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THE

Sixty-Fifth Year.

# Southern Planter

A MONTHLY JOURNAL

DEVOTED TO

Practical and Progressive Agriculture, Horticulture,  
Trucking, Live Stock and the Fireside.

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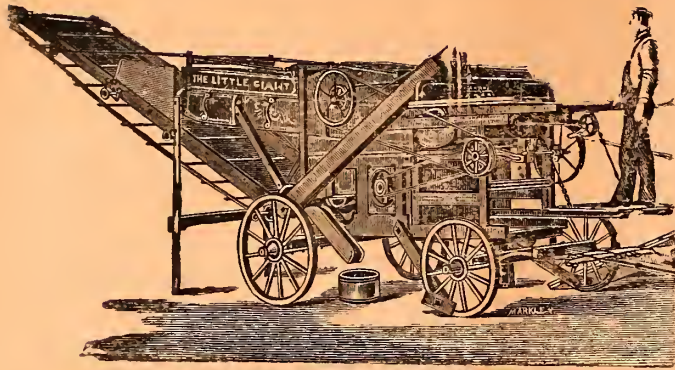
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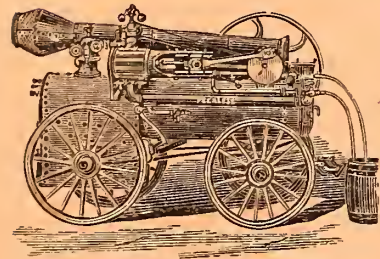
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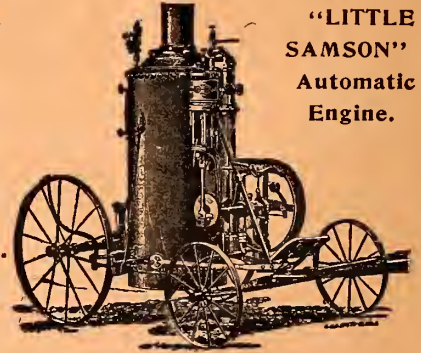
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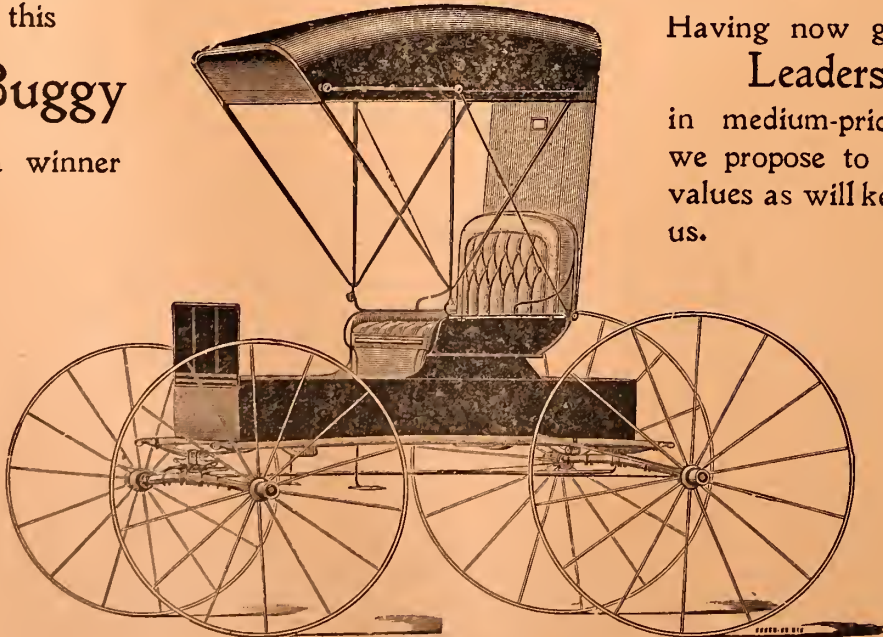
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Agriculture is the nursing mother of the Arts.--XENOPHON.  
Tillage and pasturage are the two breasts of the State.--SULLY.

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65th Year.

Richmond, November, 1904.

No. 11.

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## Farm Management.

### WORK FOR THE MONTH.

The month of October to the date of this writing (20th), has been a delightful fall month. The weather has been most seasonable, bright, clear days, with just a sufficient touch of crispness in the air to make working outdoors delightful and yet with no frost at night to cut vegetation except on two or three occasions, when it was cold enough to blacken tomato and sweet potato vines in the middle and western sections of the State, and on one night to do some slight damage to tender truck crops in the Eastern and Tidewater sections. The trees are still full of leaf and are only just beginning to show the autumnal tints, except upon the mountains, where these are now in their greatest glory. This fine month has done much to enable farmers to gather up the crops in good order and get them safely under cover, and has added thousands of bushels to the corn crop throughout the country. Probably this crop will now make something over 2,000,000,000 bushels, but will not be a record crop. In Virginia and the other Southern States it is probably the largest crop of corn ever made, as the area planted was larger and the yield is the highest. Virginia stands ahead of all the other States but one, in condition of the crop as reported by the government, and our information from all over the State goes strongly to confirm this. We will have plenty of corn, and probably a fair supply of hogs for all the people of the South this year, whilst for the live stock of all kinds an abundant supply of fodder has been saved or could have been with due diligence on every farm. Southern farmers will be able to observe Thanksgiving Day with heartiness.

The work of seeding the wheat crop should now be pushed to completion whilst the fine weather continues. The frost we have had will have reduced the danger of injury by fly to a minimum, and the seed should be got in as soon as the land is ready. We hear complaints from nearly all sections of the dry condition of the land, but this should not hinder seeding. It is always better to sow in dust than in mud. Some of the best crops of wheat ever made were seeded in a dust bed. If land has been well prepared, as it ought to have been during the weather we have had, the seed bed will have moisture sufficient in it to germinate the seed when properly sown, and well covered. Put the seed well down into the soil, giving at least two inches of cover and it will soon germinate even though we should not have rain for some time, and it is more than probable that after so long a dry time we shall soon get rain enough. If the land is not in fine condition do not hesitate to give more time to preparing it. Better work over again a rough field than prepare an additional field. We are anxious to see not only a larger wheat crop sown, but a larger yield per acre secured, but we would rejoice more in seeing a larger yield per acre than a larger acreage. The South ought to make every bushel of wheat that is consumed there and a surplus for export. At present she does not make the bread we eat. This year Virginia makes about 8,000,000 bushels of wheat, whilst to meet the needs of her population at the average rate of consumption of the country, she needs over 12,000,000 bushels. The other Southern States do even worse than Virginia. Whilst Maryland makes 12 bushels to the

acre, Virginia makes only 10, and North Carolina only 8 bushels to the acre. There is no reason whatever why we should not in this State make 25 bushels to the acre, and that without spending a dollar more for fertilizer. There are numbers of farmers all over the State who never make less than 25 bushels to the acre, and often make 35 and 40. Maryland, with no better land or climate, makes an average of 13 bushels to the acre, as against our 10. The great underlying cause of our small crop in the South is poor preparation of the land. Now that cow peas and the other leguminous crops are being so much more largely grown, there ought to be seen a change in the yield if only adequate preparation is given and lime is more generally applied. Legumes, lime and perfect preparation of the land should and will give a crop double the average one of the South. Sow only the cleanest and plumpest wheat and thus avoid growing weeds and stalks with heads without grain in them. The influence of the size of the seed is great on the yield. Sow an early maturing variety, so as to avoid danger from rust, which rarely becomes troublesome until after our earliest varieties have matured. Fultz and Fulcaster are both early maturing varieties. See to it that provision is made for carrying off all surface water quickly by water furrows wherever needed. Wheat cannot flourish with its roots in water. The world's wheat crop this year is a small one. We in this country have not a bushel for export, and already the effect of this is being seen in the European markets. From being the largest exporter of wheat to the English market we have already sunk into the second place, and are likely to go much lower this year. There is room for a large crop of wheat to be made without reducing the price materially, and wheat at present prices will pay if only such a crop is made as we can well make if we only prepare the land well. There is no money in making 10 bushels to the acre even at present prices, but there is money in 25 bushels to the acre, and this ought to be the lowest quantity aimed at. In our two last issues we discussed and advised on the fertilizer to be used where fertilizer is needed, and to these issues refer our readers. The main requirement of wheat is phosphoric acid, with also a moderate quantity of nitrogen, but we are strongly of opinion that the best time to supply the nitrogen is in spring as a top dressing, when the wheat commences its growth. Experiments have conclusively shown that wheat utilizes the fertilizer in the soil mainly when making the grain.

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Rye, wheat and English Vetches should be seeded

this month. This crop stands frost better than any other of the legumes, and makes fine spring pasture and a good green forage and hay crop, which can be saved in time to plant the land with corn. We have made heavy crops of this mixture, which came in very useful at a time when fodder was getting scarce in the barn in the spring. Stock do well on vetches, as they are rich in protein and the crop also improves the land very much, as the root growth is large, and it gathers nitrogen from the atmosphere very abundantly. Let all land possible not required for wheat and not growing other crops be seeded with the wheat and vetch mixture, or with rye when too late for seeding vetches and thus have something growing on the land to conserve fertility and keep it from washing and wasting. Sow 25 to 30 pounds of the vetch seed with three-quarters of a bushel of wheat or rye to the acre.

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Although we have had such splendid weather for housing crops all through the month of October, we yet see a very large quantity of produce of various kinds out in the fields which has long been in the finest condition for storing in barns, stacks or sheds. This is a condition of affairs on which we have to comment every year. Probably there is some improvement taking place, but we are yet far from exercising that care in the quick housing of crops that ought to prevail. Men spend months in preparing the land, seeding the crops, cultivating and harvesting them, and then sit down and watch them waste away with the weather, losing both weight and nutritive value when they might be safely housed. Surely a regard for the labor spent on them and for the money expended if not for the animals for which they are to provide the winter's food would induce greater attention to this subject. The risk of floods and storms is not heeded. Thousands of dollars worth of grain and fodder are washed away or otherwise lost every year in the South by neglect in housing crops as soon as ready. See to it that not a day be now lost in getting home all forage crops and in getting the corn into the crib. This fine weather cannot be expected to last much longer, and the cost, trouble and labor in housing crops in broken weather and hauling over water soaked land ought to be avoided. Farming can never be as profitable a business as it ought to be, and can be, whilst so much of value is lost every year by inattention to storing the crops as soon as ready. We would much like to see every crop of corn husked by machinery and the fodder run through the shredder at the same time and stored in the barn. The growing scarcity of labor

will compel this if the crop is to be saved at all, but it ought not to require this to ensure this course being taken. Where large crops are grown, it will pay a farmer to own his own husker and shredder, but where this is not practicable, then half a dozen adjoining farmers should join together and buy a machine and use it jointly. Threshing machine men ought to buy this outfit and carry it round from farm to farm and thus find work for their steam or horse powers after the wheat and oats are all threshed. In some sections this is being done, and is found of wonderful help to small farmers, who have their whole crop put into safe keeping and ready for feeding at little cost. No farmer has a right to complain that farming does not pay who allows his fodder and forage crops to waste in the field all winter. In our last issue we published a statement showing the value of the different parts of the corn stalk as feed, and its total value. This is so large a proportion of the value of the whole crop that the man who wastes it deserves no commiseration if he fails to make profit on his farm. Fodder well cured and shredded is as valuable as feed for stock as timothy or mixed hay, and will be as readily eaten by stock of all kinds.

All root crops should be dug or pulled as they mature and ripen and not be left for the frost to spoil them. Sugar beets and mangold wurtzel beets are quickly injured by frost, and when once frozen will not keep when stored. Turnips will stand a sharp frost without much injury to their keeping quality if the frost is allowed to get out of them by gentle thawing before they are pulled and stored. Ruta bagas will stand quite a sharp freeze without serious injury, and as they will make greater increase in weight during the cool weather of this month than during any like period in their growth they should not be pulled until the end of the month or even into December if the weather keeps mild. Pull and dig all root crops when dry and house them without leaving them exposed to the weather longer than necessary. We gave advice as to storing Irish and sweet potatoes in our last issue. Turnips, beets and ruta bagas keep well stored in a cool root cellar or made into pies and covered with straw and soil sufficient to keep out frost.

Old pastures which have begun to fail in yield may be given a new lease of life and usefulness by timely attention during open weather in winter and spring. Have all bushes and strong weeds grubbed out, and

then take a sharp toothed harrow and run it over the field in both directions lengthwise and across, thus tearing out much of the old matted grass and loosening the soil around the roots. Then take a horse rake and gather up all the trash harrowed up and haul it off to the hog pens. Then apply 50 bushels of lime to the acre and leave until spring, say February or March. Then sow two bushels of mixed pasture grasses like orchard grass, meadow oat grass, perennial rye and Virginia blue grass per acre, with four pounds of mixed alsike and red clover per acre, and harrow lightly in with a smoothing harrow and roll when dry enough. An application of 300 pounds of bone meal per acre will greatly help the stand, and later when the grasses are fairly growing, 100 pounds of nitrate of soda per acre will complete the work and put new life into the field and make a good pasture, probably good for many years more service.

When too late to seed any further crops, keep the teams at work whenever the weather is fine and the land dry enough breaking up land intended to be cropped next year. Many farmers think that because we have not usually hard frosts in winter that it is useless to break land in the fall and early winter as the disintegrating action of the frost is usually so slight here. This is a mistake. Whilst all land in the South is better with a crop growing on it all the year round, yet it is not practicable always to secure this. In the absence of the crop the land should be deeply broken as early in the winter as possible, so that the rain may get into the subsoil, and such frost as we may have may act on the land. In the fall nearly all our land has a hard baked surface from which the rain runs off for a long time instead of getting into the subsoil, where it can subserve the needs of the next crop. Especially after such a summer as we have had this year is it important to break this hard surface. We have had all through the South a serious deficiency in rainfall this year, and the subsoil is very dry. In many sections wells and springs have failed, and are now dry. This indicates great lack of moisture in the ground, and as the moisture of the subsoil is the great means by which crops secure their food during our hot summer it is of prime importance to the yields of crops next year that every effort should be made to replenish this lack of water by conserving the rain which may fall this winter and spring. Deep breaking and subsoiling of the land now is the best means which can be taken to meet this need. Our land in the South usually suffers more from lack of tillage than

from over-working. One plowing, and that a very shallow one, is too often all that it gets in the way of breaking, and one or two harrowings all that it gets in the way of preparation for the seed. This is not sufficient. Soil to become a fit seed bed for any crop requires much more labor than this. Frequent plowing and cultivating is equivalent to much fertilizer, and much more certain in its results. The more the soil is stirred the finer it is broken and the greater the ease with which the roots of the plants can penetrate it, and the more moisture it will be able to give to the crop, and the greater will this moisture be charged with the plant food in the soil. Deep fall and winter plowing fits the subsoil to give up its rich stores of natural plant food to the crop, and practically adds acres to the farm. The surface acres of most of our farms have been exhausted of this natural plant food by long usage. The acres below this surface are still as rich in plant food as the original surface acres ever were. This can be made available by breaking and cultivating deeply during winter and early spring. Not to utilize the winter in this way is to neglect one of the greatest opportunities which our Southern climate gives us over that given to the Northern farmer.

Now that the time for housing the live stock is near at hand we want to urge upon every farmer the importance of making the best provision possible for sheltering and caring for the animals during the cold weather. It is no use taking cattle up out of the pastures and putting them into buildings with leaky roofs and siding through which the wind whistles at every blast, and with doors and windows not closing the openings into which they should fit. See to it that these are all repaired and the houses made wind and weather tight. Give the building a good coat of limewash after sweeping down all cobwebs and dust. Let the floors of all cattle barns and stables have attention by filling up all holes and giving the floors a slight grade to one point, so that all liquid voidings can there be drained away or absorbed by straw and trash. It would pay well to concrete all these floors, as the only outlay on most farms would be for cement, say about \$2 or \$2.50 per barrel. We have published several times full directions for making concrete. Any ordinary good laborer can mix the concrete and lay same after the floor has been graded and levelled. The saving in the making of good rich manure will soon pay all the cost, and the comfort of the animals be greatly promoted. Another matter which should have attention is the making of a pit

for storing manure in the farm-yard. Whilst manure is best removed directly from the stables to the land where it is to be used in producing crops, yet there are always times during the winter when it is impossible to get on to the land with the teams, and for these times it is necessary to have a place in which to store the manure until such time as it is convenient or practicable to haul it away. This place should be made away from the side of building where the water from the roofs and yard will not drain into it. It should slope from each side towards the centre, so that the seepage from the manure will be retained in the heap and should have a well consolidated clay floor beaten to a hard surface. Into this pit the manure from all the stables should be removed regularly every day and be there mixed together. This will prevent the overheating of the horse manure, which will happen if stored alone. Pack the manure closely to exclude the air, and keep the surface level or slightly sloping towards the centre. The ordinary rainfall will not injure the manure, but will keep it just sufficiently moist and prevent fire fanging. A sprinkling of acid phosphate or kainit should be spread over the heap daily, or as manure is added to it. This will add to the value of the manure by increasing the supply of the plant food most lacking in manure, and it will also conserve the ammonia. It is well to sprinkle the manure in the stables every day with acid phosphate or plaster to prevent the escape of ammonia before it is removed to the pit or field.

### THE MANURE HEAP.

In our article, "Work for the Month," we have given some advice as to making provision for saving and caring for the manure made during the winter months. We want now to add a few words on the important economic advantages of saving manure. One of the first features which strikes a newly arrived emigrant from England or the continent of Europe (in which countries the saving and methodic application of farm-yard manure is practically a science) when he goes on to one of our Southern farms is the absence of proper care for saving and utilizing the manure made on the farm; indeed, on most farms the total absence of a manure heap. He finds it thrown out of the buildings as a waste product and left to be washed by the rain and the drippings from the roofs and blown about and dissipated by the wind and sun. The next thing that strikes him usually is the constant remark that the land



wants and must have fertilizer, meaning thereby some compound brought from the fertilizer factory, if crops are to be produced. He is at loss to reconcile these two propositions, and concludes that the farmers of the South are either a very improvident people or a very ignorant one. And there is undoubtedly very great truth in this conclusion. If the farmers realized the value of farm-yard manure as a producer of crops and enhancer of fertility they certainly would not waste it as they do, and their improvidence is seen in the fact that they immediately set about to meet the consequences of their wastefulness by paying money for commercial fertilizer of which they know but little except what the fertilizer makers tell them. It has been said of the medical profession (let us hope for our own sakes without much truth), that "they pour drugs of which they know little into stomachs of which they know less." Of the farmer it can be truly said in the South, that they apply fertilizers of which they know little into soils of which they usually know less. Any observant man—nay, even the least observant—knows that if he applies farm-yard manure to a piece of land he at once improves its crop producing capacity. We have never yet met the man who disputed this proposition, yet in the face of this the great majority of farmers go on from year to year wasting manure and buying in its place something in the use of which even the most observant men have almost yearly experience that they can see in many cases no permanent beneficial results and at the best very inconsistent and uncertain ones. When taxed with the folly of spending, as Southern farmers are now doing in the three States of Virginia, North and South Carolina, something around \$15,000,000 every year for commercial fertilizers and at the same time largely wasting all the farm-yard manure, their reply usually is that the amount of farm-yard manure which can be saved every year is such a small matter that it is not worth consideration, as it would go no way whatever in making crops, and may therefore be well left out of consideration. That this is wholly untrue is easily demonstrable. Careful experiments made have shown that each horse or mule makes manure in the year of the value of \$27, each head of cattle \$19, each hog \$12, and each sheep \$2. This value is based on the values usually assigned to phosphoric acid, potash and nitrogen in commercial fertilizers, and possibly is too high from a practical standpoint. On the other hand, however, no figure is in this estimate placed on the value of farm-yard manure as an improver of the physical and mechani-

cal condition of the soil by reason of the vegetable matter which it puts into the land, and this has been conservatively estimated from practical observation as being equally as great as the direct manurial value. Nor, again, is any figure in this estimate placed on the value of manure as the direct inoculator of the soil with the life-giving bacteria upon which recent scientific research has demonstrated largely depends the crop producing capacity of land. This feature alone is in our estimation of infinitely greater value than both the others put together. Leaving aside, however, these unestimated values and making allowance for the less quickly available nature of the phosphoric acid, potash and nitrogen in farm-yard manure as compared with the same elements in commercial fertilizers, it may be safely taken as a conservative estimate that on each farm carrying four horses or mules, 20 cows, 50 sheep and 10 pigs the manure produced each year is of the value of \$250. How few farmers in proportion to the whole number in the South spend as much as \$250 every year in the purchase of standard commercial fertilizer or fertilizing ingredients, and yet they annually waste this sum and more, in proportion as the stock kept is larger, by neglecting the manure heap. "*Saving at the spigot and spending at the bung*" with a vengeance and then they say farming does not pay. The great distinguishing characteristic of farm-yard manure as compared with the best commercial fertilizer is that the manure is permanent and lasting in its effects, whilst the other at the best is only of temporary value and depends largely even then for its effectiveness on a physical and mechanical condition of the soil, which must be brought about by other means than the fertilizer—namely, by the addition of humus making material to the soil, and an abundance of added moisture to ensure the dissolving of the chemical constituents. Sir John B. Lawes, the father of agricultural experimentation, and one of the highest authorities in the world on this subject, said that as the result of his experiments continued for forty years, he was able to say that on land manured continuously for twenty years there was gradual accumulation and increase of produce, and that for twenty years after the application of manure ceased on one particular plot of land the annual yield was considerably higher than that on unmanured land. Every farmer can secure this constant improvement of his land if he will only give attention to the saving of the manure made on his farm. As the liquid manure is the most valuable, the means used in caring for the manure should embrace pro-

vision for saving all the liquid. This is generally most easily done by providing plenty of absorbent bedding and with drains leading from the stables to the manure pit, which should be so made as to hold this liquid. Both the liquid and solid manure is largely influenced in its value as a producer of crops by the food fed to the stock. The richer the food the better and more valuable the manure. Mature animals neither gaining nor losing weight practically excrete all the fertilizing constituents consumed in the food. Growing animals and milk cows excrete from 50 to 75 per cent. of the fertilizing constituents of the food and fattening and working animals from 90 to 95 per cent. Cotton seed meal, flax seed meal and wheat bran make the richest manure, the leguminous crops like peas and clover the second best, grasses the third best, corn, wheat and oats the fourth best, and roots the least valuable. When cotton seed meal or flax seed meal is fed liberally the manure made is worth as a fertilizer nearly the whole cost of the meal, and the feeding value of the meal is got nearly for nothing if the manure is saved and used as it should be. In the article, "Work for the Month," we have pointed out the best way of saving, improving and applying the manure, and to this we refer our readers. It may be well, however, to add that where mechanical improvement of the soil is most desired—that is to say, where the soil is desired to be made lighter and more open—fresh manure is best to be applied. Well rotted manure is best applied to light soils.

### CROP PRODUCTION.

Under this caption in our last issue we took issue with our correspondent, Mr. Turner, upon the question of fertilization being the prime factor in the production of heavy crops, and endeavored to show that whilst this was one factor, it was not by any means the sole factor, and, in our opinion, was probably not the dominant factor in the problem of crop production. Amongst a number of the other factors which we asserted to be important, we named the microbial life in the soil as in our opinion probably more important than fertilization, however heavy. This contention is well illustrated by the wonderful results obtained from the introduction by inoculation of the alfalfa microbe into soil to be seeded with that crop. Land which without inoculation will not produce alfalfa at all, or only a very weak and puny growth, which dies out in a year or less, will, when inoculated with the microbe, produce not only a strong, healthy

growth of alfalfa, but will make a permanent sod of that crop, which will last for years, if only the conditions necessary for the continued life of the microbe are present, first amongst these being a slightly alkaline condition of the soil, brought about by the application of lime to the soil. This is a case where the microbe is more important than the fertilizer, the plant itself being thus rendered able to utilize the atmospheric nitrogen and the inert fertility existent in the soil in continued growth. The same results are seen when other legumes are grown after the soil has been inoculated with the specific microbe of the crop to be raised. When once a growth of the legumes is secured by means of the microbial life, then the atmospheric nitrogen and the inert fertility of the land in the form of phosphoric acid and potash become available, and succeeding crops of non-legumes can be successfully raised without the application of fertilizers of any kind, so long as there is available in the soil a supply of phosphoric acid and potash. The leguminous crop gathers nitrogen from the atmosphere through the microbes on its roots, and thus completes the trio of elements essential to plant growth. The yield of the succeeding crop will be in proportion to the sufficiency of the least abundant of the plant foods present and available. The microbial life enables the leguminous crop not only to get what nitrogen it requires for its own perfect growth, but also to store a surplus of this most essential plant food in the soil for the benefit of succeeding crops. In experiments made to illustrate this action, a crop of crimson clover not inoculated added to one acre of land 4 pounds of nitrogen, whilst a crop of crimson clover inoculated with the crimson clover microbe added to an acre of precisely similar land 143 pounds of nitrogen, an increase of  $33\frac{1}{2}$  times. So it is with vetches, soy beans, alfalfa, red clover and all the legumes. This accumulated nitrogen reveals its presence and its effectiveness in the succeeding crop. Cotton planted after an inoculated crop of red clover gave an increased yield of 40 per cent.; Irish potatoes yielded an increase of 50 per cent.; wheat increased by 46 per cent.; oats 300 per cent., and rye 400 per cent. With such evidence as to the value of one kind of microbial life in the soil, it surely cannot be safely contended that crop production depends solely, or even mainly, on the quantity of fertilizer applied. As further evidence of the importance of microbial life in the soil, the results frequently obtained from the application of even a small dressing of farm-yard manure may be cited. The amount of nitrogen, phosphoric acid and potash applied in the manure bears

but very small relation to the effect of the application on the yield of the crop. In a ton of average barn-yard manure there is only about 9 lbs. of nitrogen, 8 lbs. of potash and 6 lbs. of phosphoric acid, and this is largely in forms not immediately available for plant nourishment, yet the application of 2 or 3 tons of this manure to an acre will not merely increase the immediate crop yield, but will show in the crops for years afterwards. We have frequently seen the effect of one application of barn-yard manure on every crop for ten years afterwards, and Sir J. B. Lawes said that he could see the effect of an application on one piece of land forty years afterwards. This result arises not from the quantity of actual plant food supplied in the manure, but from the inoculation of the soil with microbic life found in and nourished by the manure. No such results can be seen from the application of commercial fertilizers. They put no life into the soil, but merely place within the reach of the crop certain forms of plant food in a more or less available condition, and the ultimate result depends mainly on the existence in the soil of microbic life, which can put these food elements into available form for plant sustenance and growth. This they do by breaking down organic life in the soil and setting free certain gases which are absorbed by the soil water, and this then becomes a powerful solvent of the mineral plant food in the fertilizer and soil. Without microbic life in the soil, commercial and all other fertilizers are practically useless in crop production. With abundant microbic life, and the conditions present necessary to its development, such as soil moisture, temperature, alkalinity and food supply, maximum crops can be produced by utilizing the nitrogen of the atmosphere and the almost exhaustless stores of phosphorus and potash in the soil. A prime factor in making all these things "work together for good" is perfect and deep cultivation and preparation of the soil. This and not extravagant fertilization lies at the root of all profitable farming.

#### IRISH POTATO GROWING IN HENRY CO., VA.

At Phospho-Lithia Springs, Mayor A. S. Bousman, of Ridgeway, has a patch of potatoes which required 20 bushels to plant, that is the wonder of all who see it. He has dug over 200 bushels, and has dug hardly one-third of the patch. It is an assured fact that he will make 600 bushels. With these wonderful possibilities before us, what excuse have the farmers for the fact that Henry county does not pro-

duce enough provisions each year to feed her people and stock until Christmas time.

#### THE USE OF COMMERCIAL FERTILIZERS.

The Ohio Experiment Station, as the result of investigations on the Station Farm, makes the following pertinent suggestions as to the use of commercial fertilizers. The suggestions are as applicable in Virginia and the South generally as in Ohio, and with cow peas and crimson clover as the source of nitrogen, instead of red clover, as there used. We would especially invite attention to the last paragraph of the suggestions—the making of stable manure. The keeping of live stock and making manure lies at the root of the successful and profitable use of commercial fertilizers, and of all profitable farming:

"On all soils the system of management plays a most important part in the scheme of fertilization. Where clover grows luxuriantly—and it will do so only on soils containing a fair supply of humus—a good crop of clover may secure a sufficient supply of nitrogen for its own use, with enough to spare for one or two crops of cereals or potatoes immediately following. Clover, however, cannot be depended upon to furnish more nitrogen than this, nor can it make up any deficiency of phosphorus or potassium. Hence, where clover does its best it may have the effect of so reducing the supplies of phosphorus and potassium that one or both of these must be furnished before maximum crops can be grown. For example, on a tract of land on the South Farm of the Experiment Station at Wooster, on which potatoes, wheat and clover have been grown in a 3-year rotation for 10 years, the 10-year average yield of wheat has been:

- 27 bushels per acre without fertilizers.
- 33 $\frac{1}{2}$  bushels with phosphorus only.
- 33 $\frac{1}{2}$  bushels with phosphorus and potassium.
- 36 bushels with phosphorus, potassium and nitrogen.

In this case the increase for phosphorus has given a large profit, but the further gain from potassium and nitrogen has not been sufficient to justify their use, except in very small quantity.

On the other hand, on the East Farm of this Station, in a 5-year rotation of corn, oats, wheat, clover and timothy, the land having been exhausted by many years of cropping with but little manuring, the 10-year average yield of wheat has been:

- 9 bushels per acre without fertilizers.
- 15 $\frac{1}{2}$  bushels with phosphorus only.
- 17 $\frac{1}{2}$  bushels with phosphorus and potassium.
- 24 bushels with phosphorus, potassium and nitrogen.

In this case the complete fertilizer, carrying phos-

phorus, potassium and nitrogen has yielded a larger net profit than any partial fertilizer.

In general, it may be assumed that land which is sufficiently fertile to produce 50 bushels of corn or 25 bushels of wheat per acre may be held close to the maximum production by the growth of clover every third season, with the addition of a small quantity of phosphorus or potassium, one or both; but when the average yield falls much below these quantities, under a 3-year rotation with clover, then the addition of nitrogen to the fertilizer is indicated.

For soils which have been depleted by exhaustive cropping the following system of management is suggested:

(1) Apply stable manure to land intended for corn, using it at the rate of 8 to 10 tons per acre. If possible, let the manure be taken directly from the stable to the field, and if it has been dusted during accumulation with acid phosphate or raw phosphate rock (floats), its effectiveness will be greatly increased for most soils.

(2) A crop of wheat or oats may follow corn treated as above, without further manuring or fertilizing, and if clover be seeded with this crop, the clover sod to be manured and planted to corn (or potatoes) thus establishing a rotation in which clover is grown every third season in alternation with a manured and cultivated crop, the best conditions of fertility recovery will have been provided and a gradual increase in productiveness may be expected.

(3) If a second crop of small grain be grown (as wheat after oats) it will be necessary to manure again or else use a complete fertilizer if the maximum yield is obtained. The proportion of ammonia, however, need not exceed two or three per cent. Clover should be sown with this crop.

(4) If, for any reason, a third crop of grain be grown before clover comes into the rotation, it should receive a fertilizer containing 4 to 6 per cent. ammonia, applied at the rate of 300 to 400 pounds per acre. Such cropping is likely to prove less profitable than where clover is more frequently grown.

(5) When clover fails to prosper on land that has been liberally manured or fertilized, making a fair stand, perhaps, but showing a weak growth after the wheat has been taken off and finally dying out altogether in spots, the use of lime is indicated. Present indications are that lime will produce more clover when applied to a crop preceding the wheat by one or two seasons than when applied to the crop with which the clover is sown. No definite quantity of lime can be stated for all conditions, but it is safe to use a ton to the acre.

(6) If a farmer's present system of management does not provide sufficient stable manure to carry out this plan, then it is time to readjust that system; for the Ohio farmer who undertakes to bring up an ex-

hausted soil to a profitable state of productiveness through the use of commercial fertilizers alone will generally find that the margin between cost of production and value of crop will leave him a very meager compensation for his labor."

#### BARNYARD MANURE AS A MONEY MAKER.

Since writing the article on "The Manure Heap," which appears in this issue, we have received the *American Agriculturist* of date 22d October, and in it find the following article under the above caption. We commend it to the attention of readers of our article:

One of the most attractive and interesting exhibits at the Ohio State Fair this year was one showing the comparative value of barnyard manure left in the yard during the winter and fresh manure. For seven years the Ohio Experiment Station has been studying in the field the question of conserving and reinforcing barnyard manure. Director Charles E. Thorne says the result of this work is that manure, which is thrown into an open barnyard and permitted to lie there during the five months of winter before it is drawn to the field, is for producing an increase of crop, worth, at present prices, \$2.40 per ton of manure, when the manure is spread on clover sod, the sod being plowed for corn and the corn followed by wheat and clover without further manuring or fertilizing.

When the manure, instead of being thrown into the barnyard, is taken directly from the stable to the field, the management and cropping being the same as above, we get an increase of crop to the amount of \$3.25 to each ton of manure. If, however, as the manure is being accumulated, it is dusted occasionally with the crude phosphate rock of the South, ground into a fine powder (called "floats" in the Southern States), thus reinforcing it with phosphorous and possibly at the same time preventing some loss of ammonia, we get a total value of increase of \$5.18; the odd 18 cents more than covering the cost of treatment. The work of the field has been supplemented by analyses made in our chemical laboratory, which show that from two-thirds to three-fourths of the fertilizing constituents of the manure may be washed out of it during the five months of winter exposure; they also show a very considerable reduction in total dry substance, indicating that it has required considerably more than a ton of manure, as thrown out of the stable, to produce a ton as taken from the barnyard. From investigations on the quantity of manure produced by cattle during the winter months of feeding, we are led to conclude that Ohio produces annually some ten million tons, and that of this undoubtedly more than half, probably not less than three-fourths, is wasted.

### BURR CLOVER AS A PREPARATION FOR ALFALFA.

This clover, which is found widely distributed through the more Southern States, and is highly prized for winter pasture, is likely to prove of great value in preparing the land for alfalfa, as the bacteria found upon it is also effective on the alfalfa plant. Prof. Kilgore, of the North Carolina Experiment Station, says of it:

Our experience with burr clover is encouraging. While we made almost an entire failure from sowing the clover last summer, due to the very dry, hot fall, in which almost all grasses and clovers failed, the areas on which this clover grew last spring were nicely reseeded and have produced a good crop. After the clover was taken off last spring, cotton and corn followed on the same land. This clover gave grazing last fall and a small amount during the entire winter, and a large amount after spring opened, and to the first of April. Since that time the clover has grown to a height of two feet, and is now maturing seed. I believe it is the most promising crop we have found for winter grazing and soil improvement, especially in rotation with cotton and corn. To show its value for soil improvement, our experimental plat which had this crop on it last year, and on which cotton followed, yielded four hundred pounds more seed cotton per acre and without any nitrogen (or ammonia) in the fertilizer, than a corresponding plat fertilized with four pounds of complete fertilizer, which cost 40 per cent. more than the fertilizer given to the burr clover area. We find that the burr containing the seed of this clover always carries the bacteria for the inoculation of the crop. We have found that this same bacteria inoculates alfalfa. We planted a small area in alfalfa on the burr clover land last winter and now have good, vigorous plants, well inoculated, on the soil. We are using the burr clover soil at Edgcombe to inoculate our alfalfa. It has been questionable as to whether or not alfalfa could be grown on the Eastern sandy lands. Two acres of this crop put out last spring is now in splendid condition, well inoculated, and gives every promise of being an entire success. I think a thin seeding of the burr clover with alfalfa, or else preceding alfalfa by burr clover to inoculate the soil, will solve the problem of getting the proper bacteria in the soil for alfalfa, and at small cost and trouble. This is the prime consideration in the growing of this crop. Our experiments in this line, I consider, make it now easy for us to get this inoculation.

### HOW I BUILT UP A POOR FARM.

*Editor Southern Planter:*

If having been the owner of poor land fits a man to write about it, and if he is competent in proportion

to the poverty of the land, then I think I am the most competent man in North Carolina to discourse about poor land. Some years ago I bought some so poor that the ownership carried a distinct species of disgrace along with it. For time out of mind owners, and since the war successive tenants, had skinned that land, or tried to, for generally the land did the skinning, the tenants being poorer at harvest than at seed time.

This land lay convenient to me. It was free from rocks, hills and waste place. It was light and indeed somewhat given to sandiness, and therefore pleasant to cultivate. I bought it, giving the owner considerably less than half the price he paid for it a few years previously, and set to work to make it productive.

I did not intend for that land to break me, as it was said to have served its former owners; therefore I sought to proceed upon economical lines. Aware that of the three elements of fertility—ammonia, potash and phosphoric acid—ammonia is both the most costly and the easiest to escape the soil, I decided to buy as little ammonia as possible, especially as it costs about three times as much as the other ingredients per pound. Of course I had to have ammonia, but I knew that I could get it without buying it at so much per ton—in fact, get it free. Potash and phosphoric acid I also needed largely. These I had to buy, because there was no other way to get them into the soil.

The land was plowed and run off in rows three feet apart. In these rows I sowed a mixture of 150 lbs. of kainit and 100 lbs. of acid phosphate per acre. Listing on this furrow by a furrow from each side, I then split open the list with one furrow. This served to mix the fertilizer in the soil and also threw open the furrow for the peas. In this furrow I sowed evenly early in June cow peas at the rate of one bushel to the acre and covered them lightly with a small tooth cultivator. During the summer, as needed, they were given three workings with the small cultivator, no hoe work being required.

The result was a fair crop of cow peas and pea vines. The peas I picked as soon as ripe and cut the vines for forage.

In September I plowed under the stubble and applied broadcast the same quantity and the same kind of fertilizer used for the peas. This I harrowed in with a disk harrow, leaving a perfect seed bed. On this I sowed annual (crimson) clover at the rate of three gallons to the acre, and dragged it in with a bush.

The following spring the clover yielded a moderate

crop of forage, the land being yet too poor to raise clover with much success.

In June I plowed under the crimson clover stubble and again drilled in peas, using the same fertilizer and the same mode of culture as the preceding year. The autumn showed how my land was improving. The crop of both peas and pea vines was good—I might almost say excellent.

In September the pea stubble was plowed under and crimson clover again sown, the treatment being the same as that of the fall before. The next spring gave a very good crop of clover hay indeed. This I again followed with peas, the cultivation and manuring being the same as for the two former crops. The crop of peas and forage that came that summer was a wonder. Its equal had never been seen in the neighborhood.

I now found that this pauper farm had been transformed into a very good one indeed, worth many times what I paid for it. That fall I turned under the pea stubble and put the land in strawberries—my staple crop. Since then I have grown as fine berries and as fine crops of all kinds on that land as anybody has grown in the county. Every two or three years I have rotated in cow peas or crimson clover, using potash in the form of sulphate of potash and acid phosphate on the berry crop, and my land grows better and better.

O. W. BLACKNALL.

#### MR. CLARK'S HAY CROP OF 1904.

*Editor Southern Planter:*

I now have the second crop in the barn off my 11½-acre field, which is all I have down to grass this year. The first crop yield was 120,173 lbs., the second crop 55,650 lbs.—total for the year on the 11½ acres, 175,823 lbs.—over 7¾ tons to the acre in the two crops.

The ⅔-acre field, now seeded 15 years, cut this year first crop 14,728 lbs., second crop 7,650 lbs.—total 22,378 lbs. Total crop on the ⅔-acre field in 15 years at one seeding, 250,650 lbs. Please notice this year in the two crops over 11 tons. I think the yield most remarkable, the 15th year after seeding, over 11 tons of well-dried hay. One word on the matter of drying my hay—the first crop this year had an average of three full days good sunshine; the second crop had eight days without rain, five of them bright sunshine, well teddered and spread and heaped up every night. This is my method of drying hay. If your readers will send me a two-cent stamp I will tell them how to produce similar crops. GEORGE M. CLARK.

