GREAT REDUCTION IN THE PRICE OF HATS AND BOOTS.

FROM 15 to 20 per cent. saved by buying from J. H. ANTHONY, Columbian Hotel Building.

Moleskin Hats of best quality, \$3½; do. second quality, \$3; Fashionable Silk Hats, \$2 50; Fine Calfskin Sewed Boots, \$3 50; Congress Gaiter Boots, \$3 25; Fine Calfskin Sewed Shoes, \$2 25.

J. H. ANTHONY has made arrangements with one of the best makers in the city of Philadelphia to supply him with a handsome and substantial Calfskin Sewed BOOT, which he will sell at the unprecedented low price of *Three Dollars and a Half*.
Nov 1856.



HITCHCOCK & OSBORN,

Coach Dealers and Manufacturers,

213 Main Street, Richmond, Va.

Have a large assortment of fashionable well made Coaches, Carriages, Buggies, Sulkeys, Harness, &c.

for city and country use, which from their long experience in the business they can safely recommend to their friends and the public, and will sell on very reasonable terms.

Repairing promptly and carefully attended to.
Ang 1856—1y

JAMES WALSH

IMPORTER AND MANUFACTURER OF

Guns, Pistols, Rifles, Fishing Tackle,
Pocket Cutlery, Walking Canes, &c.

Main Street, Richmond, Va.

Ang 1856.—1y

METROPOLITAN SAVINGS BANK, RICHMOND, VIRGINIA.

The Metropolitan Savings Bank, chartered by the Legislature, receives deposits, upon which interest is allowed at the rate of six per cent. per annum, if remaining six months, and five per cent. if less time.

Deposites received at the office of the Co. at the Store of Messrs. Dandridge & Hart, No. 105 Broad St., and by the President, Geo. I. Herring, No. 56, Main Street.

GEO. I. HERRING President.

J. G. CHENERY, Secretary.

WM. G. DANDRIDGE, Treasurer.

July 1856—1y

W. HARGRAVE WHITE, BOOKSELLER AND STATIONER, AND

DEALER IN

MUSIC AND MUSICAL INSTRUMENTS,
FREDERICKSBURG, VA.,

KEEPS constantly on hand every variety of Books in all departments, Staple and Fancy Stationery, Musical Instruments, Music and

PIANO FORTES

of the best materials. Also, Melodeons of the best quality.

Any Books or Music for sale by me, will be sent by mail free of postage on receipt of price with the order.

Subscriptions received to any of the Magazines Newspapers of the present day. [July 1

Ayer's Cherry Pectoral,

For the rapid Cure of Coughs, Colds, Hoarseness, Bronchitis, Whooping-Cough, Croup, Asthma and Consumption.

This remedy has won for itself such notoriety for its cures of every variety of Pulmonary disease, that it is entirely unnecessary to recount the evidences of its virtues to any community where it has been employed. So wide is the field of its usefulness, and so numerous the cases of its cures that almost every section of the country abounds in persons publicly known, who have been restored from alarming and even desperate diseases of the lungs by its use. When once tried its superiority over every other medicine of its kind is too apparent to escape observation, and where its virtues are known, the public no longer hesitate to what antidote to employ for the distressing and dangerous affections of the pulmonary organs which are incident to our climate. And not only in formidable attacks upon the lungs, but for the milder varieties of Colds, Coughs, Hoarseness, &c., and for Children it is the pleasantest and the safest medicine that can be obtained.

As it has long been in constant use throughout this section, we need not do more than assure the people its quality is kept up to the best that it ever has been, and that the genuine article is sold by PURCELL, LADD & CO., Richmond, and by all Druggists.

November 1856.—3t

Peach Trees for Sale.

A choice selection of kinds, both for the Garden and the Orchard, of the most beautiful growth, worked from specimen-bearing trees at \$60 per 1,000.—Also a general assortment of other trees and plants low. Planting done in the neatest manner by

EDWIN ALLEN, Nurseries,

Nov 1856.

New Brunswick, New Jersey.

FALL TRADE—1856.

To Planters and Farmers.

THOMAS D. QUARLES,

No. 229, Broad St.,

Would call attention to his large and varied stock of heavy Woollen Goods, Blankets, Kerseys, Satinets, Linseys, Oznaburgs, Bleached and Brown Domestic. Also to his stock of house furnishing goods generally. By the 15th of September, his assortment of Staple and Fancy Goods, will be complete in all departments—to which will be added Carpets, Rugs, &c.

Sept. 1856.

Coughs, Colds, Consumption, Asthma.

LEONARD'S INSTANT RELIEF.

