

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.

J. E. WILLIAMS, EDITOR.

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How Much Low-Grounds have we in Virginia? We ought to know.

There is a particular branch of statistics, concerning which it is thought desirable that we should have more accurate information than we now possess. Who would not like to know how much alluvial land—'low-grounds,' as we term it—there may be within the limits of Virginia? Such special inquiry, it seems, did not come within the scope of the Census Bureau at Washington. Its agents were required to distinguish between "improved" and "unimproved" land. But under the former designation was included all cleared land of whatever grade of fertility, and much of this in Virginia, we know, has been reduced from its original productive capacity. And had the Department attempted the additional distinction here suggested, the effort would have been attended with difficulty, when we regard the State as a whole. The valleys of many of the minor streams in the trans-Alleghany district, it is presumed, are yet clothed with their native forests, and may have been subjected neither to separate instrumental survey, nor to any other than a conjectural estimate of quantity.

This, however, can hardly be the case

with the three more eastern divisions of the State. It is believed that there are many counties in each, concerning which this information might be readily obtained. Nor can we conceive why all might not be included in this category, as ordinary obstacles would yield to a proper division of labor. The knowledge to be sought is, we may suppose, already in the possession of individuals, and were it imparted to some one or more in each county, it could with little trouble be digested into proper form and order for public use.

We desire to learn not only how much of such land there may be on our portion of the great Dismal Swamp and the ocean and bay shores, but the separate aggregates on the banks of all our larger streams, whether they be rivers of the first or second grade, or the more considerable creeks. Such portions as lie on the lesser creeks and branches might be summed up under a distinct head. The islands which skirt our eastern shore and dot our bay and larger rivers would form a fifth class.

In the first class we would include the borders of the Potomac, (with the Shenandoah and South Branch,) the Rappahannock, the York, with the Pamunkey and Mattaponi, the James, the Roanoke, with the Dan

and Staunton, the Ohio, with the Monongahela, both Kanawhas, and the New and Greenbrier rivers.

In the second would be embraced the larger affluents of those in the first class—as the Rapidan, Chichahominy, Appomattox, Rivanna, Nottoway, Meherrin, Chowan—all, in fine, that are styled rivers. The third, fourth and fifth are sufficiently defined.

A document embracing all this information would be interesting to the State at large. But in another aspect, the citizens of each separate county would willingly know how much it offers of such land in the several kinds here designated. Certain counties—as Gloucester, Elizabeth City, Nansemond, Southampton, Mecklenburg, Halifax, Goochland, Albemarle, Berkeley, Hampshire, Rockingham, Augusta, and some others—would exhibit superior natural advantages in this respect; but in others, again, the balance may have been redressed by favorable circumstances of a different kind.

But, it may be asked, *cui bono?* In what benefit would such an inquiry result? Should the querist think such knowledge more curious than useful, we might briefly respond, that if it be deemed wise in an individual to take special account of his most productive, durable and reliable property, it surely cannot be unbecoming in a State to do the same. But let us look more narrowly into this matter.

That the territory of Virginia is “well watered,” a glance at the map will suffice to show. With the ocean and bay on her eastern front, and large rivers on her northern and western boundaries, others but little inferior, with their very considerable affluents, intersect the several districts into which it has been divided by nature. But while the transmontane streams seek a western outlet, those of the East descend to the Chesapeake, or the ocean in lines nearly parallel to each other; and this has been thought to forbid that unity of interest which tends to build up marts for concentrating produce and commerce. In this view it has been said, with a degree of truth, that “we are cursed with a multitude of blessings.” Unlike New York, which has but one principal stream, to which most of the others are tributary, or the States of New Hampshire, Connecticut, Missouri, Arkansas, Louisiana, Alabama, which are somewhat similarly situated, Virginia has from the

first had to contend with an inconvenience that has often thwarted the wisest plans of her purest patriots, or led to questionable compromises for their accomplishment. But however unfavorable this may have been to harmony in legislative or social action, it has certainly furnished a wider basis for agricultural wealth and prosperity.

It would be natural to infer that streams so large and numerous must be bordered by much alluvial land; and this we know to be true from other data, as well as general report. But although Virginia has been occupied and explored by the white man for more than two centuries, who among us has any definite idea of the total quantity in each kind, however just may be his estimate of their position and relative values? Tradition or common report may have carried the knowledge of certain favored localities beyond their immediate neighborhoods or districts, and public advertisement may have informed us of the portions of such soil on particular estates when offered for sale, but we want something full and authentic in the same kind concerning our whole State.

For neither the length of rivers, nor their volumes of water, nor the general profile of the country they traverse, furnish any sure index of the breadth of their alluvium. Those within our borders show an indefinite variety in this respect. Were streams confined within a sufficient channel, equal throughout in breadth and depth, descending as they do on an inclined plane, they would seek the shortest line to the mouths, and their valleys would remain as originally formed. But inequalities in these respects give their current a direction to either shore, from which it rebounds at an angle, gradually approaching that of its incidence. If the point of resistance is not made of stubborn materials, it is in time worn away both above and below, until the current is met by a bluff or something equivalent, the soil being carried in solution together with much from above to the opposite bank, or else contributing to the formation of islands in the channel. It is thus that in the course of geologic periods low-grounds are formed, and this alternate motion will account for their total absence at certain points, and for their varying breadth and extent at others and on either shore. To this law our Virginia streams offer no exception; but there is scarcely one of the more important which does not present considerable reaches of al-

luvial soil, of extent and compactness sufficient, with the aid of the higher grounds adjoining, to constitute one or more valuable estates.

These were eagerly sought by the more sagacious and enterprising of our early settlers, and men of like stamp, in the westward march of our population, have not failed to follow their example. These were the men who gave character to our colony and State, and in this view, the enquiry, as illustrating the extent and progressive development of our resources, is of historical as well as economical interest. These were the lands which contributed to the support of pioneer adventurers, of our armies in war, and our citizens in peace, and which furnished a principal share of the exports that swelled our trade. There was a time indeed, when of them it might be said that they were our country,—certainly its most desirable part, and when this was no longer the case, their peculiar value has still been recognized. The most striking example of this known to the writer, is the fact that the low-grounds of James River have for half a century been rated at \$100 or more per acre, while the adjoining forests or fields other than the curtilage, have averaged from five to twenty; and similar if not proportional differences may be found elsewhere within our limits. Many of these lands, both above and below the head of Tide, were originally in the occupancy and cultivation of the natives; when these were dispossessed, their fields, with others of a semi-prairie character received the earliest labors of our ancestors. Being already prepared for tillage, it was thus that they afforded subsistence to our people, while attacking the forest with which other plains, both high and low, as yet were burdened. The early settlers, indeed, finding the whole country in this condition, so different from the general aspect of Europe, from this circumstance alone, formed exaggerated estimates of its general and intrinsic fertility, whereas, many a highland plain has been exhausted of its accumulated stores of vegetable mould by constant cropping and left to recover itself as it might until a more scientific husbandry came to its aid. The lower and more durable lands have ever been the chief attraction that lured the pioneers to the frontier, and when once prepared for the plough have rarely or never been permitted to return to their former state. While the area

of upland subject to tillage, has annually varied, and from many causes, that of the alluvion has been so far constant that it has never receded; but with the returning season, each year has either contributed something to our wants, or been gathering force for a new effort.

And reason good there has ever been for regarding them as the ornament and strength of Territory and the richest boon of Providence to the farmer.

In general, it may be said that our alluvial lands are our best lands: originally most fertile, less exhausted by ignorant and improvident cultivation, and more easily restored under judicious treatment. Our uplands, for the most part, may be greatly improved by good or bad management, but of the others it might, in a sense, be justly said, that "man did not make and cannot destroy;" and this is true in a degree of the margins of the lessér streams as well as the greater. The injury received under the former system was often but superficial, and a deeper culture—which they would better bear—has frequently brought to light a fresh soil never before stirred. For their level shape forbade their being washed into gulches, as were too many of the uplands, and manures, when applied, were longer retained or yielded a better return. If, in some cases, they have been damaged by freshets, in others they have been benefitted by their depositions. Added to which, they had, besides their own intrinsic virtues, received the strength of the adjacent hills for untold ages before they were cleared.

Of those above Tide, it may be affirmed that they are almost universally adapted to artificial grasses for the maintenance of their fertility; and if some of those below are less so, from an undue proportion of sand in their constitution, these are not unsuited to other valuable staples, and their texture may often be modified by deeper tillage, or manures, whether mineral or putrescent. Low-grounds are cultivated with less danger to tools and implements when these are properly chosen, and afford greater facilities for gathering their crops into barns. The operations on such lands are more easily inspected, and the results more readily and accurately calculated. As they admit of a deeper culture, so also do they better resist drought and the ravages of insects in unfavourable seasons. Whether as corn-field or meadow, they have furnished sustenance

to man and beast—proving even in disastrous years a reliable source of income to their owners and of food to others; and it henceforth will rest with their owners to say whether that source shall be perennial. Being, moreover, a monopoly of no particular county or district, but ramified throughout the entire State, the fear of general suffering from the want or high price of bread may be forever dismissed.

While they are more susceptible of renovation, they also allow a more frequent growth of the same crop, and thus lessen the draught on the uplands of the same estate. Such of them as lie on navigable rivers are, of course nearer to the ultimate markets, and often contain in the neighboring hills the means of their improvement; or if these be wanting, they may be more easily brought from a distance. Many of those on streams of a lesser grade are susceptible of Irrigation, by taking water from their channels at higher points. Where there has been a surplus of water, much valuable soil has been reclaimed and rendered salubrious by draining ponds or marshes, and yet more by the substitution of lateral canals for useless mill-ponds. The channels of not a few of the minor streams have likewise been straightened, whereby the danger of overflow has been lessened and the cultivation of their margins facilitated.

As low grounds yield a better return for the labor bestowed on them, and lighten the burden that would otherwise fall on the adjoining high-land, they give a character to the latter which they would not otherwise possess. For such localities from the first invite settlements, are afterwards in demand from the more intelligent and liberal class of cultivators, and can afford more costly and permanent improvements, whether in the character of the buildings, or enclosures or ornamental grounds. Where several such lie together, or others like them at a convenient distance, they make a desirable neighborhood, and many such will generally indicate a prosperous and intelligent community. For such neighborhoods are sought by public highways and other works of Internal Improvement, by the common arts tributary to our daily recurring wants by trade and commerce, and in the aggregate they furnish the surest basis for the higher education.

If the early proprietors of some of these

estates set an example of improvident culture and wasteful expenditure which was the more injurious to their neighbors less favorably situated as these were less able to afford it—their successors in the same class have in a measure repaired the mischief by establishing a different precedent. For it is well known that many of our most important improvements have been initiated on such lands, and they still present the fairest examples of neat, scientific and profitable management to be found among us.

Who, then, will not desire to know the extent of this the most valuable portion of our Territory? We have a wide—an ample domain, and much of it, we believe, partakes of this character; far more, perhaps, than any one, as yet, can positively aver. We also know that these are not the whole of our good lands. Particular belts, or isolated spots of greater or less area in many counties below the Ridge, were early noted as of superior excellence; and have ever since maintained their reputation. Such favoured localities are found in the counties of Louisa, Goochland, Powhatan, Amelia, Mecklenburg, Halifax, Buckingham, Amherst, Nelson, Albemarle, Loudoun and others, and a yet larger proportion of The Valley, which, originally rich, has been farther improved under the hand of culture. Nor should we forget, because they are dispersed, the multitude of orchards, gardens, yards, lawns, standing pasture, small lots for raising roots and other auxiliary crops, chiefly for home consumption, larger lots for Tobacco, where that culture still obtains, small farms near cities for supplying their markets with fruits and vegetables, and where the entire surface has been manured by well directed efforts; nor the numerous fields of larger dimensions, which, within a generation, and since wheat has become a more important staple, have been improved by the use of marl, lime, green-sand, gypsum, clover and other grasses, or the more equitable spread of the manures of the farm. When such estates are made up in part of low-grounds, much of this improvement should, in fairness, be accredited to the latter, as these, by their products, have furnished the capital, and by the ofal of their crops, the manures that have been thus expended. So true is this, that instances are not rare in which upland fields had been exhausted and abandoned to the care of the fern and the sedge, and a lot of alluvial

land has served both as fulcrum and lever for raising them to more than their pristine fertility. But all these for the present must be left out of view.

If any among us should have heretofore undervalued the capacities of our State, this bare statement limited and modest though it be, should lead to a reconsideration; and yet we know that very diverse representations have been given as to its condition, whether natural or superinduced, both by friend and foe; by some of our citizens, as well as by travelers from a distance. Our Northern brethren habitually reproach us with the general poverty of our soil, and have persuaded themselves that it is the inevitable consequence of the labor we employ. This last opinion, which once had some currency among ourselves, seems now pretty generally exploded. The inferences of both parties were hasty, yet were their mistakes not wholly unjustified by appearances.

Before the era of railroads the body of our people had been little noted for traveling, and when they did, their observations were confined to a few particular estates besides those of their own neighborhood. This is still too much the case. Our public roads, for the most part, are located on the ridges, lead through forests or farms of minor interest, or barely touch on those of a superior character. As much may be said of the railroads which cut across the country, traversing it from North to South, and of those which tend westward from the Metropolis. The only two which avowedly seek the more fertile districts for the transport of their products, may be within convenient reach of the good lands throughout their lines, sometimes touch or cross them where this is inevitable, but at best afford the passing traveler a rapid glance at only a few favored spots. He naturally infers from what he does see, the condition and proportions of that which is hidden from his view. There may be a lurking suspicion that this is not just; for he has heard, perhaps, the aggregate yield of Virginia lands is certainly not small, nor her exports of little value; but he is at a loss to divine where these come from. It might be thought that those who ascend our navigable streams could hardly be liable to such mistakes; but neither is the deck of a steamboat the most eligible situation for inspecting the adjacent levels, presenting, as they do, but little more than

their edges to the viewer. The James River Canal is, perhaps, the only public highway within our limits that permits the traveller to form anything like an adequate estimate of the valley through which it winds; yet who shall say that other of our streams do not present continuous scenes as worthy of observation?

And how shall we correct the erroneous impressions of strangers, or the unjust depreciation of our domestic croakers, or the ranting eulogies of declaimers, or the random guesses of indifferent speculators, or the vague conjectures of the well-meaning, or satisfy the enquiries of the considerate patriot, or strip the whole subject of the mystery in which it is at present involved, unless we adopt some comprehensive measure for obtaining the desired information? That we have a country, a good land, a land worth living in and taking care of, we have never doubted. But if this can be reduced to a certainty, and if it shall turn out to be better than we had supposed, may not some who now meditate flight, whether from country or city, be induced to forego their purpose, and will not those who remain, be the more content in adhearing to her fortunes? Nay, may it not be the means of inviting immigrants and capital from abroad? And can it fail to have an indirect influence for the better on our PUBLIC CREDIT, when we shall have shown the solid foundation on which our agricultural prosperity rests?

We propose no inquisitorial search that shall minister to the pride of some and expose the nakedness or short comings of others. That, alas! has already been done by a higher authority. We only desire to have a juster idea of the bounty of Providence in this regard. The lands in question are readily distinguishable from others, those on any single stream are fixed and invariable in amount, and as a whole, they can be neither increased or diminished. Any portion of the task, when once accomplished, need never be repeated, and when completed entire it is done forever.

This constant quantity may be unequally distributed among proprietors by the policy of our laws and the spirit of our government, but the general aggregate remains—a prize to be contended for by the most worthy. And let not those despond who are excluded by circumstances from participating in this portion of our general inheritance. For, did they but know it, science

has at length diminished the distance between them and their neighbors, whom they have habitually regarded as so much more fortunate than themselves, and that without detracting from the advantages of the latter. Let them rather seek this knowledge, enquire whether there is nothing in the practises of those neighbors which they may safely imitate as being suited also to their operations, and endeavor to make up what is lacking by diligence and thrift. Then would they find the returns sufficient for the supply of all their real wants, and many of the comforts—nay, the luxuries of life.

We have indulged in no vague, specious declamation, but have endeavored to view this matter in the light of common sense. If our readers approve the proposal, let them—not order, but sanction it with their public opinion, and it may be done and done gratuitously. Seven years ago this might have been pronounced impossible without governmental aid. But the Farmers of Virginia are now happily associated,—nay, organized, as they never were before, and this were no longer a Herculean enterprise. Its accomplishment will be but one of the first fruits of their exertion.

The Agricultural Society of Virginia has members, and zealous ones, in perhaps every county East of the Ridge, and in all or most of those in the Valley, besides others who are scattered throughout the Transmontane. Let the Executive Committee of that Society give this matter their consideration, and order their Secretary to prepare a circular letter explanatory of the object and method of procedure. Let copies of this be sent to some one in each county who would probably take an interest in its accomplishment. Such an one could surely enlist others in each neighborhood or Magisterial District. These, while in attendance at court, or other places of Assembly, might obtain from the citizens generally the information desired. Clerks, surveyors, assessors would lend their aid. Patriotic physicians, who, as men of science, must be the friends of an improved agriculture, who go everywhere and visit every house, would not withhold their assistance. Most proprietors, who have any notable quantity of such land, have generally ascertained the amount, and would hardly refuse a statement when sought for such a purpose. These separate items of information, when gathered, could easily be embodied in a report for the county and

forwarded to the Secretary, who would consolidate all such returns in a single report for the State.

The aggregates under the three first and the fifth heads, might probably be relied on as sufficiently accurate. Many of those under the fourth—which, however, are the least important, may as yet be conjectural, and we must be content for a time with an approximative estimate, subject to correction when actual survey shall have made them more exact.

It may be that all counties will not at once respond to the call; but many would, and their separate returns will not only be so much gained towards the general object, but will furnish material for a document well worthy the attention of our Farmers' Assembly. Should such a movement be commenced, the writer is assured by friends that he may engage for his own county, and he believes that in more than twenty others it would be zealously and promptly executed. With such a measure of success he cannot doubt that the rest would in time wheel into line.

We know not that any measure similar to that now proposed has been executed, or so much as contemplated, elsewhere in our country, but a knowledge of this branch of statistics would be desirable anywhere. If other States have also been delinquent, should we, therefore, fail to take the initiative; or postpone it longer? Let us rather take precedence in this, if we have been tardy in other respects, and if the result be as we anticipate, they would not fail to follow so worthy an example.

A FARMER OF PIEDMONT.

From the Country Gentleman.

Alphonse Karr on Tobacco.

[So few of our readers have probably met with this author's "Journey around my Garden," that although it has been before the public two or three years, we feel at liberty to offer below the substance of a chapter on the introduction of tobacco, translated and condensed for the COUNTRY GENTLEMAN, from a recent Paris edition of the book.]

It is a family of poisonous plants, in which one finds *henbane*, the *datura stramonium* and *tobacco*.

Here is a tobacco plant—as beautiful a plant as one could see—six feet in height,

and from the bosom of its broad leaves of a fine green, throwing out bunches of flowers, rose-coloured and graceful and elegant in form.

For a long time tobacco flourished solitary and unknown in some corners of America. The savages to whom we gave brandy, gave us in return tobacco. It is by this amiable interchange of poisons that the relations were begun between the old world and the new.

The first who thought fit to put powdered tobacco into their noses were attacked with ridicule and then with some persecution. James the First of England, wrote his book called *Miso-carnos*, against those who made use of tobacco. A few years later Pope Urban VII. excommunicated persons who took it in church. The Empress Elizabeth imposed the penalty of excommunication upon those who, during divine service, should snuff their noses with this black powder, and authorized the beadles to confiscate snuff-boxes to their own benefit. Amurat IV. prohibited its use under the penalty of having the nose cut off.

No useful plant could have withstood such attacks.

If, before this invention, any one had said, "Let us seek the means of drawing into the coffers of the State a voluntary impost of several millions per year, by selling something to the people which everybody uses and which no one can dispense with. There is in America a plant essentially poisonous; if you express from its leaves an empyreatic oil, a single drop will destroy an animal in horrible convulsions. Let us offer this plant for sale cut up into morsels or reduced into a powder; we will sell it very dear and we'll tell people to snuff the powder up their noses—"

"You will force them to do this by law."

"By no means—I said it should be a voluntary impost. What is cut up, we will tell them to breathe and swallow a little of the smoke of it."

"But they will die?"

"Oh no; they will be a little pale, have pains in the stomach, vertigoes, sometimes colics, spittings of blood, and distress in the chest, that's all! Beside, you know the old saying, 'habit is a second nature;' but, more than that, man is like the knife of which the blade had been changed three times in succession, and the handle twice—there is no longer any nature left in man, only the

habits. People, moreover, will become, like king Mithridates, habituated in taking poison. The first time one smokes, he may suffer from pains at the heart, nausea, vertigo, colic, cold sweats, and the like, but by and by he will be so accustomed to it as only to meet with these troubles now and then, as, for instance, when the tobacco is bad, or when it is too strong, or when he is not feeling very well, or in five or six other cases. Those who take it in powder will sneeze, will feel a little ill, will lose the power of smell, and will establish in the nose a kind of perpetual blister."

"Ah! but I suppose its smell is very sweet?"

"No, on the contrary it smells vilely. But, as I said, we will sell it dear, and keep the monopoly in our own hands."

"Why, my good friend," one would have replied to the person thus speaking, "nobody will dispute with you the privilege of disposing of a commodity which will have no purchasers. There would be a better chance to open a shop and put over the door,

'KICKS FOR SALE HERE.'

Or,

'CUDGELLINGS FOR SALE AT WHOLESALE AND RETAIL.'

You would find more consumers than for your poisonous herb."

—Alas, it is our last speaker who is in the wrong—the tobacco speculation was a perfect success. The Kings of France did not write satires against tobacco, did not cut off noses, did not confiscate snuff-boxes. On the other hand, they sold the tobacco, they put a tax on the noses, they gave the snuff-boxes to poets, with their portraits on top and diamonds around them. This little stroke of business brought them in, I don't know how many thousands a year.

The potato had much more difficulty than tobacco in establishing itself, and has yet its enemies.

But I am interrupted here. "You, my friend, are a singular preacher against tobacco, when your pipe yonder forms so ornamental a feature in your apartment." Let me explain; I confess that I have the habit of smoking acquired among fishermen and sailors, but I have this excuse for keeping it up. I have often found myself with people who actually bored me to death, whom I did not wish to talk to—in fact, to whom I had nothing to say. I found it convenient and

polite to make them smoke and to smoke—they said less and I nothing at all. But I am often months without touching my pipe, and I never smoke in the garden, so as to mingle the fumes of this weed with the odor of my flowers.

—Thus far our French philosopher. An American traveller, who reads in the books of English tourists what a filthy set of tobacco consumers we all are here, is scarcely prepared to find smoking apparently quite as common in Great Britain as it is in the United States, while we are not a "circumstance" to the Continentals—especially the Germans, to whom the pipe seems to be far more a matter of universal necessity than either water or soap, and that not for occasional enjoyment—or stultification as the case may be—but for a habitual and constant companion. In fact, it becomes a matter of doubt if they do not sleep with the pipes still in their mouths, in an atmosphere purposely darkened with clouds of this singular incense to the strange propensities of the race to which we belong.

Jones and Johnson.

William Johnson and Edwin Jones were both of them farmers, and they were also near neighbors. Their farms were beautifully situated; the soil naturally productive. So far there was not a particle of difference between the two places. Yet they wore a very different aspect. Johnson's buildings looked nice and tidy. His door yard was clean, his house neatly painted, his windows whole. His barn and out-buildings were snug and comfortable, his orchard looked thrifty, and the trees were carefully dressed. Now, Mr. Jones had no more of a family to support than his neighbor, yet the aspects of his house and farm were very different. Old rubbish was kicking around in the yard, that should have been in less unsightly places; his house looked weather-beaten and neglected; rags were seen in spots where panes of glass were expected to be found; there were large cracks in his barn, through which the winds of heaven had free course. His apple-trees were disfigured by old bark and dead limbs; in short, everything seemed to wear a look of dilapidation and neglect. Edwin Jones was a hard-working man, yet everything was at loose ends with him, and he often caught himself wondering how it was that his neighbor Johnson kept along so

smoothly and quiet, and yet had everything in perfect order.

* * * * *

One rainy day in the fall, after harvesting was over, Johnson was at work in his tool chamber, when his neighbor Jones entered.

"Johnson," said the latter, after he had watched his neighbor's plane a few moments, "how much did that sled of yours cost? I have got to have one this winter."

"Oh that cost me nothing; I made that myself. I got out the timber last winter; so that matter's disposed of, and I feel proud of it, too. It's my first attempt."

"Well, neighbor Johnson, I don't see how in the world you get along so. Your farm don't produce any more than mine does, and I don't believe you work as hard as I do. Your wife don't make any better butter than mine; your sheep don't grow any better wool. You raise more fruit, to be sure."

"I have not so many trees as you."

"No, but the fruit is of a better quality, and finds a ready market."

"Yes, because I have taken pains to obtain the best grafts. My trees were the same as yours when we started. My cows give more milk than yours do in winter, because they have a warmer barn. I raise more pork than you do, because my pens are tight and comfortable, and so on."

"And I suppose you are laying up money?" muttered Jones, with a crestfallen look.

"Certainly, I am—about two hundred dollars a year."

"So much!" exclaimed Jones, with a look of surprise; "why, I can't lay up a single cent; in fact, I am running behind."

"Let me tell you the secret," said Johnson, in the kindest and most neighborly way. "Last summer, I saw you buy two new rakes, and two pitchforks; now, how much did they all cost you?"

Let's see—two dollars and a half."

"Well, my fork-handle got broke last winter, so did some of my rakes. I brought them right up here, and when at leisure, just fixed them up. Now, you have nothing at all to do to-day."

"No, indeed; it rains too hard."

"But I am at work, making my apple-boxes; how are you going to get yours?"

"Grainson makes them for me, and I am to give him a barrel of apples."

"Which is as good as two dollars. Now, if you have as good a sled as mine, made, it will cost you at least twelve dollars. You see how these little things count up."

"And all this comes of your having tools to work with," returned Jones, whose eyes were beginning to open.