*Higganum, Conn.*

#### HOME GROWN ALFALFA SEED.

We are in receipt of the following letter from the Department of Agriculture on this subject, and invite the attention of our readers to it. There is no reason whatever why our farmers should not raise their own alfalfa seed, and thus be certain as to its purity and germinative quality, besides being also assured of its thorough acclimation. Much depends on these points as to the success of the crop:

I have your letter of September 17th, and am glad to know that the raising of alfalfa seed will receive your attention the coming year. I believe that it would be an advantage in many cases if farmers could use home grown seed. I would say that ordinarily the second crop is used for seed, although other crops may be used if the conditions are satisfactory for the ripening of the seed and curing the hay. The hay may be mowed, cured and stacked as for hay. The cutting should be done when about half of the pods are thoroughly ripe. In many places the hay is cut with a self-binder and the sheaves shocked. The threshing then takes place from the shock. Much of the seed is threshed with an ordinary threshing machine, but it is much better to use the alfalfa huller. The yield is likely to be 5-7 bushels per acre.

A. S. HITCHCOCK,

*In Charge of Alfalfa and Clover Investigations.*

*Department of Agriculture, Washington, D. C.*

#### WHAT THE PLANTER HAS DONE FOR ONE SUBSCRIBER.

We are in receipt of the following very satisfactory letter from a Pennsylvania subscriber. It illustrates the importance of the point of perfect preparation of the land before planting a crop, which we have so often advised and emphasized. No matter what the crop, the perfect preparation of the land before seeding or planting is of infinitely more importance than the quantity or quality of the fertilizer applied:

*Editor Southern Planter:*

Have been very busy harvesting Irish potatoes. Will have 2,200 bushels of potatoes, and thank you, Mr. Editor, for advising in your spring numbers to *properly fit the soil before planting*. Our spring was wet and late, and many planted on poorly prepared ground with disappointing results. It pays to thoroughly pulverize the ground before planting. The land on which I grew these potatoes would only yield from half to one ton of timothy hay per acre. I used 800 pounds of fertilizer per acre, buying the chemicals from one of your advertisers and mixing them on the barn floor. I did all the work myself.

Yield from 150 to 200 bushels per acre. Nothing large about the yield, but considering an old tough sod and extreme stony ground, I think I did very well. Neighbors said, "Starve to death" when I moved on last spring, and now I have \$1,100 worth of potatoes and nearly \$200 worth of vegetables to show for my season's work. I plant with Aspinwall potato machinery, and harvest with a Hallock digger. Long may the PLANTER live to do good.

FRED. HARVEY.

Clearfield, Pa.

### ALFALFA.

*Editor Southern Planter:*

All indications seem to point to Virginia as the ideal climate and soil for alfalfa. It appears to be destined to revolutionize our entire system of farming. One ton of good alfalfa hay is said to be worth over two tons of either red clover or timothy hay. In fact, the value is placed much higher by many chemists, who have analyzed it. One seeding will last forty years or more, but generally it takes two years and oftener three to get a good stand, but once obtained it is almost invaluable. With inoculation a stand can be obtained in two years, and it ought always to be inoculated.

The cost is comparatively small. It has succeeded as far north as Canada, and as far south as Florida. It can be cut four times a year, and the average yield is about four tons to the acre. The protein in alfalfa hay makes it extremely valuable for cattle and hogs, and indeed all stock. My knowledge of it is obtained second hand, but it rests upon the highest kind of practical evidence of men who have tried it. It will inevitably raise the price and value of Virginia real estate, and ought to double the present number of our cattle and hogs. And as far as I am able to judge, it is eminently suited to the land of Southside Virginia. It is said by Mr. Shirley, of Indiana, in the last number of the SOUTHERN PLANTER, that in Colorado the roots have been known to go in the ground 129 feet; this is almost incredible, but it is certainly true that they will go a great depth. This is the true reason why it lasts for forty years or more. From all I can gather, it can be successfully sowed in Virginia at any time from the 20th of March to the 20th of September, and if it is inoculated, a good stand can be obtained in two years. Twenty pounds of good, clean seed to the acre sowed both ways broadcast upon splendidly prepared soil is the proper amount to sow. One hundred and fifty pounds of soil at seventy-five cents f. o. b. per

100 pounds is ample to inoculate the acre, and the stand ought to be disked once every season, and the weeds and alfalfa be cut with the mower three or four times a year for the first two years so as to prevent the weeds seeding and to thicken the stand. After that time when a good stand is obtained the weeds will give no more trouble. The roots, from their immense length, draw support from soil which has never hitherto been utilized by the farmer. It is worthy of a painstaking trial by every farmer in Virginia. The writer intends to commence with ten acres the next season, and, if successful, he will increase it to fifty as rapidly as is practicable.

CAMM PATTESON.

Buckingham Co., Va.

### SOME GOOD IN ALL METHODS.

*Editor Southern Planter:*

We see a great deal of contention about different methods of farming. Many farmers are dogmatic, one-sided, and fixed in their ways. Some of them believe commercial fertilizers are the whole thing, while others more wisely advocate stable manure; a few would depend almost wholly upon rotation and a thorough cultivation of the soil. Of this class the number is very small—smaller, possibly, than it ought to be.

The fact is that agricultural science is very complicated. Therefore it is necessary in practice to exercise great care in determining the true method, or combination of methods. We need to get all the reliable theory and experience that we can and then sift for the truth.

Sometimes even truths seem to be arrayed in opposition to each other. I explain this by assuming that there are unnoticed differences in the circumstances. It is hard to see all sides of a phenomenon at one glance. For example, a progressive farmer told me the other day that he was more successful when he seeded his loose stubble land to grass in the fall by simply scratching the surface and sowing on that. He thought the stubble and dead grass acted as a cover crop, or a mulch, to protect the young crop in winter.

There is doubtless much truth in this. Yet, on the other hand, some of the best hay farmers tell us that the land should be thoroughly plowed, pulverized and cleansed of all trash before we sow. They say further that there should be no cover crop.

Which is right? Perhaps both are right from their respective viewpoints. The clean culture far-

mer sows early in order that his grass may become well established before winter. He wants all foreign matter out of the way of the new crop and the soil so finely divided in texture that the tender roots may readily take up the plant food held in solution and grow off rapidly. The two parties see different points of advantage, and no doubt there is virtue in each.

All reasonable ways of putting in a crop have their valuable points. It is the same with all farm work. This is why there is so much diversity of opinion about farm matters, and why it is so hard to have a settled science of agriculture. We thus see why it is so difficult to agree upon the relative value of fertilizers, manures and cultivation. Commercial fertilizers do good under favorable circumstances. Stable manure, we know, makes land much more productive, and there certainly is no discount on thorough cultivation and rotation as crop producers. All have their merits that should be recognized. It is a great mistake to think that all the good is in any one method or system of crop production. The best features of all methods are bound to bring satisfactory results.

T. C. KARNs.

*Powell Station, Tenn.*

“If there is one rule applicable to all successful farming, it is the old saying that, ‘Whatever is worth doing, is worth doing well.’ More intensive farming and a more exact knowledge and practice of the best methods in every branch are needed. This can be obtained by watching the agricultural papers and studying reports of the agricultural colleges and experiment stations, which are sent free to all who ask for them. Farmers want to take a little more pride in their business, and show it in their surroundings. They do not need to have their fields unsightly by reason of weeds and bushes growing where they do not belong, nor the walls and fences tumbling down, nor their dooryards littered with tools that should be housed, and carts that should be broken up with much other rubbish fit only for the wood pile. These are little things, and may not seem to have much influence on the profit of the farm, but these little things neglected give it an unthrifty look that helps to drive the more ambitious children off the farm just when they are old enough to have taken some pride in it.

When corresponding with advertisers, kindly mention the **SOUTHERN PLANTER**.

## ENQUIRERS' COLUMN.

Enquiries should be sent to the office of **THE SOUTHERN PLANTER**, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

### Utilizing Bones.

Will you please state if you know of any way that I might utilize the lye in potash fertilizers to dissolve raw bones without the expense of grinding them up. Do you believe lime is strong enough to eat the bones up if covered over them in a box or barrel? If I could manage this I could make a cheaper fertilizer by buying the bones raw.

A SUBSCRIBER.

*Port Walthall, Va.*

The best way to utilize bones, if you cannot get them ground, is to dig a trench in clay soil and put in a layer of bones and then a layer of wood ashes alternately until the trench is filled, and then keep the lot damp with water. This will gradually soften them so that they will crumble, and then mix with soil and apply to the crop. You might use some of the potash fertilizers, like muriate of potash, to soften the bones, in the place of the ashes, but this would make the cost greater.—ED.

### Value of Broom Corn Stalk and Chess or Cheat as Feed.

What is the value of broom corn stalk for feeding to cattle? Also cheat or chess that grows sometimes in winter wheat or oats if ground with corn or other grain? In fact, have either any feeding value?

*Surry Co., Va.*

J. M. H.

Whilst broom corn stalks contain a fair percentage of nutritive value, the woody fibre is so abundant that they are unpalatable to stock, and therefore cannot be usefully utilized as feed. Cheat or chess has practically no feed value, or a very low one, for stock, and is not worth saving for that purpose.—ED.

### Early Irish Potato Growing in Tidewater, Va.

I have recently purchased a farm in Mathews County, Va., and I want to make a specialty of Irish potatoes as a trucking crop. This land is a loam, but poor. Will you be kind enough to tell me in your next issue the kind of seed to use, how many bushels to plant to the acre, the kind, how much fertilizer to use and when to plant? I want to get these potatoes on the market as soon as possible in the spring. In fact, I want to beat the other fellow if possible. You might also indicate as to the preparation of the land, cultivation, etc.

W. D. BURLEY.

*Mathews Co., Va.*

The soil for the early Irish potato crop should be a



mellow, sandy loam, well supplied with vegetable matter. Land newly cleared from the forest is excellent, but the best preparation on old land is to grow a crop of peas on the land the previous season and let them die on the land to be plowed under for the crop. The plowing under should be done as soon as the vines are dead in fall, as if plowed under just before planting they are apt to promote the scab fungus. Planting should be done as soon as the land can be gotten in good order after January, and they should be planted not later than the first half of March to get on the Northern markets when high prices prevail. As the crop is to be grown at a time when nitrification in the soil is not active, a high grade fertilizer should be used. Irish potatoes are one crop upon which the highest grade of commercial fertilizer can be used with greater success than any other form of manuring. The use of farm-yard manure on the crop is very liable to cause scab. The fertilizer must be applied with a liberal hand. Many of the best growers use from 1,000 to 2,000 lbs. of the highest grade fertilizer per acre. The following formulas may be used: 300 lbs. nitrate of soda, 600 lbs. fish scrap, 800 lbs. acid phosphate (14 per cent.), 300 lbs. muriate of potash—or 300 lbs. nitrate of soda, 600 lbs. cotton seed meal, 800 lbs. dissolved bone black, 300 lbs. muriate of potash.

It will take from 8 to 10 bushels of seed to plant an acre, cut to 2 or 3 eye pieces. The best seed to use for the crop is second crop Southern grown seed. As to the variety—this is a question on which there is much difference of opinion, but we still strongly favor the Early Rose, when seed of true breeding can be relied upon. Thoroughbred, Red Bliss Triumph, Puritan and Crown Jewel are also desirable varieties. If you are satisfied that your land is good enough to grow the crop—that is to say, has sufficient vegetable matter in it—plow at once, and plow deeply. Work it whenever dry enough through the winter, and then at the time above named lay off in rows 2 ft. 6 or 3 feet apart and plant 15 inches apart in the rows.—ED.

### Preparing Pea Fallow for Wheat.

How would you prepare corn land for wheat upon which is a fair cover of peas? Would it be better to turn the peas under, or would they help the land if disked in with a disk harrow?

J. M. W.

Franklin Co., Va.

Cut the peas into the ground with a disk harrow. It is always risky to plow a pea crop down for wheat, unless done very early, so that they have time to rot

and the ground to become consolidated again. The crop turned under late makes the soil too puffy for the best success of the wheat.—ED.

### Road-Making.

We have made a stretch of road, with gravel taken from river bed. The gravel was screened and the coarser put in the bottom and the finer on top to a total depth of 5 to 6 inches. The road packs a little after rain, but soon dries out and becomes soft and loose, making it unpleasant for driving and difficult for hauling. What can you suggest doing to make the gravel bond, and thus make a hard Macadam road?

Transylvania Co., N. C.

H. E. TENER.

Spread on the road a good coating of heavy clay soil and harrow this well into the gravel, and then roll and keep well rolled until thoroughly consolidated, taking care to keep the centre of the road well above the sides so that no water will stand upon or soak into it after it has once been rolled.—ED.

### Lump on Calf—Japan Clover.

1. I have a male calf six months old that has a hard lump nearly as large as my fist immediately in front of navel. It appears to be very painful to the touch, and seems to make the animal dull and languid. Give cause and remedy for same.

2. Is Japan clover of any value as feed? My pasture has become completely overrun with it, to the exclusion of grass. My cattle do not seem to thrive on it. I have heard cows would dry up from eating it.

D. J. WALLER.

Spotsylvania Co., Va.

1. This is a case of umbilical hernia. It is often seen in young animals, and frequently heals spontaneously as the animal gets older. As the animal gets older the abdominal muscles get stronger and possess more power of resistance to pressure, the bowels become larger and do not pass so readily through a small opening, so that from a combination of causes there is a gradual growing together or adhesion of the sides of the navel. In cases of umbilical hernia, where there are no indications that a spontaneous cure will take place, the calf should be laid on its back, and immediately this is done the hernia will often disappear into the abdomen. If it does not, its reduction may be brought about by gentle handling, endeavoring, if need be, to empty the organs forming the hernia before returning them into the abdomen. After the hernia has been returned the hair should be clipped off from the skin covering it and a compress composed of ten or twelve folds of linen or cotton should be applied, first smearing the skin with pitch, and then a bandage of about three inches wide should be

passed round the body so as to retain the compress in position. Smear the part of the bandage next the compress with pitch to keep it in place. If the contents of the sac cannot be returned into the abdomen, then a surgical operation will be necessary to reduce the hernia.

2. Japan clover is a plant of the legume family, and, like all the legumes, makes valuable feed and constantly improves the land upon which it grows by gathering nitrogen from the atmosphere. There is no truth in the saying that it dries up cows. The reason that your cows do not thrive upon it is because the growth is not sufficiently tall to give them a good bite. When the land becomes rich enough to grow it luxuriantly, they will thrive on it. We have heard the late Mr. Rowe, of Fredericksburg, who was one of the first men in the State to sow Japan clover, say that, although he gave a high price for the seed, he would not be without it on his farm even if he had to give \$10 a bushel for the seed, and he kept one of the finest herds of Jersey cattle in the State. As an improver of the land alone, it is worth growing, as it will grow and thrive on poorer land than almost any of the legumes, and gradually fits them for producing other crops. In the Gulf States it makes a valuable hay crop.—ED.

### Lime.

How much can I afford to pay for common rock or builders' lime for agricultural purposes, and haul same four miles over fairly good road? In other words, will it go any further than the shell lime? The lime in question has become air slacked by standing in house eight or ten months. J. R. D.

*Pitt Co., N. C.*

The lime is no more valuable than shell lime in this condition. Both are carbonates of lime, and both will prove of great value to your land. You should get it for \$3 per ton.—ED.

### Sores on Mule.

Please give me a remedy for sores on my mule's legs. They appear to be caused by the animal biting itself, which shows there is itching. They heal in winter, but appear again in summer, and sometimes swell the limb. E. J. PANNILL.

Wash off the scabs with soap suds and a brush, if necessary, and then apply a solution of tobacco, 1½ ounces in 2 pints of water, prepared by boiling the tobacco in the water. Repeat once or twice at intervals of 10 or 15 days.—ED.

### Preparing Land for Corn—Implement Dealers—Spring Wheat.

1. I have a piece of land, somewhat sandy loam, which has been resting (?) for the past two years. I want to plow it this fall for corn next spring. Will lime sown broadcast this fall help it any? How much lime to an acre would you use?

2. Name some of the largest agricultural implement concerns, as I want to get their catalogues.

3. Will spring wheat grow in this State successfully? What variety would you advise?

*Campbell Co., Va.*

C. W. HEK, JR.

1. Plow the land this fall or winter, and plow it deep, and if possible subsoil it as well. Then apply 50 bushels of lime per acre and run a harrow over it to just mix the lime with the soil, but not to bury it deeply.

2. Ashton Starke, The Implement Co., Henning & Nuckols, Watt Plow Co., Call Watt Co. are all large dealers in implements in this city, and will gladly send you catalogues. See our advertising columns for others elsewhere.

3. Spring wheat cannot be grown successfully in this State.—ED.

### Wheat and Oats as Feed.

I saw an article some time ago in the *PLANTER* stating that the most economical way of feeding oats to stock was to have them threshed out and feed them loose and bale the straw and feed that in winter. It is our custom here in Anson County to mix wheat with our oats, and when they come ripe enough to feed we cut them and feed without threshing. What I want to know is, will wheat and oats sowed in this way threshed out make as good feed as the oats will by themselves? E. K. DUNLAP.

*Anson Co., N. C.*

We do not recall ever having advised the threshing of oats intended to be fed to stock, though some one else may have done so. Our advice always has been to feed the oats in the straw. In this way the full feeding value of the crop, and it is a high one, is secured. The mixing of wheat with the oats will not improve the feed value of the crop, as oats alone, both grain and straw, have a higher feed value than wheat and wheat straw. The mixing of the two crops will result in a greater yield of feed, as this is almost invariably the result of growing two of the cereals together. We have had a number of reports of the mixed crop, showing this to be the case. The two crops grown together and cut in the milk stage make excellent feed, but it should be fed as cut and not be threshed.—ED.

## Trucking, Garden and Orchard.

### WORK FOR THE MONTH.

The great press of work in the garden and truck patch being now over, opportunity should be taken to clean up thoroughly all trash and rubbish and to burn the same, so as to destroy all spores of fungoid, diseases and the eggs and embryos of all insects. When this has been done, have all unoccupied land plowed deeply, and give it a dressing of lime at the rate of 50 bushels to the acre. This will sweeten the soil, which is very apt to become soured and unproductive and in need of lime to hasten the decay of vegetable matter turned under. Harrow the lime in lightly and then seed with a mixture of crimson clover, hairy vetch and wheat and oats. This will make a cover for the soil during winter, and give green feed for the chickens and a good fallow to plow down in the spring.

The planting of cabbages for the spring crop should be pushed on so that the same may get hold of the soil and commence to make root growth before winter sets in. See that the land is made rich with plenty of barn-yard manure and some high-grade fertilizer, not too rich in ammonia, but having plenty of phosphoric acid and potash. In our last issue we gave some advice as to the manner of setting out the plants, to which we refer our readers.

Lettuce plants should be set out in the cold frames for winter and early spring cutting. See to it that the soil put into the frames is in a sweet and friable condition. Never use the old soil in the frames for lettuce, as it is very apt to cause rotting of the plants and damping off. Keep the frames open as long as the weather is mild.

Celery should be earthed up so as to blanch the same. Keep the soil out of the hearts of the plants by either tying the stalks together with soft material or by holding them close together with the hand when drawing the soil to them.

Cover asparagus beds with a heavy coating of barn-yard manure, first cutting off the old stalks and weeds.

Set out strawberry plants in well prepared land. Be careful not to set the plants too deep so as to cover the crowns. Let the land be made fairly rich with

phosphoric acid and potash and well rotted manure. Fresh manure is apt to introduce weed seeds into the beds, which make work and trouble in spring.

Land may be got ready for planting bush fruits and orchard trees, and the bushes, canes and trees may be set out towards the end of the month and in December. Do not place manure in the holes in which the trees are to be set, but plant them with good soil and mulch the ground after the plants are set with strawy manure to afford protection and slow feeding during the winter and spring. In setting out an orchard for home supply set out a few trees of varieties maturing their fruit at different seasons, so as to keep up a continuous supply for the table. In planting an orchard for commercial purposes plant only one or two standard varieties adapted to the section. It is much easier to market a large crop of one or two varieties than a mixed lot. Buyers will seek the large lots of one variety, but the seller has generally to seek the buyers for small lots of many varieties.

### ONION GROWING.

In our last issue we advised the planting of onion sets for the early spring green onions and for dry bulbs for the early market. A series of experiments has been conducted at the Oregon Experiment Station to determine the relative advantages of growing onions by transplanting and by sowing in the field. The seed for the onions to be transplanted was sown in boxes in January, and they were kept slowly growing in cool frames until March, when they were transplanted into the field. The seed for the open field grown crop was sowed in drills in the field on February 28th. The following table gives the results:

Variety.	Yield.		Incr'e due to trans-planting Bus.
	Trans-planting Bus.	Field Sown Bus.	
Sutton Ailsa Craig	992	393	599
Australian Brown	648	525	123
Red Wethersfield	432	263	169
Silver Skin	432	280	152
Yellow Globe	770	485	285

The table brings out clearly the increased yields obtained with all varieties with the earlier seeding and transplanting.

### STRAWBERRIES IN OCTOBER.

We have been eating strawberries for several weeks this month grown a short distance out of this city, and sold at 20 cents per basket. The grower has had quite a fine crop of beautifully colored and flavored berries—in fact, much finer flavored than those we had in the spring, when, on account of the cold weather, they were hard and sour. This fall crop is worth attention, as the berries sell readily after the bulk of the peach crop is gone. They can be had by setting out the plants in the fall and not allowing them to bloom and set fruit in the spring.—ED.

### APPLE GROWING IN THE EAST.

We take the following extract from an address made by Mr. Orlando Harrison before the Maryland Horticultural Society, as reported in the *Country Gentleman*:

Apples are attracting the attention of the fruit-grower as well as the farmer more than at any other time in the past, as the apple has become a necessity. Only a few weeks ago I had the pleasure of visiting Frederick Wellhouse, of Kansas, at his home, a man seventy-five years of age, full of enthusiasm for apples. He has now planted 1,635 acres, and is recognized as the apple king of the world; has made a financial success, and the earnest advice he gave me on apple-growing was of great value. He impressed on me the necessity of system, keeping accurate accounts of what is expended, and insists that a man who plants apple trees, cultivates well the first five years, and has push and vim, and makes his orchard self-supporting the first five years, cannot help but succeed.

Mr. Wellhouse succeeds best with the following varieties, named in order as to their value: Jonathan, Missouri Pippin, Ben Davis, Winesap, Gano, York Imperial, Maiden's Blush and Cooper's Early. The two last named varieties he has marked from his list in his last plantings. He has marketed his crop as low as five and a half cents per bushel, while it has cost him as much as ten cents per bushel to pick and barrel them. His largest crop was in 1890, being 79,170 bushels from thirty-five acres. He prefers the high hills of the best soil for best success, and such land costs him \$50 per acre. He has made a reputation as a successful apple-grower, and is proud of his profession, which has helped toward success.

After spending three weeks in the West, seeing where the apple seedlings were grown on the black bottoms frequently overflowed by water, while their nurseries and orchards often do not go through the winter safely, I feel better contented with Maryland as an apple-growing State far in advance of any other

I could select, especially the rich soil of Washington county. We have better apple soil, richer, cheaper, nearer the exportation port, cheaper labor and many natural advantages. There is no reason for leaving the State to find land to engage in a profitable and delightful business. About 75 per cent. of the apples planted in the mountainous regions are York Imperial and Ben Davis, while Grime's Golden, Missouri Pippin, Gano, Jonathan, Landford Seedling, M. B. Twig, Winesap, Stayman's Winesap, N. W. Greening, Rome Beauty and Smith's Cider are planted in light quantities by many.

### SHOULD FARMERS RAISE THEIR OWN FRUITS?

*Editor Southern Planter:*

That fruit, in the fruit season, is agreeable to the taste, healthful and desirable as a part of our diet, is not disputed by anybody. That farmers generally should raise all the fruits needed by their families is a proposition not quite so clear. There are some States in the Union, and some regions in each State, where the soil and climate are not favorable for raising some kinds of fruit, and possibly not the best quality of any. In these States, or parts of States, it would seem that the question of fruit raising had been decided in the negative by the Almighty. Rich men, for pleasure, may grow tropical fruits in hot houses, but the generality of farmers will raise the crops for which their soil and climate are adapted, and buy their oranges and prunes from Florida and California. This is in accordance with the true principles of trade, without which there could be no commerce.

It may not always be the best policy for a farmer to raise all the fruits which grow well in his neighborhood. One man cannot do everything, and do it well. He might be able to buy some of his fruits cheaper than he could raise them. Men who do only one particular thing become very expert at that, and consequently can do it quicker, better and cheaper than the man with less knowledge and experience. There are some places where even quite common fruit like strawberries cannot be bought, and a farmer must raise them himself or go without them.

Where apple trees grow well, are long lived, and productive, as in most of the Eastern and Middle States, farmers should certainly set out trees enough of the best varieties to supply their families with this king of all the tree fruits. Where the soil and climate are unfavorable, as in many parts of the West, it is not only unprofitable, but vexatious and discouraging to set out trees, as they only live a few years after they begin to bear, and more trees must be set out every few years to supply their places. In Adams county, Ill., grapes, raspberries, black-

berries and strawberries grow nicely, but Mr. John M. Stahl says that it costs considerably more to raise apples, and five times as much to raise peaches, pears and plums than the same quality of fruit can be bought for raised in more favorable localities. The same may be said of more counties in that and several other Western States. In Kane county, Ill., I was told by a friend who has lived there a long time, that eight years was about the average lifetime of apple trees. They could be made to live longer by the protection of a wind-brake, but the protection would cost labor, and make the fruit more expensive.

In Missouri thousands of apple trees die every year from what they call "root blight," and the remedy is said to be to allow the trees to form a head so low down that the lower limbs rest on the ground. If the remedy were a sure one, apples could be raised or kept seeded with valuable grasses, and would soon grow up full of noxious weeds, and instead of being a thing of beauty, would soon become an eye-sore and a harbor for woodchucks, skunks and other wild vermin.

Currants, all things considered, are the most valuable and easiest raised of all the small fruits. They are not so delicious to the taste as strawberries, but are more valuable because so much easier raised. They are indigenous in the temperate zone of Asia, Europe and America, and the black variety is so hardy it endures the rigorous climate of the Shetland Islands. The red and white varieties are the best, the whites not being quite so sour as the red. With reasonable care and manuring, they will grow on the same ground as long as asparagus, and produce crops every year. For thirty years our bushes have not failed to bear every season. The only labor is to manure them, keep the weeds pulled out, the old canes removed, and the green worms destroyed. A little white hellebore, about a heaping tablespoonful in ten quarts of water, well stirred and sprayed on from a watering pot will kill the worms every time.

There is no other fruit that will remain on the bushes so long after getting ripe without rotting or drying up, becoming tasteless or wormy. It seems to be their particular virtue to hang on the bushes and keep good until they can be used.

There is no good reason why farmers should not raise gooseberries. They are not quite so good tasted as currants, and the bushes are full of sharp thorns, which wound the hurried picker's hands, but they are easily raised, are fine for stewing or canning, and provide an agreeable change, which all tastes desire. Their chief enemy is the currant worm, which must be fought with hellebore. Raspberries and blackberries are as easily raised as cabbage or corn. The wild black caps and reds from

the woods of the vicinity will improve by cultivation, and be the kinds that will surely endure the climate. Most farmers raise grapes, and all *ought to*. The Clinton and Concord, though not the best, are the hardiest here and will endure the most neglect.

J. W. INGHAM.

Except in the mountains of the west of this State we have never seen either currants or gooseberries grown in the South worth gathering. The climate is too warm for them. The gooseberries raised are poor, miserable, sour berries, no larger than the wild ones to be found in England. We have in that country grown gooseberries by the bushel as large as plums, and quite as good flavored and sweet as the best plums. Mildew is the great enemy of the gooseberry in this country. There has not yet been produced a berry resistant to this disease. We would not advise any one to try to raise currants or gooseberries in the South. Strawberries are the best of the small fruits for the South. In bush fruits, blackberries and raspberries are the best, but even these suffer in a hot summer, and are small and hard.—Ed.

### STOCKS AND SCIONS: THEIR MUTUAL INFLUENCES.

Although a great deal is written about fruit and fruit trees in all agricultural papers, but little is ever said about grafting and budding, and what little one does see consists, almost without exception, of brief instructions how to perform these comparatively simple operations.

This, however, is but the A B C of the business, and, I fear, but few of us have got beyond it, or if we have, have religiously kept our information to ourselves. The important questions of the relative influences of stock on scion and of scion on stock are, almost without exception, passed over in silence, and yet the size, quality and time of ripening of fruit largely depend on the kind of stock used.

Referring to the Encyclopædia Britannica, article "Horticulture," this point is briefly alluded to, and one interesting illustration showing the influence of stock on scion is given—namely, the *Cytisus Adami*, a graft hybrid, originated by grafting *Cytisus Purpureus* on the common laburnum, the hybrid producing some flowers and foliage like each of its parents, and some intermediate between the two.

I am satisfied that a late apple grafted on the stock of an early variety, or on the seedling of one, matures earlier, and an early grafted on a late, matures later than the average; also, the size, shape, color and flavor of the fruit are more or less influenced.

I believe many nurserymen have been blamed for

selling stock not true to name, where the fault has been due to careless selection of stocks to graft on.

Unfortunately, it does not appear that enough experiments have been recorded to reduce the laws of grafting (outside of politics) to anything like scientific accuracy.

I trust some more experienced than I will contribute their experiences in this most interesting and profitable subject.

In a nearby orchard, a friend of mine has grafted one variety of pear on different stock, which pear is a large late cooking variety, and the nature of the different stocks on which it is grafted is known.

On the Bartlett, the pear partakes of that nature, being modified in shape and markings to that of the Bartlett, the flavor being slightly mellowed, but its large size being well maintained.

Grafted on the Seckel, both shape and skin approximate to that variety, though retaining the large size; whilst a third, grafted on the mountain ash, differs from both the others. The original pear appears somewhat different from any of these, but I do not know what the nature of the stock it is grafted on may be.

I remember eating pears in both England and Ireland which had gritty flesh next the core, and in both countries this was, rightly or wrongly, attributed to their being grafted on the English hawthorn or white thorn stock.

Another subject of interest is fruit tree seedlings. Presumably, the nearer the fruits approximate to the wild varieties, the less variation there will be in the specimens raised from seed.

At any rate, I believe it to be a fact that apricots, peaches and quinces will reproduce themselves with fair regularity, apples and pears seldom, generally producing worthless varieties, with an occasional notable exception of market value; whilst good cherries, a fairly good percentage of marketable varieties, and the same may be said of plums. Walnuts seem fairly constant to the original type; while cobnuts and filberts tend to revert to the wild hazel, whence they sprung. Occasionally, however, a variety as good as, or better, than the parent is found. Of course, with all fruits, careful hybridizing is of the utmost importance if definite results along given lines are desired.—W. J. L. Hamilton, in *Farmers' Advocate* (Canada).

#### WHAT ARE THE BEST VARIETIES OF PEACHES FOR VIRGINIA.

*Mr. R. H. Price, Montgomery Co., Va.:*

Dear Sir,—Your "History of the Peach," *SOUTHERN PLANTER*, September, 1904, shows I have been planting a wrong race of peaches for this latitude (Stump, Cranford, etc.). I am in Albemarle county, Va., within two miles of Blue Ridge, elevation 900 feet; soil, red clay loam; good, natural drainage;

field level. Could you be so good as to tell me the best peaches to plant here, and where I can buy the trees? Yours truly,

M. B. LANGHORNE.  
*Albemarle Co., Va.*

While it is a very difficult thing to recommend suitable varieties of peaches especially for a given locality, still we are beginning to learn that there are races of peaches best adapted to certain thermal lines. Leaving out high elevations on mountain sides, I would not hesitate to plant a considerable number of Elberta and Mamie Ross varieties in this State. These varieties come from the "North China race." They are late bloomers and are hardy in bud. Elberta is not a good pollenizer, when planted largely by itself. Mamie Ross is an excellent pollenizer for itself and Elberta. Therefore I would plant the two together. The Elberta variety has made several men rich in Georgia and Texas. It heads the list of great market peaches of the world. It goes to the northern markets from the above mentioned States by the train load. It has gone also in sample packages into the English markets. When the Texas and Georgia crops have been exhausted, why could not Virginia and the Carolinas follow up with other shipments. These two varieties undoubtedly would grow well on our light sandy rolling lands. Our apple orchards could be planted on richer and more clayey soils. The peaches would be harvested and gone before the apples come in. By growing both crops the market season of the grower would be prolonged to the advantage of his purse. The peach is being neglected in Virginia owing largely to the belief of the uncertain fruiting habits of this fruit. The wrong varieties have been planted. Bad locations for orchards have been selected. Borers have killed thousands of trees in the State. We have learned now how to overcome all these difficulties. Now let us plant some peaches this fall of the two varieties I have mentioned. Let the peach industry in Virginia grow. There is scarcely a better yellow canning peach than the Elberta variety. We can put up all we do not ship. The peach is one of the best paying fruits to can, as I know by experience. Plant peach orchards on the mountain sides and canneries in the valleys along the small streams. Begin the work this fall. Where can I obtain the varieties? I have not examined the lists of Virginia nurserymen for these two varieties. If they do not have them, I want them to get them. They can be bought of Texas and Georgia nurserymen by the car load. Let us have more questions asked about the peach. What are your difficulties? I will answer them through the

**PLANTER.**  
R. H. PRICE.

## Live Stock and Dairy.

### THE MANAGEMENT OF BEEF CATTLE.

*Editor Southern Planter:*

The season of the greatest interest and concern to the man who proposes to feed beef cattle is rapidly approaching. Now is the time when he must give consideration to the kind and class of animals he will feed the coming winter, for on the selection of the animals depends very much the profits derived from his labors and the price obtained for his foodstuffs. Any one contemplating feeding beef cattle must think about it a long time in advance in order to arrange matters to the best advantage, locate supplemental foodstuffs which it will be necessary to purchase, and secure them for spot cash when the market price is lowest. As a rule, it is a mistake to wait until a few days before it is desired to put cattle on feed to locate them. One then generally has to pay a higher price and has to be satisfied with a class of cattle that are not as good as could be obtained had forethought and a definite plan formed a part of the contemplated work. Possibly more loss is sustained through a failure to study the markets and the best condition of the cattle trade six months hence—the selling time—than from any other cause. In a number of instances last winter men who had undertaken the feeding of cattle failed, according to the observation of the writer, because of a failure to map out a definite plan before they commenced feeding. One man, for example, started to feed a number of cattle for the Christmas market. He had had very little experience, and not knowing how long it took to finish an animal, found them unfit for the market when Christmas arrived. He had foolishly commenced feeding them a heavy grain ration from the start, thinking by so doing he would finish them rapidly, and thus he found his grain pretty well exhausted before his cattle were half finished. He had also fed them about twice as much grain as was necessary to secure a good gain, and hence with half-finished cattle on his hands used to a heavy grain ration, he could not let down on the amount of meal fed. There was no recourse but to increase the supply of meal and continue to feed for several months in order to get rid of the cattle at a fair price. The experiment, so far as he was concerned, was a financial failure, though men in the vicinity where this happened fed cattle at a profit. The other instances referred to, while different in details, were similar in results, and the cause was almost the same. The inference to be drawn is that one who proposes to feed cattle must know what he is

trying to do, and then must proceed in an intelligent way if he hopes to succeed.

Formulating the plan is therefore the first essential and might appropriately form a feeder's motto. True, a plan, no matter how well prepared, cannot always be adhered to; but it is easier to meet contingencies with one in mind than when going at haphazard gait. After the cattle are secured many persons make the mistake of putting them on feed at once. Animals brought off the grass will not readily take to a fodder and grain ration. They must be given several days in which to become accustomed to the changed food and surroundings. This is appropriately termed the preliminary feeding period, and should cover from 7 to 14 days, the longer period being preferable. During this time very little grain need be fed; just enough to accustom them to its use and to get them to relish it. Give them a fair supply of rough fodder or silage, as the case may be, but do not feed lavishly. The attempt should be rather to teach them to acquire a liking for the new food.

Animals will sometimes not take readily to new kinds of food for several days, examples of which are sometimes seen in the case of silage and cotton seed meal. After they once acquire a taste, however, they eat these foods ravenously. The "putting-on-food" process should therefore be slow and deliberate. A violent change of foodstuffs requires a new adjustment of the digestive system, and many people make the mistake of trying to rush cattle on a heavy grain ration in the beginning, with the result that the appetite soon becomes cloyed and the animals go "off feed," something little short of a disaster to the feeder. With new foods and forced feeding from the beginning, the digestion is likely to be upset, so the cloying of the appetite and "getting off feed" is often not a simple matter, but something whose effects may be felt for several months. It sometimes happens that the animals never again acquire the keen appetite with which they started out when first put on feed. Thus, the preliminary feeding is a very important period, determining very often the success which will finally be attained.

Where cattle are to be fed for 150 or 180 days, to be finished on grass for early slaughter, at least 30 to 60 days should be consumed in bringing them to full feed. In fact they do not reach what is the final concentrate limit until within the last 30 to 60 days. At the end of the preliminary feeding period of two weeks, the roughness ration may be brought to its full

limit, though at this time not more than 4 to 6 pounds of meal is best to feed per head per day. The meal ration may then be increased one-half to one pound per week, depending on the size of the animals. If the animals are being fed for 150 days, this will give three months, or twelve or thirteen weeks in which to reach the final limit of the concentrates fed. Animals weighing 800 pounds and receiving four pounds of meal when first placed on feed, would then be receiving from 12 to 15 pounds of meal per head per day, which is all that they will consume profitably. In fact, in our experience where silage has been fed it has generally been most profitable to limit the meal ration with such animals to ten pounds if of cotton seed meal, and to ten to twelve pounds if consisting of one third to one half cotton seed meal and the balance of corn and cob meal. By raising the meal ration gradually the digestion of the animal is never upset nor the appetite impaired, and thus uniform gains are obtained from the beginning to the end of the feeding experiment, something which is absolutely necessary if large gains are to be made, for when an animal gets "off feed" it often takes two weeks to bring him back, and during that time he will certainly stand still, if he does not lose.

During the progress of the feeding experiment the consumption of roughness will decrease and the concentrates increase, and it is well to bear this in mind and not allow a lot of food to accumulate in the mangers. There is nothing that will throw an animal off feed sooner or destroy his appetite more quickly than to leave the mangers full of spoiled, pickled-over food. The mere breathing of the animals on this food makes it distasteful to them, and it will also soon become musty, thereby endangering both the appetite and the health of the animals. The manger should be cleaned carefully each day and washed once in a while with a strong solution of borax or salt. It may take a little time to do this, but it is labor well expended, for animals on heavy feed are very likely to become dainty, which is, to say the least, a misfortune.

Care should also be exercised to see that the foods are fed in the most palatable condition. Palatability increases the consumption of food, and large and uniform gain can only follow where food is consumed freely and in the best condition for rapid digestion and assimilation. Musty, dirty food should not be offered to animals. Clean, bright hay and fodder can be had just as well as the other kind, if the farmer is a good business man, and if he is not, he had better keep out of the cattle-feeding business. Should

soured or fire-fanged places occur in the silage, throw them to one side, as it is liable to throw the animals off feed and cause indigestion. The same is true of the meal. Cotton seed meal sometimes becomes stale. See that only bright, golden-colored meal is purchased, and then keep it in a well-protected place, so it will hold its flavor and quality throughout the feeding period.