This excellent preparation, very popular in Richmond and neighborhood, is carefully made up from a variety of medicinal substances, exerting a beneficial influence over the organs most affected by the above complaints.

25 Cents per Bottle

Purcell, Ladd & Co. and Bennett, Beers & Fisher, wholesale and retail agents. To be had of all Druggists in Virginia and North Carolina.

Sept 1856—1y

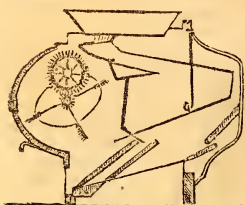
MITCHELL & TYLER,

DEALERS IN

Watches, Clocks, Jewelry, Silver and Plated Ware, Military and Fancy Goods.

RICHMOND, VA.

Sept 1856—1y

DOUBLE SCREENED ROCKAWAY.*The Great Premium Fan still Victorious.*

Invented and Manufactured by J. MONTGOMERY & Bro., at No. 155 North High Street, Baltimore.—Patented Dec. 20th, 1853, and June 9th, 1855. This Fan has taken the first Premium at all the leading Agricultural Shows of Virginia, Maryland and North Carolina. We have never been beaten since we improved our Fan, and we do not think that there is any Fan in the United States that will do its work as fast and clean as our Rockaway. They are worked easy, are very simple, can be rigged for cleaning by an intelligent farmer, are very durable, and when out of order can be repaired with great ease by any mechanic, and they are adapted to cleaning all kinds of grain. We have had ample opportunities to test our Fan, during the present harvest, with several of the latest improved Fans, and our experience is, that we can clean nearly, if not quite, as fast and clean as any two of them in the same time. We think we know what the farmer wants and needs, and that our experience enables us to suit them better than any other person in the Fan business, and they may rest assured that no pains will be spared to give them the best machine in the market. Our Fan has gained its present popularity entirely in consequence of its merits—our sales have increased 50 per cent. in our old districts, showing that those sold heretofore have given full satisfaction. We have sold over 550 Fans this season, and 750 will not more than supply the demand from present appearances. It is an easy matter to puff up an article before the public, through the Journals as some have been this season, but for a Fan to retain its popularity, and to increase in demand, as ours has done in the same counties and districts for 3 and 4 years, is the best evidence of its value. Our sales are extended over six States, namely: Maryland, Virginia, North Carolina, South Carolina, Delaware and Georgia. Having secured Letters Patent for our Fan in 1853 and 1855, we are now prepared to sell Rights for any State or County not mentioned above. We offer a good chance to any enterprising mechanic who desires to go into business—a business that can be started on a small capital and yield as fair profit as any we know of. We will give all the Patterns and any instruction requisite.

Our Fans, delivered on board the vessel in Baltimore, cost \$34. All orders by mail as promptly attended to as if made in person.

It is deemed almost unnecessary to give certificates or references, as to the superior qualities of our Fan, as they are so universally known, but for the information of those who have not as yet used them, we subjoin the following:

CHARLES COUNTY, Md., 1855.

We have tried Montgomery & Bro's improved Double Screened Rockaway Fan, and find it to be the best we have ever seen. It cleans cleaner, faster, and works better, in general, than any we have ever tried. We recommend it to all our friends.

JOHN WISE,
SAM'L CARRINGTON,
JOSEPH YOUNG,
JOS. H. COOKSEY.

This is to certify that I purchased of Messrs. J. Montgomery & Brother, one of their Wheat Fans, the 17th of July, 1852, and I consider it an excellent fan. It is now fanning wheat this day, and I think it is as perfect as when I first purchased it, except the usual wear and tear, I would recommend them to the public.

DAN'L NEWMAN.

ROCKFIELD, Nelson Co., July 23, 1855.

Messrs. J. Montgomery & Bro.

I am more than pleased with your Rockaway Fan; had I obtained yours in time on my last year's third and inferior qualified wheat, (the remnant) I could have saved \$150.

H. N. COLEMAN, SR.

All orders addressed to the undersigned, at Baltimore City (Md.) Postoffice, will be promptly attended to.

J. MONTGOMERY & Bro.
155 N. High St., between Hillen
ap 1856—1y and Gay, Baltimore.

To the Carriage Using Public.

YOUR ATTENTION is invited to our stock of RICHMOND MADE CARRIAGES, consisting of COACHES, SIX SEAT CARRIAGES, ROCK-AWAYS, BUGGIES, SULKIES, &c. The work is made of the best material, by good workmen, and under the immediate supervision of the proprietors, who are thoroughly acquainted with the business.

Several second hand LIGHT CARRIAGES AND BUGGIES, to be sold low by

AINSLIE, BOWEN & POWELL,
au—1yr 10th st., between Main and Cary.