"Yes, neighbor."

"Well, if I had tools I might save a good many sums in the course of a year, but I never have the money to spare for them. Why, these 'ere tools of your'n must cost mor'n fifty dollars."

"Just about that."

"Then I am mighty afraid I shall have to scrape along with borrowed tools. I shall never have that sum to spare."

"You don't understand. Let me explain the secret. I should never have gone with a fifty-dollar bill and bought these things. I have produced one at a time with my grog and tobacco money."

"Grog and tobacco money!" repeated Jones, with a look of blank surprise.

"Yes," said Johnson, with a smile. "Now I am going to give you a lecture. I am going to give you the benefit of my experience. The first year I began on a farm I used to have spirits by me, and every now and then take a drink to keep up my strength, I said to myself. In the long, warm days, in haying and harvesting, the bottle used to be patronized liberally. But I finally began to see that it was growing hard for me to resist; and so, after deliberating upon the subject, I came to the conclusion that rum and tobacco did me no good, and might do much evil, and I would leave them off, and I did. So I commenced laying up the money they cost me. I saw how much might be saved if I could do the work myself I had been obliged to pay for, and so I began buying such tools as I thought would come handy. At the end of the first year I found I had quite a collection, and it had all come from the money I might otherwise have drank and smoked up, and I felt healthier and happier than the year before. I knew I had laid the foundation for future good. Time passed on, and my grog and tobacco money kept coming in. It was now a hammer, then a saw, then an auger, and another plane, a bit-stock, &c., till I have now an excellent stock of tools; and they are not only a source of great profit but solid comfort into the bargain. I believe, friend Jones, in giving up my grog

and tobacco I have been a great gainer. Now, do you not think you would do as well without it?"

"Johnson," said Jones, at length, after a protracted silence, I wish you had told me of this long ago."

"I was afraid it might offend you; it is a delicate matter at best."

"I know it, but Edwin Jones is not the man to be offended with a neighbor for friendly advice."

"Well," said Johnson, with a look of extreme gratification, "its never too late to mend; and if you get into a pinch where fifty or a hundred dollars will be of use to you come to me."

Mr. Jones thanked his friend with a suspicious moisture shining in his eye, and shortly after took his leave. The very next time he went to town, instead of refilling his brown jug and empty box, he brought home a new auger, and a proud and happy man was he at work with his own tools. Time passed away, and he soon found himself the owner of quite a 'little lot of implements. This thing operated in many ways for good. Now that he has the ability to fix up the building without borrowing tools, he began to take pride in doing it. He reset his windows, roofed his bee-house, built new pig-pens, tightened his barn, and in rainy weather was never without a pleasant and profitable employment. His cows do not break through the barn floor now, and they give as much milk, his bees make as much honey, his trees yield as good apples, as his neighbor Johnson's do; and all this is because he stopped his grog and tobacco expenditures, bought his tools, and left off depending upon his neighbors; and so he is now a happy, thriving and contented farmer.—*Winchester Virginian.*

About Drying Apples.

October and November are the best months for drying apples, and the well-ripened, choice fall varieties are by far the best for the purpose. Some people have an idea that anything in the shape of an apple, big enough to pare, cut and core, let the flavor be what it may, is just as good for drying as another. We beg leave to correct this error. It is just as important to have a good apple to dry, as to eat raw, cook or bake. To those, therefore, who want good dried apple, we will offer a few suggestions.

1. Let your apples be of good size, fair in shape, choice in flavor—sweet or tart, as you may prefer; both are good for a variety of purposes. They should be gathered without bruising; laid by till nearly ripe, but not quite ripe; pared with a machine—if you have a good one and quartered, or half-quartered, according to the size of the fruit, or the use to be made of the article when dried.

2. Let the work be done as rapidly as possible, for the fruit may ripen too fast after beginning to do them, and keep the cutting and coring up with the paring; for the moment the open flesh of the fruit becomes exposed to the atmosphere, or heated, it begins to lose its aroma, moisture, and flavor, all to the damage of its quality when dried.

3. If you choose to string them, which may be done, or not, as you prefer, do it as soon as you can. We should not dry thus, preferring wire-racks for the purpose. Then instead of hanging them up by the side of the house, in the sun, or in the kitchen, where millions of flies will alight upon, and live on them for several days, put them in a kiln, or drying-room, with a heat of a hundred degrees of thermometer. Let the kiln be ventilated at the bottom and top, to pass off the exhaling moisture, but not enough to make a perceptible draft through it.

4. When the drying heat has sufficiently closed the pores of the cut fruit to prevent the escape of its aroma, the heat may be modified ten or twenty degrees, and so continue until they are sufficiently cured for storing away, which may be known by breaking a few pieces, and the absence of any settled moisture in the flesh, showing fermentation.

5. When sufficiently cured, pack them away in small bags, or sacks, not closely crowded in, but as they will naturally fill; tie them closely, and hang them to nails on the side of a dry room. They will thus keep indefinitely, or till you want to use them.

A well selected apple, properly pared, cut, cored and cured, is one of the best luxuries of the table, while indifferent varieties, carelessly worked up, strung and dried in the kitchen, half covered with flies, fused with the steams of cookery, dust, and the accumulations and exhalations of an open and disordered living room, are not fit to eat, nor even to sell. We have seen apples dried after the latter fashion, even in the

households of otherwise tidy people; and to those who are in the habit of doing so, we say, try the other plan, and if they do not acknowledge it a better way, in every possible use an apple can be put to, call upon us for the difference in expense.—*American Agriculturist.*

From the *New England Farmer.*

How Cut Nails were Introduced.

MR. EDITOR:—In your paper of March 12, under the head of "American Inventions," is a communication from CALEB BATES, Kingston, Mass., upon the invention of screw augers and cut nails. I have some facts in regard to the first invention of cut nails, received mainly from the Hon. John Folsom, formerly of Chester, once well known in various public offices, and as the keeper of a public house, which I will relate perhaps more in detail, and be more personal than will be generally interesting, but I think will interest many individuals.

Mr. Folsom told that his father, David Folsom, was the first inventor of cut nails. The idea was suggested to him by seeing some person cutting with a pair of shears, some pieces off the end of an iron hoop. He commenced cutting nails with shears, and heading them in a common vise. He then improved by having his cutting apparatus operated by a crank motion with a fly wheel, and a treadle operated by the foot. In heading, the vise was superseded by dies, a stationary one fastened to a bench, and a moveable one attached to a lever, and drawn together by the foot. When this was first invented, every nail was taken from the dies, as well as put in, with the fingers. They soon bored a hole through the bench, so that the nails could drop out by their own gravity.

The introduction of the business, I think, was at Tamworth, N. H., or that vicinity. My informant was born in 1776, and I think that when he was born in 1787, his father removed with his family to Harrisburgh, Pa., and there set up the business, but died in a few months, leaving another son, William Johnson Folsom, some four or five years older than John, and they carried on the business there until John was about sixteen, or about 1793, when they removed back to Tamworth, and set up the business.

In April, 1794, Hon. Joseph Blanchard, of Chester, N. H., who owned the mills at

what is now Auburn village, married the widow Folsom, who was the daughter of the Rev. William Johnson, of the West Newbury, Mass., and the course of a year, the young Folsoms removed there, and carried on the business and after a while, commenced cutting by water, but still heading by hand.

After the New Hampshire State Prison was established, nails were cut there and carried to Concord to be headed by the prisoners, but the self-heading machines having come into use, it became a losing business, and was given up. B. CHASE.

Auburn N. H., May 3, 1859.

How to Make Good Butter.

A lady, experienced in making butter, says:

"Before I go to milk, I put a kettle, say one-third full, of water, and large enough to let the milk-pail into it, on the stove, where it will get boiling hot by the time I come in with the milk. I then strain the milk into another vessel, and wash the pail (which should always be of tin,) then pour the milk back into the pail, and set it into the kettle of boiling water till the milk becomes scalding hot, taking care not to let it boil; then pour it into crocks or pans and set it away into the cellar for the cream to rise in the usual way. Cream produced in this way will seldom require more than twenty minutes to churn, while by common practice the poor dairy maid may often churn for hours, and then perhaps have to throw away, as I did on two occasions, before I became acquainted with the Russian plan, the essential features of which I have adopted in my present mode given above. The method is applicable to all seasons, and will answer in summer as well as winter."—*Winchester Virginian.*

TREATMENT OF BURNS.—Flour has been extensively recommend for burns; but seeing it tried several times, increasing the pain intolerably in every instance, I would not use it, nor have it used. But a short time ago, one of my family was scalded on the hand quite badly; flour was first applied, but could not be borne. Next the skin of hog's lard was applied, which relieved the pain almost at once, and entirely. If the skin of lard cannot be had, oiled silk would be a good substitute.

From the Farmers' Journal.

An Appeal.

[In transferring to our columns the following appeal of the Farmers' Journal to its "Agricultural Friends" to furnish for that paper communications on the many interesting topics relating to agriculture, we would heartily second the appeal, and would also improve the occasion by saying to the friends of the Southern Planter—yea, to the friends of agriculture, "go thou and do likewise."—ED.

TO OUR AGRICULTURAL FRIENDS.

Will you not do us and your brother farmers the favor to furnish communications for the columns of the FARMERS' JOURNAL on the many interesting topics relating to agriculture? Your experience cannot fail to enable you to impart information of a valuable charaction. We shall be pleased to hear from you often.

Selection of Seed Corn.

As the time is approaching for the ingathering of the corn crop, we would suggest to every farmer who reads the *Journal*, the advantage of making a careful selection of seed corn in the fall, rather than postponing it till the spring. To make the selection to the best advantage we would advise, that in cutting the tops off the corn, to leave the tops on those stalks having two or more good ears, and which are also the most forward. By the top the seed corn can be readily distinguished, so that it can be gathered and put away to itself. The shuck should not be taken off till planting time, as it will afford a protection against the rats. By continuing this process a few years, the increase in the crop will be materially improved, with so little trouble that no practical farmer should fail to try it. The importance of good seed, of every kind, cannot well be over estimated; and especially is it necessary in our staple crops of corn and wheat. The subject has received the attention of many good farmers, but there is still room for greater diligence. The shortest way to attain the desired object will be to procure seed of some of the most improved varieties, and then to pursue the plan recommended, keeping it up from year to year.

Farmers' Journal.

Organic Life—the same in animals as in plants.

From the Transactions of the Highland and Agricultural Society.

On Breeding and Rearing Cattle.

By HENRY TANNER, Professor of Agriculture, Queen's College, Birmingham.

[PREMIUM GOLD MEDAL.]

NO. III.

(Concluded from November Number.)

Breeding for Dairy Stock.—This requires a modified course of management. It happens, very unfortunately, that our best milkers are not generally our best fattening animals. It does happen sometimes that both points of excellence are combined in the same individual; but these are, generally speaking, cross-bred animals: for instance, the half-bred Guernsey or Alderney heifers are often remarkable for this, especially when crossed with a good Devon or short-horn bull. It would seem as if in such cases the dam gave the milking disposition, and when this is stopped, the aptitude of the sire for fattening made itself manifest. This is just what our knowledge of the principles of hereditary transmission would lead one to expect. In the heifer the tendency to give milk is strong, and has been a characteristic feature for many generations; it has therefore become powerful; whereas the influence conveyed by the bull is exceedingly weak, for his predecessors have been distinguished by little disposition for milk: hence, the power of communicating milking tendency being stronger on the side of the dam than the bull, she imparts her character to the offspring. The opposite is the case with the tendency to produce fat: here the bull is strong and the cow weak, consequently he is able to impart to the offspring an aptitude for producing fat similar to that which he possesses himself.

There is no necessity why these valuable tendencies should not be combined in the same animal much more frequently than at present; and I deem it so important a point, that I shall draw attention to the principles involved in the production of milk. From the analysis already given (page 326,) the reader will see that milk contains the nutritious and heat-giving elements of the animal's food. It is interesting to observe the changes which the food undergoes in its transition to the body of the young animal, for the same elements pass through a series of transformations. We find them

IN FOOD, as	IN BLOOD, as
Gluten, Sugar and Oil, Mineral Matter.	Fibrine and Albumen, Fatty Matter, Mineral Matter.
IN MILK, as	IN THE BODY, as
Cheese, Cream, Saline Matter.	Muscle, Fat, Bone.

The blood is derived from the food, and then transformed, either directly into the body of the animal, or indirectly through the intermediate stage of milk. Thus the same materials are needed in either case.

It might be presumed that as we know the elements required for milk, it is only to increase the food of the cow in either particular, and the effect will be evident in the production of milk. This, however, is not strictly true; for, although we may carry into the system an increased quantity of those matters which yield cheese or butter, yet it still depends upon the animal economy either to mould these elements into the cheese and butter we wish, or else into flesh and fat. This is quite dependent upon the natural disposition of the animal, and this is the keystone on which all depends. Thus, although the same food will in one case produce flesh and fat, whilst in another it will yield butter and cheese; still, when the tendency of the animal's system is thus marked, we can increase the product by presenting in the food an additional quantity of the elements required. It is clear, therefore, that the first point to be secured is this tendency in the system to co-operate with us. In this respect cows differ; but it is worthy of remark that these peculiarities are hereditary. If, therefore, we have a well-bred cow, with a tendency to produce an abundance of good milk, such a cow would, in all probability, impart to her produce a similarity of character.

The points which especially indicate good milking character must be noticed. The most prominent of these are the vessels which co-operate in the production of milk. These consist of the vessels which bring the blood, the glands which separate the milk, and the veins which carry away the blood when thus acted on. Of the former, I may name those veins which show themselves between the bearing (*vulva*) and the udder. These are often buried so that they cannot be seen; and although on pressure immediately above the udder they frequently appear, yet we must not immediately condemn the animal as a bad milker when they cannot be observed. Generally, if the skin is mellow, and not much fat present, these veins show themselves readily. Their presence is very desirable, and when combined with a full development upon the surface of the udder, they indicate a free supply of blood to the milk glands. It is also considered a good point when these veins present a knotty appearance.

The milk glands are situated in the upper portion of the udder, and are generally four in number, each gland being in connection with its own quarter of the udder. The udder should be capacious, extending well behind the legs, and also forwards under the belly; the coat should be thin, with a soft skin, and show considerable decrease in size after the

animal is milked. The teats, which are the channels from the four reservoirs in the udder, should be placed well apart from each other, and not cramped together, for this generally indicates a want of capacity in the udder. The udder may appear large, and yet be found fleshy rather than capacious. After the blood has been acted on by the glands, it is conveyed away by the veins; but none of these can be seen externally. The milk vein, which runs along the side of the belly, has been so called from its supposed connection with the udder; but such is not the case. Especial attention is desirable to the mellowness of the skin, and more particularly if the animal is poor. This vein is a sure indication of the quantity of blood supplied, and for all practical purposes may be taken as a guide.

Some attention has also been given within a few years to a discovery made by Mons. Guenon respecting "*the escutcheon*," as it is termed. Like many other persons, he was carried beyond the boundary of discretion in his speculations, and thus his valuable observations were for a time lost in the mist with which he enveloped them. Sufficient is already known of its value, at least, to lead us to the conclusion that it is worthy of more general knowledge. It can scarcely have escaped the reader's notice that the hair on the buttocks of cattle grows in two different directions—one portion pointing upwards another part downwards, and thus producing a sort of fringe at the point of juncture. This hair, which has an upward tendency, has been termed "*the escutcheon*." A very extended observation has proved that, *other conditions being equal*, the modification of form presented by the escutcheon will lead to an estimation, not only of *the quantity* of milk which the animal will produce, but also of *the time* during which the cow will keep up the supply of milk. Without going much into detail upon this point I may briefly state,* that the larger the extent of the escutcheon the greater is the promise of milk, and also of its continuance, even after the cow is again in calf. A cow may have a small escutcheon and yet be a good milker; but observation leads to the conclusion, that if she possessed a more fully developed escutcheon she would have been a better milker. It may be considered a point of merit, not as *deciding* whether or not the cow is a good milker, but rather as an additional indication, which may be taken into consideration in conjunction with other characteristic points. It is also desirable, in estimating the extent of the escutcheon, to make full allowance for the folds in the skin, otherwise a large escutcheon may be

taken for a small one. Besides the escutcheon, there are tufts of hair (*epis*) which have a certain degree of value, when seen upon the udder of the cow.

With this safeguard, we might anticipate no difficulty in transmitting a disposition for producing milk, especially as we know these characteristic features are hereditary. But we must remember there are hereditary influences conveyed from the bull as well as the cow, and hence an opposite character is often given to the produce by virtue of the bull's character. It may cause a degree of surprise to some that the bull should have any influence on the *milking* properties of his produce; but there is not the slightest doubt of such being the case. A bull, the produce of a good dairy cow, would favor this character being shown in his offspring; and should he be bred with another good milker, *he would confirm this tendency* in the young calf; whereas, if he was descended from a family of bad milkers, *he would lessen the dam's influence* in this respect. It is here that Monsieur Guenon's discovery promises to be of great service, because we find the escutcheons seen upon the bull indicate a tendency to convey to his offspring the same peculiarities which they represent when seen upon the cow.

I have before casually remarked that our improvements in the breed of cattle have been accompanied with a decreased capability for breeding; and the same remark holds good as regards the milking tendency; and therefore it is a greater stimulus for the exercise of care, and such attention will be ultimately rewarded. There is nothing essentially contradictory in the endeavor to combine, in the same animal, milking as well as fattening properties. Many of our dairy cows are distinguished by *both* these conditions. In our high-bred animals we find a small liver and a small lung, accompanied with a gentle and peaceful disposition. Now, these conditions, which are so desirable for producing fat, are equally favorable for yielding butter and cream. These diminished organs economise the consumption of the carbonaceous matter in the blood, hence more remains ready for conversion into fat, but equally prepared for yielding cream if the tendency of the animal is favorable to the same. Having, therefore, by these means got the blood well charged with the materials from which milk and cream may be prepared, it only remains for the animal to secrete the milk freely, and the most economical results are realized. It is true, we may store the blood with materials ready for yielding a rich milk, but if the milk glands are *inactive or defective*, then the stream of blood passes over them, and yields but little of the very secretion we want. In many of our high-bred cows, not only are the breeding powers weak, but the milk glands sympathise with the general torpidity of this part of the system; and hence,

* Those who wish to examine this more deeply, may advantageously consult "*Traité des Vaches, Laitières*," par T. GUENON; or also, "*How to Choose a Good Milk Cow*," by J. H. MAYNE and JOHN HAXTON.

although the blood may be charged with milk-forming matter, yet in consequence of the *inactivity* of the milk-glands, these fail fully to separate it; and the result is, that materials which might have been separated as milk and cream, pass on unappropriated, and probably become formed into fat and muscle.

The Breeding of Beef-producing Stock.—Practically this will be carried out with the local breed of cows; and if these are selected with judgment, and judiciously crossed, useful stock may generally be raised. Well-selected dairy cows will generally, *for this purpose*, be found equal, if not superior, to cows of the highest breed, by giving more weight, a larger frame, and harder constitution; and, being good milkers, will rear their calves better. It is also very important, for producing well-developed stock, to breed from cattle capable of yielding to their calves the full nourishment required. In every case the bull should be of *very superior* character, and cannot be of too good quality. The objection which I have named as regards the cows does not apply here. On the side of the sire, we should endeavor to secure *the very best qualities*, whilst the dam should be adapted *for bringing them to perfection*. It is a serious error to select an inferior bull for such a purpose, and only a matter of surprise that any of our class—who are generally such shrewd calculators of profit—should ever be found to adopt a practice manifestly indiscreet.

The destination of such stock should be for beef, because it is in the *first* produce you secure the advantages of both parents, but you cannot, with safety, use them for breeding purposes, as the *second* cross is generally an animal of very inferior quality. In the first produce we secure the advantages without the disadvantages, but the second cross is very inferior.

Throughout the entire period of growth the course of feeding should be liberal and generous, calculated to promote a progressive development of the body from the time of birth until consigned to the care of the butcher.

THE MANAGEMENT OF CATTLE WHILST BREEDING.

Having succeeded in getting the heifers in calf, it becomes necessary to give them a more liberal course of feeding, but the change must be gradual. They have now not only to render their own bodies complete, but also to nourish and support another animal which is daily increasing its demands on the system. Supposing the heifers to be running loose in the yards or sheds, they will now receive a few roots with their straw, and generally some hay. They must be watched to prevent any unruly or vicious one of the lot annoying or injuring the others; and separation must be made accordingly. After they leave the yards, pasturage of *medium* fertility will be best for them, so as to allow them to live well and keep in good

condition without being absolutely fat. In this manner the size of the calf at birth is very much held under control. If the heifers are fed highly, the nourishment of the blood renders the growth of the fetus more rapid than is desirable, and the result will be a largely-grown calf, which is especially dangerous for heifers. It is the food which the heifer receives during this period which determines the calf's size, rather than the sire, as is often supposed. Whilst, therefore, we guard against this *dangerous* error, we must not keep the heifers short of food, or we shall have weakly calves produced. A moderate allowance of food will be far better than either extreme. An animal which is in high condition is far more liable to disease after calving. Prevention however, being better than cure, it should be our object to follow the happy medium of giving them keep of sufficient quality to support them in good condition, but not overdo it by making the heifers fat.

Injuries frequently happen during this stage from the animals driving each other; this will arise when one or two bad-tempered ones happen to be amongst them. Goring with the horn upon the flank is a frequent cause of injury to the calf, especially in causing the heifer to strain herself in her attempts to escape. Running over steep land, and jumping over gutters in meadows, when tormented by the fly, are all conducive to the same end; it may be the loss of the calf, or else a disarrangement of the calf, which produces at the time of birth a false presentation. The false presentations are often accompanied with difficulty to the operator, and danger both to the dam and offspring. Too much care and caution cannot be taken to avoid injuries such as these during this period, as much loss and suffering may be saved thereby.

Abortion may be looked upon as one of the greatest difficulties of this period.* Entire herds often lose their calves from this cause; and it often ranges through large districts. Its causes are varied, and claim our attention. During the time animals are breeding, the imagination and senses are peculiarly susceptible of external influences. Of all the senses,

* It is not so common as is usually imagined, for cows which have once slipped calf continuing to do so afterwards. It altogether depends upon how it is brought about. If it arise from contagion from cows which have slipped their calves, the risk is no doubt great; but it is by far the greatest risk if the cow is predisposed, or weak of constitution—when the generative organs are not only weak, but highly sensitive at the same time. On the other hand, when it arises from accident—such as jumping, being gored, surfeit or indigestion, a chill, or water after being heated—there is little fear of apprehending abortion, if ordinary precaution is exercised.—J. D.

probably that of smell is most energetic; and thus we find effluvia, which at other times is disregarded, is now peculiarly offensive. In consequence of this, we frequently find that after heifers have been kept in situations rendered disagreeable to them by such a cause, the system becomes so excited as to produce an abortion of the calf. Some smells are much more exciting than others, and more prompt in their influence—such, for instance, as the smell arising from a newly-born calf or a foetus. I have known a heifer throw her calf (and the foetus not being found, for the tract of ground was large,) and it so affected the remaining fifteen, that within three or four days all had suffered abortion. An accident which causes a single cow to throw her calf may thus be the occasion of spreading it amongst a large number of its companions, in every other respect free from such attack previously.

It is also more frequent in some seasons than others, and certain districts are also peculiarly liable to its appearance. In a moist climate—such as that of the west side of England, and especially the south-western portion—cases are much more common than in the drier districts of the east of England. No doubt this is excited and produced by the fungi which are found on our grasses, appear to possess a power somewhat similar to, but milder than, the ergot of rye. I had on one occasion no less than twenty dairy cows and fifteen heifers under my care, and of these no less than thirty had previously slipped their calves during that season. The course I adopted was to stop breeding for twelve months, and in the mean time dispose of all that had slipped calf. I also had the buildings whitewashed, and other disinfectants were used. During the twelve months the ground was kept as clear as possible of any but feeding bullocks. At the end of this period I was able to recommence breeding with safety and success; but when it became so general, no other course appeared to be of any avail. It is by prompt attention to the first appearance that we have the best chance of success.

If an animal has slipped her calf she should be kept as if suffering from a contagious disease. Let all breeding stock be kept away from the field or shed in which it may have happened for a few weeks. If this cannot be done, and the building must be used, let quicklime and some chloride of lime be used freely before the stock are allowed there. The animal will, of course, have been removed to a place by herself for further treatment. This will consist in washing the hinder parts with a weak solution of chloride of lime, and giving her $\frac{1}{2}$ lb. or $\frac{3}{4}$ lb. of Epsom salts, and a $\frac{1}{2}$ drachm of powdered ginger. She should be fattened and disposed of forthwith, as she is almost certain to slip her calf again. I believe this is a source of great trouble, which breeders often bring on themselves. A very choice

heifer slips her calf from some accident, and she is retained to have one more trial, and, unfortunately, gives proof of the truth of the maxim, "one infected sheep will taint a flock." I know it is very ungenial to our feelings to part with the favourites of our herds, but judgment must govern our feelings, if mischief is to be prevented. This is a disease in which *half* measures are perfectly useless; the course of procedure here requires resolution and vigorous execution of the same.

Earl Spencer has published* a number of most interesting observations with respect to the probability of cows holding in calf for certain periods of time, and also of their producing live calves. His Lordship was thus able to calculate the probable number of live calves he might expect within certain periods.

We may now assume that the heifer has been brought towards the period of her calving, which generally happens from about 280 to 285 days from the time of conception. Lord Spencer has also aided us with a very extended series of observations, showing the influence which the sex of the calf has upon the time the cow goes in calf. Lord Spencer adds, that no live calf was born earlier than 220 days, nor later than 313; nor was he able to rear any calf born less than 242 days. He considers any calf born earlier than 260 days decidedly premature, and any date longer than 300 days must also be considered very irregular. From 280 to 285 days is the more general time, at which age the sex of the calf does not appear to vary much. Those calves which were born within the preceding five days were principally heifer calves, in the proportion of 3 to 2; whereas those which were delayed for the same time were principally bull calves, in the same proportion of 3 to 2; and as the delay increases the proportion of bull calves increases, except when we come to those *extreme* instances of delayed parturition, when the calves appear to be all female.†

When the period approaches for calving, the heifer should be prepared for it by keeping the bowels in healthy action and the blood cool. With this view each heifer should have 12 ounces of Epsom salts, $\frac{1}{2}$ drachm ginger, and $\frac{1}{2}$ drachm of caraway seeds in the preceding week, and repeated if not found effectual in relieving the bowels.‡ With this preparation

* *Journal of the R. A. S.*, vol. ii.