One who contemplates feeding cattle must provide some means for weighing them, if the best results are to be obtained. Cattle must be weighed at least every ten to fifteen days in order that an estimate may be made of their gains, and the food adjusted to their needs, and it is only in this way that one can keep up with the progress of the respective individuals, for the eye is very deceiving, and the best gains are frequently made when one supposes the animals to be standing still. The scales are the best criterion by which to ascertain the individual progress of the animal and the food supplies needed for the best gains. When one finds the animals not making satisfactory increase in live weight, the food can be readjusted—one concentrate increased or decreased, or a new roughness given. Very trifling changes sometimes give surprising results, and it is hard to see how one can hope to feed cattle successfully where no scales are available for weighing them from the time they are first placed on feed until they are ready for shipment. Certainly feeding cannot be done in the absence of a pair of scales, with the greatest economy of food.

Another important matter is to see that the animals are uniformly supplied with good pure water and plenty of salt. A lump of rock salt may be kept in the mangers or feeding troughs. A daily currying is a great advantage, as it keeps the skin open and healthy and aids circulation—a very important matter. It is also important to see that the animals are kept in comfortable surroundings—good clean stalls, with plenty of bedding. An open lot is not satisfactory, where the animals have to tramp through mud and are exposed to the rains of the winter season. Give them some kind of an open shed, where they can be clean and well supplied with bedding, and you will add much to their comfort and insure a larger gain and a greater profit.

ANDREW M. SOULE.  
*Virginia Experiment Station.*

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When corresponding with advertisers, kindly mention the SOUTHERN PLANTER.



**HEREFORD ASSOCIATION FOR VA. ORGANIZED.**

An enthusiastic body of Hereford cattle breeders met at the Hotel Roanoke, Roanoke, Va., on Wednesday, September 28, 1904, at 8 P. M. to discuss the subject of an organization of a Virginia Hereford Breeders' Association, to promote the interests of the Hereford breed in the State and lower South, and to hold annual sales at some central point in the State to provide those who are contemplating entering the breeding business with the opportunity of making personal selection from the best herds, without being put to the expense of visiting the several breeding establishments, and thus cause a wide distribution of the finest cattle. Breeders believe that where the Hereford breed is once tried, it is sure to be maintained.

After a general discussion of the objects and means to accomplish the greatest advancement, by-laws were drafted and adopted, and the Association was organized formally under the name of the Virginia Hereford Breeders' Association, with the following officers: Murray Boocock, President; H. B. Hawe, Vice-President, and Edward G. Butler, Secretary and Treasurer. The following Board of Directors was elected for one year: Murray Boocock, H. L. Morgan, H. B. Sproul, E. G. Butler, H. B. Hawe, J. D. Stubbs, H. Mechendorf, E. R. Phipps and E. L. Eakle.

A charter has been applied for, and a share of stock will be given each member of the Association, the membership fee being \$5, and open to all reliable Hereford breeders or owners of a registered Hereford in Virginia.

Constant additions of very fine Herefords are being made to the already grand herds in the State, and with such splendid show bulls and sires as Salisbury, Prince Rupert, Acrobat, Marmaduke, Van and Rex Premier, not to mention the other grand sires and females owned in the State, the Virginia Hereford Breeders' Association unquestionably stands on a solid foundation, and every breeder should join the ranks at once and either send his application for membership to the Secretary, Edward G. Butler, Berryville, Va., or write him in regard to joining the Association. The united efforts of every breeder of pure-bred Herefords, and every owner of a registered bull is desired.

The Association proposes to have the State Fairs join with it in the selection of competent judges, as the present system is very faulty and discouraging to breeders who exhibit their cattle and thus demonstrate the splendid qualities of the Hereford.

The Herefords won the championship over all breeds at the World's Fair, and their wonderful and superior grazing qualities and hardy constitutions stamp them as the cattle best suited for our Virginia pastures.

**AN EXPERIMENT IN FEEDING BREEDING EWES.**

Mr. Alva Agee, in the National Stockman, makes the following report of an experiment made in heavy corn feeding of breeding ewes by Mr. Todd. We reproduce the same for the purpose of showing that it is possible to adopt this course with safety, notwithstanding many strong opinions to the contrary. We would, however, urge that in adopting such a course care should be taken not to feed the heavy corn ration close up to the time of dropping the lambs, nor for a week afterwards. During this period (say a week before the lambing and a week afterwards), the grain ration should be limited to bran almost alone, so that the bowels of the sheep may be kept open, and thus the danger of a high feverish condition at lambing be reduced until normal conditions are established and the flow of milk is freely started. After that time, with strong, healthy lambs, there is no danger of any loss from heavy feeding, as the lambs will take the milk as fast as made, and the more they take the sooner they will be ready for market and the fatter they will be, and a fat lamb rather than a large one is what the market calls for and pays well for. Mr. Agee says:

Fifty-four grade ewes—Merino, Shropshire and Oxford blood—were bought by Mr. Todd the middle of last August for \$167. They were put on good grass, and began receiving a grain ration the first of November. One and a half quarts of oats and corn, by measure, per head were fed during November, and then the same quantity of a mixture of corn, oats and bran, by measure, increasing slightly the amount in latter part of January, and getting up to two and a half quarts by the first of February.

The ration was then increased to three quarts, of which one-third by measure was corn, and here only close watching saved from loss, because while the sheep ate all the grain their appearance showed to Mr. Todd that he was a little past the safe limit, and he dropped back to two and a half quarts daily. This was fed morning and night, with all the clover hay wanted, and water was supplied freely.

The lambs did not begin to come until about the middle of January, and the most were dropped during February. The ewes were fat, of course, before lambing, and Mr. Todd believed that he could have

them so, and keep them so, and raise good fat lambs at the same time.

He made an improvement in the construction of the "creep," into which the lambs go for separate feeding. Instead of placing it around the outer edge of the pen, as usual, where lambs often fail to find it readily, he put it in the center of the pen. Troughs were so constructed that the lambs could not get their feet into them and taint their food. This is important. The feed was cracked corn. It should be coarse. If any is fine, it should be sifted out. A little salt—not too much—should be put into this grain ration.

The first shipment of lambs was made early in March, at an average age of seven and a half weeks, and the average dressed weight was thirty pounds. The lambs weighing thirty pounds or more sold for \$7, while the few under thirty brought only \$5 to \$6. The shipment of any under thirty pounds dressed was a mistake, as the market was as good the following week. The market requires this weight, and the lamb must be fat. The sixty-one lambs brought \$360. The wool of the ewes sold for \$82. The ewes were fat enough for market when the lambs were taken from them, and were sold for \$212, making total receipts \$654.

The feed cost \$295, and \$10 was paid for dressing the lambs. Adding the first cost of the flock, \$167, the whole cost amounts to \$472. Placing no value upon the manure or the exercise gotten by Mr. Todd in feeding, the cash returns are entirely satisfactory.

The important point, however, is not the exact profit, but it is the fact that these highly-fed ewes, getting a big amount of corn, gave good lambs that thrived on corn, and the ewes were fat enough for market when the lambs were taken from them.

### AMONG THE FLOCKS IN ENGLAND.

*Editor Southern Planter:*

It is a great opportunity for an American shepherd to visit England and study the conditions and methods of sheep husbandry there. The writer was so fortunate this summer as to visit England for the purpose of importing some Dorsets, and he took the occasion to travel through several counties to learn about the various breeds and their management.

The first thing that caught my attention was that each small section of that wonderful country had its own breed of sheep, and when I asked for an explanation, I was told that this was the country suited to that special type. The Cotswolds have never thrived in Kent, where the Romney Marsh sheep are raised by the thousands; the Southdowns have never invaded the Dorset country in Somerset and Dorset;

the Ryelands have never been successful in Lincolnshire, where the lordly Lincolns have held sway from time immemorial.

This dividing of England up into sheep districts does not coincide with the division into counties. Sometimes two counties were found given over to a breed. The Dorsets were the sheep of Dorset, Somerset and the Isle of Wight. The Isle of Wight is in Hampshire county, and yet that lovely island has been found better suited to Dorsets, although many flocks of Hampshires are found there. One corner of Dorset county has been invaded by Hampshires, and they have done well there. Is it not remarkable that the worst flocks of Dorsets I saw were in this corner of the county! I asked an old Hampshire breeder why the Hampshires of the Isle of Wight and southern Hampshire were not proof that these sheep thrived there. He said: "Did you not notice the heads of those Hampshires? Their noses are too fine. You cannot grow typical Hampshires on that soil."

I found only one section that reminded me of cosmopolitan America. This was a lovely stretch of country around York. Here I saw scrub sheep, mottled sheep, poor sheep, ragged sheep, black sheep, white-faced sheep, black-faced sheep, big sheep, little sheep, mean sheep, fine sheep. I actually found one flock of black sheep consisting of about one hundred head. There was also a flock of Cheviots, seen so rarely except in that Cheviot country, where these noble little sheep climb the grassy hills and rest in the thick moor grass by the winding burns.

The next thing that caught my attention was the size of the flocks. It was no uncommon thing to find in Dorset one thousand head of Dorset ewes in one flock, and in Kent and Wiltshire I think the flocks were sometimes even larger. In Scotland the shepherds had learned that these large flocks could not be run together with safety, so they had taught their dogs to keep them grazing by day in small bunches, and to gather them by night into scattered groups. In England the plan of management enabled the shepherds to graze their sheep together and keep them healthy. This was a wonder to me. One day I walked through a flock of 710 Dorset ewes, and I never heard a cough, never saw a dirty nose, never caught sight of a lame sheep, and found not a single ailing ewe. Do you suppose we can ever do it in this country? You want to know at once how they manage their flocks. More of this later.

The next thing that I noticed was that in certain sections the type of sheep seemed so unsuited to gen-

eral purposes, and you were prone to ask, Why maintain such breeds? The Exmoor and Dartmoor sheep seemed to be a rough mountain sheep with horns, poor fleeces, and suited only for roughing it among the hills of Devonshire and Cornwall, and yet they are maintained as distinct breeds, and had numerous entries at the Royal Show. Imagine our showing at St. Louis, a few pens of those long-legged mountain ewes, so common in certain sections of West Virginia. On inquiry, I found that these sheep were very profitable, and were the only sheep that ever thrived in those sections. They required very little, if any, care and handling.

In another section I saw those curly fleeced Wensleydales, whose blue faces suggested disease, and whose wool looked more like a poodle's than a sheep's. I found the little Sussex, not half so large as Southdowns, and yet they were exceedingly popular, because their flesh was the choicest dish in England. It had only one rival, and that the flesh of the Welsh mountain, another type of sheep that we would set aside as not worthy our notice.

The Ryelands in Hereford were set aside a bit in popularity by the coming of the cosmopolitan Shropshire, but the people will not give them up, and I must confess that I saw much in them worth keeping. I never saw better backs and shoulders on any sheep, and the wool was the very best in all that country. Thus throughout the country you could meet up with sheep that seemed almost curiosities, and yet they were the sheep for that country.

Now, just a word about the management of sheep in certain sections. I will in this paper confine my attention to the management of flocks in Dorset and Somerset. When I reached that charming country, I found the sheep farmers making up their flocks for the season. They were to turn the rams in that very week, the last week of June. They had their shepherds go over the six toothed ewes and mark on the rumps all the ewes that would be retained, the rest being thrown out with all ewes over three years to go out as "grazers." All ewes over three and the culls were sold to men in Wiltshire and Hampshire and the Isle of Wight, who bred them to Hampshire rams and then placed ewes and lambs both on the market at Christmas, the lambs often weighing sixty pounds. Coming back to the making up of the flock, the four-toothed ewes were next marked on the side, then the two-toothed ewes, which had been carefully selected from the "chilver lambs" of the year before, were marked on the shoulder. I found that the shepherds never practiced deception in the mark-

ing of the ewes. They thus knew the individuals of the three ages in their flocks. The rams were marked on the brisket and turned in six and eight at a time, and the shepherd was on hand to keep a record of the breeding. It was a sight to see this mating. It impressed one with the fecundity of the Dorsets, for to one in this country a ewe that comes in June is a rarity. Here in Dorset 20 and 30 ewes would come to service in a few hours after turning the rams in. After two days one ram was used at a time, and the shepherd was not kept so close on the watch.

The fine sod of this section made it possible to pasture about six times as many sheep per acre as the average Virginia farm could maintain. The farms there were divided up into small fields with hurdles, which were light fence panels woven of split hazel switches. The lambs were kept in front of the flock in the rotation. These were kept for three or four days on a small boundary and were then moved to another. The ewe flock in the course of a week would come to the boundary, which the lambs had left. Thus with a half dozen fields, the lambs and ewes were kept in constant rotation, neither flock remaining on one pasture more than four days, and each going to grass that had not been grazed for eight days. There being no very hot sun, the sheep grazed all day, and had no need to lie in the shade of the fence or trees, so they had no opportunity to make pest places in the fields, as our sheep in America are sure to do. No wonder we have parasites. The ewe lambs are allowed to eat mangels all through the year. These are thrown out on the ground uncut. It injures their teeth, but it makes the lambs grow. When these mangels wilt, the shepherds say they will not stop the water of ram lambs, but they are sure death for rams when fed fresh. These people have little winter in this section, so they have no shelter. These Dorset ewes lamb in November right out in the fields, and the lambs are ready to eat the winter rations along with the ewes. They feed little grain in the winter, but their sheep are allowed plenty of roots. In December they are turned on the turnip fields, where they eat tops and roots; in January and February they are turned on the swedes (rutabagas), where they eat the roots right out of the ground, although the swedes are often lifted to help them to get at them; in March they are turned on the mangels, and they have mangels to their hearts' content.

The constant care of the shepherd is no small item in this successful sheep management. The shep-

herds stay right with the sheep, having no other company save that of their faithful dogs. These shepherds have their houses on wheels, and these are moved to different parts of the pastures at night, and the sheep are made to sleep around them. This seems extravagant to us, but it pays, I tell you. I saw a flock of 1,015 Dorset ewes sold at auction at from \$14 to \$16 a head. A man could afford to keep a shepherd with his sheep if it would enable him to handle that number on two hundred acres and make them worth that much per head. That country is an eye-opener to the sheep man. It makes him come back home determined to study the problems of sheep husbandry here and plan for better things in the future. We lack the climate of Southern England, and, therefore, the grass and the cool hours of the daytime for turning it into mutton, so we must be handicapped, still there is much for us to learn, and I confidently hope for better things in the future. The first great problem is to learn how to get our sheep healthy and keep them so. No need in trying to raise good sheep when they are filled with parasites and debilitated with catarrh.

*West Virginia.*

H. B. ARBUCKLE.

### TRAINING THE HEIFER TO BE MILKED.

*Editor Southern Planter:*

"Breaking" is the word in general use, but is not the right one to denote the proper manner of teaching heifers to stand still and be milked. When we talk about the breaking of a contract, or a bank, a wagon or a plow, the idea conveyed is of a regrettable event. The word breaking indicates that violence is to be used, whereas at the first milking, and all subsequent ones, only kindness must be exercised, and no clubs or milking stools be broken over the heifer's back. Kindness, firmness and perfect self-control must be exercised from the beginning to the end of the lessons. As the fond mother washes and dresses her child in spite of its struggles and cries to prevent her, so the experienced milker will use all the force that is necessary, and milk his heifer in spite of her kicking. Mankind obtains dominion over the lower animals by superior knowledge, greater persistence, and command of temper. No man should undertake to break a heifer or milk a kicking cow who cannot control his anger.

A neighbor of ours says he never has any trouble in breaking his heifers because he raises them already broken, or rather breaks them as he raises them. From the time he takes them as calves from their

mothers until they have calves of their own, he accustoms them to having their bags and teats handled, and frequently he pretends to milk them. This, of course, to be effectual must be often repeated, and is more trouble than most farmers who raise their own cows are willing to take, yet it is well always to accustom heifers to be handled from birth to maturity as frequently as can conveniently be done. I always break our heifers myself, and have had fifty years' experience in the business. Some heifers will allow you to milk them without offering much, if any, resistance; but a large majority will resent the liberty you take in robbing them of their milk. Perhaps they think the milk should be kept for the calf, and is a sacred deposit for that purpose, but whatever they think, they try to kick the pail over, and kick your hands loose from their teats, and sometimes kick with great violence. In such cases no amount of petting and coaxing will avail. There is but one effectual way, and that is to milk them in spite of their kicking.

I put the heifer into her stall, tie her head up short, so that she cannot back out, or surge ahead, and give her some dry meal to eat in order to put her into an amiable frame of mind, but it won't prevent her from kicking, if she doesn't want to be milked. I use a wooden pail because it stands more firmly than a tin pail, and I do not place it directly under her bag. I put an old cap on my head, stand on my feet to milk, place my head in the heifer's groin, taking a firm hold of the right hind teat with my left hand, and the front fore teat with my right. If she tries to kick I brace my feet, stiffen my neck, and hold on to the teats with a bulldog grip. The left hand is the one, of course, which she tries to get loose, as it is the one which prevents her from hitting the pail. Standing on my feet bent over, I can vary my position as she varies hers, and if my hold is maintained she can kick but little and cannot hit me nor the pail. I do not try to draw milk while the struggle lasts, only tighten my grip and maintain my hold. The length of the struggle depends on the disposition of the heifer. Some are more stubborn and determined than others and make several fierce fights for the mastery at the first milking, and repeat them with less violence at the second and third. When she finds that I am master of the situation and can "hold the fort," that I don't want to hurt her, that I do want her milk, and am determined to have it, whether she is willing or not, she gives up the battle, and there is no more trouble. In my opinion, a heifer broken by tying her with ropes and

straps around her legs or over her loins would be only half broken, and the ropes and straps would have to be used many times on a stubborn heifer. Sometimes the gentlest heifers are the most self-willed and hardest to break. I have broken a large number, and have never known one to injure her teats by my holding on to them while she is kicking. Old cows will kick when they have a sore teat, and I milk them forcibly the same as I do heifers.

J. W. INGHAM.

Where a cow has a sore teat a milking tube should be used, and this saves her pain and yourself trouble until the teat heals.—ED.

**SWINE FEEDING.**

Swine feeding, like any other industry, is profitable in proportion to the intelligence and skill employed in the care, feeding and management of the hogs. The accompanying table brings out some very interesting facts, demonstrating how the farmer might easily feed his animals, either at a considerable profit, at a bare profit, or under certain conditions at a direct loss. In view of the growing interest in feeding all classes of live stock, it will pay to study this table carefully, for it brings to light some important facts which are frequently overlooked on the farm, as they directly influence the feeder's profits.

Surely this subject of swine rearing is of great importance to the Southern farmer, because to-day, in a country with every natural facility for the development of the business, not enough pork products are produced for home consumption. Considering the favorable conditions, it is hard to realize why this should be the case, but if one inquires of the farmers themselves, he frequently receives as an answer the fact that the business is unprofitable owing to the prevalence of some animal disease, the scarcity of suitable foodstuffs, or the small gains made by the animals.

If malignant forms of disease, such as cholera, should prevail, the cause is due to unsanitary conditions, while the remedy remains in the hands of the farmer. In a state of nature the hog is a cleanly animal, keeping his home and surroundings in perfect sanitary condition and living himself on herbs, roots and mast of the great forests and swamps, which are his native haunts. Under domestication, however, he is forced to submit to the conditions which indifferent and unsympathetic owners have provided for him. These surroundings are frequently of the most unsanitary nature—in fact, filthy and inhuman beyond expression. Where such conditions prevail it is no wonder that disease of various kinds should

find a fertile soil in which to grow, and every farmer who has an unsanitary hog house should remedy the defect at once, and then this first question will be easily settled. The scarcity of foodstuffs is a poor plea for the non-development of swine husbandry when hogs can be provided with grazing crops for nine months of the year. These crops may also consist largely of legumes, and if a small amount of corn is fed in conjunction with grazing crops, hogs weighing from 200 to 300 pounds can be made in the course of the summer's grazing, by the consumption of 10 to 15 bushels of corn, and in addition the kitchen slops and by-products of the dairy, which are, or should be, available on every Southern farm. With the possibility of having the foodstuffs—should inclination or desire impel the owner—this can no longer be brought up as a reason for the neglect of this very important industry. The small gains made by the animals are attributable, as the table

RATION.	Beginning—Lbs.	End—Lbs.	Corn Meal Consumed—Lbs.	Total consumed—Lbs.	Gain per head per day—Lbs.	Cost of feed per lb. gain—Cents.	Per cent of good meat.	Value of manure.	Profit from feed 'g.
Group I.—Water.....	10.	16.	4.6	4.6	1.	3.9	73.6	\$2 06	\$ 7 16
Corn meal.....	6.	8.							
Group II.—Skim milk....	18.	40.	2.1	13.3	2.3	4.2	78.5	4 12	9 47
Corn meal.....	6.	8.							
Group III.—Skim milk....	12	.....	1.7	13.1	2.2	3.4	76.2	3 80	12 62
Corn meal.....	4.	6.25							
Whey.....	.....	40.							
Wheat meal.....	.....	1.75							
Group IV.—Skim milk....	8.	26.75	2.9	16.4	2.	5.2	77.7	2 15	3 50
Pea hay.....	4.	1.5							
Corn meal.....	2.66	5.5							

already referred to shows, first, to the use of improper rations; and, second, to inferior quality of the stock. The small gains are due quite as much to a failure to understand how to combine rations suitable for the nourishment of the hog so as to obtain the most rapid and economical gains, as to the quality of the stock. Nearly all the improved breeds of swine do well in the South, and some animals of good quality of the several leading breeds are to be found in almost every community. As the hog increases so rapidly and pure bred animals of high quality can be purchased for such a small outlay of capital, there is no reason why the quality of stock in itself should not be remedied at a very early date. With these factors settled, the farmer should then devote all his energy and attention to the study of how to best combine foodstuffs to obtain the cheapest gains. That this matter can be readily mastered by any person of average intelligence no one will question, but that the subject of feeding in itself is not only worthy of attention, but should receive the most careful consid-

eration at the hands of the farmer, only comparatively few people fully realize. In order that this may be brought home more forcibly to the reader, notice that four different rations, such as may be available on the average Southern farm, were fed to four groups of hogs with very marked results, so far as the financial end of the matter was concerned. The first group received corn meal and water; the second, skim milk and corn meal; the third, skim milk, corn meal, whey and wheat meal; and the fourth, skim milk, pea hay and corn meal. The ration fed to Group 1 is the one commonly fed on the Southern farm. The animals receiving this ration consumed 4.6 pounds of corn meal for a pound of gain; when skim milk was substituted for water, only 2.1 pounds of corn meal were required for a pound of gain; and where corn meal and a small amount of wheat meal were added, only 1.7 pounds of corn meal were required for a pound of gain. Thus it is evident that a bushel of corn fed with certain adjuncts which are waste products on the average farm, can be made to produce twice as many pounds of pork. It is also noteworthy that where this ration was fed, the gain per day was 2.3 pounds, whereas with corn meal and water it was only one pound. The addition of wheat meal to the ration, while producing a gain almost equal to that from corn meal and skim milk, made a better quality of bacon, as the fat and lean were better intermixed. In Group IV an endeavor was made to feed pea hay, but the results were unsatisfactory, as the animals would not eat enough of the hay, even in a finely chopped condition, to be satisfactory. Notice that while the amount of grain consumed and the gain per day were materially affected by the combination of certain foodstuffs, the slaughter test was also affected, the largest amount of good meat being obtained from a ration containing skim milk and corn meal. This is due to the fact that corn meal of itself is too fattening and does not build enough muscle or tissues in which to store the fat. The skim milk, on the other hand, is a protein or muscle-building food, and hence the combination of the two gave a greater proportion of more desirable meat than the use of corn meal alone. These tests bring out some very important facts, which are worthy of consideration by every person interested in swine feeding in the South. Finally, notice that the combination of foodstuffs also affected the value of the manure, a fact of the greatest importance to the Southern farmer, whose soils need liberal supplies of humus; and more important than all the rest, is the fact that combinations of foodstuffs affect profits very materially. The largest profit was made by Group III, \$12.62, which received corn meal, wheat meal, skim milk and whey, and the next largest profit was from skim milk and corn meal; the third largest from corn meal and

water, and the least profit by Group IV, which received skim milk, corn meal and pea hay. As already noted, the animals in this group would not eat the pea hay, and as it constituted a considerable portion of their ration, this accounted for their failure to make a larger profit. The addition of some by-products of the farm with Group III made the profit from feeding this group \$5.46 greater than with Group I, while the addition of skim milk to Group II made the profit \$2.13 greater than with Group I. The writer knows certain creameries in the South where the skim milk is allowed to go to waste, its virtue for hog production not being realized, or else the creamery owners would establish swine feeding pens at a suitable distance from their plant, and utilize this most valuable by-product. Also on many farms this nutritious and cheap pork producing element is allowed to go to waste. In view of these experiments, this is an unpardonable waste, and one that every Southern farmer should make haste to correct, for it would in many instances point the way to the profitable production of pork.—A. M. Soule, in *Practical Farmer*.

## DORSET SHEEP AND YORKSHIRE HOGS IN VIRGINIA.

*Editor Southern Planter:*

I have read Mr. Arbuckle's letter announcing his importation of Dorset Horn sheep for prominent members of the Continental Dorset Club. I am quite at one with him in his estimate of the Dorsets in general, and of the flock of Mr. W. R. Flower in particular. Virginia, however, must be added to his list, for I have purchased for the flock at Morven Park fifteen of Mr. Flower's yearling Dorset ewes, which are expected to lamb down in November, and also his unrelated Dorset ram that took a first prize at the English "Park Royal" show.

As it seems to be the proper thing to keep you advised upon such matters, I may add that I have also purchased for the piggery at "Morven" from the herd of Mr. Saunders Spencer in England some large white Yorkshire pigs. These swine are all of course registered, and are headed by the prize-winning large white Yorkshire boar, "Holywell Huddersfield." The above animals are now en route, and I am sure that all lovers of these grand breeds will wish them a safe voyage.

WESTMORELAND DAVIS.

*Morven Park, by Leesburg, Va.*

When corresponding with advertisers, do us the kindness to mention THE PLANTER.

## The Poultry Yard.

### EXPERIENCE IN FEEDING MILK.

The great benefit to be derived from the feeding of milk to fowls seems to be almost entirely ignored by the majority of poultry keepers. Where corn is the principal ration, as is the case on the majority of farms, a liberal supply of milk to balance up this ration will be found most profitable in the return of eggs. If hens are fed all the milk they can be induced to drink along with a corn ration, great gains can be expected in the egg-production. Last year we fed our fowls largely on corn, especially our laying hens, and for a balance ration we supplied all the milk we could possibly spare, and the result was better production of eggs than in any previous winter. On farms where there is a good supply of milk there should be no reason for not receiving a large number of eggs.

Where milk is supplied liberally, animal food in the form of cut green bone can be reduced, as milk furnishes largely the elements found in bone. Milk and corn make a much better combination than milk, wheat and oats. Feed the layers corn and milk alternately with green food in the shape of cabbage or prepared clover, and you have an almost ideal food for egg-production. Milk can be given in almost unlimited quantities without any serious results following. It very often happens that feeding meat too freely produces diarrhoea, which checks the supply of eggs, but in feeding milk we do not experience such unfavorable results. In the country where it is not convenient for the farmer to get bone from the butcher, he can supply milk instead, which is almost or quite as good as bone. We know of a lady who feeds corn and milk the year round to both young and old, with very satisfactory results, using the sour milk (after boiling it) in mash with decided benefits, especially with the young growing stock. Next year we shall use boiled sour milk, wheat bran and corn meal, sprinkled with pulverized charcoal for our young chicks, believing we will have a food that will be wholesome, palatable and inexpensive compared to some of the prepared chick foods now on the market. At the same time we shall provide skimmed milk as we have previously done for the fowls to drink, believing we can realize more from the product in feeding in this way than any other way we could feed it, realizing that it will be practically impossible to get too much milk before our fowls.

If a patch of wheat or rye is sown close to the poultry run to supply green stuff naturally for the fowls during the winter months, and they are supplied constantly with milk, we stake our all on it that eggs will be plentiful, stock healthy and vigorous, with the assurance of strong fertility in eggs when the breeding season opens up.

J. C. CLIPP.

### FEED BULKY FOODS.

Mr. P. H. Jacobs (*Farm and Fireside*) quotes a leading and successful poultryman as saying that he made it a rule to feed his hens the same as he did his cows—namely, feeding grain, hay, ensilage, cooked roots, and adding to the rations of the hens ground meat and bone, good clean bone meal also being given to the cows. There is no reason, says Mr. Jacobs, why poultry should be fed almost exclusively on concentrated foods. Such practice is not economical, is not the best mode, and is sometimes injurious. If horses and cows were kept on corn or ground grain, to the exclusion of that which is bulky, they would soon fail to give satisfaction to their owners, and this is so well known to farmers that none of them attempt to keep stock without supplying grass in summer and hay in winter. The hens will eat grass, and they will also eat hay in winter, provided it is chopped for them, and especially if it is steeped in water and softened. They prefer coarse food to grain exclusively, and they lay oftener with such food, and keep in health. The hens on farms where food is given but three or four times a week can get all they wish by consuming the herbage of the fields. Some farmers sow rye in the fall and oats in the spring for the hens, and find that it pays them to do so. The gizzard works in its grinding capacity to its best advantage when the hens are provided with a variety of food, and better digestion is thereby secured. It is cheaper to use bulky food with grain than to confine the hens to concentrated materials, and they will produce more eggs by such treatment.

### PREPARING FOR WINTER.

For the period which elapses before the fowls are housed for the winter one can find plenty to do. One of the essential things after thoroughly preparing the house for the birds is to prepare the birds for the house. If the house is free from lice, see that the birds are also, before they make it their permanent home. It is an excellent plan to find out the spots where the hens dust outdoors and sprinkle a quantity of good insect powder in these places to assist in getting rid of the vermin. Then look them over for scaly legs.

This may not cause them much trouble during the summer while they have had plenty of exercise, but will make them very uncomfortable during the winter. Kerosene oil is good for this trouble, but crude petroleum is better. Take an old toothbrush, saturate it in the crude petroleum and brush the scaly legs thoroughly. Then saturate a cloth with the liquid and bind it around the legs. The fowls will not like this, but the cloth will stay on a day or two and do them much good.

## The Horse.

### NOTES.

A gratifying announcement to breeders of Maryland and Virginia especially, is that a steeplechase event has been opened for three-year-olds by the Washington Jockey Club, to be known as the Junior Steeplechase, which will be run about November 22d at the fall meeting at Washington, D. C. The National Hunt and Steeplechase Association, President S. S. Howland, Dr. James Kerr and others who take an active part in the counsels of the Club, will undoubtedly receive the thanks and unstinted praise of many steeplechase breeders for their promptness in recognizing and meeting the demand for this new stake. Here are the conditions:

Washington Jockey Club of the District of Columbia, Race course and office during meetings, Benning, D. C.; office in New York, 571 Fifth avenue, "The Windsor Arcade"; Autumn Meeting, 1904.

The Junior Steeplechase for three-year-olds. Subscriptions to close on or before Monday, October 10, at the office of the Washington Jockey Club, New York. Horses to be named Thursday, November 17, and race run Tuesday, November 22, at Benning, D. C.

*Conditions.*—First running of the Junior Steeplechase for three-year-olds. By subscription of \$10 each at time of entry, \$10 additional at time of naming, and \$10 additional for starters, all to the winner, with \$900 added, of which \$200 to the second, \$100 to the third. To carry 140 pounds, allowances as by rule to mares and geldings. Winner of a steeplechase or hurdle race to carry 7 pounds extra. Horses that have never started allowed 3 pounds.

Fifteen subscriptions, or the race *will be declared off*. No limit to the number of subscriptions, which may be transferred at the office of the Clerk of the Course, Benning, D. C., by 5 P. M. of Monday, November 21, and must be accompanied—if not previously paid—by the amount of the subscription, the entry fee for the horse, and starting fee. About two miles. For information, or entry blanks, apply to

H. G. CRICKMORE, *Clerk of the Course*,  
571 Fifth Avenue, New York, N. Y.



At a meeting of the Upperville Colt and Horse Club, held a few weeks since at Upperville, Va., the resignation of Col. R. H. Dulaney was offered and accepted upon his special request, as he had served the Association as president since its formation more than fifty years ago. The new officers were elected as follows: President, Willie Fletcher; Vice-Presidents, R. Hunter Dulaney and Robert Neville; Secretary and Treasurer, P. S. Gochnauer; Assistant Secretary, B. B. Gochnauer. Executive Committee—Colonel R. H. Dulaney, George Frasier, Joseph A. Gibson,

A. B. Lawson, Lewis Strother, W. H. Carter, Willie Fletcher, R. Hunter Dulaney, Joshua Fletcher, H. M. Luttrell, C. M. Peach, H. Rozier Dulaney and Robert Neville. The following resolution, drawn by a committee appointed for the purpose, was adopted: "We, the members of the Upperville Colt and Horse Club, desire to tender to our retiring President, Colonel R. H. Dulaney, our thanks for the many years he has served the horse interests in this part of Virginia, as President of the oldest horse show in the county.

"ROBERT NEVILLE,

"A. B. LAWSON,

"H. M. LUTTRELL.



The bay mare Lamp Girl, 2:09, who holds the record for Virginia-bred trotters, was recently sold by the Kentucky Sales Company at Lexington to W. F. Dickerson for \$350. Mr. Dickerson also purchased her weanling, Tramp Girl, a bay filly by The Tramp, for \$180, to whom the dam had been bred in 1904. Later Lamp Girl was sold among other trotters for export to Julius Pajonch, of Charlottenlund, Copenhagen, Denmark, who shipped them at once to that far-off land. Lamp Girl was foaled 1893 and bred by W. C. West, Onancock, Va. She was sired by Walker Morrill, 2:55, dam Bertie, dam of Gold Burr, 2:13 $\frac{1}{4}$ , by Signet, 2:26 $\frac{1}{4}$ . After being campaigned extensively as a trotter, Lamp Girl was shifted to the pace and promised to make a sensational performer at the lateral gait, but went wrong, and was retired to the stud of the late R. H. Plant, of Macon, Ga., by whose estate she was consigned to the sale at Lexington.



The Virginia Circuit of horse shows for the season 1904 met with success from the start, and was accorded generous patronage and support. Commencing at Alexandria in May, open air shows followed at Fredericksburg, Leesburg, Culpeper, Manassas, Orange, Charlottesville, Staunton, Harrisonburg, Front Royal, Berryville and Warrenton. Nothing was scheduled for the month of September, but the more pretentious shows at Lynchburg, Richmond and Norfolk came off during successive weeks in October, the dates for Lynchburg being October 10-15; Richmond, October 18-22, and Norfolk, October 25-29. A good show was provided by the management at Lynchburg, but attendance was not up to expectations. The Richmond affair was a success both in point of attendance and the grand lot of exhibits, while for an initial effort the Norfolk people did well, and taken on the whole the outlook for the Virginia Circuit of horse shows during the season of 1905 is highly encouraging.

BROAD ROCK.



## Miscellaneous.

### DEATH OF MAJOR H. E. ALVORD.

It is with very sincere sorrow that we have to announce the death of Major H. E. Alvord, the Chief of the Dairy Division of the Bureau of Animal Industry, which happened very suddenly at the St. Louis Exposition on October 1st. Major Alvord had been for many years a resident of this State, having a fine dairy farm at Lewisville Loudoun county. Previous to his appointment as Chief of the Dairy Division, Major Alvord was Director of the Maryland Experiment Station, and had had a long practical experience as a dairy farmer. He was recognized as one of the leading dairy experts of the country, and was a constant contributor to the agricultural press and a frequent speaker at Farmers' Institutes. He was often a contributor to our columns, and whenever we called on him for help always most cheerfully responded. We held him in the very highest esteem, and can cordially endorse what was said of him recently in the *Country Gentleman* by an old colleague, Prof. Pearson, of Cornell College. He said:

"I became very much attached to him. He had many strong traits, as well as rare ability as an executive. I never saw him lose his temper; no matter how great a provocation, he always remained cool and considerate. He was generous almost to a fault and exceedingly unselfish. He was modest, and never strove for personal recognition where this was not necessary for the furtherance of some object in which he was interested. There stand to his credit a very large number of kind and helpful acts which were done quietly and which will never be known to the public. In his official work he never hesitated to do what seemed to him right, regardless of what the general opinions of his acts would be. Sometimes his motives were misunderstood, but this made no difference if he felt he was on the right course. Usually it did not take long for those who opposed him to see their mistake and offer their support. Maj. Alvord's place cannot be filled. His death is a severe loss in the agricultural and especially the dairy world."

### THE VIRGINIA STATE HORTICULTURAL SOCIETY.

We are informed by the secretary, Mr. S. L. Lupton, that the annual meeting of the society will be held at Front Royal, Va., on December 13 and 14, 1904. Special efforts are being made to make this the most attractive and instructive meeting ever held

by the society. We trust that fruit growers throughout the State will make note of the date of this meeting and make an effort to attend, and thus show their practical appreciation of the good work which the society has done since it was established. It has secured for shippers of fruit everywhere in the State terms which no individuals could have secured for themselves, and it is of vital importance to maintain the strength of the organization, so that it may continue its ability to exercise a wholesome pressure upon the transportation companies.

### IN NOVEMBER.

*Editor Southern Planter:*

The work on the farm for November consists mainly in preparing for winter. This month, especially the first part of it, is generally open and more pleasant than the earlier autumn, and work may be done in much more comfort. Who does not remember the days of Indian summer, which comes in this month? Whence comes all the smoke that obscures the sunlight? The days are just warm enough for comfort, and the appearance of everything reminds us of the declining year. We are filled with a sadness tinged with melancholy, or, in the words of a famous poet, our feelings

"Resemble sorrow only,  
As the mist resembles rain."

When the rain comes the air is again made clear. The blue smoke is seen curling in wreaths above the chimneys of the farm houses, everything is still, and quietness reigns supreme. The waning sunshine covers the brown earth, the shadows are growing longer, as they point northward, reminding us that winter is coming apace from the regions of everlasting frost.

If you be a farmer, look around you, and see that yet a little while you are to have the kindly days of November with you, and prepare for the rigors of the season indicated by the northward pointing shadows. Are your outhouses in good repair? Perhaps you have risen early this morning, as the nights are growing longer, and you have time to sleep. What are you going to do to-day? Does the barn need repairing? You step out into the yard and glance in the direction of the barn; yes, there is some work to be done there, and there the cow stands waiting for her breakfast. She has, doubtless, seen

the hay in the loft, and she knows that the master will not forget her. You will go at once and feed her, while your wife, and perhaps daughters, too, are preparing your own breakfast, the delightful odors of which make you think that life is worth living after all.

Lay in a liberal supply of fuel, and if your woodlands afford it, let it be wood; for the crackling blaze from the logs will cheer you as you sit around the fireside during the long winter evenings. Yes, go into the woods, and as you ply your axe or saw, you will hear the tapping of the picus upon the trees around you, and you may know that he, too, is preparing for winter.

This month is *blot monath*, as the old Anglo-Saxons termed it—the time for dispatching your porkers and filling your larders. FRANK MONROE BEVERLY.

*Osborn's Gap, Va.*

### STATE FAIR—ROANOKE, VA.

The Virginia State Fair, held in Roanoke October 10th to 14th, was a decided success. The Roanoke people appreciated the efforts put forth by the Association, and turned out from the least even to the greatest to see the many attractive features of the fair. The races perhaps drew the attention of the masses, while many who were interested in agricultural pursuits came to see the beautiful and well-filled exhibits of live stock, which was indeed creditable to any organization of its kind. Five breeds of cattle were represented, besides grades of the various breeds.

In Herefords, S. W. Anderson, of Greenbrier, W. Va.; Mr. Huxley, of Bunker Hill, Ind.; Haines L. Morgan, Saltville, Va.; Virginia Experiment Station, Blacksburg, Va., and Murray Boocock, Keswick, Va., exhibited. These herds making strong competition in all classes. Mr. Huxley and Mr. Anderson came well prepared to take away most of the best premiums, while the Virginia Experiment Station, Murray Boocock and H. L. Morgan won in a few instances. These latter herds showed careful breeding, but lacked the condition necessary for the occasion. Mr. Anderson had sweepstakes bull, while Mr. Huxley won first on aged bull.