McKINNEY & DUPUY,
COMMISSION MERCHANTS,
RICHMOND, VA.

PAY particular attention to the sale of TOBACCO, WHEAT, FLOUR, &c., and make liberal advances on produce in hand.

July 1856.—1y*

DRAINING TILE.

THE subscribers have constantly on hand any quantity of DRAINING TILE of the most approved patterns, which they will dispose of at the following prices: 1½ inch bore \$12 per thousand, about one foot bore each; 2½ inch bore \$15; 4 inch bore \$35; Gutter Tile \$20. They also keep on hand the best Sand Press Brick, \$15, and Fine Brick, \$25. Samples can be seen. Orders left at the office of American Farmer, or direct to the subscribers.

RITTENHOUSE & CRAWFORD,

Brick Makers, W. Pratt St., near the
jan—tf Cattle Scales, Baltimore, Md.

LIST OF PAYMENTS

From November 24, to December 31.

All persons who have made payments early enough to be entered, and whose names do not appear in the following receipt list, are requested to give immediate notice of the omission, in order that the correction may be made in the next issue:

D H Clarke, Jan 1859	5 00	Jno J Knoxville, Jan 1858	1 00	E Betts, Jan 1858	3 50
F K Nelson, Jan 1858	1 00	P D Lowry, Jan 1858	1 00	Dr Geo Field, Jan 1858	1 00
O G Clay, Jan 1857	1 00	Sam'l S Brooke, Jan 1858	1 00	Dr And'w Field, Jan 1858	1 00
Wm A Ford, Jan 1858	2 00	Jno Schooler, Jan 1858	1 00	J P Resor, Sep 1857	2 00
Dr Wm R Holt, Jan 1858	2 00	P D G Hedgman, Jan 1858	1 00	A H Young, Jan 1858	1 00
J B Lucas, Jan 1857	1 00	Baalis Davis, Jan 1858	1 00	E W Horseley, Jan 1857	2 50
H M Vaughan, Ap 1857	2 00	Jno H Suttle, Jan 1858	1 00	J B Craig, Sept 1857	1 00
Jos Tisdale, Sep 1857	1 00	Judge Moncre, Nov 1857	1 00	G B Stephens, Jan 1857	3 12
W Nichie, Jan 1857	1 00	R A Banks, Jan 1857	1 00	T C Morgan, Feb 1857	1 25
W Logan, Jr Jan 1858	1 00	P Cave, Jan 1857	1 00	Jas A Reid, July 1856	3 70
D Fry, Jan 1857	3 75	L H Knight, July 1857	1 00	E L Winder, Jan 1859	2 00
R J Morrison, Jan 1858	2 00	C L Crockett, Jan 1858	1 00	C B Poindexter, Jan 1859	2 00
H W Latane, Jan 1858	1 00	Borum & McClean, Dec 59	5 00	D S Green, Jan 1859	1 00
Elisha Hardy, Jan 1858	1 50	B Lindsay, Dec 1857	1 00	Jno A Carter, Sep 1857	2 50
W M Gill, Jan 1858	2 33	J B Hurt, July 1857	2 00	Jas Miller, Jan 1858	1 00
H D Smith, July 1856	3 75	Thos Betterton, May 1857	1 00	W B Smith, Jan 1858	1 00
E T Tayloe, Jan 1858	1 00	J F Callaway, Jan 1857	1 00	L H B Whitaker, Jan 1858	1 00
R S Ellis, Jan 1857	1 25	J A Ferguson, Jan 1858	2 00	E M Tomkies, Jan 1857	2 50
Wm Gravatt, Jan 1857	1 25	Geo C Ellis, Jan 1857	1 25	W Gee, Jan 1859	5 00
Mrs S H Powell, July 1857	1 00	Jos A Earley, Nov 1857	1 00	W Dupuy, Jan 1858	1 00
Rev W W Kennedy, Jan 58	2 00	Jno Tabb, Sr Jan 1858	2 42	R C Harvey, Jan 1857	1 00
P St Geo Cocke,		H C Howard, Nov 1859	5 00	B H Brightwell, Jan 1856	75
Jno W Talbott,		Mayo Cabell, Jan 1859	5 00	T Coles, Jan 1858	1 00
Sam'l Holeman,		A G Hobson, Jan 1857	3 50	M Arnold, Jan 1857	2 00
And'w Maxwell,	} Jan 58 8 00	H Minor, Oct 1859	5 00	Wm M Jones, July 1856	4 37