† The age of bulls influences in a very considerable degree the sex of cattle. Old bulls get heifer calves in the proportion to 3 to 2, and young bulls *vice versa*.—J. D.

‡ Bran-mashes, with a very short allowance of fodder, is the best preparation before calving. If anything else is required, 1 to 1 $\frac{1}{2}$ lb. of molasses diluted in water may be given once a-day. If a cow has had a bad time, then 1 lb. of Epsom salts, along with 1 lb. of molasses, and $\frac{1}{4}$ oz. of ground ginger.—J. D.

we may await the time of calving. The depression on either side of the rump-bone, together with the appearance of waxy matter on the teats, are symptoms of approaching calving. Having provided the heifer with a convenient loose-box, she should be left to herself. When the labour-pains have been on her for half an hour, the man usually attending her may quietly examine the progress, and continue to do so every half hour subsequently, avoiding as much as possible causing any disturbance to the animal. As soon as the calf is making progress towards delivery, let him carefully try if the calf is in a right position; that is, with its two fore-legs protruding, and the muzzle of the nose resting upon them.

Having satisfied himself that all is right, let him give the heifer plenty of time for making a passage for the calf. It should be remembered that the bones of the pelvis have to yield for the passage of the calf, and it is much safer to allow Nature time for effecting this herself, and in her own superior manner, rather than endeavour, by applying force to the calf, to make a passage by other aid. Much mischief arises by persons being in too much hurry about these matters. The great point is to be assured that the calf is in its right position, and then give the heifer every opportunity of aiding herself. When the fore-feet show themselves assistance may be given, but even then not with that violence which is so often used. Excessive strength is quite needless, and is productive of much injury. A firm and steady pull at the fore-legs simply to prevent any return of the calf when the pains cease, and also to aid the calf forward when the pains return, will be of great service to the heifer, whilst an over-eager application of strength, often almost enough to carry the heifer away, is worse than useless.

In cases of false presentation much suffering and loss will be saved by calling in a veterinary surgeon. I should prolong this report beyond its proper limits if I were to go into this branch of the subject.

As soon as the calf is born, see that it can perform that new function of life—breathing. Up to this time this has not taken place, but now it has lost the warmth of the mother's body, it requires another supply of heat, and this is produced by the process of respiration. Any film over the nostrils should be removed; and if the calf cannot draw breath, it should be done artificially by blowing down the throat, and the lungs, having once expanded, will probably continue to act. If the birth of the calf has been tedious, it may be much exhausted. In such cases, a little gin and peppermint may be given in some gruel, but if it can be avoided with safety to the calf, it is preferable to do so. The calf should now be drawn to the heifer's head, and she will amuse herself by cleaning it. Shortly after, some warm gruel should be given to the heifer, and

followed by a bran-mash; but if she appears much exhausted, the gruel should be given quickly. In cases of protracted labour, thirst should never be allowed to continue, but occasional draughts of warm and thin gruel may be advantageously given.

Having traced the proper management of cattle from the period of birth until they have produced a successor capable of following a similar course, I shall proceed to notice—

THE MANAGEMENT OF COWS AFTER BREEDING.

After the delivery of the young calf, our management of the dam must be of a preventive rather than a curative character. The cow, having been refreshed by the bran-mash and gruel given, may be safely left for a time quiet and undisturbed. In the course of two or three hours she should be drenched with 12 ounces or a pound of Epsom salts, mixed with 1 drachm powdered ginger, and 1 drachm caraway seeds. If she has had an *unusually bad time*, it will be desirable to give it rather sooner, and combine with it one of the following fever powders, consisting of—nitre, 2 drachms; digitalis, $\frac{1}{2}$ drachm; tartarised antimony, $\frac{1}{2}$ drachm. These are calculated to check any tendency to fever in the system; for it must be remembered that the heifer has undergone a very severe strain upon the system, and the appearance of inflammatory action is therefore to be guarded against. The fever powder should only be added *after cases of difficulty*, in which the animal may have suffered badly; for, in ordinary cases, the former drench will generally be found sufficient.

The after-birth (or *placenta*) will probably be thrown off within twenty-four hours, but it may remain several days. The appearance is the greatest annoyance, for it does not seem to inconvenience the animal. It is better to avoid the removal of it by hand, although this must be done if it appears to cause irritation and inflammation. A small weight is often tied to the after-birth, if it is not thrown off in proper time, and this gentle pressure tends to its removal. Many are in the habit of giving irritating and exciting cleansing drenches, which are productive of much harm. If anything is given, probably a pint of good ale in some gruel is as good as anything. The object should rather be to prevent all further excitement, and to quiet the system as much as possible.

The drop, after calving, is one of the earliest and most serious attacks to which the cow is subject. Here, however, is a case for the attentive care of a veterinary surgeon, and no time should be lost in securing the same.

Attention should also be given to the state of the udder and the flow of milk. In some cases the udder feels hard and lumpy. This requires gentle friction, with some softening ointment, such as elder-flower ointment. If this friction be repeated two or three times a

day, and the calf allowed to suck immediately after, it will probably become supple in a short time. Many persons allow the calf to run loose, and suck the cow at liberty, and in slight cases this generally answers. The udder must still be watched, and if not relieved by this plan, it should be rubbed by the hand as before directed. Warm fomentations are useful, but unless care is taken there is some danger of catching a cold afterwards, thus only increasing the original evil. These warm fomentations should always be followed by the use of some lard or elder ointment, which lessens the risk of inflammation. Any sudden loss of the milk, or any great decrease in its quantity, must be carefully attended to, for there is always risk to the animal. Cloths soaked in warm water must be applied to the udder, and one of the fever powders (So. Plan., p. 654) given to the cow, together with a dose of Epsom salts. The return of the milk will be the first sign of improvement, and this should be drawn off as fast as it comes into the udder. The drench recommended above may be generally given to cows when the milk lessens, because this almost always arises from inflammatory action in the system.

Soreness of the teats is often observed in cows, and if neglected has a tendency to injure the temper, for the painful handling is almost sure to make them kick; and if the cause is not remedied, they become bad-tempered and permanent kickers. Any soreness should have immediate attention, and the following ointment is very purifying and healing. It should be applied to the teats after the cow has been milked, and the part washed before the next milking:—Melt together 6 ounces of lard, and 2 ounces of beeswax, and 3 ounces of olive-oil; and, as they cool, rub in 2 ounces of sugar-of-lead, and 2 drachms of alum. These substances should be finely powdered, and well mixed together before adding to the melted lard.

The early precautionary measures having been taken for the preservation of the cow's health, we may presume that she is progressing favourably, and rearing her calf. After a few weeks she will again come into season, and be ready for taking the bull. This time, however, we shall be comparatively free from those difficulties which attended us at this stage previously; for, having once produced a calf, the animal becomes more adapted for doing so again. Should any difficulty arise in this respect, we cannot adopt the usual remedies as freely as before; for now we must remember that we are dealing with an animal producing milk, upon which the calf is dependent. Besides this, any imprudent step which checks the milk is always felt by the animal when the same period returns, therefore the loss of the cow's milk would depreciate her subsequent value. But the greatest danger from the loss of milk is upon the animal herself; for if the

milk-glands cease to act, the effect on the system is most dangerous. I should, in any case of difficulty, adopt the plan of using the bull twice, as before recommended, in preference to any other plan; and this will be found almost always to overcome the difficulty, especially if she is put to the bull when first she appears ready.

When the cow is far advanced in calf, it is necessary to stop milking her, in order that the entire nourishment of the system may be shared between the growth of the calf and in giving fresh vigour and strength to the dam. It is usual to give two months' rest, but with high-bred stock, which do not nourish their calves very well, three months is decidedly better. We thus divert the nourishment which would be drawn away as milk, and the result is a great improvement in the calf, the cow is prepared for the delivery of her calf, and the subsequent flow of milk is improved. In the later months the calf requires a very considerable amount of nourishment, and, when a well-developed animal is sought for, we should encourage its formation by drying up the milk.

It now remains for me to notice the mode of feeding, and system of management, to be adopted whilst producing milk. I shall presume that the calf is born in one of the early months of the year, and from this period the cow will be kept in a comfortable building until the grass is ready in the spring. Moderate exercise is desirable, if it can be given; still shelter is even more important; but their combined influence is best. Many have not the opportunity of giving exercise under shelter, and frequently cows are put out into an adjoining field for an hour or two during the day; and instead of their taking exercise, they stand and call for their release from the cold. When thus turned out from warm and ill-ventilated cow-houses, as is too frequently the case, they suffer much more than when kept in healthy and moderately-sheltered boxes or stalls.

It should be remembered, that whilst too much warmth weakens the animal, and renders it more subject to disease, the opposite extreme of cold draws upon the food for supplying additional heat to the body, and consequently less remains to yield cream. It is, therefore, economical to shelter a milking animal from the cold; but at the same time we must not economise heat to the prejudice of the health and comfort of the animal. We may take it as a rule that, so far as we can promote the health and comfort of the animal, so far shall we succeed in rendering the cow more competent for the support and development of her calf.

The food of the cow during this period claims our notice; for we can exercise great control over the milk by regulating the food from which it is produced. Succulent food,

such as mangold-wurzel, and brewers' grains, &c., always produces a large *quantity* of milk; but it is not quantity alone which is important to the calf. The *quality* is the chief point for this use; and here we find good hay and linseed-cake showing themselves in a very marked manner, and producing a much larger produce of cream. If, however, the requirements of the dairy render the production of cheese desirable, we have to look at the quantity of curd produced; and here we shall find the importance of exercise, and such food as clover, hay, or vetches. If, in such a case, artificial food is given, bean or pea meal would be the best for producing *quantity* of cheese, but the addition of linseed-cake to the food would very much improve the *quality* of the cheese. Here, as in many other instances, the object in view must determine our course of management, for the food must contain the materials we want,—whether it is water to give quantity, or rich oily matter to produce cream, or highly nutritive matter to yield cheese,—for they cannot substitute each other in their modes of operation or uses.

It is also worthy of comment that, whilst exercise has a tendency to increase the quantity of cheese, it deteriorates from its richness. Hence we find our richest cheeses are made from strong and fertile land, where the cows take only a moderate degree of exercise, whilst those hilly farms, which render more active search for food necessary, give proportionately more cheese, but it is of inferior quality. Exercise cannot fail to use up, by respiration, a certain quantity of carbonaceous matter, which would otherwise be appropriated to the milk; and it is simply a question of the supply of oily matter being decreased on poorer land, by being used for another function of the body which exercises a prior claim. This would lead one to anticipate that, for the production of cream, our stall-fed cows would be superior to others, whilst, for a cheese dairy, a greater amount of exercise is desirable, and the practice of our dairy district strongly confirms such an inference.

I have thus endeavoured to bring before the reader the leading points connected with the breeding of cattle. I have traced the calf through its successive stages of growth until it has produced a successor capable of again performing the same circle. I have noticed the management most desirable for these several periods, and the principles upon which such practice is based, together with the diseases to which each age is peculiarly liable. There is no branch of rural economy of greater importance to the interests of agriculturists. It is a subject which demands our careful attention, and it will reward our zealous endeavours to make the functions of animal life subservient to our requirements.

Hear counsel, and receive instruction.

Curing Beef and Pork.

This recipe which originated with us, and has now had many years of trial, we believe to be unsurpassed as a pickle.—Nearly all the modern recipes which have appeared in the different agricultural papers, partake, in some instances almost identically, of the ingredients and proportions set forth in ours, which we first laid before our readers some fifteen or eighteen years ago. At this period in the season, when farmers and others will soon be putting down their winter's, and we may add their next year's supply of meat, it may be of service to republish the recipe, which is as follows:—To one gallon of water, take one pound and a half of salt, half a pound of brown sugar, half an ounce of saltpetre, and half an ounce of potash. In this ratio, the pickle to be increased to any quantity desired. Let these be boiled together until all the dirt from the salt and sugar (which will be not a little) rises to the top, and is all skimmed off. Then throw the pickle into a large tub to cool, and when cold, pour it over your beef or pork, to remain the usual time, say from four to six weeks, according to the size of the pieces, and the kind of meat. The meat must be well covered with the pickle, and it should not be put down for at least two days after killing, during which time it should be slightly sprinkled with powdered saltpetre. Several of our friends have omitted the boiling of the pickle, and found it to answer equally as well. It will not, however answer *quite* so well. By boiling the pickle, it is *purified*—for the amount of dirt which is thrown off by the operation from the salt and sugar, would surprise one not acquainted with the fact.—*Telegraph.*

VICTORIA CAKE.—One and a half pounds sugar; one and a half of butter; one dozen eggs to one pound of flour; one cupful of cream; one tea-spoonful of saleratus; flavor with rose water or nutmeg.

INDIAN MEAL PUFFS.—Into one quart of boiling milk, stir eight table-spoonfuls of meal and four spoonfuls of sugar; boil five minutes, stirring constantly; when cool, add six well-beaten eggs; bake in buttered cups half an hour; try them with a little butter and maple molasses, and see if they are not good.

From the Pittsburgh Evening Chronicle.

**A Visit to Knox's "Small Fruit" Farm—
One Hundred Acres in Fruit—Fifty
Acres in Strawberries.**

Having long heard of and desired to see the "small fruit" farm of Rev. J. Knox, we took advantage the other day of a leisure afternoon to pay it a visit. We were so much pleased and astonished at what we saw that we feel prompted to give our readers a somewhat extended description of it. This extensive and highly cultivated farm is a credit to Pittsburgh, and Mr. Knox deserves most honorable mention for the enterprise and perseverance which has induced him to increase year by year his plantations of "small fruits," until now they are, beyond any peradventure, not only the largest and most complete of any in the west, but of any in the United States. If, as has been well said, that man should be esteemed a public benefactor who causes two blades of grass to grow where but one grew before, how much more he who devotes his whole time and means to the culture, improvement and multiplication of various kinds of the most delicious fruit; who supplies not only our own but far distant and diverse markets with such abundance and superior qualities of berries as but a few years ago would have been considered unattainable. Nothing in the art of horticulture, arboriculture, or floriculture is, to our minds, more instructive or interesting than to witness the almost endless varieties which have, by progressive and experimental culture, been produced from one parent stock. For example, the wonderful varieties of multiform and varicolored roses, which are now catalogued by the florist or nurseryman, are but the result of science and culture applied to the improvement of the common wild rose of our forests. So the almost innumerable varieties of apples, peaches, plums, grapes, strawberries, and more lately of blackberries, can all be clearly and unerringly traced back to a few common and inferior species. A very few years only have elapsed since any especial attention has been devoted to the last four varieties of fruit above mentioned, or what are now best known as "Small Fruits," and yet now we have almost innumerable and ever increasing varieties of them, contributing to the health and comfort of man, ministering to his tastes, and supplying him with an

endless profusion of most luscious and delicious fruit. The latest products of these berries are as far superior in size, flavor, productiveness, and profitableness to those brought to our markets but a few years since, as the splendid Tube, or Monthly roses, are to their original—the modest and humble native of the forest, for as the Golden Gate and Newtown Pipin are to the sour and forbidding Crab, which contracts the mouth like a persimmon. We have little doubt, too, that we have only seen the beginning of fruit culture, and that those which are now considered the best and most delicious kinds of fruits will be discarded for such as have been produced far better and much more delicious. But we wander.

A GENERAL DESCRIPTION OF THE FARM.

The "small fruit" farm of Rev. J. Knox is situated on the summit, but somewhat back from the brow of Coal Hill, nearly above Birmingham, and about a mile and a half distant from the city. The farm comprises one hundred and twenty-five acres, fully one hundred of which is in close and unintermittent cultivation; the rest is occupied by vegetable gardens, dwellings, out-houses, woods, &c., &c. The mansion, which is disposed nearly in the centre of the ground, is a plain, but roomy and comfortable structure, of two stories, and surrounded by a broad porch. It looks very much like one of those commodious planter's houses, which are so often met with in the cotton states. This farm of one hundred acres is quite equivalent—so carefully is the mode of culture and such the economy of space and growths—to a farm double the size. As an instance of how economy of space and time is regarded, we saw in one division a thrifty young peach orchard, of some ten acres extent, the trees of which were not expected to produce for four years. To turn this soil and time to profit until the trees commenced to yield their golden fruitage, Mr Knox had planted out between each row of trees, a line of Black Cap raspberries, which would be profitable for fruit and plants for four years, and between each row of trees at right angles to the other rows, a line of strawberries, from which he expected three crops of fruit and plants, so that when the trees commenced bearing and needed all the soils nourishment, the "small

fruit" plantations would have served their ends, and would be ready for rooting up.

The entire farm is divided about thus—fifty acres in strawberries, ten in raspberries, ten in blackberries, seventeen in peaches, ten in apples, and three in very select varieties of the grape, chiefly the Concord, Delaware and Diana, raised for fruit, for wine making, and for sale of cuttings. We need not dwell on the apple or peach orchards—although Mr. Knox is one of the best and most successful pomologists, and has as choice a selection as any in the country—nor on the graperies, or their peculiar mode of culture; nor on the large and highly profitable patches of choice current, gooseberry, and giant rhubarb, cultivated for the market and for wine making. These, while they engage close attention and most approved culture, are not Mr. Knox's specialities; but let us rather regard and describe the Strawberry, Raspberry and Blackberry divisions of the grounds. We should first promise, however, that Mr. Knox's business is two-fold—to cultivate these berries for market, and to propagate plants for sale. In both of these branches he has been already highly successful. His plants of every variety of these three berries have been transmitted, carefully packed, to every State South and West of us, while his berries have found a ready market, and at the highest prices, not only at home but abroad.

MR. KNOX'S PECULIAR MODE OF CULTURE.

It may not be, though it should be, known to all our readers that Pittsburgh has the reputation of producing the largest, if not the most delicious and finest-flavored strawberries in the United States, and frequently has Mr. Knox sold to an admiring New Yorker, or Philadelphian, visiting our markets, a quart box of his strawberries for a dollar per box, to be sent on East as samples of remarkable size and superior excellence. This superiority in our berries is greatly owing, at least with Mr. Knox, to his peculiar and unusually careful and expensive mode of culture. Where large tracts of berries are grown, the plants, or bushes are usually allowed to run together and closely occupy the whole field—not so at this farm. They are all set in perfectly straight and equidistant rows. The ground is frequently and abundantly enriched after the most approved treatment. The soil is

often, and very thoroughly stirred by suitable cultivators, by the hoe, and otherwise, and then gone over at regular intervals and throughout the year, by hand. Every weed is rooted out, every plant examined, and every thing removed which might prove noxious, or added which might prove beneficial to the plants health, thriftiness and productiveness. This very laborious and expensive culture would be considered by most fruitists ridiculous and unprofitable, but Mr. Knox thinks—nay, he knows, that it pays, and that very largely. The more he has tried and experienced their benefits, the more does he resolve to continue his care and minute labors. For this elaborate culture and manipulation a very large force is requisite, and in spring time, when the plants are putting forth their green leaves, and when every attention tells directly on the fruit, *over one hundred persons are employed on the grounds at one time.* But let us proceed at once to the

STRAWBERRY PLANTATIONS,

comprising fully fifty acres, forty of which were planted out this Spring. They are divided into *specimen, fruiting and propagating* beds. In the specimen bed there is grown a single row of all the best reputed stock varieties of strawberries known—over a hundred—and each kept perfectly distinct by the constant removal of runners. Such a bed is of manifest advantage in affording visitors opportunity to examine and compare in close proximity the plants and fruit of a large collection. The propagation beds for the production of new plants by their parent plants being allowed to make runners and strike out roots. The different varieties are grown so remote from each other, and are numbered and registered with such care, as to preclude all possibility of any admixture of sorts. The fruit beds are, as mentioned above planted and cultivated in rows, no runner being allowed to extend or root itself. This is garden culture introduced into the field. So far as we know, Mr. Knox is the only person in the country who has adopted this expensive and elaborate mode of culture on a large scale; and his conclusion is that it will pay better than any other treatment; that one acre thus cultivated will produce *more than five* treated in the ordinary way, and that *all judicious* labor spent on the strawberry will pay at least one hundred per cent.

Mr. Knox has in cultivation over one hundred varieties, some of which are but of little comparative value for their fruit, but which, in a general collection, are very important, as allowing persons interested to form a correct judgment with reference to them, as well as to compare them with others of better repute. Hence, old and new, native and foreign, rejected and accepted varieties have been procured, but many of them are only kept in the specimen bed.

THE VARIOUS KINDS OF STRAWBERRIES.

The fruit plantations are composed chiefly, at present, of the following popular varieties—British Queen, Buist's prize, Boston Pine, Brighton Pine, Baltimore Scarlet, Burrs New Pine, Compte de Flanders, Hovey's Seedling, Hooker, Honneur de Belgique, Jenny Lind, Kitly's Goliath, Large Early Scarlet, Longworth's Prolific, McAvoy's Superior, Moyamensing, Nimrod, Peabody's Seedling, Princess Royal, Scarlet Magpate, Scott's Seedling, Triomphe de Gand, Trollope's Victoria, Vicomtesse Herriart de Theury, and Wilson's Albany. There are about twenty-five varieties, which, for fruit, Mr. Knox says he could not get along without, although from three to six kinds will furnish sufficient variety for such as cultivate for family use. He regards the Wilson's Albany as a very valuable and profitable variety, and has shown his faith in it by planting full fifteen acres of it this spring. In addition to its many other excellences, it has proved a superior berry for canning, or preserving, and was this season in great demand for these purposes. Its weight, size, solidity, flavor and color render it popular for this use. It is, moreover, eminently productive, and highly profitable as market fruit. Mr. Knox is also very partial to Trollope's Victoria, an excellent variety of very large size, and delicious flavor, and which continues in bearing a long time. He has raised specimens of fruit this season, without any extra attention, measuring from $1\frac{1}{4}$ to $2\frac{1}{4}$ inches in diameter.

THE TRIOMPHE DE GAND STRAWBERRY.

But after a trial of three years, Mr. Knox places at the head of the list of strawberries, the Triomphe de Gand. But little has yet been said about this variety, and it has not been generally cultivated, but

as soon as well-known, it will be the most popular strawberry in the country. There is no known excellence which it does not possess. The plants are thrifty, hardy, and vigorous growers, bearing their fruit well up, which renders it easy to be kept clean. They are also wonderfully productive, and the fruit is not only usually of very large size but uniformly so, and throughout the season, which is longer with it than with most other varieties. The flavor is everything which could be desired. It is of a very beautiful crimson color, glossy and altogether lovely. It keeps well after being picked, retaining its beautiful color and firmness, and carries better than any other variety. Mr. Knox planted of this variety, last spring, four acres fruiting, but was so well pleased with the season's crop that he concluded to devote all of these to propagation, and will have millions of plants for sale the coming spring. Fruit of this variety, and Trollope's Victoria, was bought at Mr. Knox's Market street stand this season at from 50 cents to \$1 per quart, and was sent to Cincinnati, Philadelphia, and New York. Besides the kinds above mentioned, there is a number of foreign varieties under cultivation that promise well. Some of them bore fruit this season of remarkable size and beauty; but Mr. Knox wishes to test them another season before expressing an opinion as to their value.

THE RASPBERRY DEPARTMENT.

Is as yet somewhat small when compared with his strawberry patch, but very large when considered by itself. He has ten acres, very densely planted with over twenty varieties. The Fastoff, Red Antwerp, and Hudson River Antwerp, do exceedingly well with him, but his three favorite varieties are Brinkle's Orange, Franconia, and Improved American Black Cap. Brinkle's Orange, Mr. Knox considers the finest flavored raspberry in the world—of large size, beautiful color, unvarying productiveness, and delicious flavor. The Franconia berry is not so highly flavored, but is very large. Its size and color render it attractive, and ever procure for it a ready market. It is enormously productive, and continues a long time in bearing. The Improved American Black Cap is much superior to the common Black Cap. The fruit is sweet and juicy, and very large—sometimes measuring three quarters of an inch in diameter. Many

persons prefer this to all other varieties. One advantage it possesses over all others is its hardiness, it never requiring any winter protection. Mr. K. was so much pleased with this variety, and the fruit was found to be so popular in market this season, that he is producing, as rapidly as possible, new plants for sale, and will have a very large supply for his customers this Autumn.

THE NEW ROCHELLE BLACKBERRY.

The Blackberry patches will immediately attract the attention, and will command the marked admiration of every visitor to Mr. Knox's farm. The blackberry is a fruit which has been in culture but a very few years, but so many and so excellent have been the varieties already produced, and so enormous and profitable has proved their yield that it is destined to become a great and indispensable favorite with both the amateur and the professional fruitist. Mr. K. has about *ten acres* of them in cultivation, but is rapidly increasing his plantations. The three chief varieties are the Lawton, or New Rochelle, the Dorchester and the Thornless, but he esteems the Rochelle the best; in fact it is, as it well deserves to be, his *pet of all the berries*. Mr. K. was the first to introduce it into this market, and after overcoming many obstacles and encountering and conquering many prejudices, he is now highly successful with it, not only sending enormous quantities of the berry to market, where it always commands from twenty to fifty cents per quart, but distributing throughout the West and South prodigious numbers of the plants, carefully packed in tidy bundles, and imbedded in soft moss. He has now cultivated it for five years, and was highly pleased with it from the time it commenced to bear, but he thinks far more highly of it now than ever, and it is likely to prove by far the most profitable department of his farm. It is in the most lively demand, not only for the fruit to eat, but for making into jams, jellies and wine, for which purpose there are none of its species can *begin* to compare with it.