In Shorthorns, only two herds were in the battle—the Virginia Experiment Station and Mr. Lucas, of Staunton, Va. The best prizes fell to the Virginia Experiment Station in all classes except yearling heifer.

In Aberdeen Angus, only two herds came out—

Wessenger & Son, of Kentucky, and the Virginia Experiment Station. Mr. Wessenger's herd was too much for the V. P. I. this time, having brought out a number of high-priced animals. Both herds were indeed creditable, and showed up beautifully the true characteristic "Doddie," with his even and smooth finish.

In the dairy breeds the Virginia Experiment Station again came to the front with some useful and typical Jerseys and Holsteins. Hollins Institute brought out a few Holsteins, but were compelled to take second place.

In sheep the Virginia Experiment Station was the only exhibitor, having a nicely-selected bunch of Dorsets.

In hogs, Dr. Kirk, Roanoke, was the important exhibitor, having some beautiful Berkshire of gilt-edge breeding.

The Fair was a decided success, and the prospect for the Virginia Fair in the future is indeed encouraging.

Much of this live stock was taken to Wytheville and Hagerstown, then to the Southwest Virginia District Fair, held at Radford, Va.

Other interesting features of the Fair were the large Shorthorn ox, weighing 3,200 pounds, and a small Midway, which contained sideshows, beer tents, and various attraction of this nature. A. P. SPENCER.

*Montgomery Co., Va.*

### DISTRICT FAIR—RADFORD, VA.

The great District Fair, held at Radford, Va., October 18th to 21st, inclusive, was truly an Agricultural Fair, and the finest herds of live stock ever seen here were brought together. Many new stalls were erected, yet those who brought along nurse cows were compelled to tie to the fence to make room for the exhibition cattle.

In Herefords, S. W. Anderson, Blakes Mills, W. Va., came again with a beautiful and well-fitted herd, some of which have been on the circuit for months, and also were exhibited at St. Louis, and in many cases were successful competitors there. Clem Graves, Bunker Hill, Ind., had also a well-filled herd of "White Faces," and the best places in this breed came to these two herds. Other exhibitors in this class were A. Meschendorf, Forest Depot; Mr. Osborne, the Virginia Experiment Station; Mr. Howe, Dublin, Va. The class as a whole was indeed a stiff one, and those who came with animals in low

flesh found they were not among those who won prizes. Many of these animals were of very excellent breeding and lacked only condition.

In Shorthorns there was a very strong class. Exhibitors were the Virginia Experiment Station, Major James T. Cowan, Cowan's Mills; Major W. W. Bentley, Pulaski; William Warfield, Lexington, Ky.; Mr. Bowen, Tennessee, and Mr. Lucas, Staunton, Va. Most of these cattle showed excellent breeding, but in too many cases a lack of condition was noticeable. The bull classes, cow classes and calf classes were very strong, and it was a difficult task for the judge to place all in their proper order.

A Shorthorn sale was arranged for, but there being no bidders, the sale was called off.

In the Aberdeen Angus class, Wessenger & Son, Kentucky, and the Virginia Experiment Station were the only exhibitors, the Kentucky herd proving too strong for the Station, and, consequently, winning best places. Mr. Imboden, an expert judge, was selected to make the decision on all breeds, and did so to the satisfaction of nearly all concerned. A battle among the breeds was arranged for among the various exhibitors in the cow class alone. This prize went to S. W. Anderson on his World's Fair Hereford cow. The Shorthorns, however, did not compete for this special premium.

In front of the grandstand some good racing and jumping was seen; also a race of an ostrich against a horse, which was an attractive feature, and a trained dog driving a horse were events enjoyed by many not interested in cattle. All that was needed to make this Fair a great success was slight rain to lay the dust and good weather following. The management purpose to make this the most important cattle show in Virginia, and this being a central spot for cattle-breeders to assemble, all that is required is good management and the patronage of the public, with the Southwest Virginia farmers to co-operate.

Montgomery Co., Va.

A. P. SPENCER.

### PERSISTENT VITALITY OF SEEDS.

Ordinary discussion as to seed vitality, or the germinative forces of seeds, is consequent upon the prevailing idea that their tenure of life is very short; and so it is, under ordinary conditions, but the observing gardener every year has brought to his notice the sprouting of weed seeds, the parent crops of which grew years long past. As, for example, the weeds following the turning down of a 20 or 30 year old pasture, weed seeds not blown there after plowing,

nor carried there by birds, but the seeds which have been resting dormant in the soil since it was last in cultivation.

This voluntary growth of weeds is so common that little attention is given to it; but when a seed planter, a farmer, market gardener, or cottage gardener, observes plants not sown by him growing among his sown crops, he at once cries "fraud!" He claims he was sold a mixed lot of seeds.

On Bloomsdale Farm we have every summer noticed this sprouting up of plants from a previous crop; but this year, possibly on account of the continued rains, it has been particularly observable. For example, a ten-acre field of grass, which had been undisturbed for five years, when this July plowed under and sown in Valentine beans, produced among the beans a very excellent crop of German kale, almost enough to stand; but it was ten years ago, or in 1894, that a crop of German kale was grown upon that field.

A field drilled in okra is now full of radish, and it is three or four years ago since radish was drilled on that field.

Turnip seed is especially likely to remain dormant for six or seven years.

We have now a six-acre patch of beans on which was grown, five years ago, a crop of seed of Seven Top turnip, and, of course, in its harvesting a portion of the seed was scattered out on the ground. A part of that seed in the earth remained fully vital until this summer, and to-day the bean crop referred to is full of this unusual variety of turnip, clearly indicating that the turnip seed has remained dormant in the soil over a period of four summers. This variety of turnip is so distinct that its presence in the bean field can be accounted for in no other way than already indicated.

Mustard seed, under certain conditions, is particularly tenacious of life, there being frequent examples of it appearing in a field after having apparently been eradicated for a period of ten or twenty years.

Farmers and gardeners not familiar with this fact of the persistent vitality of seeds, frequently charge seedsmen with selling seeds mixed with mustard; this charge, ninety-nine times in a hundred, is due to a clear case of ignorance on the part of the claimant.

Strangest of all of our field observations this year is as to a growth of Valentine beans, which appeared where a lot of beans were dumped in 1891, and since then subjected to all the changes of heat, cold and moisture, winter and summer. Beans, however, when kept under favorable conditions, are long-lived, there being well-authenticated instances of their sprouting 75 years after their harvest; while in the case of rye, 120 years have been known to elapse between harvest and sprouting. We do not give much credence to the tales of travelers, of wheat or Milo maize sprouting taken from the Catacombs or from mummies. A

wise guide always has some good grain in his pocket, smoked, of course.

The writer firmly believes that much seed condemned as unvital, or of low vitality, as proved in comparative tests, would, nevertheless, sprout under certain peculiar and odd circumstances.

All seedsmen, wherever located, have had an experience in the case of charges of selling mixed seeds, and so, possibly any one might occasionally, but unknowingly do; for no proprietor or his employees, especially, are infallible; but generally the complaint is, no doubt, due to the germination of seeds and vegetation of plants, the like of which were grown on the same ground years before.—*Burnet Landreth.*

We recall a case in the "Old Country" showing the persistent vitality of one kind of seed even more wonderful than any of those cited by Mr. Landreth. An old pasture field which had never within the memory of the oldest inhabitant been plowed was broken up and seeded with oats. The oats came well, but in a short time were completely smothered out by a weed called charlock, which is like a wild rape plant having a seed so like rape seed that they cannot be distinguished from each other. The whole field was one mass of this weed. Never a plant of the weed had ever been seen in the field before whilst it was in pasture; in fact, it never grows in a grass sod. The oat seed was perfectly clean seed. Evidently the field had grown this weed when under cultivation before, and the seed had been buried when the land was put down in grass. There were numbers of farmers in the neighborhood who had known the field as a pasture field for from 50 to 75 years, and never seen a charlock plant in it. This shows for this seed an astonishing persistent vitality. Clover seed has a similar persistent vitality. It will often come thickly on a field which has been unplowed for 20 years.—*ED.*

## THE FALL CROPS IN TIDEWATER VIRGINIA.

*Editor Southern Planter:*

Just now great loads of green peas and beans (snaps) are going north daily. The farmers' wagons come rolling into the city, piled high with the half-barrel baskets which contain these crops.

The peas and beans (second crop) were planted the last of August or first week in September, and our farmers have been shipping the crops to Northern markets during the past three weeks, and will finish before the first frosts, which usually come in November.

We may remark, in passing, that, in round num-

bers, a ten-cent freight rate transports a basket of peas or snaps from this seaport to nearly twenty million consumers.

We have had no frost, as yet this fall up to date (October 18th). As soon as the fall crops of peas and beans are marketed the ground is at once fitted for cabbages to be set out in November and December. The kale and spinach crops, sown early in September, look well, but need a little rain. October so far being quite a dry but a very pleasant month, only lacking a little in moisture.

These fall crops are covered with but a thin layer of earth when planted, and need frequent showers to start them off in good shape. Our trucking belt looks better in November, December and January than it does in August, September and October.

September gave us a mean monthly average of 72 degrees, which was one degree higher than the average for the past thirty-four years. The September rainfall was 4.02 inches, against an average of 4.19 for the past thirty-four years.

September gave us 24 beautiful, warm Sunny days—fine "Sunny South" weather.

October so far has also been very fine. Rain fell in September on six days—namely, on the 4th, 5th, 14th, 15th, 21st and 27th. We seldom feel like quarreling with our "Weather Bureau People," as they seem to hit, fit, suit and please us nicely.

We have lately had the pleasure of reading a little pamphlet published by Dr. Plecker, a re-print from the New York Medical Record, upon the "Climate of Eastern Virginia." We wish the Doctor's little pamphlet could be placed in the hands of all who are studying the question of climate and its relation to health.

Fall work is well in hand, although it is too dry to plow. The sweet potato crop is likely to be a little short.

A. JEFFERS.

*Norfolk, Va.*

## COST OF PRODUCING MILK.

At a number of experiment stations records were kept to determine the cost of producing milk. At four of the stations it cost 55 cents to produce 100 pounds. This made the cost of one pound of butter fat 13.3 cents. Milk was produced at the lowest cost during the summer and at the highest during winter.

THE  
**Southern Planter**

PUBLISHED BY  
THE SOUTHERN PLANTER PUBLISHING COMP'Y,  
RICHMOND, VA.

ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,  
Editor and General Manager.  
B. MORGAN SHEPHERD,  
Business Manager.

TERMS FOR ADVERTISING.  
Rate card furnished on application.

TERMS FOR SUBSCRIPTION.

THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, 75c.

WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known. Particulars of Experiments tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

NO ANONYMOUS communications or enquiries will receive attention.

REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

THE DATE ON YOUR LABEL shows to what time your subscription is paid.

SUBSCRIBERS failing to receive their paper promptly and regularly, will confer a favor by reporting the fact at once.

ALWAYS GIVE THE NAME of the Post-Office to which your paper is sent. Your name cannot be found on our books unless this is done

Address THE SOUTHERN PLANTER,  
RICHMOND, VA.

Entered at the Post-office, Richmond Va., as second-class matter.

DETAIL INDEX TO ENQUIRER'S COLUMN.

Utilizing Bones .....	728
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Wheat and Oats as Feed.....	730

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

PUBLISHER'S NOTES.

To Advertisers.

We wish to impress upon our advertisers the necessity of sending in all advertisements and matter pertaining to advertising, by the 25th of each month. If it can be sent before that date, so much the better for both of us. There is not a month that passes that we do not leave out somebody's ad. because of it reaching us too late.

WITH THE ADVERTISERS.

J. W. Atkinson & Co. are advertising "paints that stay painted." This company is in a position to do business with farmers and is anxious to get into communication with parties who need paint for any purpose.

J. B. Watkins & Bro., the well known nurserymen, have some splendid, vigorous strawberry plants, which they are selling at low prices.

Dorset sheep and Hereford cattle of good breeding can be had of H. Armstrong, Lantz Mills, Va.

Some finely bred Poland China hogs are offered by Mr. W. B. Payne, Crofton, Va. He advises us that the demand for stock is good, and that he recently made shipments to far-off Texas. Look up his ad. and write to him for prices.

Knight & Jetton have a fine collection of jacks and jennets, which they are offering our readers. Refer to the ad. elsewhere.

The Chattanooga Nurseries are making a special offer on peach trees. Look up the ad. and write to them for catalogue and prices.

Mr. Ed. S. Schmid is advertising pets and all kinds of fancier's stock and supplies.

Pit games and Pointer dogs are advertised by Capt. Owen Swaffield. Refer to his ads.

Poll Durham cattle can be had of Mr. John S. Funk.

The Norfolk Farm Supply Co. has a seasonable card on another page.

W. E. Knight & Co. start the season's advertising with this issue. Jacks, jennets and stallions, of superior breeding, are offered.

Bargains in Berkshires are offered by Mr. W. Tally, of Beechenbrook Stock Farm.

Yager's Liniment, already well known to thousands of our readers, has an attractive ad. on another page.

Duroc Jersey hogs are offered by Mr. D. L. Robertson.

Some splendid Jersey cows, heifers and bulls are offered by Major A. R.

**Poultry Supplies.**

If you want eggs during the winter, you must feed Animal Foods, such as

- Meat Meal,**
- Beef Scraps,**
- Blood Meal,**
- Bone Meal,**

to take the place of the insects, worms, etc., which poultry get in summer. OYSTER SHELLS and GRIT are also prime necessities..

Write for Prices and Catalogue telling what to use for Success and Profit with Poultry.

**T. W. Wood & Sons, Seedsmen,**  
RICHMOND, - VIRGINIA.

We carry complete stocks of Cyphers' Incubators and Brooders, Poultry Foods, Egg Producers, Lice and Insect Powders, Poultry Remedies, etc.

Helpful Catalogue mailed free.

**SAN JOSE SCALE**  
and other INSECTS killed by

**GOOD'S**

**Caustic Potash Whale-Oil Soap No. 3**

Endorsed by U. S. Dept. of Agri. and State Experiment Stations. This soap is a Fertilizer as well as an Insecticide. 50-lb. kegs, \$2.50; 100-lb. kegs, \$4.50; half barrel, 270 lb., 3c per lb.; barrel, 425 lb., 3c. Send for Booklet, JAMES GOOD, Original Maker, 989-41 N. Front Street, Philadelphia, Pa.

**FRAZER**

**Axle Grease** Best in the world.

Its wearing qualities are unsurpassed, actually outlasting 3 bxs. any other brand. Not affected by heat. Get the Genuine. FOR SALE BY ALL DEALERS.

**"FUMA"** kills Prairie Dogs, Woodchucks, Gophers, and Grain Insects. "The wheels of the gods grind slow but exceedingly small." So the weevil, but you can stop their grind "Fuma Carbon Bisulphide" as others with "Fuma Carbon Bisulphide" are doing. EDWARD R. TAYLOR, Penn Yan, N. Y.



**Krausers' Liquid Extract of Smoke**  
Smokes meat perfectly in a few hours. Made from hickory wood. Delicious flavor. Cleaner, cheaper. No smokehouse needed. Send for circular. E. KRAUSER & BRO., Milton, Pa.

**BANK OF RICHMOND,**

Main and Tenth Streets.

CAPITAL AND PROFITS, - - - \$1,134,938.14.

Special attention paid to out-of-town accounts. Correspondence invited.

Three per cent. interest allowed in Savings Department, Compounded semi-annually.

## Union Lock Poultry Fencing



As It Looks When Erected

### Strongest and Best By Every Test.

Has been fully tested by leading poultrymen. All heights (12 in. to 7 ft.) Has fine mesh for small chicks. Over 1,000 rods of this fence used on Lakewood Poultry Farm, New Jersey. You will be pleased with it.

**Our Low Price will Surprise You.**

We will ship from mills in Connecticut, Illinois and California, and guarantee prompt delivery. Catalogue of Farm and Poultry Fencing sent free.

**Write Us What You Want. Do It To-Day.**

**CASE BROTHERS,**  
16-22 Main St., Colchester, Conn.

## HARD STEEL

### WIRE • FENCE

Heavy lateral wires, heavy hard steel stays, coiled spring wire, Sure Grip Lock. In strength, appearance and durability, the Hard Steel cannot be excelled. Write for catalogue and prices.

**THE HARD STEEL FENCE CO.,** Cuyahoga Falls, O.

## BROWN PAYS THE FREIGHT

Heaviest Fence Made. All No. 9 Steel Wire 15 to 35 CENTS PER ROD DELIVERED

We also sell direct to farmers at wholesale prices. Coiled Spring, Barb and Soft Galvanized Wire. Write for Fence Book, showing 110 styles.

**THE BROWN FENCE & WIRE CO.**  
Cleveland, Ohio

## Genuine Spiral Spring Wire FENCES AND GATES

If your dealer does not have our goods in stock you can buy direct at Manufacturers' Price. Write for Catalogue and secure agency.

**INTERNATIONAL FENCE AND F. CO.**  
Columbus, Ohio.

## TRUSS AND CABLES

We are now in our new factory.

### PRICES LOWER THAN EVER

Write for free sample, etc.

Truss & Cable Fence Co., 82 Donn Ave., Cleveland, O.

## PAGE

### DON'T YOU WANT TO KNOW

about the better quality of Page-Wire and our more practical construction of fences? Catalogue free. **PAGE WOVEN WIRE FENCE CO.,** Box 512, Adrian, Mich.

## WIRE FENCE

at Wholesale. A 48-inch stock fence 29¢ per rod. Send for price list and FREE catalogue of Wire Fence and full line of Fence Supplies.

**W. H. MASON & CO.,** Box 80 Leeburg, Ohio.

Venable, Jr., at very low prices. We suggest that you refer to his ad. and write him for further particulars.

Genuine Peruvian Guano as well as fertilizer chemicals can be had of Smith-Davis Co., Wilmington, N. C.

We invite attention to the change in the ad. of the Imperial Fruit and Stock Farm.

Dr. D. M. Kipps is offering some splendid Shorthorn cattle.

Look up the ad. of W. R. Harrison & Co., in which is offered the well known line of Tornado ensilage and feed cutters.

Mr. I. S. Eberly has some very choice Shorthorn youngsters for sale at very reasonable prices.

Among the new advertisers in this issue is Mr. Dorr Clark, who is offering English Berkshires of the very best breeding obtainable.

Look up the ad. of Percy L. Banks, Norfolk, Va.

Cottage Grove Stock Farm guarantees to please with the Berkshires it offers. See the ad.

The J. Stevens Arms & Tool Co. has a striking ad. on another page. Remember the boy's birthday and give him a Stevens' Rifle.

The Temple Pump Co. has a couple of ads. in this issue to which we invite attention.

The Brown Fence and Wire Co. is a new advertiser in this issue. Look up the announcement.

The Acme Harrow ad. makes its usual appearance this month. Send for some literature about it.

The prize winning Prairie State Incubator is offered our readers in this issue.

The Truss & Cable Fence Co. has something interesting to say to parties contemplating buying fencing.

J. F. Gaylord is advertising his Defender Spray Pump again this season. Inquire about it.

Smith—I woke up last night with a horrible suspicion that my new gold watch was gone. So strong was the impression that I got up to look.

Brown—Well, was it gone?

Smith—No; but it was going.


### ELIZABETH COLLEGE, CHARLOTTE, N. C.

This college opened this fall with an increased attendance over previous years. This is an encouraging sign for higher education, as Elizabeth College has its A. B. degree course on a par with the Southern Universities for men. The Conservatory of Music is maintained and run on the plan of the Leipzig, Germany, Conservatory, under the able management of Harry J. Zehm. The Conservatory is a separate building in connection with the college, and is attracting wide attention on account of the high grade work done there.

All of the departments of the institution are headed by specialists who have enjoyed University training.

## The Red Ripper HAY PRESS

Saves Time, Labor and Money.



THE RED RIPPER is the strongest, simplest and most durable hay press on the market; requires only one horse to operate; capacity, 15 to 20 full size bales (75 to 100 pounds) per hour. Costs less than any other good press and does more and better work than most presses costing five times as much.

Write for Free Illustrated Booklet.

**SIKES MFG. CO.,** Helena, Ga.

## BALE YOUR OWN HAY

MILLET SORGHUM PEAVINES ETC.

WITH A "HANDY" BALER

THE STRONGEST, MOST POWERFUL SWIFTEST AND LIGHTEST OPERATING HAND PRESS EVER PUT ON THE MARKET.

FINISHES ABSOLUTELY UNIFORM BALES STANDARD SIZE EITHER LIGHT OR HEAVY

### LITTLE GIANT HAY PRESS CO.

DALLAS, TEXAS.

WRITE FOR PARTICULARS CATALOGUE HAND AND POWER PRESSES FREE.

## CHAMPION COMBINED GASOLINE ENGINE AND HAY PRESS

At it for 30 years and right up-to-date. Presses of every style and for every purpose. If wanting a Baling Press write to **FAMOUS MFG. CO.,** 722 RAILROAD AVE. EAST CHICAGO, IND.

## "ELI" HAY BALERS.

38 styles and sizes.



The world's standard.

Work fastest, bales are tightest and shapeliest. Load cars to best advantage. Balers that endure, insure safety and facilitate work. Steel and wood frames, horse and steam powers. Eli catalog free.

**Collins Plow Co.,** 1185 Hampshire St., Quincy, Ill.

## LAWN FENCE

Many designs. Cheap as wood. 32 page Catalogue free. Special Prices to Cemeteries and Churches. Address **COILED SPRING FENCE CO.,** Box Q Winchester, Ind.

## BEATS ALL FARM FENCE AGENTS TO MAKE MONEY

**B. B. FENCE CO.,** Peru, Ind.

## FENCE STRONGEST MADE

en-tight. Sold to the Farmer at Wholesale Prices. Fully warranted. Catalogue free

**COILED SPRING FENCE CO.,** Box 330. 62 Winchester, Indiana.

## DOW FARM FENCE

PRICE AND QUALITY WILL PLEASE YOU—WRITE US NOW.

**DOW WIRE WORKS—LOUISVILLE, KY.**

Mention THE SOUTHERN PLANTER in writing.

### Clark's Tools for Large Hay Crops

**Clark's Rev. Bush Plow and Harrow** cuts a track 5 ft. wide, 1 ft. deep. Connects the sub-soil water. It is an excellent machine for covering in sugar cane, strength guaranteed. Can plow a newly cut forest, stump, bush, or bog land, leaves land true, clean for any crop.

**Clark's Double Action Cutaway Harrow** moves 15,000 tons of earth in a day. Send for Circulars.

**Clark's Rev. Sulky Disc Plow** Made single or double. One or two furrows five to ten inches deep; 14 inches wide. For two or four horses. Light draft. No side draft. No similar plow made. When Clark's grass tools are used as directed in his grass circular, we, the C. H. Co., guarantee them to kill wild mustard, charlock, hard hack, sunflower, milk weed, morning glory, Russian thistle or any other foul plant that grows, or money refunded. Now is the time to commence work for next year's seeding to grass.

**THE CUTAWAY HARROW CO.,**  
Higganum, Ct., U. S. A.

**The Best Power**  
after all is steam power. The best example is here shown in our

### LEFFEL ENGINES

with Stationary Tubular Boiler

This outfit contains all the Leffel superiority and efficiency. Easy steamers, little fuel, easy handling, always in order, long lived, safe, etc. This style made 10 to 40 H. P. Many other styles of engines and boilers for all purposes. Get free book "Power Economy and Efficiency."

James Leffel & Co. Box 134  
Springfield, Ohio.

ASHTON STARKE  
So. Sales Agt. Richmond, Va.

### INTERNATIONAL KEROSENE ENGINES

Stationary, Portable, Marine, for Lighting, Pumping and Hoisting Outfits, all kinds of machinery, Launches and Boats. Send for catalogue and prices.

INTERNATIONAL POWER VEHICLE CO., 354 Third St., Macon, Ga.

### RIFE HYDRAULIC ENGINE

Water By Water Power.

The pump that never stops. Raises water to any height, needs no attention, costs nothing to run. You can buy a Rife on 30 days free trial. Ask for our free catalog.

RIFE ENGINE CO.  
126 Liberty St. New York.

### Defender Sprayer

All brass, easiest working, most powerful, automatic mixer, expansion valves, double strainer. Catalogue of Pumps and Treatise on Spraying free.

AGENTS WANTED:  
J. F. Gaylord, Box 82 Catskill, N. Y.

Mention THE SOUTHERN PLANTER in writing.

### BUYING A FEED GRINDER.

The season when feeders will be scanning our advertising columns with a view to buying a good feed grinder is here. The matter of selecting a mill is important. It is a matter that should be attended to just once. A really good feed mill should last a lifetime. It is not uncommon to see feed grinders lying around on farms broken and discarded. There is no legitimate excuse for this. The reason is always the same: the mills were poorly made, not able to do the work, or were not adapted to the feeder's purposes. In most cases the fault lies with the maker of the mill, and yet the purchaser is himself to blame for not making investigation and selecting a mill, once for all, that is sure to meet every requirement.

Buying a feed mill is new business to many feeders. They have no experience or data to draw upon. Buying at random, as many do, it is little wonder that mistakes are made, and that so many mills are found "out of use." For this reason we wish to say a word about a mill that is advertised every year in our columns, the Quaker City, manufactured by the A. W. Straub Co., Philadelphia and Chicago. It is a mill that will give satisfaction to every one of our readers who is induced to buy it. They will not be buying experiments, for the Quaker City has been on the market for 38 years. That fact alone should be its highest endorsement. If it had not been a mill that was durable and met feeders' wants, it would long ago have been off the market. Of course, it has changed—been improved and kept abreast of the times. The mill as it is to-day with one hopper for crushing and grinding ear corn and another for grinding and mixing in all grains in desired proportions, all in one operation, is the mill we have in mind. It would not be up to date if it were not ball bearing. That accounts for its easy running, its fast grinding with little power. It is made in eight sizes, adapting it to small or large feeder. The mill is sent out freely on trial. Intending buyers are requested to put it in competition with others, and to keep the one that proves itself best suited to their needs. For the benefit, therefore, of any reader of this paper who is about to purchase a mill, and is not well advised, we recommend sending to the Straub Company for catalogue and making study of the Quaker City.

Robert B. Mantell tells of a clergyman who went fishing. He was perched in a precarious position when he got a bite, and in his excitement he fell into the stream.

He yelled lustily for help, and a farmer came along and pulled him out. "How did you come to fall in?" inquired his rescuer.

"I didn't come to fall in," replied the dripping preacher, "I came to fish."

### Your Feeble Old Wagon

has many years' service in it. Replace its shabby wheels with

## ELECTRIC Metal Wheels.

Made to fit any size. Straight or staggered oval steel spokes, cast in the hub, not riveted in the tire. Broad tires save rutting and draft. Any height desired. Write for free catalogue for particulars.

**ELECTRIC WHEEL CO., BOX 1-6 QUINCY, ILLINOIS.**

## BUGGIES

SURRIES, DAYTONS, RUNABOUTS, SPINDLE WAGONS, CARTS, etc. 8' different styles and grades. Finest material and workmanship. Get our prices and see our vehicles before purchasing.

**SAFETY BUGGY CO., 1309 E. Main street, Richmond, Va.**

**WE'LL PAY THE FREIGHT**  
and send 4 Buggy Wheels, Steel Tire on, - \$7.25  
With Rubber Tires, \$15.00. Infl. wheels 3/4 to 4 in. tread. Top Buggies, \$28.75; Harness, \$3.50. Write for catalogue. Learn how to buy vehicles and parts direct.  
Wagon Umbrella FREE. W. V. BOOB, Cincinnati, O.

—GREAT—

## HARNESS INVENTION.

FONTAINE SAFETY TUGS

prevent sores and white spots on horses' backs by regulating tension of girth as if it were elastic. Prevent huggy running against horse if breaching breaks. Prevents girth breaking and shafts whabbling. Made of best single leather. Outlast other tugs. Handsome in appearance. Pair sent postpaid for \$1.50. Write for circular. THE FONTAINE CO., Ohristle, Va.

VIRGINIA DIVISION.

### FARMER'S MUTUAL BENEFIT ASSOCIATION.

Chartered by State of Virginia.

A Fire Insurance Association for Farmers of Eastern Virginia.

Organized January 9, 1899; amount insured January 9, 1904, \$400,000; policies secured by real and personal property, estimated value, \$1,000,000. Send for statement of plan and book of membership to CHAS. N. FRIEND, General Agent, Chester, Va.

## BIG 4

HAND HORSE OR BEIT POWER, 4 STROKE TO 1 REVOLUTION, SELF FEEDER, QUICK, COMPACT BALE, SMALL FORM

DELOACH PAT. VARIABLE FRICTION FEED.

PLANERS, EDGERS, MILL DOGS, ETC.

WE SHOW THE FARMER HOW TO GET THE MOST MONEY FROM HIS CROPS

WRITE FOR OUR ILLUSTRATED CATALOG

### SAW MILLS

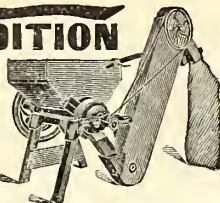
4 TO 200 HORSE POWER FOR FARMERS.

CORN WHEAT FEEDS

**DELOACH MILL MFG. CO.**  
ATLANTA, GA. BOX 500

### ON CONDITION

Free trial given at your home. If you don't grind more feed and do it easier, better and faster with a



### New Holland Feed Mill

than any other, return and we pay all expense. We ask you to test on ear and shelled corn, all grains and mixed feed stuffs. Three styles, four sizes, including small hand power. Write today and ask about our labor saving WOOD SAWS in sizes 1 to 12 h. p. Booklet free.

NEW HOLLAND MCH. CO., Box 153, New Holland, Pa.

### One Operation

is all it takes to break, crush and grind, either fine or coarse, all grains for all feed purposes, when you use the

### KELLY DUPLEX Grinding Mills

They are the fastest, easiest running, strongest and most durable mills made. New double cutters; force feed; never choke. Four sizes, any power.

THE O. S. KELLY CO., 159 N. Lime St., Springfield, Ohio

### QUAKER CITY Two Hopper Mill

One for ear corn, the other for small grain. Grinds ear corn and small grain at the same time or separately to any fineness. Mixes while grinding, also makes corn meal for table use. We furnish

#### Special Plates

for different kinds of grinding. Built in eight sizes, one to twenty horse power. Shipped on trial. Freight prepaid. Catalog free.

The A.W. Straub Co. 47-49 Canal St., Chicago, Ills.

### Cut! Crush! Shred!

Prepare your fodder so stock will get all the nourishment. No waste if you use



### Heebner's Feed Cutters.

Prepare corn so stock eat it all and thrive on it. With shredder attachment (\$5.00 extra), you have three machines in one for ensilage and all feed cutting. We make Tread and Lever Powers, Thrashers, Wood Saws, etc. Catalog mailed free.

Heebner & Sons, 25 Broad St., Lansdale, Pa.

### Make Your Own Fertilizer

at Small Cost with

### Wilson's Phosphate Mills

From 1 to 40 H. P. Also Bone Cutters, hand and power, for the poultrymen; Farm Feed Mills, Graham Flour Hand Mills, Grit and Shell Mills. Send for catalogue. WILSON BROS., Sole Mfrs., Easton, Pa.

### BAGS

FOR EVERYTHING; NEW OR SECOND-HAND; SOLD OR RENTED. Write for prices.

RICHMOND BAG COMPANY, Richmond, Va.

Mention THE SOUTHERN PLANTER in writing

### REPORTS.

United States Department of Agriculture, Washington, D. C. Bureau of Chemistry. Bulletin 86. Arsenic in Papers and Fabrics.

Bureau of Entomology. Circular 56. The Most Important Step in the Cultural System of Controlling the Boll Weevil.

Bureau of Plant Industry. Bulletin 67. Range Investigation in Arizona.

Bureau of Plant Industry. Bulletin 67. The Commercial Status of Durum Wheat.

Bureau of Plant Industry. Crimson Clover.

Bureau of Plant Industry. Bulletin 51. Part IV. The Cultivation of the Australian Wattle.

Bureau of Statistics. Bulletin 29. Methods and Routes for Exporting Farm Products.

Weather Bureau. Climate: Its Physical Basis and Controlling Factors.

Farmers' Bulletin. No. 206. Milk Fever: Its Simple and Successful Treatment.

Farmers' Bulletin, 207. Game Laws for 1904.

Farmers' Bulletin, 209. Controlling the Boll Weevil in Cotton Seed and at Gineries.

Columbus (Ohio) Horticultural Society. Journal for September, 1904.

Idaho Experiment Station, Moscow, Idaho. Bulletin 45. Trap Rocks of Palouse Region as Road Material.

Kansas State Board of Agriculture, Topeka, Kan. Report for Quarter, September, 1904. Potato Production.

Maryland Experiment Station, College Park, Md. Bulletin 94. Systems for Keeping Milk and Butter Records.

Bulletin 95. The Character of Milk During the Period of Heat.

Nebraska Experiment Station, Lincoln, Neb. Bulletin 85. Feeding Experiments with Cattle.

Bulletin 86: Destroying Prairie Dogs.

New Hampshire Experiment Station, Durham, N. H. Bulletin 112. Experiments in Destroying Black Flies.

New York Experiment Station, Geneva, N. Y. Bulletin 248. Popular Edition, Keeping Qualities of Apples. Bulletin 253. Report of Analysis of Fertilizers.

Virginia Experiment Station, Blacksburg, Va. Special Bulletin. Virginia State Crop Pest Commission, No. 45. Circular in Relation to Some Injurious Insects and Plant Diseases.

South Carolina Experiment Station, Clemson College, S. C. Bulletin 90. Texas Fever, Part II, Inoculation.

Bulletin 91. Coast Experiments. Report of Progress.

The Best Cooking Range Made, Sold for Cash or on Monthly Payments. \$10 to \$20 Saved. FREIGHT PAID.

Your money refunded after six mos' trial if

### Clapp's Ideal Steel Range

is not 50 per cent better than others. My superior location on Lake Erie, where iron, steel, coal, freights and skilled labor are cheaper and best, enables me to furnish a TOP NOTCH Steel Range at a clean saving of \$10 to \$20. Send for free catalogues of five distinct lines, over 50 styles and sizes, with or without reservoir, for city, town or country use. CHESTER D. CLAPP, 247 Lynn St., Toledo, O. (PRACTICAL STOVE AND RANGE MAN.)

### THE IMPROVED SCREW STUMP PULLER

Write for Prices.

### HERCULES STUMP PULLER

Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made. Hercules Mfg. Co., 413 17th St., Centerville, Iowa.

### The Monarch Stump Puller.

The best on earth; you make no mistake in buying of a man of 5 years experience in pulling stumps. We set up the Puller and guarantee satisfaction before we want your money 5 sizes. Write for catalog and price.

JOS. W. RITCHIE, State Agent, R. F. D. No. 39, Grottoes, Va.

### STUMP PULLERS SEVEN SIZES

\$17.50 UP

DEPT P.W. SMITH GRUBBER CO LACROSSE WIS

WE PAY THE FREIGHT CATALOG FREE

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.



**In Close Touch  
With The  
Whole  
World**



With a telephone in the home the farmer is in close touch with the whole world. It proves the handiest thing on the farm and we prove

**Stromberg-Carlson  
Telephones**

are the most economical to buy. Strong in mechanism — strong in talking qualities and guarantee. Send for free book 1-113 "Telephone Facts for Farmers." It proves our claims. Address nearest office. **Stromberg-Carlson Tel. Co.** Rochester, N. Y. Chicago, Ill.



**TELEPHONES**  
and line material for  
**FARMERS' LINES**

So simple you can build your own line. Instruction book and price list free.

The Williams Telephone & Supply Co.,  
66 Central Ave., Cleveland, O.



**PATENT YOUR IDEAS**

\$100,000 offered for one invention; \$8,500 for another. Book "How to Obtain a Patent" and "What to Invent" sent free. Send rough sketch for free report as to patentability. We advertise your patent for sale at our expense.

**CHANDLEE & CHANDLEE, Patent Attorneys**  
976 F Street, Washington, D. C.

**HARRIS HARDWARE CO.**  
409 E. Broad St., Richmond, Va.

**Breech-Loading Shotguns \$3.85**

**GUNS** Bicycles and Sundries.  
Hunting Leggins  
Razors and Scissors  
Hunting Coats  
Gun Covers

WE ARE AGENTS FOR GOOD THINGS.

**..Second Hand Bags..**

Wanted. Any kind, any quantity, anywhere. I pay the freight. **GEO. T. KING, Richmond, Va.**



**WARRINER'S CHAIN HANGING STANCHION**

CLEAN, SAFE, DURABLE AND COMFORTABLE.

**WALLACE B. CRUMB, FORESTVILLE, CONN., P. O. BOX 446**

Bulletin 92. Analyses of Commercial Fertilizers.  
Virginia Climate and Crop Service, Weather Bureau, Richmond, Va. Report for September, 1904.  
Imperial Agricultural Department for the West Indies, Barbadoes, W. I. West Indian Bulletin, Vol. V, No. 2.

**PAMPHLETS.**

The Pecan Tree. How to Plant, Grow and Buy It. The G. M. Bacon Pecan Co., DeWitt, Ga.

Why the Fish Failed. A Story of Potash, by H. W. Collingwood. Published by German Kali Works, Nassau street, New York.

The Climate of Tidewater Virginia, by W. A. Plecker, M. D., Hampton, Va.

Telephone Line Construction and Equipment. This will be found a very useful and convenient handbook for those installing a telephone system in the country. It is published by the Williams Telephone and Supply Co., Cleveland, Ohio, whose advertisement is appearing in our columns.

**CATALOGUES.**

Pumps and Hay Tools. F. E. Myers & Bro., Ashland, Ohio. This is one of the most beautiful and comprehensive catalogues issued. It contains 374 pages, and is replete with information and full illustrations of every kind of pump and hay tool made by this celebrated firm. Before installing a pump or buying haying tools of any kind send for their catalogue.

J. G. Harrison & Sons, Berlin, Md., Nurserymen.

John Lightfoot, Sherman Heights, Tenn. Strawberry and Raspberry plants and June bud peach trees.

**A NEW HARNESS INVENTION.**

We invite the attention of our readers to the ad. of The Fontaine Co., Christie, Va., which recently patented and is now offering for sale a splendid contrivance in the shape of Safety Tugs. This tug is buckled to the saddle straps and it tightens or slackens automatically, depending on the pressure upon them.

Some of the many advantages of these tugs are that they prevent the harness saddle hurting the horse's back; should the breeching break, the safety tugs will prevent the buggy from running against the horse; they always keep the shafts in correct position, preventing them from flying up or wobbling sideways.

Interested parties are requested to send to the company for descriptive circulars or testimonials from parties who have used them.

**TOOK A BIG RISK (?)**

"The parson preached such a edifyin' sermon on the subject o' filthy lucre that the trustees raised his salary three hundred dollars. The parson took it. He said he reckined he'd put in a new bath-tub an' take the chances."

The dealer who sells lamp-chimneys to last, is either a shrewd or an honest man.

**MACBETH.**

How to take care of lamps, including the getting of right-shape chimneys, is in my Index; sent free.

MACBETH, Pittsburgh.

**Genuine Imported**

**PERUVIAN GUANO**

Absolutely pure and not manipulated.

**A FINE NATURAL BIRD MANURE.**

NEVER HAS BEEN EQUALLED.  
NEVER WILL BE EQUALLED.

SHIPMENTS FROM NORFOLK, VA.  
WILMINGTON, N. C.

**SMITH-DAVIS CO., Importers,**  
WILMINGTON, N. C.

**AGRICULTURAL AND BUILDERS' LIME**


Send for Circulars and Price-List.