Jos B Traylor,		Thos W Neal, Jan 1857	1 00	J R Coupland, Jan 1860	5 00
B B Saunders,		R W Wyatt, Jan 1859	5 00	B W Nowlin, Jan 1857	4 00
Jos B Buckley,		P B Snapp, Jan 1860	5 00	Thos W Walton, Jan 1858	1 00
R D Powell,		G W Eichelberger, July 59	5 00	A Aldridge, Jan 1858	1 00
J C Crutchfield,	W C Rives, Sep 1859	5 00	Jno McKrae, Jan 1858	1 00	
Miss C H Carver, Jan 1858	2 00	C Braxton, July 1857	1 00	Jas Huff, Jan 1857	1 00
Dr W H Goodwin, Jan 1858	1 00	D Chalmers, Nov 1858	4 00	W B Stanard, Jan 1858	2 50
Jas D Watts, Jan 1858	1 00	H Gravit, Jan 1857	2 25	Com Jones, Nov 1859	5 00
Jos Spriggs, Jan 1858	2 00	Col Wm Crawford, Jan 1858	1 00	Ro Tinsley, Jan 1857	1 25
E C Jordan, Jan 1858	1 00	Capt B Allen, Dec 1857	1 00	Z D Tinsley, Jan 1857	1 25
Col J S Dillard, Ap 1857	3 75	Jas T Twitty, Jan 1857	1 00	Ed Loyd, Jan 1860	5 00
Dr A Crump, Jan 1858	2 00	S D Booker, Jan 1860	5 00	J C Hardy, July 1859	5 00
J H C Jones, Jan 1858	1 00	M Harrison, Jan 1858	1 00	E Brown, Jan 1859	2 00
W M Branch, May 1859	5 00	Jno H Lewis, Oct 1856	3 75	P N Meade, Oct 1857	2 00
Dr Geo E Scott, Jan 1858	1 00	E Clayton, Jan 1857	3 50	J M McCue, July 1857	1 00
Jno Lowry, Jan 1857	2 50	Geo B Clarke, Jan 1857	3 50	Wm K Tune, Jan 1857	2 50
W A Smith, Jan 1858	3 00	W H E Merritt, July 1857	2 25	H Baldwin, Jan 1857	4 00
J S Spangler, Jan 1858	1 00	Dr W B Price, July 1857	2 25	W W Oliver, Jan 1857	1 25
M D Echols, Jan 1857	1 00	W Puryear, Jan 1858	2 00	J H Wray,	4 00
Wm R Yates, Jan 1857	1 00	J N Ryland, Jan 1858	1 00	W H Cutchen, Jan 1857	1 00
L T Dodson, Jan 1857	1 00	P P Nalle, Jan 1858	1 00	D Meade, Jan 1857	1 00
Wm B Terry, Jan 1857	1 00	Jas Paxton, Jan 1859	5 00	C Dickinson, Jan 1857	1 25
Geo W Jones, Jan 1858	1 00	Jno R Baylor, Oct 1857	1 00	P Hackett, Jan 1855	7 50
H M Chamberlayne, Dec 57	1 00	Jas W Walker, July 1857	1 00	G W Hackett, Jan 1857	2 50
J M Johns, Jan 1858	2 25	H Chandler, Jan 1857	2 00	Jas Kinnard, Jan 1857	2 00
J S Lockett, Jan 1857	2 50	J M Chandler, Jan 1860	3 00	A P Giles, Jan 1855	1 00
J K Gibson, Jan 1858	2 00	Geo Wilson, Jan 1858	1 00	Geo Carr, Jan 1859	6 00
E J Bates, Dec 1857	1 00	R Peters, Jan 1858	2 00	J W West, Mar 1860	5 00
Dr R Shore, Jan 1858	1 00	W R Segar, Jan 1858	2 00	T W Anderson, Jan 1859	2 00
Dr W J Cheatham, Jan 58	2 00	H Madison, Jan 1857	2 00	R A Gbolson, July 1856	9 37
R Butt, Jan 1860	5 00	P H Hurt, Jan 1860	5 00	J S Ellis, Jan 1857	2 50
Jno M Conway, Jan 1858	1 00	Ro Stringfellow, Jan 1853	1 00		

SUPER PHOSPHATE LIME.

The subscriber continues to manufacture the above at his Bone Mill near the City, the quality is fully equal to any manufactured out of the State, his price is \$40 per ton. For topdressing this will be found invaluable, and during the winter is the best time to apply it. Those in want can always be supplied upon one week's notice.

R. R. DUVAL.

SOUTHERN FEMALE INSTITUTE.

RICHMOND, VA.

The Principals of the Southern Female Institute, with this announcement of its 7th session, tender their thanks to the Public for the liberal and increasing patronage they have received at its hands.