For propagating new plants it is highly profitable, as it spreads with amazing rapidity, and requires but little or no care, and plants are in demand at high prices. For wine purposes it has been found by actual experiment to be more profitable than to sell it as edible fruit at twenty-five cents per quart. Eight gallons of berries will easily

produce five gallons of rich juice, which will work well and make most delicious wine. This berry can be devoted to so many profitable purposes, that it will be found difficult to overstock the market for many years to come. Its medicinal qualities are by no means its least recommendation. During the hot season no fruit is so grateful to the taste, or so beneficial in its influences.

In a word, it may be called the *Queen of Berries*, and Mr. Knox deserves the highest credit for his enterprise in introducing this super-excellent fruit to our market, as well as doing all he possibly can to extend the culture of the berry throughout the west. It has been pronounced by many who have committed serious blunders in planting, or who have tasted the fruit when not fully ripe, to be somewhat of a humbug, but we have the very best evidence and the most reliable authorities for saying that when *perfectly ripe* it is a paragon of excellence—of the most exquisite flavor, and not equalled by any berry yet grown, in beauty, size and enormous productiveness. It is *by no means fully ripe when quite black*. After becoming black it tastes quite tart and comparatively juiceless and flavorless, but *if allowed to remain until just as it were melting away from the stem, it has then acquired all its richest and most savory juices, has an incomparable flavor, and is of most delicious lusciousness*.

PRESENT APPEARANCE OF THE ROCHELLES.

Mr. Knox's new Rochelle plantations are now in high season. The berries are either fully ripe or rapidly ripening, and present a sight worth going a great way to behold. We stood in the midst of a patch, and on all sides of us stood thrifty and vigorous bushes *laden down to the very earth, and lying along upon the ground* with large clusters of most beautiful and most appetizing fruit. Some of the bushes we saw must each of them have had from two to three dollars worth of ripe, or ripening berries upon them. We had only to take our position anywhere, stretch forth our hands, and pluck our fill of such beautifully large, and deliciously melting berries as we have never seen equalled and never expect to see equalled. It makes the mouth water even to write of them. Large as these berries are they contain scarcely any seed, but just

melt away in the mouth like snow-flakes. No, the Rochelle Blackberry is no humbug, a fact most abundantly proved by those who have grown it largest and most extensively, and who now universally and enthusiastically unite in expressing their opinion that *no more productive, delicious or profitable berry has ever yet been produced.*

THE ROCHELLE BERRY AS A WINE MAKER.

Wonders are now related of the almost incredible profit to be derived from the new Rochelle Blackberry when expressed into wine. The largest growers are bestowing great attention to this new and valuable use for the berry. Where large markets are not accessible for the consumption of the fruit, or when the markets happen to be glutted, wine making will be its chief use. It has been proved by actual experiment to be more remunerative to make it into wines *then to sell the fruit at twenty-five cents per quart.* Its yield of wine is most generous, and the process of manufacture most simple. Eight gallons of well-ripened fruit will yield five gallons of pure juice, to which twice the amount of water, and the requisite amount of sugar is added, making fully fifteen gallons of rich, nutty, generous, and very wholesome wine.

When well made and long enough kept, this wine has been pronounced by the *very best judges as superior to that of any native grape*, excepting alone the Catawba, and in many localities superior even to that. Professor Mapes, and other old wine drinkers, pronounced some made by Seymour & Co., and without any admixture of spirits, to be the *best native wine they ever had tasted*, only one of the party suspecting when it was offered and drank, that it originated from other fruit than the grape. As a *still wine*, it is said to more closely resemble the best South Side Madeira than any other brand. As a sparkling, or Champagne wine, it has not yet been tried. The best feature of the blackberry wine, and one that cannot and should not be overlooked in these days of villainous concoctions and poisoned liquors, is its benefit as an energetic tonic and stimulant. Where a pure and reliable article is required by the aged, and for the debilitated, no better stimulative, or recuperative tonic could be obtained. It never affects the head, has a most penetrating influence,

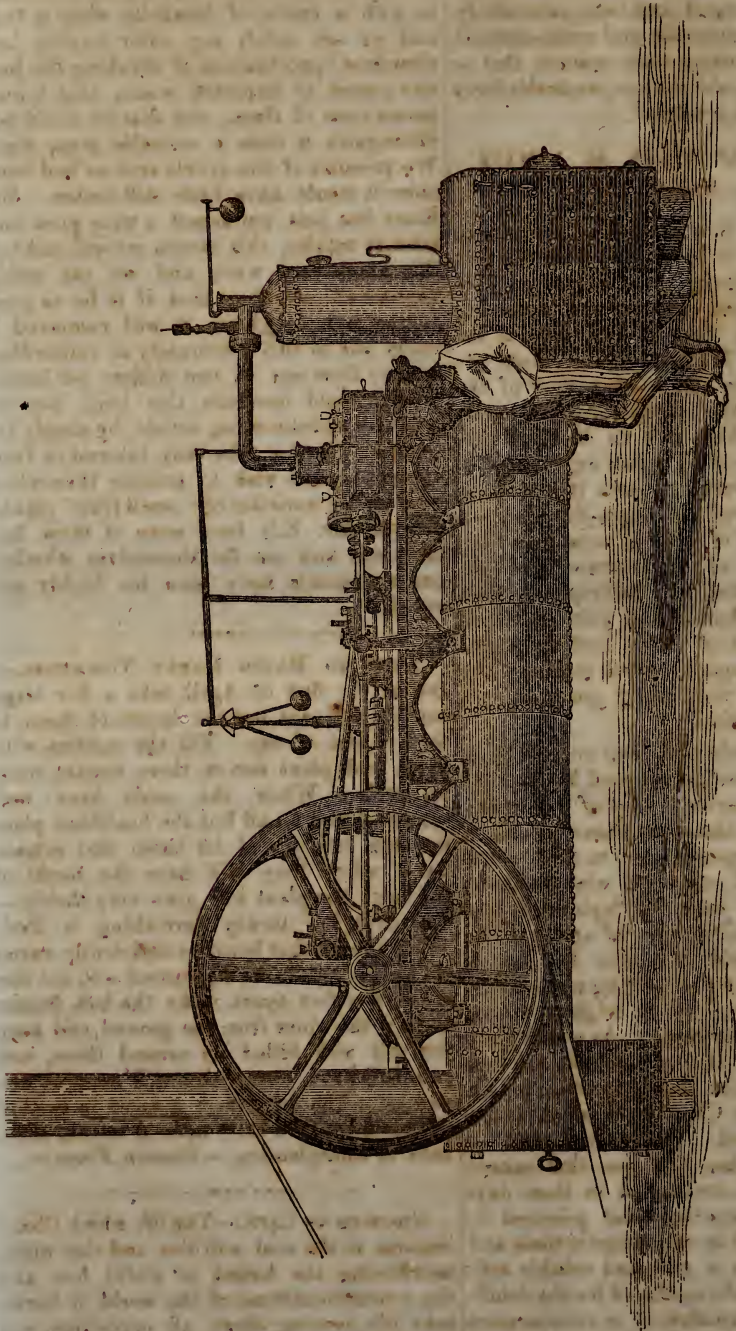
and diffuses a warmth and glow throughout the whole system.

Mr. Knox, a few days since, presented us with a bottle of Rochelle wine to test, and we can safely say, after having had abundant opportunities of drinking the best and purest of imported wines, that it surpasses most of them, and that we could not distinguish it from a veritable grape wine. We presume if the article sent us had been older it would have been still better. Mr. Knox has just purchased a wine press and intends making this season several casks of this blackberry wine, and we can safely venture the assertion that if it be as good as the sample given, it will command a ready sale in this community at (according to age) from one to two dollars per bottle. We would conclude this long, but we hope not uninteresting article, by simply requesting all who take any interest in fruit culture, or who wish to provide themselves with choice varieties of "small fruit" plants, to visit Mr. K.'s farm some of these fine mornings and see for themselves whether our statements have been too highly coloured.

HOW TO RAISE EARLY TOMATOES.—

About the first of April, take a few large turnips and cut out the hearts of them, to form a sort of cup. Fill the cavities with earth and plant two or three tomato seeds in each. When the seeds have well sprouted, pull up all but the healthiest plant in each turnip, and let those that remain stand where they will have the benefit of the sun; the plant will grow very thrifty—the decaying turnip furnishing it food. When the weather becomes sufficiently warm, set the turnips in well prepared soil, not less than three feet apart, make the lath frames to keep the vines from the ground, and keep the soil well hilled up around them, and you will have a crop that will astonish the natives. The advantage consists in getting the plants started early without setting them back in transplanting.—*Eastern Farmer.*

GROWTH OF LIFE.—The life which Christ imparts to the soul will rise and rise until, overflowing the bound of sinful fear and the conventionalisms of the world, it bursts into life bearing down all opposition, and compelling even the ungodly to admit that Christ has gained another friend.



The above Cut represents a Portable Steam Engine, applicable to Agricultural purposes, as constructed by Messrs. Joseph R. Anderson & Co., at the Tredegar Works, in this city.

Steam Engine.

The introduction of the Steam Engine, as an appendage to our farms, is attracting the attention of our best and most successful Farmers; and I propose, in this communication, briefly to discuss its merits.

To the celebrated Watt, the world is chiefly indebted for all it knows of the Steam Engine. In order to designate the power of the Engine; he established a standard based upon the effective force or power of the Horse, which he called a *Horse power*. He found that a London cart horse could raise 33,000 pounds one foot high in a minute. An engine producing the same result would, therefore, be classed as a *one horse power engine*, or if raised 33,000 pounds ten feet in a minute, it would be a *ten horse power engine*, and so on.

The power of an engine, depends upon the diameter of the cylinder, the length of the stroke, and the amount of steam-pressure. One-third of the power is consumed by friction. This is an ample allowance in well-built machines, where the parts are all perfectly adjusted and work true; but if the work be badly executed, the different parts badly proportioned and *out of true*, the friction is increased to an unknown extent, and instead of buying a twenty horse engine, as you bargained for, you may, perchance, get one of fifteen or sixteen horse power.

Whatever some of us may think of the ultimate substitution of steam for horse power, we must all agree that the time has not yet arrived, when horses can be dispensed with. Our country is too new and our roads too rough, for our daughters to go to meeting, and our sons fox-hunting, on a Steam Engine; and however desirable such an event may be to the utilitarian or the political economist, it will be a long time before the Virginian's hereditary veneration for that noble animal will suffer his place to be filled by any other substitute. It is because I duly appreciate this sentiment, that I would rescue him from much of the drudgery, the destructive and ignoble work, to which he is now of necessity subjected.

That there are many operations connected with the farm, that can be more profitably performed by the power of steam than of horses, no one will deny; for instance, threshing, grinding, sawing, and various other mechanical operations, where steady and reliable power is required. It then be-

comes a question, simply of economy, of dollars and cents, how far we should be justified in dispensing with a portion of our horse power, and substituting for it that of steam.

Now let us take, for example, the operations on a twelve horse farm.

As soon as the land is in a condition to be worked, you begin breaking it up for corn, and your twelve horses are driven to their utmost endurance from that time until the crop is laid by, frequently not until after harvest, in July. What now is their condition? Count their ribs; see the galls of the trace-chain upon their legs, and of the collar upon their shoulders, and witness the seeming agony with which they move their stiffened limbs. Surely these poor creatures should enjoy a long resting spell, to recover their exhausted strength and heal their galls and bruises; but no,—a little tar and grease to protect the galls from the flies, and a few days in a meagre pasture, is all they get. Threshing time arrives, the wheat must be got out for market, and the horses, galled, jaded and broken down in the corn crop, are hitched to the murderous threshing-mill, than which no other machine, invented by man, is more destructive to the energies of the horse. Well, at last the wheat is threshed out and winnowed, with the assistance, perhaps, of a horse or two borrowed from a neighbour, to whom we promise to reciprocate the favor next year, *that is, if we can*. And what now is the condition of the horses? are their ribs less distinctly counted? do their galled shoulders wince less under the pressure of the collar? or do their stiffened joints bend with a more elastic spring? No indeed—but no matter, the ground must be broken up for wheat, and if we have good luck and seasonable rains to soften it, they will, no doubt, hold out to finish the fallow and put in the wheat,—so they are unhitched from the thresher, hitched up to the heavy plough and subjected, for three or four months more, to the severest labor of the year, when they are the least able to endure it.

Have I drawn this picture too strongly? Perhaps I have, to the taste of many; but if the horse could answer, I should like to refer the question to him.

Now, where is the remedy for all this inhumanity and misjudged economy? Either we must increase our stock of horses, so as to rest them and keep them in good working

condition, or furnish a substitute to do a portion of the heavy work, and thus be enabled to reduce the number of horses. This substitute is the Steam Engine.

Now, how many of the twelve horses could be dispensed with, if the labor of the remainder was confined to the preparation of the land and the cultivation of the usual crops, and if the threshing, grinding, and other necessary mechanical operations were performed by steam? At least two. For you will bear in mind, that from the time the corn is laid by, until you commence fallowing for wheat, your horses will have nothing or little to do for six or eight weeks, during which time they will be resting and fitted to do full work in the fallow field.

The Steam Engine, then, would dispense with two horses; and now let us see what would be their comparative cost, assuming that an engine will live, upon an average, as long as a work-horse.

Two horses would cost, - - -	\$320 00
The interest upon this sum for one year, - - - - -	19 20
Shoeing two horses, one year, - - -	12 00
Feeding, one year, at the army allowance, say two gallons of corn and fourteen pounds of hay, each, per day, - - - - -	200 00

Making the annual cost of 2 horses, \$231 20

It may be objected here, that this is an over estimate, as for a portion of the year the horses are not fed on corn and fodder, but are turned out to pasture, which costs nothing. Not so. Every spear of grass eaten or trodden down by your horses, costs you something; perhaps as much as the corn and fodder they would consume if regularly fed; for if the grass is removed from the land, an equivalent, in the form of manure of some kind must be returned for it, or your land goes down. If this proposition be not true, then is the theory of Arator and the experience of our best farmers falsified, and we had better stop sowing clover and turn out our fields to the commons, as soon as we have secured the crop.

The annual cost, then, of two horses, is \$231 20. Now, a Steam Engine, of ten horse power will cost, complete, say \$800. The interest on this sum, per year, is \$48 00

Fuel and oil whilst threshing wheat, say 12 days, at \$1 25, - - -	15 00
Making, - - - - -	\$63 00

And showing a saving of \$168 20 a year on dispensing with two horses and substituting a Steam Engine.

But this is only a small part of the saving, as you perceive the engine is only credited with twelve days work during the year. Suppose you work it two hundred days more, how will the account then stand? Why, you will have the effective power of ten horses for two hundred days, which, according to the foregoing estimate of thirty-two cents per day, the cost of each horse will amount to the round sum of \$640, which you can realise at your pleasure, by applying the power in any way you think most profitable. And you will also bear in mind, that whether a horse work or not, he must eat; the Steam Engine only eats when it works; and in sawing, supplies its own food, in the slabs and saw-dust it makes.

But, says the cautious farmer, I am afraid of steam, the boiler may burst and kill somebody. Possible. But have you never known anybody killed by the running away, or kicking of a horse? Have you never known your stock injured, or your fences thrown down and your crop endangered by a vicious or mischievous animal? and are you sure that a ten horse Steam Engine is more destructive to life, or property, than ten horses would be? I verily believe it is not. I believe, as the modern engine is constructed, it is as safe as horses or any other power, and if any accident occur, it must arise from the grossest and most unpardonable negligence. It cannot be otherwise, with the precautions now taken of safety valves steam cocks, steam and water gauges, which are constantly exposed to view; and the time is not distant, when the Steam Engine will be considered as necessary to the farmer as it is to the manufacturer, or the rail road.

AN OLD FARMER.

Plum Pudding.—One stale brick loaf—take off the brown crust—cut it in thin slices, and spread them with butter; pour over it one quart of boiled milk, and let it stand until morning; grate in one nutmeg, one teaspoonful of salt, eight eggs, well beaten, a pint bowl of stoned raisins, flour the raisins and bake two hours. To be baked immediately after putting in the raisins and eggs.

Recipe for Blackberry Wine.

There is a large amount of blackberries now being brought into our markets by the different railroads for the purpose of being made into jams and wines. We have heard of much complaint from unskilful wine makers, that their kegs and vessels are burst open while the juice is in process of fermentation. In another column we have much to say of the wine making qualities of the Rochelle Blackberry, principally cultivated here by the Rev. J. Knox. He hands us the following recipe, as used by Messrs. Geo. Seymour & Co., the largest manufacturers of blackberry wine in the country. It is as follows:

One gallon New Rochelle Blackberry juice; two gallons water; nine pounds of refined sugar; reduce the berries to a pulp in a small cider mill, or in any other convenient way, and press to a fair degree of dryness; put away in kegs, or barrels, *with vent*, and as soon as the first fermentation has subsided, so as not to endanger the packages, bung tightly, and time will accomplish the rest. The New Rochelle, being a high-spirited berry, requires no spirits whatever to be added to the wine. Probably the common berry juice might be the better for a small addition of choice brandy. Blackberry wine, like all grape wines, improves very much by age and long keeping. The older the better.

Principles of Manuring.

Laws and Liebig's Controversy on the Principles of Manuring popularly explained—The Rothamsted Experiments with Special Manures described—Laws's Doctrines in Nitrogenous Manuring questioned—Liebig's Doctrines confirmed—The success of Consecutive Corn-growing with Special Manures proved experimentally.

In the second paper of this series, it was demonstrated that the principles which guided the authors of the Rothamsted experiments in their selection of a common gauge or standard of comparison, and in their grouping and averaging of results, were altogether erroneous. Let us now endeavour, in the first place, to discover and choose from amongst the twenty instances some one of them possessed of the qualifications ne-

cessary in a genuine test, and, in the second place, to distribute the individual trials into more natural and instructive associations.

Now, assuming it to be undeniable in principle that that which constitutes a *perfect* manure, is its possessing *all* the elements of plant nutrition, we are naturally led to examine whether any of the experimental compounds belong to this category, and whether the results from their use are such as to furnish a good standard mean. As a perfect fertilizer, no known substance, probably, excels rape-cake. But, as standards, the experiments with this manure, whether alone or in association with alkalis and phosphate of lime, are disqualified both singly and in aggregate, belonging as they all do (see Table V. of the last paper) to the indeterminately ascending class. Again, except these, the only other approximately perfect instances, experiments 11 and 17 of the table; and surely it is to be regarded as a very remarkable characteristic of them, that not only is No. 11 so nearly constant in its effects as to show a decrease in six years of only three pecks per acre per annum; but the other, No. 17, in each of the divisions of three years, into which the entire period of the trials has been divided, exhibits a mean so essentially exact as to differ to the immaterial extent of less than half a peck. The details of this important experiment, No. 17, are shown thus:—

TABLE I.

Experiment No. 17.	MEAN PRODUCE.	
	1st period of 3 yrs.	2nd period of 3 yrs.
Crop 1852	45 0 $\frac{3}{4}$...	—
" 1853	44 2 ...	—
" 1854	62 3 ...	—
" 1855	— ...	49 2 $\frac{3}{4}$
" 1856	— ...	37 2 $\frac{1}{2}$
" 1857	— ...	64 3 $\frac{1}{2}$
	3)152 1 $\frac{3}{4}$...	3)152 0 $\frac{1}{2}$
Triennial mean	50 3 $\frac{1}{4}$...	50 2 $\frac{3}{4}$

Hence, then, not only does this experiment possess the significant characteristic of secular permanency of yield, but also this other striking peculiarity, of exhibiting a higher rate of productiveness than any other of the entire list; and in every respect, therefore, it is entitled to receive very special consideration; and to this end we present the following comparative table:

TABLE II.—Showing the mineral and nitrogenous constituents of the experimental manure No. 17, and approximately of the crop of barley, including straw, thereby produced. The analysis of rape cake is introduced with a view to after-reference.

Commercial Substance composing the Manures.	Chemical Substances composing the Manures.	Manure Exprmt No. 17.	Crop Exprmt. No. 17.	2,000 lbs. Rape Cake.
		lbs.	lbs.	lbs.
Mineral:— 300 lbs. Sulphate of Potash 200 “ “ Soda 100 “ “ Magnesia <hr/> 600 lbs. 350 lbs. Superphosphate of Lime <hr/> 200 lbs. Sulphate of Ammonia 200 lbs. Muriate <hr/> 400 lbs.	Silica.....	—	173.0	21.0
	Potash.....	163.5	16.0	35.2
	Soda.....	39.6	9.0	0.3
	Lime.....	60.5	23.0	13.8
	Magnesia.....	24.7	10.0	23.6
	Oxide of Iron.....	Trace	1.0	7.2
	Chlorine.....	135.1	2.0	0.7
	Phosphoric acid.....	33.6	37.0	52.2
	Sulphuric acid.....	482.6	5.0	2.6
	Nitrogenous:— 350 lbs. Superphosphate of Lime 300 lbs. Sulphate of Ammonia 200 lbs. Muriate	Nitrogen.....	14.0	—
Nitrogen.....		89.6	56.0	103.8

From this table, then, is seen how coincident in quality in every respect, save in silica, are the several chemical ingredients of the manure and of the produce raised by it; and probably the silicious element of vegetation is seldom otherwise than naturally superabundant in all soils containing a moderate proportion of clay.

In trial 17th, therefore, is presented a manure *theoretically* perfect, since it embraces in its composition every one of the mineral constituents of vegetative fertility, and no less *practically* an effective one, since not only did its use very largely enhance the yearly crop to which it was applied, but maintained unflagging productiveness throughout the entire period of six successive years during which its use was repeated. Here, then, are found all the elements required to constitute a valuable test; and, thus, with the aid of this experiment No. 17, as a gauge or standard of comparison, it may now be possible to discover how well or ill-founded are certain general conclusions deduced by the experimenters themselves from the experimental data, and expressed at p. 492 of their report—

“From a review,” they there write, “of the whole of the results relating to the action of special manures upon the barley crop,” &c., “we learn that exclusively mineral manures, and especially those containing phosphoric acid, annually increased

the produce of barley, even doing so in the first year of their application on the land in the condition described.”

The following figures give the experimental particulars falling within the scope of this proposition—

TABLE III.

Exp. 5.—*Superphosphate of Lime.*

	Produce per acre.
	b. p.
Mean of second period of three years,	29 0
True gauge of mean,	50 2½
Comparative deficiency,	21 4¾

Exp. 3.—*Mixed Alkalies.*

	b. p.
Mean of second period of three years,	27 3
Gauge mean,	50 2½
Comparative deficiency,	22 3¾

Exp. 6.—*Superphosphate of Lime and Mixed Alkalies.*

	b. p.
Mean of second period of three years,	32 1
Gauge mean,	50 2½
Comparative deficiency,	18 1¾

(The mean of the second period is here and subsequently adopted in comparison, as being of more approximate accuracy than that of the first period, whether in decreasing or increasing instances.)

Of these three experimental manures, it must further be remarked, that although relatively inefficient when compared with the true gauge, they certainly exhibit some fertilizing influence when tested by the unmanured experiment Nos. 1 and 2; No. 5, in this point of view, showing an increase of 3 b 2½ p. per annum, No. 4 of 3¼ p., and No. 6 of 6 b. 2 p. But this manifestation of fertile power, relatively small as it is, is no less a complete exemplification of Liebig's teaching, which assigns to every seemingly successful special manure, whether nitrogenous, phosphatic, or alkaline, an exhaustive character. This is demonstrated by the following figures—

TABLE IV.

	Ex. 5.	Ex. 4.	Ex. 6.
	b. p.	b. p.	b. p.
Produce of these three experiments severally in the first period of three years,	34 0	30 0	36 3
Produce of these three experiments severally in the second period of three years,	29 0	27 3	32 1
Secular decrease per acre per annum,	5 0	2 1	4 2

Here it is plainly seen that the greatest yields at first fell off most latterly.

The second conclusion deduced by the experimenters is as follows—

“That with barley grown continuously on the same land (as was the case with wheat), nitrogenous manure had a much more striking effect than mineral manures.”

Now, the best interpretation which can be given of this somewhat vague conclusion (and which no doubt applies to the nitrogenous contra-distinguished from the mineral manures) will be to place the effects of the two sets in juxtaposition—

TABLE V.

	Produce per acre.
	b. p.
Ex. 8.—Produce of 100 lbs. each sulphate and muriate of ammonia, mean of second period,	36 0
Ex. 5, 4, 6.—Average produce of the three experiments forming the mineral series,	29 3

Superiority of the nitrogenous manure No. 8 over the mineral series, 6 1

Ex. 13.—Produce of 200 lbs. each sulphate and muriate of ammonia, mean of second period, 44 3

Ex. 5, 4, 6.—Average produce of the three experiments forming the mineral series, 39 3

Superiority of the nitrogenous manure No. 13 over the mineral series, 15 0

But although these ammoniacal manures, Nos. 8 and 13, compared with the mineral series, evince a marked superiority, yet, when contrasted with the true gauge (No. 17,) No. 8 shows a deficiency of 14 b., and No. 13 of 3 b. 1¼ p.; and still more important is it to remark that both belong to the secularly decreasing instances: thus—

TABLE VI.

	Ex. 8.	Ex. 13.
	b. p.	b. p.
Produce of the two experiments severally in the first period of three years,	41 0	47 1
Produce of the two experiments severally in the second period of three years,	36 0	44 3
Secular decrease per acre per annum,	5 0	2 2

Here, indeed, is exhibited a very “striking effect;” but it is the effect of ultimate exhaustion, induced by the use of a species of manure all but entirely destitute of any mineral element of plant nutrition, and seemingly acting only as an unnatural and eventually depressive stimulant.

Again, it is asserted by the experimenters—

“That by the annual supply of nitrogenous manures alone (nitrate of soda or ammoniacal salts), larger successive crops both of corn and straw were obtained than by the annual use of 14 tons of farmyard manure with all its minerals, and certainly more nitrogen than either the nitrate or ammoniacal salts employed by its side.”

This is most erroneous, as is shown below—

TABLE VII.