**FELLSWORTH LIME WORKS,**  
REEVES CATT, Agent,  
Staunton, Virginia.

**DEHORNING ISN'T CRUEL**

It may be with a saw, but not so when the

**KEYSTONE DEHORNER** is used. It cuts from four sides at once; makes a sliding, sharp shear cut. Any stock-raiser can do it easily. No crushing or splintering of horns or tearing of flesh. Done in 2 minutes. Send for free booklet. **M. T. Phillips, Box 45, Pomeroy, Pa.**



**ENGINES;** 13 Horse Traction \$250; 10 Horse Traction \$200; Boilers, Engines new and second hand from 4 to 100 Horse. Single saw mill \$125; Double mill \$150; Machinery of every description at one-third actual value.

D. CASEY, Springfield, Ohio.

**CHESTNUTS.**

WANTED—To communicate with persons having extra large native chestnuts. **J. RUSSELL SMITH, Univ. of Penn., Philadelphia, Pa.**

## Northern Virginia Farms.

Of every class, adapted to Grain, Fruit, Dairy and Blue Grass, within five to thirty miles of Washington, D. C.

No. 5.—163 acres; half timber, balance cleared; 1½ miles from station. Good 7 room house; large barn; good water. Price, \$2,000.

No. 16.—130 acres; 20 in timber, balance cleared. Good land. In good condition. Comfortable 4 room house. Fine water. Five miles from station. Fronts on Pike. Price, \$20 per acre.

No. 22.—225 acres. Two and one-half miles from station. Forty acres timber, balance cleared. Fine land. In good condition. Good 7 room house. Large barn, etc. Price, \$20 per acre.

No. 23.—50 acres truck and fruit farm. Price, \$2,650.

No. 30.—50 acre farm in Loudoun county, 3½ miles from rail. Price, \$1,600.

No. 33.—400 acre farm in Loudoun county. Good grain and grazing land. Price, \$7,500.

No. 36.—275 acre farm in Fairfax. Fine quality of grain and grass land. Good buildings. Refined and educated citizens. Price, \$7,000.

See April and May issue of **SOUTHERN PLANTER** for description of the above farms, and write for my farm list and full information.

W. E. MILLER, - Herndon, Va.

## VIRGINIA .. AND .. ... TO ... FIND THE BEST HOMES

Where Health, Climate, Soil, Location and markets are unsurpassed. Any size, place and price to suit the buyer of a stock truck, fruit, poultry or fish and oyster farm. The James River Valley Colonization Co. offers superior advantages to land buyers. Write for free 36 P. pamphlet giving full particulars.

W. A. PARSONS,  
C. & O. Main St. Depot, - - Richmond, Va.  
ESTABLISHED 1875.

## BLUE GRASS & TRUCK FARMS.

The best grazing section of Virginia, Blue grass indigenous. If you are interested in fruit growing or trucking, you can find no better country in the United States.

BUY THE BEST and send for our free Real Estate Bulletin, it will help you find it. SOUTHWESTERN VIRGINIA LAND AGENCY, C. B. Thomas and L. F. Krenning, General Managers, Wytheville, Va.

**FINE FARMS** In the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information, address  
ALBEMARLE IMMIGRATION CO.,  
SAM'L B. WOODS, Pres. Charlottesville, Va.

### MAGAZINES.

Prof. Henry Fairfield Osborn's paper on "The Evolution of the Horse in America," which is the opening article in the November Century, would give distinction to any magazine. It is the second in his group on "Fossil Wonders of the West," the first, on the "Bone Cabin Quarry of Wyoming," having appeared in September. This is the first complete account of the explorations of the American Museum of Natural History under the William C. Whitney Fund, and presents very striking results in the direction of solving many problems in the study of the fossil horse. The paper is fully illustrated. November being the month of the Horse Show in New York, The Century presents also three drawings of "The American Horsewoman," by Urquhart Wilcox: "The Morning Ride," "The Winner," and "In Perfect Form." The horse also figures in the frontispiece, St. Gaudens' Sherman group at the entrance to Central Park, reproduced from a color drawing by F. V. Dumond, which conveys not only the color but the vigor and spirit of the original. Two other examples of color work are a "Tiger and Cobra," drawn by Charles R. Knight, and a double page drawing by Maxfield Parish in illustration of Keats' ode "To Autumn," which is accompanied by a facsimile of the original manuscript, owned in Boston, and now first reproduced.

There are also timely as well as seasonal features, reflecting the current interest in Japan and Russia. Hon. Andrew D. White continues his entertaining papers, with recollections and impressions of Russia during his service as minister in 1892. The article has in parts the character of a philippic, and is written with intense conviction. Mr. White gives his impressions of the present Czar and Czarevitch, and others of the imperial family—De Plehve, Makaroff, De Witte—and records his frank criticism of the Russian foreign policy and its conduct toward Finland.

"Japanese Devotion and Courage" is the title of a paper by Oscar King Davis, who describes graphically the three heroic attempts to block the harbor of Port Arthur, and several courageous actions on the part of the military. A short article on "The Peeresses of Japan in Tableaux" introduces a dozen views of a recent exhibition for charity in which, for the time, the peeresses appeared in public—an extraordinary innovation, which is said to be no less remarkable than the feudal nobles' voluntary relinquishment of their fiefs in 1868. The subjects of these tableaux were heroic scenes from the history of Japan. A curious paper by Gustave Michaud, entitled "The Brain of the Nation," undertakes to answer the question, "Where are the most intellectual people of our country?" In this respect the large cities are compared, with a result which is

## ..To Homeseekers.. "THE BUSINESS OF FARMING IN VIRGINIA."

Is the title of a new pamphlet issued by the Norfolk and Western Railway Company. We will gladly mail you a copy.

W. B. BEVILL, PAUL SCHERER, Agt.,  
G. P. A., Lands and Immigration,  
Roanoke, Va.

## Northern Virginia,

Grain, Fruit, Dairy and Blue Grass Farms of every Class within one hour of Washington, D. C.

LOUDOUN COUNTY  
Farms a Specialty ....

Catalogue on application.

P. B. BUELL & SO.,  
Real Estate Brokers,  
Herndon, Fairfax Co., Va.

## DWELLING, LAND and MILLING OUTFIT,

for sale. Fine 10 room house, well furnished, 25 acres good land (5 acres cleared), 10 minutes' walk to depot, together with pumping station, 20 h. p. boiler and engine, saw and grits mill and cotton gin, in good running condition, in the town of Bronson, Fla. Price, \$2,500. Write for further information to J. R. SQUIRES, Bronson, Fla.

## A FINE FARM FOR SALE.

Being physically unable to properly manage my farm of 910 acres, I offer it for sale. 600 acres in cultivation, 200 acres splendid timber land—no waste lands. Good dwelling, store house, barns, water-works, telephone, daily mails. 13 good cabins, with tenants. All lands in cultivation, circled and terraced. Price, \$17.50 per acre. Any one looking for such property can address or call on  
W. B. MERCIER, Centreville, Miss.

## Old Virginia Farms

25, 50, 100, 500, 1,000 and 2,000 acre tracts. Some of these highly improved and convenient to schools, churches, steam and trolley lines. Send for our new catalogue. HOCKADAY, CASSELMAN & CO., Box 257, Richmond, Va.

## 630 ACRE FARM

Near Keysville, Va., for sale at \$4.00 per acre. This farm is well wooded and watered; about half of it is in original growth timber valued at several thousand dollars. Am anxious to sell. Correspondence invited. T. E. ROBERTS, Chase City, Va.

## CHEAP LANDS FOR SALE

1,000 acres on Indian river, Fla. Building lots, orange and grape fruit groves, pineapple plantations, wild land. \$5 to \$10 per acre. Also a bearing fruit farm near Lynchburg, Va., \$15 per acre. Owing to poor health, will sell any quantity desired cheap or easy terms. Rare opportunity for profitable investments. JAS. HOLMES, College Park, Va.

## "In the Green Fields of Virginia."

Homes for ALL; Health for ALL; Happiness and Independence for ALL. ALL sizes of FARMS at corresponding prices, but ALL reasonable.

MACON & CO., Orange, Va.

**To Land Owners.**

Have you a map of your farm, or is your old map torn and falling to pieces? I make a specialty of farm map making, and should be glad to make you a nice map. If you haven't a map, copy the metes and bounds from your deed (be careful in copying), and mail to me; or if you want your old map copied, mail it to me. My maps are made on best quality mapping cloth (doesn't tear or fade), and look well framed and hung on the wall. Are you satisfied that your farm contains as many acres as you paid for? or are you buying or selling land and wish to know the area without going to the trouble and expense of a new survey? If so, let me calculate the area for you from the old notes on your deed. Many of our old surveyors were very careless with their calculations, and I may save you many times my small charge for calculating.

My charges are: For maps, \$2.00 each; for calculating area, 10 sides or under, \$1.00; 10c. extra for each side over 10.

**SPECIAL ATTENTION** given to surveying and dividing large tracts of land and to surveys of coal, timber and mineral lands in Virginia, North Carolina and West Virginia.

DAVID T. WILLIAMS,  
Civil Engineer and Surveyor, 336 Main St., Danville, Va.

**FARM LANDS.**

The best locations, choicest lands in Virginia. Grains, Grasses, Fruit, Poultry, Dairy, Stock. For catalogue and further information, address

**Real Estate Trust Co.,**  
RICHMOND, VA.

**I Can Sell Your Farm....**

If located in one of these Virginia counties: Prince George, Chesterfield, King William, Gloucester, New Kent, King and Queen, Hanover. Send description, stating price.

JOHN JELINEK, 1116 Pine Alley, Braddock, Pa.

**VIRGINIA FARMS**

\$3 PER ACRE AND UPWARDS  
EASY PAYMENTS. CATALOGUE FREE  
GEO. E. CRAWFORD & CO., Richmond, Va  
Established 1875.

**Go South.**

For full particulars write  
A. JEFFERS,  
Norfolk, Va.

**VIRGINIA FARMS**

Nice little poultry farm, 100 acres, good house and orchard, \$500. Blue Grass, Stock and Fruit Farms. Address PORTER & GATES, Louisa, Va.

**POSITION WANTED**

on a stock and dairy farm, by man who has had experience with cattle. W. P. DAVIS, R. F. D. 6, Gaffney, S. C.

**SALESMEN WANTED**

In Virginia and adjacent territory for old established line of live stock remedies. Only those with experience in this or similar line, and capable of earning \$100 net or more, per month need apply. Give references and full particulars in first letter. Address JOS. HAAS, V. S., 106 So. Penn. St., Indianapolis, Ind.

likely to cause surprise to most readers.

Of the fiction—the readers of “The Sea Wolf” will turn first of all to the concluding chapters of that strenuous tale. The stories include “Within the Enemy’s Lines,” by Edward Boltwood; “Down the Flume with the Sneath Piano,” by Bailey Millard; “The Man Who Forgot,” by Alice Sedgwick (sister of Anne Douglas Sedgwick)—a story of cheating at cards; “An Impossible Possibility,” by Elliott Flower, a story of municipal politics. These are illustrated, respectively, by Ashe, Russell, Marchand and Gruger. A fifth story, unillustrated, is “Miss Harriet’s Extravagance,” by Florida Pier.

Readers throughout the United States and Canada are on the qui-vive of expectancy at the announcement of a new novelette by Charles G. D. Roberts. This is published entire in the November number of Lippincott’s Magazine. A bit of inside history concerning this “find” is that it was first submitted in short story form to the editor of Lippincott’s Magazine. He at once saw in it splendid possibilities as a novel and suggested its expansion to Mr. Roberts. Hence, “The Prisoner or Mademoiselle de Biencourt” makes its bow to the public in a size befitting its greatness. This is a rattling good story of adventure. It is placed in the beautiful “Evangeline” country; and in picturesqueness, in power of portrayal, and in literary finish it is not surpassed in contemporary fiction.

An entertaining tale of “get rich quick” variety is called “The Metamorphosis of Phil Barrett.” Its author is Albert Payson Terhune, the talented son of his talented mother, “Marion Harland.” Among the plethora of automobile stories afloat the one called “Matched Pairs,” by Helen Sherman Griffith, shines out on a plane by itself for its cleverly interwoven love-interest. Prince Vladimir Vaniatsky, the Russian diplomat, contributes a short story, entitled “The Tragic Child,” which contains a happy note, notwithstanding its title. A humorous story of a preacher’s ruse and its outcome is called “Uncle Luke’s Downfall.” The author is C. T. Revere. “The Tale of a Cad,” by Alison M. Lederer, presents its artist hero in the unenviable role of playing fast and loose with a woman’s heart.

An especially important paper, on “Mr. Gladstone’s Friendship with Lord Acton,” is written by the Hon. Maud Lyttelton. All the interesting new matter which it contains has been endorsed by “The Grand Old Man’s” daughter, Mrs. Mary Gladstone Derw.

The November St. Nicholas, No. 1 of Volume XXXII, is notable by virtue of the first chapters of L. Frank Baum’s new serial, “Queen Zixi of Ix.” Mr. Baum will be remembered as the author of “The Wizard of Oz” and other delightful absurdities; and this

**Make your face happy by using Williams’ Shaving Soap.**

Sold everywhere. Free trial sample for 2-cent stamp to pay postage. Write for booklet “How to Shave.”

The J. B. Williams Co., Glastonbury, Ct

**Virginia Polytechnic Institute,**  
(State Agricultural and Mechanical College)  
AT BLACKSBURG, VA.

A SOUTHERN INSTITUTE OF TECHNOLOGY.

54 Instructors. Thoroughly equipped Shops, Laboratories, and Infirmary. Farm of 400 acres. Steam heating and electric lights in dormitories. Degree courses in Agriculture, Horticulture, Civil, Mechanical and Electrical Engineering, Applied Chemistry and General Science. Shorter courses in Practical Agriculture and Practical Mechanics. Total cost of session of nine months, including tuition, and other fees, Board, Washing, Text-Books, Uniform, Medical Attendance, etc., \$222. Cost to State students, \$182. Session began September 21, 1904. For catalogue and other information, apply to J. M. McBRIDE, Ph. D., LL. D., President.

**WANTED TO SUPERINTEND**

a good farm in Virginia, near river preferred, either on shares or on salary. Willing to put some money in if satisfactory. Have run a James river farm for nine years successfully. I have a large force of help in my own family, and had a life experience. Best of references in Virginia and here. Address THOS. SHOOSMITH, 3030 Kensington avenue, Philadelphia, Pa.

**Situation Wanted**

by a practical and experienced man, as Manager of a Large Dairy Farm near a town where milk and butter could be sold from a wagon. Address B. H. VAN MATER, Bel Alton, Charles County, Md.

**WANTED**

an experienced man on my farm, near Richmond. \$15 per month and board. Also a boy. \$4 per month and board. Address “EXPERIENCE,” care Southern Planter.

**WANTED**

An experienced farmer and business man with \$2,000 to engage with me in the sheep business in the mountains of West Virginia. Also good man to rent a farm in West Virginia. O. D. HILL, Kendallia, W. Va.

**F. E. MYERS & BRO. Honored.**

They Capture Highest Award at the Louisiana Purchase Exposition

The World’s Fair Judges have awarded F. E. Myers & Bro. Ashland, Ohio highest grand prize and gold medal for their famous line of Pumps, Hay Tools, etc.

This is only another proof of the fact that every one who knows the best “Takes off his hat to the Myers.”

Mention THE SOUTHERN PLANTER in writing.



**Grain Pasture Mixture**

**FOR FALL SOWING.**

A combination of Wheat, Barley, Rye and Winter Turf Oats.

Yields the largest amount of Winter and Spring grazing, fine for soil improving or can be cut for hay.

Sow 1/4 bushel per acre.

Price per bushel, \$1.00. 5 bushel and over 90c per bushel. 50 bushel, 85c per bushel. SACKS INCLUDED.

We carry the most complete assortment of all seeds, viz: Seed Wheat, Barley, Rye, Winter Turf Oats, Grass, Clover and Forage Crops.

Write for our Large Free Catalog No. 423.

**WOOD, STUBBS & CO., Seedsmen,**  
LOUISVILLE, KY.

**Trees - Trees**

I offer a fine lot of whole root trees.

**APPLES, PEARS, PEACHES,  
CHERRIES, PLUMS, GRAPE  
VINES, RASPBERRIES, Etc.**

Save agent's commission by sending your order to the nursery.

**CATALOGUE FREE. All Stock Inspected and Fumigated.**

**WERTZ'S NURSERY, SALEM, VA.**

**Reliable Seeds**

**FOR FALL SOWING.**

Seed Oats, Rye, Barley, Rape, Vetches, Alfalfa, Clover and Grass Seeds, Onion Sets and Garden Seeds of the highest quality and germination at the lowest market prices. Write us for quotations. Mail orders given prompt attention.

**DIGGS & BEADLES,  
SEEDSMEN,**

1709 E. Franklin St., RICHMOND, VA.

Samples mailed when desired. Catalogue mailed free.

**THE  
NUT NURSERY CO.  
MONTICELLO FLA.**

Growers of FANCY and RARE VARIETIES by grafting in all of the more important species of nuts. We have probably the FINEST STOCK OF GRAFTED PECANS in the South. Catalogue for the asking. J. F. JONES, Msngr.

**GINSENG & RAW FURS**

Wanted; full value for your goods. Write for price lists. Address H. C. METCALF, Ainstead, N. H.

new story starts off so fascinatingly that every young reader will welcome the announcement that "Queen Zixi of Ix" is to run all through the year. The story is also notable for its illustrations, many of them in color. Indeed, it is promised that the serial will bring at least sixteen full pages printed in color, with sixty or more colored illustrations in the text.

The November St. Nicholas brings, too, the first of what promises to be a series of rarely instructive and valuable papers for young readers by the well-known art critic, Charles H. Caffin. The papers will be grouped under the heading, "How to Study Pictures." This month Mr. Caffin takes up the two paintings of "The Madonna Enthroned," by Cimabue and Giotto, and the paintings of "The Virgin Enthroned," by Botticelli and Memling, tells of the artists, points out the likenesses and the differences of the pictures contrasted, and in careful detail advises how to get the most and the best out of pictures. The same plan will be followed in other papers to come, and reproductions of the world's masterpieces will be used to point the moral and adorn the tale. And there is another series of helpful and instructive articles beginning in this issue, entitled "The Practical Boy," by Joseph H. Adams. This first paper treats of simple carpentry and painting and the use of tools in a clear, practical manner, with many illustrations to help the amateur carpenter. Other papers are promised from month to month along the same lines from Mr. Adams, who was for years chief designer of artistic wood and metal work for a great manufacturing firm in New York.

**FLOOR PAINT.**

A Methodist minister's wife is authority for this recipe, published some years ago in a newspaper: For a floor twelve by sixteen feet, take four pounds of French ochre and mix with one gallon of boiling water, to which one ounce of melted glue has been added. Paint the floor with this mixture while it is hot, using a whitewash brush for the purpose. It dries quickly. If applied at noon, it will be dry by night. When dry apply a coat of boiled linseed oil, using the whitewash brush. It should be dry by morning. About three quarts of oil will be needed. The floor improves in looks as it is cleaned from week to week. Fill cracks and nailholes with a mixture of sawdust and glue several days before painting.

Daniel Webster liked to make remarks of a character intended to puzzle simple minds. Stopping to dinner one day at a country inn on his way to Marshfield, he was asked by the hostess if he usually had a good appetite. "Madam," answered Webster, "I sometimes eat more than I do at other times, but never less."

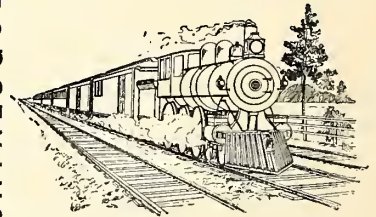
**COW PEAS**

**WANTED.**

State variety and price, and mail samples.

**Robert Buist Company,  
SEEDSMEN,  
Philadelphia, - - Penn.**

CATALOGUE



FREE!

Write for it and you get price list of EARLY and SELECT varieties of

**SEED (Irish) POTATOES.**  
PERCY L. BANKS,  
P. O. Box 182, Norfolk, Va.

**Strawberry Plants,  
Trees, etc.**

\$1.60 buys 1,000 nice young STRAWBERRY PLANTS, and if you are not satisfied with them, you can get your money back. Send for free catalogue. JOHN LIGHTFOOT, R. F. D. 2, Sherman Heights, Tenn.

**Largest Peach Tree Growers**

IN THE SOUTH.



Write for our new illustrated and descriptive catalogue of general Nursery Stock.

**CHATTANOOGA NURSERIES,**  
Chattanooga, Tenn.

**Alfalfa Seed** 18 CTS. LB. \$10 BUSH'L

INOCULATED ALFALFA SOIL, 75c. 100 lbs.; \$10 a ton. RECORDED HEREFORDS, almost beef prices. J. N. SHIRLEY, Lebanon, Ind.

**SAVE THAT PORKER.**

To any person sending us 25 cents in stamps or silver we will send by mail a bottle of GREGORY'S ANTISEPTIC HEALING OIL, guaranteed to cure every case of Cholera in hog or chicken if administered in first stage of the disease. Cures colic in man or horse in one to three minutes. If it fails drop a postal card and we will return stamps or money. Full directions given. GREGORY MEDICINE CO., Conway, Ark. Send now, as this ad. will not appear but three times.

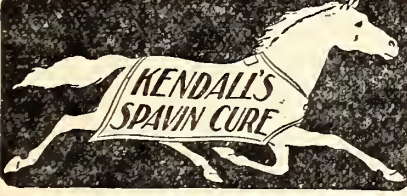
**OPIUM** and Whiskey Habits cured at home without pain. Book of particulars sent FREE. B. M. Woolley, M. D., Atlanta, Ga., 103 N. Pryor St.

# KENDALL'S SPAVIN CURE

**Horse Owners Know**  
from long experience in treating such characteristic ailments of the horse as **Spavins, Ringbones, Splints, Curbs** and all the forms of **Lameness** that the one reliable remedy is

## KENDALL'S SPAVIN CURE

Bleecker, N. Y., Jan. 24, 1904.  
Dr. B. J. Kendall Co.  
Gentlemen: Enclosed please find a 2c stamp for which kindly send me your "Treatise on the Horse and his Diseases." I think that your **Kendall's Spavin Cure** is a great remedy for everything. I would not be without it. I cured a Spavin of three months standing on a colt with one bottle of your Spavin Cure. **WILLIAM RHINEHART.**  
Price \$1; six for \$5. As a liniment for family use it has no equal. Ask your druggist for **Kendall's Spavin Cure**, also a "Treatise on the Horse and his Diseases," the book free, or address  
**Dr. B. J. KENDALL CO., ENOESBURG FALLS, VT.**



# Spavin

Bone Spavin, Bog Spavin, Ringbone or any kind of blemish—we have what you need to make a certain cure. Guaranteed always—money right back if it ever fails.  
**Fleming's Spavin Cure (Liquid)**  
for the soft bunches—Paste for the hard ones. A 45-minute application and the lameness goes. Lots of blemish information in the free book we send.

# Fistula and Poll Evil

Do yourself what horse doctors charge big prices for trying to do. Cure **Fistula or Poll Evil** in fifteen to thirty days.  
**Fleming's Fistula & Poll Evil Cure** is a wonder—guaranteed to cure any case—money back if it fails. No cutting—no scar. Leaves the horse sound and smooth. Write for our **free book** on diseases and blemishes of horses.  
**FLEMING BROS., Chemists, 280 Union Stock Yards, Chicago, Ill.**

**DEATH TO HEAVES** Guaranteed  
**NEWTON'S Heave, Cough, Dis-temper and Indigestion Cure.**  
A veterinary specific for wind, throat and stomach troubles. Strong recommendations. \$1.00 per can. Dealers. Mailer Ex. paid. The Newton Remedy Co., Toledo, Ohio.

**NO MORE BLIND HORSES.**  
For Specific Opt-almia, Moon Blindness, and other Sore Eyes, Barry Co., Iowa City, Ia. have a sure cure.

# THE KEELEY INSTITUTE GREENSBORO, N.C.

For the treatment of **THE LIQUOR, OPIUM, MORPHINE** and other Drug Addictions. The Tobacco Habit, Nerve Exhaustion

Mr. Editor,—We are pleased to note many improvements in manufacturing in this section, among which we find the Planters Hoe Shop, formerly owned by D. & H. Scovil; now owned and run by the Porters, who have added to this already large shop another shop 200 feet more in length, and another 100 horse power engine. I have also noticed the addition of another 100 horse power boiler and engine added to the already large water power of the famous Cutaway Harrow Co.'s works; also notice with pleasure the addition of an electric light plant to spread the light and power into the dark corners of this shop.

The Clarks' Genuine Cutaways are truly a great invention. The Clarks' Cutaway trade-mark is worth a fortune to the Cutaway Harrow Co. It always insures a machine of excellent quality. The trade in this section is good; also in the South, West and far West; foreign trade was never better.  
Yours truly, **GEO. M. CLARK.**

## YORKSHIRE HOGS AT BOWMONT FARMS.

We invite the attention of our readers to the ad. of Bowmont Farms. Col. Bowman, the proprietor, writes us that he has recently added to his already fine herd of large Yorkshires the great sows, Oak Lodge Julia, 35th, Oak Lodge Pride, 80th, first and third prize sows, respectively, in the Junior class at the recent swine exhibit at the World's Fair. Both of these sows were bought from Mr. Brethour, of Ontario, who is a well known breeder.

These farms have always been noted for breeding the best in everything, and it is very evident that Col. Bowman is determined that this reputation shall not suffer. Look up the ad. and get prices on some of the splendid stock now for sale.

## THE LEHMAN HEATERS.

One of the most useful devices ever advertised in our columns is the Lehman Heater. It certainly transforms a long, cold drive in a sleigh or buggy into one of comfort and pleasure. The Heater is very neat and attractive in appearance, costs only two cents per day to operate, using Lehman Coal, which has no smoke or smell. There is positively no danger of setting fire to anything. Inquire of your hardware man for one, and if he cannot supply you, write to the makers, whose ad. will be found on another page.

Would you rub up a lather on your face for shaving with a coarse scrubbing brush? It's nearly as bad—using toilet or laundry soap for the lather. After shaving, your face ought to feel cool and smooth and comfortable. If it doesn't—try real shaving soap—made by The J. B. Williams Company, whose advertisement appears elsewhere in this paper. Shaving may become a pleasure—as you will learn if you take advantage of their offer.



Warranted to give satisfaction

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Cockerels for sale. Exhibition or breeding stock. Address

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Cocks and Pullets. Some fine ones, and plenty of nice B. P. ROCK PULLETS for sale at right prices. Write us your wants. PRICE & PRICE, Propr., Green Bay Poultry Yards, Green Bay, Va.



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Some fine cockerels and pullets for sale cheap.

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BARRED PLYMOUTH COCKERELS for sale at a very low special rate if taken before November 1, 1904. Thoroughbred stock, and are very fine birds. Elegantly marked. Address PIEDMONT POULTRY PLACE, Whites Depot, Va., Miss E. CALLIE GILES, Propr.

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WHITE HOLLAND TURKEYS (Mammoth Strain), \$7 per trio. EMBDEN GEESSE, \$5 per pair. ROSE COMB WHITE LEGHORNS, \$4 per trio. MRS. LIZZIE DYER, Versailles, Tenn.

### HOME-MADE RUGS.

There are many sensible women in the country who never gave up the practice of making rag rugs during all the years these useful things were in disfavor, and now that fashion has set its seal of approval on them, they are besieged with inquiries as to how to make them. The old custom of speaking of "hideous rag carpets" has given place to such exclamations as, "How striking," "Too beautiful for anything." The woman in the country is apt to smile a little over the raptures of her visitors, and wonder how long the new fad will last, but she knows that as long as she keeps house, rugs will form an important part of the furnishing thereof.

To the novice a few general directions may not come amiss. For kitchen use and on porches the hit-and-miss style is the best, as the odds and ends from making fancy rugs may be used as well as the ugly rags old trousers and coats make. Keep all colors separate, and much trouble and work will be avoided. Some people argue that it is just as easy to have one large basket and pick out the rags as you want them; but much handling frays and spoils them, and it is just as easy to have three or four grape baskets without handles to hold the different colors. For fine rugs cut the rags narrow, but where they will see hard service make the strips at least an inch wide. Of course the finer the rags the thinner the rug.

For a bedroom rug, I have just finished tearing up some faded shirts, that could really be called white now, and some old pink night shirts. I know this will be a dainty combination, for a woman near by made one, using pink chain, or rather a light shade of red, and the result was very pleasing. One pink and one white was the rule, and I aimed to tear the strips the same length as nearly as possible. This rug will not get hard wear in front of a spare bed, and will keep clean several years before it needs washing. After that it can be dipped in dye and used again, or, if dingy-looking, be used on rainy days on the piazza.

For a drugget for a dining-room, take all one color of rags and have two strips woven each one yard wide and two and one-half yards long. Some looms turn out carpet a yard and a quarter wide, and in that case it is better to make the strips a little longer. Strip six inches from each end with a six-inch band of contrasting color, and when the strips are sewed together, you will have a beautiful drugget at a moderate cost. Mine is made from old trousers, and has a red border and red fringe. The fringe is made from woolen yarn, in the way we used to fringe our tidies, and we think it is very pretty.

An all white rug is beautiful but, to my mind, too perishable for a home where the mistress does her own work.

### TEN TRIOS

## Buff Leghorns,

the best layers, beautifully marked, from strains which layed 210 eggs a year. \$5 a trio.

SUPERB BRONZE TURKEYS from the best pens of the country. Trio, \$10; hens, \$3 each. Toms, \$4 to \$5 each. Satisfaction guaranteed. A. R. VENABLE, JR., Farmville, Va.

## PIT GAMES.

Imported HENNY and ASEELS of the best fighting strains in England. A few 1904 birds for sale. Price \$6 the trio. State wants. OWEN SWAFFIELD, Ivy Depot, Va.

## PIT GAMES

Black Devils and Red Cubans.

Where they won, Sharon, N. Y., 4 out of 5. Blue Rock, Pa., 2 out of 3. Clarton, Pa., 5 straight. Roanoke, Va., 8 out of 9. Akron, Ia., 2 straight. Eggs, \$2 per sitting. Young trios, quail size, \$3.

THOS. W. JARMAN, Yancey Mills, Va.

WHITE HOLLAND TURKEYS, W. PLYMOUTH ROCK FOWLS, TOULOUSE GEESSE, PEKIN DUCKS and PEA FOWLS:

Eggs in season. Will exchange for White Plymouth Rocks.

OAK HILL FARM, Wenonda, Va. (Oak Hill Station, D. & W. Ry.)

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of Cockerels; Langshans, Orpingtons, Rocks, Wyandottes, Minorcas, Leghorns and others. Write wants. Low prices for early buyers. Large illustrated poultry book describes 40 varieties best poultry, only 6c. List free. JOHN E. HEATWOLE, Harrisonburg, Va.

## Pure-Bred Buff Orpington

Cockerels for sale; \$1 up, depending on quality. Also R. C. White Leghorn Cockerels, "Victor Strain", and W. B. Turkeys of excellent breeding. Write me what you want. T. M. KING, Queensland Farm, R. F. D. 2, Hagan, Lee county, Va.

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Gobblers for sale. MISS M. E. BADER, McGeheysville, Va.

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Particularly Deer, Wild Turkeys, White  
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COCKERELS, April hatch, for sale. Finely  
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and well grown. For prices, etc., address  
MISS MARY FOSTER, Salem, Va.

Very fine pure bred  
**Plymouth Rock Cockerels,**  
for sale at \$1.50 each; also some splendid  
M. B. Turkeys for sale. F. MAXWELL  
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**Homer Pigeons,**  
Bred of choicest selected stock, from Ply-  
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●—● **COLLIE PUPS** —●●  
By Imported Sires. Sable and white and tri-  
color. Prices, \$8 to \$15. Older ones correspond-  
ingly low—Book on Training, 50 cents: FREE! if  
you buy a Collie.  
MAPLEMONT STOCK FARM, Rutland, Vermont.

**Scotch Collies**

Champion blood of England and America.  
Puppies now ready to ship. Also hitches in  
whelp for sale. MEYER & JEHN, Farm-  
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**Scotch Collie Pups**

3 months old, bred from prize winning im-  
ported stock, with written pedigree for 94  
generations. Price, \$10 each. Trained grown  
dogs at reasonable prices. C. H. BENNETT,  
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Several broken dogs and puppies of the best  
English and American strains for sale at rea-  
sonable prices. Also BULL, FOX and AIRE-  
DALE TERRIERS.

OWEN SWAFFIELD,  
Ivy Depot, Va.

The faded blues and pinks from chil-  
dren's dresses and old shirt waists  
combine beautifully and may be used  
with white or colored chain. Insist  
on having plenty of chain used in the  
weaving or your rug will be unsatis-  
factory and soon worn out. Red rugs  
show the dirt badly, but are useful to  
brighten up a dull carpet in a living  
room, while green ones are especially  
pleasing to the eye in summer time.  
Choose a reliable dye and follow the  
directions to the letter, if you expect  
success in coloring. Have your rags  
clean and wound in small hanks, dry  
thoroughly, and there is not much  
danger that they will fade.

If once you take up the carpets at  
spring cleaning time and leave them  
up till fall with only gay rugs on the  
painted floors, you will never want to  
go back to the old way of having a  
dusty carpet down the year round.  
Two or three new rugs a year will be  
ample even for a large family, for  
they wear like iron when well made.—  
Hilda Richmond, in Country Gentle-  
man.

The October "American Boy," with  
its football cover and ninety illustra-  
tions, ought to make a boy's heart  
jump with pleasure. This number is  
especially attractive. There is a mes-  
sage from Governor Warfield, of Mary-  
land, to the boys of America, a page  
devoted to the Order of the American  
Boy, books reviewed, directions for  
saving drowning persons, a page on  
stamps, coins and curios, one on ama-  
teur photography, and one on puzzles.  
Published by The Sprague Publishing  
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price, \$1 per annum.

**INSECT PESTS IN NORTH CARO-  
LINA.**

*To the Editor:*

Dear Sir,—Your attention is called  
to the press edition of the Entomologi-  
cal Circulars. Each of these circulars  
deals with matters pertaining to in-  
sects which are of importance to farm-  
ers, truckers, orchardists, or to the  
public generally. It seems to me that  
it would be well, therefore, if you could  
reprint this notice in your paper, with  
the statement that copies of the regular  
edition of each of the circulars  
may be had on application to me.

I beg to assure you that this office  
is doing all that it can to make its  
work of real value to the people of the  
State, and to this end request your  
co-operation in extending notices of  
the circulars as they are issued.

FRANKLIN SHERMAN,  
*Entomologist.*

Department of Agriculture, Raleigh,  
N. C.

**THE BRUTE.**

Wife—Mr. Dauber, the artist, has  
asked me to let him paint my face.

Husband—He didn't think one coat  
was enough, I suppose.—Topeka State  
Journal.

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INCUBATORS  
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Winners of 385 First Prizes. A  
phenomenal record of successes in  
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For sale; 2 years old and older; bred from the  
best families in America; pedigrees tracing to  
imported sire and dam; nothing but imported  
stallion used at the head of stud; prices right.

D. T. MARTIN, Salem, Va.

**Sweetwood Jr.,**

at a bargain. Dark sorrel, 6 years old,  
weighs 900 pounds; went half mile this sea-  
son in 1.08 with 3 weeks' handling. Write  
for pedigree. Price, \$300 cash, if taken at  
once. H. F. SINCLAIR, Morrison, Va.

**THOROUGHBREDS for Sale.**

BAY COLT "BURT," May 10, 1901. By Au-  
rus, Cara Bell, by imp. Charaxus.  
FLORENCE GLENN, No. 15709, chestnut  
mare, by Linsey Woolsey; Thelma, by imp.  
Esher, foaled May 27, 1898.

BROWN FILLY, Hannah C., No. 32735,  
foaled March, 1902, by Aureus; Kathleen Gray,  
by Jim Gray. For further information, ap-  
ply to S. H. WILSON, R. F. D. 2, Byrdville,  
Va.

**FOR SALE OR EXCHANGE**

**ALBENSON:** '6249, Standard bred  
stallion 16½ hands h'gb; weight, 1 200  
lbs. Rich bay with black points  
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GEO. D. WINGFIELD, Bedford City, Va.

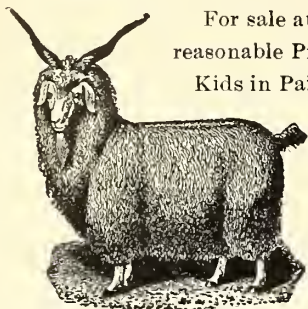
**FOR SALE OR EXCHANGE  
Thoroughbred Stallion**

"Hano," No. 18306 (foaled May 20, 1898),  
by Hanover, out of Lizzie Lee, she by Ten  
Broeck; he is a rich chestnut 15½ hands, a  
sure foal getter, and a grand hunting horse.  
Write at once about him. G. I. HUTCHIN-  
SON, Summerville, S. C.

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A fine lot of **KEN  
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**BLACK SPANISH**  
Jacks and Jennets  
also 1 and 2 year old  
Jacks; young stock for  
sale at all times



Write or see me be  
fore you buy. Come to Kentucky if you  
want a good Jack. **JOE E. WRIGHT,** Junc  
tion City, Ky.

**Woodland Dorsets.**

At 6 great State Fairs this year, we  
won every first, but two. At St. Louis,  
we won second on Ewe Lamb and third  
on Ram Lamb, against the strongest  
Dorset Show ever seen in America.  
J. E. WING & Bros., Mechanicsburg, O.

**DORSETS AND  
HEREFORDS**

H. ARMSTRONG, Lantz Mills, Va.



**O. I. C. PIGS**

FROM REG. STOCK

FOR SALE. PRICES RIGHT.

F. S. MICHIE, Charlottesville, Va.

**MAKING BOTH ENDS MEET.**

The old saying, "His head will never  
save his hands," has many illustra-  
tions, and in this story it has a most  
forceful application.

"Well, Caleb," said Captain W., of  
Massachusetts, years ago, "what will  
you ask a day to saw wood for me?  
I've got several cords that I want sawed  
in two for the fireplace."

"I should charge you about half a  
dollar a day if I had a saw," replied  
Caleb, "but I ain't got none, captain, so  
I don't see how I can accommodate  
you."

"If that's all that's lacking I guess  
we can manage it," said the captain.  
"I've got a prime new one, keen as a  
brier, and I'll let it to you reasonable.  
How would ninepence a cord do for the  
use of it?"

"I reckon that's a fair price, cap-  
tain. I'll be over in the morning."

Bright and early that next July  
morning Caleb was at work, and he  
kept at it so faithfully that he finished  
before sunset, when he went to the  
house to settle.

"Let's see," said the captain, "you  
were to have half a dollar a day; we'll  
call it a day, although it ain't sun-  
down yet. That's 50 cents for you.  
And you were to pay me ninepence a  
cord for the use of the saw. There  
were three cords and a half in the  
pile; that makes 43½ cents due me.  
Somehow, Caleb, you don't have very  
much coming to you."

"How unfortnit," said Caleb, after  
scratching his head dubiously for half  
a minute, and then looking up quickly,  
as if a new light had broken in upon  
his mind. "How unfortnit that you  
didn't have half a cord more, for then  
we'd a come out jest square!"