As this Institution had its origin in individual enterprise and has been fostered neither by aid from the State, nor by denominational influence, it is with pride that they point to the appended list of patrons, believing as they do that it evinces the estimation in which their labours in the cause of female education are held by men of eminence and high character.

The Principals are Virginians, and were educated in Va. They selected teaching for a Profession and have devoted themselves earnestly to it for a number of years in their native state. Relying upon the support of the Southern people they established, six years ago, this Institution, Southern in every feature and in all its teachings. No expense has been spared to make it worthy of patronage, and they hope to be supported in the effort to make the South independent of Northern schools and teachers.

The Boarding Department will hereafter be under the immediate and sole control of D. Lee Powell who has taken a large new house on the South-East corner of 1st and Franklin Streets, for the purpose of accommodating a number of young ladies as Boarders.

The Principals are determined that the opportunities offered for acquiring a thorough knowledge of the French and other modern Languages in their school, shall be equal to those of any institution in the country. One or more Parisian ladies will reside in the family of Mr. Powell, who will be required to converse habitually in French with the Boarders.

The most experienced and accomplished teachers of music, vocal and instrumental, in the city will be employed, and every effort will be made to secure improvement in this valuable accomplishment. It will be the duty of one of the teachers to see that the music scholars practice regularly and *properly*.

TERMS.

Board for 9 mos., washing and lights extra.....	\$200,00
Music on Piano, Harp or Guitar at Professors	Preparatory Department
charges, Tuition in English.....	\$50
Use of Piano per month.	Modern Languages in classes each.....\$20
	Drawing and Painting each from
	\$20 to \$50

We beg leave to refer to the following list of patrons who have now or have had daughters in the Institution. His Excellency, Henry A. Wise, Gov. of Va.

Lieut. M. F. Maury, Nat. Observatory, N. Beverley Tucker, Thomas Green, Rev. D. S. Doggett, *Washington, D. C.*

Dr. Beverley R. Welford, A. A. Morson, Esq., Conway Robinson, James Lyons, Joseph R. Anderson, P. R. Grattan, Rev. Ch. H. Read, Rev. Geo. Woodbridge, Hon. A. R. Holladay, Col. Geo. W. Munford, Charles Ellett, Jr., Charles Gennett, Lewis D. Crenshaw, Wm. R. Hill, Capt. Charles Dimmock, S. J. Rutherford, Richmond, Va.

Col. H. B. Powell, Loudoun Co., Va. Revd. P. Slaughter, Warrenton. R. E. Scott, Esq. P. St. Geo. Cocke, Powhatan Co., Va. Richard Baylor, Essex. Wm. H. Clark, Halifax. J. R. Edmunds, Mrs. I. R. Harrison, Lower Brandon, Va. Hon. Geo. H. Lee, Clarksburg, Va. Thomas B. Barton, Esq., Thomas F. Knox, Wm. H. White, Fredericksburg, Va. Dr. A. H. Mason, Falmouth. Dr. Wm. Cochrane, Middleburg, Loudon, Va. Dr. H. A. Buttolph, Trenton, New Jersey.

For further information, apply to Principals.

Richmond, June 1, 1856.—tf

D. LEE POWELL, }
R. J. MORRISON, }

HENRY SHAFER,

DEALER IN

Gentlemen's Clothing & Furnishing Goods,

FOR THE

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THE following Goods, assorted in style and size to suit the trade. All can be satisfied with cheap, fashionable goods; in fact, let the taste be ever so fastidious, I am confident that my stock embraces quantity and quality sufficient to please all. Expecting my customers will acknowledge facts which must be apparent on examination, I merely enumerate the following list of goods brought out this season.

- Black and fancy cloth dress and frock Coats,
- Beaver Over-Coats, Sacks, Talmas and Raglans,
- Cassimere, Beaver, Pershram and Cloth Business Coats,
- Black Doeskin, Black Figured, Scotch Plaid, Brown, Drab and Steel mix Cassimere Pants,
- Velvet, moire-antique, Silk, Cassimere, Cloth and Satin Vests.

My furnishing stock contains a full assortment of Shawls, Blankets, Umbrellas, White Linen and Cotton Shirts, Merino and Knit Wool Shirts and Drawers, Silk Shirts, White and Brown Canton Flannel and Jeans Drawers, Gloves, Gannetlets, Suspenders, Night Caps, Money Belts, Mullers, Handkerchiefs, Cravats, Scarfs, Ties, Stocks and Collars, all of which will be sold low for **CASH**.

HENRY SHAFER,

Corner Main (Pearl) and 14th streets.

October, 1856.

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