Manures.	Mean of 6 years.		Mean of second period of 3 years.		Secular increase.		Secular decrease.	
	b.	p.	b.	p.	b.	p.	b.	p.
Experiment 7.—Produce of 275 lbs. nitrate of soda, . . .	42	0 $\frac{1}{4}$	40	2	—	—	3	0
“ 8.—Produce of 100 lbs. each of sulphate and muriate of ammonia, . . .	38	2 $\frac{3}{4}$	36	0	—	—	5	0
“ 12.—Produce of 550 lbs. nitrate of soda, . . .	47	3 $\frac{3}{4}$	49	3	3	3	—	—
“ 13.—Produce of 200 lbs. each of sulphate and muriate of ammonia, . . .	46	0	44	3	—	—	2	2
“ Mean,	42	2 $\frac{3}{4}$	42	3				
“ 3.—Produce of 14 tons of farmyard manure, . . .	43	0 $\frac{1}{4}$	44	2				
Superiority of nitrogenous manure, taking a mean of six years,	0	1 $\frac{1}{4}$	—	—				
Superiority of farmyard manure, taking a mean of the second period of three years,	—	—	1	3				

Here, then, it is shown that were the average of six years to be a proper criterion, the difference either way is too immaterial to be regarded. On the other hand, tested by the more appropriate mean furnished by the second moiety of that period, the superiority is unequivocally in favour of the farmyard manure, amounting, as it does, to all but 2 lb. per acre per annum of greater yield.

But what at once demonstrates that any fair comparison of these four nitrogenous manures with farmyard manure is impossible, is this—that, excepting the anomalous instance No. 12, they all being in very striking degrees to the *decreasing* class of the experiments, the trial with farmyard manure belonging, on the other hand, to the *increasing* list. On referring to Table V. of the former paper, it will be seen that in No. 13 the secular annual *decrease* per acre is 2 bush. 2 peck; in No. 7, 3 bush.; and in No. 8, it is no less than 5 bush. *Per contra* to this, there is a secular *increase* effected by the farmyard manure of all but 2 bush. per acre per annum.

Again, reverting to the summary of conclusions presented by the experimentalists

themselves, we find this other proposition:

“That, within certain limits, even on this comparatively exhausted soil (and it would probably be more nearly so on soils in ordinary condition for the crop), nitrate of soda, ammoniacal salts, and rapecake all increase the produce of barley, approximately, *in proportion to the amounts of nitrogen they respectively supplied*. Their comparative effects will, however, vary generally more rapid in its action.”

And again it is said:

“That the effect of a given amount of nitrogen, if not excessive, will be considerably increased by the addition of certain mineral manures, especially those containing phosphates. The action of the mineral manures is very much increased under such circumstances—that is, their application gives very much more increase when there is present a liberal supply of *available nitrogen within the soil*, than when there is not.”

It is impossible to assent to these propositions; and, indeed, the reverse of them is true, as shall be proved by means of the following tabulation:

TABLE VIII., showing—1st, That a secular decrease of produce prevailed amongst the instances of manuring in which nitrogenous salts were used; 2ndly, That this decrease was greatest where the proportion of nitrogen was largest; and 3rdly, That the annual acréable produce was most where the nitrogen was proportionally least.

Exp.	MANURES.	Quantity of Manure.	Secular In-crease.	Secular De-crease.	Mean produce per Acre per Annum in 2d period.	Proportion of Nitrogen.	Actual amount of Nitrogen.	Actual amount of Mineral.
		Lbs.	B. P.	B. P.			Lbs.	Lbs.
CLASS 1.—Nit'n in maximum mean Amount of 1-7th.								
8	Sulphate and muriate of ammonia,	200	..	5 0	36 0	1-5th	44.8	155.2
15	" " " and alkalies,	1000	..	4 0	40 3	1-11th	89.6	910.4
7	Nitrate of soda,	275	..	3 0	40 2	1-6th	45.0	230.0
	Mean,	..	..	4 0	39 0	1-7th	59.8	431.9
CLASS 2.—Nitro'n in medium mean Amount of 1-11th.								
13	Sulphate and muriate of ammonia,	400	..	2 2	44 3	1-4th	89.6	310.4
9	" " " and alkalies,	800	..	2 1	38 2	1-18th	44.8	755.2
10	" " " and superphosphate of lime,	550	..	2 0	44 2	1-12th	44.8	505.2
	Mean,	..	..	2 1	42 2	1-11th	59.7	523.6
CLASS 3.—Nitro, in minimum mean Amount of 1-16th.								
11	Sulphate and muriate of ammonia, alkalies and superphosphate of lime,	1150	..	0 3	45 3	1-26th	44.8	1105.2
16	Sulphate and muriate of ammonia, and superphosphate of lime,	750	..	0 1	49 2	1-8th	89.6	660.4
17	Sulphate and muriate of ammonia, alkalies and superphosphate of lime,	1350	..	0 0	50 3	1-15th	89.6	1260.4
	Mean,	..	..	0 0½	48 3	1-16th	74.7	1009.0
12	Nitrate of soda,	550	33	..	49 3	1-6th	90.0	460.0

Putting aside the Experiment No. 12, as being in its results too anomalous to be associated with any of the other instances, here are presented three classes, arranged according to the several degrees of secular decrease exhibited by the experiments, and comprising all the trials with substances composed wholly or in part of nitrogenous salts; and from this arrangement, it clearly appears that—

In class 1st, where the secular decrease is the greatest, (and hence the progressive exhaustion of the soil most strongly evinced,) the mean proportion of nitrogen, in the three instances comprised in it, is the highest.

In class 2d, where the secular decrease is smaller, so also is the mean amount of nitrogenous element.

In class 3rd, where the yield is not only steadiest but greatest, the proportion of nitrogen is least.

Arranged according to the several amounts

of mineral ingredient, the table may be abstracted thus:

TABLE IX.

CLASSES.	Amount of mineral lbs.	Proportion of nitrogen.	Produce per acre.	Secular decrease.
			B. P.	B. P.
Class I.	431.9	1-7th	39 0	4 0
Class II.	523.6	1-11th	42 2	2 1
Class III.	1009.0	1-16th	48 3	0 0½

From this, the true conclusion seems to be the very reverse of that deduced by the experimentalists themselves, for here it would seem that if the mineral elements be applied in plenty to the soil, an abundant and sustained yield will be procured, albeit the quantities of nitrogen in the manure be proportionally very inconsiderable.

From these last tabulations, the experi-

ments with rape-cake have purposely been omitted, because composed as that fertilizer is of substances in a state of organic union, there is no rational analogy between them and the crude salts forming the components of factitious experimental matters. But even in this organic manure, when supple-

mented with mineral ingredients, the same consequence of an increase of produce coincident with a decrease of the proportion of nitrogen, exhibited itself. The following calculations (but only approximate as regards the composition rape-cake) are very conclusive on this point:

TABLE X.

Exp.	MANURE.	Mineral and Nitrogen.	Mean produce per acre, 2nd period.	Secular Increase.	Proportion of Nitrogen.	Actual quantity of Nitrogen.	Actual quantity of Mineral.
14	2,000 pounds of rape-cake alone. (see Table II.)	260.4	49 3	3 1	1-3rd	103.8	156.6
18	2,000 pounds of rape-cake and mixed alkalis,	860.4	47 1	5 2	1-9th	103.8	756.6
19	2,000 pounds of rape-cake and superphosphate of lime,	610.4	50 3	6 1	1-6th	103.8	506.6
20	2,000 pounds of rape-cake and mixed alkalis, and superphosphate of lime,	1210.4	49 3	3 3	1-12th	103.8	1106.6
	Mean,		49 1	5 1	1.9th		

It is true that here the mean of the produce effected by the mineral admixtures is rather less than that of the rape-cake administered alone, but in point of secular increase the superiority is very strikingly in their favour, although, as respects nitrogen, the proportion they contain is only 1-9th part, whilst in the cake alone, it is nearly three times as much.

And now, to conclude. At the outset of this examination of the Rothamsted experiment, we premised, in the language of Liebig, that "the use of manure, rich in nitrogen, by the farmer, prepares for the proprietor the ruin of his land;" and moreover, "that a field which by manuring with salts rich in nitrogen has produced a larger crop for one or more years is thereby impaired in fertility for future crops." We also quoted a passage from his last work on "Agricultural Chemistry," which, by obvious implication, infers that the only means by which the farmer can keep his soil in sustained fertility is, by returning, from time to time, the mineral substances alienated from thence, in the condition of live stock and corn sent to market. Adopting these propositions as the basis of our argument, we next presumed to assert as demonstrable that the results of the Rothamsted manurial trials in corn growing, when properly examined, completely confirmed these data; and the only postulate we sought in demonstration was this—

that if, dividing into halves the period of years involved in the use of nitrogenous manures, the yield during the latter moiety of time was less than in the previous period, that then the German controversialist's doctrines were to be held as thereby proved. Now, firstly, both in the wheat and in the barley experiments a palpable secular decrease of this kind has been pointed out, in every trial in which, by means of substances selected and used by the experimentalists themselves, a liberal amount of available nitrogen was deposited in the soil. And hence, secondly, the English disputants have with their own hands placed the garland of controversial victory on their antagonist's brow.

TO COOK A BEEFSTEAK.—Cut off the fat and place it upon the gridiron first, and when warmed set on the lean, which is to be removed before the fat; this makes the fat like marrow. Serve as-usual.

COCOA-NUT DROPS.—Take the white meat of a cocoa-nut and grate it; the whites of four eggs; half a pound white sugar; a tea-spoonful essence of lemon; make a batter, drop on buttered paper, and bake.

ROSE DROPS.—One pound flour; one half pound white sugar; half pound butter; six eggs; a wine glass of rose water; one cup cream and one tea-spoonful saleratus. Drop on tins and sift sugar on before baking.

JOURNAL OF TRANSACTIONS

OF THE

VIRGINIA STATE AGRICULTURAL SOCIETY.

JOURNAL OF FARMERS' ASSEMBLY.

The members elect of the Farmers' Assembly convened at the Hall of the House of Delegates, agreeably to public notice, on Monday evening, the 22nd of October, 1860.

The meeting was called to order by the Secretary of the State Agricultural Society, who proceeded to call the roll, when it was ascertained there was no quorum present; whereupon, on motion of Mr. Wickham, the meeting adjourned to meet at this place to-morrow evening, at half-past 7 o'clock.

TUESDAY EVENING, October 23rd, 1860.

The members of the Farmers' Assembly met pursuant to adjournment; when, on the calling of the roll, it was found that a quorum was in attendance.

Mr. Morris nominated Wyndham Robertson, Esq., as speaker, who was unanimously elected.

Mr. Wickham nominated Ch. B. Williams as clerk, who was also duly elected.

The annual reports of the Executive Committee, and of the Treasurer, were then read by the Secretary, and are as follows:

ANNUAL REPORT

OF THE

Executive Committee of Va. State Agricultural Society.

Members of the Farmers' Assembly:

The Constitution of the Society directs the Executive Committee to make "an annual report to the Farmers' Assembly of the condition of the Society, and of any other matters they may deem pertinent."

In discharging that duty, they have the honor to submit the following analysis of the

FINANCIAL CONDITION OF THE SOCIETY:

The Permanent Fund amounts to - - - - -	\$46,550
Invested in Virginia State Stock, - - - - -	1,800
Invested in City of Richmond Bonds, - - - - -	44,750
	46,550
The annual interest of which is, - - - - -	2,793
The Contingent Fund at the commencement of the year consisted of the amount on deposit in the City Savings' Bank, as per last annual report of the Treasurer, - - - - -	2,457 83
And the balance of cash on hand, - - - - -	1,078 01
	3,535 84

RECEIPTS DURING THE YEAR.

Donation of the City of Petersburg, - - - - -	1,000
Receipts from annual members, - - - - -	218 30
Gate Fees received at the last Fair, - - - - -	666 50
Interest on Stock, &c., - - - - -	2,862 26
	8,282 80

DISBURSEMENTS.

Premiums of 1859, - - - - -	3,902 50
Expenses of 1859-60, - - - - -	2,690 41
	6,592 91
Leaving a balance applicable to contingent purposes, of - - - - -	\$1,689 99

The permanent fund or invested capital of the Society, is set apart by the Constitution as "a fund sacred to the cause of agricultural improvement, of which the income only shall be subject to appropriation." That invested capital cannot be expended by any authority without a change of the Constitution of the

Society. The interest upon this fund, the receipts from annual and new members, and incidental receipts from holding annual Fairs, constitute the only means at the disposal of the authorities of the Society. In all arrangements for holding Fairs, and other necessary expenditures, your Committee have been confined to those contingent and uncertain resources, varying in amount, and for several years past, wholly insufficient to defray the cost of preparing Fair grounds and fixtures for holding an independent Fair. A modification of the Constitution to authorize the appropriation of a portion of the permanent fund for such purpose, or some increase of the annual income can alone enable the Executive Committee to hold annual Fairs as prescribed by the Constitution.

The Farmers' Assembly at its last annual meeting, appointed a Committee to make arrangements for holding the present Fair near the City of Richmond; and to report a plan to your body for the permanent location of the Fairs. This duty being thus imposed upon another Committee, your Executive Committee refrained from taking any action on that subject in the early part of the year. Deference to the wishes and the power of the Farmers' Assembly; and also high respect for the great influence, position and intelligence of your Special Committee induced delay as long as the successful execution of your wishes would justify. But your President having been informed by the Secretary in April last, that the Central Society had appointed its Committee on Premiums, and was taking preparatory measures for holding an independent Fair, and as in the opinion of the President, the union of the two Societies for the present year presented the only practicable means, with the limited resources at your disposal, of carrying your wishes into faithful execution, he felt assured that your Committee specially charged with the duty, as well as your body also, would excuse the assumption of power, if thereby your wishes could be substantially complied with. The purpose you had indicated, was too clear and decided to leave any doubt. You had resolved to hold this Fair near the City of Richmond, if it could be effected within Constitutional powers, upon just and honorable terms, either through the means of your Special Committee, or by the efforts of your Executive Committee. Firmly impressed with these views, the President of the Society determined with the approbation of the Executive Committee, to propose to the President of the Central Society, in person, definite terms for uniting the two Societies, the present year, in holding their Fair.

The proposition was considered promptly, in a spirit, conciliatory and cordial, with due regard to the interest of each Society, and after a few modifications, submitted to the respective Executive Committees, accepted and

approved by them and signed by the President of each Society.

The following is the agreement: "The Virginia Central and the Virginia State Agricultural Societies, agree that the Societies will unite in holding the next Fair upon the grounds of the Central Society, on the following conditions:

"The members of each Society shall have the same rights and pay the same entrance fee.

"All fees at the gates and other incidental receipts, with the receipts from annual members, shall be devoted to paying the expenses of the Fair, including the interest upon the purchase money of the grounds, viz: \$750. The other expenses of the Fair shall be paid, if any deficiency, in equal parts by the two Societies.

"A Joint Committee composed of equal numbers from each Executive Committee, shall arrange the premium list and regulations for holding the Fair. The officers of the Societies shall hold their respective grades during the Fair, and the Presidents shall appoint, on consultation, the Marshals, &c.

"The Orator shall be elected by the joint action of the two Executive Committees.

"The State Society will claim no portion of the surplus after paying the expenses of the Fair."

This agreement recognises equality in the rights of the officers and members of each Society upon the grounds, and equal authority in arranging the premium list and regulations for holding the Fair. Under its provisions the Joint Committee have united cordially and zealously, and the result is before you. A liberal premium list has been offered to induce more extended competition and a more successful exhibition.

The Executive Committee have limited their action to the arrangement of terms of holding the Fair the present year; but have taken no steps to ascertain upon what conditions permanent arrangements could be effected. They regarded themselves justified in assuming that duty under the exigencies of the case, deferring to your Special Committee the more important task enjoined by your resolution. Earnestly desirous that your views should be fully carried out, the Secretary was directed to call the attention of the Chairman of your Committee to the urgent importance of maturing and reporting some practical plan for holding all future State Fairs near the Metropolis of the State. It is earnestly hoped that no difficulties will interpose to prevent so desirable an object.

The Secretary, when about to execute the instructions above referred to, by embodying in a note to the Chairman of the Special Committee the substance of the resolution under which the Committee was appointed, discovered that, as reported by the Clerk of the Farmers' Assembly, it contained no specification of

authority to make arrangements for holding the future State Fairs. He was consequently withheld, for the time, from addressing to the Chairman of the Special Committee, the communication he had contemplated.

He has since, however, been favored with a personal interview with the Chairman, who was the Speaker of the last Farmers' Assembly, and finds on consultation with him, that he, as well as the mover of the resolution, the President of the Society, and other members of the last Farmers' Assembly, retains a distinct recollection of the fact that, the resolution, as adopted, did contain a clause authorizing the Committee to discharge the duty in question. He will, therefore, call the members of the Joint Committees together, and will zealously endeavor, in co-operation with his colleagues, to consummate the wishes and instructions of the Farmers' Assembly.

It is due to the clerk to say that, no imputation of blame rests upon him, as the Executive Committee feel perfectly assured that the omission was purely accidental.

A resolution was adopted by the last Farmers' Assembly, instructing the Executive Committee "to proceed at an early day to re-arrange the Electoral Districts of the State Agricultural Society in accordance with the second clause of the fifth section of the Constitution; and in such re-arrangement, that they regard as members of the Society such as were actually members at the adoption of the Constitution and have not since withdrawn; and such as have become members since that time, and so remain at the time of the re-arrangement." That duty has been carefully performed; the enquiry in respect to the qualification of members being limited by legal considerations to the date of the incorporation of the Society, instead of the adoption of the amended Constitution. Under this rule of action, there were found to be 1736 persons not legally entitled to membership, who were stricken from the list, and the aggregate of representation in the Farmers' Assembly was thereby reduced from 128 to 111 members in the re-apportionment consequent thereon. A detailed statement of the electoral districts, and the number of representatives from each is embraced in the paper marked A, and herewith submitted:

The whole representation in the Farmers' Assembly is anomalous and rests upon a fictitious basis. A member of the Society, when once initiated, is bound by the Constitution thereafter to pay an annual contribution of one dollar, unless he shall notify the Secretary of the Society of his wish to withdraw; but this provision has been almost wholly disregarded, and the practical construction prevails that he may release himself at any time from the obligation by withholding his annual dues. The effect has been the retention on the lists of membership of the different counties and

towns a large number of names of persons who will admit no liability to the Society for the payment of their annual dues, while yet, they cannot be legally discharged except upon their own application, and are therefore necessarily regarded as an element in the apportionment of the electoral districts of representation in the Farmers' Assembly. The obvious remedy for this evil is, to change the constitutional term of membership so that it shall expire with the year for which payment is made, and be renewable annually only so long as the annual contribution continues to be made.

The Committee appointed by the last Farmers' Assembly to memorialize the General Assembly on the subject of taking "Annually the Agricultural Statistics of the Commonwealth," submitted to the Legislature a memorial praying the enactment of a law answerable in its provisions to the views and wishes of the Farmers' Assembly. The memorial was received by the Senate, and referred to a Standing Committee of that body, but no other or further action was had upon it. A copy is herewith submitted marked [B].

The Executive Committee, firmly impressed with the belief that the attendance of a full delegation at this meeting of your body was of vital importance to the welfare of the Society, caused a circular letter to be prepared invoking the active co-operation of the Commissioners of Election with the members generally "in the promoting, by all suitable means, the attainment of so desirable an object."

They felt that a failure to form a quorum at this time would prove disastrous to the Society, by postponing—perhaps indefinitely—the salutary reforms in the constitution, which experience had demonstrated to be "necessary to adapt it to a more efficient subservience to the purposes and objects for which the Society was originally founded, and so munificently endowed." They, therefore, sought to stimulate the friends of the Society to "an earnest and concerted movement, to secure the election of persons in every district competent to the efficient discharge of the representative trust," and who should be pledged in advance to attend, if elected, the present meeting of your body. A copy of this Circular is submitted, marked C.

The progress of improvement since the inauguration of the Society may with truth be said to mark a distinct epoch in our history. The wonderful triumphs of mind over matter, in the discovery and development of the hitherto hidden laws of nature—bringing the whole range of physical science into subsidiary relation to this noble art—have invested it with so vast an accession of power over the forces of nature, in harnessing them for its uses, as is only limited by the want of adequate knowledge to control and apply them.

Hence, while inventive genius and educated mind are plying all their powers to replace the seriously felt want of a sufficiency of manual labour, by the introduction of implements and machinery, constructed upon scientific principles, and adapted to subserve the greatest economy in the operations of husbandry, the academic institutions of the State are being crowded with the sons of agriculturists, earnestly seeking after knowledge—the synonyme of power—that they may be thoroughly furnished—as in other so-called learned professions—to meet the responsibilities and fulfil the obligations of their station, when they shall come to enter upon the active duties of a department in social life, demanding the highest order of qualification for the successful conduct of its operations, and habits of study and investigation to be acquired only by the severe discipline of the mind during the plastic season of youth, that shall fit them to advance in knowledge and practical improvement as the area of known truth shall continue to expand, and fresh trophies of science shall be laid at their feet.

The cause of Agriculture is the one great and paramount interest of the Commonwealth. The basis—and directly or incidentally—the support of all the other social interests, the development of its resources, and the augmentation of its profits are attended with a proportionate increase in the population, wealth and power of the State, and a corresponding advance of society in intelligence, refinement, and social happiness.

The distinguished mission of this Society, then, is, to stimulate every department of industry, and to urge forward the car of improvement, until the illimitable stores of the mineral wealth of the State shall yield to the hand of labour their ample tribute; until the fruits of the workshop and the factory shall be united with the exuberant productions of the well-tilled farm; and Virginia, disenthralled from Northern dependence, shall manufacture her own goods, conduct her own trade with her own marine, and spread the wings of her commerce to the four winds of heaven.

Respectfully submitted

By the EXECUTIVE COMMITTEE,
CH. B. WILLIAMS, Sec'y.

The Treasurer has the honour to submit to the Farmers' Assembly the following report:

The permanent Fund of the Society consists in the following investments, viz:

In Virginia State stock, . . .	1,800	
In Richmond City stock, . . .	44,750	
		\$46,550

The following are the amounts of the receipts and disbursements of the fiscal year end-

ing on the 29th of September, and the general quarterly statement and balance sheet to the same period:

Va. State Agricultural Society,

In account with CH. B. WILLIAMS, Treas'r :

RECEIPTS WITHIN THE YEAR.

1859.		
Sept. 30.	Balance on hand, . . .	\$1078 01
Nov.	Donation from city of Petersburg, . . .	1000 00
	Receipts from annual members, . . .	218 30
	Gate fees at the Exhibition of 1859, . . .	666 50
	Withdrawn from Savings Bank,	2457 83
1860.	Interest,	2862 26
		\$8282 90

DISBURSEMENTS.

Office expenses,	\$290 56
Salary of Secretary	1000 00
Printing and advertising,	551 73
Incidental expenses,	408 81
Forage Department,	439 31
Premiums of 1859,	3902 50
	6592 91

Sept. 29.	Balance applicable to contingent purposes, of	\$1689 99
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QUARTERLY STATEMENT, SEPT. 29TH, 1860.

Contingent Fund,	\$50,288 19
Permanent Fund,	46,464 00
Interest Account,	15,764 63
Cash,	1689 99
Virginia State stock,	1,800 00
Richmond City stock,	44,750 00
Premiums of 1853,	3,353 00
Premiums of 1854,	3,843 50
Premiums of 1855,	3,731 00
Premiums of 1856,	3,805 00
Premiums of 1857,	3,896 50
Premiums of 1859,	3,902 50
Expenses of 1853-4,	3,884 24
Expenses of 1854-5,	7,456 77
Expenses of 1855-6,	8,958 44
Expenses of 1856-7,	9,039 91
Expenses of 1857-8,	7,343 45
Expenses of 1858-9,	2,077 11
Expenses of 1859-60,	2,690 41
Union Ag'l So'y of Va. and N. C.,	295 00
	\$112,516 82
	\$112,516 82

The undersigned has examined the above statement, and compared it with the books of the Treasurer, and finds it correct, and supported by proper vouchers.

WM. G. CRENSHAW.

The Speaker laid before the Assembly a letter from John R. Edmunds, Esq., declining a re-election to the office of President of the State Society at the close of his official term; which was, on motion, laid upon the table.

Mr. Morris moved to take up the resolution offered by Mr. Harvie at the last annual meeting of the Farmers' Assembly, namely: to amend the Constitution by striking out the 4th clause of the 11th section, and inserting the following in lieu thereof:

"Amendments may be made to the Constitution by a two-thirds vote of the members in attendance."

After discussion, the said amendment was carried in the affirmative.

Mr. Wickham then moved to take up the resolution offered by him at the last Farmers' Assembly, viz:

"Resolved, That so much of the Constitution as refers to the Farmers' Assembly be altered and amended so as to abolish the said Assembly, and devolve its powers and duties on the general meetings of the Society and on the Executive Committee."

Mr. Tate offered, as a substitute, the resolution proposed by him at the last Assembly, in the following words:

"That the Constitution be so amended as to devolve all the duties and powers of the Farmers' Assembly on the life members in legislative meeting."

Mr. Minor proposed to amend the substitute by including annual members, as well as life members, as the depositaries of the powers now exercised by the Assembly; whereupon, on consultation, the following amended resolution, proposed by Mr. Minor, was accepted by the movers of the original resolution and the substitute, viz:

Resolved, That so much of the Constitution as refers to the Farmers' Assembly, be altered and amended so as to devolve its powers and duties on the general meetings of the Society, in which life members and all annual members, who have paid their annual contributions six months before the general meeting at which they may offer to vote, shall have the right to vote and none others.

After protracted discussion, and several ineffectual motions to lay the resolution on the table, on the motion of Mr. Crump, the

Assembly adjourned to meet in this place to-morrow evening at half-past 7 o'clock.

WEDNESDAY EVENING, October 24th.

The Assembly met pursuant to adjournment.

On motion of Mr. Morris,

Resolved, That the rules of the Virginia House of Delegates be adopted as the rules of this Body, so far as they are applicable.

The substitute of Mr. Minor was then taken up, and, by general consent, the following clause was added thereto, viz: But this amendment shall not take effect until the end of the present Session of this Assembly.