**A POPULAR BOOK.**

On March 7, 1804, "a numerous and  
respectable meeting of persons of var-  
ious denominations" was held at the  
London Tavern, and a society formed  
"to promote the circulation of the  
Holy Scriptures in the principal living  
languages." At that time the Bible,  
or portions of it, could be obtained in  
about forty living languages, spoken  
by two-tenths of the race. During the  
century since the meeting at the Lon-  
don Tavern adjourned, and very large-  
ly from the machinery then and there  
started, the Scriptures have been trans-  
lated into 450 languages and dialects,  
understood by seven-tenths of the race.  
By the London society alone 180,000-  
000 copies have been distributed, at an  
expense of \$70,000,000. If we add to  
this total the 70,000,000 copies already  
distributed by the younger American  
Bible Society, and the unknown mil-  
lions printed and sold by private en-  
terprise, we find ourselves inside a  
safe estimate if we hold that certainly  
300,000,000 copies of the Scriptures, in  
whole or separate books or portions,  
have gone into circulation during the  
last century. Amazement attends the  
study of the Bible, whatever the point

**HOLLYBROOK FARM**  
**BERKSHIRE PIGS**

**For Sale.**

**THREE FINE YOUNG BOARS,**  
five months old, \$7.50 each.

**TWO YOUNG SOWS,** same  
age and breeding, \$7.50 each.

These pigs are from registered stock  
and are first-class in every respect. Our  
pigs have free range, with a fine stream  
of running water through the hog pas-  
tures, and our stock is as vigorous and  
healthy as possible.

Prices include crating and delivery  
f. o. b. cars at Richmond, Va.

**HENRY W. WOOD,**  
P. O. Box 330. Richmond, Va.

**— ENGLISH —****BERKSHIRE PIGS,**

for sale. A fine lot of spring farrowed  
Boars and Gilts. These pigs are sired  
by Imported **Danesfield Tailor** (76940)  
from the famous R. W. Hudson herd,  
Danesfield England. His sire is the cel-  
ebrated **Manor Faithful**, which sold at  
the Biltmore sale of 1903 for \$615.00.

Their dams are Buttercup of Bilt-  
more II (66611) and her get by Imported  
Danesfield Minting (B. B. 8564), giving  
strong Highclere blood. The best strains  
of Berkshire blood in the World is in  
these pigs. Pedigrees with every pig.

Address, **D. CLARK,**  
SNOWDEN FARM, FREDERICKSBURG, VA

WE NOW HAVE A CHOICE  
NUMBER OF PURE-BRED

**Berkshire Pigs**

**MINIBORYA FARM,**

Box 901, Richmond, Va.

**BEECHENBROOK STOCK FARM**  
A Splendid Chance  
**TO BUY ROYALLY BRED BERKSHIRES  
AT A SACRIFICE.**

Pigs from 8 weeks to 8 months old. Also  
that fine Boar King John, of Fassifern, No.  
9123, 20 months old, by Sir John Bull, 3609,  
imported. Also 4 Registered Sows, 18 months  
old, all bred to King John of Fassifern.  
Will sell almost at butcher's prices to close.  
Act promptly. **WILLIAMSON TALLEY,**  
Richmond, Va.



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ANNEFIELD HERD

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## Finest Blood Lines

in England and America.

Young Stock for Sale.

Inquiries cheerfully answered.

EDW. G. BUTLER, Annefield Farms,  
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## Berkshire Pigs

ready for October and November delivery by my 700 lb. boar, Capt. Jack 68623 and out of sows weighing from 500 to 600 lbs. in only fair breeding condition. To show that these pigs are extra good, I WILL SHIP TO RESPONSIBLE PARTIES ON APPROVAL.

Every hog in my herd is registered.

WOODSIDE STOCK FARM,  
Charlottesville, Va.

OUR herd represents the very best strains imported

—LARGE—

### English Berkshires.

Choice stock at reasonable prices. Address

Cottage Grove Farm,  
P. O. Box 5. Greensboro, N. C.

## BERKSHIRES

All my pigs sold except twenty-one (21), farrowed September 20th, 24th and 25th, 1904, from registered sows, sired by MASON OF BILTMORE II (68548). Price, \$6 each, or \$10 a pair f. o. b. delivered first week in December. None but Biltmore blood in my herd.

ROBERT HIBBERT, Charlottesville, Va.

THREE BRED

## Berkshire Sows

and 1 READY-FOR-SERVICE BOAR for sale at a bargain. COLLIE PUPS, sable and white, full white points; breeding unsurpassed. Write for prices. ALFRED P. WHITE, JR., Parksley, Va.

HAWKSLEY STOCK FARM  
has some very choice

## Berkshire Pigs

now ready for shipment. They are "tops" in breeding and individuality. Also M. B. TURKEYS and 8 C. B. LEGHORN CHICKENS for sale.

J. T. OLIVER, Prop'r.  
Allen's Level, Va.

of view or the course pursued. But nothing about the Bible is more amazing than its continuous, universal and utterly unparalleled popularity. In nearly every, if not every, country on earth where books are sold, more Bibles are sold than any other book. Last year the British and Foreign Bible Society alone distributed 5,943,775 copies, the majority by sale, in 370 languages, covering every part of the globe. And the issue by the American Society for the year amounted to 1,993,558 Bibles and portions.—Century.

### CHRISTINE'S CONSCIENCE.

Christine was the young daughter of a professor in a Western University, and had acquired from the students a picturesque vocabulary. The kitten with which she was playing one morning displeased her, and she exclaimed: "Oh, you blanked, blanked little kitten!" Thereupon her mother led her to her bedroom, washed out her mouth with soap and water, then touched it with quinine. "It is very bitter, my daughter," said the troubled parent. "but the taste of those bad words you have spoken is far worse." On the following day the kitten again displeased Christine, and she muttered something inaudible. "Christine!" said her mother, warningly. "I didn't say it, mamma," declared the culprit. "No, I kept the words shut up tight; but it's the very same kind of kitten it was yesterday."—Lippincott's.

### WHO, INDEED?

An old Scottish minister took it into his head to marry his housekeeper. His precursor being ill on the day when the bans were to be proclaimed, the minister, not caring to make the intimation himself, arranged with his herdboy to do it.

"Now," he said, "you must call out in a loud voice, 'Proclamation of marriage between the Rev. Mr. Murray, of this parish, and Jean Lowe, o' the same.' Ha! ha!" laughed the minister, as he concluded. "Wha'd hae thocht it?"

The Sabbath came round and the congregation assembled. When the moment arrived the lad, who had duly prepared himself, rose and called out:

"Proclamation of marriage between the Rev. Mr. Murray, of this parish, and Jean Lowe, o' the same. Ha! ha!" he laughed, thinking this to be a part of the proclamation. "Wha'd hae thocht it?"

### A SOCIAL HAPPENING.

Little Alphonso, Jr., had been carefully tucked into bed, had asked for his last drink of water, and was about to dream material for new questions when his mother heard, as she was carefully and quietly folding the little garments in the dim light, "Mother, how was it I first met you?"—October Lippincott's.

## REG. BERKSHIRES

ready for shipment. Will sell cheap. S. C. B. LEGHORN chickens, 65c. each; good, healthy well bred stock. 3 year old Reg. Jersey Bull at \$50. Selling to prevent inbreeding. EVERGREEN DAIRY & STOCK FARM, W. B. GATES, Propr., Rice Depot, Va.



### ORCHARD HILL PURE-BRED

## POLAND CHINAS

Two fine litters of pigs now ready for sale; six beautiful young sows ready to breed, and a fine Guernsey hull calf, one month old. F. M. SMITH, JR., R. F. D., No. 4, Charlottesville, Va.

## Registered Poland Chinas

1 year old Reg. P. C. SOW, bred to Reg. P. C. Boar. \$25.  
3 mos. P. C. PIGS, eligible to registry, \$5 each.

SILVER LACED WYANDOTTE COCKERELS, \$1 each. Fine birds. E. T. ROBINSON, Lexington, Va.



Registered P. Chinas Berkshire  
C. Whites Large strain. All ages mated not akin, Bred sows, Service hoars, Guernsey colves, Scotch Collie pups, and Poultry. Write for prices and free circular.  
P. F. HAMILTON,  
Cochranville, Chester Co., Pa.

### EDGEWOOD STOCK FARM,

has for sale a choice lot of

## REG. POLAND CHINAS

of the FINEST STRAINS, descendants of prize winners. GILTS, BRED SOWS and ready-for-service BOARS for sale cheap to make room for spring litters. Must be sold. Orders hooked for spring pigs. Don't fail to get my prices before buying elsewhere. Customers in several States. Mention the Southern Planter. W. B. PAYNE, Crofton, Va.

## Duroc Jerseys

FROM REGISTERED STOCK.

A few nice Sow Pigs of March, 1904, farrow. Also a nice lot of August and September, 1904, farrow of both sexes for sale. Stock guaranteed as represented. Give me an order and I will please you.

D. L. ROBERTSON,  
Marmaduke, Warren Co., N. C.

Salt Pond Herd.

## DUROC JERSEYS

Home of Paul J. 21625, Also Lulu's Pet 40434. Pigs of March and May farrow for sale. Write for what you want.

S. A. WHITTAKER, Hopeside, Va.

## VERY FINE DUROC PIGS FOR SALE

Also, handsome SETTER DOG eight months old; pure black ANGORA KITTENS.  
A. F. LOCKWOOD,  
Orange, Va.

## Poland-Chinas and Chester Whites

AND MAMMOTH BRONZE TURKEYS

AT FARMERS PRICES.

S. M. WISECARVER, Rustburg, Va

∴ SOME VERY FINE ∴

## RED POLLED

Calves, entitled to registry, for sale; also a few very good

## Poland China Pigs

whose breeding cannot be excelled. Only one SHETLAND PONY for sale now. ARROWHEAD STOCK FARM, SAM'L B. WOODS, Propr., Charlottesville, Va.

## PLEASANT VALLEY STOCK FARM

### Shorthorn

calves from fine milking stock.

### Yorkshire Pigs

of prolific breed.

JAMES M. HOGE, Hamilton, Va.

THOROUGH-BRED....

**Berkshire Boars,  
Dorset Buck Lambs,  
Jersey Bull Calves.**

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, Centerville, Md.

## OAK-HILL FARM

SADDLE HORSES, JERSEY AND ABERDEEN ANGUS CATTLE, BERKSHIRE, POLAND CHINA, RED JERSEY, and TAMWORTH HOGS, FOR SALE

WRITE FOR PRICES.

Shipping point Oak-Hill, Va., (Station on farm) on D. & W. Ry. 15 miles west of Danville, Va.  
SAM'L HAIRSTON,  
Wenonda, Va.

IN ALL THAT'S GOOD,  
OWENS OFFERS THE BEST  
The Cedars Kennels, Poultry and Stock Farm.

Home of the most fashionable strains of Llewellyn Setters, Beagle Hounds, Jersey Cattle, Duroc Jersey and Poland China Swine, M. B. Turkeys and B. P. R. chickens. Fanciers' Stock—Farmers' Prices.  
WM. G. OWENS, Midlothian, Va.

## OAK - GROVE - STOCK - FARM

offers for sale a number of fine ESSEX PIGS November delivery. Also some choice POLAND SHOATS, March, 1904, farrow, \$15 per pair. Your orders solicited. All stock as represented.

L. G. JONES, Tobaccoville, N. C.



A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

## GOOD HOUSEKEEPING.

### GREEN TOMATO CATSUP.

One peck of green tomatoes boiled soft in a half gallon of vinegar. When done press through a sieve. Add one teacup of sugar, one-half ounce each of cloves, allspice, cinnamon and black pepper, four ounces of horseradish, one dozen silver skinned onions, chopped fine, one ounce of garlic, three pods of green pepper, boil till very thick. Take from the fire, add three pints of good vinegar. Bottle and cork. Dip each cork, after pressing it in tight, in a cement made of equal parts of wax and beef suet. Be careful not to break the cement and your catsup will keep indefinitely.

### CORN BATTER CAKES.

Two pints of corn meal, one pint of flour, three eggs beaten light, one and a half teaspoons of soda, one tablespoon of lard, one teaspoon of salt. Make into a thin batter with buttermilk. Fry on a hot griddle.

### BREAKFAST PUFFS.

Mix one teaspoon of salt in one of baking powder and sift them in one quart of flour. Add the well-beaten yolks of three eggs, one tablespoon of butter and nearly three cups of sweet milk. Stir together lightly, and just before baking add the whites of the eggs, beaten stiff. Bake quickly in well greased patty pans or muffin rings.

### FRITTERS.

Beat three eggs very light and add to them a heaping tablespoon of butter, a pint of flour, one level teaspoon of soda, dissolved in a little hot water and nearly a pint of buttermilk. Mix very smooth and drop by spoonfuls into deep boiling fat. Fry to a light brown, skim out and sprinkle with powdered sugar and serve with wine sauce, or have the hutter, sugar and wine on the table and let each person season to taste.

### BEEF PUDDING.

Chop the beef and potatoes, about a third as much potato as beef; do not grind; this makes it pasty. Put them into a pudding dish, a thick layer of the meat and then a thin one of the potatoes, then a sprinkling of bread crumbs, pepper, salt, a little celery seed, and if you choose a shaving of onion, then meat again, and so fill the dish. Pour over it a gravy from boiling the bones in water. Let the top layer be bread crumbs, and after pouring the gravy over it put a few rings of hard boiled eggs and lumps of butter all about the top and bake until the potatoes are done. This is a good way to use up scraps.

### CARAMEL PIE.

Three tablespoons of hutter, three eggs, two cups of sugar, two tablespoons of flour, half a cup of milk, and half a nutmeg. Beat all well and add two cups of damson preserves. Bake in an open crust. If you have no damsons, any acid jam or jelly will do as well.

### SWEET POTATO CUSTARD.

Boil the potatoes done. Peel and

REGISTERED

## SHORTHORNS

A few choice BULL CALVES 6 months old for sale at reasonable prices. Write me for further information. I. S. EBERLY, Glendale, Va.

WILLOW GLEN

## Short = Horns.

Special offering of two and three year old heifers with calves at side. Also nine head of splendid young bulls. Prices low if sold at once. Inspection invited. DR. D. M. KIPPS, Front Royal, Va.

## ELLERSLIE FARM

**Thoroughbred Horses**

**AND SHORTHORN CATTLE,  
Pure Southdown Sheep  
and Berkshire Pigs.**

FOR SALE. R. J. HANCOCK & SON,  
CHARLOTTEVILLE, VA.

## Springwood Short-Horns

Young stock for sale, sired by Royal Chief, No. 185432; he by Imported Royal Stamp, Champion Bull at Ohio State Fair this year. Spring and fall Poland China Pigs and shoats; sired by Coler's Perfection. I will sell this hog at a bargain. Call on or write WM. T. THRASHER, Springwood, Va.



**COOK'S CREEK HERD  
SCOTCH - TOPPED  
SHORTHORNS...**

Herd Headed by Governor Tyler, 158548, 1st prize aged bull at Radford Fair, Young Bulls and helpers for sale. Inspection and correspondence invited.

HEATWOLE & SUTER, Dale Enterprise, Va.

## RED POLL BULL,

5 years old, Registered, for sale. Price, \$100; also Reg. POLAND CHINA BOAR, 1 year old. Price, \$25. Address G. F. COX, 1300 E. Main street, Richmond, Va.

## I WILL TRADE FOUR PURE-BRED POLLED DURHAM BULLS

(double standard) for a team of Matched Carriage Horses. Address FIELD, Box 656, Knoxville, Tenn.

## "Feeds and Feeding"

Prof. Henry's Great Book for  
Farmers and Stockmen.

Delivered anywhere for - - \$2.00  
With the SOUTHERN PLANTER, 2.25

Mention THE SOUTHERN PLANTER in writing.

## Elkton Stock Farm,

LOCATED ON NORFOLK & WESTERN R. R.  
12 Miles W. of Lynchburg.  
Breeders of Pure Bred, Registered

## HEREFORD CATTLE

AND

## BERKSHIRE HOGS.

Young stock for sale at all times, at reasonable prices.

All statements and representations guaranteed.

LONG DISTANCE TELEPHONE.

## FOREST DEPOT, VIRGINIA.

## Aberdeen-Angus Bull Calves For Sale

Born as follows: Dec. 15, 1903; Jan. 30, 1904; May 15, 1904; June 2, 1904; Aug. 11, 1904. Calves will be kept with their dams until 9 mos. old. None sold younger, and NOT SOLD AT ALL AS BULLS, unless they turn out good specimens of the breed.

I shall also be ready to part with my herd bull, "ROCKBRIDGE ABACTOR," 40864, Nov. 1st. He will be 5 years old Dec. 2, 1904.

The two calves first mentioned are pure bred and very promising youngsters, but out of unrecorded dams; the three last are registered. I am willing to exchange "ROCKBRIDGE ABACTOR" or any of the above calves for a suitable herd bull, not less than 18 mos. old.  
B. F. DAY, Glasgow, Va.

## ANGUS HERD BULL FOR SALE

To prevent inbreeding, we offer our herd bull, PAGAN, 26416; sire, BARONET NOSEGAY, 12869; dam, PRINCESS ERICA OF LINN, 10369. Pagan is 7 years old, weight, 2,000 pounds, vigorous, active, perfectly broken, an excellent sire. Address ROSE DALE STOCK FARM, Jeffersonton, Va.

## MONTEBELLO HERD ABERDEEN-ANGUS CATTLE.

FOR SALE—Registered Bull calves from 3 months old, up.

L. H. GRAY, Orange, Va.

To reduce my herd of

## JERSEYS

I will sell 4 or 5 first class family cows, now in calf, at very low prices; also 2 Reg.

## BULL CALVES,

4 to 6 mos. old. One is a son of RIOTA'S PRIMA DONNA, tested 17½ lbs. butter in 7 days; the other, a son of LADY MADELINE, who gave 200 lbs. more milk per month than her own weight. Price, \$50 each; also 10

## JERSEY HEIFERS,

from 6 to 15 mos. old, from my very best cows, and no better in Virginia, for \$30 each. These cattle are in fine condition, kindly handled, and will make valuable animals.  
A. R. VENABLE, JR., Manager, Farmville, Va.

25 REGISTERED

## HOLSTEIN and GRADE

Milk Cows for sale. Most of them to calve this fall. H. W. MANSON, Crewe, Va.

weigh. To one pound of potatoes add a cup and a half of butter, two cups of sugar, the yolks of six eggs, beaten light, a half cup of milk. Beat all well and add the whites beaten to a froth. Mix, season with fresh lemon, and bake in pudding dish or in pastry.  
MOLASSES PIE.

Two cups of molasses, five eggs beaten separately, one and a half cups of brown sugar. One large spoon of melted butter, half a nutmeg, and a tablespoon of flour. Beat all well together, and bake on rich pastry.

### GINGER COOKIES.

One cup of butter, one cup of sugar, one cup of molasses, two even teaspoons of soda, one tablespoon of ground ginger, a teaspoon of cinnamon, two eggs, enough flour to make a soft dough. Roll thin and bake quickly. Dissolve the soda in warm water.

### APPLE FLOAT.

Select large firm apples and put them into a new tin pan with a little water in it. Bake them thoroughly done, then let them cool, and with a spoon scrape out all the pulp, being careful not to let any of the core get in; sweeten and season this pulp, then add to each quart the well beaten whites of four eggs. Serve at once with cream seasoned with vanilla.

### WALNUT TEA CAKE.

One cup of butter creamed with three cups of sugar, five cups of flour, five eggs beaten light, one teaspoon of soda, two teaspoons of cream tartar, milk enough to make a stiff dough; it will take very little. Roll thin and cut into squares. Bake in a quick oven. Boil two cups of granulated sugar till it threads from the spoon; have ready beaten very light the whites of three eggs. Pour the sugar over them very slowly, stirring all the time and adding a cup of chopped walnut meats. Ice each little cake with this and set it aside to dry.

### PUMPKIN PIE.

Cook a yellow pumpkin thoroughly; mash and press through a sifter. To four cups of pumpkin, add four cups of milk, a teacup of butter, three cups of sugar, four teaspoons of cinnamon, two of ginger, one of grated nutmeg, and a half teaspoon of cloves, eight well beaten eggs. Mix all these ingredients together and bake in a rich crust. Serve cold.  
CARAVEN.

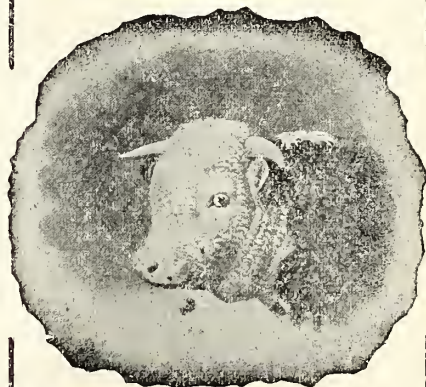
Mr. Brown's little daughter, aged ten, accidentally swallowed a nickel. He sent his little son, aged six, in great haste for the doctor.

The child soon returned with the doctor and also the minister. His father met them at the gate, and, sending the men into the house, he kept his son outside and asked him why he had brought the minister.

"Papa," answered the little boy, "I heard you tell mamma, last Sunday at dinner, that this minister could beat any man you ever saw for getting money out of people."

# HEREFORDS!

The very best breed of beef cattle for the South is the HEREFORD. I am convincing scores of farmers of this fact, as evidenced by my sales. When a purchaser sees for himself what these cattle are doing, I don't have to argue any longer. When he sees a HEREFORD keep in better condition than the scrub in the same pasture with him, or lay on more fat on the same or less feed, or sees a grade HEREFORD CALF sell for \$10 or \$15 at 6 weeks, or go to the slaughter-house at 20 months weighing 1,200 to 1,500 pounds, is it any wonder that he is convinced of



the superiority of the breed? There are lots of farmers and stockmen to be convinced yet. I believe if interested parties would come (and this is a special invitation to come) and inspect the CASTALIA HERD, half of the task would be accomplished. I will meet any one if notified. To those who cannot come, I will say that if you will write me your wants, I will give you the benefit of my best judgment in making a selection. I am sure to have something—BULL, COW, or HEIFER—which will suit your fancy, and purse also.

## MURRAY BOOCOCK,

"Castalia,"

KESWICK, ALBEMARLE COUNTY, VA.

### TRAINING FOR YOUNG FARMERS.

The popular course for young farmers in the North Carolina A. & M. College, Raleigh, N. C., known as the Short course in dairying and agriculture, opens this year January 4, 1905, and continues for ten weeks, closing March 10, 1905.

On account of many improvements in the line of work introduced, the work will be for more interesting and important than before. A new course in Farm engineering that will be given in connection with the other studies will add much to the importance of the work. This study will embrace rural architecture, and farm machinery, and special stress will be placed upon designing barns, houses, silos, etc.

Another course that will be added is that of Farm Management, which will include a discussion of the management of the farm in various details.

A third new course that will be offered will be the Cotton course, which will include cotton growing, judging, breeding, and soil management in all of its phases. It is believed that the cotton course will be especially important to the young farmers in our State, and it should receive the attendance of every young cotton farmer who can get away from home during the winter months.

No entrance examination is required in these winter courses, and no tuition is charged at all. Practical courses are hereby open to all who desire to better themselves in the various lines of agriculture. The total cost for ten weeks, including board, room, light and fuel, etc., is but \$30. Young men contemplating attending should send in their application at once to C. W. Burkett, Professor of Agriculture, West Raleigh, N. C., as all students are registered in advance of the opening date.

### DIDN'T KNOW BEANS.

Senator Hoar relates with much glee the conversation that recently took place between two Southerners, the first of whom had but lately returned from a trip through New England. Said the first man from Dixie to his friend:

"You know those little, white, round beans?"

"Yes," replied the friend, "the kind we feed to our horses?"

"The very same. Well, do you know, sir, that in Boston the enlightened citizens take those little, white, round beans, boil them for three or four hours, mix with them molasses and I know not what other ingredients, bake them, and then—what do you suppose they then do with the beans?"

"They—"

"They eat 'em, sir!" interrupted the first Southerner, impressively. "Bless me, sir, they eat 'em!"—Edwin Tar-risse, in October Lippincott's.

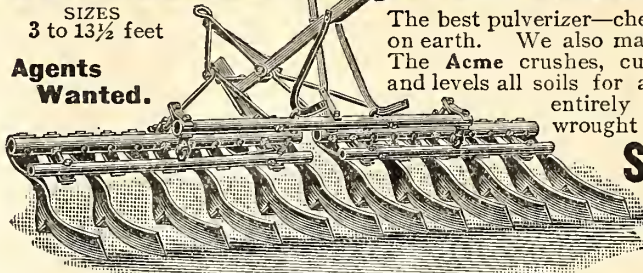
Mention THE SOUTHERN PLANTER in writing.

# ACME Pulverizing Harrow

## Clod Crusher and Leveler.

SIZES  
3 to 13½ feet

Agents  
Wanted.



The best pulverizer—cheapest Riding Harrow on earth. We also make walking ACMES. The Acme crushes, cuts, pulverizes, turns and levels all soils for all purposes. Made entirely of cast steel and wrought iron—indestructible.

### Sent on Trial

To be returned at my expense if not satisfactory. Catalogue and Booklet "An Ideal Harrow" by Henry Stewart, mailed free.

I deliver f.o.b. at New York, Chicago, Columbus, Louisville, Kansas City, Minneapolis, San Francisco, Portland, etc. **DUANE H. NASH, Sole Manufacturer, Millington, New Jersey.**  
Branch Houses: 110 Washington St., Chicago. 240 7th Ave. So., Minneapolis. 1316 W. 8th St., Kansas City.  
**PLEASE MENTION THIS PAPER.**

## FOR SALE.

### 10 Registered Jersey Heifers

Due to calve this fall and winter.

Several Registered HEIFER CALVES, four months old, at \$25 each, if taken this month, and a few BULL CALVES at farmers' prices.

Also several GUERNSEY BULL CALVES, BERKSHIRE BOARS, SOWS and PIGS.

Two grand guard Dogs (Danes), 6 months old, at \$20 each.

**M. B. ROWE & CO., Fredericksburg, Va.**

— URY STOCK FARM HERD OF —

### HOLSTEIN - FRIESIANS

DE KOL 2D BUTTER BOY 3D No. 2 heads our herd; his breeding and individual excellence are second to none. A few COWS, YOUNG BULLS and HEIFERS from our best cows, for sale. All the leading families represented.

ENGLISH BERKSHIRE pigs by such Boars as MANOR FAITHFUL, Imp.; wt. 1100 lbs.; FANCY DUKE, a double grandson of LOYAL BERKS; ESAU PRINCESS OF FILSTON, by ESAU, Imp. THOS. FASSITT & SONS, Sylmar, Md.

### Swift Creek Stock and Dairy Farm

Has for sale a large number of nice young registered A. J. C. C.

### JERSEY BULLS AND HEIFERS.



None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 4 to 6 months old, \$25; Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

THE WOODSIDE HERD

FOR SALE: 2 grandly bred

### JERSEY BULLS,

1 year old For prices and description, address,

**DAVID ROBERTS, Moorestown, N. J.**

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

COTTAGE VALLEY STOCK FARM.

## FINE STOCK FOR SALE LOW

7-8 and 15-16 GRADE ANGUS BULLS and HEIFERS from 6 months to 2 years old. One Bull Calf, half Angus and half Short-Horn. Fine family Milk Cows fresh, young and gentle. One pair splendid 1,200-pound Bay Mares 6 years old, first-class all-round farm teams, and very good roasters. One fine SADDLE MARE, 4 years old, very handsome and stylish, every gait, Hackney and Hambletonian. One beautiful DRIVING MARE, coming 4 years old, three-fourths Hackney, one-fourth Hambletonian. These Mares are well bred and nice enough for any one. Pure-bred Poland-China Pigs at \$5 each. Pure-bred Llewellyn Setter Pups, \$5 each. Silver-Laced Wyandotte Cockerels and Pullets at \$1 each.

**W. M. WATKINS & SONS, Saxe, Va.**

— MORVEN PARK —

# GUERNSEYS

**The Property of WESTMORELAND DAVIS, Esq.**

LARGE HERD OF FASHIONABLY BRED REGISTERED ANIMALS, INCLUDING COWS IN THE ADVANCED REGISTRY. HERD HEADED BY THE BRILLIANTLY BRED IMPORTED BULL,

**TOP NOTCH No. 9023.**

The Dam of this Bull, Imported ITCHEN BEDA, took 1st prize at the "Park Royal" Show in England in 1902, and her daughter ITCHEN BEDA II, took the same honors in 1904: further, Imported TOP NOTCH'S Dam, ITCHEN BEDA, entered the official advanced Registry of the American Guernsey Cattle Club this year with a record FOR THE YEAR of 10642.10 lbs. of milk; 548.70 lbs. of butter fat, equivalent to 640.15 lbs. of butter.

The Pedigree of Imported TOP NOTCH, with some of the achievements and prizes won in the direct line of his ancestry, are given below:

TOP NOTCH, 9023, bred by Sir Henry Tichborne, of England, was sired by Rival, 1343 E, and is out of imp. Itchen Beda, 15627. His father, Rival, by Rival of Mont March, 1164, P. S., out of Clatford Gentle, 4746, E. (first prize English Royal, B. & W. E. and Royal C., 1900). His mother, Itchen Beda, 15627 (see record above); she by Loyal of Hunguets, 978, P. S. (first prize, 1896, second prize, 1898); sire of Itchen Lady, Hayes Lily du Preel. His extended pedigree is impossible in this space, but will be furnished if desired. It goes back to winners of the Queen's prizes, as well as to members of her late Majesty's Prize Herd.

MORVEN PARK is situated in Loudoun County, Virginia, and because of its climate and soil is peculiarly adapted to the production of the highest class of animal life, and particularly to supply the needs of Southern breeders of pedigreed cattle.

REGISTERED and TUBERCULIN TESTED animals for sale, including a fine lot of BULL CALVES at reasonable prices.

For further particulars, Address

**LIVE STOCK DEPARTMENT, MORVEN PARK,  
LEESBURG, LOUDOUN CO., VA.**

## NOTES FROM THE WEST.

Billings, Mont., October 10, 1904.

Billings lies in the heart of the famous Yellowstone Valley, a land of sheep and cattle, and great fields of grain and alfalfa to feed them, and of potatoes and fruit, and, in fact, almost everything that will grow in a temperate zone. Yellowstone farming by irrigation is young, but Billings aspires to be the centre of a potato world as famous as Greeley, of apple raising as noted as northern New York, of muskmelon, growing as well known as Rocky Ford, and of beet sugar making as prosperous as Sugar City or Oxnard. It has the climate—the long days of sunshine—it has the rich soil, and keystone to the whole, it has the waters of the Yellowstone river.

Billings has seen a wonderful transformation in the Yellowstone Valley. First, it was simply a cattle pasture, where it took thirty acres to support a steer. Then gradually came the big fields of alfalfa, after the first irrigation canal was built, now we find diversified farming, and the division of the larger tracts into smaller farms with diversified crops. I enjoyed a dinner with the family of my old friend, I. D. O'Donnell, well known throughout Montana as "Old Alfalfa," and with the exception of the coffee and the sugar and the salt everything upon the table was raised upon his own farm, and it was a bountiful repast. Of course, this is not such a strange thing to find among Eastern farmers, but it is a bit unusual in a new country, where the first development of agriculture has been the cattle ranch, and where the condensed milk can and the canning factories have found all too ready a market, for the agricultural good of the country. And while I am speaking of Mr. O'Donnell's farm and garden, I will say that there are too few ample and abundant gardens, thoughtfully laid out and planted and well tilled, even in the East. The really ideal farm garden, furnishing not only a wholesome and luxurious table all the growing season, but dried and home-canned products for all the winter, is the exception rather than the rule, even in the good farming sections in the East. We are not thinking too much of our stomachs and our animal desires when we make the best garden possible. Many a kitchen garden which is to, or at least should, furnish most of the motive power to carry on the work of the farm, is the product of odd times, between the planting of the "money" crops. Money crops for what? To buy, in considerable measure, things unnecessary or which could better be raised on the farm. The farmer who plans broad and deep to get every particle of his living possible from the soil by his labor has a wisdom from which many of our people have departed. How many things do we buy regularly, because they are cheap, which we could either do without very



**KILLS PAIN  
QUICKER THAN  
ANYTHING  
IN THE WORLD**

**SLOAN'S LINIMENT**

**FOR MAN OR BEAST**

**Penetrating·Kills Germs**

**ALL DEALERS**

## The Grove Stock Farm

I OFFER AT RIGHT PRICES THE FOLLOWING STOCK:

- One yearling **HOLSTEIN-FRIESIAN BULL**,
- Seven **BULL CALVES** (same breed), 2 to 6 months old  
(These calves are from heavy milkers),
- Six **BERKSHIRE SOWS** (1 year old),
- Ten **BERKSHIRE SOWS** (5 months old).

All of the above will be registered and transferred to the buyer.

N. & W. and Southern Railways.

**T. O. SANDY, Burkeville, Va.**

## YORKSHIRE PIGS

Our spring pigs have all been sold and we are now booking orders for

### FALL PIGS

for November and December delivery. The great display of Large Yorkshires at the recent Live Stock Show at the World's Fair, shows the growing popularity of this profitable bacon breed.

Also **Jersey Bulls and Heifers**,  
from our high testing herd.

**BOWMONT FARMS, Salem, Va.**

### IS YOUR FARM FOR SALE?

If so, list it with us. No sale, no charge.  
Largest list of farms for sale in Virginia.  
Write for Free Catalogue.

**R. B. CHAFFIN & CO., (INC.) Richmond, Virginia.**

# YAGER'S CREAM CHLOROFORM LINIMENT

Is a never failing Pain Remover; it is a standard and reliable home remedy, always ready to kill pain from any cause; it is to be found in every up-to-date stable or barn, as it is recognized as the best of liniments for stable use. It is truly a LINIMENT FOR MAN OR BEAST, and should be a part of every farmer's outfit—in fact, he cannot well afford to be without it.

Mr. HENRY MYERS, of Bridgeport, Conn., says:  
"I have used YAGER'S LINIMENT for two years; it is the only thing that gives me relief in my back."

Mrs. A. H. McLAUGHLIN, of Petersburg, Va., writes:  
"I can speak in highest praise of YAGER'S LINIMENT. I suffered greatly with a severe pain in my back. Yager's Liniment cured it. For many nights I could not sleep from a sprained wrist; Yager's Liniment cured it. I had something like a wen on my left shoulder that worried me considerably; I bathed it several times with Yager's Liniment and in less than a week it was gone."

Mr. W. M. STUBBS, of Plymouth, N. C., writes:  
"I have recently used YAGER'S LINIMENT for a mashed foot; it acted like a charm, and I believe it to be the best external remedy on the market."

Mr. DAVID BRADLEY, of Wilscot, Ga., writes:  
"I have suffered for a long while with rheumatism, and YAGER'S LINIMENT gave me so much relief that I never want to be without it."

Mr. ISHAM TRICE, of Chapel Hill, N. C., says:  
"I must write a few lines of gratitude for Yager's Liniment. Recently I wrenched my shoulder severely and went to the drug store for something to relieve it, and a large bottle of YAGER'S LINIMENT was offered me for 25c. I was tempted to refuse it; could not believe it was any good, but since using it I must say it gave me quicker relief than I could believe was in it."

YAGER'S LINIMENT is put up in a large bottle, as is shown by the cut of the package, but it is as good as it is big, and at 25c. per bottle is within reach of everybody—and everybody uses it in preference to any other Liniment because there is none other so good. YAGER'S LINIMENT is sure; it NEVER FAILS to relieve pain—try it.

FOR MAN OR BEAST—YAGER'S LINIMENT IS JUST RIGHT.

**YAGER'S**  
**CREAM**  
**LINIMENT**  
**FOR**  
**MAN OR BEAST**

Applying to RHEUMATIC JOINTS  
Applying to SPAVIN  
TRADE MARK

**POPULAR**  
**SOOTHING & EFFECTIVE**  
**QUICK HEALING POWERS.**  
IN THE TREATMENT OF DISEASES REQUIRING AN EFFICACIOUS EXTERNAL REMEDY.

**BEWARE OF IMITATIONS.**  
PREPARED ONLY BY  
**GILBERT BROS. & CO.**  
SOLE PROPRIETORS  
**BALTIMORE, M.D.**  
U.S.A.  
REGISTERED U.S. PATENT OFFICE

WHEN YOU GET YAGER'S FOR 25 CENTS, WHY TAKE A SUBSTITUTE?

EXACT SIZE OF BOTTLE.

TAKE NO SUBSTITUTE.

well or which we could make better at home. We may buy tomatoes and canned corn and canned lima beans and jellies and preserves and thus support several classes of merchants and jobbers by the profits made, but what do we get to eat? The poorest, unripe vegetables, colored and sweetened with hurtful chemicals, and fruits, so-called, made from glucose and colored and sweetened with coal tar. The American people somehow seem to have gotten rooted in the belief that to live they must trade their labor for money, and then go with that money in their hands and trade it again for something to eat and to wear, instead of producing these things themselves.

The fake creamery promoter is reported abroad. It is well to cast the eye of suspicion upon his kind, for he is always a smooth one. His business is to organize a co-operative creamery company among farmers surrounding a town and sell the organization a \$2,000 outfit for about \$4,000. A business-like individual appears in the town where it is proposed to victimize the farmers, takes rooms at the best hotel, and begins to talk "creamery." He is always supplied with the most convincing statistics of what he has accomplished in this line elsewhere, either counterfeit or gathered from localities peculiarly adapted to the business. In two weeks a meeting is called by influential farmers, and the plot from this point moves rapidly to completion. The promoter receives his money and moves quickly on to new fields and the farmers hold the sack.

While I stopped at Billings, George H. Maxwell, the executive chairman of The National Irrigation Association, addressed a meeting of the people, at which he unfolded a plan for putting people onto land, which, if it can be worked out, will become one of the most important sociological movements of the times. He suggested that if the people of Billings would take it up and co-operate, he would undertake to secure subscriptions sufficient to establish at the outskirts of the town an acre farm colony, where 160 acres could be secured, with a good irrigation supply, and divided up into one acre tracts, and provided with competent farm instructors, so that men in the eastern centres who have saved a little money and wanted to get a little country home, could come out and stay on one of those acres for a year or two and be taught how to farm and to irrigate. Then they would feel confidence in looking about and buying a five or ten acre farm and making their home upon it. He stated that there are thousands and hundreds of thousands of such men in the Eastern towns and cities who are anxious to get such small farms where they can make their homes, but that their training has been all their lives away from mother earth, and they are afraid to



# STEVENS

The name—on a rifle or shotgun—that guarantees perfection in accuracy, reliability and safety. It would require many columns of this publication to tell all about "Stevens" famous guns. We want you to know about them, and we make it worth your while to learn about them.

**OUR FREE OFFER** If you will send us your name and address, enclosing two 2-cent stamps to cover postage, we will send you our great book of outdoor sports, containing 140 pages of interesting and useful information on hunting, camping and wood craft, the proper care of a firearm, notes on sights and ammunition, as well as full descriptions of the famous "Stevens" Guns—the book every lover of outdoor life should have. Our clever Rifle Puzzle sent free, postpaid.

**J. STEVENS ARMS AND TOOL CO., 380 Pine Street, Chicopee Falls, Mass., U. S. A.**

## Large English Berkshires.

BOARS ready for service.

Pigs ready to ship.

Bred Gilts.

### Forest Home Farm,

Purcellville, Va.

**THE - OAKS - STOCK - FARM.**

A. W. HARMAN, Jr., Treasurer State of Virginia, Prop. Richmond, Va.

We breed and ship the **FINEST STRAINS** of

#### Large **ENGLISH BERKSHIRES**

for less money than any firm in the South, quality considered. Every pig shipped possesses individual merit. Pedigree furnished with all stock. Kill or sell your scrubs and buy hogs that will pay. For prices and description, address **ALEX. HARMAN, Mgr., Lexington, Va.**



**25 Tons of Choice Timothy Hay For Sale.**



#### **GLENBURN FARM BERKSHIRES**

This herd is composed of four royally bred, imported sows, and an imported boar from the celebrated herds of Mr. Fricker and Mr. Hudson, England, and selected American bred animals from Blitmore and other noted herds. Dr. J. D. KIRK, Importer and Breeder, Roanoke, Va.



take the plunge. This plan would open the door of opportunity to them. The working out of this plan, Mr. Maxwell said, would furnish a supply of ideal colonists for any new country, and it would at the same time tend to relieve the congested centres in the East. If the outcome of a single such rural instruction colony should prove successful, he believed that every Western centre with new and undeveloped tributary country would adopt the plan, for it would bring them in tenfold returns, both indirectly and directly. That it was not a chimera of his brain, he stated that one of the Southern transcontinental railroads had already started the system in Arizona, in the irrigated Salt River Valley, and was now dividing up a 160 acre tract into acre farm gardens and had engaged one of the best farmers in Arizona as an instructor.

The editor of the American Agriculturist, who has been travelling around the country to note economic conditions, says that the American farmers will receive more money for their products in 1904 than in any previous year, and that "the relative decrease in price of many manufactures the farmer has to buy, and the high range of values of what he has to sell, will make 1904 the most profitable one in the history of American agriculture. The editor is of the opinion that the agricultural vote will elect the next President.

The prediction of Senators and Representatives, who may be presumed to know their own people, that the States of the middle and prairie West are going to give heavy pluralities for the Republican ticket, are bottomed on the conspicuous fact of the unparalleled and continuing prosperity of the agricultural classes.

The muck pit should be drawn upon sparingly unless cheap lime is at hand. Muck often contains iron pyrites, which, when exposed to air, oxidizes to iron sulphate or copperas. The sourness of muck or peat is often due to this. Free sulphuric acid may form in such cases, especially in the presence of decaying organic matters. The injurious action of muck on plants is often due to these cause rather than to any peculiarity of their nitrogen. Thorough composting with lime is a remedy for these conditions.

GUY E. MITCHELL.

"Remember this," said the primary school teacher, "a plural subject takes a plural verb—a girl is, a boy is: girls are, boys are. Now, do you understand?" Every hand was raised in assent. "Well, then, who will give a sentence with girls in the plural?" This time only one little girl: "I can give a sentence. 'Girls, are my hat on straight?'"

# The Best, North, South, East or West



is the general opinion formed by those who use the celebrated

## LEHMAN Carriage and Sleigh HEATERS.

They are the original, having been on the market for 20 years, and are known as the Standard.

Over 250,000 of our Heaters are in use. They are universally known to be the STANDARD, and are used by horsemen, physicians, farmers, etc., everywhere.

They burn Lehman Coal, which gives no smoke nor smell, and from which there is no danger whatever. It costs only 2 cents per day to heat them. Be sure you get the LEHMAN if you want the BEST. Beware of imitations. Our heaters and coal are sold by leading dealers everywhere.

Send for our illustrated booklet, and mention this paper.

LEHMAN BROS, Mfrs.,  
10 Bond St., New York.

J. W. ERRINGER,  
General Western Sales Agent,  
45 E. Congress St., Chicago, Ill.

# BERKSHIRES! ❁ ❁ BERKSHIRES!

The following up-to-date stockmen think my ROYAL BERKSHIRES the finest the world can show. I could print thousands of the same opinion, but I take only one from each State:



P. H. Rudd, Marlboro Harbor, N. Y.; Col. F. C. Goldborough, Easton, Md.; J. M. Venable, Farmville, Va.; Edgar Long, Graham, N. C.; John C. McAfee, Chester, S. C.; Dr. S. W. Fain, Dandridge, Tenn.; President Bowdrie Phinizy, Augusta, Ga.; R. C. McKinney, Bassinger, Fla.; General Thos. T. Munford, Uniontown, Ala.; W. W. Cornelius, Blue Springs, Miss.; J. M. Gann, Varnada, La.; B. P. Van Horn, Toyah, Texas; D. C. Lester, Hatfield, Ark.

Take no risk; confer with these people, and order direct from the veteran breeder.

THOS. S. WHITE, Fassifern Stock Farm, Lexington, Virginia.

Five car loads bright Timothy Hay for sale, cheap.

## BLUE-BLOODED BERKSHIRES.

The grand brood sows GEORGIA'S HIGHCLERE, No. 66136, and CAMEL, No. 64085, have farrowed; these pigs were sired by the great boar, COLUMBIA, No. 60527. CAMEL 2D, No. 75516, has farrowed a litter by a son of the celebrated boar, MANOR FAVORITE. The above were all large litters of very fine pigs.

The head of this herd is COLUMBIA, No. 60527, an imported son of the celebrated FIRST CATCH E., and he is practically a full brother to the sire of the celebrated Manor Favorite. Columbia, we think, is one of the best boars in the United States.

Georgia's Highclere is a grand sow, and would be very hard to beat if in show ring condition; she is of the best Highclere breeding; Caramel is an imported granddaughter of the celebrated Loyal Berks. She is an extra fine brood sow; Caramel 2d was imported in her dam. She has 37½ per cent. of the blood of Loyal Berks.

Here is the place to get the blood of the most fashionably bred Berkshire families—viz., the Highcleres, First Catch F., Loyal Berks and Manor Favorite. For further information and prices address A. H. HODGSON, Athens, Ga., or F. M. HODGSON, West End, Va.

We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered LARGE ENGLISH BERKSHIRE Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,  
Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.



## ANTE-NATAL INFLUENCES.

MARY WASHINGTON.

A woman's responsibility as a mother antedates even the moment when her newborn infant draws its first breath, or gives its first cry that sounds so thrilling to a mother's heart. It dates back to the first embryonic development of the child that is to be. It is a solemn—nay, a fearful thought how largely a child's whole future character and career will be influenced by the mental and physical condition of the mother during the period of gestation by her predominant state of feeling, by the thoughts she thinks and dwells upon most, by the books she reads, the pursuits she follows, the persons she associates with most intimately—in short, by all the elements that enter into her mental and physical environment. The mother's state, both of mind and body, leave their impress on the child in the womb, and therefore even before the little creature has come forth into actual existence the expectant mother has a wide scope for maternal care and tenderness, inasmuch as she can strongly influence the moulding of the embryonic brain and the whole being of the child, both mental and physical. What holier and more important task could a woman set for herself than to strive with especial diligence during these nine momentous months to keep her heart in "tune with heaven," to accentuate all good and pure affections, and to strive after a bright, cheerful, serene frame of mind, the true Christian optimism. If such a frame of mind could be predominant with her, she would be assisting largely in laying up real treasures for the child to come. A woman ought, if practicable, to carry on some improving, refining and interesting pursuit at this time, good reading or music, drawing, or painting, if she has any turn for such things, and, if not, even to be in their atmosphere will be some advantage. The reason the old Greeks were such a heautiful race was because beautiful objects of art as well as handsome and symmetrical human beings met the eye at every turn, and the impressions from these were stamped on the unborn infants, and besides the latter inherited their beauty from many generations of comely ancestors.

A woman should also strive to provide for the physical well-being of her unborn infant by observing carefully the laws of health in her own case. She should be careful about her diet, eating only the most wholesome and nourishing food she can obtain. She should have a plenty of fresh air and exercise, and she should take, at least, moderate exercise. Inertia during pregnancy (unless necessitated by physical disabilities), is very bad for both the woman and child. It is mistaken kindness for the woman's friends to wait on her too much and encourage her to be indolent. It is better for her to exert herself moderately to the very last stages. She should walk

## FREE! FREE!

### "HOGOLOGY"

Latest Revised Edition.

There is nothing so cheap as something valuable, that is yours for the asking, and that will make and save you hundreds of dollars in time. YOU WILL MAKE NO MISTAKE in getting a copy of "Hogology" at once and following the advice given therein. It will be sent FREE if you mention Southern Planter when asking for it.

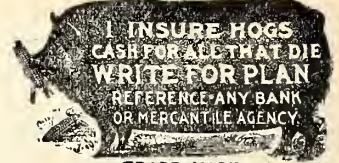
**\$1,000 Reward** if this is not the best hog book out. It was the first book of the kind ever issued for gratuitous distribution, the first edition having issued more than 20 years ago, and it is the only book of the kind devoted exclusively to the hog, and written by a veterinary and swine specialist. The last edition is just from the printer, and is down to date, practical and profitable hog-raising as found in an experience of more than 30 years.

### I PAY FOR ALL HOGS THAT DIE

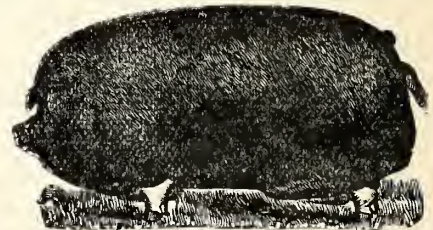
when my Remedy is fed as a preventive. Full particulars regarding this insurance proposition in "Hogology." It is the oldest hog remedy on the market, as well as the most successful, and is used by thousands of the leading breeders and feeders throughout the hog-raising world.

Twenty-five pound can, \$12.50; 12½ lb. can, \$6.50, prepaid. Packages, \$2.50, \$1.25 and 50 cents. None genuine without my signature on package or can label.

JOS. HAAS, V. S., Indianapolis, Ind.



## POLAND-CHINAS.



GRAY'S BIG CHIEF, 57077.

I have a limited number of Pigs by my fine Boars, Gray's Big Chief, 57077, and Victor G, 57075, and can furnish pairs not akin or related to those previously purchased. Young Boars and Sows of all ages. Send to headquarters and get the best from the oldest and largest herd of Poland-Chinas in this State at one-half Western prices. Address

J. B. GRAY, Fredericksburg, Va.

## 50 POLAND-CHINA AND TAMWORTH

pigs, 3 and 4 months old, eligible to registration \$6.50 will buy the best of them. The first orders will get the pick of the lot.

A few nice boars ready for service, also for sale.

J. C. GRAVES, Barboursville, Orange Co., Va.



## POLAND CHINAS

I have now for sale a choice lot of pigs, boars ready for service, and bred sows. Every hog or pig in this offering is either registered or eligible to registry and most of them are closely related to such hogs or Ideal Sunshine, Great Chief Tecumseh, Royal Racket and Anderson's Model. All stock guaranteed as represented or may be returned at my expense. Also a few Short Horn Calves. Farmers prices.

J. F. DURRETTE, Birdwood, Alb. Marie Co., Va.

## Belgian Hares, Homer Pigeons, —AND— Poland China & Berkshire Hogs.

REGISTERED STOCK AND FROM THE BEST STRAINS.  
SATISFACTION GUARANTEED OR MONEY REFUNDED.

C. M. REAVES, Mullins, S. C.

When corresponding with our advertisers always mention the  
Southern Planter.

daily in the fresh air and sunshine, and she should carry on her ordinary pursuits, at least partially, unless they involve heavy lifting or long standing up. Her condition (unless there are some unusual complications) need not interfere with the usual run of little feminine pursuits, such as hand sewing, embroidery and many other quiet, sedentary pursuits; only she ought not to be too quiet and sedentary, as it is very important for her to stir about as much as she can, without injury to herself or child. A proper development of the muscular system is of incalculable service to a woman on the eve of maternity, greatly lessening the pain and danger she is called on to undergo. I do not believe it was intended by a beneficent Creator that a woman should suffer so severely whilst performing so important a service. Her sufferings at that time are largely due to enervation from an artificial mode of life, and consequent non-development or imperfect development of her muscular system. Women who lead a simple, natural life, doing enough manual labor to develop their muscles, do not undergo long, protracted or very painful labor. It is a well known fact that women who do all their own house work, besides gardening and attending to the cows, pass through the ordeal of child birth far more easily and quickly than wealthy and luxurious women, who lead a life of ease and have all their work done by a corps of servants. In the crucial hour of woman's physical existence the one of frugal, simple habits and well developed muscles enjoys a comparative immunity from great suffering, which affords her a recompense for what some persons might consider the hardships of her lot.

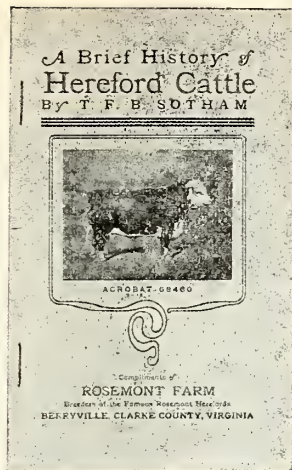
**ERRATA.**

Please correct the following errors in my article on Annapolis, in your October number: "An old vessel, the *Jante*, is kept there as a prison ship." It should be "the *Santee*." "It is only by a long and gradual process of invention that the navy has reached," etc. It should be "evolution."

MARY WASHINGTON.

They had not met in some years, and he told her that she had grown as plump as a partridge; at which she cried, "Oh, now you are making game of me!"—October Lippincott's.

Passer-by—I thought you were blind. Mendicant!—Well, boss, times is so hard and competition is so great that even a blind man has to keep his eyes open now-a-days if he wants to do any business at all.—Chicago Journal.



**TWO SPLENDID  
HEREFORD BULLS**

FOR SALE AT BARGAIN PRICES.

One is a yearling by Imp. Protector (cost \$6,000) who weighs 2,800 lbs., and is out of one of our choicest cows. The other is a ten months old calf by Champion Perfection, son of Champion Dale. Don't let these two great bargains slip by you. Write for further information about them.



"A Brief History of Hereford Cattle" will be mailed free to all applicants. Be sure to get a copy.

**ROSEMONT FARM,**

Berryville, - Clarke - County - Va.

**Bacon Hall Farm.**

**Hereford Cattle :- Berkshire Hogs**

REGISTERED—ALL AGES.

**Toulouse Geese, Muscovy Ducks.**

MOTTO: Satisfaction or no sale.

**E. M. GILLET & SON, - Glencoe, Maryland.**

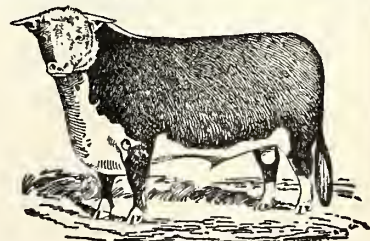
**Registered Herefords,**

Herd headed by the Grand Champion

**PRINCE RUPERT, 79539.**

Young stock for sale. Inquiries cheerfully answered.

**EDW. G. BUTLER, Annefield Farms,  
Berryville, Virginia.**



PRINCE RUPERT, 79539.



—The Delaware Herd of—

**ROYAL ANGUS CATTLE**

is not surpassed either in breeding or individual animals, by any herd in the East. At the head of our herd is **PRINCE BARBARA, 68604**, the son of the great \$9,100 Prince Ito. Females of equally choice breeding. Write your wants. Remember, we take personal care of our cattle; keep no high priced help; incur no expense of exhibiting; all of which enables us to offer stock at equitable prices. Send for pamphlet.

**MYER & SON, Prop., - Bridgeville, Del.**

**WINDMILLS PUMPS TANKS**

THE DIAMOND The greatest Pumping Mill. Made for durability and hard usage.

Water Purifying Pumps IRON Pumps Wood Pumps of every Description.

—STEEL STOCK TANKS— of every description. Great Saving in Freight. This is our 51st year.

THE TEMPLE PUMP CO., Mfgs. Meagher and Canal Streets, CHICAGO, ILL.

**GOOD BYE! SMOKE HOUSE.**

The smoke house always was a source of worryment, vexation and expense, anyhow. When it catches fire let it go up in smoke. There's a better way to smoke meats. That is by using Krauser's Liquid Extract of Smoke. It's been gaining in all parts of the country for several years past, and there is no longer any doubt that it is driving the smoke house out of business.

Krauser's Liquid Extract of Smoke is made from selected hickory wood. It is applied to meat with a brush or sponge. It contains the same ingredients that preserve meat that is smoked in the old way. It gives meat a delicious, sweet flavor and gives perfect protection against insects and mould. It is cheaper and cleaner than the old way. Information concerning its use, cost, etc., can be had by writing to the makers, E. Krauser & Bro., Milton, Pa.

The villagers were all gathered round the little store, talking about Sam Jones' lost colt. It was a two-year-old, and had strayed out of the pasture lot the day before. Sam worried about it; the neighbors had all been out looking for it without success, and no one seemed to know where to look for it.

Jim stood there, looking on and listening. Jim was a tall, lank young fellow, regarded as half-witted by some persons and as foolish by others.

"I think I could find your horse," he said to Sam Jones.

"You? Why, Jim, how do you think you could find him when we have had the best men in town out looking for him?"

"Well," said Jim, "I could try, couldn't I?"

"Yes," answered the owner, "you can try, and if you find him I'll give you a dollar."

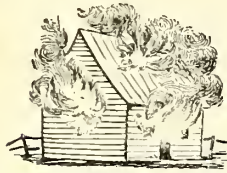
"All right," said Jim, and walked away on his search. To the surprise of all, he returned in less than half an hour leading the missing horse by a rope tied around his neck.

"Well, well," said Jones, as he took the horse and paid Jim the dollar. "How in the world did you find him so quick?"

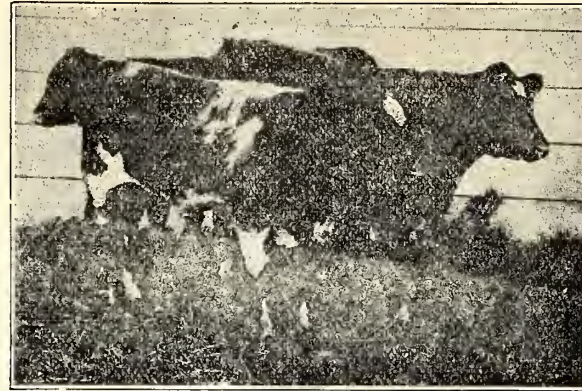
Jim answered in his long-drawn-out words: "Why, I thought: 'Now, if I was a horse, where would I go?' And so I went there, and he had."

There is a health resort in the west of Scotland near which is a gunpowder factory. A visitor one day asked a native if the place was really so healthy as was generally represented.

"Healthy!" exclaimed the native; "man, if it werena for the pooder factory, we wudna need to keep a cemetery ava."



**JNO. S. FUNK, Glen Farm.  
Importer and Breeder of POLLED DURHAM CATTLE.**



Reds and roans. Can furnish bull calves or cows and heifers in car lots. **SOUTHDOWN SHEEP, POLAND CHINA HOGS.** R. F. D. 7, Harrisonburg, Va.

Deep Creek, Va.,  
October 8, 1904.  
JOHN S. FUNK, Esq.:  
Dear Sir,—I received the calf on the 6th, safe and sound. Every one that has seen him says he is the finest and largest for his age that they ever saw. I would like for you to have him registered for when he is old enough. I am highly pleased with pig and calf both.  
Yours truly,  
W. T. CULPEPPER.

**EDGEWOOD STOCK FARM DORSETS! DORSETS!**

We have sold all the Dorsets offered. We wish to thank our friends and patrons for their kind words. Our one object is to please, and we strive to make our flock better every year. Our Ewes this summer were selected by one of us from the best English flocks, and they are bred to the best rams in England. We will book your orders now for fall Lambs from these and other Ewes.

J. D. and H. B. ARBUCKLE, Maxwellton, Greenbrier, Co., W. Va.



ORGANIZED 1832.

ASSETS, \$932,050.00.

**Virginia Fire and Marine  
Insurance Company, of Richmond, Va.  
Insures Against Fire and Lightning.**

All descriptions of property in country and town, private or public, insured at fair rates, on accommodating terms.

AGENCIES IN EVERY TOWN AND COUNTY.  
W. H. PALMER, President. W. H. McCARTHY, Secretary.

CHARTERED 1870.

**Merchants National Bank,  
OF RICHMOND, VIRGINIA.**

Capital,	-	-	-	-	-	\$200,000.00.
Surplus,	-	-	-	-	-	\$500,000.00.
Undivided Profits,	-	-	-	-	-	\$171,000.00.

Depository of the United States, State of Virginia, City of Richmond.

Being the largest depository for banks between Baltimore and New Orleans, we offer superior facilities for direct and quick collections. Accounts solicited.

JOHN P. BRANCH, Pres. JOHN K. BRANCH, Vice-Pres. JOHN F. GLENN, Cashier.  
Assistant Cashiers: J. R. PERDUE, THOS. B. McADAMS, GEO. H. KEESEE.

Three Per Cent. Interest Allowed in Savings Department.

**9 CORDS IN 10 HOURS BY ONE MAN**



With our Folding Sawing Machine. Saws any kind of timber. Instantly adjusted to cut log square on rough or level ground. Operator always stands straight. One man can saw more with it than two men can in any other way, and do it easier. Saw blades 5 1/2, 6, 6 1/2 or 7 ft long. Champlon, Diamond or Lance Teeth, to suit your timber. GUARANTEE.—If any part breaks within three years, we will send a new part without charge. Send for Free Catalog showing latest improvements, giving testimonials from thousands. First order secures agency.  
**FOLDING SAWING MACHINE CO., 16 and 18 S. Clinton St., Chicago, Illinois.**

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BILTMORE, N. C.

We Have Become Headquarters for Everything We Breed.

**BILTMORE JERSEYS.**—The American home of the Great Golden Lads—a family that has produced great milkers, with the best udders and show-yard records that the world has ever seen. Our bulls are out of dams owned and tested in the Biltmore Herds, and buyers can get as near to a certainty as is possible. Large, 52 week milk and butter records a specialty. Over four hundred in five different herds to select from.

**BILTMORE BERKSHIRES.**—No herd in the world has made as good a record. All the great Champions of England and America have either been in service or bred here. Our yearly offerings at unreserved auction are eagerly taken at nearly double the price of all previous records. The most successful herds all over the States are using a Biltmore foundation.

**BILTMORE POULTRY.**—Only the UTILITY breeds. Barred and White Plymouth Rocks, White and Golden Wyandottes, Brown and White Leghorns, Bronze Turkeys, Pekin Ducks. Over 50 yards of prize winners. Extra size, fine type, from fixed strains, and more prizes won at the leading shows than all competitors together.

Also a small kennel of extra choice, Rough coated imported Scotch Collies.

## The Imperial Fruit and Poultry Farm

offers 600 head Cockerels and Pullets,  
All First Class and Pure Bred. :-: :-:

S. C. BROWN LEGHORN,

BARRED PLYMOUTH ROCKS,

S. C. WHITE LEGHORN,

WHITE PLYMOUTH ROCKS,

WHITE WYANDOTTES,

BLACK MINORCA,

SILVER LACED WYANDOTTES,

PEKIN DUCKS.

WILL SELL DURING MONTH OF NOVEMBER AT \$1.00.

Also 75 Bronze Turkeys at \$3.00, for Gobblers; and \$2.00 for hens. Don't delay, write to-day. Reference furnished.

P. H. HEYDENREICH, Prop., : : : Staunton, Va.

Canyon Hotel,  
Yellowstone Park, October, 1904.  
*Editor Southern Planter:*

Thinking that your readers might be interested in hearing some items about the Nation's wonderland, Yellowstone Park, I avail myself of a little interval of leisure at the last stopping point of the trip, to write you some account of its marvels, which, however, almost baffle description. My readers are doubtless aware of the fact that Yellowstone Park is the northwestern corner of Wyoming, set apart as a National pleasure ground by Congress in 1872, because of its great beauties, its sublime features and unique characteristics. It embraces an area of 3,500 square miles, has an average altitude of 8,000 feet above the sea level, and is both surrounded and traversed by ranges of the Rocky Mountains. No railroad, trolley line or any such route may enter or cross this Park, set aside for the benefit and enjoyment of the American people, but the Government has made a fine wagon road extending from the main entrance and back to it again, over a route of about 135 miles, connecting five important centres, at each of which there is a good hotel, accommodating from 150 to 250 guests.


After a visit to St. Louis, where we saw a stupendous exhibition of what can be achieved by art and labor, we turned our faces westward to view the equally stupendous wonders of nature as displayed in Yellowstone Park. We had three days and two nights of rather tiresome travel, crossing Nebraska on our way. It is a barren plain as seen from the train, very much like the veldt of South Africa. Still the landscape is pretty, as the formation of the land is picturesque, and the skies deep blue and very clear. There is no sign of vegetation and little water, only cattle everywhere, and the miserable huts of the ranchmen. Occasionally we saw cow boys racing their broncos.

Livingston, the starting point for the Park, was the first place we came to that looked like the habitation of human beings. It is a pretty little town at the foot of the mountains, with a fine, new depot and Carnegie library, and every dwelling in it has a yard and flowers. We stopped here and took lunch. We reached the entrance to the Park about night fall, and drove in five miles to the first hotel, the one at the Terraces. These formations are due to the dripping of water over sharp ledges of rock regularly stratified, cropping out along the hillside. Their color is due to four minerals held in solution by hot water—viz., lime, sulphur, magnesia and arsenic. The most noted of these terraces are called the Angel, the Pulpit, Minerva and Jupiter. The last is the largest, covering several acres, but the first is the most beautiful, being decked in every color of the rainbow.

We left the hotel of the Terraces in

## FARQUHAR MACHINERY

*Send for handsome new Catalogue*



**AJAX  
Center Crank  
ENGINE**

Just received highest award, Gold Medal, on Saw Mills, Engines and Threshing Machines, World's Fair, St. Louis. Ajax Portable and Traction Engines: All sizes. Threshing Machines: All kinds—20 to 40 inches. Portable Saw Mills with friction feed and log turner. Pennsylvania Grate Drills, Disc and Hoe patterns, greatly improved for 1905.

**A. B. Farquhar Co., Ltd.  
York, Pa.**

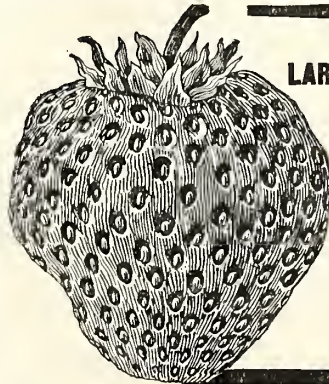
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EGGS from B. P. ROCK and BROWN LEGHORN FOWLS at \$1.00 per 13. Also a few pullets and cockerels of these breeds at \$1.00 each for immediate delivery. Write for Catalogue to

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Shrubs, Roses, Grape Vines.

A large assortment of the Finest Varieties.

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Best Full Cream Cheese, per pound.....	12½c.	Pillsbury Patent Flour, per bbl.....	7.00
Best Prunes, per pound.....	5c.	Gold Medal Patent Flour, per bbl.....	7.00
Best Water-Ground Meal, peck, 18c.; bushel.....	70c.	Excelsior Flour, per bbl.....	5.50
Pure Apple Vinegar, per gallon.....	25c.	New Virginia Buckwheat, pound, 5c.; 6 lbs. for.....	25c.
Good Cider Vinegar, per gallon.....	20c.	Best Elgin Butter, per pound.....	25c.
Large Cans Tomatoes, per can.....	7c.	Good Green Coffee, Rio, per lb.....	10c., 12c., 15c.
Best Can Corn, per can.....	8c.	Good Laguayra Coffee, per lb.....	12½c. and 15c.
Large Cans Table Peaches, 2 cans for.....	25c.	Good Java Coffee, per lb.....	20c.
Mother's Rolled Oats, per package.....	9c.	Best Feed Oats, per bushel.....	43c.
Quaker Oats, per package.....	10c.	Good Corn, per bushel.....	68c.
Avena Oats, per package.....	9c.	Ship Stuff, per 100 pounds.....	\$1.25
American Oats, per package.....	8c.	Best Bran, per 100 pounds.....	1.15
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Pure Lard, per pound.....	10c.	Good Luck Baking Powder, Small Cans.....	4c.
Good Salt Pork, per pound.....	7c.	Good Luck Baking Powder, Large Cans.....	8c.
Choice Salt Pork, per pound.....	8c.	Lenox Soap, 7 Bars for.....	25c.
Best Salt Pork, per pound.....	11c.	Polo Soap, 11 Bars for.....	25c.
Country Bacon, per pound.....	12c.	Moon Soap, 11 Bars for.....	25c.
Bologna Sausage, per pound.....	7c.	Octagon Soap, per Bar.....	4c.
California Evaporated Peaches, per pound.....	10c.	Circus Soap, 7 Bars for.....	25c.
Hominy or Grits, 2 pounds for.....	5c.	Best Navy Beans, per quart.....	8c.
Duke's Mixture Smoking Tobacco, 2 packages.....	9c.	Good N. C. Corn Whiskey, per gallon.....	\$2.00
Green Back Smoking Tobacco, 2 packages.....	9c.	Best 5 year old Corn Whiskey, per gallon.....	2.50
American Beauty Cigarettes, 20 to package.....	4c.	Old Crown Rye Whiskey, per gallon.....	3.00
Piedmont Cigarettes, 10 to package.....	4c.	Old Keystone Rye Whiskey, per gallon.....	2.50
Carolina Bright Cigarettes, 10 to package.....	4c.	Old Excelsior Rye Whiskey, per gallon.....	2.00
Plum, Peach, Grape and Reynolds' S. C. Tobacco, 3 plugs for.....	25c.	Old Capitol Rye Whiskey, per gallon.....	1.50
New N. C. Cut Herrings, dozen, 10c.; or, 3 dozen for.....	25c.	Virginia Apple Brandy, per gallon.....	2.50
New N. C. Cut Herrings, one-half bbl., \$2; per bbl....	\$3.50	Duffy's Malt Whiskey, per bottle.....	80c.
New N. C. Roe Herrings, dozen, 18c.; half bbl.....	2.50	Good Gin, per gallon.....	\$2.00
New N. C. Roe Herrings, per bbl.....	4.00	Best Gin, per gallon.....	2.50
New Gross Herrings, per bbl.....	2.50	Mountain Whiskey, 4 years old, per gallon.....	3.00
New Fat Mackerel, Medium Size.....	5c.	Wilson Whiskey, per bottle.....	90c.
New Fat Mackerel, Large Size, 3 for.....	25c.	Paul Jones Whiskey, per bottle.....	90c.
New Fat Mackerel, 20 Medium Size in Kit.....	\$1.00	Fulcher Whiskey, per bottle.....	\$1.00
Genuine New Orleans Molasses, per gallon.....	60c.	Buchu Gin, good for kidneys, per quart.....	90c.

Prompt attention to out of town orders. We guarantee to save you money and give satisfaction. Ten cents extra per gal. for jugs. All orders packed carefully and shipped promptly. Remittances must accompany all orders. Give us a trial. These prices are subject to market changes.

# J. S. MOORE'S SONS, INC.,

## STORES

1724 East Main Street, Phone 507,  
501 North 25th Street, Phone 1865,  
RICHMOND, VA.

a carriage with an East Indian prince, his courier and his slave. The prince was a large, dark man, wearing a turban, loose trousers and slippers. He spoke only a few words of English, but his courier had fluent command of the language. The slave was the most absurd figure I ever saw, dressed all in patches, and he wore his master's monogram in silver on a huge white turban. We drove forty miles the first day, through Silver Pass, Golden Gate, past the Hoodoos and Beaver Lake to Norres Basin. Here we stopped for luncheon and then drove on past Emerald Pool and Obsidian Cliff. Our next stopping place was Fountain Hotel. This is the region of bubbling springs, and also one of its remarkable features is the Mammoth Paint Pot, a cauldron fifty feet in diameter, in the basin of which there is a fluid substance in a state of constant ebullition. It is composed of oil, lime, clay and water, and is so much like the calcimine of commerce that it can be used for coloring walls. Our next drive brought us to the upper Geyser basin, the region which the Indians call "Steamboat Springs." Here we found cones which send forth eruptions of hot water in tall, straight columns from 50 feet in height to 250. The most noted of these geysers is "Old Faithful," which erupts once an hour. "The Giant" and the "Gaintess" are also remarkable. One of the great attractions of this region is "Larry," a jovial Irishman, proprietor of the hotel here, a very fine one, recently built, and entirely of natural wood. Ten bears came into the back yard and fed there. Indeed, I understand that bears feed at all the hotels in Yellowstone Park. In driving through the forests, we were struck with the abundance and tameness of the animals. They are not allowed to be shot, though there is no interdiction on fishing. The evening we spent at "Larry's" hotel, we sat around an open fire, popping corn, enlivened by the merry jests of our host, who possesses the traditional fun and humor of the race from which he springs.

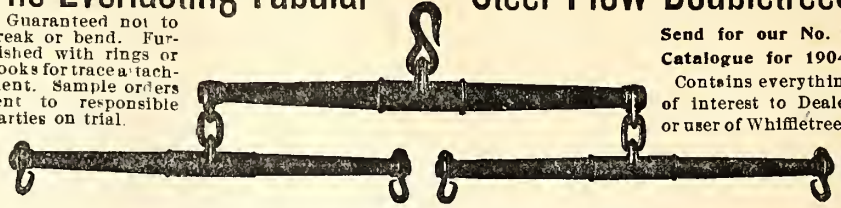
Yesterday we drove around the lake, and to-day we have explored the falls and the Grand Canyon, which, I believe, form the climax of all the great and wonderful sights we have seen in the park. The falls are formed by the plunge of a whole river over the edge of a precipice 365 feet, and the Grand Canyon is a great rent in the earth, six miles long, half a mile wide, and 1,500 feet deep.

To-morrow we return to the railway and the outside world, leaving behind us this land of enchantment of whose wonders and beauties I have only leisure now to give you a brief outline.

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Guaranteed not to break or bend. Furnished with rings or hooks for trace attachment. Sample orders sent to responsible parties on trial.



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Send for our No. 8 Catalogue for 1904. Contains everything of interest to Dealer or user of Whiffletrees.

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Also manufacturer of Farm Wagon Doubletrees, Neck Yokes and Singletrees.

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**PAINT** will preserve and improve your property?  
**PAINT** will give your property a prosperous appearance.  
**PAINT** will increase the value of your farm. We have  
**PAINT** on hand for everything—  
**PAINT** for roofs and barns. **LYTHITE COLD WATER**  
**PAINT** Carriage and wagon **PAINT**. Our "Standard" house  
**PAINT** is ready-mixed, and for the money no  
**PAINT** can surpass it. Write us for  
**PAINT** prices and color cards.

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7 10,000 Gallon Tanks and Towers,	
12 Artesian Wells,	
9 Miles of Pipe.	

If we can satisfy Uncle Sam we can satisfy you.

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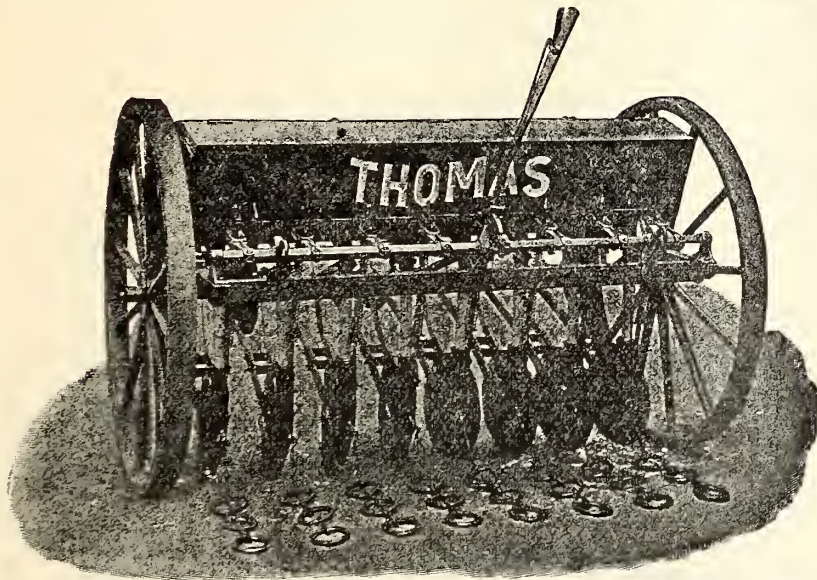
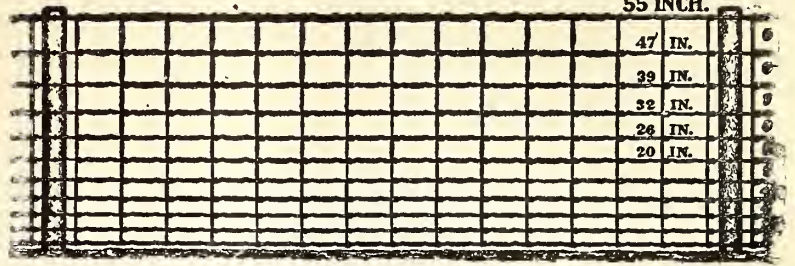
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is even less than barb wire or wood and when erected is practically everlasting. Furnished in various heights and styles.

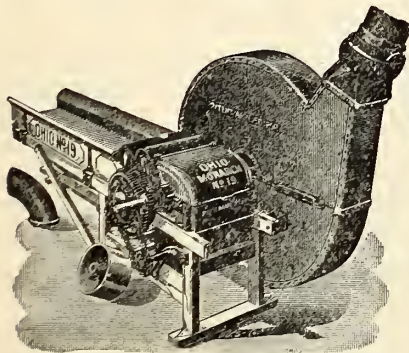
Write for special catalogue and prices.



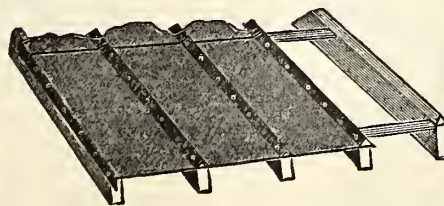
THE THOMAS DISC GRAIN DRILL will drill perfectly WHEAT, OATS, CORN, PEAS and BEANS as well as grass seed of all kinds. With or without fertilizer attachment.



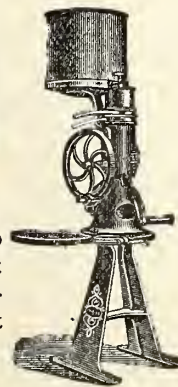
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OHIO FEED CUTTERS for hand or power. A comparison with others will convince you it is the strongest, simplest and best made. The power machines are furnished with blower or carrier if so wanted. Prices very low.



V CRIMP STEEL ROOFING. The most economical roof made. Does not require a carpenter to put it on. Furnished in all lengths from 5 to 10 feet long.



THE EMPIRE CREAM SEPARATOR should be on every farm where three or more cows are kept. It will save its cost many times in one year. It is the simplest one ever manufactured and can be cleaned without trouble to any one. Write us for particulars.

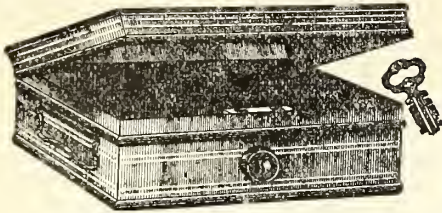
SINGLE AND DOUBLE CIDER MILLS. All sizes and capacities at low prices.

BIRSELL STEEL SKEIN FARM WAGONS, MITCHELL FARM WAGONS, BUGGIES, CARRIAGES, HARNESSES, ROBES, BARB AND PLAIN WIRE, POULTRY NETTING AND LAWN FENCING, CORN SHELLERS, FEED CUTTERS, GRAIN DRILLS, WOOD SAWS, MOWERS, BINDERS, HAY RAKES.

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BRAUER CHEMICAL CO., 427 Postal Building, N. Y.

A distinctive feature of the Review of Reviews for November is the series of sketches of men of the hour, including, besides an elaborate character study of the late Senator Hoar, by Talcott Williams, briefer articles on Mr. John Morley and Mr. James Bryce, who are now visiting the United States; on Comander Booth Tucker, of the Salavtion Army, whose work in America is just closing; on the late F. A. Bartholdi, the designer of the statue of "Liberty," in New York harbor; and on the late Lafcadio Hearn, the interpreter of Japan to the Western world. Mr. Herman Rosenthal writes on "Prince Mirsky, Russia's new Minister of the Interior," and Mr. W. T. Stead contributes an interesting character sketch of Lord Grey, the new Governor-General of Canada. Mr. Stead's article is followed by two other Canadian papers of exceptional interest—"The Trend of Political Affairs in Canada," apropos of the approaching elections, by Miss Agnes C. Laut, and "Western Canada in 1904," by Theodore M. Knappen. "Iowa's Campaign for Better Corn," by Prof. P. G. Holden, is a suggestive account of the work performed last spring by the so-called "Corn Gospel" trains. Mr. Edward A. Moseley, secretary of the Interstate Commerce Commission, contributes an authoritative article on American railroad accidents; their causes, and the means of securing greater safety in travel. Miss Florence E. Winslow reviews the work of the Episcopal Triennial Convention, which has just completed its sessions at Boston. "What the People Read in Hungary," is the somewhat out-of-the-way subject of a paper by John Skotthy. The closing phases of the Presidential campaign, the developments in the Russo-Japanese war, and other topics of the hour are discussed in the editorial department, "The Progress of the World."