On motion of Mr. Wickham,

Resolved, That the roll be now called, and that the names of the members present be spread upon the record.

The Clerk proceeded to call the roll accordingly, when no quorum being present, the Assembly took a recess to allow time for summoning absentees; meanwhile Prof. Gilham, on the invitation of the Assembly, proceeded to address them on the general subject of artificial manures, and was followed, by the request of the Assembly, by Mr. Newton, and Mr. F. G. Ruffin, on subjects highly interesting to the agriculturist.

Several absentees appearing in the Assembly during the recess, the Speaker called the Assembly to order, and the call of the roll was completed.

The following persons answered to their names:

Franklin Minor, R. N. Trice, Wm. W. Minor, James Fife, Samuel B. Finley, William M. Tate, George W. Mowry, J. Wayt Bell, Wm. B. Price, Grandison Moseley, Odin G. Clay, Edmund T. Morris, Joseph Jesse, Edward Willecox, Wood Bouldin, Samuel S. Bradford, James M. Austin, John F. Cobbs, Wm. B. Stanard, Littleton Edmunds, William H. Clarke, David Chalmers, Williams C. Wickham, William Nelson, John R. Garnett, Carter W. Wormley, Alexander Fleet, C. G. Coleman, Thomas S. Watson, R. H. Dulany, N. F. Cabell, Sharpe Carter, Ferdinand Jones, Thomas Branch, Elisha Keene, Richard Stokes, D. J. Saunders, Wyndham Robertson, Wm. H. Macfarland, Wm. W. Crump, Corbin Warwick, Henry C. Cabell, George Watt, Wm. M. Harrison, R. B. Haxall,

Thos. J. Deane, Robert Edmond, Wm. G. Crenshaw, Peyton Johnston, B. W. Haxall, Wm. Gilham, George B. Dillard, Benjamin L. Cason, Hugh M. Nelson, Willoughby Newton, Warner T. Talliaferro, Sen'r.—56.

On motion of Mr. Bolling,

Resolved, unanimously, That the action of the President and Executive Committee, in making arrangements for holding the present Fair near this city, in conjunction with the Central Agricultural Society of Virginia, is hereby approved.

On motion of Mr. Morris,

Resolved, That the Executive Committee of this Society be and is hereby authorized and requested, at their discretion, to treat with the Central Agricultural Society of Virginia, for the purpose of fixing the terms of a permanent union of the two Societies in their annual Fairs and Exhibitions, and to make report to the next meeting of the Society; and the said Committee is hereby further authorized and requested, in the mean time, to make arrangements with the Central Society of Virginia, to hold our next Annual Exhibition, Cattle Show, and Fair, at Richmond, in connection with said Society, if arrangements can be made, which, in their opinion, would not result in injury to this Society.

Mr. Wickham moved as a substitute for the pending amendments of the Constitution, a series of amendments which had been agreed upon among the friends of the measure; but after discussion, proposed to withdraw the same, whereupon, Mr. Crenshaw renewed the motion, and the question being taken thereon, they were adopted, and the Constitution, as thus amended, is in the following words:

CONSTITUTION

OF THE

Virginia State Agricultural Society.

SECTION I.

NAME AND PURPOSE.

1. The name of this Society shall be "The Virginia State Agricultural Society."

2. Its object shall be to advance and improve the condition of Agriculture, Horticulture and the auxiliary Mining and Mechanic Arts.

SECTION II.

ANNUAL FAIR.

The Society shall hold an Annual Exhibition, Cattle Show and Fair, at such time and place as may be designated by the Executive Committee.

SECTION III.

MEMBERSHIP.

1. The Society shall consist of such persons as shall pay to the Secretary of the Society, or other person duly authorized to receive the same, an initiation fee of two dollars; of life members; and of such as shall be elected Honorary Members thereof by the members of the Society in general meeting.

2. Every person so paying two dollars shall be accounted and listed a member of the Society for twelve months from the next preceding first day of January, and shall be bound thereafter to pay an annual contribution of one dollar, unless he shall notify the Secretary of the Society of his wish to withdraw; such withdrawal shall be duly recorded by that officer, and take effect from the close of the current year.

3. The payment of twenty dollars, at one time, shall constitute a member for life, and shall exempt the payer from annual contributions.

SECTION IV.

OFFICERS.

1. The officers of the Society shall consist of a President, eight Vice Presidents, and of ten other persons, (all being members of the Society,) to constitute together the Executive Committee, and a Secretary and Treasurer, who shall be one person.

2. These officers shall be elected annually by separate votes by the members of the Society in general meeting for one year, and till their successors be appointed, and they shall be re-eligible to office, except that from and after the adoption of the Constitution the same person shall not be President of the Society for more than three consecutive years.

SECTION V.

1. The life members and such annual members as shall have paid all their dues to the Society six months previous to the meeting, shall be entitled to vote in the general meetings of the Society.

2. Two hundred members of the Society shall constitute a quorum.

SECTION VI.

POWERS AND DUTIES OF PRESIDENT.

1. The President of the Society shall preside at all general meetings of the Society at large.

2. May, at his option, make an annual communication to the Society, with such recommendations as he may think expedient.

3. Shall appoint and have the direction of all Marshals and other agents required to carry out and give effect to the rules and regulations prescribed by the Executive Committee for the annual fair.

4. Shall preside at all meetings of the Executive Committee, and convene special meetings thereof when he may deem it necessary, or a quorum of their number request it; and, in addition to his vote as member thereof, shall, as Chairman, have the casting vote in case of a tie.

SECTION VII.

POWERS AND DUTIES OF VICE PRESIDENTS.

The Vice Presidents shall be ex-officio members of the Executive Committee, and shall, in the order of their election, perform the duties of the President in the absence of that officer.

SECTION VIII.

POWERS AND DUTIES OF EXECUTIVE COMMITTEE.

1. The Executive Committee shall hold stated meetings at such time as they may fix.

2. Shall fill vacancies in their own body, as also in the office of Secretary and Treasurer.

3. Shall procure and take charge of all such useful models, books, seeds, plants, or other property of the Society, as they may deem fit, or may be transmitted to the Society, and take order for the proper preservation or distribution thereof.

4. Shall invite communications or essays from men eminent in agriculture, or in science or art auxiliary thereto; shall make provision for an Address to be delivered before the Society at large at each annual fair.

5. Shall prescribe the manner of holding the annual fair, in such mode as to them shall seem best, determine the objects to which premiums shall be awarded, and the manner in which the same shall be apportioned and paid, and generally direct everything appertaining to the said fair.

6. Shall make an annual report to the Society of its condition and of any other matters they may deem pertinent; and may, at their discretion, publish such of the proceedings, essays, communications, or other matters as they may deem interesting to the Society, or calculated to promote its objects.

7. Shall have power, by a vote of a majority of their whole number, to remove the Secretary and Treasurer, and appoint another in his stead, to serve till the next meeting of the Society, and till his successor be appointed; and shall record and report to said meeting the causes of such removal.

8. Shall, subject to the control of the Society, manage the funds of the Society, and direct their disbursements; and shall invest all surplus moneys of the Society, hereafter received, in State Stock.

9. Shall, in the absence of the President and Vice President's, be authorized to appoint a Chairman pro tem., and generally shall do all acts not inconsistent with the provisions of this Constitution or the directions of the Society, which they may deem calculated to advance the interest and objects of this Society.

Five members shall constitute a quorum of said committee.

SECTION IX.

POWERS AND DUTIES OF SECRETARY AND TREASURER.

1. The Secretary and Treasurer shall attend all the meetings of the Executive Committee, and keep minutes of their proceedings.

2. Shall keep a list of the members of the Society, erasing therefrom, as occasion arises, the names of members dying, withdrawing or removing from the State.

3. Shall carry on such correspondence with other Societies and with individuals as he may deem calculated to further the objects of the Society, or as the Executive Committee may direct.

4. Shall collect, by himself or such un-

paid or other assistants as he may be able to engage, all dues to the Society, deposit them or any other moneys of the Society coming to his hands, as received, in such bank as the Executive Committee may direct; and disburse the same by checks drawn by the President, or in his absence by the Chairman of the Executive Committee, and countersigned by the said Secretary and Treasurer.

5. Shall keep regular accounts of all receipts and disbursements, and report the same to every stated meeting of the Executive Committee, and perform all such other duties, not specially prescribed herein, as may be required of him by the said Committee.

6. He shall keep an office in the City of Richmond, where shall be preserved the records of the Society, and whatever else the Executive Committee may direct; which office shall be open daily, at convenient times, to the members of the Society; and,

7. He shall give bond and security in such form, and for such sum, as the Executive Committee shall prescribe, conditioned for the faithful performance of his duties.

SECTION X.

GENERAL PROVISIONS.

1. All capital of the Society, now or hereafter invested, shall be held a fund sacred to the cause of Agricultural improvement, of which the income only shall be subject to appropriation.

2. No officer of the Society, elected under the 4th Section of this Constitution, except the Secretary and Treasurer, shall receive compensation for his services, or any allowance for traveling or other expenses.

3. The year of the Society, as regards elections, memberships, &c., shall be understood to be the calendar year: except that the fiscal year shall terminate on the 30th day of September.

4. Amendments to this Constitution may be made by a two-thirds vote of the members in attendance at a general meeting, provided that the first clause of this section shall not be changed by a vote less than a majority of all the members of the Society.

On motion of Mr. Branch,

Resolved, That the committee appointed

by the last Farmers Assembly be continued, with instructions to examine the accounts of the Treasurer for the last three years, and that they report to the Executive Committee, and publish a copy of the report in the city papers.*

On motion,

Resolved, That the Assembly do now proceed to the election of officers to serve for twelve months from the 31st of December next: Whereupon the following were unanimously elected.

President.

John R. Edmunds, of Halifax.

Vice-Presidents.

- Willoughby Newton, of Westmoreland, 1st.
- E. W. Hubard, of Buckingham, 2nd.
- Frank G. Ruffin, of Chesterfield, 3rd.
- Franklin Minor, of Albemarle, 4th.
- Thomas L. Preston, of Campbell, 5th.
- Wm. C. Knight, of Henrico, 6th.
- R. H. Dulany, of Loudon, 7th.
- Richard Irby, of Nottoway, 8th.

Executive Committee.

- Hugh M. Nelson, of Clarke.
- Wm. G. Crenshaw, of Richmond.
- Wm. T. Scott, of Charlotte.
- John R. Garnett, of Henrico.
- Colin Stokes, of Lunenburg.

* VIRGINIA STATE AGRICULTURAL SOCIETY.

[A Copy.]

The undersigned, appointed by the Farmers Assembly, a committee to examine the accounts of the Treasurer of the Virginia State Agricultural Society, respectfully beg leave to report to the Executive Committee that they have not deemed it necessary to re-examine the papers which have already undergone the scrutiny of the Committee of Accounts and been accepted by them as "proper vouchers," but, that they have carefully reviewed the accounts of the Treasurer, compared them with his books, and find them correct and in exact correspondence.

They find in the custody of the Treasurer, agreeably to his last report, certificates of Virginia State Stock amounting to\$1,800 00
And certificates of Richmond City
Stock,44,750 00
Making the total invested fund,46,550 00
And the balance of cash on hand as
per last annual report,1,689 99

All of which is respectfully submitted.
[Signed.] CORBIN WARWICK,
DAVID J. SAUNDERS, } Committee.
R. BARTON HAXALL,
Richmond, Nov. 14, 1860.

Samuel McD. Reid, of Rockbridge.
 R. W. N. Noland, of Albemarle.
 Wm. Overton, of Louisa.
 Odin G. Clay, of Campbell.
 B. F. Dew, of King & Queen.

Secretary and Treasurer.

Charles B. Williams, of Henrico.

On motion of Mr. Nelson,

Resolved, That the thanks of the Assembly are hereby tendered to the speaker, for the ability with which he has discharged the duties of the chair.

The speaker tendered his acknowledgment of the honor in a brief and feeling address, and the Assembly then adjourned *sine die*.

CH. B. WILLIAMS, *Clerk.*

PREMIUMS AWARDED

BY THE

Virginia State and Central Societies

AT THEIR UNITED FAIR AND CATTLE SHOW
 IN OCTOBER, 1860.

ESSAYS OR WRITTEN COMMUNICATIONS.

CLASS I.

1. For the best Essay on the practical management of a farm of not less than 300 acres, devoted to the cultivation of corn and wheat as staple crops. The necessary farm buildings to be described; the proper division of the farm into fields; the force in teams and farm hands necessary for its cultivation; the rotation of crops pursued; the artificial grasses cultivated; the green crops plowed in for manure; the quantity and kinds of stock which may be usefully and profitably kept upon it; and all other matters deemed necessary by the writer for its profitable and economical management to be distinctly stated. Also, the proper preparation of land for corn and wheat, the best times in the opinion of the writer for planting and sowing these crops, the method pursued in the management and disposal of the sheaves, stalks, and fodder of the corn, and in harvesting, preserving and threshing the wheat crop, and preparing it for market—

A Gold Medal of the value of \$100

CLASS 2.

2. For the best Essay on the cultivation and management of Tobacco, including the preparation of the plant-bed, and the rearing of plants; the preparation and manuring of the land; the number and proper construction of tobacco barns; the mode of curing, assorting, ordering, and prizing for market; and the force to every thousand hills necessary to cultivate the crop successfully—

A Gold Medal of the value of \$50

The Committee on *Essays* would respectfully report:—That papers on six of the nine classes of subjects included in the Society's Schedule, have been submitted to their inspection, and that the result of their examination is as follows:

To an Essay on "The practical and systematic management of a farm of 300 acres of which corn and wheat are the principle staples," by Mr. Edmund Taylor, of Campbell, they award the premium mentioned under Class 1st. The Committee are not prepared to subscribe to all the views of this paper; but the points in which it is open to criticism are so few, as compared with those in which it is to be commended, and are so readily susceptible of modification; and the number of its approved suggestions, (whether confirmed by the experience of the writer or gathered from the practice of others, we know not,) is such that its supposed errors have not been thought sufficient to alter our decision.

Of Essays on the Cultivation and Management of Tobacco, they have, with some hesitation, awarded the premium to one by Mr. Henry M. Folkes, of Chesterfield—not that they doubted its sufficiency as a summary of the modes most approved in this quarter of the State, but because of the merits of another paper, by Mr. Samuel C. Shelton, of Henry county, giving the more novel and somewhat peculiar methods practised in another district, in the preparation of this crop for other and very different purposes. The Committee, therefore, think that this paper is worthy of a like premium; or if, under the Rules of the Society, this be inadmissible, that its equivalent should be equally divided, and a half assigned to each writer in some other form.

Essays on Manures, on Grasses, and on Swine, were also presented;—not one of

which was without its merits—in some cases very decided, and such as might well bring it in competition for a premium, had a due proportion been observed in its several parts. But as they now appear, from the omission of some topics, and the defective presentation of some others, they seem to come short of the standard required by the Society's Schedule; we, therefore, decline awarding a premium to any. But as each contains information, the fruit of personal experience, and worthy of public attention, the Committee have instructed their Chairman to communicate with the several writers, suggesting the several points in which it is thought their papers are deficient,—in the hope that, after due revision, and with proper additions, they may be again brought forward and re-submitted to a future Committee of the Society with better prospects of successful competition.

Several Essays on Fruit trees were also laid before us; but the number and character of these papers, and the late hour at which they were handed in, have not left us sufficient time for their due consideration; we, therefore, reserve our decision as to their comparative merits until we shall have been able to give them a more mature examination, after which our award shall be announced to the Secretary of the Society.

Respectfully submitted,

N. F. CABELL, *Chairman.*

J. R. BRYAN,

WM. M. TATE.

Dr. J. R. Baylor has read carefully, and unites in the award made by the Committee of the Premiums for the Essays No. 1 and No. 2, and is only prevented from signing by his absence, occasioned by illness.

N. F. CABELL,

J. R. BRYAN.

CATTLE DEPARTMENT.

CLASS 11.

Durham Bulls of Native Stock.

11. To V. Hansberger, of Rockingham, best Bull 3 years old or upwards, "Scipio," \$75
12. To Dr. D. Sanders, of Wythe, second best, "Valentine," 35
13. To J. M. McCue, agent for A. Gooch, of Mercer, best Bull 2 years old and under 3, "Simon Pure," 35

14. To W. Radford, of Bedford, second best, "Glaucus," \$15
15. To Dr. D. Saunders, of Wythe, best Bull 1 year old and under 2, "Van Tromp," 20
16. To R. H. Dulany, of Loudoun, second best, "Lord Fairfax," 10

CLASS 12.

Durham Cows and Heifers of Native Stock.

17. To S. W. Ficklen, of Albemarle, best Cow 2 years old or upwards, "Flora the 3rd," 40
18. To R. H. Dulany, of Loudoun, second best, "Dairy Maid," 20
19. To Dr. D. Saunders, of Wythe, best Cow or Heifer 2 years old and under 3, "Molly May," 20
20. To Dr. D. Saunders, of Wythe, second best, "Lottie Linwood," 10
21. To W. Radford, of Bedford, best Heifer 1 year old and under 2, "Fanny Fly," 15
22. To S. W. Ficklen, of Albemarle, second best, "Martha Clay," 8

CLASS 13.

Hereford Bulls of Native Stock.

23. To John Merryman, of Maryland, best Bull 3 years old or over, "Blenheim," 75
24. To Stephen Hunter, of Henrico, second best, "Catalpa," 35
25. To John Merryman, of Maryland, best Bull 2 years old and under 3, "Expectation," 35

CLASS 14.

Hereford Cows and Heifers of Native Stock.

29. To John Merryman, of Maryland, best Cow 3 years old or upwards, "Promise," 40
31. To John Merryman, of Maryland, best Cow or Heifer 2 years old and under 3, "Fill the Pail," 20
- 29½. To J. Merryman, of Maryland, best imported Hereford Cow, "Milton," 40

CLASS 15.

Devon Bulls of Native Stock.

35. To J. H. McHenry, of Maryland, best Bull 3 years old or over, "Uncas," 75

36. To S. S. Bradford, of Culpeper, second best, "Henry Clay,"	\$35
37. To Dr. G. B. Dillard, of Spottsylvania, best Bull 2 years old and under 3, "Duke of Hanover,"	35
38. To H. J. Strandberg, of Maryland, second best, "Baltimore,"	15
39. To Alex. Garrett, of Richmond, best Bull 1 year old and under 2, "Herod,"	20
40. To H. J. Strandberg, of Maryland, second best, "Brooklyn,"	10
35½. To T. J. Carson, of Orange, best imported Bull, "Napoleon,"	75

CLASS 15.

Devon Cows and Heifers of Native Stock.

41 To H. J. Strandberg, of Maryland, best Cow 3 years old or over, "Matilda,"*	40
42. To Dr. G. B. Dillard, of Spottsylvania, second best, "Malibran,"	20
43. To Wm. Allen, of Surry, best Cow or Heifer 2 years old and under 3, "Beauty,"	20
44. To Dr. G. B. Dillard, of Spottsylvania, second best, "Norma,"	10
45. To Dr. G. B. Dillard, of Spottsylvania, best Heifer 1 year old and under 2, "Pearl,"	15
45. To Dr. P. B. Pendleton, of Louisa, second best, "Virginia,"	8
41½. To T. J. Carson, of Orange, best imported Cow, "Penelope,"	40

CLASS 17.

Ayrshire Bulls of Native Stock.

47. To Lewis Graves, of Orange, best Bull 3 years old or upwards, "Defiance,"	75
46. To John B. Crenshaw, of Henrico, second best, "Lord Mar,"	35
51. To R. B. Haxall, of Richmond, best Bull 1 year old and under 2,	20

CLASS 18.

Ayrshire Cows and Heifers of Native Stock.

53. To Peter D. Glinn, of Henrico, best Cow 3 years old or upwards, "Christmas,"	\$40
54. To Peter D. Glinn, second best, "Martha,"	20
55. To B. W. Haxall, of Henrico, best Cow or Heifer 2 years old and under 3, "Heifer,"	20

CLASS 19.

Alderney Bulls of Native Stock.

59. To Peyton Johnston, of Richmond, best Bull 3 years old or upwards, "Pryor,"	75
60. To J. H. McHenry, of Maryland, second best, "Reward,"	35
61. To S. S. Bradford, of Culpeper, best Bull 2 years old and under 3, "Burgundy,"	35
62. To J. H. McHenry, of Maryland, second best, "Hector,"	15
63. To Peyton Johnston, of Richmond, best Bull 1 year old and under 2, "Colonel,"	20
64. To J. H. McHenry, of Maryland, second best, "Figaro,"	10

CLASS 20.

Alderney Cows and Heifers of Native Stock.

65. To Peyton Johnston, of Richmond, best Cow 3 years old or upwards, "Nora,"	40
66. To J. H. McHenry, of Maryland, second best, "Lady,"	20
67. To J. H. McHenry, of Maryland, best Cow or Heifer 2 years old and 3, "Constance,"	20
69. To Peyton Johnston, of Richmond, best Heifer 1 year old and under 2, "Daisy,"	15
70. To J. H. McHenry, of Maryland, second best, "Plenty,"	8
65½. To J. H. McHenry, of Maryland, best imported Cow, "Hope,"	40

CLASS 21.

Grade Cows and Heifers.

71. To Stephen Hunter, of Richmond, best 3 year old or upwards, "Maggie,"	20
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* On establishing for her a thorough pedigree, in default of which the first premium is awarded to Dr. G. B. Dillard for "Malibran" in lieu of the second.

- 72. To S. W. Ficklen, of Albemarle, second best, \$10
- 73. To Crouse & Irvine, of Lynchburg, best cow 2 years and under 3, "Mary Mathews," 15
- 74. To Peyton Johnston, of Richmond, second best, "Georgiana," 8

CLASS 22.

Dairy Cows.

- 75. To S. S. Bradford, of Culpeper, best Cow for the dairy, "Dairy Maid," 40
- 76. To Peter D. Glinn, of Richmond, second best, "Martha," 20

CLASS 23.

Yoked Working Oxen.

- 77. To W. B. Crawford, of Augusta, best pair 4 years old or upwards, 40
- 78. To P. Linn, of Augusta, second best, 20

FAT STOCK.

CLASS 24.

Fat Bullocks.

- 82. To Francis Bell, of Pulaski, best pair 5 years old or over, 50
- 83. To Francis Bell, of Pulaski, best pair 3 years old and under 5, 50
- 84. To Francis Bell, of Pulaski, best fat Bullock of any age, 30

CLASS 25.

Fat Cows and Heifers.

- 86. To J. E. Carson, of Augusta, best fat Cow, 5 years old or over, 30

CLASS 26.

Fat Sheep.

- 88. To P. B. Jones, of Orange, best pen of fat Sheep, 4 or more, 20
- 89. To G. W. Hackett, of Louisa, second best, 10
- 90. To P. B. Jones, of Orange, best slaughtered mutton, 10
- 91. To H. G. Guthrie, of Augusta, second best, 5

CLASS 27.

Fat Hogs.

- 92. To William Ballard Preston, of

- Montgomery, best pen fat Hogs, 4 or more, \$20

HORSE AND MULE DEPARTMENT.

CLASS 28.

Thorough Bred Stallions and Colts.

- 94. To J. Maury Garland, of Richmond, best thorough bred Stallion, 4 years old or upwards, "Ducoleon," 100
- 95. To R. V. Gaines, of Charlotte, second best, "Trojan," 50
- 96. To W. T. Walker, of Goochland, best entire Colt, 3 years old and under 4, "Gray Colt," by Red Eye, 50
- 98. To W. T. Walker, of Goochland, best entire Colt, 2 years old and under 3, "Colt," by Red Eye, 30
- 99. To W. T. Waring, second best "Colt," by Otelius, 15
- 100. To R. V. Gaines, of Charlotte, best entire Colt, 1 year old and under 2, "Roscoe," 20

CLASS 29.

Thorough Bred Mares and Fillies.

- 103. } To Wm. C. Scott for "Pau-
- 104. } line," and John M. Botts, for
- "Crinoline," the first and second premiums were united and divided in equal parts between them of \$37 50 each.
- 107. To John Eubank, of Lunenburg, best Filly, 2 years old and under 3, 20
- 108. To R. V. Gaines, of Charlotte, second best, "Sunshine," 10
- 109. To W. C. Scott, of Powhatan, best Filly, 1 year old and under 2, out of Pauline, by Fly-by-Night, 15
- 110. To H. M. Fowlkes, of Chesterfield, second best, 10

CLASS 30.

Roadster Stallions and Colts, adapted to Quick Light Draught.

- 112. To S. W. Ficklen, of Albemarle, best Stallion, 4 years old or upwards, "Blackhawk," 100
- 113. To William Ellis, second best, "Black Eagle," 50
- 115. To William Walls, best entire Colt, 3 years old and under 4, "Oracle," 50
- 115. To John Rowlett, second best, "Upright," 25

116. To H. M. Fowlkes; best entire Colt, 2 years old and under 3, "Hamp-ton," \$30

117. To J. C. Garnett, second best, "Criterion," by Imported Emperor, 15

118. To Dr. W. H. Macon, best entire Colt, 2 years old and under 3, "Jno. J. Crittenden," 20

119. To R. W. Wyatt, second best, "Morgan Hunter, Jr." 10

120. To Norborne Berkeley, best entire Colt, under 1 year old, 10

CLASS 31.

Roadster Mares and Fillies, adapted to Quick Light Draught.

121. To John H. Timberlake, best Brood Mare, 4 years old or over, "Lady Kossuth," 50

122. To Joseph Brummel, second best "Nelly," 25

123. To S. W. Ficklen, best 3 years old and under 4, "Lassie," 30

124. To R. B. Haxall, second best, "Empress," by Imported Emperor, 15

125. To B. W. Green, best Filly, 2 years old and under 3, 20

126. To B. W. Green, second best, "Betty Collin," 10

127. To Col. Geo. Willis, best Filly, 1 year old and under 2, "Ann Empress," by Imported Emperor, 15

128. To Dr. W. H. Macon, second best, Victoria, 10

129. To B. W. Green, best Filly, under 1 year old, 10

CLASS 32.