"Does your husband take as much interest in horse racing as he used to?"

"Yes," answered young Mrs. Torkins, "Charley can always tell the day before a race which horse ought to win, and the day after why he didn't."

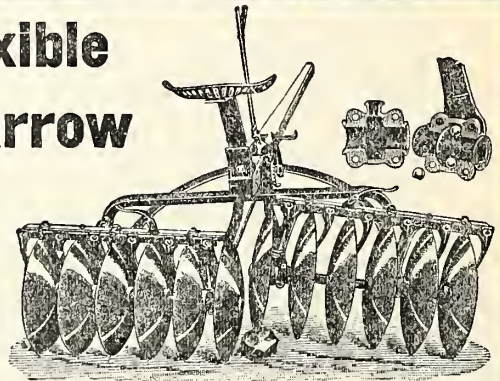
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This Magnificent Doubly Reinforced Handsomely Finished,  
**Large and Roomy STEEL SAFETY BOX** The Kind Bankers Use  
Black Enameled, Trimmed in Maroon and Gold, Strong Lock, Intricate Key.  
An actual necessity to every man, woman, boy and girl.

Appeals with great force to Men for Deeds, Women for Jewels, Boys for Letters, Girls for Trinkets

**CONTENTS AS SAFE AND PRIVATE AS A BURIED TREASURE, HIDDEN FROM THE EYES OF ALL BUT THE RIGHTFUL OWNER.**

## Spring Flexible Disc Harrow

Only Harrow in the world with independent adjustable spring pressure upon inner ends of disc gangs. Any amount of pressure thrown on these inner ends by foot. Ball-bearing. Works uneven ground. All sizes, at proportionate prices.



Seasonable Implements of the latest style, always up-to-date. Possibly you are now or will soon need a Corn Sheller, Feed Cutter, Disc Plow. You can get our Catalogue for the asking.

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## Do You Ship Apples?

If so, let us call your attention to the California and Oregon apple boxes, the coming packages for nice apples, particularly for foreign shipments. **SOUTHSIDE M'F'G CO., PETERSBURG, VA.**

Not long ago the genial superintendent of a public school was asked by one of his youthful friends to listen to the latter's rehearsal of a lesson, in which there was a reference to Atlas.

"Do you know who Atlas was?" asked the superintendent.

"Yes, sir. He was a giant who supported the world."

"Ah! Supported the world, did he!" went on the superintendent. "Well,

tell me who supported Atlas?"

The little fellow looked as though he had not given the subject any particular attention, but showed immediate willingness to think it over. The superintendent stood looking on, trying hard to keep back a smile; but the youngster finally brightened up and answered:

"Well, I think he must have married a rich wife."

# Our Clubbing List.

The following list of papers and periodicals are the most popular ones in this section. We can **SAVE YOU MONEY** on whatever journal you wish:

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Times-Dispatch, Richmond, Va.....		\$5 00	\$5 00
The Post, Washington, D. C.....		6 00	6 00
The Sun, Baltimore, Md.....		8 00	3 40
Chicago Live Stock World.....		4 00	3 50
News-Leader, Richmond, Va.....		3 00	3 00
TRI-WEEKLY.			
The World (thrice-a-week), N. Y...	1 00	1 25	
WEEKLIES.			
Harper's Weekly .....	4 00	4 00	
Montgomery Advertiser .....	1 00	1 00	
Nashville American .....	50	75	
Breeder's Gazette .....	2 00	1 75	
Hoard's Dairyman .....	1 00	1 35	
Country Gentleman .....	1 50	1 75	
Religious Herald, Richmond, Va....	2 00	2 25	
Times-Dispatch, Richmond, Va.....	1 00	1 25	
Central Presbyterian, " " " " " "	2 00	2 25	
Horseman .....	3 00	3 00	
MONTHLIES.			
Wool Markets and Sheep .....	50	75	
Dairy and Creamery .....	50	75	
Commercial Poultry .....	50	75	
All three .....	1 50	1 15	
North American Review .....	5 00	5 00	
The Century Magazine .....	4 00	4 25	
St. Nicholas Magazine .....	3 00	3 25	
Lippincott's Magazine .....	2 50	2 50	
Harper's Magazine .....	4 00	4 00	
Harper's Bazaar .....	1 00	1 40	
Scribner's Magazine .....	3 00	3 25	
Frank Leslie's Magazine .....	1 00	1 35	
Cosmopolitan Magazine .....	1 00	1 35	
Everybody's Magazine .....	1 00	1 35	
Munsey Magazine .....	1 00	1 35	
Strand Magazine .....	1 25	1 65	
Madame .....	1 00	1 00	
Argosy Magazine .....	1 00	1 35	
Review of Reviews .....	2 50	2 75	
Poultry Success .....	1 00	75	
Rural Mechanics .....	1 00	55	
Bleeding Stock .....	50	60	
Successful Farming .....	1 00	60	
Southern Fruit Grower .....	50	85	

Where you desire to subscribe to two or more of the publications named, you can arrive at the net subscription price by deducting 50 cents from "our price with the PLANTER." If you desire to subscribe to any other publications not listed here, write us and we will cheerfully quote clubbing or net subscription rates.

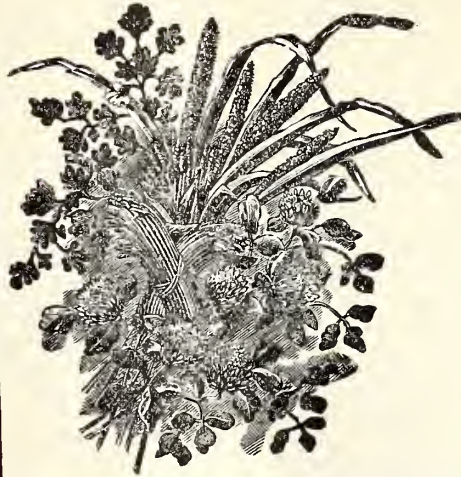
Subscribers whose time does not expire until later can take advantage of our club rates, and have their subscription advanced one year from date of expiration of their subscription to either the PLANTER or any of the other publications mentioned.

Don't hesitate to write us for any information desired; we will cheerfully answer any correspondence.

We furnish NO SAMPLE COPIES of other periodicals.

# Seed House of the South.

- RED CLOVER,
- MAMMOTH CLOVER,
- CRIMSON CLOVER,
- WHITE CLOVER,
- LUCERNE CLOVER,
- ALSYKE CLOVER,
- BOKHARA CLOVER,
- JAPAN CLOVER,
- BUR CLOVER,



- TIMOTHY,
- ORCHARD GRASS,
- RED TOP or HERDS GRASS,
- KENTUCKY BLUE GRASS,
- RANDALL GRASS,
- TALL MEADOW OAT GRASS,
- JOHNSON GRASS,
- GERMAN MILLET,
- BUCKWHEAT,
- OATS and CANE SEED.

"Whatsoever One Soweth, That Shall He Reap."

We sell strictly reliable **FIELD AND GARDEN SEEDS** of every variety at **Lowest Market rates**, included in which are **RAGLAND'S PEDIGREE TOBACCO SEEDS.**

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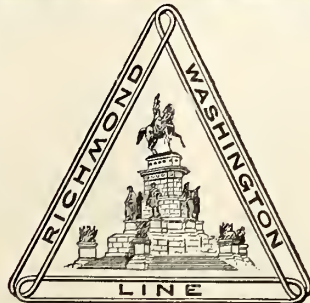
For Tobacco, Corn, Wheat, Potatoes, &c.

Pure Raw-Bone Meal, Nova Scotia and Virginia Plaster and Fertilizing Materials generally.

Parties wishing to purchase will find it to their interest to price our goods. Samples sent by mail when desired.

**Wm. A. Miller & Son,** 1016 Main Street, LYNCHBURG, VA.

**Richmond, Fredericksburg & Potomac R. R.**  
AND  
**Washington Southern Railway**



The Double-Track Link Connecting the

Atlantic Coast Line Railroad  
Baltimore and Ohio Railroad  
Chesapeake and Ohio Railway  
Pennsylvania Railroad  
Seaboard Air Line Railway  
Southern Railway

Between ALL POINTS  
Via RICHMOND, VIRGINIA

THE GATEWAY BETWEEN THE NORTH AND THE SOUTH  
FAST MAIL, PASSENGER, EXPRESS AND FREIGHT ROUTE  
OVER FIFTY MILES OF THE SECOND TRACK ALREADY IN SERVICE

DAN PATCH AT WORLD'S FAIR.

Our readers who intend to visit the great World's Fair during November will be pleased to know that the World's Champion Harness Horse Dan Patch, 1:56 will give two of his marvellous speed exhibitions at the Delmar Race Track, which is directly opposite to the "Administration Entrance" of the World's Fair Ground.

Dan's exhibitions will be on November 5th and November 10th, commencing at 2 P. M. This is the only chance you will ever have in your life to see the greatest fair in the world and the greatest horse in the world in one day.

It is nothing unusual for Dan Patch to draw 50,000 people to one of his wonderful performances, and many of them travel for hundreds of miles. The American people are great admirers of genuine greatness, and Dan Patch appeals to them, not only on account of his lovable disposition. He has a special liking for ladies and children, and the horse never lived who had so many ardent admirers as the World famous Dan.

Mr. M. W. Savage, of Minneapolis, Minn., the owner of Dan, writes us that these two dates are the only dates on which Dan Patch will appear at St. Louis.

MERIT COUNTS EVERY TIME.

Farquhar Machinery Receives Highest Award, Gold Medal, at the St. Louis Exposition.

The A. B. Farquhar Company, Ltd., of York, Pa., whose exhibit comprising engines, boilers, threshers, saw mills and agricultural machinery, is one of the features in the Palace of Agriculture at the St. Louis Exposition. has just received highest award and gold medal on saw mills, engine and threshing machines.

The receiving of this high honor is not to be wondered at, for the exhibit is truly a revelation in mechanical improvement. It also shows that merit is appreciated, and that it is bound to win out.

The Farquhar Company has always kept well in the lead in new inventions. They have time and again received awards for improvements, and the name Farquhar on any farm implement is to-day a guarantee that the machine in question will give the greatest economy and profits in operation.

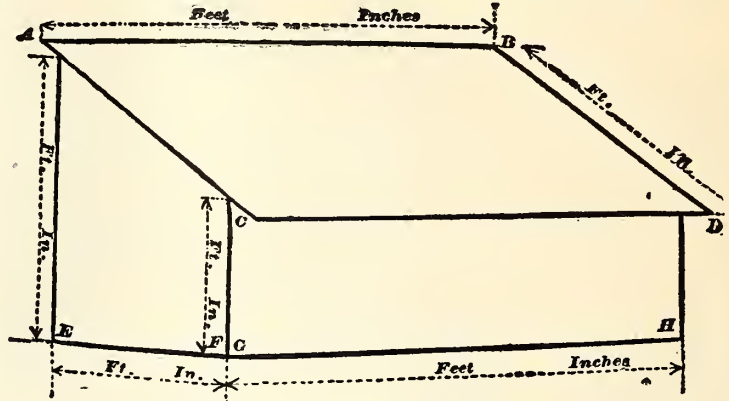
To those who have not seen this exhibit or will not get to the fair, the next best thing is to send for a catalogue describing and illustrating their machinery just as it is. The company will send a copy of their catalogue free to any address. It is worth having.

"To what account shall we charge these new battleships?" asked the Russian Treasury official.

"The sinking fund," answered his superior, wearily.

# ROOFING OF ALL KINDS.

Painted Corrugated Roofing, Painted V. Crimp Roofing, Roofing Tin in boxes or rolls, Tarred Roofing Felt, Perfected Granite Roofing.



Send us the DIMENSIONS OF YOUR ROOF, stating KIND OF ROOFING wanted, and we will quote you on sufficient quantity to cover it.

You can ADD YEARS to the life of your roof by painting it with our

## Magnet Red Roofing Paint.

1 gallon will cover 2½ squares. Can furnish in any size package, 1 gallon up. Only the very HIGHEST GRADE material enters into the manufacture of this paint. Write for prices.

We also carry a complete stock of Conductor Pipe and Gutter, Solders and Metals; Galvanized and Black Sheet Iron, etc.

### Southern Railway Supply Company,

1323 East Main Street,

RICHMOND, VIRGINIA

## Headquarters for Nursery Stock.

WHOLESALE AND RETAIL.

We make a specialty of handling dealers' orders.

ALL STOCK TRUE TO NAME.

- |           |             |               |                |
|-----------|-------------|---------------|----------------|
| Apples,   | Nectarines, | Pecans,       | Ornamental and |
| Pears,    | Cherry,     | Chestnuts,    | Shade Trees,   |
| Peach,    | Quinces,    | Walnuts,      | Evergreens,    |
| Plum,     | Almonds,    | Small Fruits, | Roses, Etc.    |
| Apricots, |             |               |                |

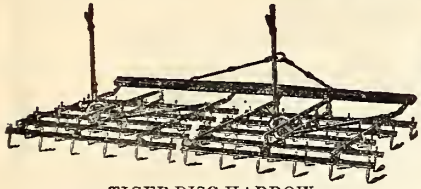
CALIFORNIA PRIVET, for Hedging.

WRITE FOR CATALOGUE.

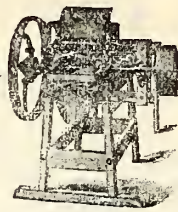
AGENTS WANTED.

FRANKLIN DAVIS NURSERY CO., Baltimore, MP.

# Latest Improved FARM IMPLEMENTS.

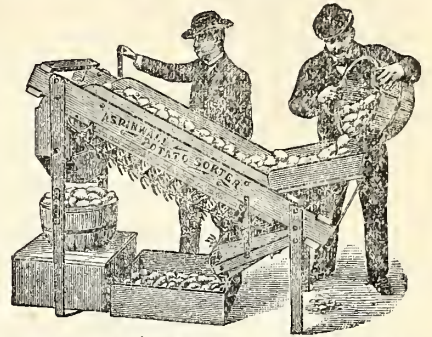


**TIGER DISC HARROW.**  
Plain and Lever Spring Tooth Harrows. All Sizes

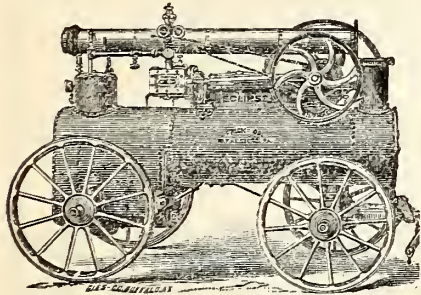


## ROSS....

Fodder Cutters, Fodder Shredders, Cutters for all purposes, Corn Shellers, Grinding Mills, Horse Powers and Wood Saw.

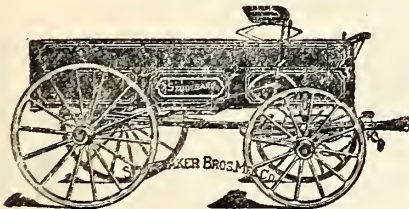
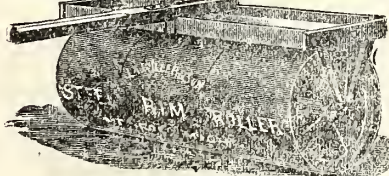


**Aspinwall Planters, Potato Sorters and Cutters.**

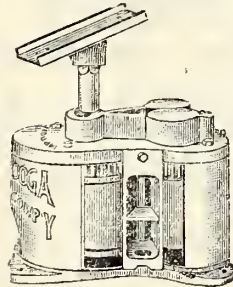


Frick and Aultman and Taylor Engines. Saw Mills and Threshers.

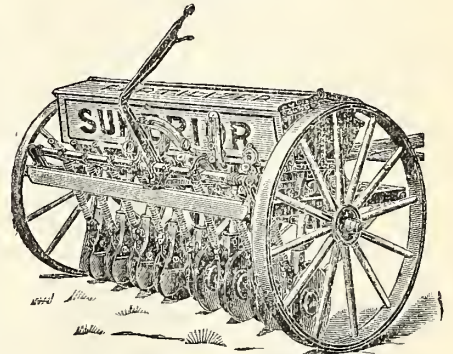
**STEEL AND IRON ROLLERS** All SIZES AND KINDS



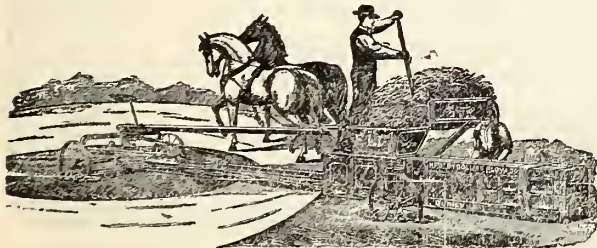
Special prices given on Studebaker and Brown Wagons, Buggies and Carts.



Chattanooga  
Cane Mills  
and  
Evaporators.

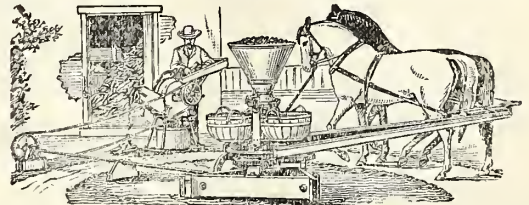


**SUPERIOR GRAIN DRILLS.**  
Plain and Fertilizer Hoe and Disc Drills—all sizes



**ELI BALING PRESSES.** 58 styles and sizes. For Horse or steam power. Write for prices and Catalogues.

## "SCIENTIFIC FEED MILLS, All Sizes."



The **SCIENTIFIC** Grinding Mills. Are unequalled for grinding ear corn, shucks on or off, Corn, Oats Wheat and all other grains, single or mixed.

**POWER MILLS** in five sizes, 2 to 30 horse-power.

Scientific Sweep Mills in five sizes.

Geared—plain and combined, with horse-power.

**Milwaukee Corn Husker and Fodder Shredder,**

Has steel gears and steel clutches and rolls easily. Adjusted to all conditions of corn.

**With Blower or Carrier.** Manufactured in 5 sizes: Large machines for threshermen and small machines for farmers' own use.

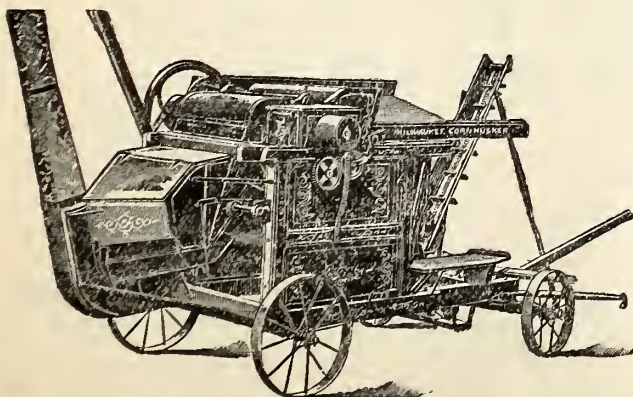
Read list of only a few of the many using the **MILWAUKEE** Husker:

- |                                |                               |
|--------------------------------|-------------------------------|
| <b>VIRGINIA:</b>               | <b>M. L. NORVELL,</b> Island. |
| R. L. BRUCE, Medlock.          | S. D. IVEY, Petersburg.       |
| J. C. SEGAR, Lewiston.         | J. A. MADDOX, Triangle.       |
| J. A. GRAHAM, Hanover.         | W. H. WALTON, Rice Depot.     |
| L. E. WILLIAMS, Enfield.       | T. S. WILSON, News Ferry.     |
| JULIAN RUFFIN, Old Church.     | Geo. R. LAND, Boydton.        |
| EDMUND RUFFIN, Old Church.     |                               |
| A. T. BROADDUS, Old Church.    |                               |
| H. S. SAUNDERS, Shirley.       |                               |
| MRS. ALICE BRANSFORD, Shirley. |                               |
| C. C. BRANCH, Toano.           |                               |

### NORTH CAROLINA:

- |                             |
|-----------------------------|
| C. C. MOORE, Charlotte.     |
| R. F. BROADDUS, New Berne.  |
| Col. B. CAMERON, Stagville. |

The above parties will cheerfully give you testimonials as to the merits of the **Milwaukee**. We are ready at all times to go in the field with any other husker made, and will guarantee the **Milwaukee** to be the **best made**; and will also guarantee it to do more work than any other made, and **shell less corn**, and **cost less for repairs** and last longer. Write the parties that are using them; also write for special circulars and testimonials we have, which will be sent with pleasure.



**HENING & NUCKOLS,** Successors to **CHAS. E. HUNTER,** 1436-38 E. Main St., RICHMOND, VA.

## THE CANADIAN WHEAT CROP.

A great deal of attention has been paid in the United States this year to the Western Canadian wheat crop. It is generally realized that that great wheat country is now arriving at such a volume of production that hereafter the markets of the world will have to pay close attention to its annual contribution to the world's supply of wheat.

Owing to the scare created by the discovery of rust in a part of Manitoba in August an erroneous impression has got abroad as to the size of this year's crop in Western Canada. At the time of the scare a well known wheat estimator put the whole Western Canadian crop as low as 42,000,000 bushels, and one guess even had it as low as 35,000,000 bushels.

Now threshing is so far advanced that it can be asserted without doubt that the Western Canada wheat crop will be about 60,000,000 bushels, or an average of 17 bushels to the acre—as good an average yield and a larger total by 7,000,000 bushels than last year.

That it may not be inferred that this is a biased estimate, we will say that our estimate at the time of the scare was for less than 15 bushels to the acre.

The indications now are that Western Canada will have 4,500,000 acres in wheat next year, and with favorable conditions will for the first time produce a crop of about 100,000,000 bushels.

WESTERN CANADA INFORMATION BUREAU,  
THEO. M. KNAPPEN, *Secretary*.

After the jury in a Texas case had listened to the charge of the court and gone to its room to deliberate upon the verdict, one of the twelve men went right to the point by saying, "That thar' Pike Mulrow orter be convicted on gen'ral principles. He's bad as they make 'em."

As the hum of approval went around a weazened little juror said: "I heerd that Pike guv it out that he'd go gunnin' fur us if we sent him up, jes' soon's he got out, an' fur the Jedge, too."

"We must perctect the Jedge," they agreed, and the evrdict was "not guilty."

An Irishman was charged with a petty offence.

"Have you any one in court who will vouch for your good character?" queried the judge.

"Yes, sorr; there is the chief constable, yonder," answered Pat.

The chief constable was amazed. "Why, your Honor, I don't even know the man," protested he.

"Now, sorr," broke in Pat, "I have lived in the borough for nearly twenty years, and if the chief constable doesn't know me yet, isn't that a character for ye?"

## The best at one-half price

It takes five of the ordinary "quarts" to make a gallon, but a HAYNER QUART is a full quart, an honest quart of 32 ounces, four to the gallon. Now, you pay your dealer at least \$1.25 a bottle for whiskey that cannot possibly be any better than HAYNER, if as good, or \$6.25 a gallon. If you buy HAYNER WHISKEY you save at least \$3.05 on every gallon. We sell two gallons for about the same as you pay for one gallon of probably poorer whiskey. Just think that over and remember that HAYNER WHISKEY goes direct from our distillery to you, carries a UNITED STATES REGISTERED DISTILLER'S GUARANTEE OF PURITY and AGE and saves you the dealers' enormous profits. That's why it's so good and so cheap. That's why we have over a quarter of a million satisfied customers. That's why YOU should try it. Your money back if you're not satisfied.

### Direct from our distillery to YOU

Saves Dealers' Profits! Prevents Adulteration!

# HAYNER WHISKEY

PURE SEVEN-YEAR-OLD RYE

## 4 FULL \$3.20 EXPRESS QUARTS PREPAID

We will send you FOUR FULL QUART BOTTLES of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. Try it and if you don't find it all right and as good as you ever used or can buy from anybody else at any price, then send it back at our expense and your \$3.20 will be returned to you by next mail. Just think that over. How could it be fairer? If you are not perfectly satisfied, you are not out a cent. Better let us send you a trial order. If you don't want four quarts yourself, get a friend to join you. We ship in a plain sealed case, no marks to show what's inside.

Orders for Ariz., Cal., Col., Idaho, Mont., Nev., N. Mex., Ore., Utah, Wash. or Wyo. must be on the basis of 4 Quarts for \$4.00 by Express Prepaid or 20 Quarts for \$16.00 by Freight Prepaid.

Write our nearest office and do it NOW.

### THE HAYNER DISTILLING COMPANY

ATLANTA, GA. DAYTON, OHIO ST. LOUIS, MO. ST. PAUL, MINN.  
150 DISTILLERY, TROY, O. ESTABLISHED 1866.



## THE SEABOARD AIR LINE RAILWAY

OFFERS  
PROFITABLE  
INVESTMENTS

THE MANUFACTURER,  
THE STOCK RAISER,  
THE DAIRYMAN,  
THE FRUIT GROWER,  
THE TRUCKER.

TO

### WHERE YOUR LABOR IS NOT IN VAIN.

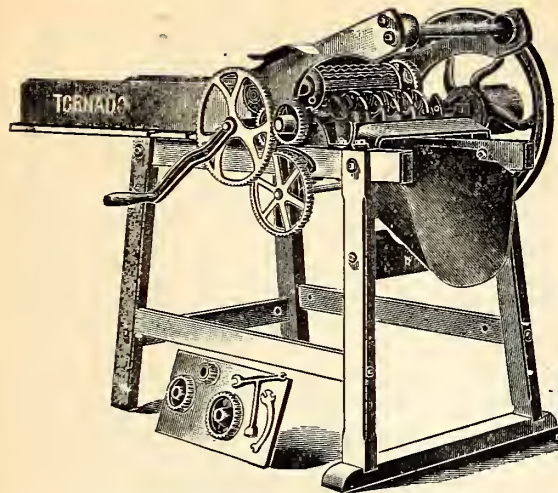
Would a country where work can be carried on the entire year and where large profits can be realized interest you?

The SEABOARD Air Line Railway traverses six Southern States and a region of this character. One two cent stamp will bring handsome illustrated literature descriptive of the section.

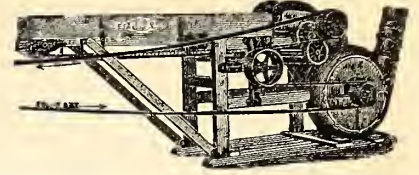
J. B. WHITE,  
Gen. Industrial Agt., Portsmouth, Va.

EDW. W. COST,  
Traffic Mg

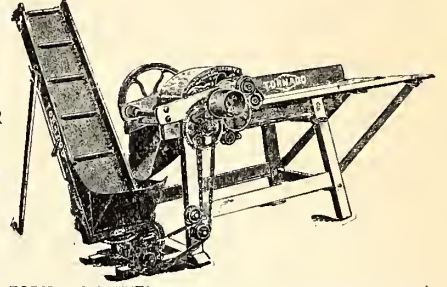
CHARLES B. RYAN,  
Gen. Pass. Agt., Portsmouth, Va



THE CELEBRATED  
**TORNADO**  
LINE OF  
**FEED CUTTERS,  
CARRIERS,  
BLOWERS, Etc.**



TORNADO CUTTER WITH BLOWER ATTACHED.



TORNADO CUTTER WITH SWIVEL CARRIER ATTACH'D

SIZES  
ranging from  
**6-INCH  
HAND POWER**  
TO  
**Large 27-Inch  
MOGUL  
Power Cutter.**

The most successful HAY, STRAW, FODDER, and ENSILAGE CUTTING AND SHREDDING MACHINE in the world. No extra shredding or splitting attachments needed on the TORNADO. These Cutters, with Carrier or Blower, are prime favorites with the progressive Southern farmer. Call on your local dealer for information and prices, or write to us. We will mail you Catalogue and full information for the asking. Many hundreds of these machines in use in the South.

MANUFACTURED BY

**W. R. HARRISON & CO.,** Massillon, Ohio.

**FOR SALE**

In the October Planter I said a patron, who has acquired a wide experience as a breeder, is overstocked and advises me to offer a portion of his stock. To this many replies were received from various sections, and a number of sales made. Of the remainder I am offering the fine prize winning Hackney Stallion and a half dozen yearlings.

Some Shetland and Exmoor ponies, averaging 40 inches, and a few yearlings.

Also a portion of the Guernsey and Holstein cows, which are registered.

Limited area on farm prompts these offerings. Further information may be had of W. J. CARTER, P. O. Box 929, Richmond, Va.

**R. H. RICHARDSON,**

Having removed to my new and commodious store, at 308 Hull street, Manchester, Va., I am prepared to offer at tempting prices harness of all kinds, hardware, paints and oils; also farm wagons of various grades.

**FOR SALE CHEAP**

Small stud of Hackneys, stallion Rickell, won 1st New York, Philadelphia, 1896. 7 imported mares, 2 daughters and 5 granddaughters of the great Denmark; also yearlings and foals. Address WESTTOWN STOCK FARM, Westtown, Pa.

1904.

WOODMONDE AND HATTONDALE FARMS

**BURLINGTON**

"The Gentleman in Black,"

Winner of the Criterion Stakes, Pelham Handicap, Brooklyn Derby, Belmont, Trial and Tidal Stakes.

Black horse, by Powhatan, dam imp. Invercauld, by St. Albans; 2d dam imp. Eleanor, by Voltigeur; 3d Themis, by Touchstone; 4th dam Rectitude (dam of Latus, Dr. Caius, Chivalry and Aristides), by Lottery; 5th dam Decision (dam of Brown Stout XXX and Silvio), by Magistrate, etc., etc. BURLINGTON will make the season of 1904 at J. E. Lane's above named farms at Esmont, Albemarle county, Va.

Fee \$50 with usual return privilege if horse is alive and in my possession.

For particulars address

**J. E. LANE,**  
Esmont, Albemarle County, Va.

**For Sale to Reduce Stock.**

SOME FINE BROOD MARES, all trotters, and richly bred. Bargains. Address  
**ROBERT TAIT, Norfolk, Va.**

1904.

1904.

**KELLY, 22823.**

Record 2:27. Sire of McChesney, 2:16 3/4, etc. Bay horse, by Electioneer 125; first dam, Esther, dam of Expressive 3, 2:12 1/2; Express, 2:21, etc.; by Express, etc. Kelly represents the highest type of a trotter, having fine size and the form and finish of a thorough-bred. For terms of service address

**W. J. CARTER, Richmond, Va,**  
Kelly will serve at my private stable, 1102 Hull street, Manchester, Va.

**Richardson Brothers,**

613 Brook Ave., Richmond, Va.,

BUILDERS OF

**Wagons and Carriages,**

A select lot of business and pleasure Vehicles on hand.

Repairing neatly done. Orders by mail solicited.

**W. J. CARTER,**  
TURF JOURNALIST and  
PEDIGREE EXPERT...

ADDRESS:

**P. O. Box 929, Richmond, Va.**  
Or 1102 Hull St., Manchester, Va. PHONE 3380.  
Representing "The Times-Dispatch" and "Southern Planter," Richmond, Va.; "Kentucky Stock Farm," and "The Thoroughbred Record," Lexington, Ky.; "Sports of the Times," New York, and the "Breeder and Sportsman," San Francisco, Cal.

Owen Wister, the novelist, was talking about puns.

"I detest puns," he said, "but Fanny Kemble, who was my grandmother, used to tell one made by a certain Baron Rothschild that was good of its kind.

"The Baron was dining out, and some one spoke of venison.

"I," said the Baron, 'nevaire eats venishon. I think it ish not so coot ash mutton.'

"Oh, absurd" some one exclaimed. "If mutton is better than venison, why isn't it more expensive?"

"The Baron laughed, overcome by the brilliancy of the pun that had just come to him. Then he said, and his dialect came in very handy:

"The reason why venishon ish more expensive than mutton ish that the people always prefer vat ish deer to vat is sheep."

#### SURE.

"What did Noah live on when the flood subsided and his provisions in the ark were exhausted?" asked a Sunday school teacher of her class.

"I know," squeaked a little girl after the others had given up.

"Well, what?" inquired the teacher. "Dry land."—Lippincott's.

Wife—You seem to be able to read me like a book.

Husband—Yes; I wish I could shut you up as easily.

## FOR 5 HP GAS ENGINES

Grinds Ear Corn and Shuck Corn.

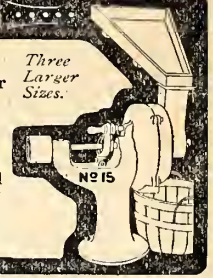
Capacity 12 to 18 bushels per hour. Safety Quick Release. 50 other sizes and styles of

Three  
Larger  
Sizes.

### Scientific Grinding Mills.

Sweep-gear, Combined and Power. Most efficient and economical mills on the market. Simple, strong and durable. Write for new catalogue C-5.

THE FOOS MFG. CO., (Established 25 years) Springfield, Ohio.



## The Chesapeake & Ohio Railway

Extending from Cincinnati and Louisville, and  
THROUGH ITS CONNECTIONS....

THE BIG FOUR SYSTEM, from Chicago, St. Louis, Peoria, Indianapolis, Sandusky and Cleveland;

THE OHIO CENTRAL LINES, from Toledo and Columbus;

THE CINCINNATI, HAMILTON & DAYTON, from Detroit, Toledo, Lima and Dayton—

FORMS THE MOST DIRECT And from Five to Twelve Hours the Quickest ROUTE.

To STAUNTON, LYNCHBURG, CHARLOTTESVILLE, RICHMOND, PETERSBURG, NORFOLK, And Principal Virginia Points.

H. W. FULLER, Gen. Pass. Agt. C. & O. Ry., Washington, D. C.

Established by  
GEO. WATT, 1840.

## THE CALL-WATT CO.,

MANFRED CALL,  
Gen'l. Manager.

Implements. Machinery and Vehicles.

## THE UNIT ROAD MACHINE,

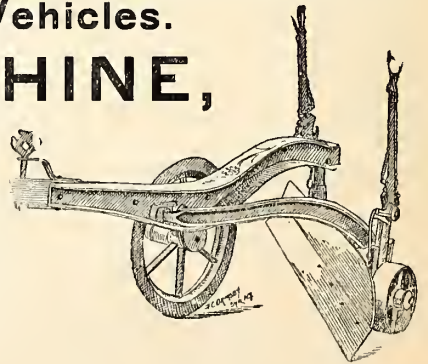
So called because it has but ONE WHEEL, and takes but ONE TEAM and ONE MAN to operate it. It has passed through the experimental stage, and stands well tested and perfected. By actual test it has been demonstrated that with one team and four men it will build more and better road than can be done by 40 men with the usual tools. That it saves labor enough to pay for itself every two days it is in use. That it is economy for each township to have one, not only to build its roads, but to keep them in order after they are built. It will do as good work as the heavy, expensive road machines, at very much less expense, and has advantages over any of them. The price is so low every road district and even individuals can afford one.

The following unsolicited communication indicates how the UNIT is regarded:

THE CALL-WATT CO., Richmond, Va.:

Dear Sirs,—Enclosed find check to pay for the Unit road machine. The more I use it the better I am pleased with it. Yesterday my road overseer with one team and three men built more road, and did it better, than could have been done with 40 men with picks, shovels and hoes. It saves labor enough to pay for the machine every two days while in use. This is no exaggeration or idle talk. I will gladly answer enquiry from any one needing road building tools. It is valuable to go behind the big machines and fill the ruts made by the wheels in the loose dirt before it is packed. I think every one of the townships in our county will have one next spring. We have eight townships.

Respectfully yours,



Jackson, N. C., September 21, 1904.

JOHN E. MOORE, Road Commissioner.

All interested in GOOD ROADS are requested to write for descriptive circulars of the UNIT and other road building tools.

BALING PRESSES for Hay, Cotton, Straw, etc. WHEAT DRILLS, CANE MILLS, DISC HARROWS, ROLLERS, MANURE SPREADERS, PEA HULLERS, FARM WAGONS, ENGINES, SAW MILLS, CORN MILLS, CORN SHELLERS, WHEAT FANS, PLOWS and PLOW CASTINGS.

We solicit enquiries for anything desired.

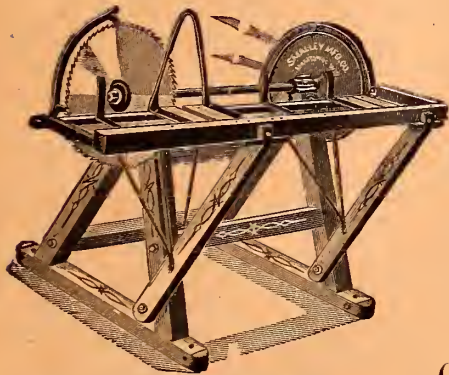
13 S. 15th Street, Bet. Main and Cary RICHMOND, VA.



# THE WATT PLOW CO.,

15th and Franklin Streets and 1404 East Main Street,  
RICHMOND, VIRGINIA.

## LABOR SAVING IMPLEMENTS AND MACHINERY, VEHICLES AND HARNESS.



SMALLEY WOOD SAW.

Smalley Saw Frames  
for short and long  
wood.

Hocking Valley and  
Smalley Feed Cut-  
ters, all sizes.

Hocking Valley Corn  
Shellers.



STAVER BUCKEYE COMBINED MILL AND  
POWER.

Geiser Saw Mills and En-  
gines, well known every-  
where.

Buffalo Pitts and Johnston  
Disc Harrows and Culti-  
vators.

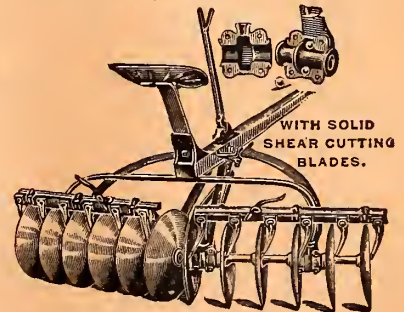
Smalley, Hocking Valley  
and Buckeye Horse  
Powers,

Chattanooga, South Bend  
and Syracuse Plows.

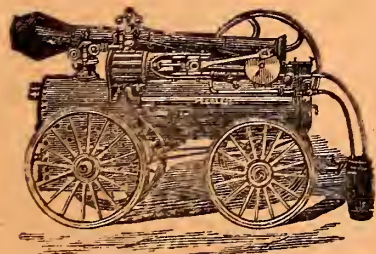
Fish, Weber, Champion  
and Hickory Wagons.

We carry a large stock of  
Buggies, Surreys and  
Vehicles of all descrip-  
tions.

THE BUFFALO PITTS ALL-STEEL, SPRING-  
FLEXIBLE, DISC HARROW.



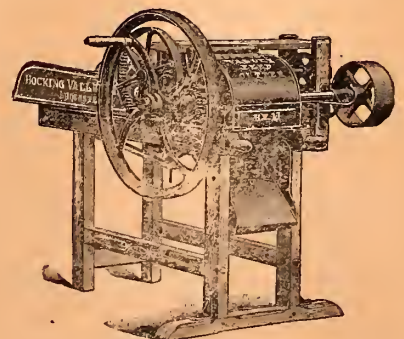
WITH SOLID  
SHEAR CUTTING  
BLADES.



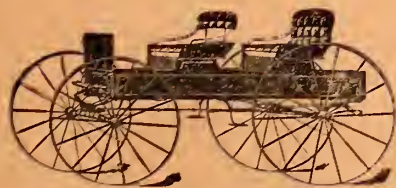
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