Roadster Stallions and Colts, adapted to Quick Coach Draft.

130. To Alexander Rives, best Stallion, 4 years old or upwards, "Carl," by imp. Emperor, \$100

131. To L. Manger & Co., Baltimore, second best, "Paul Clifford," 50

132. To James Newman, best Entire Colt, 3 years old and under four, "Cardinal," 50

133. To R. B. Haxall, second best, "Ala-Mode Kossuth," 25

134. To R. H. Dulany, best Entire Colt, 2 years old and under 3, 30

135. To J. H. Dillard, second best, 15

136. To George Willis, best Entire Colt, 1 year old and under two, "Emperor," by imp. Emperor. 20

137. To J. B. Newman, second best, \$10

138. To S. W. Ficklen, the best Entire Colt, under 1 year old, 10

CLASS 33.

Best Roadsted Mares and Fillies, adapted to Quick Coach Draught.

139. To W. H. Macon, best Brood Mare, 4 years old or over, 50

140. To R. H. Dulany, second best, 25

143. To James Walker, of Augusta, best Filly, 2 years old and under 3, "Lillie," 20

144. To J. S. Wharley, second best, 10

145. To Maj. Jno. Lec, of Orange, best Filly, 1 year old and under 2, 15

146. To W. B. Sydnor, second best, 10

147. To Dr. Jno. R. Woods, of Al-bemarle, best Filly, under 1 year old, 10

CLASS 34.

Saddle Stallions and Colts, adapted to the Breeding of Improved Riding Horses.

148. To Henry & Broughn, best Stallion, 4 years old or over, "Virginia," \$100

149. To C. F. Berkeley, second best, "Tom Telegraph," 50

151. To John H. Swarts, second best entire Colt, 3 years old and under 4, "Latham," 25

152. To B. Johnson, best entire Colt, 2 years old and under 3, "Quix-otte," 30

153. To H. F. Davis, second best, "Henry A. Wise," 15

154. To J. P. H. Graves, best entire Colt, 1 year old and under 2, "Zouave," 20

CLASS 35.

Saddle Mares and Fillies, adapted to the Breeding of Improved Riding Horses.

157. To G. W. Mowry, best Brood Mare, 4 years old or over, "Gyp," \$50

158. To H. M. Fowlkes, second best, "Katy Darling," 25

159. To Jno. M. Hooper, best Filly, 3 years old and under four, "Mozelle," 30

160. To R. V. Gaines, second best, "Polly Hopkins," 15

161. To J. H. Swarts, best Filly, 2 years old and under 3, "Fanny," 20

- 162. To G. W. Dillard, second best, "Sally Miller," \$10
- 163. To H. M. Fowlkes, best Filly, 1 year old and under two, "Maggie Mitchel," 15
- 164. To G. H. Dillard, second best, "Bessie Bramham," 10
- 165. To H. M. Fowlkes, best Filly, under 1 year old, "Ticonderoga," 10

CLASS 36.

Heavy Draught Stallions and Colts.

- 166. To Absalom Rowe, best Stallion, 4 years old or over, "Champion," 50
- 167. To James D. Mundy, second best, "Cobham," 25
- 170. To S. B. Finley, of Augusta, best Entire Colt, 2 years old and under 3, "Emperor," by imp. Emperor, 20
- 171. To T. E. Dillard, second best, 10
- 172. To H. F. Davis, best Entire Colt, 1 year old and under 2, 10

CLASS 37.

Heavy Draught Mares and Fillies.

- 176. To John Hanger, best Filly, 3 years old and under 4, "Lady Augusta," 20

CLASS 38.

Trials of Speed.

- 182. To John Kinsley, first premium for Horses, Mares or Geldings, best time limited to 2 min. 50 seconds, won in 2 minutes 46 $\frac{1}{4}$ seconds, by "Belle of Baltimore," \$250
- 183. To J. R. Parker, of Vermont, second premium for Horses, Mares or Geldings; best time limited to 3 min., won in 2 minutes 43 $\frac{1}{4}$ seconds by "General Dunham," 150
- 185. To Pierre Lapence, for Horses, Mares, or Geldings, 4 years old and under 7; best time limited to 3 min. 10 seconds; second premium won in 3 min. 1 $\frac{1}{2}$ sec., by "Gray Stranger," 75
- 186. To R. H. Dulany, of Loudoun, first premium for Colts or Fillies, under 4 years old; best time limited to 3 min. 30 sec., won in 2 min. 54 $\frac{1}{2}$ sec., by "Lady May," 100
- 187. To R. H. Dulany, of Loudoun, second premium for Colts or Fillies, under 4 years old; best time limited to 3 min. 40 sec., won in 3 min. 7 $\frac{1}{2}$ sec., by "Walter Morgan," 50

CLASS 39.

Match Horses in Harness, accustomed to be used as such in Pairs, for Quick, Light Draught.

- 190. To J. R. Allen, best pair Mares, \$50

CLASS 40.

Match Horses in Harness, accustomed to be used together as such, in Pairs, for Quick Coach Draught.

- 191. To R. S. Allen, best pair Mares or Geldings, \$50
- 191 $\frac{1}{2}$. To Edm'd Bossieux, best single Mare or Gelding, in Harness, adapted to the road, 40
- 191 $\frac{1}{4}$. To James Lyons, second best, 20

CLASS 41.

Saddle Horses. Under the Saddle.

- 192. To Sanderson Thrift, of Loudoun, best Mare, "Lillie," 40
- 193. To T. J. Swarts, second best Mare, 20

CLASS 42.

Ponies and Horsemanship.

- 194. To A. T. Partman, best Pony, ridden by a lad 14 years of age, the Horsemanship also considered, 20
- 195. To Alphonso Green, second best, 10

CLASS 43.

Mules and Jacks.

- 196. To Nimrod Bramham, of Albemarle, best Jack, 50
- 197. To Isaac G. Caison, of Spottsylvania, second best, 25
- 198. To John Eubank, of Lunenburg, best Jennet, 30

SHEEP DEPARTMENT.

CLASS 44.

Fine Wools of Native Stock, including pure bred Spanish, Saxon, French and Silesian Merinos.

- 206. To S. S. Bradford, of Culpeper, best Ram, 20
- 207. To W. S. Rowley, of Henrico, second best, 10

208. To S. S. Bradford, of Culpeper, best pen Ram Lambs, 4 in number,	\$15
209. To S. S. Bradford, of Culpeper, best pen Ewes, 3 in number.	30
210. To S. S. Bradford, of Culpeper, second best,	15
211. To S. S. Bradford, of Culpeper, best pen Ewe Lambs, 4 in number,	15
212. To S. S. Bradford, of Culpeper, second best,	10

Imported Fine Wool Merinos.

CLASS 45.

213. To S. S. Bradford, of Culpeper, best Ram,	30
214. To S. S. Bradford, of Culpeper, best Ewe.	30

CLASS 46.

*Fine Wool Grades, including crosses of the
above classes.*

215. To S. S. Bradford, of Culpeper, best pen Ewes, 3 in number,	30
216. To S. S. Bradford, of Culpeper, second best,	15
217. To S. S. Bradford, of Culpeper, best pen Ewe Lambs,	10

CLASS 47.

*Middle Wools of pure bred, Native Stock,
including South Downs and other pure
breeds of Middle Wools.*

218. To R. H. Dulany and Thos. L. Farish, divided, best Ram,	20
219. To R. H. Dulany and Thomas L. Farish, divided, second best,	10
220. To R. H. Dulany, of Loudoun, pen Ram Lambs, 4 in number,	15
221. To R. H. Dulany, of Loudoun, best pen Ewe Lambs, 3 in number,	30
222. To R. H. Dulany, of Loudoun, second best,	15
223. To R. H. Dulany, of Loudoun, best pen Ewe Lambs, 4 in number,	15

CLASS 48.

*Imported Middle Wools, including the above
varieties.*

225. To R. H. Dulany, of Loudoun, best Ram,	30
226. To R. H. Dulany, of Loudoun, best Ewe,	30

CLASS 49.

Middle Wool Grades.

227. To Dr. Jno. R. Woods, of Al- bemarle, best pen Ewes, 3 in number,	\$30
228. To Frank G. Ruffin, of Ches- field, second best,	15
229. To Frank G. Ruffin, best pen Ewe Lambs, 4 in number,	10

CLASS 50.

*Long Wools of Native Stock, including
Bakewell, Leicester, Cotswood, or New
Oxfordshire and Lincoln.*

230. To Dr. John R. Woods, of Al- bemarle, best Ram,	20
231. To Dr. John R. Woods, of Al- bemarle, second best,	10
232. To Dr. John R. Woods, of Al- bemarle, best pen Ram Lambs, 4 in number,	15
233. To Dr. John R. Woods, of Al- bemarle, best pen Ewes, 3 in number,	30
234. To Dr. John R. Woods, of Al- bemarle, second best,	15
235. To Dr. John R. Woods, best pen Ewe Lambs, 4 in number,	15

CLASS 52.

*Long Wool Grades, including Crosses of
the above Breeds and Natives.*

239. To G. W. Hackett, of Louisa, best pen of Ewes, 3 in number,	30
240. To Edmund Fontaine, of Han- over, second best,	15

SWINE DEPARTMENT.

CLASSES 34 AND 35.

Reports on these two classes have been referred to the Executive Committee of the Central Agricultural Society of Virginia, but no action has yet been had upon them.

POULTRY DEPARTMENT.

CLASS 55.

Gallinaceous Fowls.

262. To W. J. Hubard, of Henrico, best pair Game,	5
263. To J. G. Turpin, of Petersburg, best pair Spanish Black,	5
264. To Mrs. Johnson, of Henrico, best pair White Dorkings,	5

268. To J. G. Turpin, of Petersburg, best pair Black Hamburg, \$5
 269. To W. S. Chandler, of Henrico, best pair Dominiques, 5
 279. To Mrs. Wall, of Henrico, best pair Silver Polands, 5
 272. To W. J. Binford, of Hanover, best pair White Crested Polands, 5
 273. To W. A. Dunnaway, of Henrico, best pair White Bantams, 5
 274. To D. M. Miller, of Richmond, best pair Black Bantams, 5
 275. To W. S. Britton, of Henrico, best pair Mongrels, 5
 276. To Jackson Bolton, of Richmond, best pair Capons, 5

CLASS 56.

Ducks.

277. To J. G. Turpin, of Petersburg, best pair Aylesbury, 5
 278. To J. G. Turpin, of Petersburg, best pair Java, 5
 279. To G. A. Carter, of Henrico, best pair Muscovy, 5
 281. To W. J. Binford, of Hanover, best pair Rouen, 5
 282. To Mrs. B. Slade, of Richmond, best pair Mongrel, 5

CLASS 57.

Geese.

283. To J. G. Turpin, of Petersburg, best pair African, 5
 284. To J. G. Turpin, of Petersburg, best pair Bremen, 5
 285. To Mrs. Dr. Johnson, of Henrico, best pair Hong Kong, 5
 286. To Washington Jones, of Hanover, best pair Mungrel, 5
 287. To George Palmer, of Richmond, best pair Wild, 5

CLASS 58.

Turkeys.

288. To Dr. J. E. Williams, of Henrico, best pair Domestic, 5

CLASS 59.

Guinea Fowls, Pea Fowls, &c

290. To W. S. Britton, of Henrico, best pair Guinea Fowls, 5

291. To Mrs. B. W. Green, of Henrico, best pair Pea Fowls, \$5
 293 To Geo. Palmer, of Richmond, best collection Pigeons, 5

FARM AND GARDEN PRODUCTIONS.

CLASS 61.

Manufactured Tobacco.

297. To W. B. Ross & Co., best specimens for general home consumption, \$30

CLASS 62.

Flour, Grain, and Corn.

298. To W. W. Dabney, King William Mills, best barrel Flour, \$10
 299. To M. Blair & Co., Slate Hill Mills, second best, 5
 300. To Dr. A. J. Terrill, of Henrico, best bushel of Wheat, 10
 301. To G. H. Dillard, second best, 5
 303. To Garland Hanes, of Henrico, best bushel of Oats, 5
 305. To W. B. Sydnor, of Hanover, best bushel shelled white Corn, 5

CLASS 64.

Beverages.

320. To Miss Julia E. Turpin, best specimen of Domestic Wine, other than Grape, \$10
 321. To Joseph Sinton & Son, best barrel of Cider, 15

CLASS 65.

Fruit and Fruit Trees all raised by the Exhibitor on this side of the Potomac, and suitable for Southern cultivation.

322. To H. B. Jones, best and largest variety of Apples, each labelled with its name, \$20
 323. To Joseph Sinton & Son, best and largest variety of Pears, each labelled, 15
 325. To Franklin Davis, best and largest collection of Apple Trees, 10
 326. To Joseph Sinton & Son, best and largest collection of Pear Trees, 10
 327. To Franklin Davis, best and largest collection of Peach Trees, 10

- 328. To Joseph Sinton & Son, best specimen Fig Trees, \$5
- 329. To Franklin Davis, best collection Grape Vines, 5
- 330. To John Stransbury, best collection Strawberry Plants, 3
- 331. To Joseph Sinton & Son, best collection of Raspberry Plants, 3
- 333. To Miss A. C. Rennie, best bushel of Dried Apples, cured by the exhibitor, 3
- 334. To Mrs. R. H. Dibrell, best and largest collection native Grapes, 10

HORTICULTURAL DEPARTMENT.

CLASS 66.

Flowers.

- 338. To James Guest, best and largest collection choice plants, \$10
- 340. To J. Morton, best and greatest variety of Dahlias, 5
- 341. To James Guest, best 12 Dahlias, 2
- 342. To James Guest, best and greatest variety of Roses, 5
- 343. To James Guest, best 25 Roses, 2
- 344. To James Guest, best and largest collection of Crysanthemums, 3
- 335. To J. Morton, best Floral Ornament, 5
- 348. To Franklin Davis, best and largest collection of Evergreens, 5
- 349. To Franklin Davis, best and largest collection Flowering Shrubs, 5

CLASS 67.

Vegetables of Virginia Growth.

- 350. To S. Chamberlain, best and largest assortment table vegetables, \$20
- 351. To William Smith, best half dozen Long Blood Beet, 2
- 352. To J. W. Bevridge, best half dozen heads Cabbage, 2
- 353. To Thomas Bruton, best half dozen Cauliflower, 2
- 355. To William Smith, best half dozen Carrots, 2
- 356. To S. Chamberlain, best half dozen Egg Plants, 2
- 357. To Geo. H. King, best peck Onions, 2
- 358. To William Smith, best half dozen Parsnips, 2

- 359. To A. Schaad, best bunch Celery, \$5
- 360. To John Gordon, best bunch Salsify, 5
- 361. To Thos. Bruton, best bushel Irish Potatoes, 5
- 362. To David Moore, best bushel Secwt Potatoes, 5
- 363. To S. Chamberlain, best acre Irish Potatoes, 268½ bushels per acre, 25

DOMESTIC DEPARTMENT.

CLASS 68.

Butter and Cheese.

- 365. } To Mrs. Edwin Hill of Han-
- 366. } over, \$20, and Mrs. W. H. Saunders of Henrico, \$20, best specimen of fresh Butter, not less than 10 pounds, 1st and 2nd premiums, united and divided between them, \$40
- 367. To Mrs. T. J. Hansberger of Rockingham, best firkin or tub of salted Butter, nor less than 6 months old, of 40 pounds or more, \$25
- 369. To Mrs. M. J. McCue, of Augusta, best Cheese, not less than 20 pounds, 10
- 370. Second best divided between lots 6 and 14, 5

CLASS 69.

Honey, Bee Hives, and Bacon Hams.

- 371. To A. S. Maddux, Chesterfield, best specimen of Honey, nor less than 10 pounds, \$5
- 372. To A. S. Maddux, Chesterfield, best Bee Hive, Phelps' patent, 10
- 373. To R. O. Haskins, Richmond, best Ham, cured by exhibitor, 8
- 364. To S. W. Ficklen, Albemarle, second best, 4

CLASS 70.

Domestic Manufactures.

- 367. To Young & Winston, N. C., best and largest variety of Woolen Goods manufactured in any other slave State, if of equal quality to those manufactured in Virginia, to be labeled with a descriptive commercial name, &c., \$50

CLASS 71.

Household Manufactures.

278. To Mrs. Lorraine, Richmond, best Bed Quilt,	\$5	406. To Miss M. Carr, second best,	\$6
379. To Mrs. E. Brock, 2nd best,	3	408. To Miss Warren, second best specimen Leather Work,	6
380. To Mrs. Burton of Madison, best Counterpane,	5	409. To Mrs. E. T. Morris, best specimen Knitting,	8
381. To Mrs. R. A. Mills of Richmond, 2nd best,	3	410. To Mrs. Mickell, of Prince Edward, second best,	6
382. To Mrs. T. E. Bush, best home made Blankets,	5	411. To Mrs. P. Woolfork, best specimen Netting,	8
383. To Mrs. T. B. Anderson, best home made Carpet,	5	412. To Miss E. P. Gray, second best,	6
384. To Mrs. H. E. Johns of Buckingham, best home made Hearth Rug,	3	413. To Miss K. Vanderverter, best specimen Needle Work,	8
385. To Miss T. C. Harrold, best home made Curtains,	5	414. To Miss M. E. Rennie, second best,	6
388. To Miss H. J. Turner, Louisa, best fine long Yarn Hose,	5	415. To Mrs. J. C. Burton, best made Shirt,	8
389. To Miss H. J. Turner, Louisa, best fine long Cotton Hose,	5	416. To Mrs. R. Sheppard, second best,	6
390. To Miss C. Tally of Hanover, best Silk Hose of home made Silk,	5	417. To Mrs. B. W. Green, most extensive variety of Useful, Ornamental and Fancy Work, not excluding articles which may have had premiums awarded to them under the above specifications, a premium of.	10
391. To Mrs. Mary Waddell, best 5 lbs. Maple Sugar,	5		
392. To Mrs. John P. Tabb, best home made Family Bread,	5		
393. To Miss S. P. Bigger, best home made Pound Cake,	3		
394. To Miss S. P. Bigger, best home made Sponge Cake,	3		
395. To Mrs. William Willis, best and largest variety home made Pickles,	3		
396. To Mrs. B. W. Green, best and largest variety home made Preserves,	3		
397. To Miss Julia A. Turpin, largest variety, and best home made fruit Jelly,	3		
398. To Mrs. William Miller, best 5 pounds home made Soap,	5		

CLASS 72.

Ladies' Ornamental and Fancy Work.

399. To Miss A. E. Dudley, best specimen Embroidery,	\$8		
400. To Mrs. Peter C. Warwick, second best,	6		
401. To Mrs. John Allen, best specimen Worsted Work,	8		
402. To Mrs. E. Semmes, second best,	6		
403. To Miss M. E. Gordon, best specimen Crotchet Work,	8		
404. To Miss E. P. Gray, second best,	6		
405. To Mrs. S. H. Burton, best specimen Shell Work,	8		

CLASS 73.

Servants' Premium.

419. To Ira T. Carlton, best dozen Baskets of Virginia grown materials,	5
423. To Corbin Street, best Straw Chair,	5

MECHANICAL DEPARTMENT.

CLASS 74.

Ploughs, Cultivators, &c.

425. To P. H. Stark, Richmond, best 3 or 4 horse Plough,	10
426. To P. H. Stark, best 2 horse Plough,	10
427. To P. H. Stark, best 1 horse Plough,	5
428. To P. H. Stark, best Shovel Plough,	5
429. To George Watt, best Subsoil Plough,	5
430. To P. H. Starke, best New-ground or Coulter Plough,	5
431. To George Watt, best Hillside Plough,	5
432. To H. M. Smith, best Water-furrow Plough,	5
435. To H. M. Smith, best Cultivator for corn and tobacco,	5
436. To H. M. Smith, best Cultivator for 2 horses,	5

CLASS 75.

Drills, Broad-Casters, &c.

437. To Bickford & Huffman, best Broad-Casting Machine for sewing grain or grass seed, \$10
 438. To J. R. Black, by Cardwell & Co., best Wheat Drill, with Guano Attachment, 40
 439. To A. P. Routt, best Corn Planter, with Guano Attachment, 10
 440. To Dr. J. R. Garnett, best Implement for sowing and covering peas among corn, at or immediately following the last tillage, either with or without guano, 15
 442. To H. M. Smith, best Turnip Drill, 3

CLASS 76.

Wagons, Carts, Harness, &c.

443. To C. D. Flynn, of Lynchburg, for Self-Adjusting Brake, on wagon, for farm use, being a valuable implement, deemed worthy of premium, 20
 446. To H. M. Smith, of Richmond, best Wagon Body, or Ladder, for hauling wheat in the sheaf, or hay, or straw, 5
 447. To G. Kann, best and most numerous collection of Saddles, Bridles, Collars, Hames, Harness, &c., 25

CLASS 77.

Farm Gate, Horse Powers, Threshers, &c.

449. To Leonard S. Treat, best Farm Gate, including best Hinge-Fastenings, &c., 10
 450. To John Haw, of Hanover, best simple Horse Power, 25
 451. To C. C. Welford, of Fredericksburg, best Threshing Machine, 30

CLASS 78.

Straw, Root Cutters, Corn-Shellers, &c.

453. To H. M. Smith, Richmond, best Hay or Straw Cutter, 10
 455. To Shinn & Taylor, best Grist Mill, for horse-power, 10
 457. To John Haw, Hanover, best Saw Mill, for farm use, 10

CLASS 79.

Hay Press, Fan Mill, &c.

460. To H. M. Smith, best Hay Press, 15

461. To Montgomery & Bro., best Fan Mill, (Rockaway,) \$10
 464. To H. M. Smith, best Horse Rake, for Hay, 5

CLASS 80.

Machines and Implements.

466. Divided between H. M. Smith, \$25, and John W. Cardwell, & Co., \$25, for the most extensive and valuable collection of useful Machines and Implements exhibited and made at any one factory in Virginia, whether including subjects for other premiums or not, 50

CLASS 81.

Carriages and other Vehicles.

467. To G. A. Ainslie, Richmond, best and most numerous collection and variety made in Virginia, 50
 468. To R. H. Boshier, best 2 horse Family Carriage made in Virginia, 25

CLASS 82.

Miscellaneous.

469. To Daniel O. Donnell, Richmond, best Pump adapted to deep wells, 10
 470. To Sampson & Pae, Richmond, best Lifting and Forcing Pump, 15
 471. To Salem T. Lamb, best improved Churn, 10
 472. To Wilcox & Gibbs, per Geo. Darby, Agent, best Sewing Machine for general use, 15

CLASS 83.

Agricultural Steam Engine, Steam Plough, Steam Saw Mill.

476. To Joseph R. Anderson & Co., best Steam Engine, applicable to agricultural purposes generally, as a substitute for horse power, \$100

CLASS 84.

Reaping and Mowing Machines.

479. To McCormick, best Reaping Machine, 50
 480. To C. Dimmock, Richmond, best Rake and Reel, for combination with Reaper, 20

CLASS 86.

Minerals of Virginia.

482. To Oswald Henrich, of Richmond, best collection and largest variety Minerals, \$30

CLASS 87.

Trials of Ploughs and Ploughing Match.

483. { To Geo. Watt & Co., \$20, } 20
 { and P. H Stark & Co., 20, }
 { equally divided for the best }
 484. { 2, 3 and 4 horse Ploughs, } 20
 485. To William Shepperson, Hen- 10
 rico, best Ploughman with horses,
 486. To R. M. Courtney, second best, 5
 487. To W. C. Allen's man, Lee, 10
 best colored Ploughman,
 489. To B. W. Haxall's James, 2nd 5
 premium,



The Southern Planter.

RICHMOND, VIRGINIA.

Our Union Fair.

The joint exhibition lately held in this city, by the *Virginia State* and the *Central Agricultural Societies*, was the very best show, (in all its departments,) of this kind, that we have ever had the pleasure of attending. The weather was lovely, and as genial as spring. The absence of even a threatening cloud during the whole progress of the Fair, seemed to indicate that Heaven itself smiled upon the assemblage of orderly, courteous, *good looking* gentlemen and ladies, who were there engaged in the laudable purpose of promoting the Agricultural and Mechanical interests of our beloved old State. Good nature shone on every face, and all that vast crowd of attending visitors seemed to vie with each other in courtesy, and that gentle spirit of kindness, which everywhere is recognised as the distinguishing mark of Nature's noblemen.

The scene upon the Fair Grounds was one of which any State might be proud; and the fact that we had amongst us as visitors and exhibitors, some of the best citizens of our sister States—while the magnificent display of animals, machinery, and other articles evincing ingenuity, taste, and industry on the part of exhibitors, was brought about by the joint action and harmony of our two Societies, proved, if proof was wanting, that "*in union there is strength.*"

The merits of many of the animals competing in the various classes for premiums, were so closely balanced, as to make it often a very difficult matter on the part of Judges to decide between them—notwithstanding which, the *defeated* kept up their spirits and good humor in an unusual degree, and determined to "pick flint and try again."

Perhaps *the best display in any department*, was in that of the Horses. Every stall was filled, and among them were some of the most superb specimens of horse-flesh that ever we saw. "Every man thinks himself a judge of a horse," says an old proverb, and we only claim for ourselves those rights which other people have. Therefore, we don't expect to be contradicted when we assert that the show of horses would be very hard to beat by a similar number in any country.

We intended to say something of *particular* animals, which greatly excited our admiration; but since the Fair was held, we have received a communication from a subscriber on this very head, which expresses our views; we endorse it, and publish it here:

"It is conceded that the exhibition of horses was superior to that at any previous Fair in the State, and it would probably not exceed the truth to say that it was equal to any ever seen in the United States. The equine tribe was certainly represented by many of the noblest developments of its various types. In the class of thoroughbred, with his coat of satin, his bones of ivory, and his sinews of steel, justly regarded the very basis of all real improvement in horse breeding, were some noble specimens—the beautiful Deucalion, considered the very refinement of thorough breeding, Trojan, Eugenie, Pauline, Crinoline, and others of less note. In the class of coaching horses were several specimens of the Cleveland stock, combining great power with fine action, and prominent among them was the last importation of Dr. John R. Woods, of Albemarle, called Symmetry. A horse of more imposing appearance, or more majestic carriage, I have never seen. He impresses the observer with a sense of his combined strength and activity, and his perfect adap-

tation to all purposes of heavy quick draft. There was the real Yankee horse, "Black Hawk," represented by as noble looking specimens as my eye ever rested upon, belonging to Mr. Ficklen, of Albemarle, and "Kossuth," the property of Mr. Smith, of *your city*, together with many of his colts—(9) nine of which received premiums—and a horse of wonderful size, representing the old English cart-horse, suited to extremely heavy slow draft.

"Among the noted brood mares was old Katy Darling, the property of H. M. Foulkes, of Chesterfield, considered to combine as much of excellence as can be brought within the compass of a medium-sized animal. At this Fair she scores down her fifth prize—never having known defeat in the class of brood-mares for saddle;—with her were her family of three colts, every one a first prize animal. Her first produce, Hampton, the magnificent two year old, stands full sixteen hands, a model of elegant proportion, and is full of action of every kind. He represents what is known in England as the high-bred weight-carrying hunter, equal to any weight, for any distance, over any country. Her second is a superb filly by Red Eye, of exquisite beauty; and her youngest, now at her side, a truly light and graceful thing, a scion of the "picture horse," Ticonderoga Black Hawk, the winner of more first prizes than any horse of his day.

"Without professing to be a prophet, I venture the prediction, that in ten years from to-day, Virginia will be able to boast the finest stock of horses of all kinds in the world. From the character of her present stock, and the enterprise of her amateur breeders, such must certainly be the result."

We were glad to see among the descendants of "Cleveland Bays," colts of great beauty and promise, as we frankly confess that our impressions of the first of the kind we ever saw were not favorable to them. We supposed the Cleveland would prove too heavy and large for the wants of the present "fast" age—but we were in error, we now believe, since we saw some splendid colts, (sired by Cleveland Stallions,) which were said to be out of ordinary mares.

We think our breed of Coach Horses will be greatly improved by their introduction to this country; and we are very anxious to see the cross made between them and our Morgans and Black Hawks, as we should expect from such a cross, size, style and speed. The stallions seem to be remarkably docile and gentle. "Symmetry," the fine stallion spoken of by our correspondent, the property of Dr. John R. Woods, of Albemarle, made his appearance in our Horse Ring in harness.

He had harness put on him for the first time, just one week before the Fair commenced, after having made a season.

He was hitched up and driven off in our presence, and worked straight along without a caper. He wanted scarcely any breaking, and we were never more surprised than when we saw a horse of such extraordinary size and power submit to being harnessed, handled and driven by a stranger, without showing some ill nature or vice.

The "Black Hawk" stock had representatives on the ground which well maintained their claims to deserved popularity.

Mr. Dulany's "Lady May"—a three year old—we thought the *best filly we ever saw*; nor were we alone in our judgment of her, as she combined size, beauty, action and speed enough to strike the attention of any man, "who knows a horse when he sees him."

The show of *Durhams* and *Devons* was fine. We have seen before a larger number of the former on exhibition—but what they lacked in number was more than made up by their superior quality.

It was a very difficult matter for the Judges to decide between the contending *Devons*. We have never before seen so great an array of beauty in this class.

We give the names of prize-winners in the Premium List, which is published in the present number. Among our *Virginia* friends who were exhibitors, we noticed some *very* superior animals.

Dr. George B. Dillard's bull, "Duke of Hanover," and cows, "Malibran" and "Norma," would be hard to beat at any show of animals of similar ages. Wm. Allen's "Beauty," (rightly named we think,) S. S. Bradford's "Henry Clay," Alex. Garrett's "Herod," Dr. P. B. Pendleton's "Virginia," were all prize winners and of *native* stock, while Mr. T. J. Carson had two superb *imported* animals, which received the same honors in their class.

Mr. Merryman, of Maryland, had a herd of *Herefords*, which we thought the finest animals of this breed we had ever seen. The sight of them gave us almost as much pleasure as we presume they would have given Mr. Sotham, of N. Y., who has for a long time disputed with the breeders of short-horns their claims of superiority over this breed.

Mr. J. H. McHenry, of Maryland, had both *Devons* and *Alderneys* of such quality that he might afford to brag over them, did not his gentlemanly modesty prevent him. We heard *Devon* breeders praise his stock very highly—but as we were more interested in the *Alderneys*, we

examined them much more closely, and observed some bulls and heifers which we thought very superior—his young bull, "*Figaro*," especially.

Mr. P. Johnston and S. S. Bradford, Esq., of Virginia, also exhibited *Alderneys*, which were winners of prizes. We are glad to see on our show grounds good specimens of so many different breeds of animals, as it is evidence of a growing spirit of observation and experiment which proves our agriculturists are wide awake to the importance of constant efforts at improvement, which must be productive of benefit to them finally. Mr. Bradford had a cow from Kerry county, Ireland, which was a remarkable animal, and attracted much attention. She is almost as broad as she is long, and has *very short legs*. She gives a large quantity of rich milk, and is very valuable for dairy purposes.

Messrs. Kuhn & Martin, of Henrico Co., exhibited their splendid bull, "*Mazeppa*," whose towering size, graceful carriage, and general beauty, makes him not only a curiosity, but as noble a specimen of the Bovine race as any man ever saw. This bull weighs nearly 3,000 pounds, and yet as active as a calf. He is out of the Khaisi cow imported by Lieut. Lynch from the vicinity of the *Dead Sea*, and was sired by a fine Durham from the herd of Col. L. G. Morris, of N. Y. The Khaisis make very valuable oxen, and from what we have seen of them, we think highly of the grades as milkers.

The *number* of sheep on the ground was not as large as usual—but in this department, too, the *quality* was as good as it could be. Messrs. Bradford, Dulany, Ruffin and Dr. Woods were the principal exhibitors in this department.

The display of machinery was unusually good, but the limits of this article will not allow us to speak very particularly of it. We present to our readers wood cuts and explanations of two valuable and new inventions, viz: the Portable Fence, which can be made straight, crooked or round, and a Rat Trap, which is as curious as useful.

W. E. Rider, of New York city, exhibited some magnificent specimens of Paraffine Candles. Candles made from the products of Virginia coal, as clear and as lard as glass, giving a light, it is said, equal to two of the very best sperm candles, and lasting as long, *etc., etc.* They are for wholesale by I. & G. B. Davenport, of this city, and retailed at all the respectable grocery stores throughout Virginia.

Patent Packages for holding spices, seeds, teas, coffee, &c., &c., attracted a great deal of attention. All the old ladies that were good housekeepers, and all the young ladies that had a view of eventually becoming good housekeepers, admired those boxes very much. Thomas Bruton astonished the people exceedingly with some samples of "solidified milk" from the manufactory of the American Solidified Milk Company, Dutchess county, N. Y. We tried it in our coffee, and make no hesitation in saying, that on sea or in large cities, where good milk is difficult to be had, it must indeed prove a very useful invention. Spalding's prepared glues, in bottles of varied sizes and hues, looked very nice.—French's Conical Washing Machine was much admired for its simplicity and solidity of construction.

In taking leave of the exhibition, we cannot refrain from the expression of our admiration for the courtesy and continued good humor of the officers superintending it, who, although subjected to many questions, interruptions, and *botherations*, were not in a single instance unmindful of the most genuine politeness and kindness.

We trust that the Chief Marshal, (Capt. Dimmock,) will fill the same post for many years to come.

The Close of the Year.

With this number, the twentieth year of the "The Southern Planter's" labors to promote the interests of the Farmer and Mechanic closes, and it enters upon its "majority."

We disclaim for it any of that feeling which animates the bosom of "Young America," and makes him anxious to throw off the counsels and assistance of surrounding friends. On the contrary, as it approaches "the years of discretion," it more highly appreciate the sympathy, the advice and support of those friends who have cheered it on during the "burden and heat" of the days through which it has passed; and who have lightened its toils by the bestowal of "gentle words and loving smiles."

To these we say, "deal gently with the young man," and help him go on in a path of usefulness, which he has no wish to leave. Let him feel that there are those for whose sakes it is worth while to work, and who feel that "the laborer is worthy of his hire."

The Editor begs to assure the patrons of the paper, that no effort of his shall be wanting to make it worthy of the confidence and support of

the farmers of the country—particularly those of the South. A farmer himself, he is directly interested in all that concerns his brethren, and he never asks one of them to follow in any matter where he is afraid to lead. He believes that the arrangements made for conducting the paper during the next year, will greatly add to its usefulness and interest; and he earnestly appeals to its friends for their zealous co-operation in his efforts to increase its circulation.

Major Wm. Gilham, Professor of Agriculture, in the Virginia Military Institute, at Lexington, will be associated in the editorial control of the Planter.

The Major has been so long and favorably known to the citizens of our State, as an accomplished, faithful, and energetic teacher and writer, that we deem it unnecessary to add a word more in relation to the arrangement, except to express our personal satisfaction at the prospect of so pleasant an association—but let him speak for himself in our January number.

Sombrero Guano.

See the advertisement in our advertising sheet, of this Guano, furnished by Mr. Elliott, of Baltimore, to *Messrs. Edmond, Davenport & Co., of this city*, who are not only engaged in selling it, but have used it successfully on their own farm near Richmond, for several years past.

Errata.

In the article on the low grounds of Virginia, the reader will please make the following corrections.

Page 706. Strike out "chowan" occurring in the fourth line from the top of first column. In the 18th line of second column, same page, for "position" read positive.

Page 707, 5th line of second column, for "years" read acres. Insert "our" before Territory near the close of the next paragraph. In the 7th line of the next paragraph after, the words "proved good or," insert injured by, which the reader will see is necessary to make out the sense in which the author intended to speak.

"GARDENER'S MONTHLY."—See the Prospectus of this valuable monthly periodical in our advertising sheet. It is just such a paper as Gardeners and Florists ought to have.

Big Potatoes and Turnips.

We tender our thanks to our friend and neighbor P. W. Grubbs, Esq., for some very fine Potatoes and Turnips—the former of which (planted late in June,) weighed *twenty ounces*—the latter, (planted late in July,) weighing, with the tops, 9 lbs.

We are every year trying our best to beat him farming, and although we have not succeeded, we are glad to see that he bears us no malice for the effort. In view of the big Potatoes and Turnips which he *has* this year raised, and the improvements we *expect* to make in our farm, we cannot help thinking that we "retired pill-makers" are "some" at farming—anyhow.

E. H. Crane's Revolving Self-Setting Animal, Game and Rat Trap.

Among the most attractive features in the mechanical department of our late Fair, was the Rat Trap which is named at the head of this article. It is thus described in the business card of the proprietors:

When this Trap is set, it will catch a Rat, kill him, throw him away in a box, and set itself for another and so continue to do until it has caught *fourteen*, without re-setting by hand.



Messrs. Fisher & Burt are the assignees of the inventor, and are prepared to sell State and County Rights. They have made arrangements for the manufacture and sale of their Traps in this City.

We have thought proper to introduce it to our readers, because we think it likely to become a public benefit by its general use.



Vandenmark's Self-Fastening, or Hook and Eye PORTABLE FENCES. Patented June 2d, 1857, and July 27th, 1858.

By CHARLES VANDEMARK.

For description see Advertising Sheet.

Rural Affairs.

The popular and accomplished Editors of *The Country Gentleman*. (Messrs. Luther Tucker & Son, of Albany, N. Y.) have issued the edition of this valuable little work for 1861.

We have several times before called the attention of our friends to the merits of this publication, which should be in the hands of every farmer and house-keeper.

We say now, buy a copy of it every year, and our word for it, you will never regret it. Price 25 cents.

The following "Kossuth" colts received premiums at our late Fair:

Dr. Howlett's 1st premium, John Rowlett's 2d premium, Dr. W. H. Macon's 1st premium, John H. Tembulake's 1st premium, T. E. Dillard's 2d premium, R. B. Haxall's 2d premium, James Walker's 1st premium, Geo. W. Dillard's 2d premium, John Hanger's 1st premium, John R. Allen's 1st premium.

Also two yearling colts by "Sultan" received premiums.

Well done neighbor Smith. We congratulate you on your stock.

From the Valley Farmer.

Adornment of Home.

Home has a meaning and intention beyond the simple necessities of life. It is made, or ought to be, for something more than a place to eat and drink and sleep. It is for cultivation, pleasure, rational enjoyment, and improvement. Cultivated man generally exhibits some taste about home. It is generally the index to his degree of cultivation. The savage leaves his home unadorned. The barbarian deems it unworthy of him to study for rational adornments of his home; or even for ordinary comfort.

Just as civilization advances taste exhibits itself in the homes of the people. A cultivated mind craves a beautiful home. And what makes a beautiful home? It is not wealth, for we have just been told of a man worth \$250,000, who never had a chair in his house, or rather hovel. He and his sat on rude stools. It is not professional honors, nor learning, nor talent, that makes home beautiful; for we have seen all these in homes disgusting to every idea of taste, or order, or neatness. It is what is around and within our home, that makes it beauti-

ful—the evidence of taste, refinement and culture that encircles it. A home must have some things about it, or it cannot be tasteful, it cannot be beautiful, cannot be in the highest degree pleasant. The first of these is *order*. There must be order in the arrangement in the buildings. They must be situated in proper relation to the points of compass. A house that faces no way in particular, neither north, south, east or west, is sadly out of order, unless the road or street, or hills or valley, or stream, or some other prominent natural object, be so important as to be its regulator. When a house is orderly established with respect to the points of compass or the scenery about it—the next thing is to have the land immediately around it so graded as to carry off all water and look pleasantly to the eye. Then the fences about the house should square with the house and other buildings. They should be neat, trim,—the best of their kind—made both with respect to convenience and good taste. Fences may be cheap and in good taste, or expensive and out of taste. The yards, gardens, &c., about a home, when neatly fenced add greatly to its appearance. Fine fences beautify a farm, and especially a home. When kept in good repair, painted or white-washed, free from a hedgeway of weeds, briars, thistles, brush-wood, &c., they remind every passer-by of thrift, taste and happiness within. The next point of importance is walks to the road, garden, yards and out-buildings. They are easily made, and when neatly made and well arranged, add greatly to the beauty of home. A puddle of water, a mudhole, or any such pestiferous obstruction in a frequented path or walk about a farmer's home is a great annoyance, and reflects seriously on his good taste and good sense. The walks made, trees and shrubbery are wanted. Trees along the road, trees about the yards, and shrubbery about the house, are so natural, so grateful to the eye, so musical to the ear, so delicious to the taste, that a home without them scarcely deserves the name. We would not have it all trees about a home. That would create too much dampness. But just trees enough to make a sprightly contrast between sunshine and shade, between heat and cold.

But trees are not enough. There should be vines—an abundance of vines, those beautiful emblems of affection about every home. A home without vines, is like a man

without a wife, or a bird without a mate. It wears a look of desolation. Vines come creeping about so lovingly, grow so thriftily, bloom so profusely, can be trailed into so many beautiful forms, and are withal so fresh and fragrant, that they should be about every home, to remind its inmates of industry, sprightliness and affection.

Then come the flowers, close along the walks, beside the doors, under the windows, in the corners of the fences, sprinkled in profusely, and yet orderly, so as to give an idea of finish, as well as of beauty and happiness. A home without flowers! No, let it not be. Let every woman, every child with tiny hand and growing taste, plant flower seeds and roots in little nooks and recesses and beds, where they can as well grow as not. They love to grow and blossom. Who does not love to see them? Let the buildings all be painted, then let the flowers challenge them to a contrast of colors. When all is in order, let it be kept in order. And when the outside is beautiful, let the inside be, with order, neatness, comfort, taste, virtue, peace, good will, love and happiness. *

Salt in Agriculture.

The application of two to four hundred pounds of salt to the acre has been found to be of great advantage in promoting the growth of all plants and trees. Warm soils of the inland districts, and especially those that have been dressed liberally with animal manure are the most benefited. A dressing of salt upon a grass lawn will often increase the growth and thicken up the plants far more than a coating of animal manure.—*Scientific American.*

BARRELS FOR FRUIT.—Everything in contact with fruit should be clean and sweet, and the vessel in which it is placed should be dry and tight. Old flour barrels should not be used, unless well washed and dried, as the particles of flour left in the barrel will mould and impart to the fruit an unpleasant odor and flavor. Old lime barrels, it is said, are excellent for this purpose—the lime absorbing the vapor and gases. If this is so, a little fresh slacked lime scattered on the bottom, sides and top of the barrel, would be beneficial.—*Genesee Farmer.*

The Land of Rest.

FROM THE GERMAN OF UHLAND.

There is a land where beauty will not fade,
Nor sorrow dim the eye;
Where true hearts will not sink nor be dismayed,
And love will never die.
Tell me, I fain would go,
For I am burdened with a heavy woe;
The beautiful have left me all alone;
The true, the tender from my path have gone,
And I am weak and fainting with despair;
Where is it? Tell me where?
Friend, thou must trust to Him who trod before
The lonely path of life;
Must bear in meekness, as He meekly bore,
Sorrow and toil and strife.
Think how the son of God
These thorny paths has trod;
Think how he longed to go,
Yet tarried out for thee the appointed woe;
Think of His loneliness in places dim,
When no man comforted nor cared for Him:
Think how he prayed, unaided and alone,
In that dread agony, "Thy will be done!"
Friend, do not thou despair,
Christ, in his heaven of heavens, will hear thy
prayer.

FOR CHILBLAINS.—Immerse the feet in salt water as hot as can be borne. Have a kettle of boiling water by you, and gradually increase the temperature by pouring it in. The feet will become puffy and swollen. Keep the feet in for half an hour or longer, and then wipe dry and go to bed, and it will be found that the soreness and inflammation have entirely subsided. Remember this, it is so simple and effectual.

DROPPED EGGS are probably the most healthful form in which they can be prepared for the table. Break the eggs very carefully into a pan of scalding water, and let the water come gradually to a boil, removing the eggs with a skimmer as soon as the white is set. Serve on a hot platter with a little salt, pepper and butter, or lay the eggs on hot buttered toast. For invalids, use cream instead of butter.

DURABILITY OF WOOD.—Cedar is the most durable of known wood, and the black ash is the next so. Posts of the red cedar have been found to be in a good state of preservation after having been in the ground fifty years. Fir will make good rails, lasting a number of years. Poplar, if cut in December, and the bark taken off the June after, will last fifteen or twenty years. It is a light wood when seasoned, and easy to be made into fence.

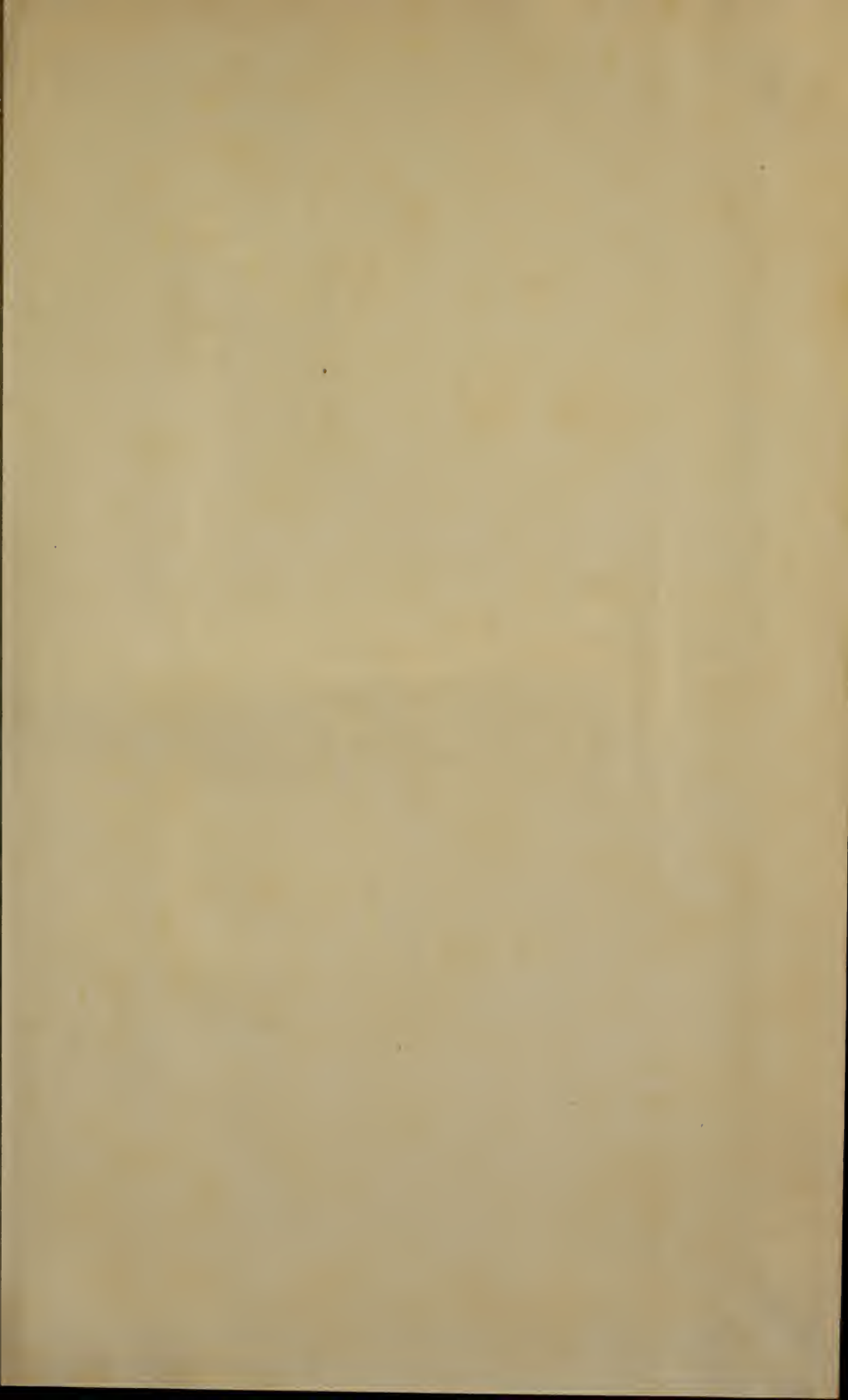
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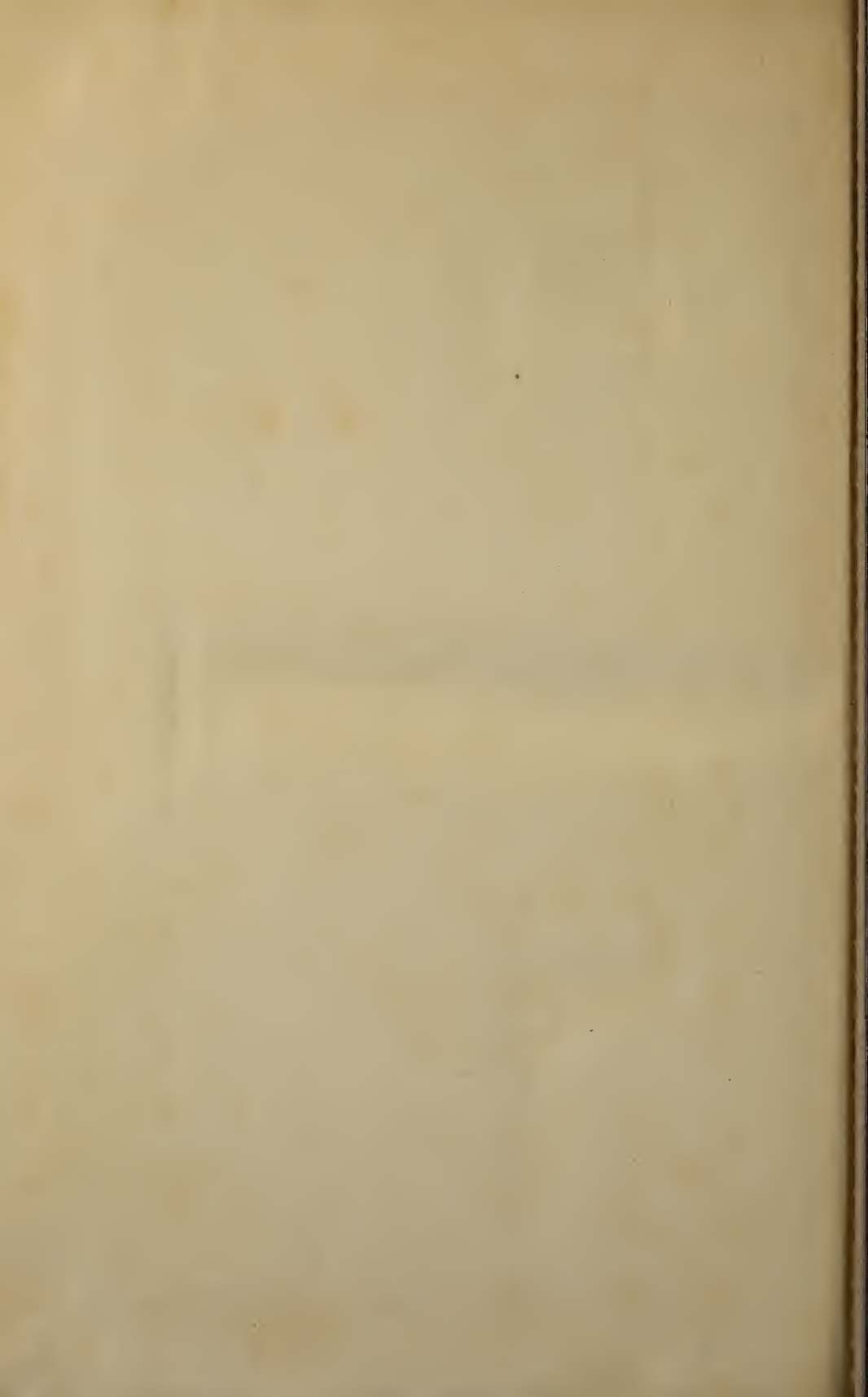
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